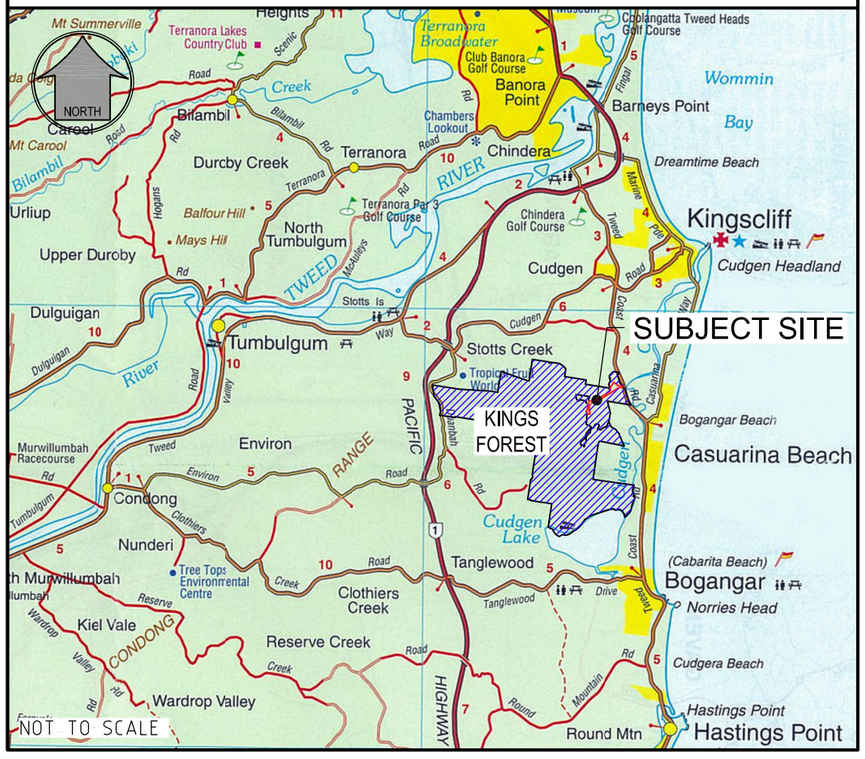
KINGS FOREST

KINGS FOREST PARKWAY 1
No.12301-KFP1

LOCALITY PLAN



REAL PROPERTY DESCRIPTION:
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

COMPASS ASSURANCE ISO 9001 QUALITY

CLIENT:
PROJECT 28 PTY LTD

ASSOCIATED CONSULTANTS:
LANDSURV
GILBERT SUTHERLAND

DRAWING NUMBER	AMEND.
12301-KFP1-000	A

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SCHEDULE OF DRAWINGS

NUMBER	REV. NO.	TITLE
GENERAL		
12301-KFP1-000	A	COVER SHEET
12301-KFP1-001	D	SCHEDULE OF DRAWINGS
12301-KFP1-002	B	GENERAL NOTES
12301-KFP1-005	C	ROAD HIERARCHY AND STAGING PLAN SHEET 1
12301-KFP1-006	C	ROAD HIERARCHY AND STAGING PLAN SHEET 2
FENCE		
12301-KFP1-010	B	FENCING PLAN
EXISTING FEATURES		
12301-KFP1-020	C	PLAN SHEET 1
12301-KFP1-021	B	PLAN SHEET 2
12301-KFP1-022	A	PLAN SHEET 3
12301-KFP1-023	A	PLAN SHEET 4
BULK EARTHWORKS		
12301-KFP1-040	C	PLAN SHEET 1
12301-FKP1-041	B	PLAN SHEET 2
EARTHWORKS: FINAL SURFACE AND SEDIMENT & EROSION		
12301-KFP1-070	B	PLAN SHEET 1
12301-KFP1-071	C	PLAN SHEET 2
12301-KFP1-072	B	PLAN SHEET 3
EARTHWORKS: TOPSOIL SECTION		
12301-KFP1-075	D	DETAIL SHEET 1
COMBINED SERVICES		
12301-KFP1-090	C	PLAN SHEET 1
12301-KFP1-091	C	PLAN SHEET 2
12301-KFP1-092	C	PLAN SHEET 3
12301-KFP1-093	B	PLAN SHEET 4
12301-KFP1-094	C	PLAN SHEET 5
12301-KFP1-095	C	TYPICAL SECTIONS OF SERVICES SHEET 01
12301-KFP1-096	B	TYPICAL SECTIONS OF SERVICES SHEET 02
12301-KFP1-097	B	TYPICAL SECTIONS OF SERVICES SHEET 03
12301-KFP1-098	C	TYPICAL SECTIONS OF SERVICES SHEET 04
ROADWORKS: PLAN		
12301-KFP1-100	C	SHEET 1
12301-KFP1-101	C	SHEET 2
12301-KFP1-102	C	SHEET 3
12301-KFP1-103	C	SHEET 4
ROADWORKS: DETAILS		
12301-KFP1-120	C	SHEET 1
12301-KFP1-121	D	SHEET 2
ROADWORKS: KERB LONGITUDINAL SECTIONS		
12301-KFP1-122	A	SHEET 1
12301-KFP1-123	A	SHEET 2
ROADWORKS: SWEPT PATHS		
12301-KFP1-160	A	12.5m TRUCK SHEET 1
12301-KFP1-161	A	12.5m TRUCK SHEET 2
12301-KFP1-162	A	12.5m TRUCK SHEET 3
12301-KFP1-163	A	PASSANGER CAR SHEET 1
12301-KFP1-164	A	PASSANGER CAR SHEET 2
ROADWORKS: CROSSING SIGHT DISTANCE		
12301-KFP1-170	A	CSD PLAN
ROADWORKS: LONGITUDINAL SECTION		
12301-KFP1-200	B	KINGS FOREST PARKWAY SHEET 1 (ROAD 01)
12301-KFP1-201	C	KINGS FOREST PARKWAY SHEET 2 (ROAD 01)
12301-KFP1-202	B	KINGS FOREST PARKWAY SHEET 3 (ROAD 01)
12301-KFP1-203	C	KINGS FOREST PARKWAY SHEET 4 (ROAD 01)
12301-KFP1-204	C	SECRET LANE (ROAD 03)
12301-KFP1-205	C	ROAD 04
12301-KFP1-206	C	ROAD 05
12301-KFP1-207	C	ROAD 07
12301-KFP1-208	C	ROAD 27
12301-KFP1-209	C	ROAD 28
ROADWORKS: CROSS SECTIONS		
12301-KFP1-300	C	KINGS FOREST PARKWAY SHEET 1 (ROAD 01)
12301-KFP1-301	C	KINGS FOREST PARKWAY SHEET 2 (ROAD 01)
12301-KFP1-302	C	KINGS FOREST PARKWAY SHEET 3 (ROAD 01)
12301-KFP1-303	C	KINGS FOREST PARKWAY SHEET 4 (ROAD 01)
12301-KFP1-304	C	KINGS FOREST PARKWAY SHEET 5 (ROAD 01)
12301-KFP1-305	C	KINGS FOREST PARKWAY SHEET 6 (ROAD 01)
12301-KFP1-306	C	KINGS FOREST PARKWAY SHEET 7 (ROAD 01)
12301-KFP1-307	C	SECRET LANE (ROAD 03)
12301-KFP1-308	C	ROAD 04
12301-KFP1-309	B	ROAD 05
12301-KFP1-310	C	ROAD 07 AND ROAD 28
ROADWORKS: INTERSECTION GRADING DETAILS		
12301-KFP1-400	C	SHEET 1
12301-KFP1-401	B	SHEET 2
12301-KFP1-402	B	SHEET 3
12301-KFP1-403	B	SHEET 4
12301-KFP1-404	C	SHEET 5
12301-KFP1-405	B	SHEET 6
12301-KFP1-406	C	SHEET 7
ROADWORKS: LINEMARKING & SIGNAGE		
12301-KFP1-420	C	PLAN SHEET 1
12301-KFP1-421	B	PLAN SHEET 2
12301-KFP1-422	C	PLAN SHEET 3
12301-KFP1-423	B	PLAN SHEET 4
ROADWORKS: INTERSECTION ISLAND AND ROUNDABOUT DETAILS		
12301-KFP1-430	B	SHEET 1
12301-KFP1-431	B	SHEET 2
12301-KFP1-432	C	SHEET 3
RETAINING WALL		
12301-KFP1-450	C	PLAN
12301-KFP1-451	B	DETAILS
12301-KFP1-452	A	SECTIONS SHEET 1
12301-KFP1-453	A	SECTIONS SHEET 2
SEWER RETICULATION		
12301-KFP1-500	D	NOTES AND DETAILS
12301-KFP1-501	D	PLAN SHEET 1
12301-KFP1-502	C	PLAN SHEET 2
12301-KFP1-503	D	PLAN SHEET 3
12301-KFP1-504	B	PLAN SHEET 4
12301-KFP1-505	D	PLAN SHEET 5
12301-KFP1-506	A	PLAN SHEET 6
12301-KFP1-507	B	PLAN SHEET 7
12301-KFP1-508	B	PLAN SHEET 8
12301-KFP1-509	B	PLAN SHEET 9
SEWER RETICULATION: PROFILES		
12301-KFP1-530	D	PROFILES SHEET 1
12301-KFP1-531	C	PROFILES SHEET 2
12301-KFP1-532	C	PROFILES SHEET 3
12301-KFP1-533	C	PROFILES SHEET 4
12301-KFP1-534	C	PROFILES SHEET 5
12301-KFP1-535	C	PROFILES SHEET 6
12301-KFP1-536	D	PROFILES SHEET 7
12301-KFP1-537	D	PROFILES SHEET 8
12301-KFP1-538	C	PROFILES SHEET 9
12301-KFP1-539	C	PROFILES SHEET 10
12301-KFP1-540	C	PROFILES SHEET 11
12301-KFP1-541	B	PROFILES SHEET 12
12301-KFP1-542	C	PROFILES SHEET 13
12301-KFP1-543	C	PROFILES SHEET 14
12301-KFP1-544	B	PROFILES SHEET 15
12301-KFP1-545	B	PROFILES SHEET 16
12301-KFP1-546	C	PROFILES SHEET 17
12301-KFP1-547	C	PROFILES SHEET 18
SEWER RETICULATION: SEWER VALVE DETAILS		
12301-KFP1-550	C	DETAILS SHEET 1
12301-KFP1-551	C	DETAILS SHEET 2
12301-KFP1-552	C	DETAILS SHEET 3
12301-KFP1-555	A	SCOUR STANDARD DETAIL
SEWER RETICULATION: VENT DETAILS		
12301-KFP1-580	A	VENT DETAILS
SEWER RETICULATION: THRUST BLOCKS		
12301-KFP1-591	C	SEWER HORIZONTAL THRUST BLOCK DETAIL
12301-KFP1-592	C	SEWER VERTICAL THRUST BLOCK
12301-KFP1-593	B	SEWER VALVE THRUST DETAIL
12301-KFP1-594	A	CUSTOM THRUST BLOCKS - SHEET 1
12301-KFP1-595	A	CUSTOM THRUST BLOCKS - SHEET 2
STORMWATER		
12301-KFP1-600	C	DRAINAGE PLAN SHEET 1
12301-KFP1-601	B	DRAINAGE PLAN SHEET 2
12301-KFP1-602	C	DRAINAGE PLAN SHEET 3
12301-KFP1-603	C	DRAINAGE PLAN SHEET 4
12301-KFP1-604	C	DRAINAGE PLAN SHEET 5
STORMWATER: BIORETENTION TREATMENT		
12301-KFP1-609	B	SWALE PLAN
12301-KFP1-610	C	PLAN SHEET 1
12301-KFP1-611	C	PLAN SHEET 2
12301-KFP1-612	C	PLAN SHEET 3
12301-KFP1-613	C	PLAN SHEET 4
12301-KFP1-614	B	PLAN SHEET 5
12301-KFP1-615	C	PLAN SHEET 6
12301-KFP1-616	C	PLAN SHEET 7
12301-KFP1-617	C	DETAIL SHEET 1
STORMWATER: PROFILES		
12301-KFP1-620	B	SHEET 1
12301-KFP1-621	B	SHEET 2
12301-KFP1-622	C	SHEET 3
12301-KFP1-623	B	SHEET 4
12301-KFP1-624	C	SHEET 5
12301-KFP1-625	C	SHEET 6
12301-KFP1-626	B	SHEET 7
12301-KFP1-627	A	SHEET 8
12301-KFP1-628	B	SHEET 9
STORMWATER: STRUCTURE DETAILS		
12301-KFP1-640	C	SHEET 1
12301-KFP1-641	C	SHEET 2
12301-KFP1-642	C	SHEET 3
12301-KFP1-643	B	SHEET 4
12301-KFP1-644	B	SHEET 5
STORMWATER: SWALE		
12301-KFP1-660	A	SWALE LONG SECTIONS
12301-KFP1-664	C	SWALE TYPE DETAILS SHEET 1
12301-KFP1-665	D	SWALE TYPE DETAILS SHEET 2
STORMWATER: CATCHMENT		
12301-KFP1-670	A	PLAN
STORMWATER: CALCULATION TABLES		
12301-KFP1-680	C	MINOR STORM EVENT
12301-KFP1-681	C	MAJOR STORM EVENT
WATER: RETICULATION PLAN		
12301-KFP1-700	E	SHEET 1
12301-KFP1-701	D	SHEET 2
12301-KFP1-702	D	SHEET 3
12301-KFP1-703	E	SHEET 4
12301-KFP1-704	C	SHEET 5
WATER: PROFILES		
12301-KFP1-720	C	PLAN SHEET 1 OF 6
12301-KFP1-721	C	PLAN SHEET 2 OF 6
12301-KFP1-722	C	PLAN SHEET 3 OF 6
12301-KFP1-723	C	PLAN SHEET 4 OF 6
12301-KFP1-724	C	PLAN SHEET 5 OF 6
12301-KFP1-725	B	PLAN SHEET 6 OF 6
WATER: VALVES		
12301-KFP1-741	B	SCOUR STANDARD DETAIL
12301-KFP1-742	D	AIR VALVE DETAIL
WATER: THRUST BLOCKS		
12301-KFP1-744	C	TYPICAL HORIZONTAL THRUST BLOCK DETAIL
12301-KFP1-745	C	TYPICAL VERTICAL THRUST BLOCK DETAIL
12301-KFP1-746	B	WATER VALVE THRUST DETAILS
EXTERNAL INTERSECTION PCA		
12301-KFP1-990	A	EXTERNAL INTERSECTION PCA PLAN
12301-KFP1-991	A	PROFILES SHEET 1 OF 2
12301-KFP1-992	A	PROFILES SHEET 2 OF 2
12301-KFP1-993	A	SHEET 1 OF 2
12301-KFP1-994	A	SHEET 2 OF 2

NUMBER	REV NO.	TITLE
TWEED SHIRE COUNCIL STANDARD DRAWINGS		
S.D 007	D	STANDARD KERB DETAILS SHEET 1
S.D 012	H	SUB SOIL DRAINAGE DETAILS
S.D 013	E	FOOTPATH AND CYCLEWAY DETAILS
S.D 014	F	STANDARD KERB RAMP DETAILS
S.D 103	B	STANDARD GULLY PIT - ROLL TOP KERB
S.D 104	C	STANDARD GULLY PIT - BARRIER KERB
S.D 105	B	STORMWATER STANDARDS SECURITY GRATE FOR STORMWATER OUTLETS
S.D 240	C	SLUICE VALVE INSTALLATION DETAILS
S.D 243	C	MANUAL AIR VALVE INSTALLATION DETAILS
S.D 261	E	PRESSURE SEWERAGE SYSTEMS TYPICAL DETAILS
S.D 276	C	TRENCH DRAINAGE BULKHEADS & TRENCH STOPS
S.D 278	B	MAINTENANCE HOLES FOR SEWERS
S.D 301	C	WATER RETICULATION LAYOUT CUL-DE-SACS
S.D 311	A	AUTOMATIC AIR RELEASE VALVE INSTALLATION DETAILS
S.D 312	C	TYPICAL VALVE INSTALLATION DETAILS
S.D 320	C	PROPERTY SERVICES CONNECTION TO MAIN
S.D 341	E	TRENCH DRAINAGE BULKHEADS & TRENCH STOPS
S.D 242	C	DN50 & DN80 AUTOMATIC AIR RELEASE VALVE FOR USE IN DIFFICULT TO ACCESS LOCATIONS OR SPECIFIC APPLICATIONS
S.D 501	C	EROSION & SILTATION PREVENTION DEVICES SHEET 1
S.D 502	B	EROSION & SILTATION PREVENTION DEVICES SHEET 2
STRUCTURAL ARTS DRAWINGS		
EMAW-S100	0	TYPICAL WALL PENETRATION REINFORCING DETAILS
EMAW-S101	0	TYPICAL WALL AND BASE SECTION
EMAW-S102	0	TYPICAL PIT ROOF SLAB AND MANHOLE PLAN
EMAW-S103	0	TYPICAL PIT ROOF SLAB WITH SLAB PLAN
EMAW-S110	0	PIT WALL BEAM PLANS
EMAW-S111	0	TEMPORARY INLET PIT WALL BEAM PLANS
EMAW-S120	0	01/262 AND 03/022 HEAD WALL DETAILS
KFP1-S001	A	SANDSTONE RETAINING WALL
WATER SERVICE OF AUSTRALIA STD DRAWINGS		
SEW 1200	V2.1	SOIL CLASSIFICATION GUIDELINES AND ALLOWABLE BEARING PRESSURES FOR BULKHEADS
WAT 1205	V2.2	THRUST BLOCK DETAILS CONCRETE BLOCKS
WAT 1207	V2.2	THRUST AND ANCHOR BLOCKS GATE VALVES AND VERTICAL BENDS
WAT 1208	V2.1	RESTRAINED JOINT SYSTEM DN100 TO DN375 DI MAINS
SPS 1602	V1.1	SCOUR ARRANGEMENT PUMP AND GRAVITY
SPS 1603	V1.1	SCOUR ARRANGEMENTS PRESSURE MAINS <300 ≤2.2 INVERT
SPS 1605	V1.1	GAS RELEASE ARRANGEMENT PRESSURE MAINS ≤DN 300

NUMBER	REV NO.	TITLE
DEPARTMENT OF TRANSPORT AND MAIN ROAD STD DRAWINGS		
S.D 1243	B	PRECAST CULVERT HEADWALLS HEADWALL CONNECTIONS FOR CULVERTS DIA OR HEIGHTS ≤1200
S.D 1243	B	PRECAST CULVERT HEADWALLS HEADWALL CONNECTIONS FOR PIPE CULVERTS DIA ≥1200
S.D 1243	B	PRECAST CULVERT HEADWALLS HEADWALL CONNECTIONS FOR BOX CULVERTS HEIGHT ≥1200
S.D 1250	A	R C BOX CULVERTS AND SLAB LINK BOX CULVERTS - CULVERT HEIGHTS >600 GENERAL ARRANGEMENT AND NOTES
S.D 1250	A	R C BOX CULVERTS AND SLAB LINK BOX CULVERTS - CULVERT HEIGHTS >600 SLAB BASES AND APRONS
S.D 1250	A	R C BOX CULVERTS AND SLAB LINK BOX CULVERTS - CULVERT HEIGHTS >600 INSTALLATION OF PRECAST UNITS AND CONSTRUCTION OF HEADWALLS & WINGWALLS
S.D R0710-01 TO S.D R0710-25	-	R0710 SAFETY BARRIER SERIES - SEMI-RIGID
S.D R0730-01 TO S.D R0730-08	-	R0730 SAFETY BARRIER SERIES - TERMINALS

DRAWING NUMBER 12301-KFP1-001

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GENERAL

1. CONTRACT SPECIFICATIONS
   ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION.
2. SETOUT
   SURVEY SETOUT INFORMATION HAS BEEN ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR TO ENABLE THE CONTRACTOR TO ACCURATELY SETOUT THE WORKS TO THE CO-ORDINATES SHOWN. SETOUT INFORMATION SHALL NOT BE OBTAINED BY SCALING FROM THESE DRAWINGS.
3. DATUM
   LEVELS SHOWN ARE TO A.H.D.
4. EXISTING SERVICES - External Works
   THE LOCATIONS OF ALL EXISTING SERVICES HAVE BEEN CONFIRMED BY VACUUM EXCAVATIONS AND SURVEY. THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCING SHALL CONFIRM THE LOCATION OF ALL SERVICES AND REPORT ANY DISCREPANCIES TO THE SUPERINTENDENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT AUTHORITIES AND TO ENSURE THAT THE EXISTING SERVICES ARE NOT DAMAGED OR DISTURBED IN ANY WAY.
   a. ALL MATERIALS ARISING FROM ROADS AND SERVICES ARE TO BE COMPACTED TO FUTURE STAGES, TO LEVEL 1 OR IF DIRECTED BY THE SUPERINTENDENT SHALL BE TRUCKED TO A LICENSED TIP.
   b. CONTRACTOR IS RESPONSIBLE TO ENSURE ANY ELECTRONIC DATA FILES MATCH THE DRAWINGS
5. SITE ARRANGEMENTS
   a. HOURS OF WORKS ARE TO BE IN 7:00am TO 6:00pm MONDAY - FRIDAY, 8:00am TO 5:00pm SATURDAY, NO WORK SUNDAYS OR PUBLIC HOLIDAYS.
   b. COMPLAINTS ARE TO BE REGISTERED AND DEALT WITH PROMPTLY IN A PROFESSIONAL MANNER.
   c. COMMUNITY LIAISON – DETAILS OF THE CONTACT PERSON AND TELEPHONE NUMBER SHALL BE CLEARLY DISPLAYED AT THE SITE ENTRY. A SIGN IS TO BE ERECTED AT THE ENTRY OF THE SITE TO CLEARLY ADVISE THE COMMUNITY LIAISON OFFICER'S DETAILS AND CONTACT NUMBER. THESE DETAILS ARE TO BE DOCUMENTED IN THE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN.
6. SAFETY MANAGEMENT
   PRIOR TO THE COMMENCEMENT OF WORKS, A SITE-SPECIFIC SAFETY MANAGEMENT PLAN AND SAFE WORK METHODS FOR THE SUBJECT SITE HAVE BEEN PREPARED AND PUT IN PLACE IN ACCORDANCE WITH TWEED SHIRE COUNCIL GUIDELINES.
7. ABORIGINAL HERITAGE
   ABORIGINAL CULTURAL HERITAGE PROGRAM – RECORDS ARE TO BE KEPT OF WHICH STAFF / CONTRACTORS WERE INDUCTED UNDER THE ABORIGINAL CULTURAL HERITAGE PROGRAM FOR THE DURATION OF THE PROJECT.

EARTHWORKS/ROADWORKS

1. PAVEMENT
   a. BEFORE THE COMMENCEMENT OF THE RELEVANT STAGES OF ROAD CONSTRUCTION, PAVEMENT DESIGN DETAIL INCLUDING REPORTS FROM A REGISTERED NATA CONSULTANT SHALL BE SUBMITTED TO PRINCIPAL CERTIFIED FOR APPROVAL AND DEMONSTRATING.
   b. UPON RECEIPT OF THE CRB RESULTS THE ENGINEER HAS DESIGNED THE PAVEMENT IN ACCORDANCE WITH COUNCIL'S DEVELOPMENT DESIGN SPECIFICATION, D2.
   c. THE PAVEMENT MATERIALS TO BE USED, MUST COMPLY WITH THE SPECIFICATIONS TABLED IN TWEED SHIRE COUNCILS CONSTRUCTION SPECIFICATIONS, C242-C245, C247, C248 AND C255 (AS IN FORCE AT THE DATE OF THIS APPROVAL).
   d. THAT SITE FILL AREAS MUST BE COMPACTED TO THE SPECIFIED STANDARD.
   e. THAT SUPERVISION OF BULK EARTHWORKS MUST BE TO LEVEL 1 AND FREQUENCY OF FIELD DENSITY TESTING COMPLETED IN ACCORDANCE WITH TABLE 8.1 OF AS 3798-2007. DURING THE RELEVANT STAGES OF ROAD CONSTRUCTION, TESTS SHALL BE UNDERTAKEN BY A REGISTERED NATA GEOTECHNICAL FIRM. A REPORT INCLUDING COPIES OF TEST RESULTS SHALL BE SUBMITTED TO THE PRINCIPAL CERTIFIER PRIOR TO THE PLACEMENT OF THE WEARING SURFACE DEMONSTRATING:
      - THAT THE PAVEMENT LAYERS HAVE BEEN COMPACTED IN ACCORDANCE WITH COUNCIL'S DEVELOPMENT DESIGN AND CONSTRUCTION SPECIFICATIONS. (AS IN FORCE AT THE DATE OF THIS APPROVAL).
      - THAT PAVEMENT TESTING HAS BEEN COMPLETED IN ACCORDANCE WITH TABLE 8.1 OF AS 3798 INCLUDING THE PROVISION OF A CORE PROFILE FOR THE FULL DEPTH OF THE PAVEMENT.
   f. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).

C

2. SOILS
   ALL WORKS THAT INVOLVE THE DISTURBANCE OF SOILS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED ACID SULFATE MANAGEMENT PLAN, AS REQUIRED BY CONDITION 17 OF MP08_0194.
3. MAINTAIN WORKS
   a. THE SURROUNDING ROAD CARRIAGEWAYS ARE TO BE KEPT CLEAN OF ANY MATERIAL CARRIED ONTO THE ROADWAY BY CONSTRUCTION VEHICLES. ANY WORK CARRIED OUT BY COUNCIL TO REMOVE MATERIAL FROM THE ROADWAY WILL BE TAKEN OUT OF THE 1% COMPLIANCE BOND.
   b. COMPULSORY INSPECTIONS ARE REQUIRED THROUGHOUT THE WORKS AS PER CONDITION 88 OF MP08_0194.

CONSTRUCTION SEQUENCE/SILT MANAGEMENT PROGRAM

1. CONSTRUCTION - NOISE
   CONSTRUCTION NOISE MANAGEMENT SHALL COMPLY WITH THE APPROVED NOISE AND VIBRATION MANAGEMENT PLAN AND CONDITIONS 79 & 80 OF MP08_0194.
2. CONSTRUCTION - SEDIMENT
   EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND CONDITION 78 OF MP08_0194.
3. CONSTRUCTION - MACHINERY
   THE USE OF CRUSHING PLANT MACHINERY, MECHANICAL SCREENING OR MECHANICAL BLENDING OF MATERIALS IS NOT APPROVED. SEPARATE APPROVAL MUST BE OBTAINED FOR ANY SUCH USE OF THE SITE.

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PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	13-11-19	
CONSTRUCTION	"	

PRE	DATE	AMENDMENT
B	01-09-21	NOTES AMENDED
A	11-07-19	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

GENERAL NOTES

CONSTRUCTION ISSUE

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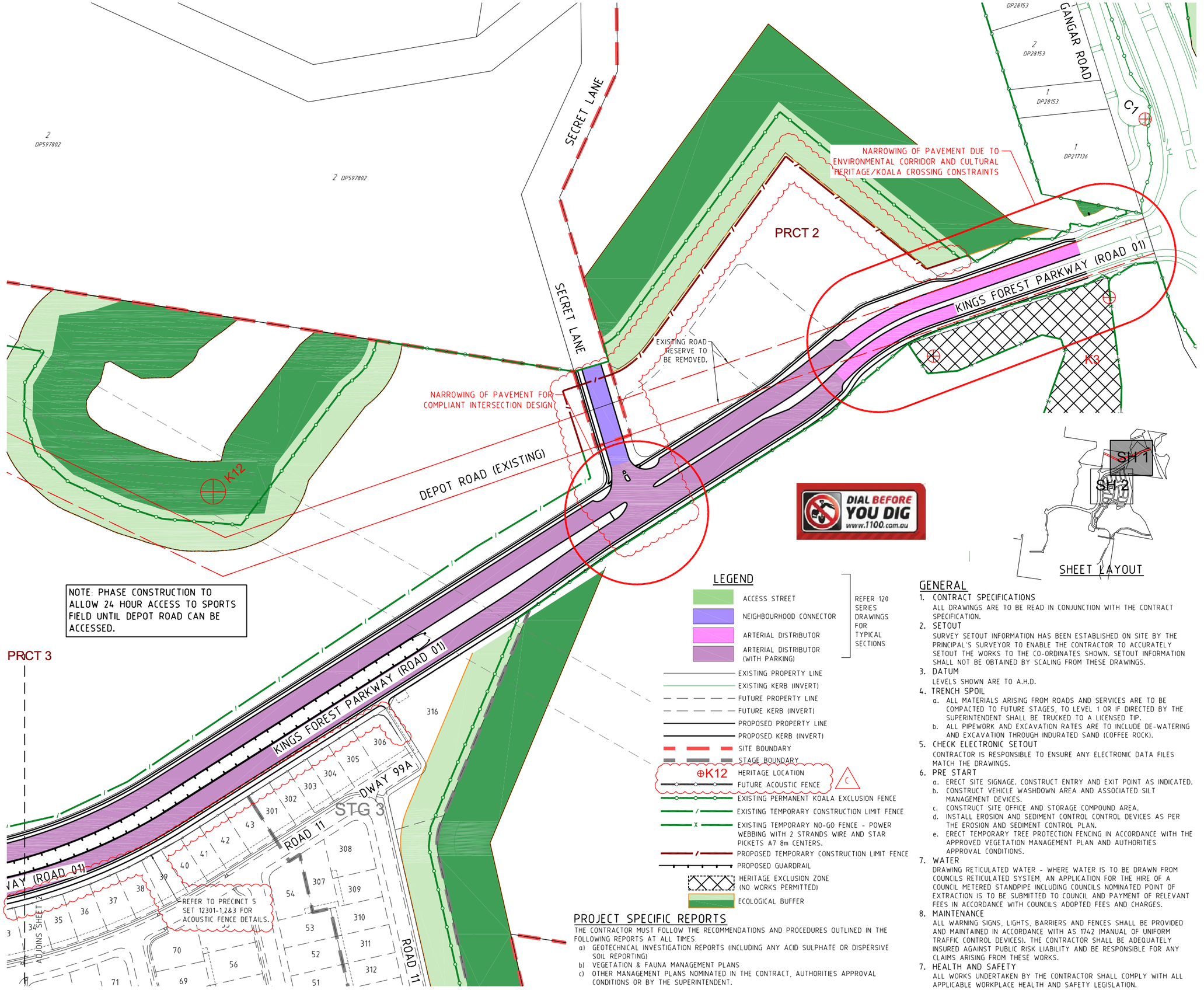

LEGEND

- ACCESS STREET
- NEIGHBOURHOOD CONNECTOR
- ARTERIAL DISTRIBUTOR
- ARTERIAL DISTRIBUTOR (WITH PARKING)

REFER 120 SERIES DRAWINGS FOR TYPICAL SECTIONS

- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- FUTURE PROPERTY LINE
- FUTURE KERB (INVERT)
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- SITE BOUNDARY
- STAGE BOUNDARY
- ⊕K12 HERITAGE LOCATION
- FUTURE ACOUSTIC FENCE (C)
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS A7 8m CENTERS.
- PROPOSED TEMPORARY CONSTRUCTION LIMIT FENCE
- PROPOSED GUARDRAIL
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER

PROJECT SPECIFIC REPORTS

THE CONTRACTOR MUST FOLLOW THE RECOMMENDATIONS AND PROCEDURES OUTLINED IN THE FOLLOWING REPORTS AT ALL TIMES.

a) GEOTECHNICAL INVESTIGATION REPORTS (INCLUDING ANY ACID SULPHATE OR DISPERSIVE SOIL REPORTING)
b) VEGETATION & FAUNA MANAGEMENT PLANS
c) OTHER MANAGEMENT PLANS NOMINATED IN THE CONTRACT, AUTHORITIES APPROVAL CONDITIONS OR BY THE SUPERINTENDENT.

GENERAL

1. CONTRACT SPECIFICATIONS
   ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION.
2. SETOUT
   SURVEY SETOUT INFORMATION HAS BEEN ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR TO ENABLE THE CONTRACTOR TO ACCURATELY SETOUT THE WORKS TO THE CO-ORDINATES SHOWN. SETOUT INFORMATION SHALL NOT BE OBTAINED BY SCALING FROM THESE DRAWINGS.
3. DATUM
   LEVELS SHOWN ARE TO A.H.D.
4. TRENCH SPOIL
   a. ALL MATERIALS ARISING FROM ROADS AND SERVICES ARE TO BE COMPACTED TO FUTURE STAGES, TO LEVEL 1 OR IF DIRECTED BY THE SUPERINTENDENT SHALL BE TRUCKED TO A LICENSED TIP.
   b. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
5. CHECK ELECTRONIC SETOUT
   CONTRACTOR IS RESPONSIBLE TO ENSURE ANY ELECTRONIC DATA FILES MATCH THE DRAWINGS.
6. PRE START
   a. ERECT SITE SIGNAGE. CONSTRUCT ENTRY AND EXIT POINT AS INDICATED.
   b. CONSTRUCT VEHICLE WASHDOWN AREA AND ASSOCIATED SILT MANAGEMENT DEVICES.
   c. CONSTRUCT SITE OFFICE AND STORAGE COMPOUND AREA.
   d. INSTALL EROSION AND SEDIMENT CONTROL CONTROL DEVICES AS PER THE EROSION AND SEDIMENT CONTROL PLAN.
   e. ERECT TEMPORARY TREE PROTECTION FENCING IN ACCORDANCE WITH THE APPROVED VEGETATION MANAGEMENT PLAN AND AUTHORITIES APPROVAL CONDITIONS.
7. WATER
   DRAWING RETICULATED WATER - WHERE WATER IS TO BE DRAWN FROM COUNCILS RETICULATED SYSTEM, AN APPLICATION FOR THE HIRE OF A COUNCIL METERED STANDPIPE INCLUDING COUNCILS NOMINATED POINT OF EXTRACTION IS TO BE SUBMITTED TO COUNCIL AND PAYMENT OF RELEVANT FEES IN ACCORDANCE WITH COUNCILS ADOPTED FEES AND CHARGES.
8. MAINTENANCE
   ALL WARNING SIGNS, LIGHTS, BARRIERS AND FENCES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH AS 1742 (MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES). THE CONTRACTOR SHALL BE ADEQUATELY INSURED AGAINST PUBLIC RISK LIABILITY AND BE RESPONSIBLE FOR ANY CLAIMS ARISING FROM THESE WORKS.
7. HEALTH AND SAFETY
   ALL WORKS UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE WORKPLACE HEALTH AND SAFETY LEGISLATION.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	05-07-21	LEGEND, ROAD LAYOUT AND FENCE AMENDED
B	25-02-21	LEGEND AND GUARD RAIL ADDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROAD HIERARCHY AND STAGING PLAN SHEET 1

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 16-11-18

DRAWING NUMBER: 12301-KFP1-005
AMEND.: C

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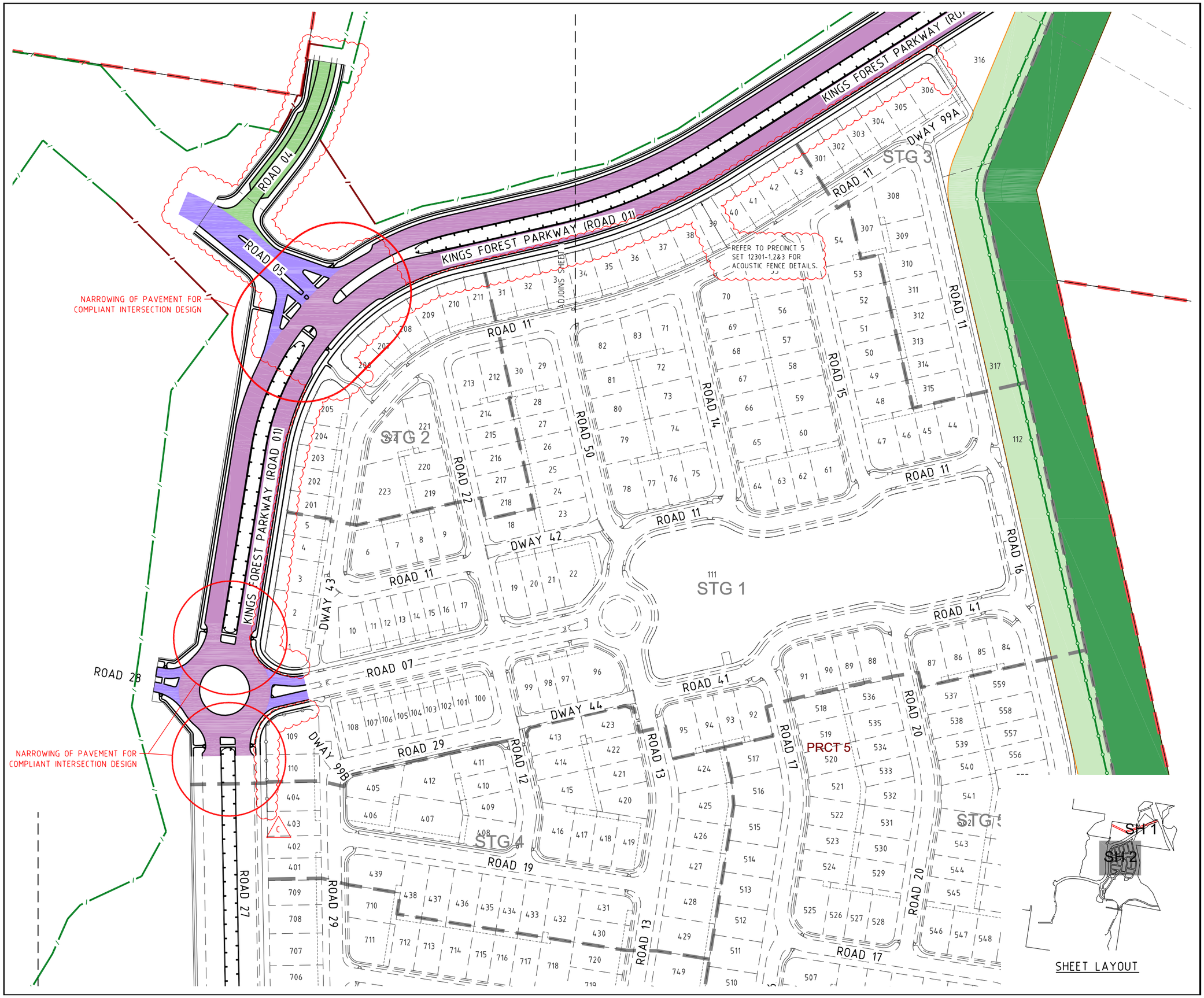

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
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Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 10 20 30 40 50m

Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	06-07-21	FENCE AND ROAD LAYOUT ADDED
B	19-02-21	GUARDRAIL ADDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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GILBERT SUTHERLAND

DRAWING TITLE

ROAD HIERARCHY
AND STAGING PLAN
SHEET 2

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 16-11-18

DRAWING NUMBER	AMEND.
12301-KFP1-006	C

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING KOALA EXCLUSION FENCE
- EXISTING TEMPORARY FENCE
- EXISTING TEMPORARY NO-GO FENCE
- FUTURE ACOUSTIC FENCE
- MAINTAIN EXISTING FENCE ON DEPOT ROAD
- PROPOSED TEMPORARY FENCE
- EXISTING ACCESS TRACK BOUNDARY
- REMOVE AND RELOCATE EXISTING FENCE IN KINGS FOREST PARKWAY
- ACCESS GATE IN ACCORDANCE WITH TSC STD DWG S.D.020
- K12 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER

B

SECTIONS IN THE AREA OF THE ECOLOGICAL BUFFER SHOULD BE CONSTRUCTED IN ACCORDANCE WITH THE CIVIL CONSTRUCTION DRAWINGS AND JWA ECOLOGICAL CONSULTANTS SPECIFICATIONS.

JWA PTY LTD Ecological Consultants

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 20 40 60 80 100m
Scale 1:2000 - A1 (1:4000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	xx-xx-xx	
CONSTRUCTION	..	

B	05-07-21	LEGEND, FENCE AND LINETYPE AMENDED
A	07-02-19	PRELIMINARY CLIENT ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

FENCING PLAN

CONSTRUCTION ISSUE

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DRAWING NUMBER	AMEND.
12301-KFP1-010	B

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PRCT 2

EXTINGUISH AND REMOVE ROAD RESERVE, FENCE AND EXISTING SERVICES OFF SITE.

EXISTING 3 BAYS OF KOALA SCRATCH PANELS TO BE LOWERED TO STANDARD POSITION TO PREVENT FROG ACCESS.

TIE ROAD INTO PERMANENT KOALA GRID.

REMOVE TEMPORARY FENCE TO ALLOW FOR CONSTRUCTION OF ROAD

HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED).

PRCT 3

STG 3

ADJOINS SHEET 2

K12

K3

DP28153

DP217136

2 DP597802

LEGEND

- EXISTING PROPERTY LINE
- EXISTING KERB
- FUTURE PROPERTY LINE
- EXISTING FOOTPATH
- SW — EXISTING STORMWATER
- W — W — EXISTING WATER
- 1.0 — EXISTING CONTOURS MAJOR (mAHD)
- 1.5 — EXISTING CONTOURS MINOR (mAHD)
- SITE BOUNDARY
- PRECINCT BOUNDARY
- STAGE BOUNDARY
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- / EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- X EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS A7 8m CENTERS.
- PROPOSED TEMPORARY CONSTRUCTION LIMIT FENCE
- C ⊕ K12 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER

DIAL BEFORE YOU DIG www.1100.com.au

NOTE:
CONTRACTOR TO MAKE ALL NECESSARY ALLOWANCES FOR EXISTING SERVICES DURING BULK EARTHWORKS EXCAVATION.

SH 1 SH 4 SH 2 SH 3

SHEET LAYOUT

GENERAL

1. EXISTING SERVICES - EXTERNAL WORKS
   THE LOCATIONS OF ALL EXISTING SERVICES WITHIN THE WORK AREA SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT AUTHORITIES AND TO ENSURE THAT THE EXISTING SERVICES ARE NOT DAMAGED OR DISTURBED IN ANY WAY.
2. EXISTING STRUCTURES -
   ALL EXISTING STRUCTURES AND ASSOCIATED INFRASTRUCTURE TO BE REMOVED AND DISPOSED OF OFF SITE.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	05-07-21	LEGEND AMENDED
B	12-10-20	LEGEND AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

EXISTING FEATURES PLAN SHEET 1

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-020	C

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PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	12-10-20	FENCING AND NOTE AMENDED
A	14-11-19	COUNCIL ISSUE

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EXISTING FEATURES
PLAN
SHEET 2

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DRAWING NUMBER	AMEND.
12301-KFP1-021	B

SHEET LAYOUT

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SHEET LAYOUT

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 10 20 30 40 50m

Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

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EXISTING FEATURES
PLAN
SHEET 3

CONSTRUCTION ISSUE

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DRAWING NUMBER	AMEND.
12301-KFP1-022	A

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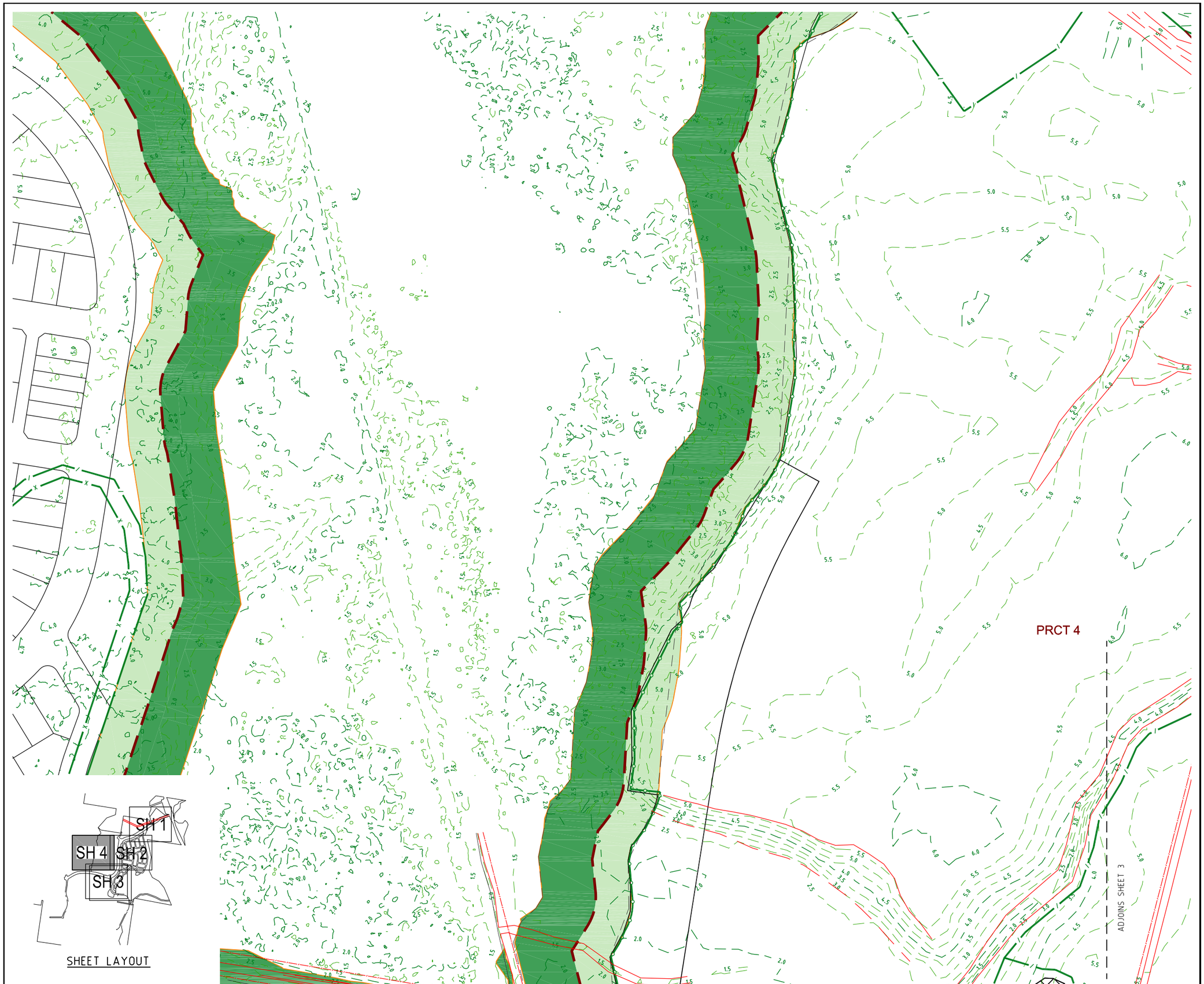

SHEET LAYOUT

PROJECT NAME

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PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	14-11-19	COUNCIL ISSUE

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DRAWING TITLE

EXISTING FEATURES
PLAN
SHEET 4

CONSTRUCTION ISSUE

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DRAWING NUMBER 12301-KFP1-023
AMEND. A

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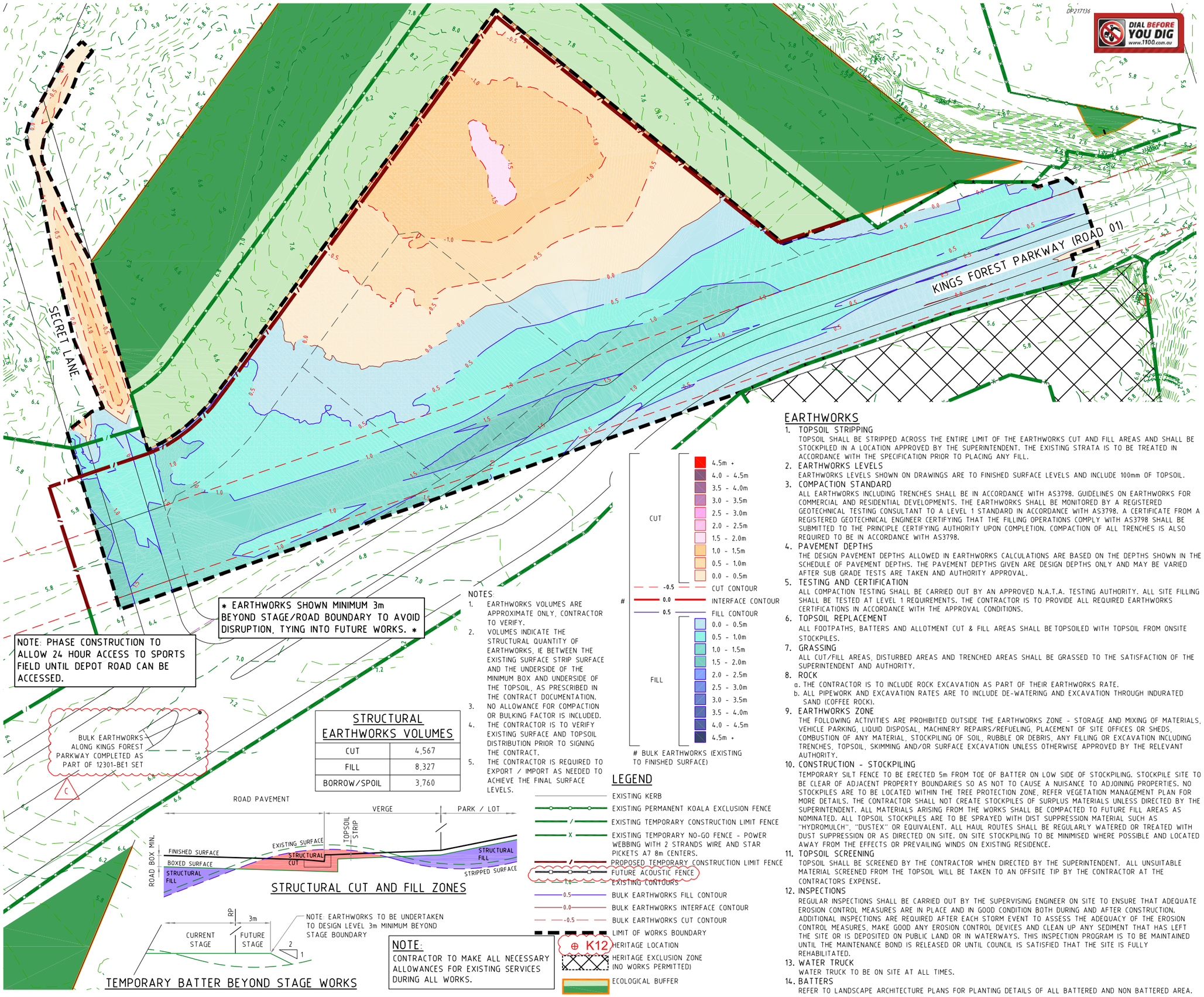

NOTES:

1. EARTHWORKS VOLUMES ARE APPROXIMATE ONLY, CONTRACTOR TO VERIFY.
2. VOLUMES INDICATE THE STRUCTURAL QUANTITY OF EARTHWORKS, IE BETWEEN THE EXISTING SURFACE STRIP SURFACE AND THE UNDERSIDE OF THE MINIMUM BOX AND UNDERSIDE OF THE TOPSOIL, AS PRESCRIBED IN THE CONTRACT DOCUMENTATION.
3. NO ALLOWANCE FOR COMPACTION OR BULKING FACTOR IS INCLUDED.
4. THE CONTRACTOR IS TO VERIFY EXISTING SURFACE AND TOPSOIL DISTRIBUTION PRIOR TO SIGNING THE CONTRACT.
5. THE CONTRACTOR IS REQUIRED TO EXPORT / IMPORT AS NEEDED TO ACHIEVE THE FINAL SURFACE LEVELS.

STRUCTURAL EARTHWORKS VOLUMES

CUT	4,567
FILL	8,327
BORROW/SPOIL	3,760

STRUCTURAL CUT AND FILL ZONES

TEMPORARY BATTER BEYOND STAGE WORKS

NOTE:
CONTRACTOR TO MAKE ALL NECESSARY ALLOWANCES FOR EXISTING SERVICES DURING ALL WORKS.

LEGEND

- EXISTING KERB
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS A7 8m CENTERS.
- PROPOSED TEMPORARY CONSTRUCTION LIMIT FENCE
- FUTURE ACOUSTIC FENCE
- 1.0 EXISTING CONTOURS
- 0.5 BULK EARTHWORKS FILL CONTOUR
- 0.0 BULK EARTHWORKS INTERFACE CONTOUR
- -0.5 BULK EARTHWORKS CUT CONTOUR
- LIMIT OF WORKS BOUNDARY
- ⊕ K12 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER

EARTHWORKS

1. TOPSOIL STRIPPING
   TOPSOIL SHALL BE STRIPPED ACROSS THE ENTIRE LIMIT OF THE EARTHWORKS CUT AND FILL AREAS AND SHALL BE STOCKPILED IN A LOCATION APPROVED BY THE SUPERINTENDENT. THE EXISTING STRATA IS TO BE TREATED IN ACCORDANCE WITH THE SPECIFICATION PRIOR TO PLACING ANY FILL.
2. EARTHWORKS LEVELS
   EARTHWORKS LEVELS SHOWN ON DRAWINGS ARE TO FINISHED SURFACE LEVELS AND INCLUDE 100mm OF TOPSOIL.
3. COMPACTION STANDARD
   ALL EARTHWORKS INCLUDING TRENCHES SHALL BE IN ACCORDANCE WITH AS3798. GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS. THE EARTHWORKS SHALL BE MONITORED BY A REGISTERED GEOTECHNICAL TESTING CONSULTANT TO A LEVEL 1 STANDARD IN ACCORDANCE WITH AS3798. A CERTIFICATE FROM A REGISTERED GEOTECHNICAL ENGINEER CERTIFYING THAT THE FILLING OPERATIONS COMPLY WITH AS3798 SHALL BE SUBMITTED TO THE PRINCIPLE CERTIFYING AUTHORITY UPON COMPLETION. COMPACTION OF ALL TRENCHES IS ALSO REQUIRED TO BE IN ACCORDANCE WITH AS3798.
4. PAVEMENT DEPTHS
   THE DESIGN PAVEMENT DEPTHS ALLOWED IN EARTHWORKS CALCULATIONS ARE BASED ON THE DEPTHS SHOWN IN THE SCHEDULE OF PAVEMENT DEPTHS. THE PAVEMENT DEPTHS GIVEN ARE DESIGN DEPTHS ONLY AND MAY BE VARIED AFTER SUB GRADE TESTS ARE TAKEN AND AUTHORITY APPROVAL.
5. TESTING AND CERTIFICATION
   ALL COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A. TESTING AUTHORITY. ALL SITE FILLING SHALL BE TESTED AT LEVEL 1 REQUIREMENTS. THE CONTRACTOR IS TO PROVIDE ALL REQUIRED EARTHWORKS CERTIFICATIONS IN ACCORDANCE WITH THE APPROVAL CONDITIONS.
6. TOPSOIL REPLACEMENT
   ALL FOOTPATHS, BATTERS AND ALLOTMENT CUT & FILL AREAS SHALL BE TOPSOILED WITH TOPSOIL FROM ONSITE STOCKPILES.
7. GRASSING
   ALL CUT/FILL AREAS, DISTURBED AREAS AND TRENCHED AREAS SHALL BE GRASSED TO THE SATISFACTION OF THE SUPERINTENDENT AND AUTHORITY.
8. ROCK
   a. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR EARTHWORKS RATE.
   b. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
9. EARTHWORKS ZONE
   THE FOLLOWING ACTIVITIES ARE PROHIBITED OUTSIDE THE EARTHWORKS ZONE - STORAGE AND MIXING OF MATERIALS, VEHICLE PARKING, LIQUID DISPOSAL, MACHINERY REPAIRS/REFUELING, PLACEMENT OF SITE OFFICES OR SHEDS, COMBUSTION OF ANY MATERIAL, STOCKPILING OF SOIL, RUBBLE OR DEBRIS, ANY FILLING OR EXCAVATION INCLUDING TRENCHES, TOPSOIL, SKIMMING AND/OR SURFACE EXCAVATION UNLESS OTHERWISE APPROVED BY THE RELEVANT AUTHORITY.
10. CONSTRUCTION - STOCKPILING
    TEMPORARY SILT FENCE TO BE ERECTED 5m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING. STOCKPILE SITE TO BE CLEAR OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE A NUISANCE TO ADJOINING PROPERTIES. NO STOCKPILES ARE TO BE LOCATED WITHIN THE TREE PROTECTION ZONE, REFER VEGETATION MANAGEMENT PLAN FOR MORE DETAILS. THE CONTRACTOR SHALL NOT CREATE STOCKPILES OF SURPLUS MATERIALS UNLESS DIRECTED BY THE SUPERINTENDENT. ALL MATERIALS ARISING FROM THE WORKS SHALL BE COMPACTED TO FUTURE FILL AREAS AS NOMINATED. ALL TOPSOIL STOCKPILES ARE TO BE SPRAYED WITH DIST SUPPRESSION MATERIAL SUCH AS "HYDROMULCH", "DUSTEX" OR EQUIVALENT. ALL HAUL ROUTES SHALL BE REGULARLY WATERED OR TREATED WITH DUST SUPPRESSION OR AS DIRECTED ON SITE. ON SITE STOCKPILING TO BE MINIMISED WHERE POSSIBLE AND LOCATED AWAY FROM THE EFFECTS OR PREVAILING WINDS ON EXISTING RESIDENCE.
11. TOPSOIL SCREENING
    TOPSOIL SHALL BE SCREENED BY THE CONTRACTOR WHEN DIRECTED BY THE SUPERINTENDENT. ALL UNSUITABLE MATERIAL SCREENED FROM THE TOPSOIL WILL BE TAKEN TO AN OFFSITE TIP BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE.
12. INSPECTIONS
    REGULAR INSPECTIONS SHALL BE CARRIED OUT BY THE SUPERVISING ENGINEER ON SITE TO ENSURE THAT ADEQUATE EROSION CONTROL MEASURES ARE IN PLACE AND IN GOOD CONDITION BOTH DURING AND AFTER CONSTRUCTION. ADDITIONAL INSPECTIONS ARE REQUIRED AFTER EACH STORM EVENT TO ASSESS THE ADEQUACY OF THE EROSION CONTROL MEASURES, MAKE GOOD ANY EROSION CONTROL DEVICES AND CLEAN UP ANY SEDIMENT THAT HAS LEFT THE SITE OR IS DEPOSITED ON PUBLIC LAND OR IN WATERWAYS. THIS INSPECTION PROGRAM IS TO BE MAINTAINED UNTIL THE MAINTENANCE BOND IS RELEASED OR UNTIL COUNCIL IS SATISFIED THAT THE SITE IS FULLY REHABILITATED.
13. WATER TRUCK
    WATER TRUCK TO BE ON SITE AT ALL TIMES.
14. BATTERS
    REFER TO LANDSCAPE ARCHITECTURE PLANS FOR PLANTING DETAILS OF ALL BATTERED AND NON BATTERED AREA.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	05-07-21	LEGEND AND NOTE AMENDED
B	25-02-21	LEGEND AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

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GILBERT SUTHERLAND

DRAWING TITLE

BULK EARTHWORKS
CUT FILL
PLAN
SHEET 1

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 27-11-18

DRAWING NUMBER 12301-KFP1-040
AMEND. C

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* EARTHWORKS SHOWN MINIMUM 3m BEYOND STAGE/ROAD BOUNDARY TO AVOID DISRUPTION, TYING INTO FUTURE WORKS. *

NOTE: PHASE CONSTRUCTION TO ALLOW 24 HOUR ACCESS TO SPORTS FIELD UNTIL DEPOT ROAD CAN BE ACCESSED.

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STRUCTURAL EARTHWORKS VOLUMES

CUT	2,745
FILL	712
BORROW/SPOIL	2,033

1 DP397082

ROAD 04

ROAD 05

KINGS FOREST PARKWAY (ROAD 01)

BULK EARTHWORKS ALONG KINGS FOREST PARKWAY COMPLETED AS PART OF 12301-BE1 SET

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	05-07-21	CUT AND FILL, NOTE AND FENCE ADDED
A	12-10-20	COUNCIL ISSUE

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DRAWING TITLE

BULK EARTHWORKS
CUT FILL
PLAN
SHEET 2

CONSTRUCTION ISSUE

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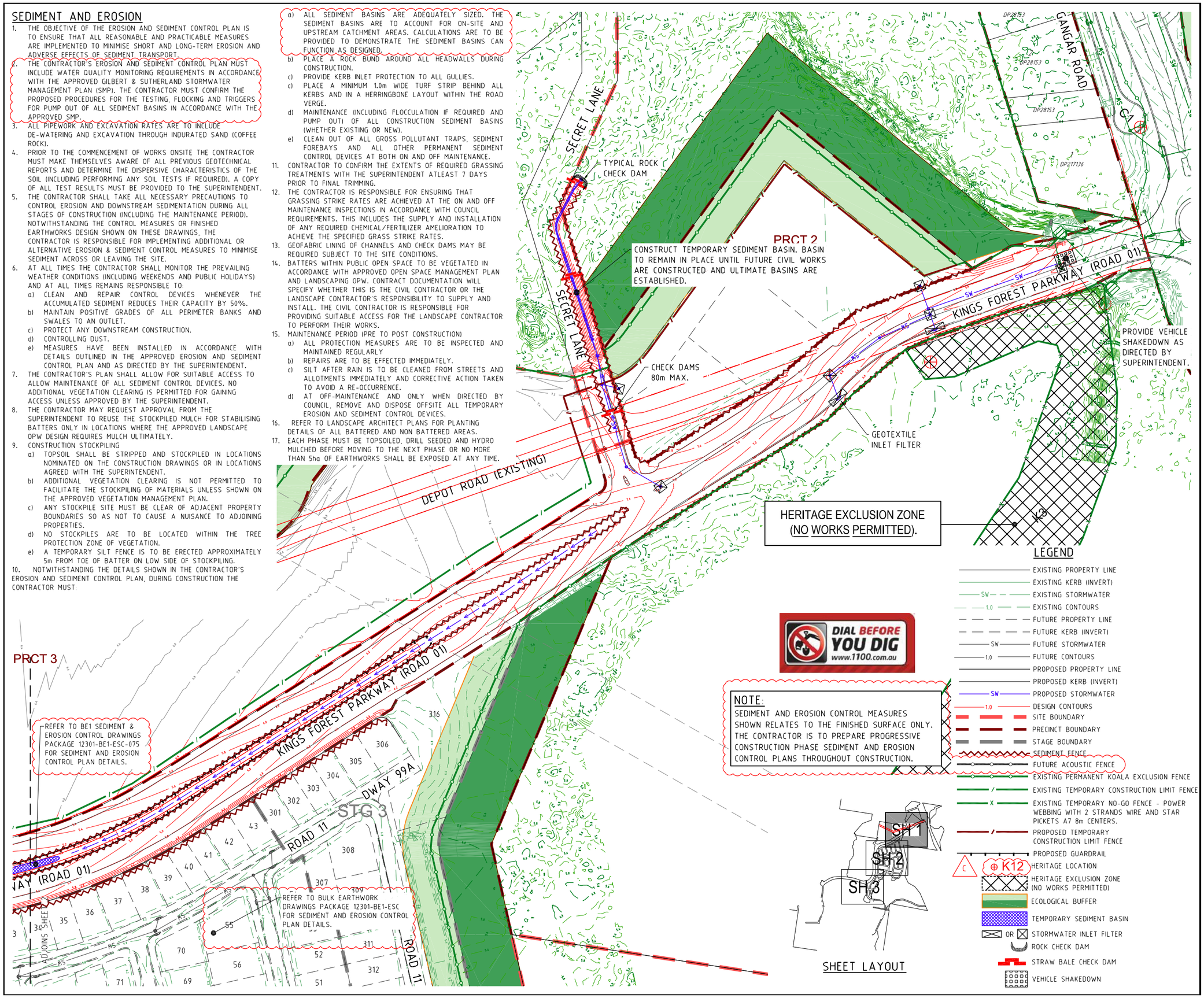
SEDIMENT AND EROSION

1. THE OBJECTIVE OF THE EROSION AND SEDIMENT CONTROL PLAN IS TO ENSURE THAT ALL REASONABLE AND PRACTICABLE MEASURES ARE IMPLEMENTED TO MINIMISE SHORT AND LONG-TERM EROSION AND ADVERSE EFFECTS OF SEDIMENT TRANSPORT.
2. THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN MUST INCLUDE WATER QUALITY MONITORING REQUIREMENTS IN ACCORDANCE WITH THE APPROVED GILBERT & SUTHERLAND STORMWATER MANAGEMENT PLAN (SMP). THE CONTRACTOR MUST CONFIRM THE PROPOSED PROCEDURES FOR THE TESTING, FLOCKING AND TRIGGERS FOR PUMP OUT OF ALL SEDIMENT BASINS IN ACCORDANCE WITH THE APPROVED SMP.
3. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
4. PRIOR TO THE COMMENCEMENT OF WORKS ONSITE THE CONTRACTOR MUST MAKE THEMSELVES AWARE OF ALL PREVIOUS GEOTECHNICAL REPORTS AND DETERMINE THE DISPERSIVE CHARACTERISTICS OF THE SOIL (INCLUDING PERFORMING ANY SOIL TESTS IF REQUIRED). A COPY OF ALL TEST RESULTS MUST BE PROVIDED TO THE SUPERINTENDENT.
5. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION (INCLUDING THE MAINTENANCE PERIOD). NOTWITHSTANDING THE CONTROL MEASURES OR FINISHED EARTHWORKS DESIGN SHOWN ON THESE DRAWINGS, THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING ADDITIONAL OR ALTERNATIVE EROSION & SEDIMENT CONTROL MEASURES TO MINIMISE SEDIMENT ACROSS OR LEAVING THE SITE.
6. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS (INCLUDING WEEKENDS AND PUBLIC HOLIDAYS) AND AT ALL TIMES REMAINS RESPONSIBLE TO:
   a) CLEAN AND REPAIR CONTROL DEVICES WHENEVER THE ACCUMULATED SEDIMENT REDUCES THEIR CAPACITY BY 50%.
   b) MAINTAIN POSITIVE GRADES OF ALL PERIMETER BANKS AND SWALES TO AN OUTLET.
   c) PROTECT ANY DOWNSTREAM CONSTRUCTION.
   d) CONTROLLING DUST.
   e) MEASURES HAVE BEEN INSTALLED IN ACCORDANCE WITH DETAILS OUTLINED IN THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND AS DIRECTED BY THE SUPERINTENDENT.
7. THE CONTRACTOR'S PLAN SHALL ALLOW FOR SUITABLE ACCESS TO ALLOW MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. NO ADDITIONAL VEGETATION CLEARING IS PERMITTED FOR GAINING ACCESS UNLESS APPROVED BY THE SUPERINTENDENT.
8. THE CONTRACTOR MAY REQUEST APPROVAL FROM THE SUPERINTENDENT TO REUSE THE STOCKPILED MULCH FOR STABILISING BATTERS ONLY IN LOCATIONS WHERE THE APPROVED LANDSCAPE OPW DESIGN REQUIRES MULCH ULTIMATELY.
9. CONSTRUCTION STOCKPILING
   a) TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN LOCATIONS NOMINATED ON THE CONSTRUCTION DRAWINGS OR IN LOCATIONS AGREED WITH THE SUPERINTENDENT.
   b) ADDITIONAL VEGETATION CLEARING IS NOT PERMITTED TO FACILITATE THE STOCKPILING OF MATERIALS UNLESS SHOWN ON THE APPROVED VEGETATION MANAGEMENT PLAN.
   c) ANY STOCKPILE SITE MUST BE CLEAR OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE A NUISANCE TO ADJOINING PROPERTIES.
   d) NO STOCKPILES ARE TO BE LOCATED WITHIN THE TREE PROTECTION ZONE OF VEGETATION.
   e) A TEMPORARY SILT FENCE IS TO BE ERECTED APPROXIMATELY 5m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING.
10. NOTWITHSTANDING THE DETAILS SHOWN IN THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN, DURING CONSTRUCTION THE CONTRACTOR MUST:
   a) ALL SEDIMENT BASINS ARE ADEQUATELY SIZED. THE SEDIMENT BASINS ARE TO ACCOUNT FOR ON-SITE AND UPSTREAM CATCHMENT AREAS. CALCULATIONS ARE TO BE PROVIDED TO DEMONSTRATE THE SEDIMENT BASINS CAN FUNCTION AS DESIGNED.
   b) PLACE A ROCK BUND AROUND ALL HEADWALLS DURING CONSTRUCTION.
   c) PROVIDE KERB INLET PROTECTION TO ALL GULLIES.
   c) PLACE A MINIMUM 1.0m WIDE TURF STRIP BEHIND ALL KERBS AND IN A HERRINGBONE LAYOUT WITHIN THE ROAD VERGE.
   d) MAINTENANCE (INCLUDING FLOCCULATION IF REQUIRED AND PUMP OUT) OF ALL CONSTRUCTION SEDIMENT BASINS (WHETHER EXISTING OR NEW).
   e) CLEAN OUT OF ALL GROSS POLLUTANT TRAPS, SEDIMENT FOREBAYS AND ALL OTHER PERMANENT SEDIMENT CONTROL DEVICES AT BOTH ON AND OFF MAINTENANCE.
11. CONTRACTOR TO CONFIRM THE EXTENTS OF REQUIRED GRASSING TREATMENTS WITH THE SUPERINTENDENT ATLEAST 7 DAYS PRIOR TO FINAL TRIMMING.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT GRASSING STRIKE RATES ARE ACHIEVED AT THE ON AND OFF MAINTENANCE INSPECTIONS IN ACCORDANCE WITH COUNCIL REQUIREMENTS. THIS INCLUDES THE SUPPLY AND INSTALLATION OF ANY REQUIRED CHEMICAL/FERTILIZER AMELIORATION TO ACHIEVE THE SPECIFIED GRASS STRIKE RATES.
13. GEOFABRIC LINING OF CHANNELS AND CHECK DAMS MAY BE REQUIRED SUBJECT TO THE SITE CONDITIONS.
14. BATTERS WITHIN PUBLIC OPEN SPACE TO BE VEGETATED IN ACCORDANCE WITH APPROVED OPEN SPACE MANAGEMENT PLAN AND LANDSCAPING OPW. CONTRACT DOCUMENTATION WILL SPECIFY WHETHER THIS IS THE CIVIL CONTRACTOR OR THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO SUPPLY AND INSTALL. THE CIVIL CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUITABLE ACCESS FOR THE LANDSCAPE CONTRACTOR TO PERFORM THEIR WORKS.
15. MAINTENANCE PERIOD (PRE TO POST CONSTRUCTION)
   a) ALL PROTECTION MEASURES ARE TO BE INSPECTED AND MAINTAINED REGULARLY
   b) REPAIRS ARE TO BE EFFECTED IMMEDIATELY.
   c) SILT AFTER RAIN IS TO BE CLEANED FROM STREETS AND ALLOTMENTS IMMEDIATELY AND CORRECTIVE ACTION TAKEN TO AVOID A RE-OCCURRENCE.
   d) AT OFF-MAINTENANCE AND ONLY WHEN DIRECTED BY COUNCIL, REMOVE AND DISPOSE OFFSITE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
16. REFER TO LANDSCAPE ARCHITECT PLANS FOR PLANTING DETAILS OF ALL BATTERED AND NON BATTERED AREAS.
17. EACH PHASE MUST BE TOPSOILED, DRILL SEEDED AND HYDRO MULCHED BEFORE MOVING TO THE NEXT PHASE OR NO MORE THAN 5ha OF EARTHWORKS SHALL BE EXPOSED AT ANY TIME.



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NOTE:
SEDIMENT AND EROSION CONTROL MEASURES SHOWN RELATES TO THE FINISHED SURFACE ONLY. THE CONTRACTOR IS TO PREPARE PROGRESSIVE CONSTRUCTION PHASE SEDIMENT AND EROSION CONTROL PLANS THROUGHOUT CONSTRUCTION.

SHEET LAYOUT

LEGEND

- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- EXISTING STORMWATER
- EXISTING CONTOURS
- FUTURE PROPERTY LINE
- FUTURE KERB (INVERT)
- FUTURE STORMWATER
- FUTURE CONTOURS
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- PROPOSED STORMWATER
- DESIGN CONTOURS
- SITE BOUNDARY
- PRECINCT BOUNDARY
- STAGE BOUNDARY
- SEDIMENT FENCE
- FUTURE ACOUSTIC FENCE
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS A7 8m CENTERS.
- PROPOSED TEMPORARY CONSTRUCTION LIMIT FENCE
- PROPOSED GUARDRAIL
- HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER
- TEMPORARY SEDIMENT BASIN
- STORMWATER INLET FILTER
- ROCK CHECK DAM
- STRAW BALE CHECK DAM
- VEHICLE SHAKEDOWN

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	05-07-21	LEGEND AND NOTES AMENDED
B	27-10-20	LEGEND, SURVEYAND FENCE AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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GILBERT SUTHERLAND

DRAWING TITLE
EARTHWORKS FINAL SURFACE AND SEDIMENT AND EROSION PLAN SHEET 1

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 14-11-19

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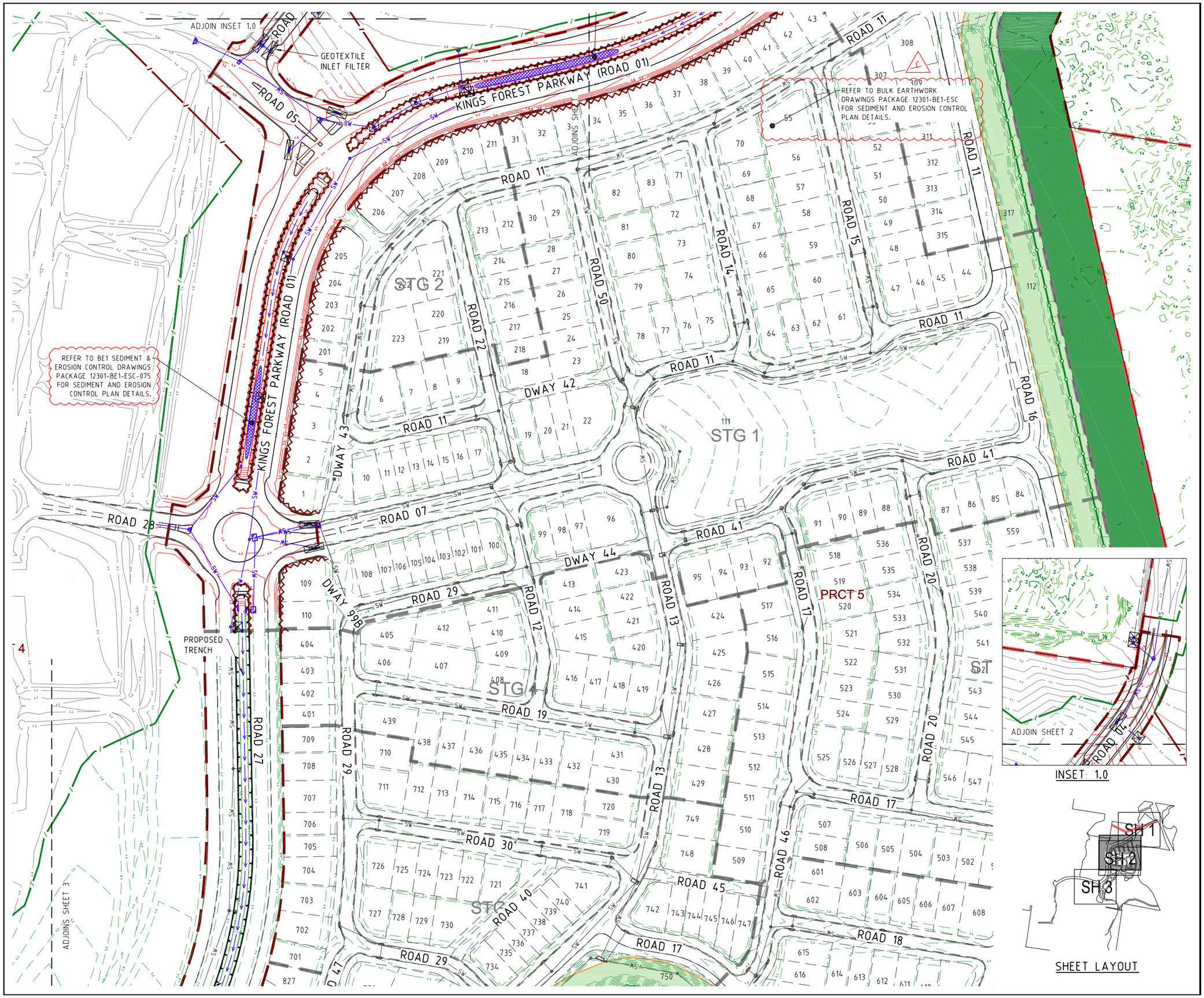

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SHEET LAYOUT

PROJECT NAME

KINGS FOREST

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PARISH OF CUDGEN ,
COUNTY OF ROUS .

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TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	"	

PRE	DATE	AMENDMENT
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B	19-02-21	STORM, CONTOURING AND FENCING AMENDED
A	14-11-19	COUNCIL ISSUE

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DRAWING TITLE

EARTHWORKS FINAL SURFACE AND SEDIMENT AND EROSION PLAN SHEET 2

CONSTRUCTION ISSUE

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APPROVED		NER	906726
DATE	14-11-19		

DRAWING NUMBER: 12301-KFP1-071
AMEND.: C

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ROAD 10
ADJOINS SHEET 2
PROPOSED TRENCH
ROAD 27
ROAD 47
ROAD 29
ROAD 13
ROAD 08
ROAD 57
ROAD 10
ROAD 09
ROAD 13
ROAD 49
ROAD 09
ROAD 13
REFER TO BULK EARTHWORK DRAWINGS PACKAGE 12301-BE1-ESC FOR SEDIMENT AND EROSION CONTROL PLAN DETAILS.
STG 10
STG9
STG8
PT 1003
PT 1003
1001
SH 1
SH 2
SH 3
SHEET LAYOUT

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
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COUNTY OF ROUS .

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PROJECT 28 PTY LTD

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Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
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CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	05-07-21	NOTE ADDED
A	14-11-19	COUNCIL ISSUE

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DRAWING TITLE

EARTHWORKS
FINAL SURFACE AND
SEDIMENT AND EROSION
PLAN
SHEET 3

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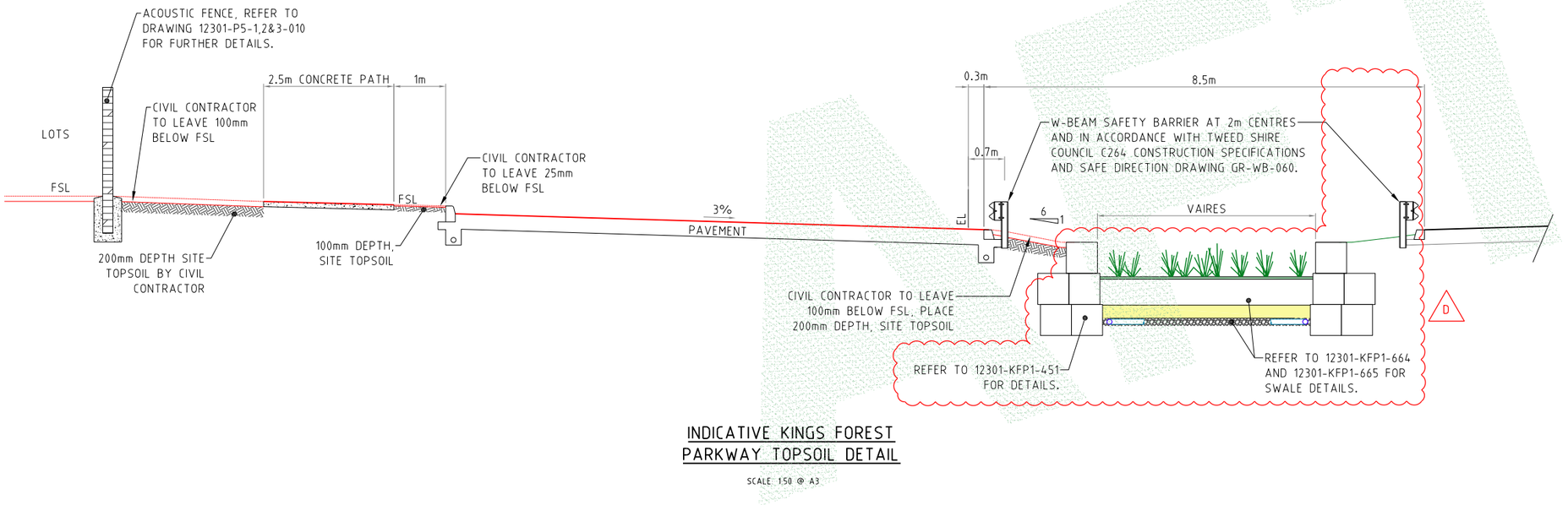

INDICATIVE KINGS FOREST PARKWAY TOPSOIL DETAIL

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PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

D	05-07-21	GUARDRAIL AND RETAINING WALL AMENDED
C	28-04-21	RETAINING WALLS AMENDED
B	10-11-20	SWALE AMENEDED
A	04-10-19	ISSUE FOR INFORMATION
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

INDICATIVE TOPSOIL DETAIL KINGS FOREST PARKWAY

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-10-19

DRAWING NUMBER	AMEND.
12301-KFP1-075	D

CONSTRUCTION SERVICES

1. CONSTRUCTION OF SEWER/ROOFWATER/STORMWATER/SERVICES
   a. EXCAVATED MATERIAL TO BE PLACED ON HIGH SIDE OF TRENCH AND TO PROTECT PIPE WORK AND DIRECT SURFACE MATERIAL AWAY FROM EXCAVATIONS.
   b. TOPSOIL AND GRASS SEED AREAS IN ALLOTMENTS IMMEDIATELY AFTER COMPLETING THE SEWER AND ROOFWATER DRAINAGE CONSTRUCTION.
   c. DEPRESS GROUND AROUND TEMPORARY FIELD INLETS TO CREATE SILT POND.
   b. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
2. TRIP HAZARD
   MANHOLES OR STRUCTURES INSTALLED IN THE ROAD, FOOTPATH OR VERGE MUST MATCH NEATLY WITH NO TRIP HAZARD.
3. EXISTING SERVICES - EXTERNAL WORKS
   THE LOCATIONS OF ALL EXISTING SERVICES WITHIN THE WORK AREA SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT AUTHORITIES AND TO ENSURE THAT THE EXISTING SERVICES ARE NOT DAMAGED OR DISTURBED IN ANY WAY.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- EXISTING FOOTPATH
- EXISTING STORMWATER
- EXISTING WATER MAIN
- FUTURE PROPERTY LINE
- FUTURE KERB (INVERT)
- FUTURE FOOTPATH
- FUTURE RISING MAIN
- FUTURE SEWER
- FUTURE STORMWATER
- FUTURE WATER MAIN
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- PROPOSED FOOTPATH
- PROPOSED RISING MAIN
- PROPOSED SEWER
- PROPOSED STORMWATER
- PROPOSED WATER MAIN
- PROPOSED Ø100 IRRIGATION ROAD CROSSING
- PROPOSED SEWER 200
- PROPOSED SEWER 375
- FUTURE SEWER 450
- SITE BOUNDARY
- STAGE BOUNDARY

- FUTURE ACOUSTIC FENCE
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS A7 8m CENTERS.
- PROPOSED TEMPORARY CONSTRUCTION LIMIT FENCE
- PROPOSED GUARDRAIL
- K12 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER
- EXISTING PADMOUNT TRANSFORMER
- EXISTING ELECTRICAL POWER LINE POLES
- EXISTING ELECTRICAL SERVICE PILLAR
- EXISTING ELECTRICAL LINE - STREET LIGHT
- EXISTING ELECTRICAL LINE - LOW VOLTAGE
- EXISTING ELECTRICAL LINE - HIGH VOLTAGE
- EXISTING ELECTRICAL OVERHEAD
- PROPOSED PADMOUNT TRANSFORMER
- PROPOSED ELECTRICAL POWER POLES
- PROPOSED ELECTRICAL SERVICE PILLAR
- PROPOSED ELECTRICAL LINE - STREET LIGHT
- PROPOSED ELECTRICAL LINE - LOW VOLTAGE
- PROPOSED ELECTRICAL LINE - HIGH VOLTAGE
- PROPOSED ELECTRICAL OVERHEAD
- PROPOSED STREET LIGHT

SECRET L

SECRET LANE

1 DP217136

KINGS FOREST PARKWAY (ROAD 01)

HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED).

K3

ADJOINS SHEET 2

DIAL BEFORE YOU DIG www.1100.com.au

SHEET LAYOUT

SH 1 SH 2 SH 3 SH 4 SH 5

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	05-07-21	LEGEND AND ELECTRICAL AMENDED
B	25-02-21	LEGEND, TABLES, NOTES, FENCE AND SERVICES AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

COMBINED SERVICES PLAN
SHEET 1

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-090	C

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ROAD

K12

DEPOT ROAD (EXISTING)

ADJOINS SHEET 1

KINGS FOREST PARKWAY (ROAD 01)

DWAY 99A

ROAD 11

STG 3

ADJOINS SHEET 3

01

316 306 305 304 303 302 301 43 42 41 40 39 38 37 36 35 34 308 307 309 54 310 55 53

SHEET LAYOUT

SHT 1 SHT 2 SHT 3 SHT 4 SHT 5

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	05-07-21	ELECTRICAL AMENDED
B	25-02-21	SERVICES AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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GILBERT SUTHERLAND

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COMBINED SERVICES PLAN
SHEET 2

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-091 | AMEND. C

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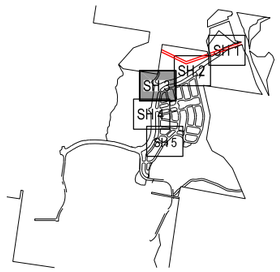

SHEET LAYOUT

ROAD 04

ROAD 05

CONCRETE SURROUNDS, REFER TO DRAWING 12301-KFP1-095 FOR DETAILS.

KINGS FOREST PARKWAY (ROAD 01)

ADJOINS SHEET 2

ADJOINS SHEET 4

095

STG 2

ROAD 11

ROAD 22

ROAD 50

KINGS FOREST PARKWAY (ROAD 01)

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
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Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m

Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	05-07-21	ALL SERVICES AND NOTE AMENDED
B	25-02-21	SERVICES AMENDED
A	14-11-19	COUNCIL ISSUE

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LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

COMBINED SERVICES PLAN
SHEET 3

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER: 12301-KFP1-092

AMEND.: C

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SHEET LAYOUT

ADJOINS SHEET 3

CONCRETE SURROUNDS, REFER TO DRAWING 12301-KFP1-097 FOR DETAILS.

REFER TO DRAWING 12301-KFP1-096 FOR DETAILS.

ADJOINS SHEET 5

PRCT 4

ROAD 11

DWAY 43

ROAD 07

DWAY 42

ROAD 29

ROAD 27

ROAD 30

ST

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

B	25-02-21	ELECTRICAL AND NOTE AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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COMBINED SERVICES PLAN
SHEET 4

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-093	B

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SHEET LAYOUT

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	25-02-21	NOTE AMENDED
B	25-02-21	NOTE AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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COMBINED SERVICES
PLAN
SHEET 5

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-094	C

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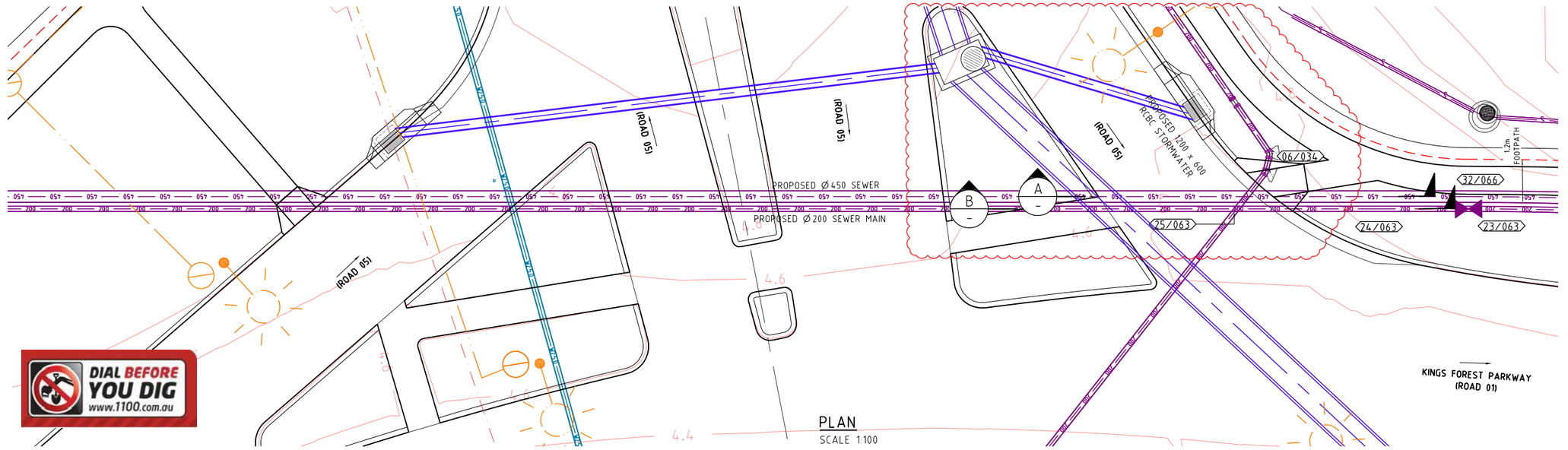
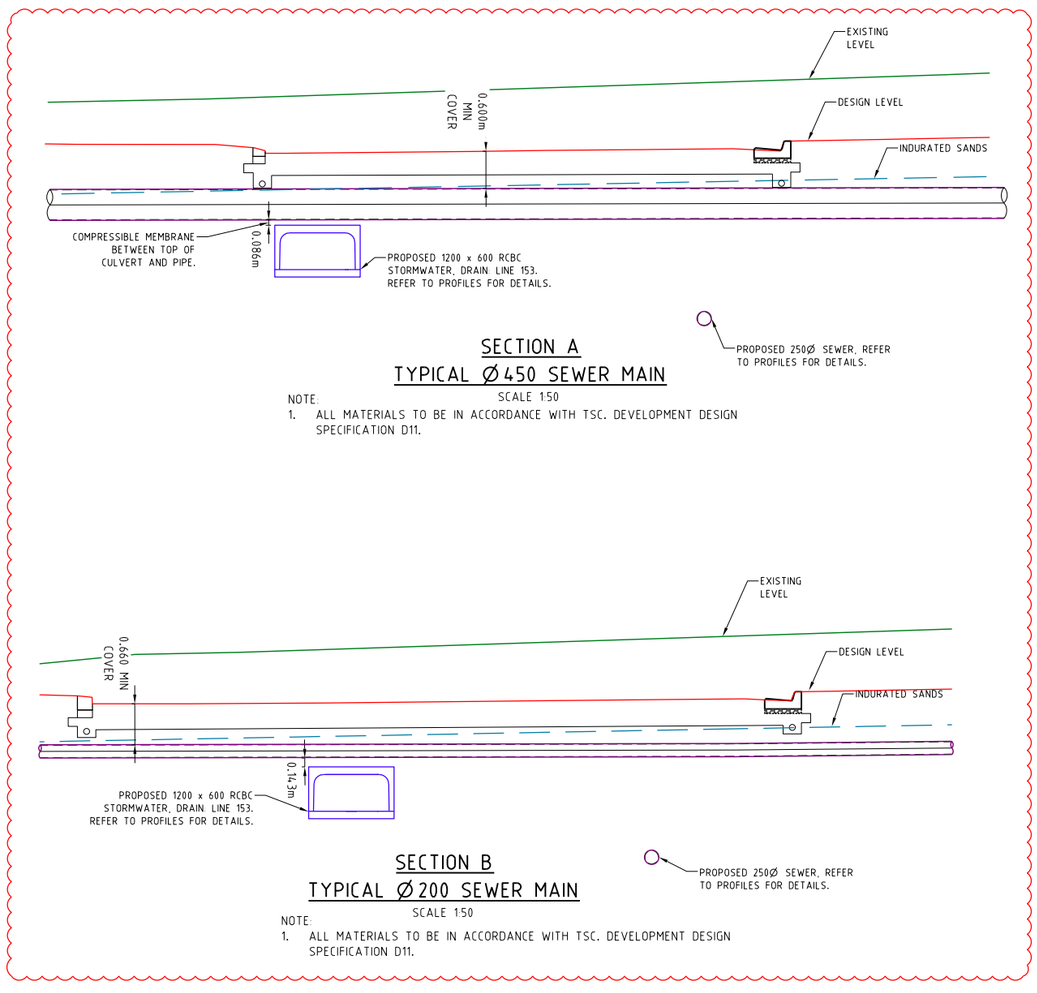


PLAN
SCALE 1:100

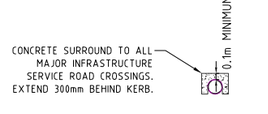


SECTION A
TYPICAL Ø450 SEWER MAIN
SCALE 1:50

NOTE:
1. ALL MATERIALS TO BE IN ACCORDANCE WITH TSC. DEVELOPMENT DESIGN SPECIFICATION D11.

SECTION B
TYPICAL Ø200 SEWER MAIN
SCALE 1:50

NOTE:
1. ALL MATERIALS TO BE IN ACCORDANCE WITH TSC. DEVELOPMENT DESIGN SPECIFICATION D11.



CONCRETE SURROUND DETAIL
SCALE 1:50

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)
0 1 2 3 4 5m
Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
C	14-07-21	DETAILS AMENDED
B	06-07-21	DIMENSIONS AND DETAILS ADDED
A	19-10-20	ISSUE FOR INFORMATION

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LandSurv
GILBERT SUTHERLAND

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TYPICAL SECTIONS OF SERVICES SHEET 1

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER: 12301-KFP1-095
AMEND.: C

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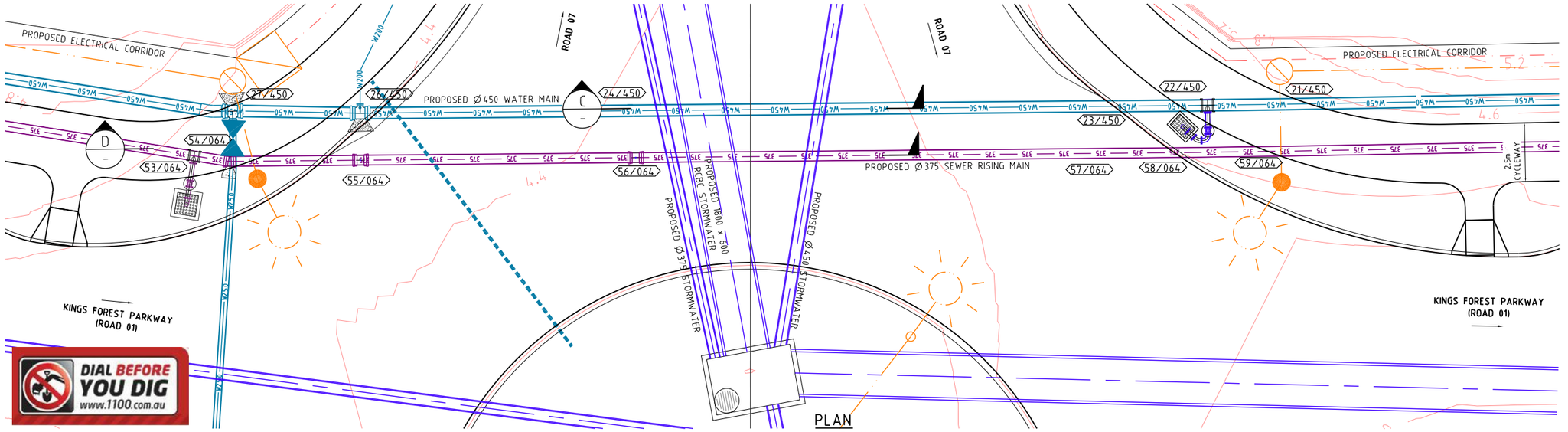
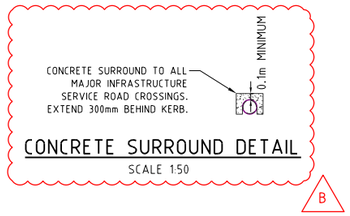
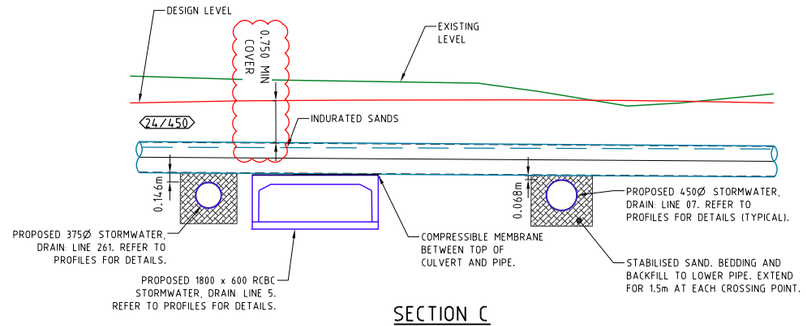


PLAN
SCALE 1:100

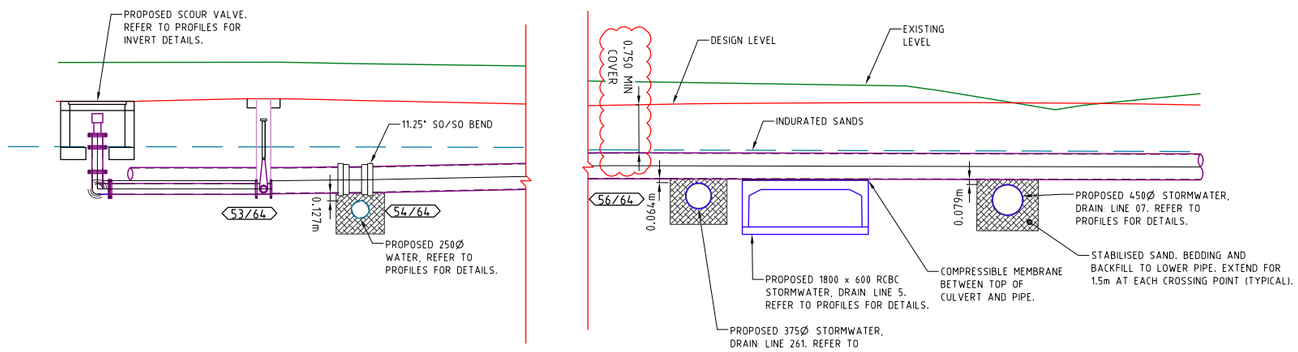


CONCRETE SURROUND DETAIL
SCALE 1:50



SECTION C
TYPICAL Ø450 WATER MAIN
SCALE 1:50

NOTE:
1. ALL MATERIALS TO BE IN ACCORDANCE WITH TSC. DEVELOPMENT DESIGN SPECIFICATION D11.



SECTION D
TYPICAL Ø375 SEWER MAIN
SCALE 1:50

NOTE:
1. ALL MATERIALS TO BE IN ACCORDANCE WITH TSC. DEVELOPMENT DESIGN SPECIFICATION D11.

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)
0 1 2 3 4 5m
Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
B	06-07-21	DETAIL AND DIMENSIONS ADDED
A	19-10-20	ISSUE FOR INFORMATION

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE
TYPICAL SECTIONS OF SERVICES SHEET 2

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
		DATE	04-09-17

DRAWING NUMBER 12301-KFP1-096
AMEND. B

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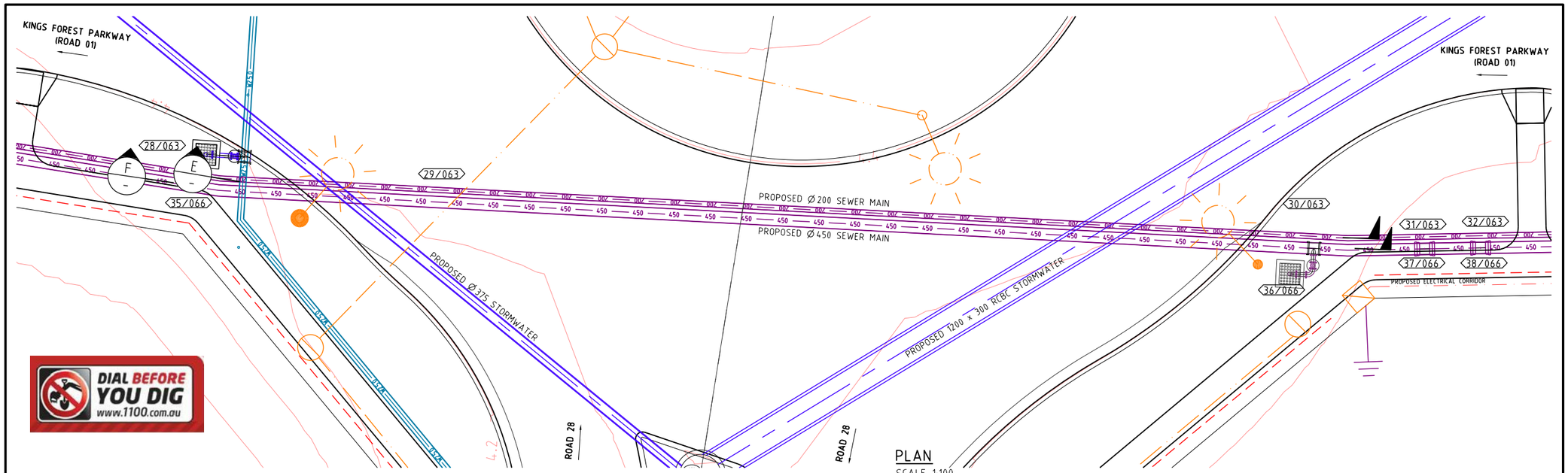
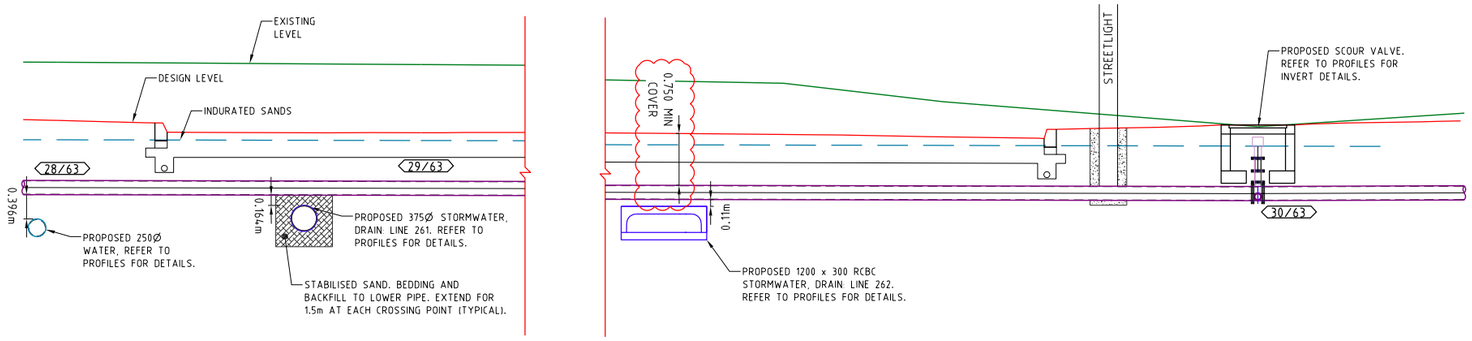
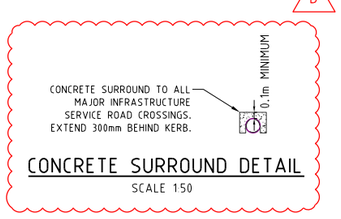


PLAN
SCALE 1:100

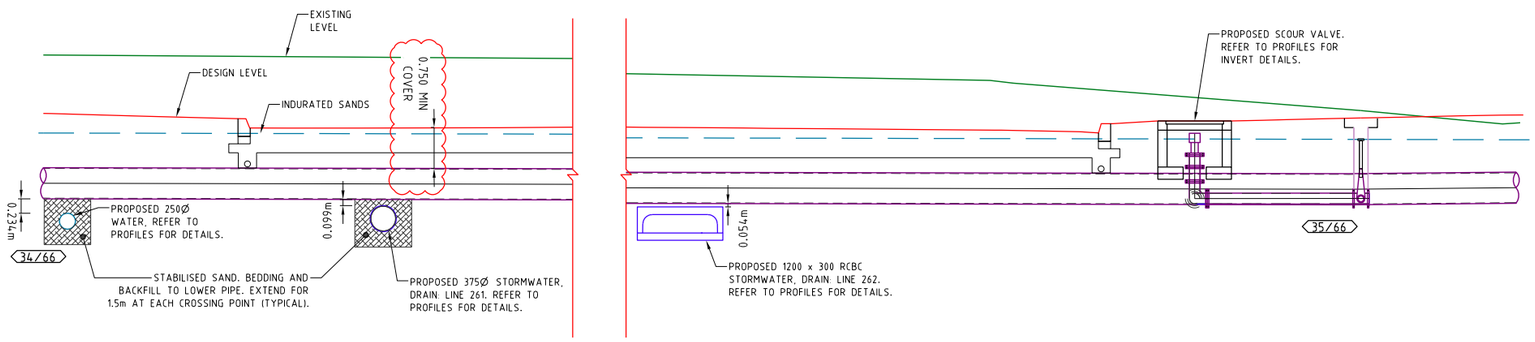


SECTION E
TYPICAL Ø200 SEWER MAIN
SCALE 1:50

NOTE.
1. ALL MATERIALS TO BE IN ACCORDANCE WITH TSC. DEVELOPMENT DESIGN SPECIFICATION D11.



CONCRETE SURROUND DETAIL
SCALE 1:50



SECTION F
TYPICAL Ø450 SEWER MAIN
SCALE 1:100

NOTE.
1. ALL MATERIALS TO BE IN ACCORDANCE WITH TSC. DEVELOPMENT DESIGN SPECIFICATION D11.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)
0 1 2 3 4 5m
Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
B	06-07-21	DETAIL AND DIMENSIONS ADDED
A	19-10-20	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

TYPICAL SECTIONS OF SERVICES SHEET 3

CONSTRUCTION ISSUE

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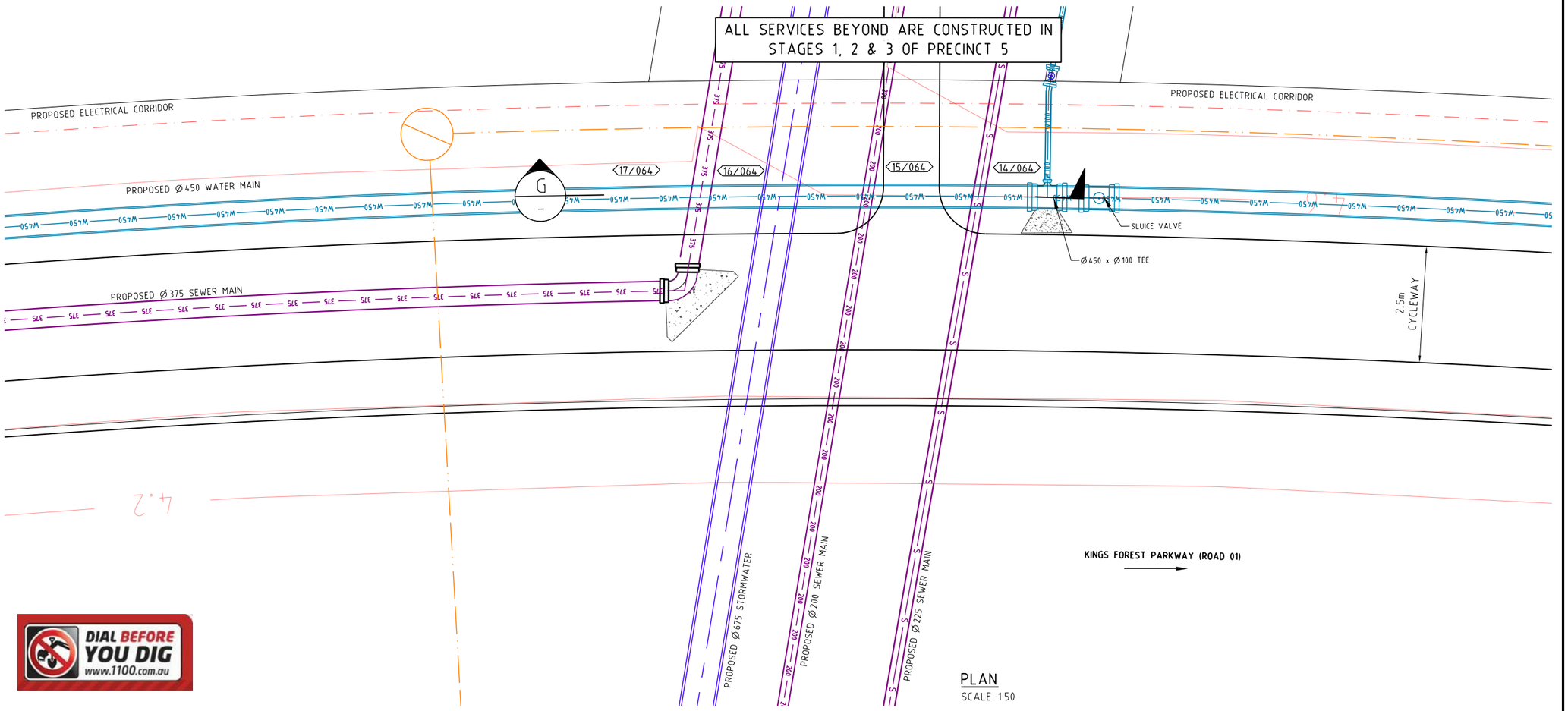
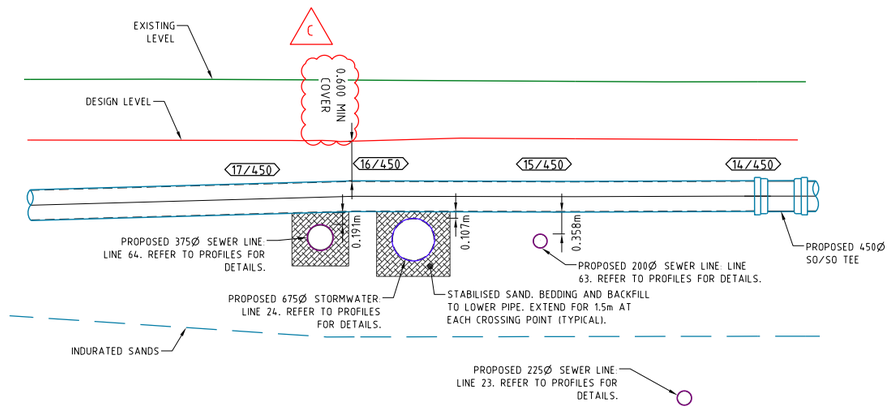
DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER: 12301-KFP1-097
AMEND.: B

y:\123 - feda developments pty ltd\01 - kings forest\KFP1\engineering drawings\Current\12301-KFP1-096.dwg, 1/10/2021 11:51:08 AM, 1:2



PLAN
SCALE 1:50



SECTION G
TYPICAL Ø450 WATER MAIN
SCALE 1:50

NOTE:
1. ALL MATERIALS TO BE IN ACCORDANCE WITH TSC. DEVELOPMENT DESIGN SPECIFICATION D11.

DIAL BEFORE YOU DIG www.1100.com.au

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
C	06-07-21	DIMENSION AMENDED
B	06-07-21	DIMENSION ADDED
A	19-10-20	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS
LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE
TYPICAL SECTIONS OF SERVICES SHEET 4

CONSTRUCTION ISSUE

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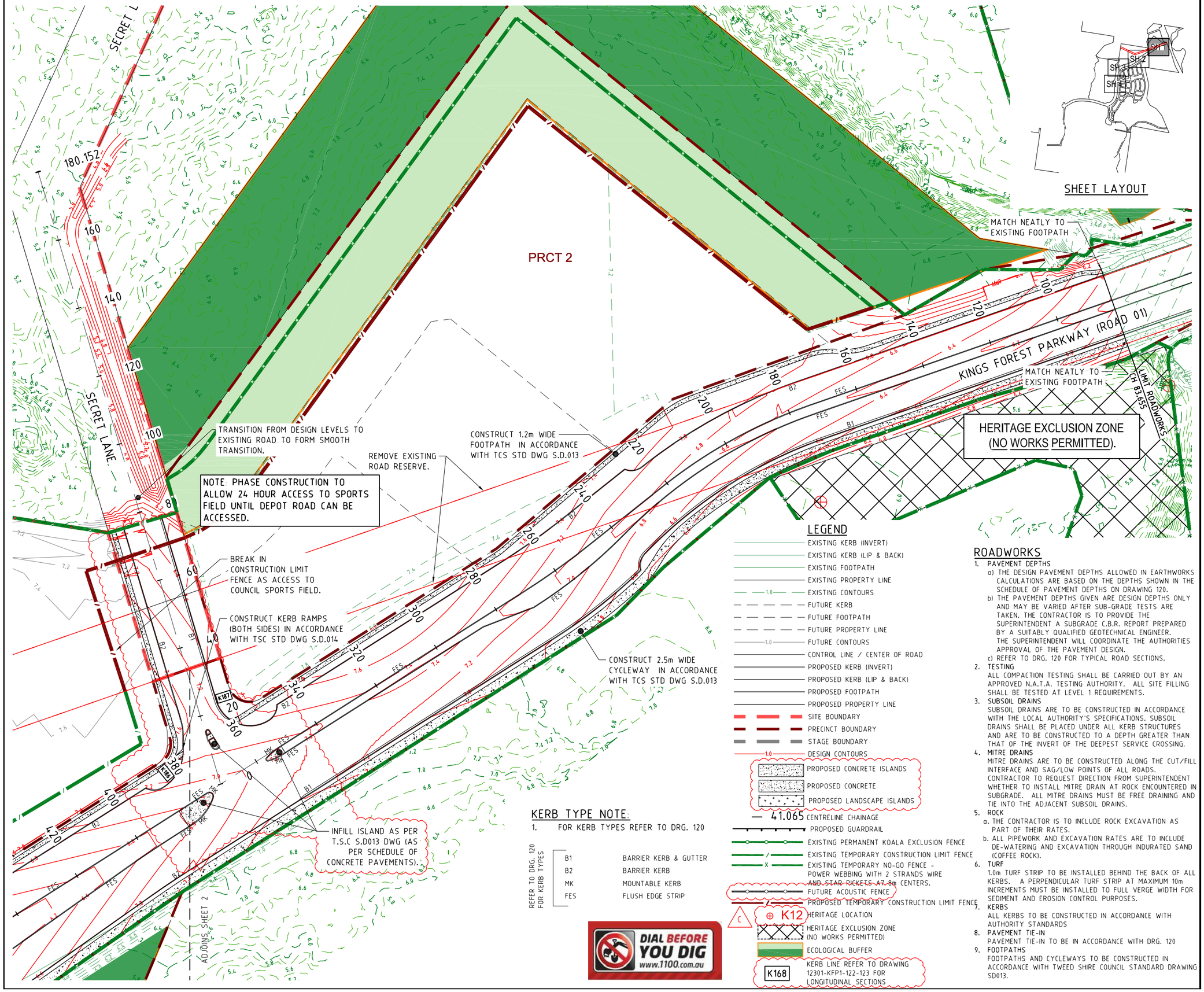
DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER 12301-KFP1-098
AMEND. C

y:\123 - lleda developments pty ltd\01 - kings forest\KFP1\engineering drawings\Current\12301-KFP1-098.dwg, 1/10/2021 11:51:26 AM, 1:2



ROADWORKS

1. PAVEMENT DEPTHS
   a) THE DESIGN PAVEMENT DEPTHS ALLOWED IN EARTHWORKS CALCULATIONS ARE BASED ON THE DEPTHS SHOWN IN THE SCHEDULE OF PAVEMENT DEPTHS ON DRAWING 120.
   b) THE PAVEMENT DEPTHS GIVEN ARE DESIGN DEPTHS ONLY AND MAY BE VARIED AFTER SUB-GRADE TESTS ARE TAKEN. THE CONTRACTOR IS TO PROVIDE THE SUPERINTENDENT A SUBGRADE C.B.R. REPORT PREPARED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER. THE SUPERINTENDENT WILL COORDINATE THE AUTHORITIES APPROVAL OF THE PAVEMENT DESIGN.
   c) REFER TO DRG. 120 FOR TYPICAL ROAD SECTIONS.
2. TESTING
   ALL COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A. TESTING AUTHORITY. ALL SITE FILLING SHALL BE TESTED AT LEVEL 1 REQUIREMENTS.
3. SUBSOIL DRAINS
   SUBSOIL DRAINS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE LOCAL AUTHORITY'S SPECIFICATIONS. SUBSOIL DRAINS SHALL BE PLACED UNDER ALL KERB STRUCTURES AND ARE TO BE CONSTRUCTED TO A DEPTH GREATER THAN THAT OF THE INVERT OF THE DEEPEST SERVICE CROSSING.
4. MITRE DRAINS
   MITRE DRAINS ARE TO BE CONSTRUCTED ALONG THE CUT/FILL INTERFACE AND SAG/LOW POINTS OF ALL ROADS. CONTRACTOR TO REQUEST DIRECTION FROM SUPERINTENDENT WHETHER TO INSTALL MITRE DRAIN AT ROCK ENCOUNTERED IN SUBGRADE. ALL MITRE DRAINS MUST BE FREE DRAINING AND TIE INTO THE ADJACENT SUBSOIL DRAINS.
5. ROCK
   a. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR RATES.
   b. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
6. TURF
   1.0m TURF STRIP TO BE INSTALLED BEHIND THE BACK OF ALL KERBS. A PERPENDICULAR TURF STRIP AT MAXIMUM 10m INCREMENTS MUST BE INSTALLED TO FULL VERGE WIDTH FOR SEDIMENT AND EROSION CONTROL PURPOSES.
7. KERBS
   ALL KERBS TO BE CONSTRUCTED IN ACCORDANCE WITH AUTHORITY STANDARDS
8. PAVEMENT TIE-IN
   PAVEMENT TIE-IN TO BE IN ACCORDANCE WITH DRG. 120
9. FOOTPATHS
   FOOTPATHS AND CYCLEWAYS TO BE CONSTRUCTED IN ACCORDANCE WITH TWEED SHIRE COUNCIL STANDARD DRAWING SD013.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	05-07-21	RAOD LAYOUT, LEGEND AND NOTE AMENDED
B	27-10-20	LEGEND AND FENCE AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LandSurv
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS PLAN SHEET 1

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
		DATE	14-11-19

DRAWING NUMBER 12301-KFP1-100 | AMEND. C

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REMOVE EXISTING ROAD RESERVE.

DEPOT ROAD (EXISTING)

CONSTRUCT 1.2m WIDE FOOTPATH IN ACCORDANCE WITH TCS STD DWG S.D.013

MELT AND TRAILING TERMINALS TO BE IN ACCORDANCE WITH RMS DRAWING R0730.

CONSTRUCT 2.5m WIDE CYCLEWAY IN ACCORDANCE WITH TCS STD DWG S.D.013

W-BEAM SEMI-RIGID STEEL SAFETY BARRIER AT 2m CENTRES TO BE IN ACCORDANCE WITH RMS DRAWING R0710.

KINGS FOREST PARKWAY (ROAD 01)

ROAD 11

DWAY 99A

ADJOINS SHEET 3

ADJOINS SHEET 1

SHEET LAYOUT

SHT 1 SHT 2 SHT 3 SHT 4

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m

Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	19-07-21	GUARD RAIL AND NOTES AMENDED
B	15-02-21	GUARD RAIL ADDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
PLAN
SHEET 2

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER: 12301-KFP1-101

AMEND.: C

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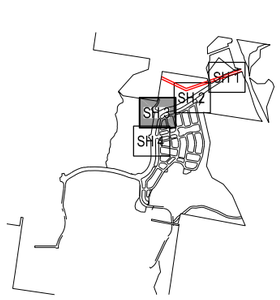

SHEET LAYOUT

CONSTRUCT 1.2m WIDE FOOTPATH IN ACCORDANCE WITH TCS STD DWG S.D.013

LIMIT ROADWORKS CH 110.00

LIMIT ROADWORKS CH 86.413

ROAD 04

ROAD 05

REFER TO 12301-KFP1-430 & 431 FOR ISLAND DETAILS.

CONSTRUCT KERB RAMPS (BOTH SIDES) IN ACCORDANCE WITH TSC STD DWG S.D.014

CONSTRUCT 1.2m WIDE FOOTPATHIN ACCORDANCE WITH TCS STD DWG S.D.013

ADJOINS SHEET 2

KINGS FOREST PARKWAY (ROAD 01)

W-BEAM SEMI-RIGID STEEL SAFETY BARRIER AT 2m CENTRES TO BE IN ACCORDANCE WITH RMS DRAWING R0710.

MELT AND TRAILING TERMINALS TO BE IN ACCORDANCE WITH RMS DRAWING R0730.

ROAD 11

CONSTRUCT KERB RAMPS (BOTH SIDES) IN ACCORDANCE WITH TSC STD DWG S.D.014

COMBINED MELT AND TRAILING TERMINALS TO BE IN ACCORDANCE WITH RMS DRAWING R0730.

REFER TO 12301-KFP1-430 & 431 FOR ISLAND DETAILS.

CONSTRUCT KERB RAMPS IN ACCORDANCE WITH TSC STD DWG S.D.014

CONSTRUCT 1.2m WIDE FOOTPATH IN ACCORDANCE WITH TCS STD DWG S.D.013

CONSTRUCT 1.2m WIDE FOOTPATH IN ACCORDANCE WITH TCS STD DWG S.D.013

W-BEAM SEMI-RIGID STEEL SAFETY BARRIER AT 2m CENTRES TO BE IN ACCORDANCE WITH RMS DRAWING R0710.

CONSTRUCT 2.5m WIDE CYCLEPATH IN ACCORDANCE WITH TCS STD DWG S.D.013

KINGS FOREST PARKWAY (ROAD 01)

ROAD 22

ROAD 50

STG 2

ADJOINS SHEET 4

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	05-07-21	ROAD LAYOUT, NOTES AND ISLAND HATCH AMENDED
B	27-10-20	FENCE AND GUARDRAIL AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS PLAN SHEET 3

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-102

AMEND. C

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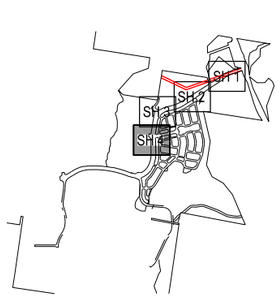

SHEET LAYOUT

ADJOINS SHEET 3

CONSTRUCT 1.2m WIDE FOOTPATH IN ACCORDANCE WITH TCS STD DWG S.D.013

INFILL ISLAND AS PER T.S.C S.D013 DWG (AS PER SCHEDULE OF CONCRETE PAVEMENTS).

INFILL ISLAND AS PER T.S.C S.D013 DWG (AS PER SCHEDULE OF CONCRETE PAVEMENTS).

CONSTRUCT KERB RAMPS (BOTH SIDES) IN ACCORDANCE WITH TSC STD DWG S.D.014

REFER TO DRAWING 12301-KFP1-121 FOR ROUNDABOUT DETAILS.

INFILL ISLAND AS PER T.S.C S.D013 DWG (AS PER SCHEDULE OF CONCRETE PAVEMENTS).

W-BEAM SEMI-RIGID STEEL SAFETY BARRIER AT 2m CENTRES TO BE IN ACCORDANCE WITH RMS DRAWING R0710.

COMBINED MELT AND TRAILING TERMINALS TO BE IN ACCORDANCE WITH RMS DRAWING R0730.

CONSTRUCT 2.5m WIDE CYCLEPATH IN ACCORDANCE WITH TCS STD DWG S.D.013

LIMIT ROADWORKS CH 39.585

LIMIT ROADWORKS CH 46.490

LIMIT ROADWORKS CH 36.771

COMBINED MELT AND TRAILING TERMINALS TO BE IN ACCORDANCE WITH RMS DRAWING R0730.

REFER TO DRAWING 12301-KFP1-406 FOR INFILL DETAILS.

ROAD 51

ROAD 28

ROAD 56

ROAD 27

ROAD 11

ROAD 07

ROAD 29

ROAD 30

PRCT 4

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN , COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	05-07-21	NOTES AND TRAFFIC ISLANDS AMENDED
B	15-02-19	GUARDRAIL ADDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

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GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS PLAN SHEET 4

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-103	C

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SCHEDULE OF PAVEMENT DEPTHS

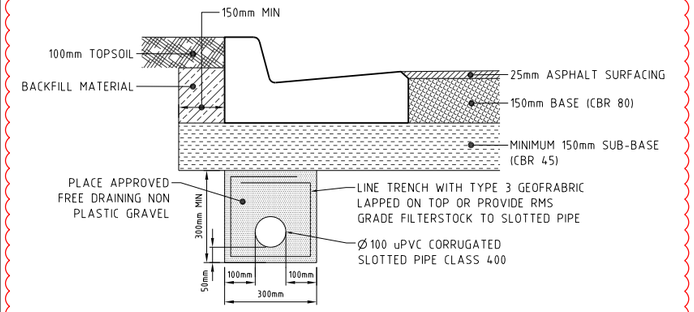
ROAD NAME	SURFACING	BASE	SUB-BASE	CBR	CLASSIFICATION	DESA	DESIGN GUIDE
ROAD 04 & ROAD 51	25mm (FGG7) ON PRIMER SEAL *	150mm TYPE 2.1 (CBR 80)	150mm TYPE 2.4 (CBR 45)	9	LOCAL ACCESS ST	3.7×10^4	D2 PAVEMENT DESIGN MANUAL
ROAD 05, ROAD 07, ROAD 28 & SECRET LANE (ROAD 03)	25mm (DG10) ON PRIMER SEAL *	150mm TYPE 2.1 (CBR 80)	165mm TYPE 2.3 (CBR 45)	9	NEIGHBOURHOOD CONNECTOR RD	7.5×10^5	D2 PAVEMENT DESIGN MANUAL
KINGS FOREST PARKWAY (ROAD 01) & ROAD 27	50mm (DG14) ON PRIMER SEAL *	150mm TYPE 2.1 (CBR 80)	210mm TYPE 2.3 (CBR 45)	9	ARTERIAL DISTRIBUTOR	1.5×10^6	D2 PAVEMENT DESIGN MANUAL

* 7mm PRIMER SEAL TACK COAT 0.22l/m² RES. BITUMEN PRIOR TO ASPHALT LAYING.

THE PAVEMENT DEPTHS ARE A GUIDE ONLY. FINAL PAVEMENT DESIGN IS SUBJECT TO INSITU SUBGRADE TESTING AND PRIVATE CERTIFIER APPROVAL.

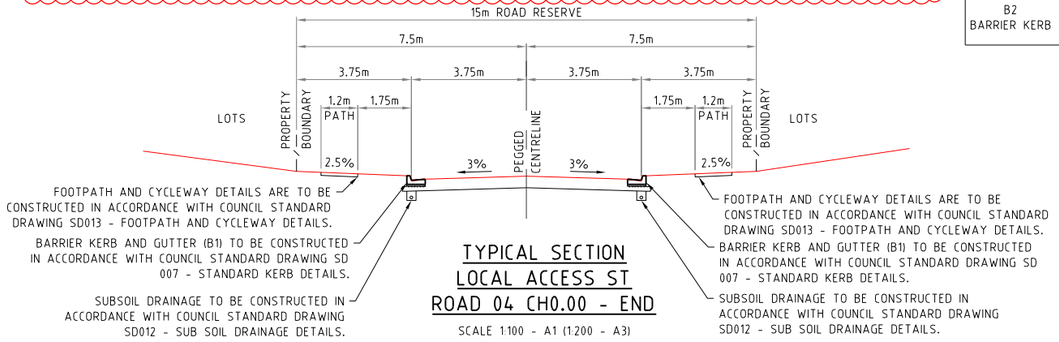
SCHEDULE OF KERB TYPES

KERB TYPE	IMAGE	REFERENCE
B1 BARRIER KERB AND GUTTER		TSC DRG. SD-007 NOTE: SUBSOIL DRAINS TO BE PLACED UNDER ALL KERBS.
MK MOUNTABLE KERB		
FES FLUSH EDGING STRIP		
RKG ROLL TOP KERB AND GUTTER		
DD CONCRETE DISH DRAIN		
B2 BARRIER KERB		IPWEA DRG. RS-080



TYPICAL BEDDING DETAIL

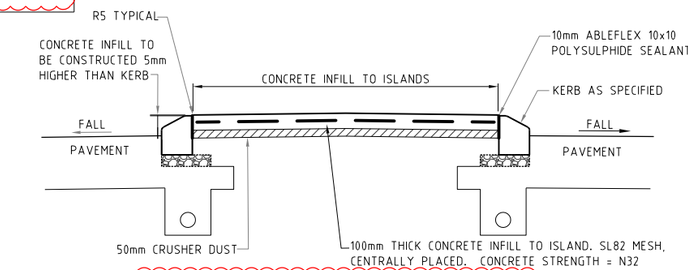
SCALE 1:10 - A1 (1:20 - A3)



TYPICAL SECTION LOCAL ACCESS ST ROAD 04 CH0.00 - END

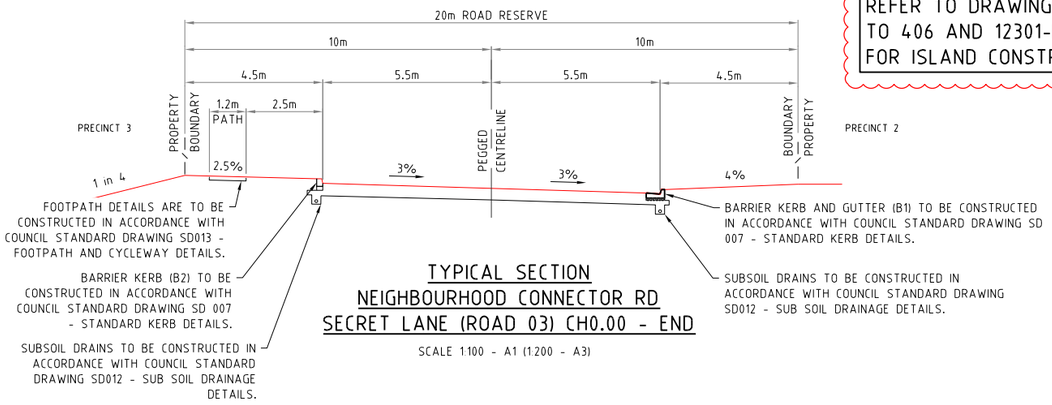
SCALE 1:100 - A1 (1:200 - A3)

NOTE:
REFER TO DRAWINGS 12301-KFP1-400 TO 406 AND 12301-KFP1-430 TO 432 FOR ISLAND CONSTRUCTION DETAILS.



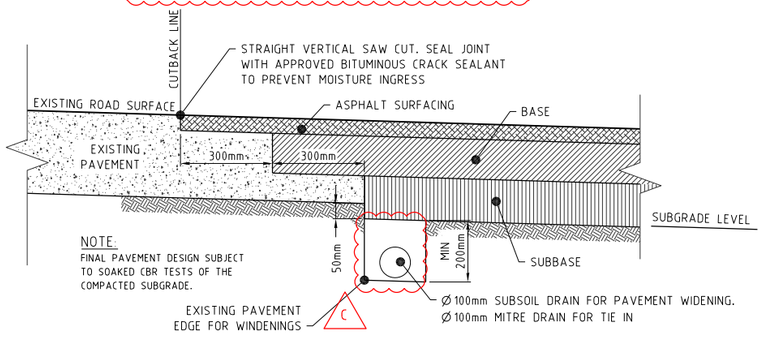
DETAIL A ISLAND WITH CONCRETE INFILL DETAIL

NOT TO SCALE



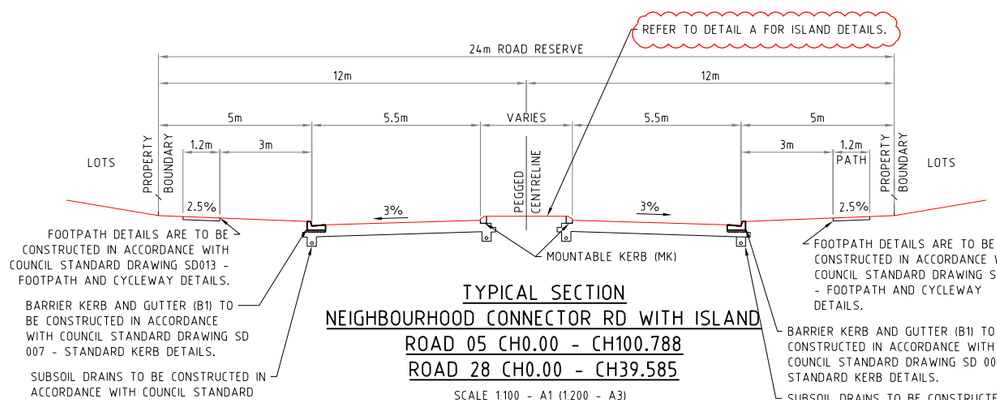
TYPICAL SECTION NEIGHBOURHOOD CONNECTOR RD SECRET LANE (ROAD 03) CH0.00 - END

SCALE 1:100 - A1 (1:200 - A3)



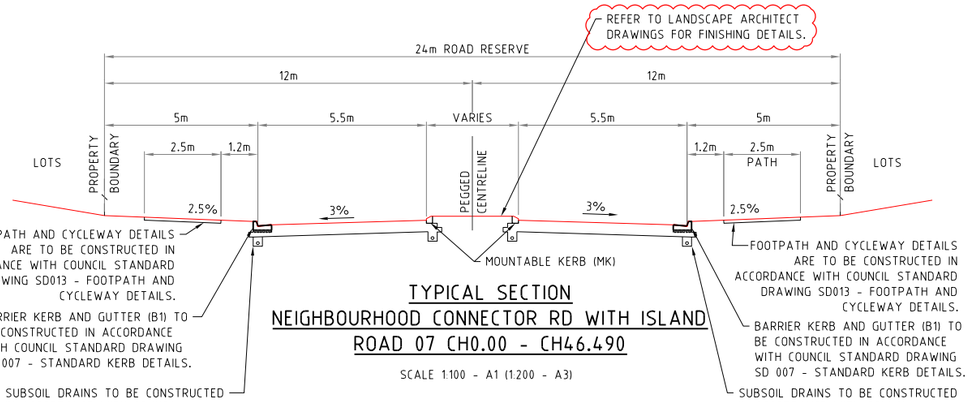
PAVEMENT WIDENING AND TIE-IN DETAIL

NOT TO SCALE



TYPICAL SECTION NEIGHBOURHOOD CONNECTOR RD WITH ISLAND ROAD 05 CH0.00 - CH100.788 ROAD 28 CH0.00 - CH39.585

SCALE 1:100 - A1 (1:200 - A3)



TYPICAL SECTION NEIGHBOURHOOD CONNECTOR RD WITH ISLAND ROAD 07 CH0.00 - CH46.490

SCALE 1:100 - A1 (1:200 - A3)

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.1 0.2 0.3 0.4 0.5m
Scale 1:10 - A1 (1:20 - A3)
0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)
0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)
0 1 2 3 4 5m
Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	01-09-21	TABLE, NOTES AND DIMENSION AMENDED
B	25-02-21	TABLE AND DETAIL AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS DETAILS SHEET 1 OF 2

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER: 12301-KFP1-120
AMEND.: C

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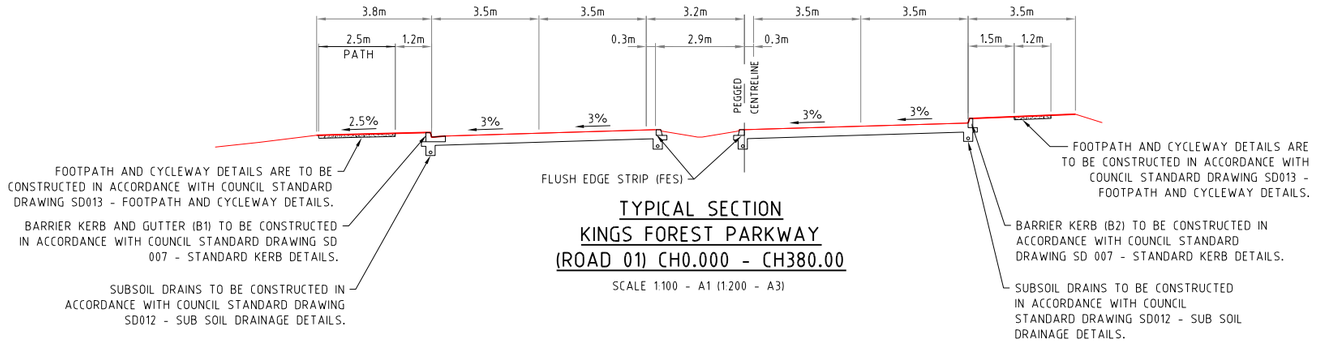
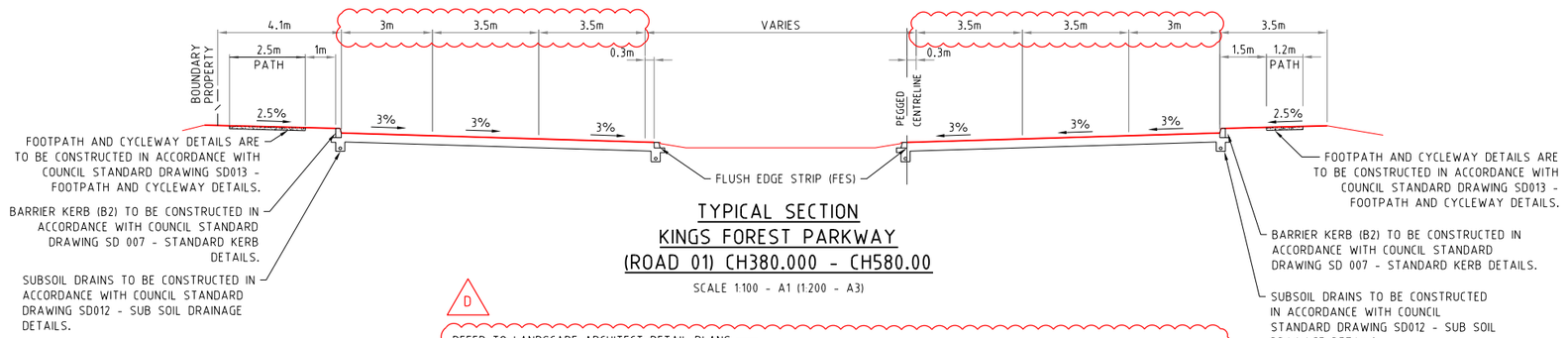


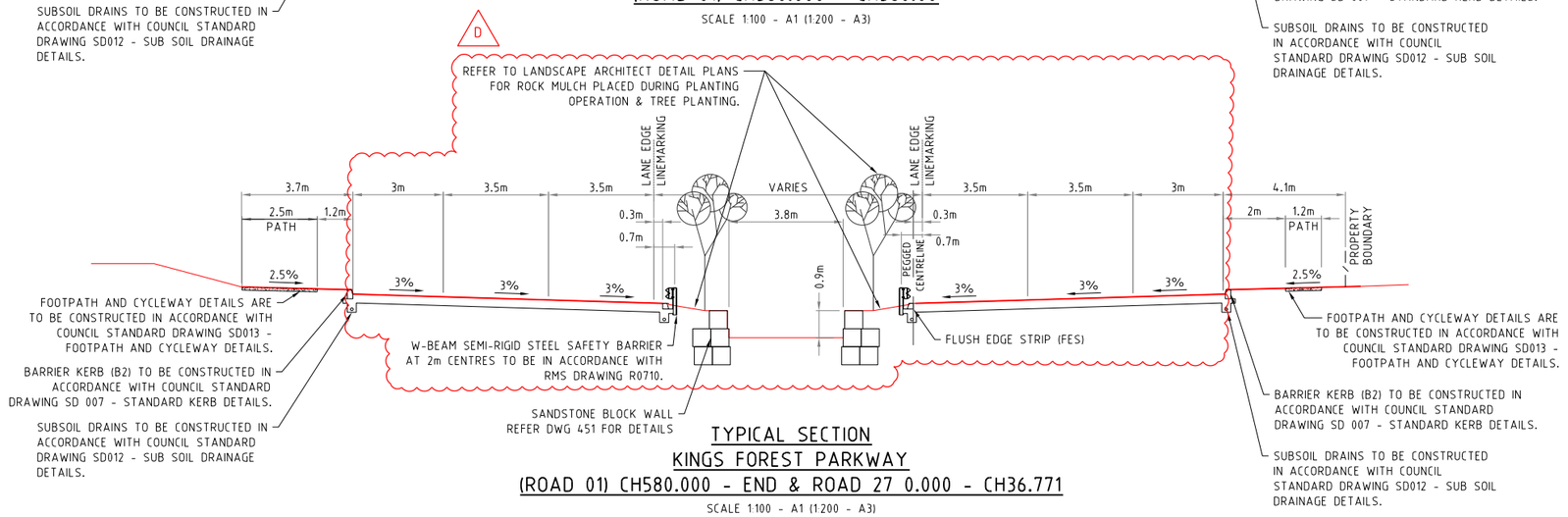
TYPICAL SECTION
KINGS FOREST PARKWAY
(ROAD 01) CH0.000 - CH380.00

SCALE 1:100 - A1 (1:200 - A3)



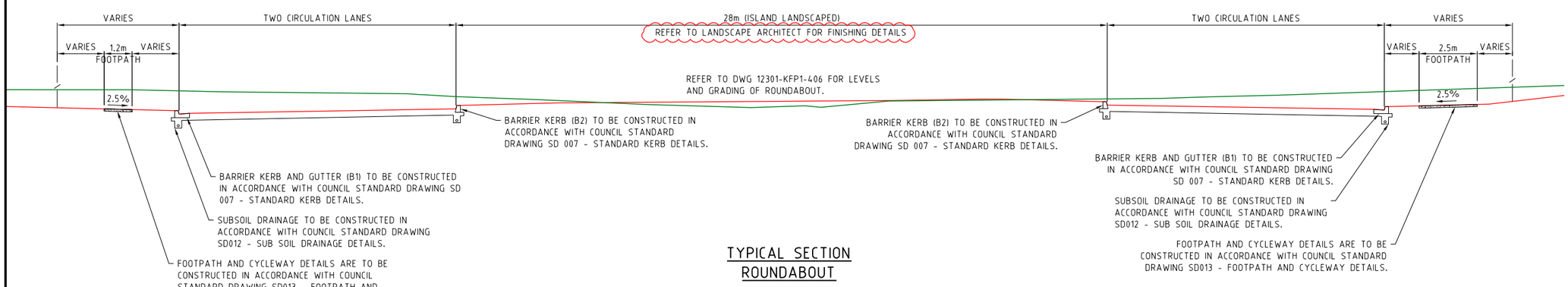
TYPICAL SECTION
KINGS FOREST PARKWAY
(ROAD 01) CH380.000 - CH580.00

SCALE 1:100 - A1 (1:200 - A3)



TYPICAL SECTION
KINGS FOREST PARKWAY
(ROAD 01) CH580.000 - END & ROAD 27 0.000 - CH36.771

SCALE 1:100 - A1 (1:200 - A3)



TYPICAL SECTION
ROUNDABOUT

SCALE 1:100 - A1 (1:200 - A3)

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.1 0.2 0.3 0.4 0.5m
Scale 1:10 - A1 (1:20 - A3)
0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)
0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)
0 1 2 3 4 5m
Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

D	01-09-21	NOTES AND RETAINING WALL AMENDED
C	28-04-21	RETAINING WALL AMENDED
B	17-02-21	SERVICES AND GURAD RAIL AMEDNED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS DETAILS SHEET 2 OF 2

CONSTRUCTION ISSUE

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Gold Coast Office
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Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-121
AMEND. D

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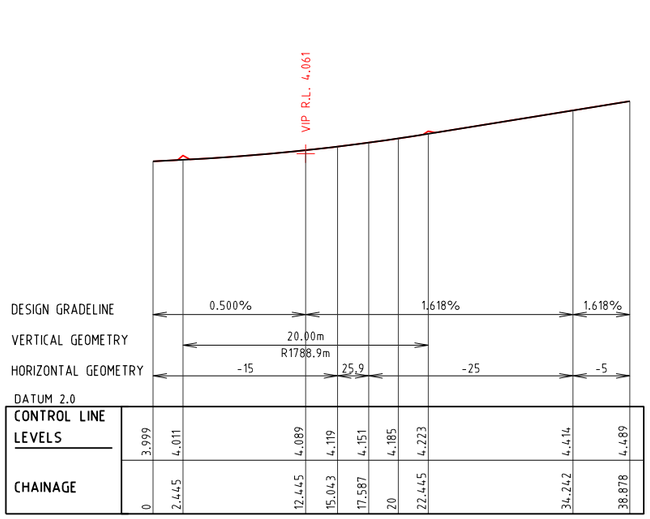
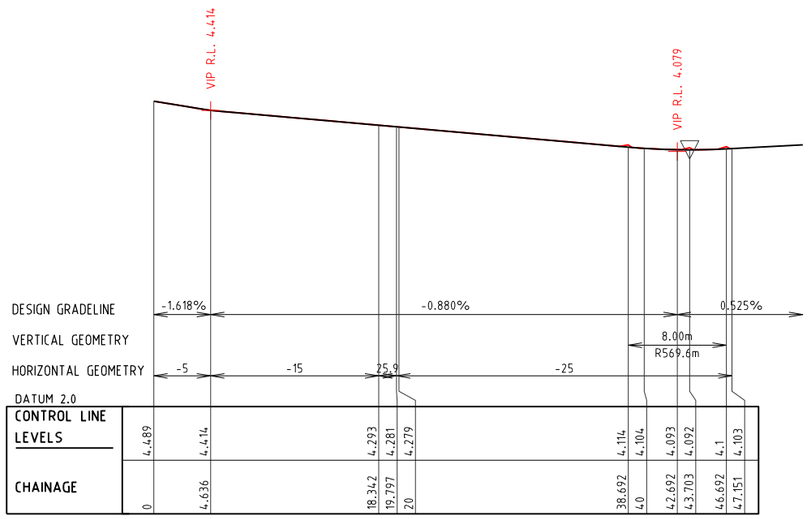
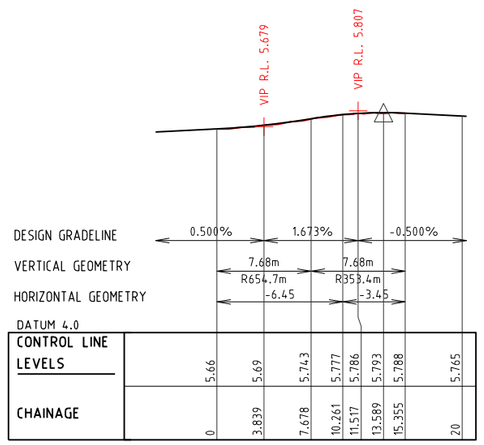


KERB SECTION 12



KERB SECTION 13



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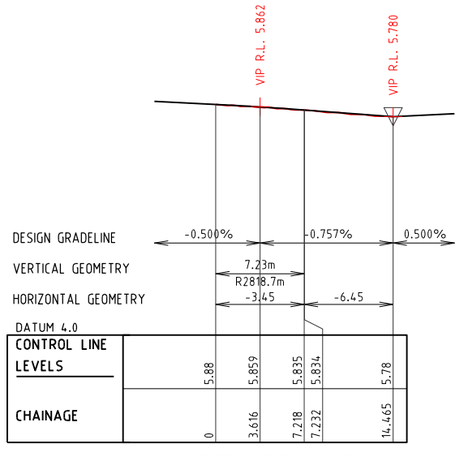

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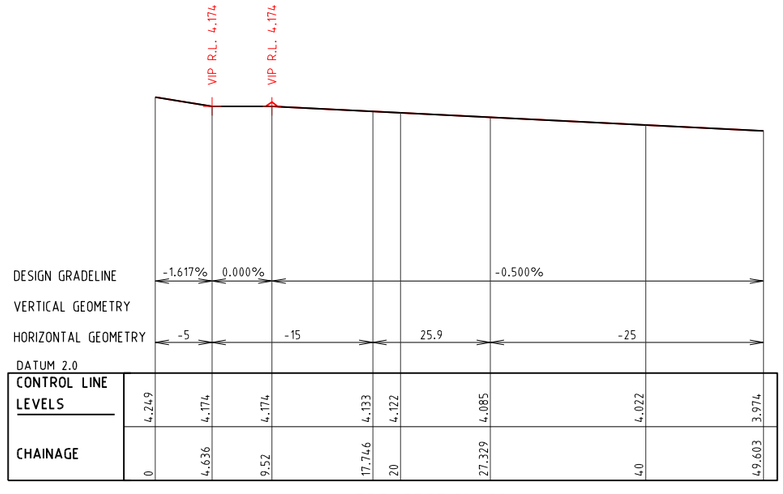
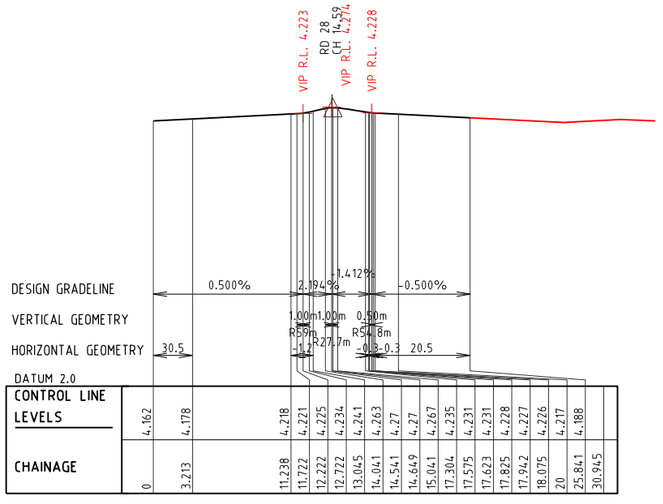


KERB SECTION 28



KERB SECTION 111

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.1 0.2 0.3 0.4 0.5m
Scale 1:10 - A1 (1:20 - A3)
0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)
0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)
0 1 2 3 4 5m
Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	14-07-21	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

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GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
KERB LONGSECTIONS
SHEET 1 OF 2

CONSTRUCTION ISSUE

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Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER
12301-KFP1-122

AMEND.
A

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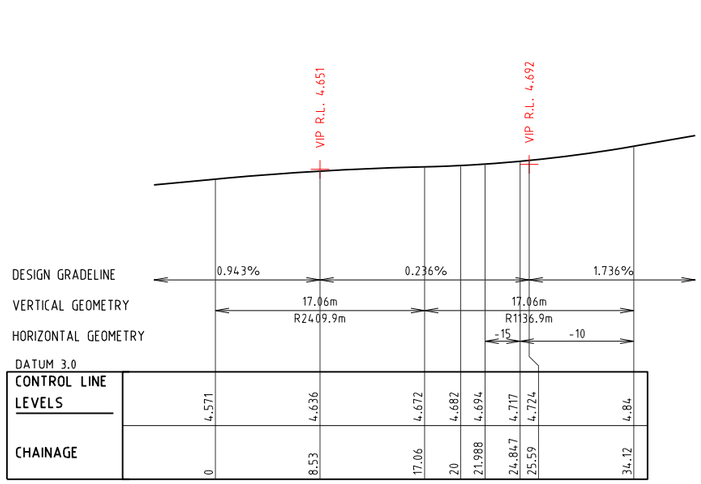
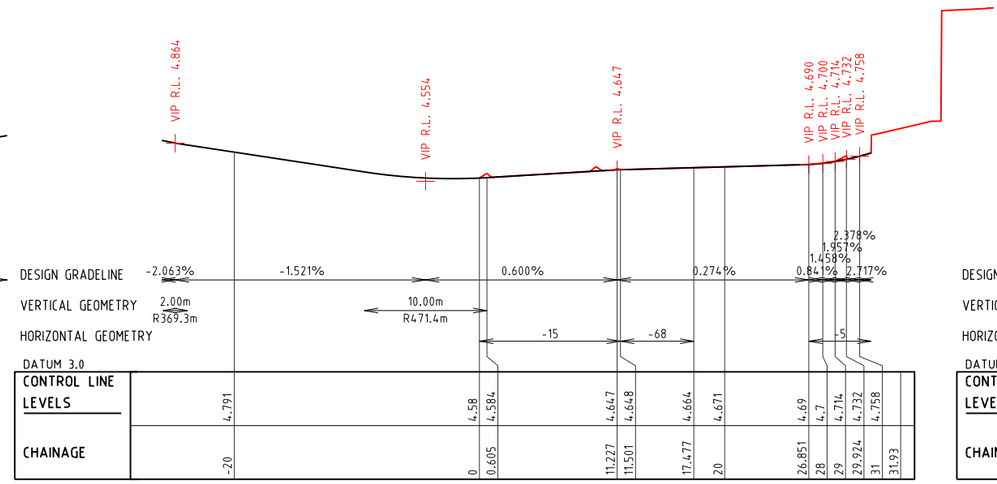


KERB SECTION 112



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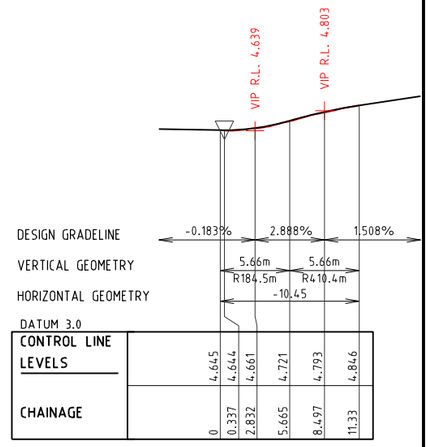

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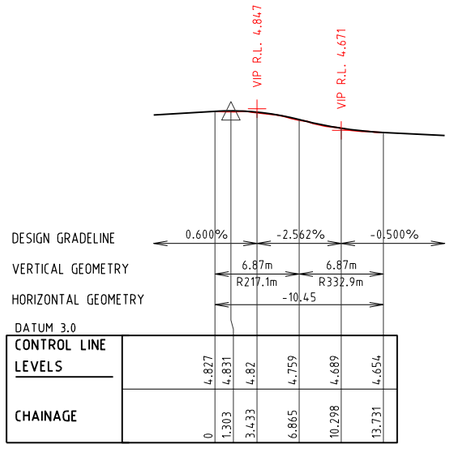
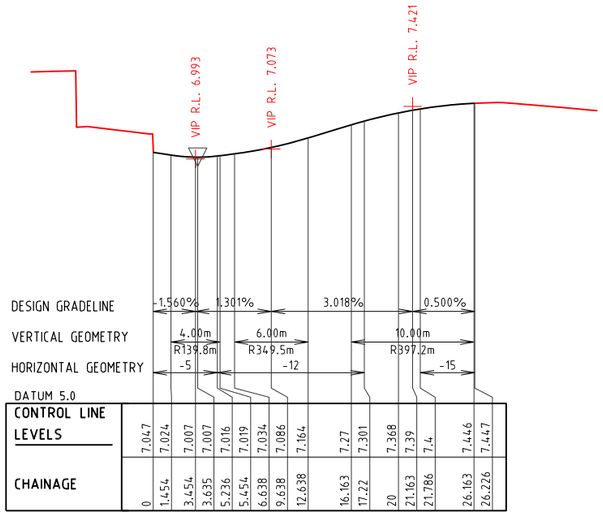
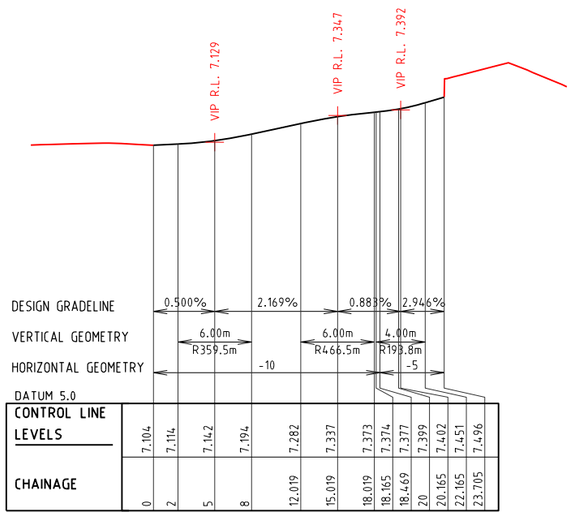


KERB SECTION 116



KERB SECTION 186



KERB SECTION 187

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.1 0.2 0.3 0.4 0.5m
Scale 1:10 - A1 (1:20 - A3)
0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)
0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)
0 1 2 3 4 5m
Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	14-07-21	ISSUE FOR INFORMATION

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
KERB LONGSECTIONS
SHEET 2 OF 2

CONSTRUCTION ISSUE

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Civil Engineering
Project Coordination
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Suite 9, 19 Short St
Southport QLD 4215

DESIGNED RB	DRAWN CB	
APPROVED	NER 906726	DATE 14-11-19

DRAWING NUMBER
12301-KFP1-123

AMEND.
A

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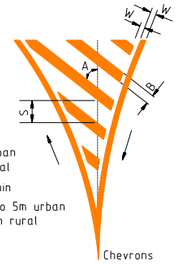
LEGEND

- BODY OF VEHICLE
- FRONT TIRES
- REAR TIRES
- 0.5m CLEARANCE FROM BODY OF VEHICLE

PROPOSED PAVEMENT MARKING LEGEND

- EDGE LINE - EL
- CONTINUITY LINE - CL
- TURN LINE - TL
- BARRIER LINE - BL(B)
- BARRIER LINE - BL
- LANE LINE - LL
- LANE LINE - LL(B)
- GIVE WAY LINE - GWL
- HOLDING LINE - HL
- STOP LINE - SL
- PEDESTRIAN LINE - PL

NOTE: REFER TO: MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ALL LINEMARKING AND SIGN STANDARDS



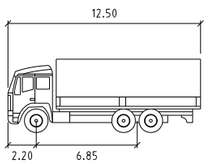
Angle A = 45° urban
30°rural

B = 1.0m min

S = 1.5m to 5m urban
3m min rural

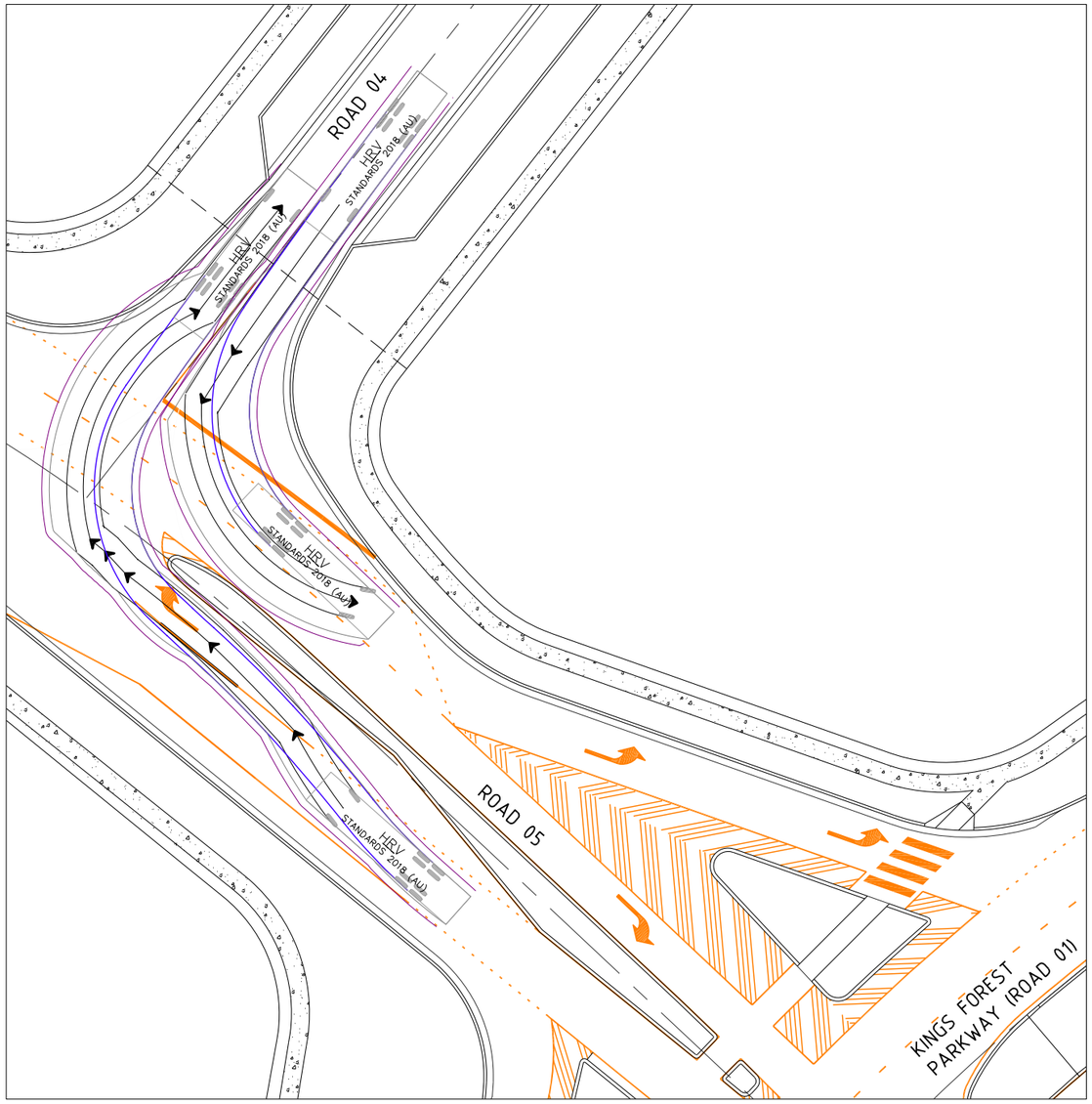
W = 150mm

Chevrons



HRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.7



INTERSECTION 1A

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2 4 6 8 10m

Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER		
COUNCIL		
CONSTRUCTION		

PRE	DATE	AMENDMENT
A	15-07-21	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

KINGS FOREST
PARKWAY
INTERSECTION ATURN
12.5m TRUCK
SHEET 1

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
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Southport QLD 4215

DESIGNED	RB	DRAWN	JB
APPROVED		NER 906726	DATE 10-06-21

DRAWING NUMBER	AMEND.
12301-KFP1-160	A

y:\123 - lleida developments pty ltd\01 - kings forest\KFP1\engineering drawings\Current\12301-KFP1-160.dwg, 1/10/2021 11:26:28 AM, 1:2

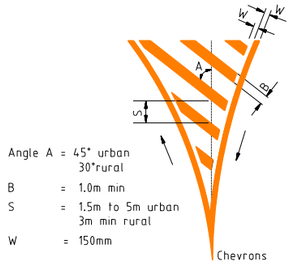
LEGEND

- BODY OF VEHICLE
- FRONT TIRES
- REAR TIRES
- 0.5m CLEARANCE FROM BODY OF VEHICLE

PROPOSED PAVEMENT MARKING LEGEND

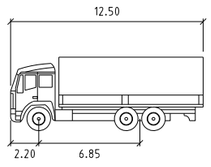
- EDGE LINE - EL
- CONTINUITY LINE - CL
- TURN LINE - TL
- BARRIER LINE - BL(B)
- BARRIER LINE - BL
- LANE LINE - LL
- LANE LINE - LL(B)
- GIVE WAY LINE - GWL
- HOLDING LINE - HL
- STOP LINE - SL
- PEDESTRIAN LINE - PL

NOTE: REFER TO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ALL LINEMARKING AND SIGN STANDARDS



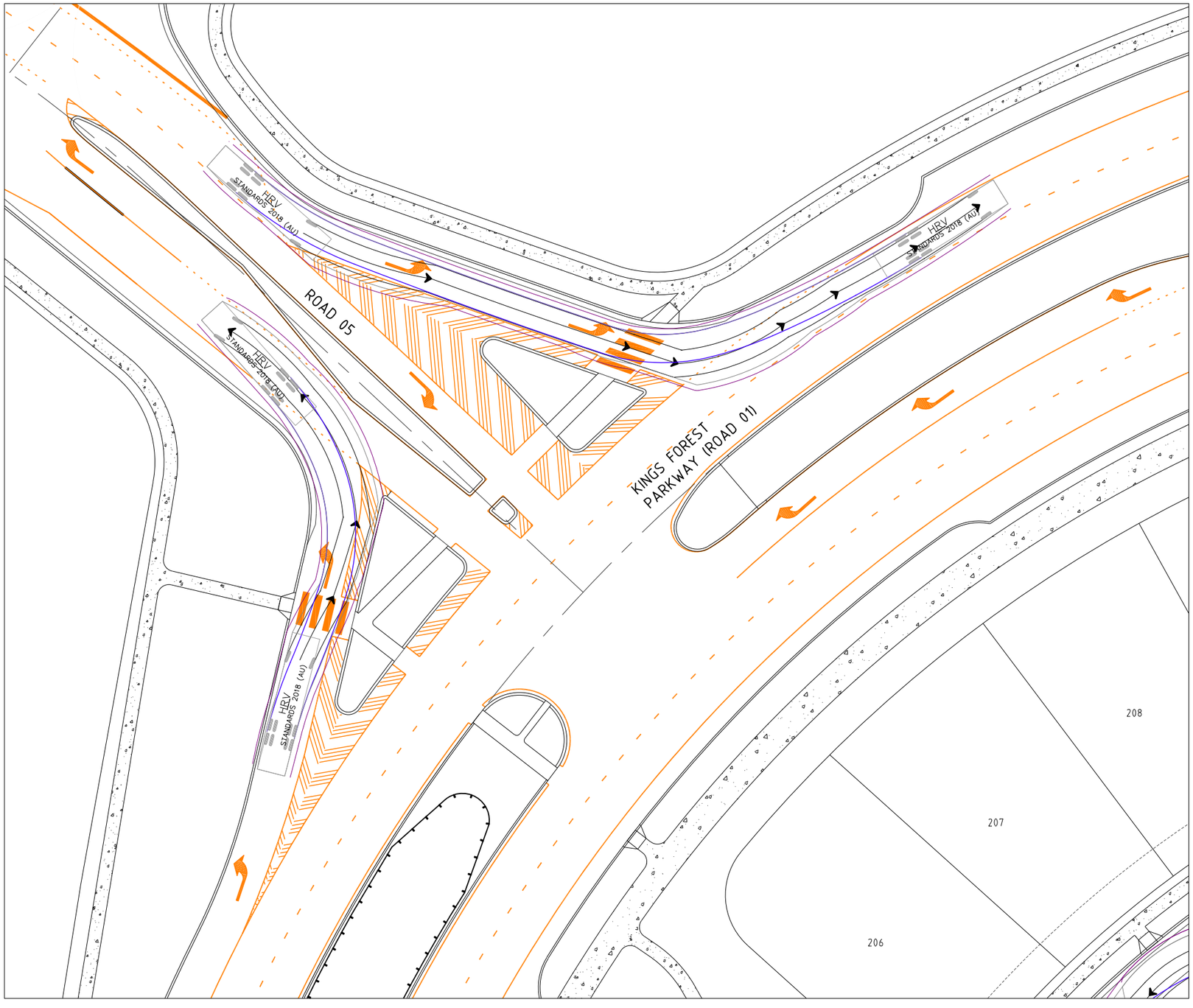
Angle A = 45° urban
30°rural
B = 1.0m min
S = 1.5m to 5m urban
3m min rural
W = 150mm

Chevrons



HRV

	meters
Width	2.50
Track	2.50
Lock to Lock Time	6.0
Steering Angle	36.7



INTERSECTION 2A

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2 4 6 8 10m

Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER		
COUNCIL		
CONSTRUCTION		

A	15-07-21	ISSUE FOR INFORMATION
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

KINGS FOREST
PARKWAY
INTERSECTION ATURN
12.5m TRUCK
SHEET 2

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
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Project Coordination

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APPROVED		NER 906726	DATE 10-06-21

DRAWING NUMBER	AMEND.
12301-KFP1-161	A

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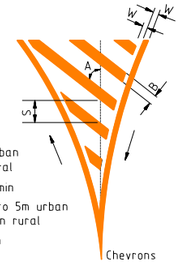
LEGEND

- BODY OF VEHICLE
- FRONT TIRES
- REAR TIRES
- 0.5m CLEARANCE FROM BODY OF VEHICLE

PROPOSED PAVEMENT MARKING LEGEND

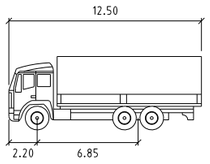
- EDGE LINE - EL
- CONTINUITY LINE - CL
- TURN LINE - TL
- BARRIER LINE - BL(B)
- BARRIER LINE - BL
- LANE LINE - LL
- LANE LINE - LL(B)
- GIVE WAY LINE - GWL
- HOLDING LINE - HL
- STOP LINE - SL
- PEDESTRIAN LINE - PL

NOTE: REFER TO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ALL LINEMARKING AND SIGN STANDARDS



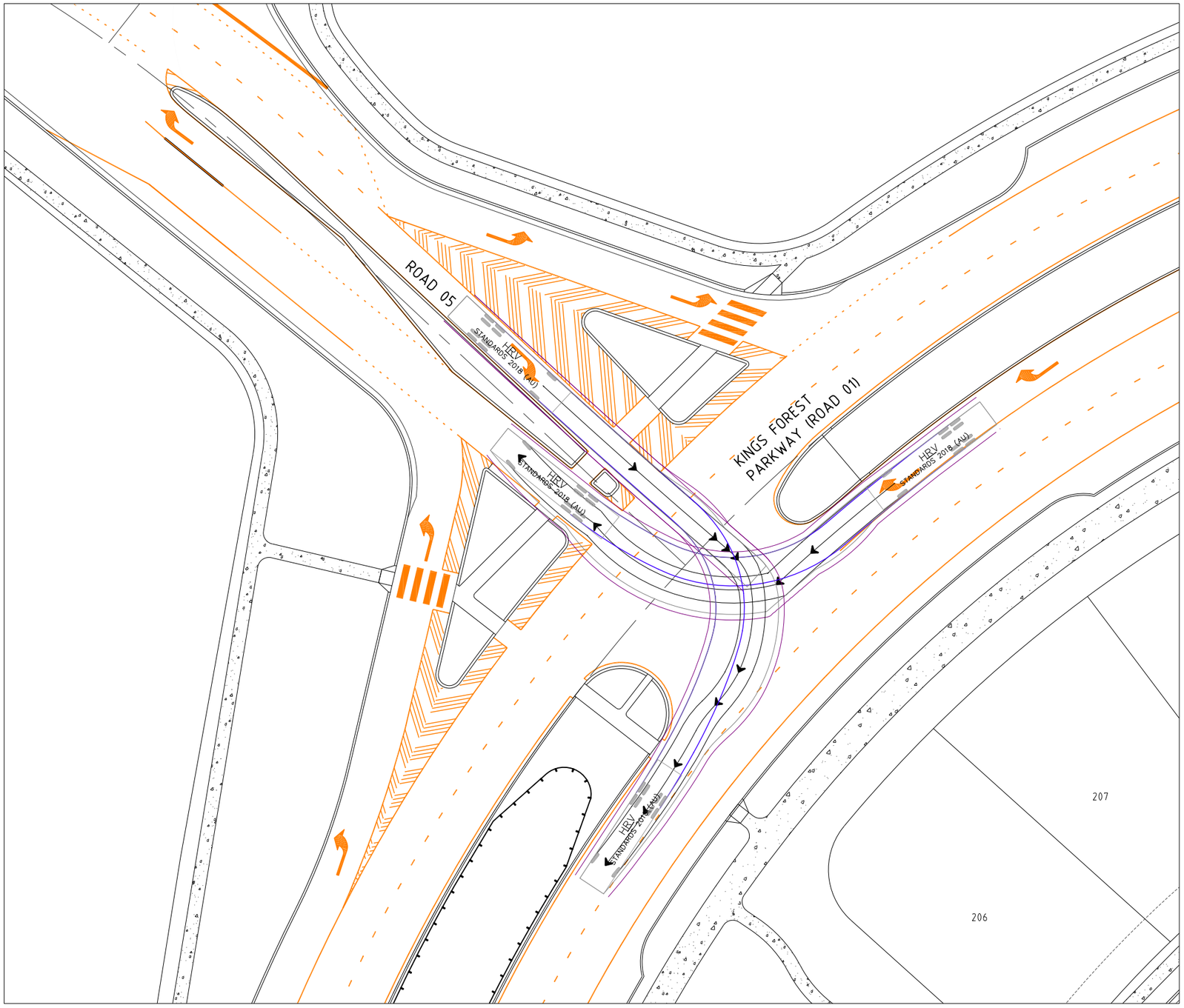
Angle A = 45° urban
30°rural
B = 1.0m min
S = 1.5m to 5m urban
3m min rural
W = 150mm

Chevrons



HRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.7



INTERSECTION 2B

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER		
COUNCIL		
CONSTRUCTION		

PRE	DATE	AMENDMENT
A	15-07-21	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

KINGS FOREST
PARKWAY
INTERSECTION ATURN
12.5m TRUCK
SHEET 3

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
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Southport QLD 4215

DESIGNED	RB	DRAWN	JB
APPROVED		NER 906726	DATE 10-06-21

DRAWING NUMBER	AMEND.
12301-KFP1-162	A

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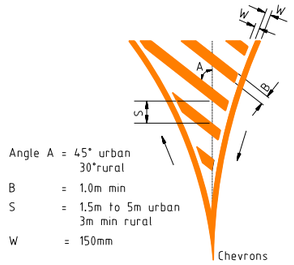
LEGEND

- BODY OF VEHICLE
- FRONT TIRES
- 0.5m CLEARANCE FROM BODY OF VEHICLE

PROPOSED PAVEMENT MARKING LEGEND

- EDGE LINE - EL
- CONTINUITY LINE - CL
- TURN LINE - TL
- BARRIER LINE - BL(B)
- BARRIER LINE - BL
- LANE LINE - LL
- LANE LINE - LL(B)
- GIVE WAY LINE - GWL
- HOLDING LINE - HL
- STOP LINE - SL
- PEDESTRIAN LINE - PL

NOTE: REFER TO: MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ALL LINEMARKING AND SIGN STANDARDS



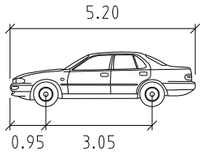
Angle A = 45° urban
30°rural

B = 1.0m min

S = 1.5m to 5m urban
3m min rural

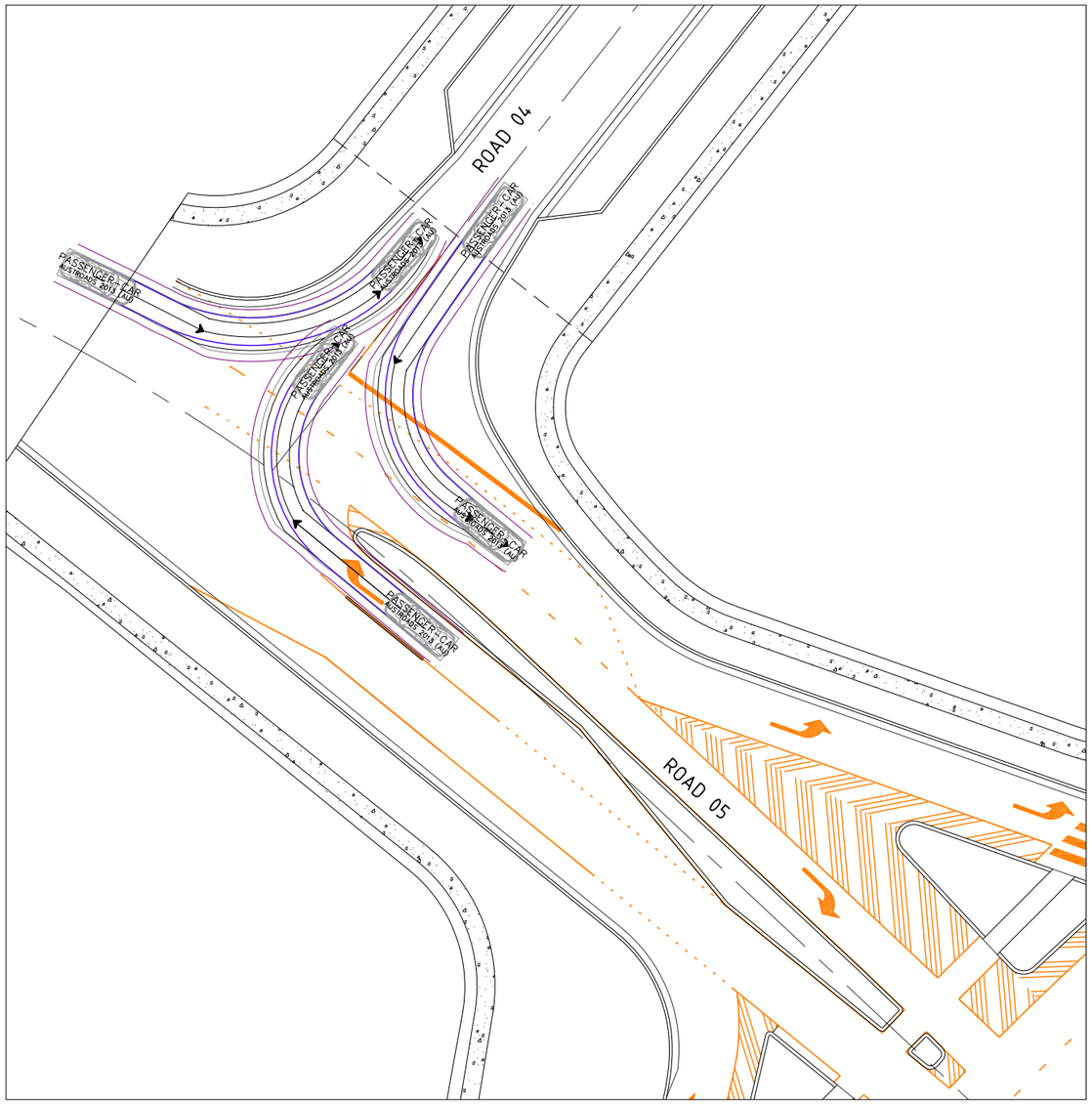
W = 150mm

Chevrons



PASSENGER-CAR

		meters
Width	:	1.94
Track	:	1.84
Lock to Lock Time	:	6.0
Steering Angle	:	33.6



INTERSECTION 1B

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2 4 6 8 10m

Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER		
COUNCIL		
CONSTRUCTION		

PRE	DATE	AMENDMENT
A	15-07-21	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

KINGS FOREST
PARKWAY
INTERSECTION ATURN
PASSANGER CAR
SHEET 1

CONSTRUCTION ISSUE

MORTONS urbansolutions
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Civil Engineering
Project Coordination

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DRAWING NUMBER	AMEND.
12301-KFP1-163	A

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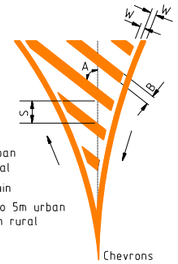
LEGEND

- BODY OF VEHICLE
- FRONT TIRES
- 0.5m CLEARANCE FROM BODY OF VEHICLE

PROPOSED PAVEMENT MARKING LEGEND

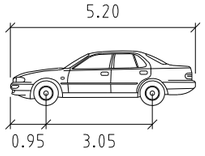
- EDGE LINE - EL
- CONTINUITY LINE - CL
- TURN LINE - TL
- BARRIER LINE - BL(B)
- BARRIER LINE - BL
- LANE LINE - LL
- LANE LINE - LL(B)
- GIVE WAY LINE - GWL
- HOLDING LINE - HL
- STOP LINE - SL
- PEDESTRIAN LINE - PL

NOTE: REFER TO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ALL LINEMARKING AND SIGN STANDARDS



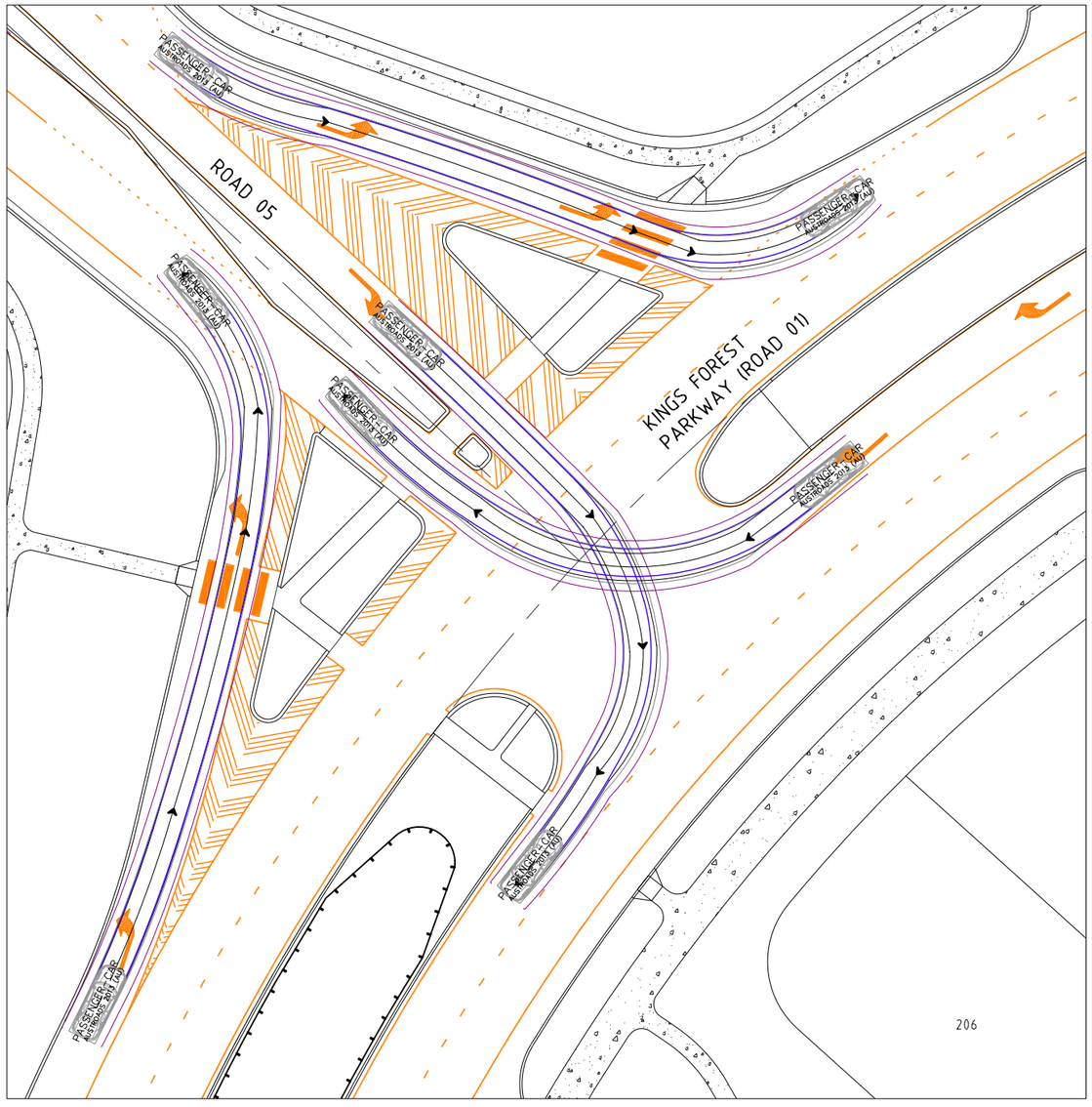
Angle A = 45° urban
30°rural
B = 1.0m min
S = 1.5m to 5m urban
3m min rural
W = 150mm

Chevrons



PASSENGER-CAR

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.6



INTERSECTION 2C

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER		
COUNCIL		
CONSTRUCTION		

PRE	DATE	AMENDMENT
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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

KINGS FOREST
PARKWAY
INTERSECTION ATURN
PASSANGER CAR
SHEET 2

CONSTRUCTION ISSUE

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Urban & Regional Planning
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Southport QLD 4215

DESIGNED	RB	DRAWN	JB
APPROVED		NER 906726	DATE 10-06-21

DRAWING NUMBER	AMEND.
12301-KFP1-164	A

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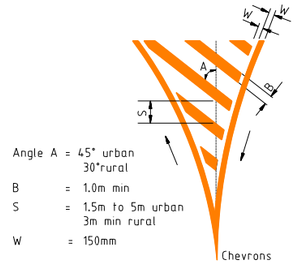
LEGEND

- CROSSING SIGHT DISTANCE (CSD)
- SAFE INTERSECTION SIGHT DISTANCE (SISD)
- LANDSCAPING TO MEET AUST ROADS SIGHT REQUIREMENTS

PROPOSED PAVEMENT MARKING LEGEND

- EDGE LINE - EL
- CONTINUITY LINE - CL
- TURN LINE - TL
- BARRIER LINE - BL(B)
- BARRIER LINE - BL
- LANE LINE - LL
- LANE LINE - LL(B)
- GIVE WAY LINE - GWL
- HOLDING LINE - HL
- STOP LINE - SL
- PEDESTRIAN LINE - PL

NOTE: REFER TO: MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ALL LINEMARKING AND SIGN STANDARDS



Angle A = 45° urban
30°rural

B = 1.0m min

S = 1.5m to 5m urban
3m min rural

W = 150mm

NOMINATED DESIGN SPEED 50km/h

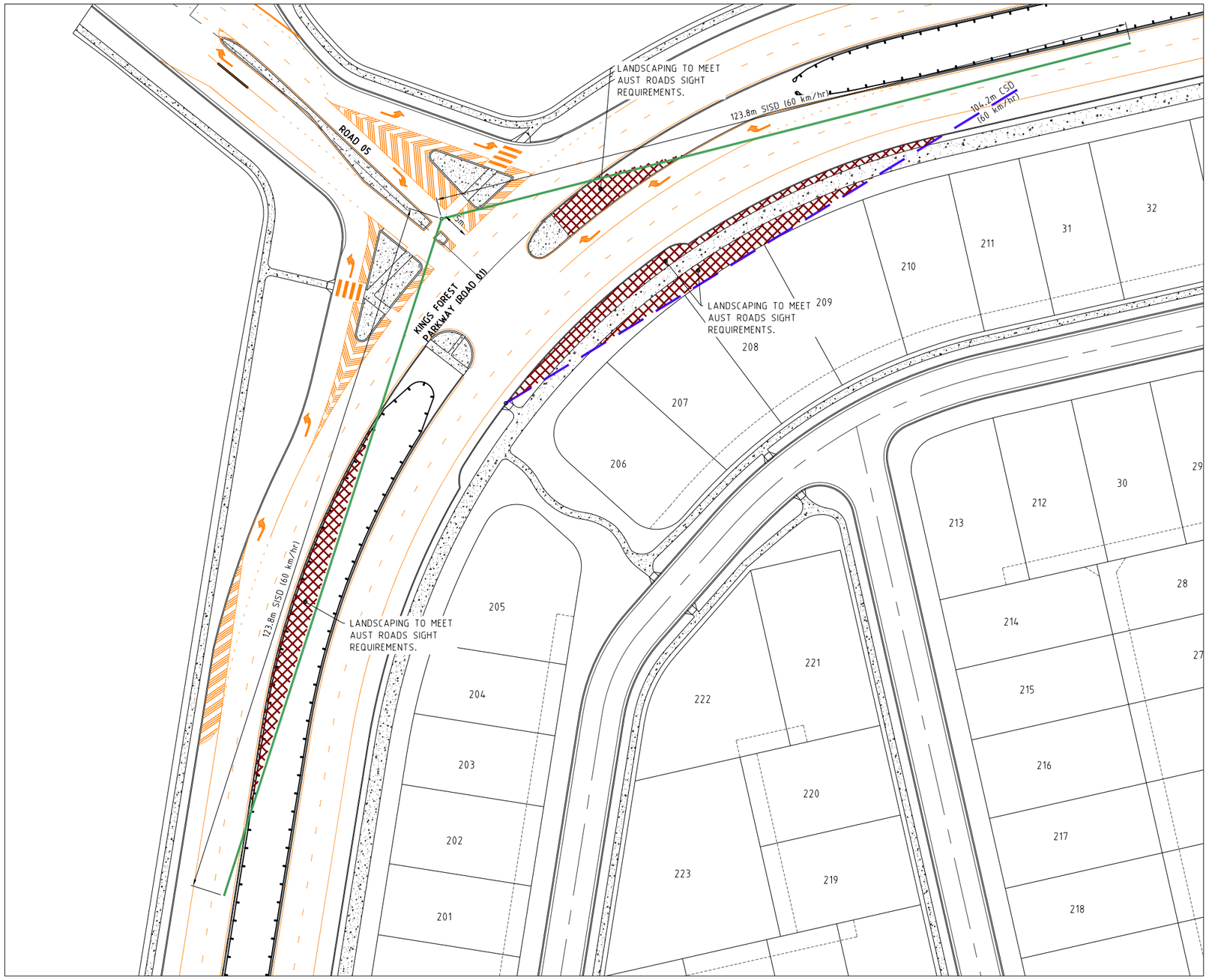
SAFE INTERSECTION SIGHT DISTANCE

Dt = 5 seconds
D = 0.36
A = -1%
V = 60 km/hr

$$SISD = \frac{D_T \times V}{3.6} + \frac{V^2}{254 \times (d + 0.01 \times a)}$$

Pedestrian sight distance — CSD = Tc x V/3.6 — 1.2 ped speed m/s
Width between lanes — Time to cross

Speed	3.5	7	7.5
20	16.2	32.4	34.7
30	24.3	48.6	52.1
40	32.4	64.8	69.4
50	40.5	81.0	86.8
60	48.6	97.2	104.2
70	56.7	113.4	121.5
80	64.8	129.6	138.9
90	72.9	145.8	156.3
100	81.0	162.0	173.6



PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m
Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER		
COUNCIL		
CONSTRUCTION		

PRE	DATE	AMENDMENT
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ASSOCIATED CONSULTANTS

LandSurv
GILBERT SUTHERLAND

DRAWING TITLE

KINGS FOREST PARKWAY
CSD FOR PEDESTRIANS

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	JB
APPROVED		NER 906726	DATE 10-06-21

DRAWING NUMBER 12301-KFP1-170 — AMEND. A

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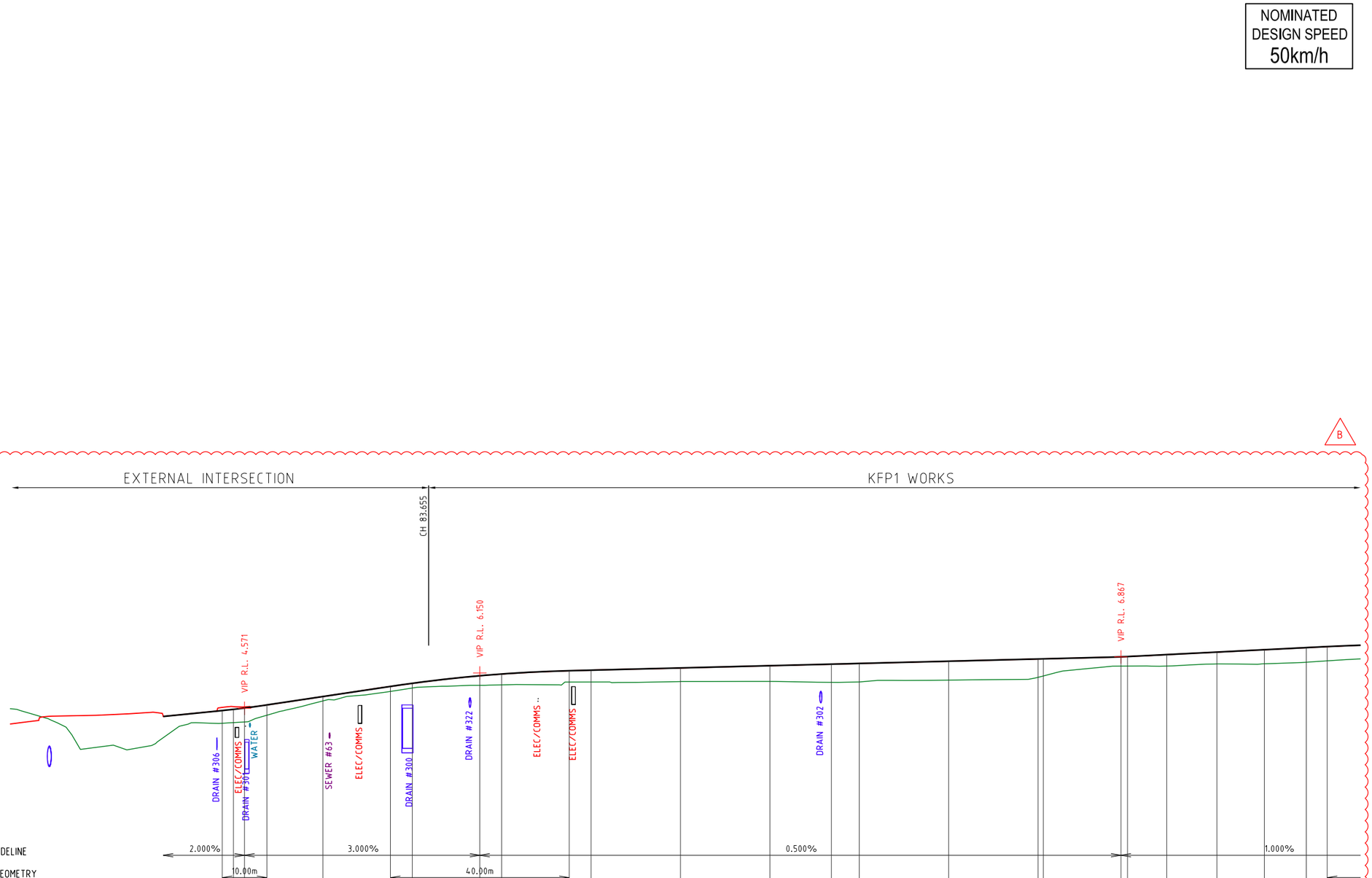
NOMINATED
DESIGN SPEED
50km/h

B

EXTERNAL INTERSECTION

KFP1 WORKS

CH 83.655

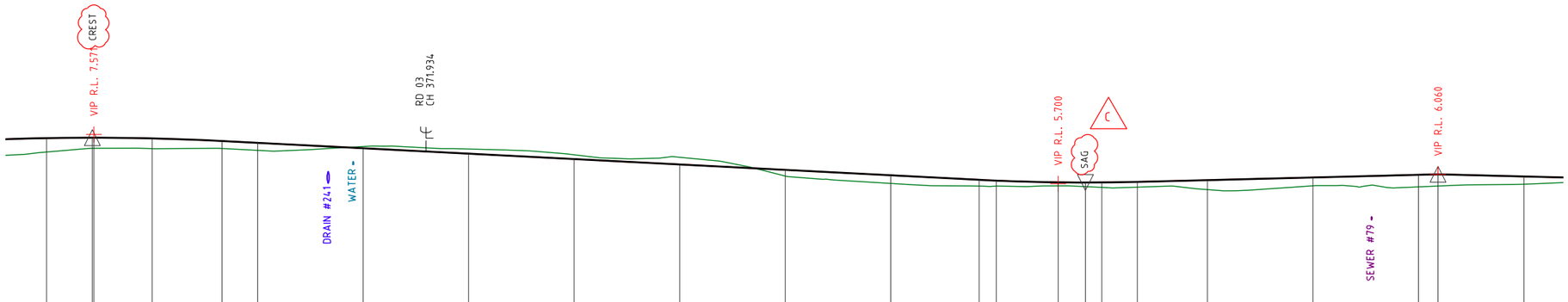


DESIGN GRADELINE
VERTICAL GEOMETRY
HORIZONTAL GEOMETRY
DATUM -5.0

| | | |

NOMINATED
DESIGN SPEED
50km/h

KFP1 WORKS



CONTROL LINE LEVELS	7.433	7.448	7.448	7.422	7.322	7.253	7.049	6.844	6.639	6.434	6.23	6.025	5.854	5.823	5.757	5.75	5.753	5.775	5.841	5.941	6.041	6.06	5.978
EXISTING SURFACE	6.906	7.048	7.048	7.035	7.039	6.97	7.113	7.019	6.801	6.706	5.998	5.716	5.615	5.617	5.623	5.594	5.566	5.575	5.481	5.625	5.586	5.616	5.686
DEPTH	-0.527	-0.4	-0.4	-0.387	-0.283	-0.283	0.064	0.175	0.162	0.271	-0.232	-0.309	-0.239	-0.206	-0.134	-0.156	-0.186	-0.2	-0.36	-0.316	-0.456	-0.444	-0.292
CHAINAGE	300	308.688	308.974	320	333.261	340	360	380	400	420	440	460	476.727	480	491.727	496.883	500	506.727	520	540	560	563.699	580

LONGITUDINAL SECTION KF PARKWAY

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	06-07-21	NOTES ADDED
B	28-02-20	LONGITUDINAL SECTION AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
LONGITUDINAL SECTION
KINGS FOREST PARKWAY
SHEET 2
(ROAD 01)

CONSTRUCTION ISSUE

MORTONS urbansolutions
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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER	AMEND.
12301-KFP1-201	C

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NOMINATED
DESIGN SPEED
50km/h

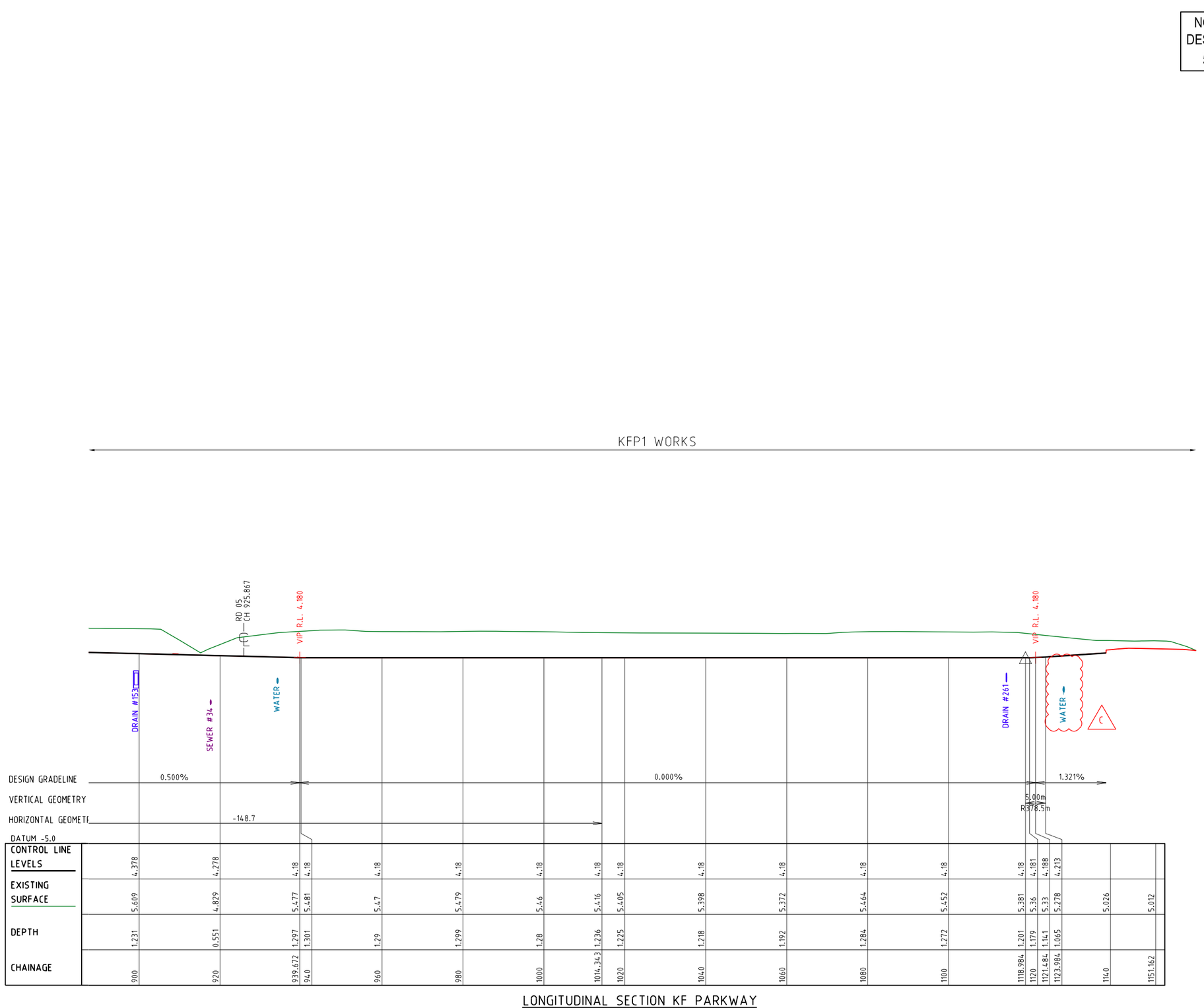
B

KFP1 WORKS

| | | |

NOMINATED
DESIGN SPEED
50km/h

KFP1 WORKS



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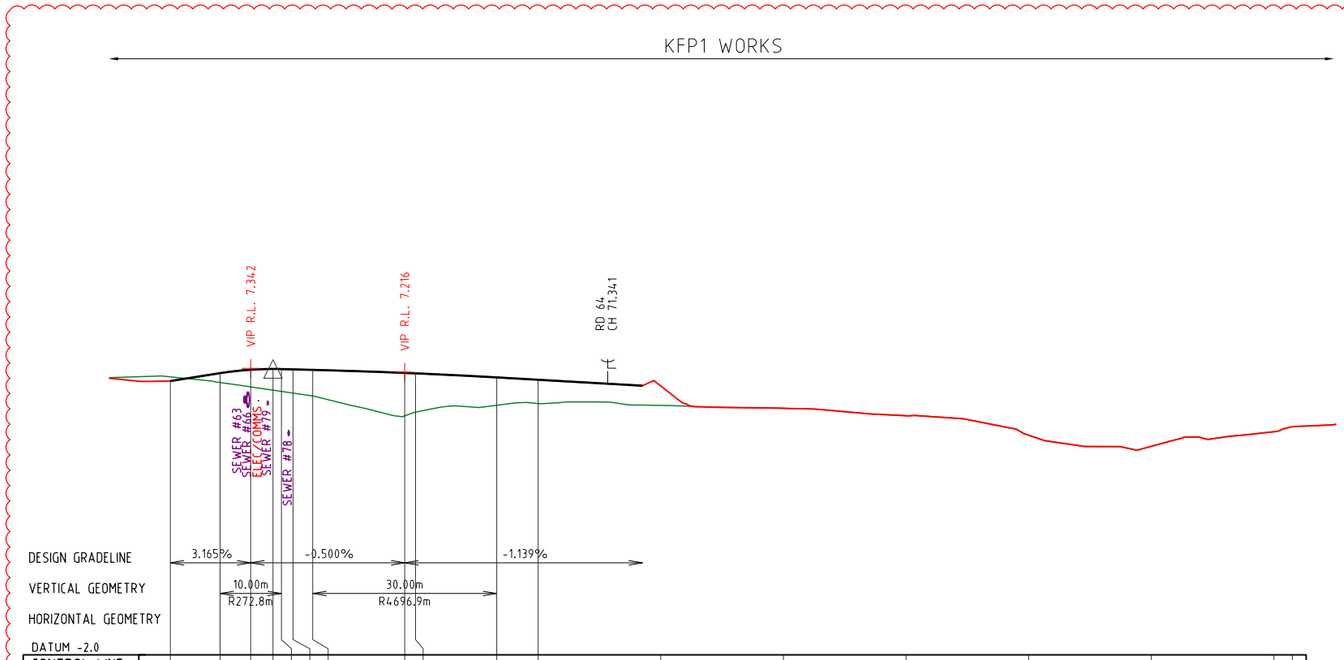
NOMINATED
DESIGN SPEED
50km/h

C

KFP1 WORKS



CONTROL LINE LEVELS	6.926	7.183	7.296	7.32	7.317	7.307	7.291	7.192	7.177	7.045	6.968							
EXISTING SURFACE	7.064	6.881	6.737	6.629	6.589	6.533	6.438	5.791	5.912	6.138	6.192	6.13	6.035	5.795	5.159	4.8	5.274	5.277
DEPTH	0.138	-0.303	-0.559	-0.691	-0.728	-0.774	-0.854	-1.401	-1.265	-0.907	-0.777							
CHAINAGE	0	8.119	13.119	16.755	18.119	20	23.235	38.235	40	53.235	60	80	100	120	14.0	160	180	180.152

LONGITUDINAL SECTION SECRET LANE (ROAD 03)

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	09-07-21	LONGITUDINAL SECTION AMENDED
B	28-02-20	LONGITUDINAL SECTION AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
LONGITUDINAL SECTION
SECRET LANE
(ROAD 03)

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER	AMEND.
12301-KFP1-204	C

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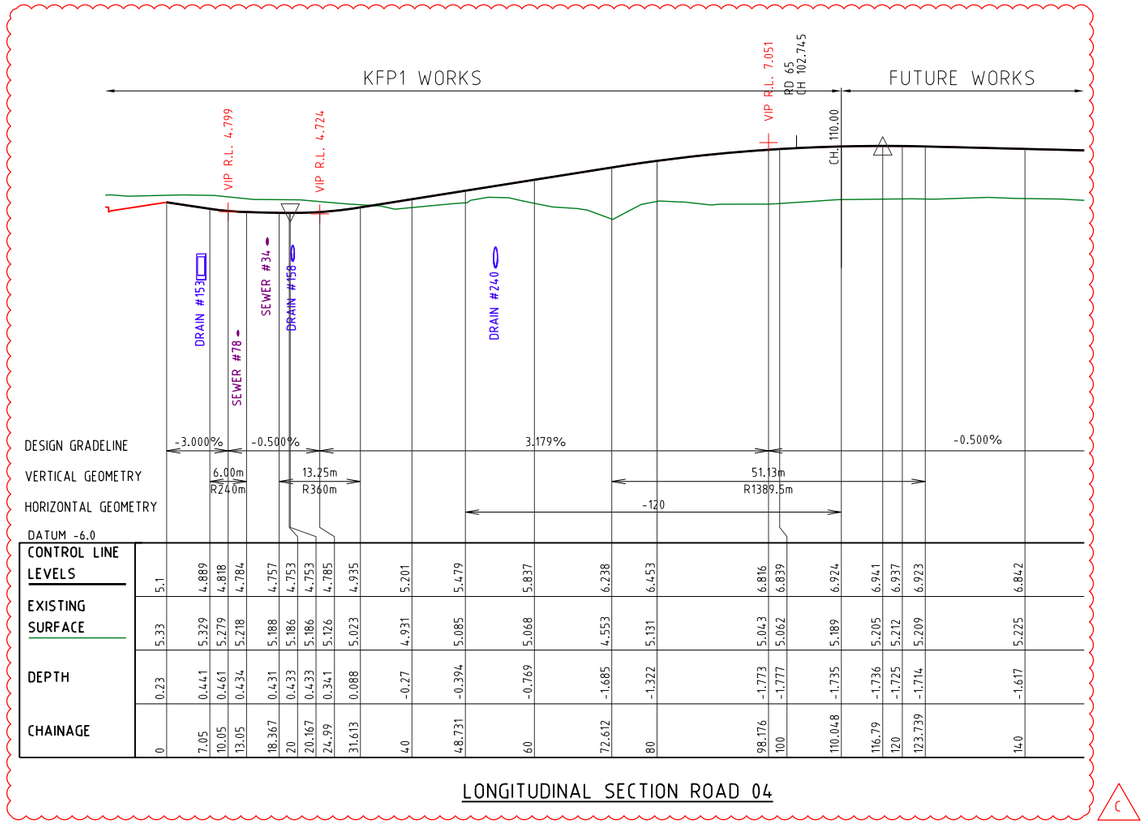

CONTROL LINE LEVELS	5.1	4.889	4.818	4.784	4.757	4.753	4.753	4.785	4.935	5.201	5.479	5.837	6.238	6.453	6.816	6.839	6.924	6.941	6.937	6.923	6.842
EXISTING SURFACE	5.33	5.329	5.279	5.218	5.188	5.186	5.186	5.126	5.023	4.931	5.085	5.068	4.553	5.131	5.043	5.062	5.189	5.205	5.212	5.209	5.225
DEPTH	0.23	0.441	0.461	0.434	0.431	0.433	0.433	0.341	0.088	-0.27	-0.394	-0.769	-1.685	-1.322	-1.773	-1.777	-1.735	-1.736	-1.725	-1.714	-1.617
CHAINAGE	0	7.05	10.05	13.05	18.367	20	20.167	24.99	31.613	40	48.731	60	72.612	80	98.176	100	110.048	116.79	120	123.739	140

LONGITUDINAL SECTION ROAD 04

C

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	06-07-21	LONGITUDINAL SECTION AND LABEL AMENDED
B	28-02-20	LONGITUDINAL SECTION AMENDED
A	14-11-19	COUNCIL ISSUE

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
LONGITUDINAL SECTION
ROAD 04

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER	AMEND.
12301-KFP1-205	C

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DESIGN SPEED
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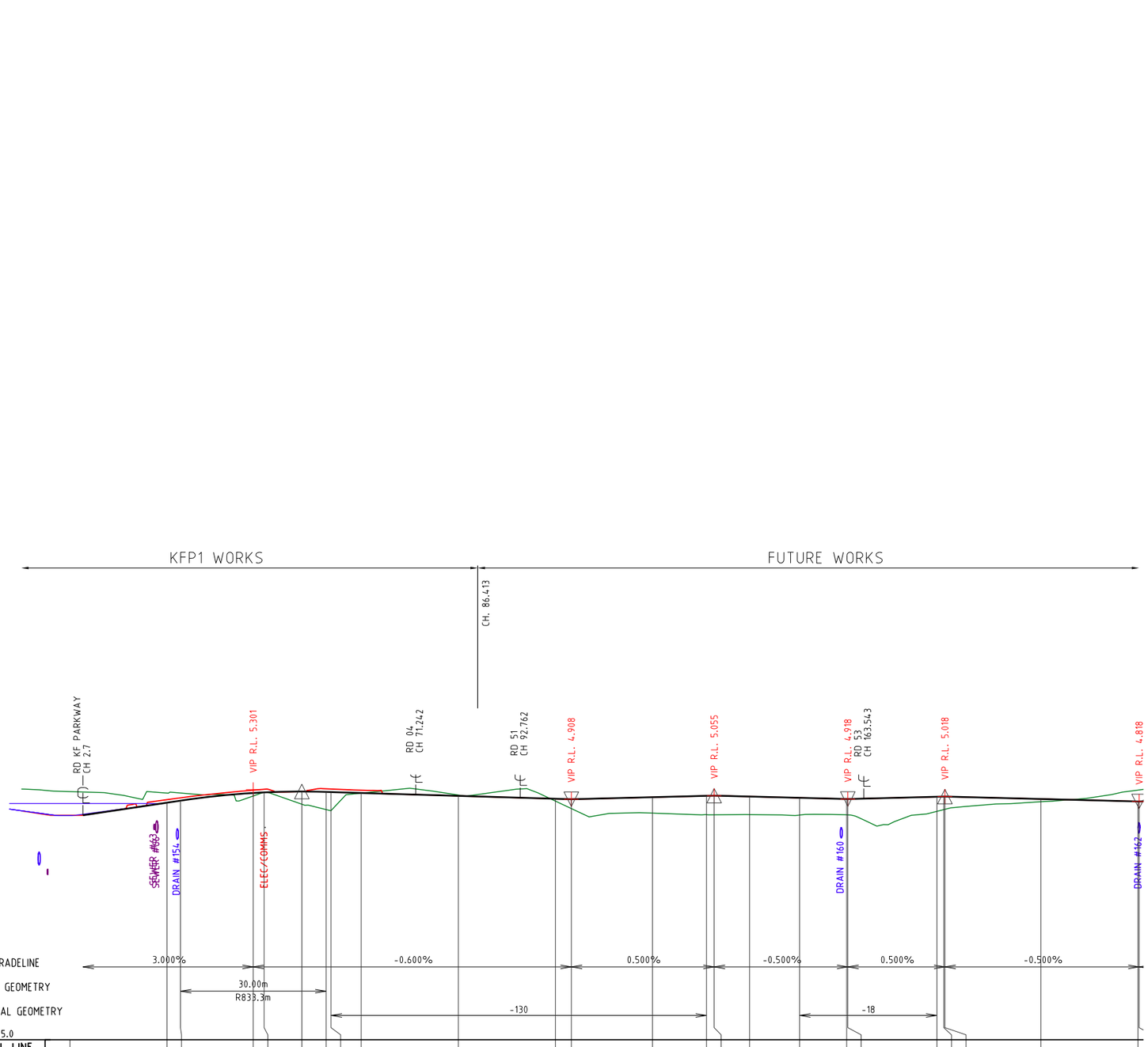
KFP1 WORKS

FUTURE WORKS

CH. 86.413



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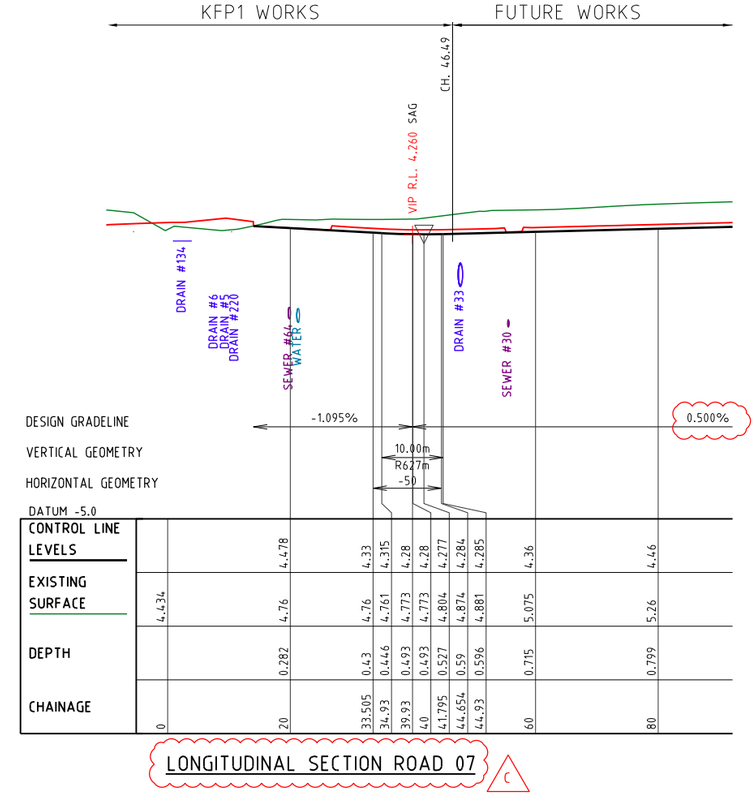

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	06-07-21	LABEL AMENDED
B	28-02-20	LONGITUDINAL SECTION AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
LONGITUDINAL SECTION
ROAD 07

CONSTRUCTION ISSUE

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DRAWING NUMBER
12301-KFP1-207

AMEND.
C

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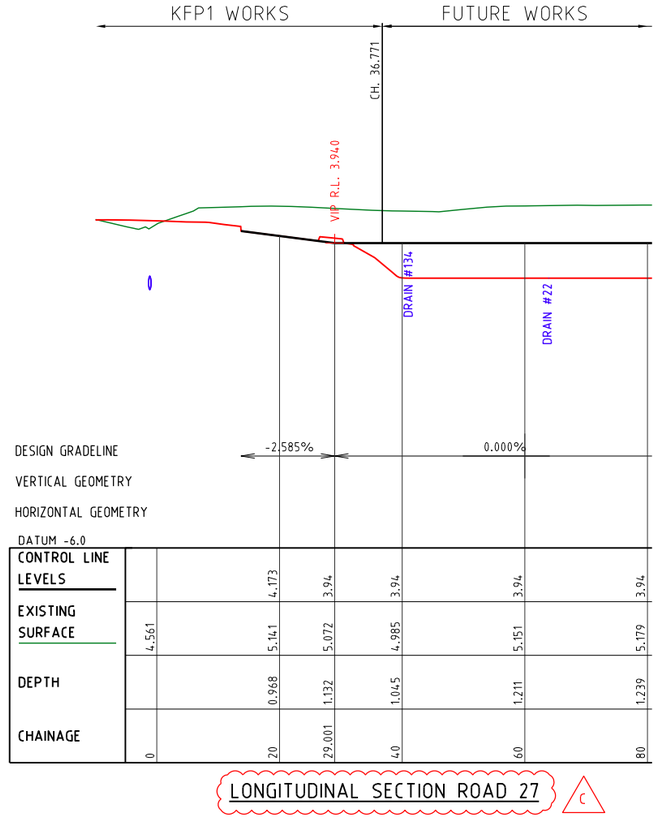

LONGITUDINAL SECTION ROAD 27 C

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	06-07-21	LABEL AMENDED
B	28-02-20	LONGITUDINAL SECTION AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
LONGITUDINAL SECTION
ROAD 27

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER 12301-KFP1-208 | AMEND. C

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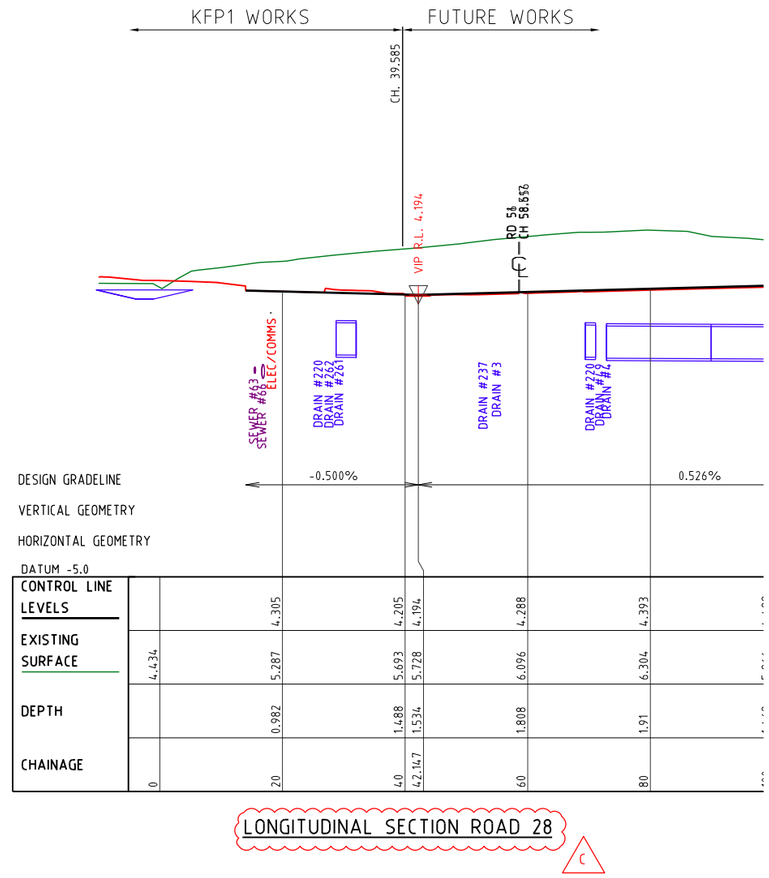

LONGITUDINAL SECTION ROAD 28

C

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	06-07-21	LABEL AMENDED
B	28-02-20	LONGITUDINAL SECTION AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
LONGITUDINAL SECTION
ROAD 28

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER	AMEND.
12301-KFP1-209	C

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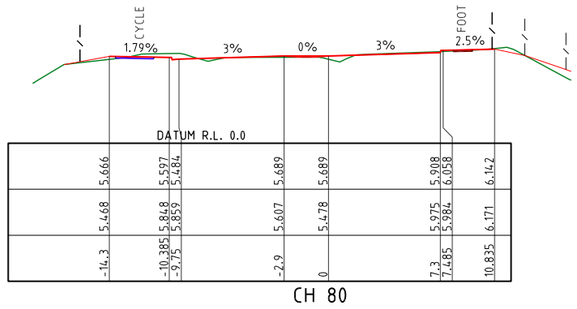
CYCLEWAY

CYCLEWAY ON ROAD

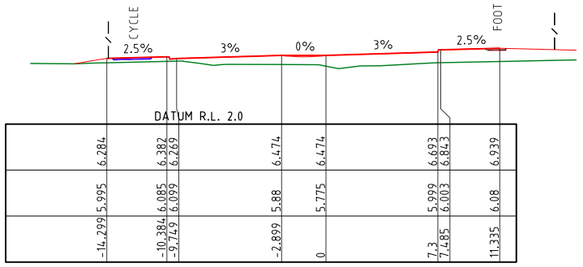
FOOTPATH

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



CH 80



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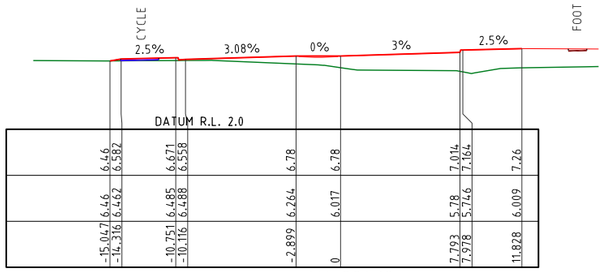

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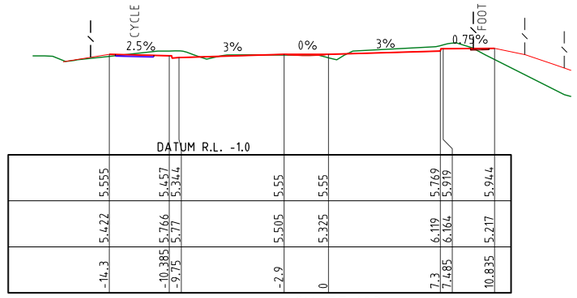

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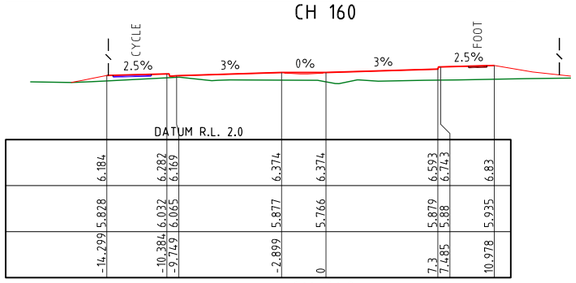

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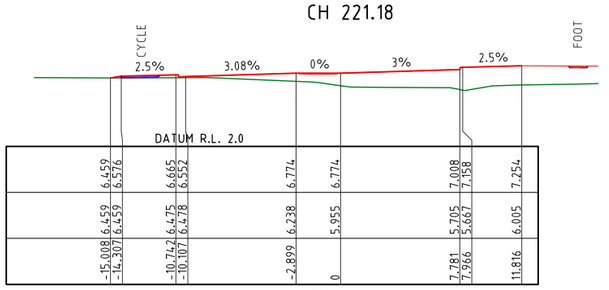

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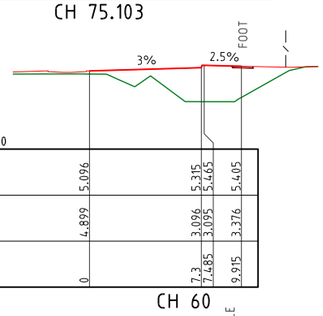

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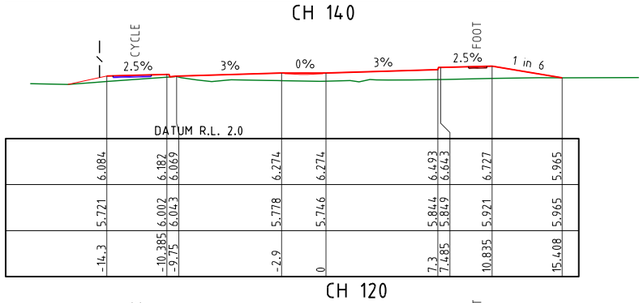

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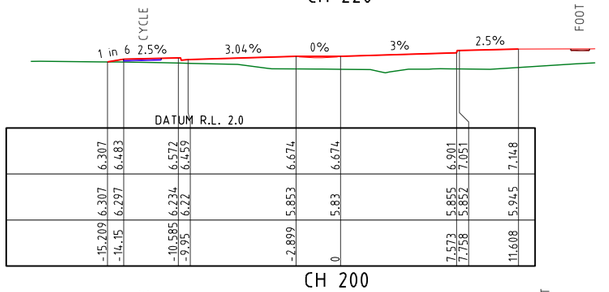

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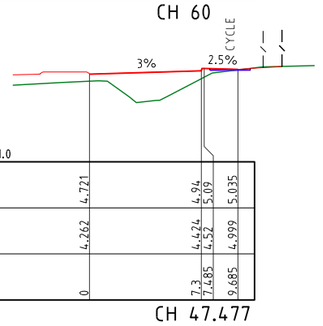

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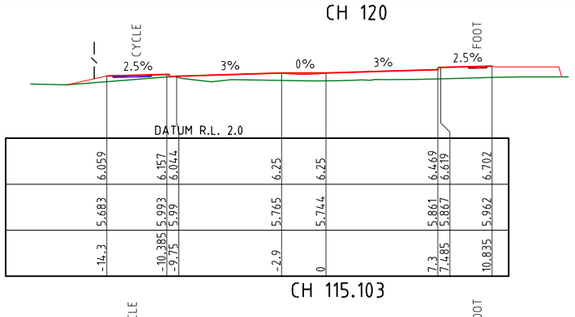

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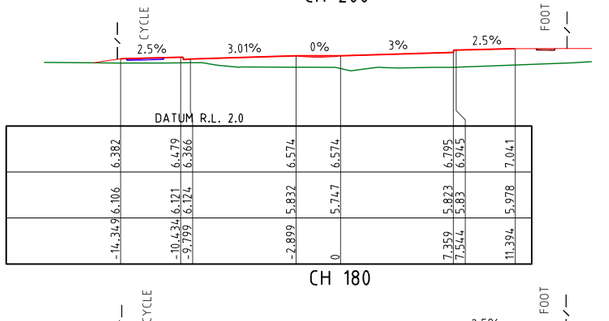

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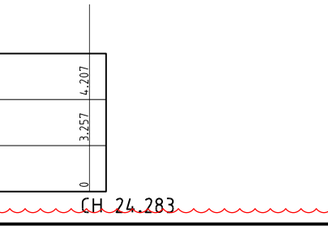
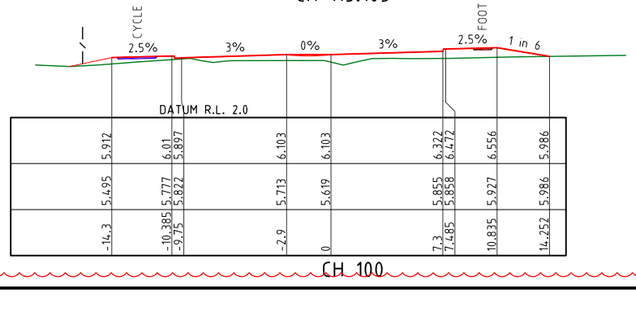


ROAD 01

CH 24.283



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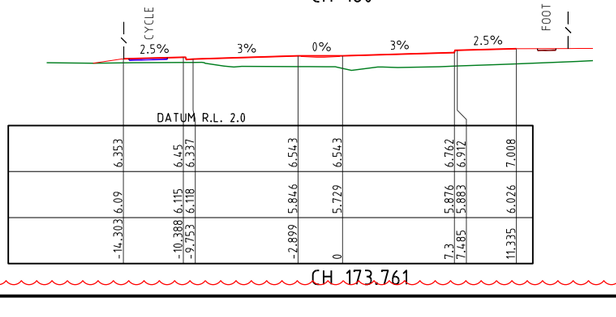

CH 173.761

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	09-07-21	CROSS SECTIONS AMENDED
B	27-10-20	LEGEND AND CROSS SECTIONS AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
KINGS FOREST PARKWAY
SHEET 1
(ROAD 01)

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

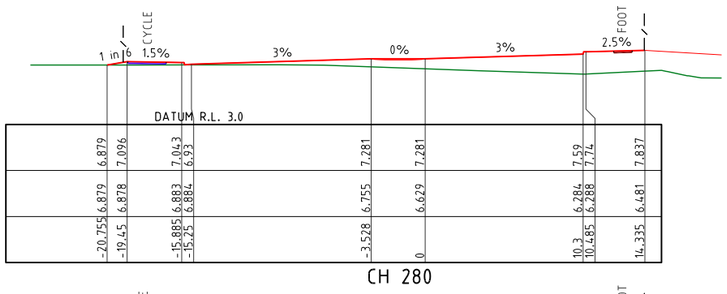
DRAWING NUMBER	AMEND.
12301-KFP1-300	C

yc123 - feda developments pty ltd\01 - kings forest\KFP1\engineering drawings\Current\12301-KFP1-300.dwg, 1/10/2021 11:57:39 AM, 12

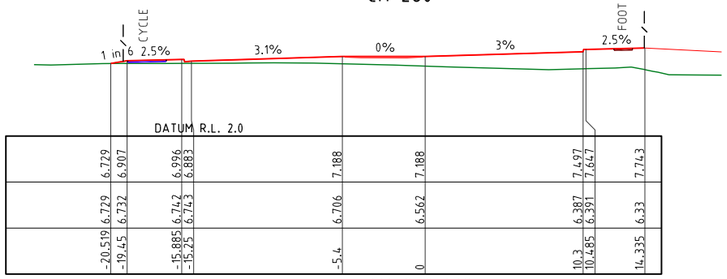
C

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



CH 280



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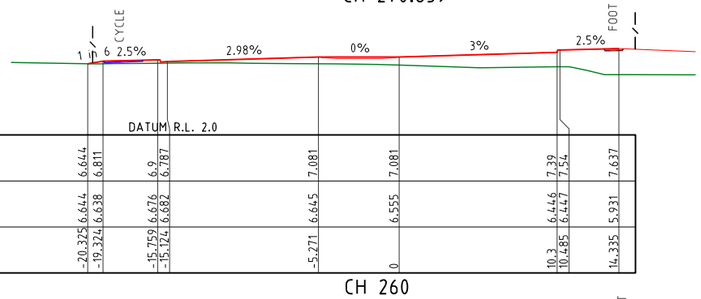

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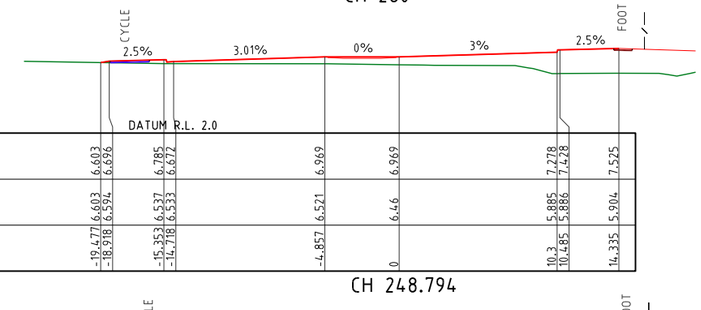

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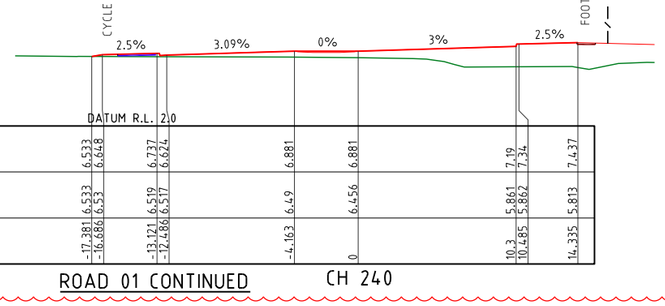


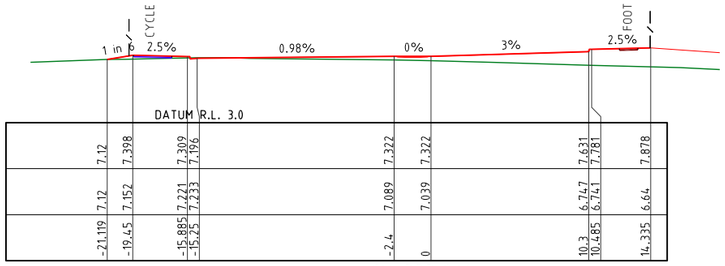
DESIGN SURFACE LEVEL

EXISTING SURFACE LEVEL

OFFSET

ROAD 01 CONTINUED

CH 240



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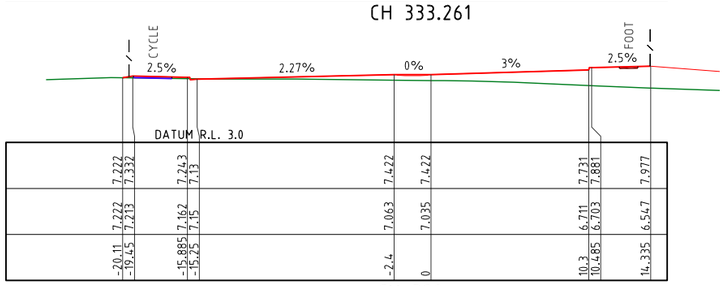

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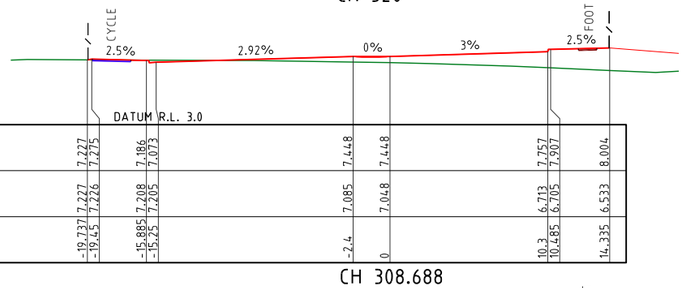
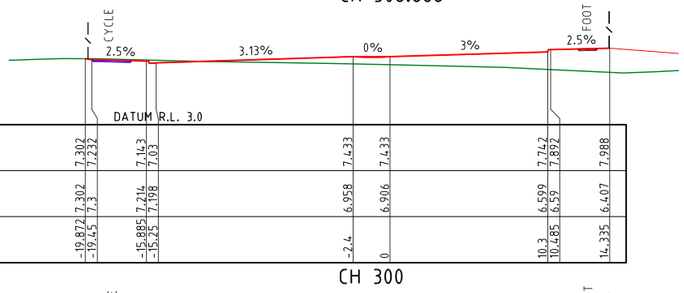


CH 308.688



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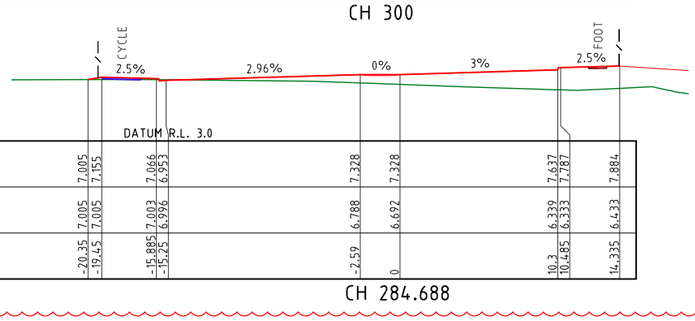

CH 284.688

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	09-07-21	CROSS SECTIONS AMENDED
B	27-10-20	CROSS SECTIONS AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
KINGS FOREST PARKWAY
SHEET 2
(ROAD 01)

CONSTRUCTION ISSUE

MORTONS urbansolutions
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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
		DATE	14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-301	C

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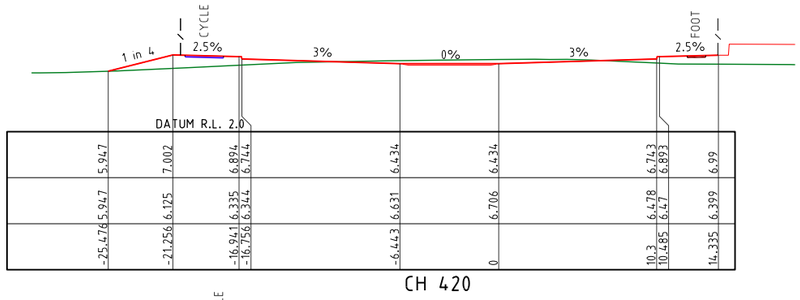
C

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



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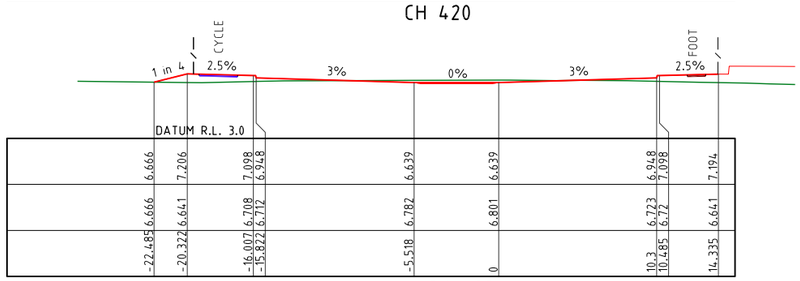

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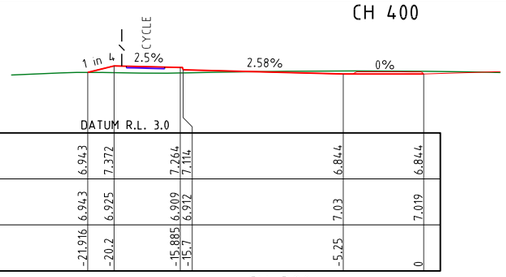

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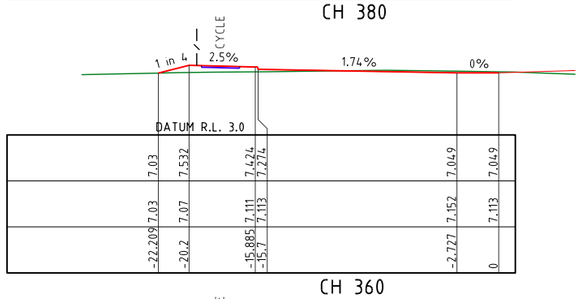

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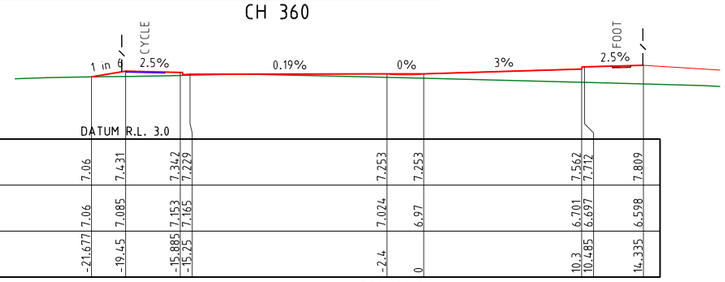
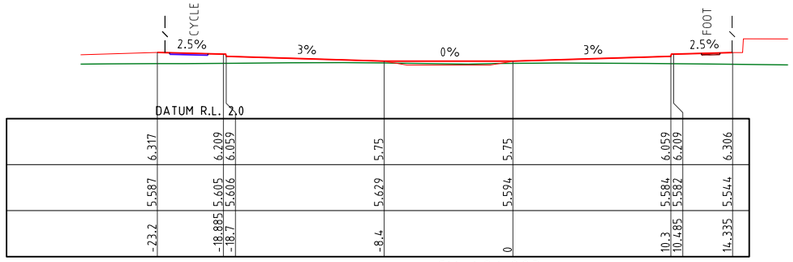


CH 340

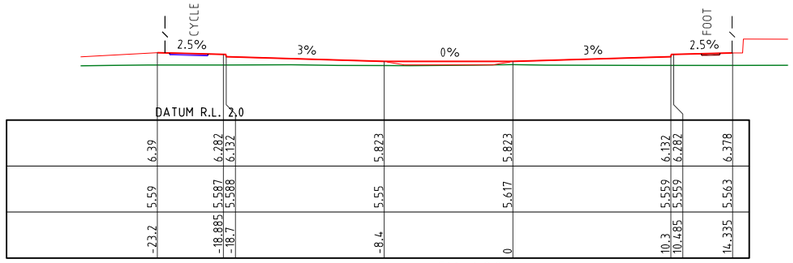
DESIGN SURFACE LEVEL

EXISTING SURFACE LEVEL

OFFSET



CH 496.883



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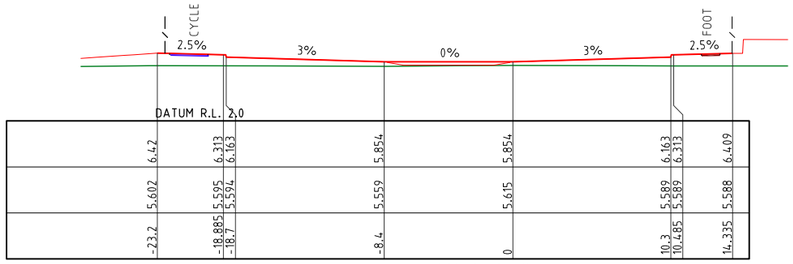
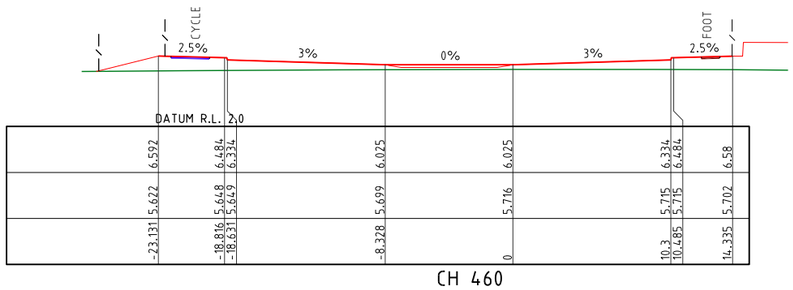


CH 476.727



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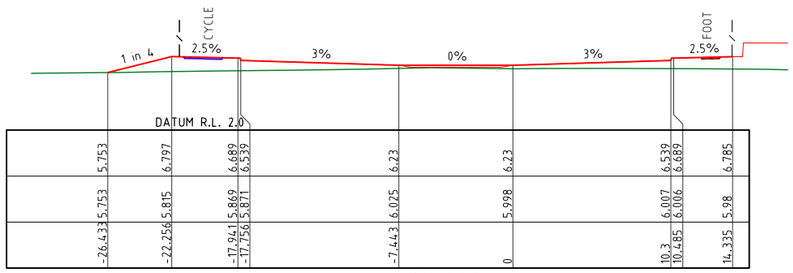

CH 440

ROAD 01 CONTINUED

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	09-07-21	CROSS SECTIONS AMENDED
B	27-10-20	CROSS SECTIONS AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
KINGS FOREST PARKWAY
SHEET 3
(ROAD 01)

CONSTRUCTION ISSUE

MORTONS urbansolutions
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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
		DATE	14-11-19

DRAWING NUMBER 12301-KFP1-302

AMEND. C

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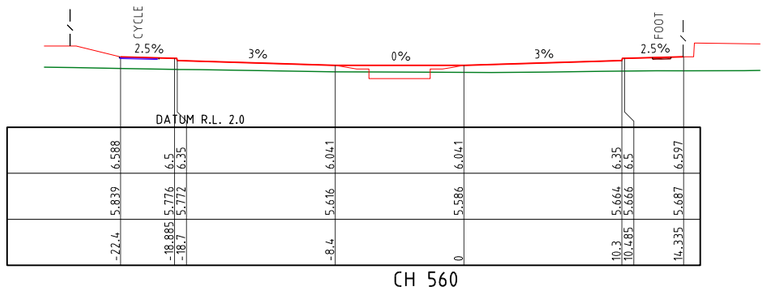
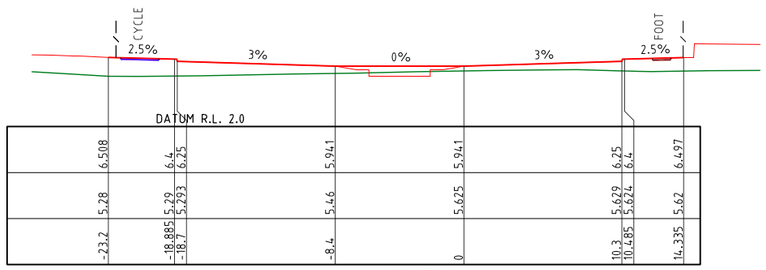
C

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



CH 560



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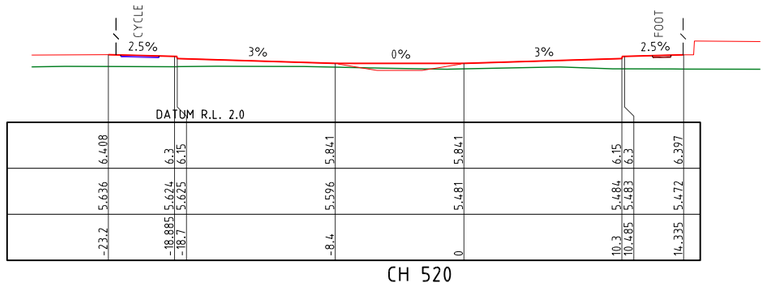

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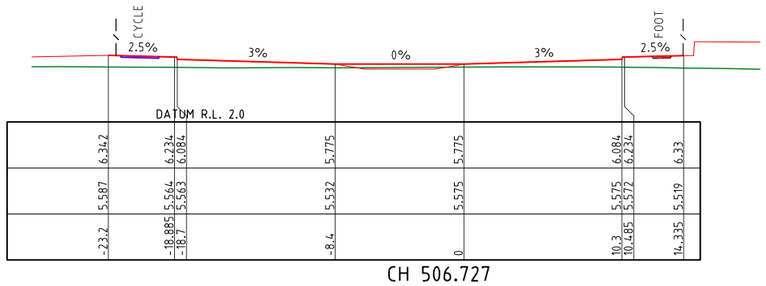

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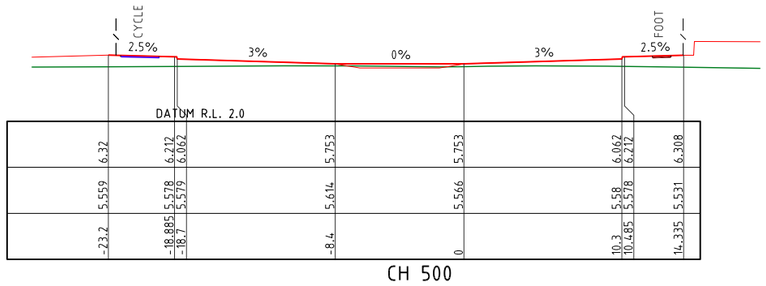

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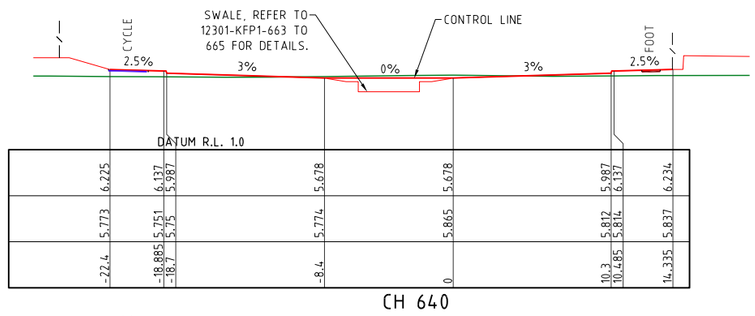
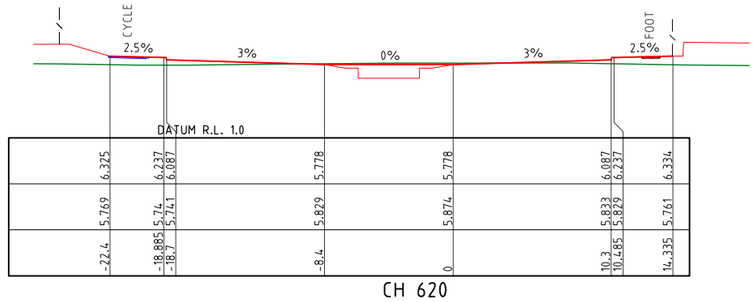


CH 640



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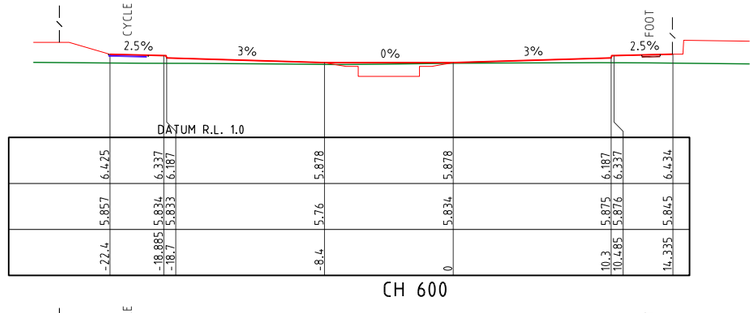

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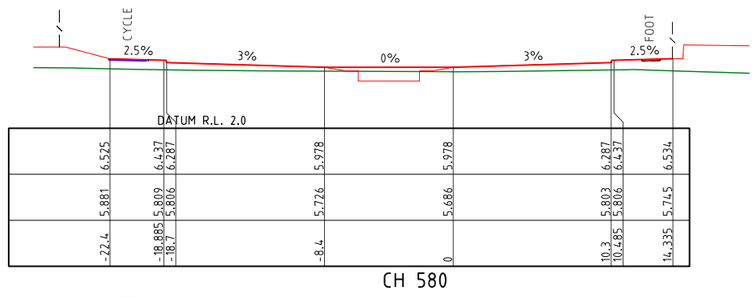

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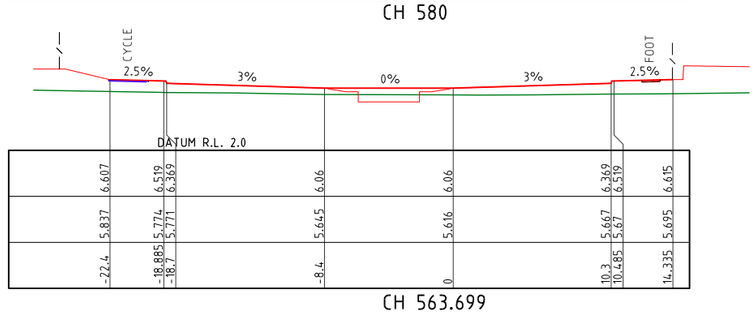

CH 563.699

DESIGN SURFACE LEVEL

EXISTING SURFACE LEVEL

OFFSET

ROAD 01 CONTINUED

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	09-07-21	CROSS SECTIONS AMENDED
B	27-10-20	CROSS SECTIONS AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
KINGS FOREST PARKWAY
SHEET 4
(ROAD 01)

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
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Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-303	C

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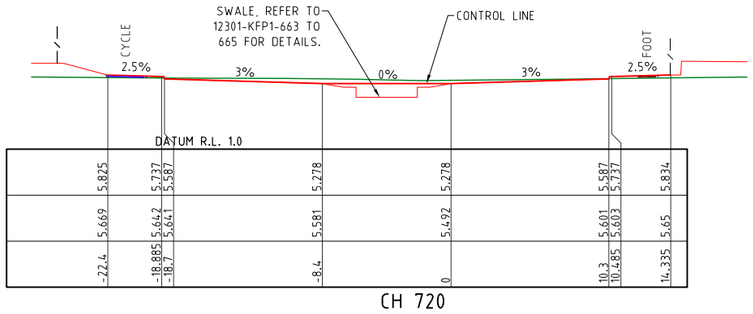
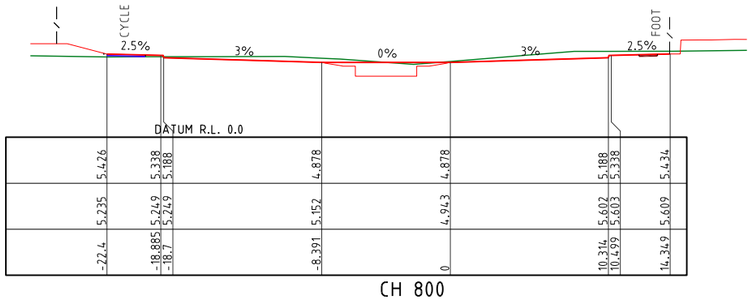
C

NOTES:

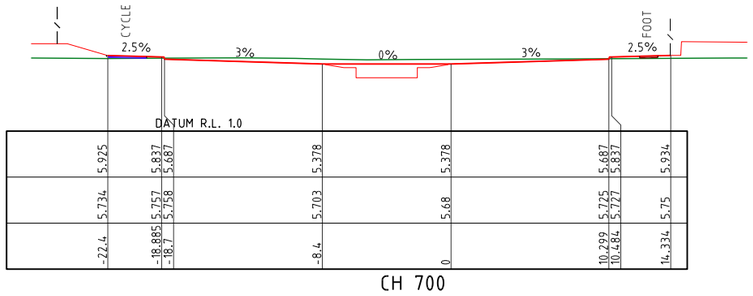
1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



CH 720



CH 800



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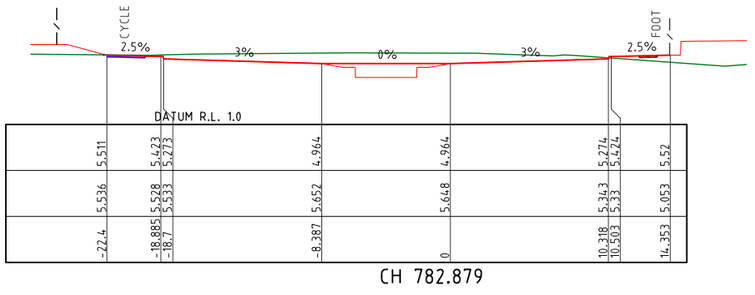
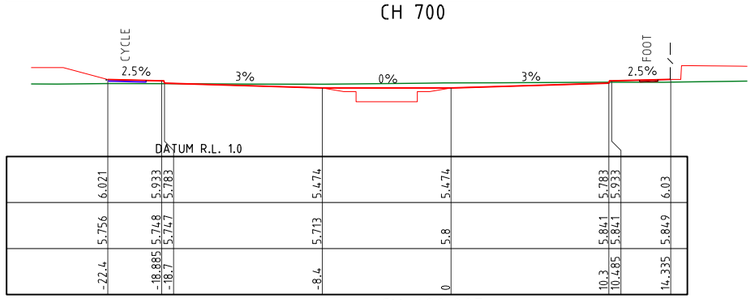
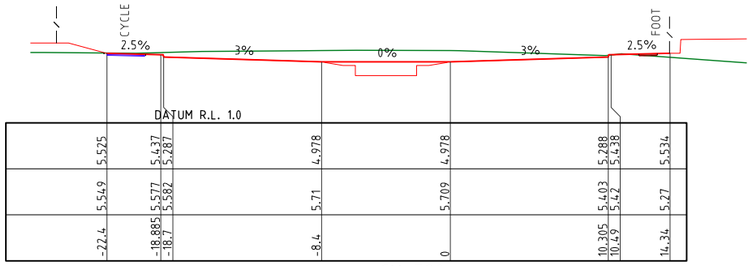


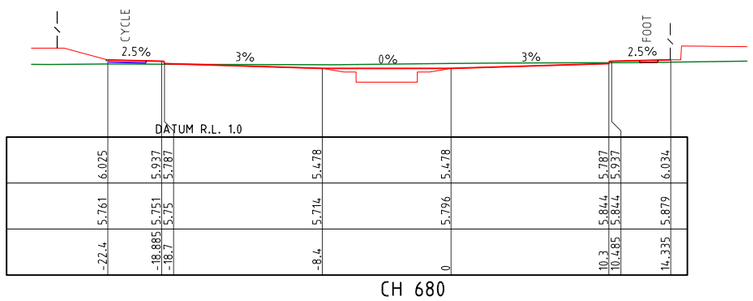
CH 782.879



CH 680.805



CH 780



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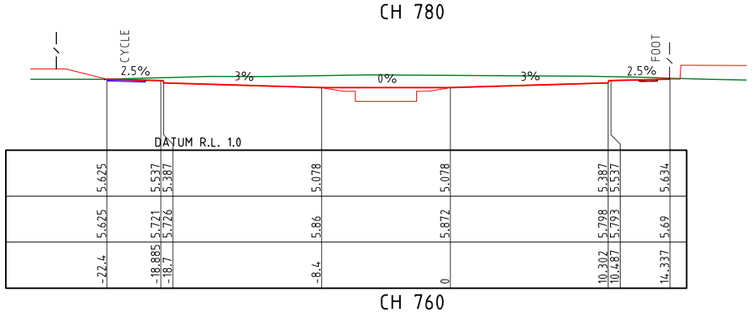

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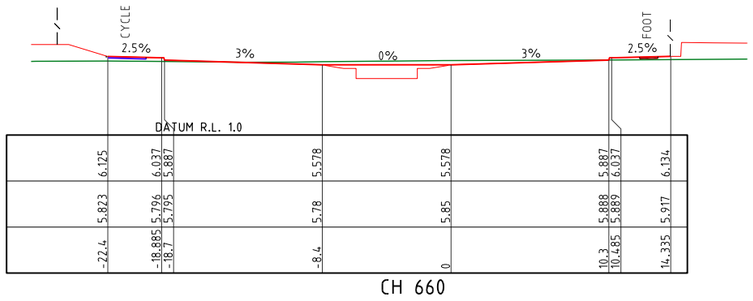

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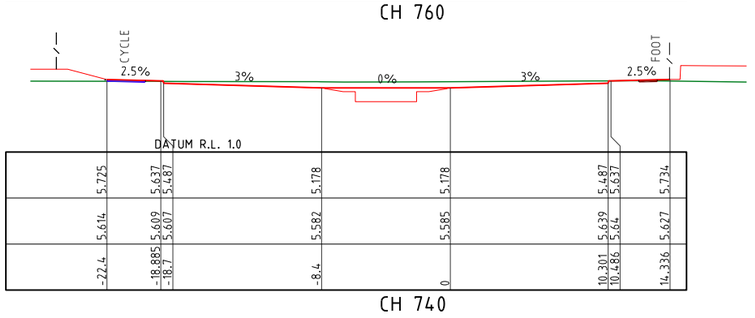

CH 740

DESIGN SURFACE LEVEL

EXISTING SURFACE LEVEL

OFFSET

ROAD 01 CONTINUED

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	09-07-21	CROSS SECTIONS AMENDED
B	27-10-20	CROSS SECTIONS AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
KINGS FOREST PARKWAY
SHEET 5
(ROAD 01)

CONSTRUCTION ISSUE

MORTONS urbansolutions
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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

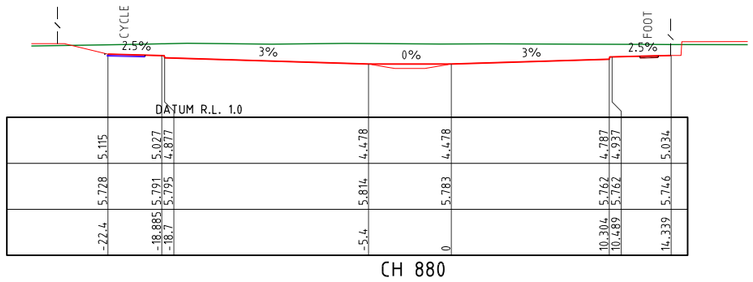
DRAWING NUMBER 12301-KFP1-304
AMEND. C

y:\123 - leda developments pty ltd\01 - kings forest\KFP1\engineering drawings\Current\12301-KFP1-300.dwg, 1/10/2021 11:27:52 AM, 1:2

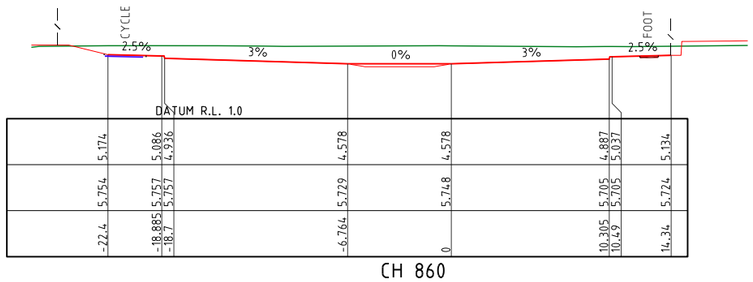
C

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



CH 880



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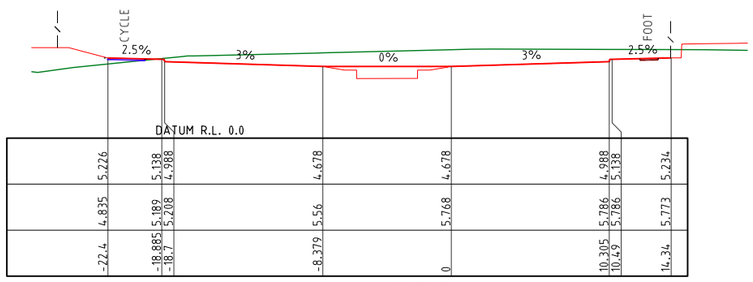

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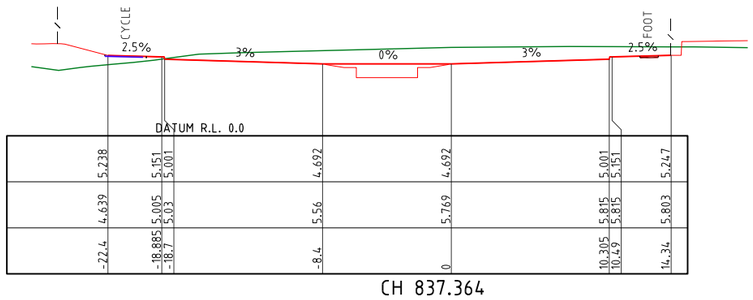

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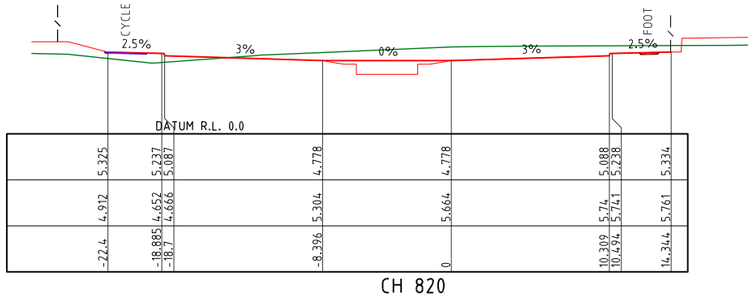
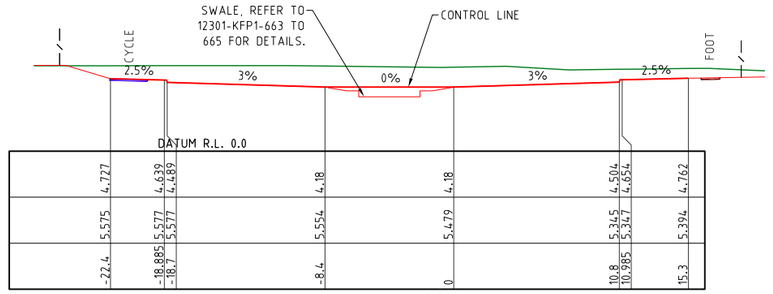


CH 820

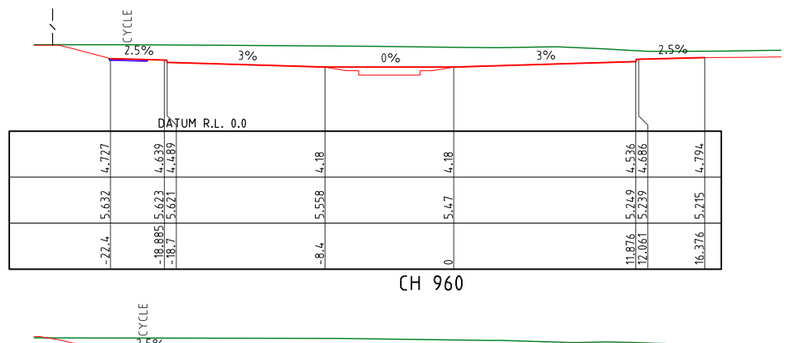
DESIGN SURFACE LEVEL

EXISTING SURFACE LEVEL

OFFSET



CH 980



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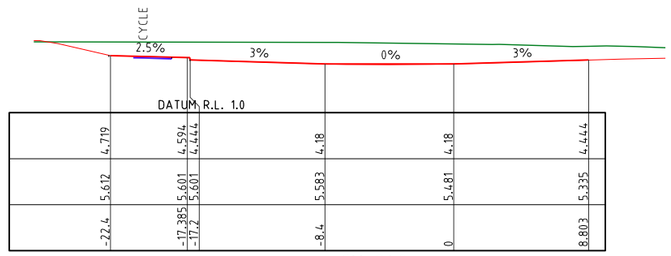

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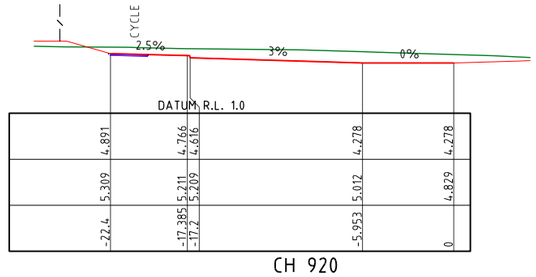
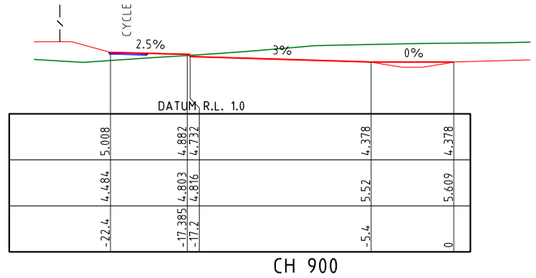


CH 920



CH 900

ROAD 01 CONTINUED

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	09-07-21	CROSS SECTIONS AMENDED
B	27-10-20	CROSS SECTIONS AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
KINGS FOREST PARKWAY
SHEET 6
(ROAD 01)

CONSTRUCTION ISSUE

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DESIGNED RB	DRAWN CB	
APPROVED	NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-305
AMEND. C

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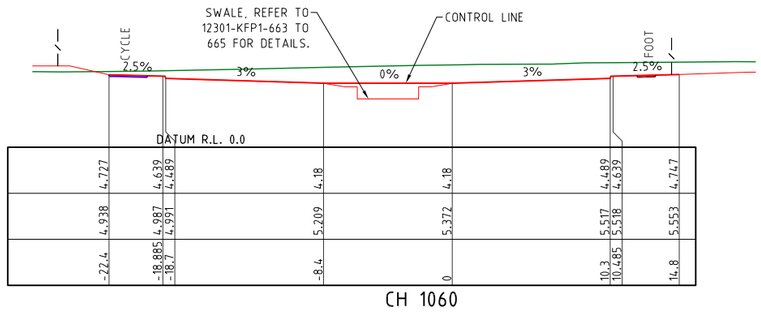
C

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



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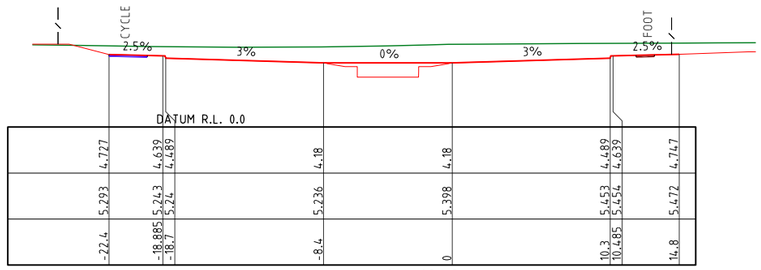

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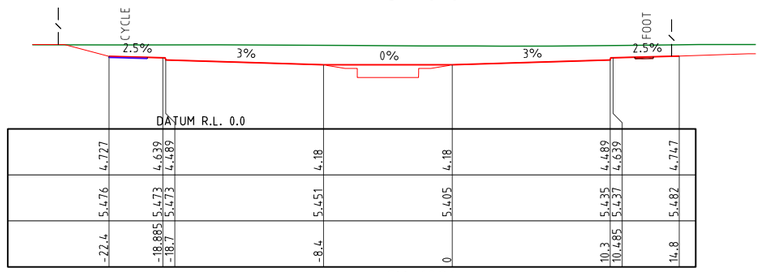

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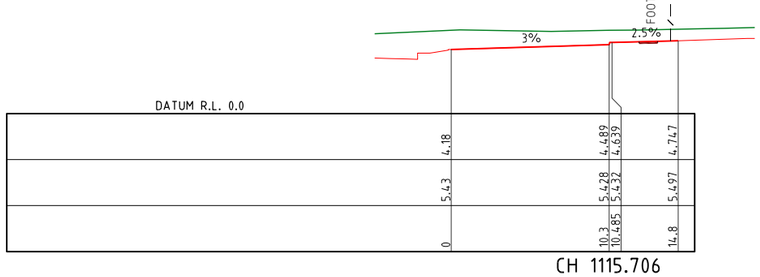
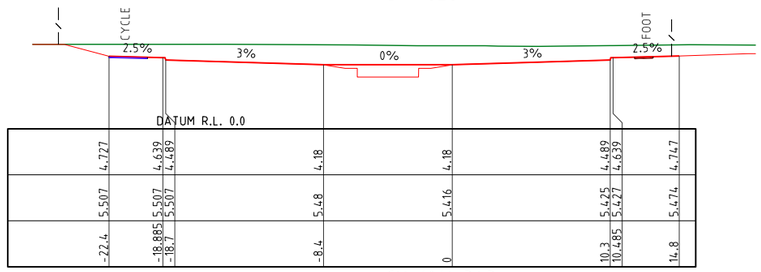
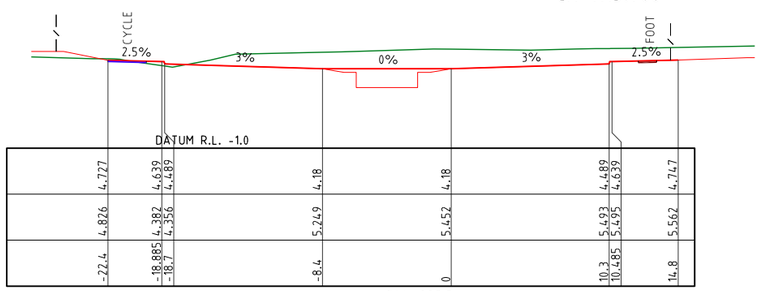


CH 1115.706



CH 1014.343



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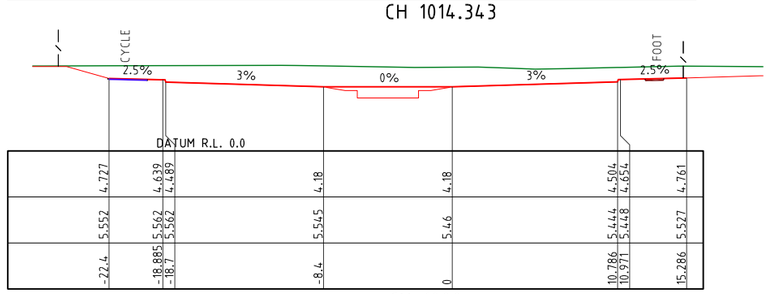

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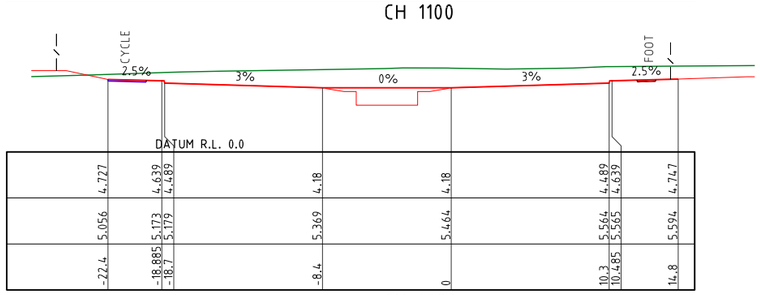

CH 1080

DESIGN SURFACE LEVEL

EXISTING SURFACE LEVEL

OFFSET

ROAD 01 CONTINUED

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	09-07-21	CROSS SECTIONS AMENDED
B	27-10-20	CROSS SECTIONS AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
KINGS FOREST PARKWAY
SHEET 7
(ROAD 01)

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As
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Tel 07 5571 1099
Fax 07 5571 1088
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Gold Coast Office
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Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-306	C

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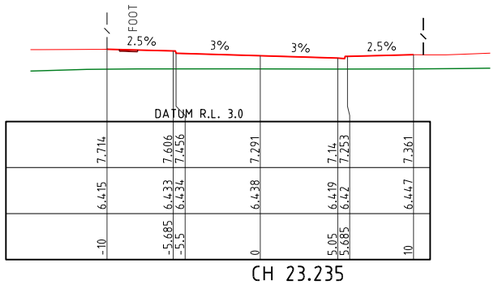
C

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



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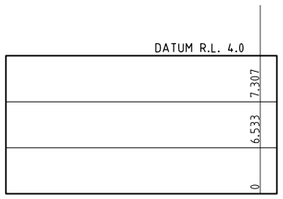
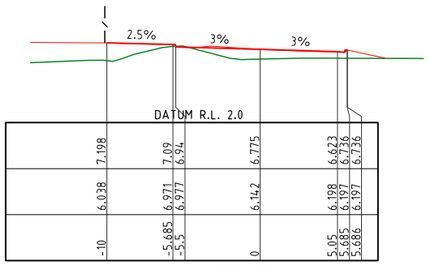
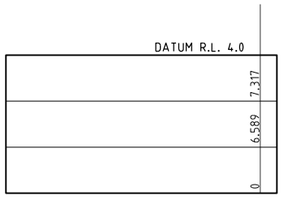


CH 20



CH 77



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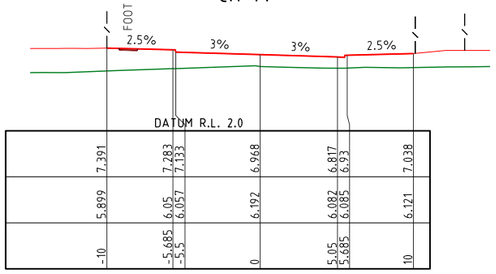
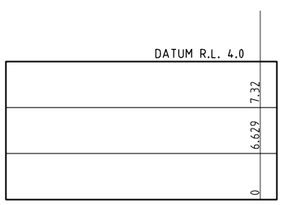


CH 60



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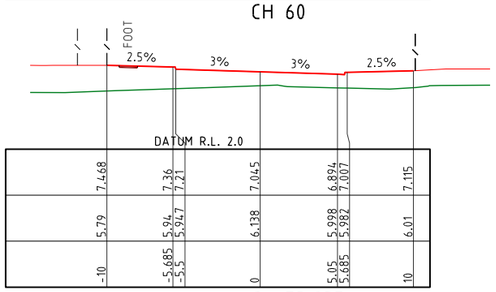

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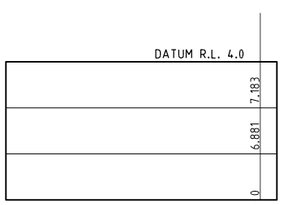

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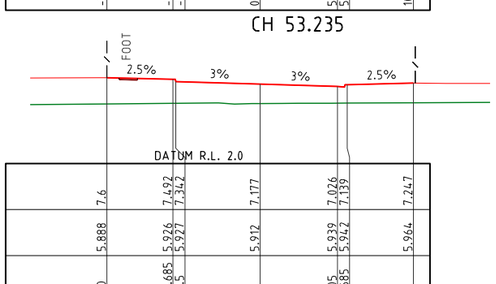

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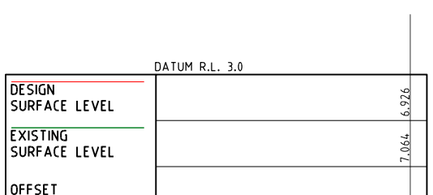

CH 0

ROAD 03

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	09-07-21	CROSS SECTIONS AMENDED
B	27-10-20	CROSS SECTIONS AMENDED
A	14-11-19	COUNCIL ISSUE

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
SECRET LANE
(ROAD 03)

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
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Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
DATE	14-11-19		

DRAWING NUMBER: 12301-KFP1-307
AMEND.: C

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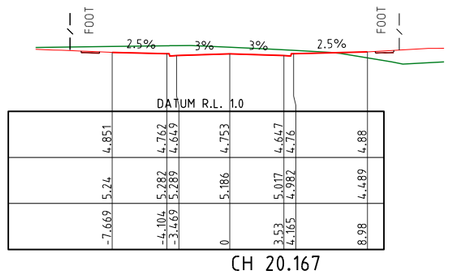
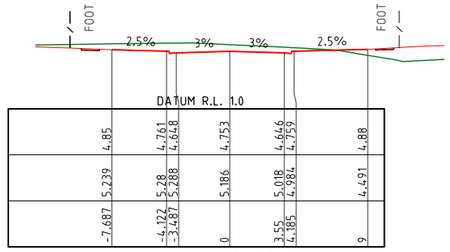
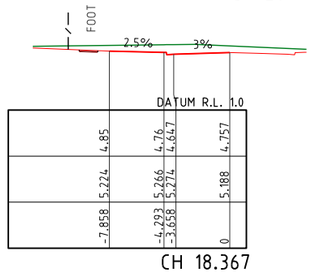
ROAD 03



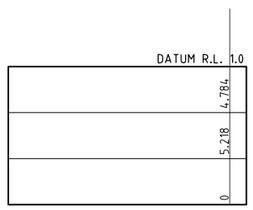
CH 20.167



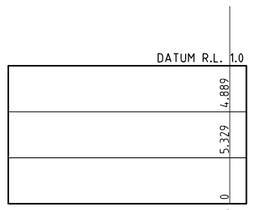
CH 20



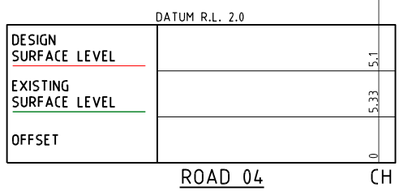
CH 18.367



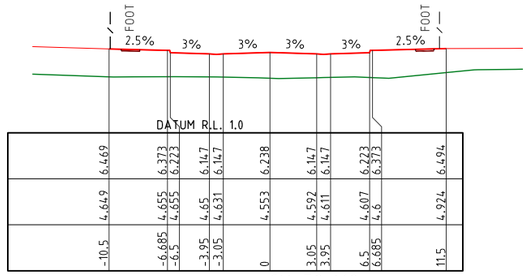
CH 13.05



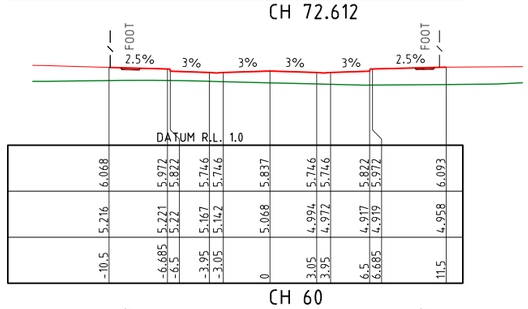
CH 7.05



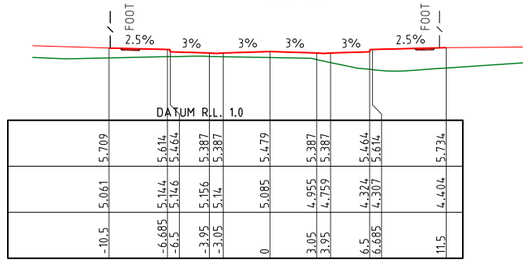
ROAD 04 CH 0



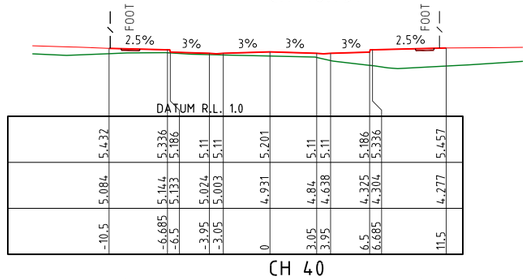
CH 72.612



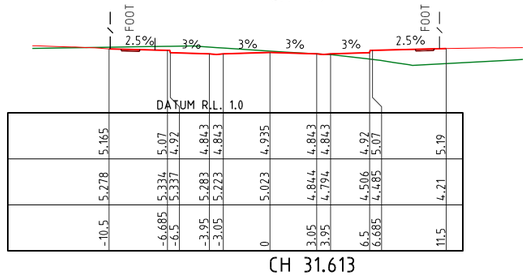
CH 60



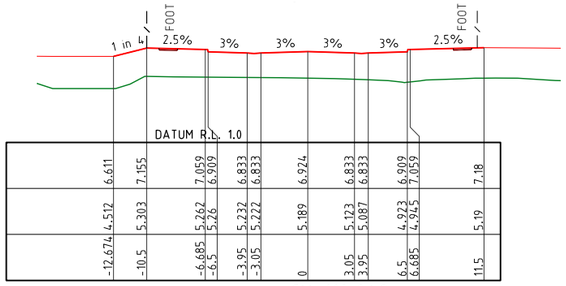
CH 48.731



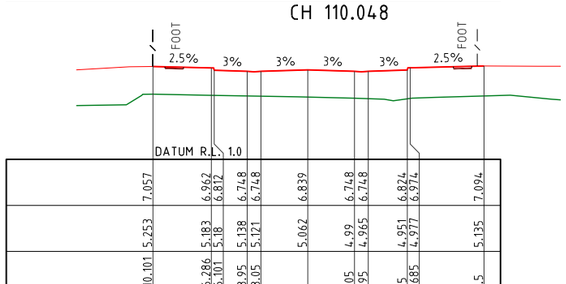
CH 40



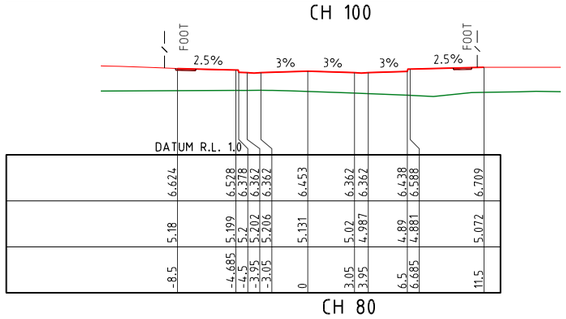
CH 31.613



CH 110.048



CH 100



CH 80

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	09-07-21	CROSS SECTIONS AMENDED
B	27-10-20	CROSS SECTIONS AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 04

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As
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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

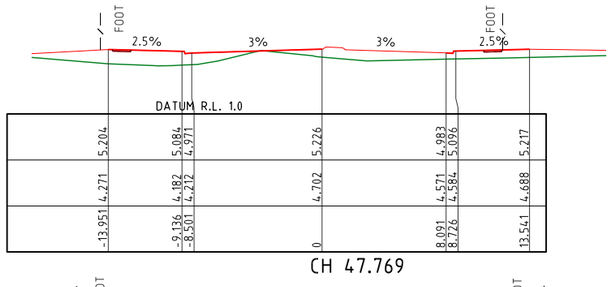
DRAWING NUMBER	AMEND.
12301-KFP1-308	C

y:\123 - feda developments pty ltd\01 - kings forest\KFP1\engineering drawings\Current\12301-KFP1-300.dwg, 1/10/2021 11:38:05 AM, 1:2

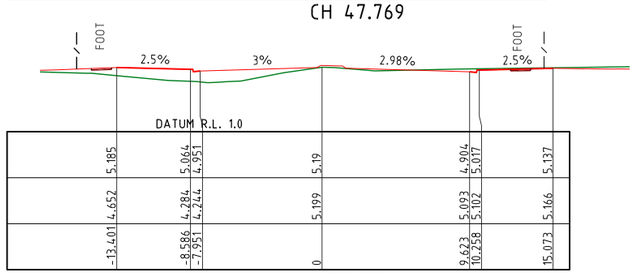
B

NOTES:

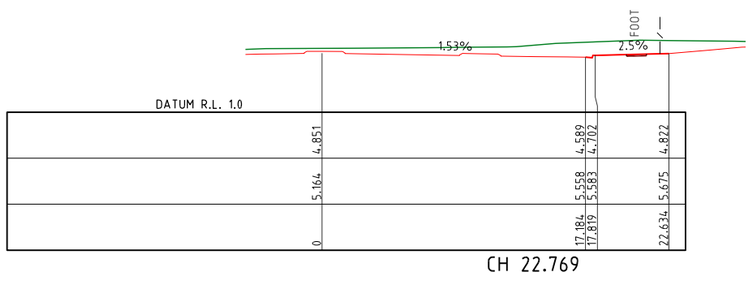
1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



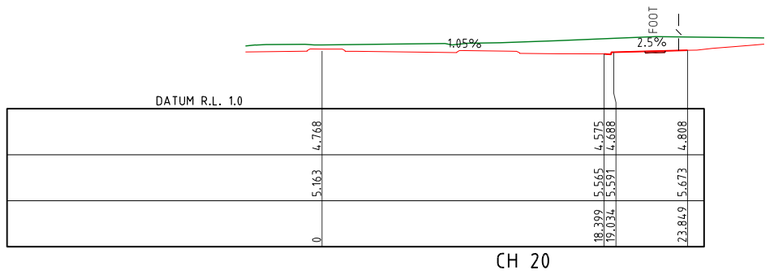
CH 47.769



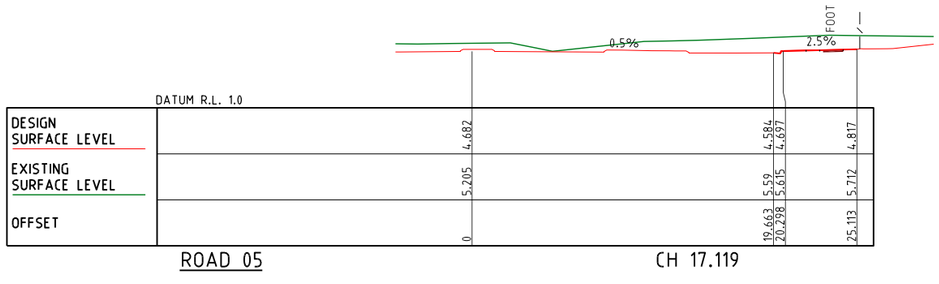
CH 40



CH 22.769



CH 20



ROAD 05 CH 17.119

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	27-10-20	CROSS SECTIONS AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 05

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-309
AMEND. B

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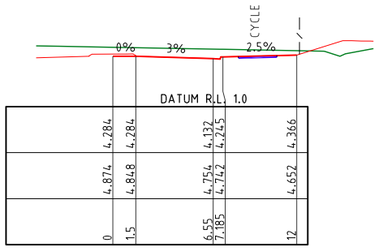
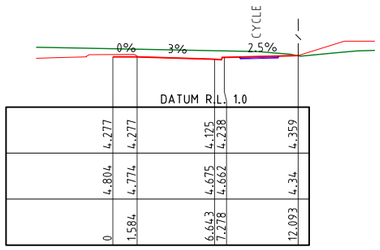
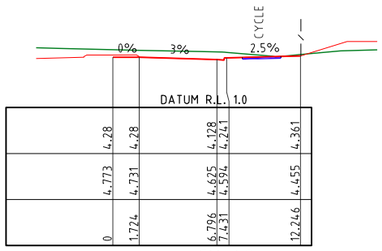


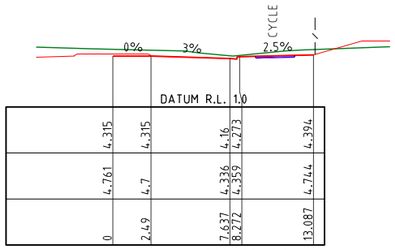
CH 44.654



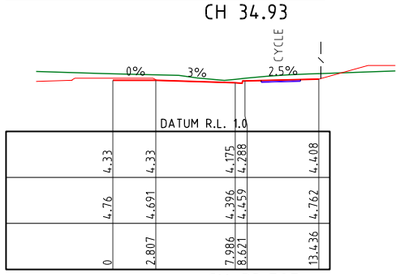
CH 41.795



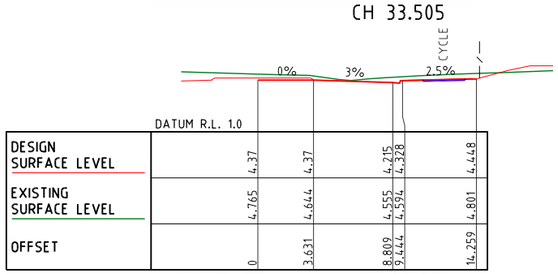
CH 40



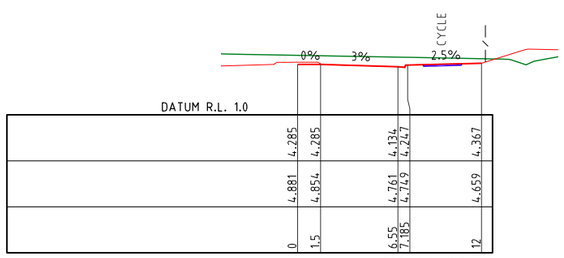
CH 34.93



CH 33.505

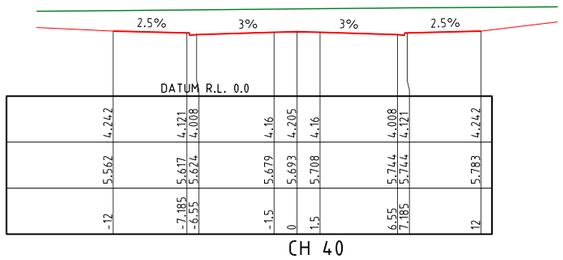


ROAD 07 CH 29.874

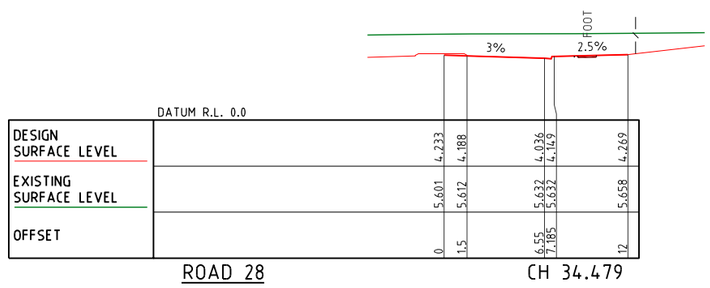


CH 44.93

C



CH 40



ROAD 28 CH 34.479

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	08-09-21	CROSS SECTIONS AMENDED
B	27-10-20	CROSS SECTIONS AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 07 &
ROAD 28

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
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Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-310
AMEND. C

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LEGEND

- EXISTING CONTOURS
- EXISTING KERB
- EXISTING FOOTPATH
- CONTROL LINE / CENTER OF ROAD
- PROPOSED KERB (INVERT)
- PROPOSED KERB (LIP & BACK)
- PROPOSED FOOTPATH
- PROPOSED PROPERTY LINE
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS A7 8m CENTERS.
- FUTURE ACOUSTIC FENCE
- PROPOSED TEMPORARY CONSTRUCTION LIMIT FENCE
- PROPOSED GUARDRAIL
- K12 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER
- PROPOSED CONCRETE
- PROPOSED CONCRETE ISLANDS
- PROPOSED LANDSCAPE ISLANDS
- 24.0 _41.065 INTERSECTION CHAINAGE & LEVEL
- — 41.065 CENTRELINE CHAINAGE

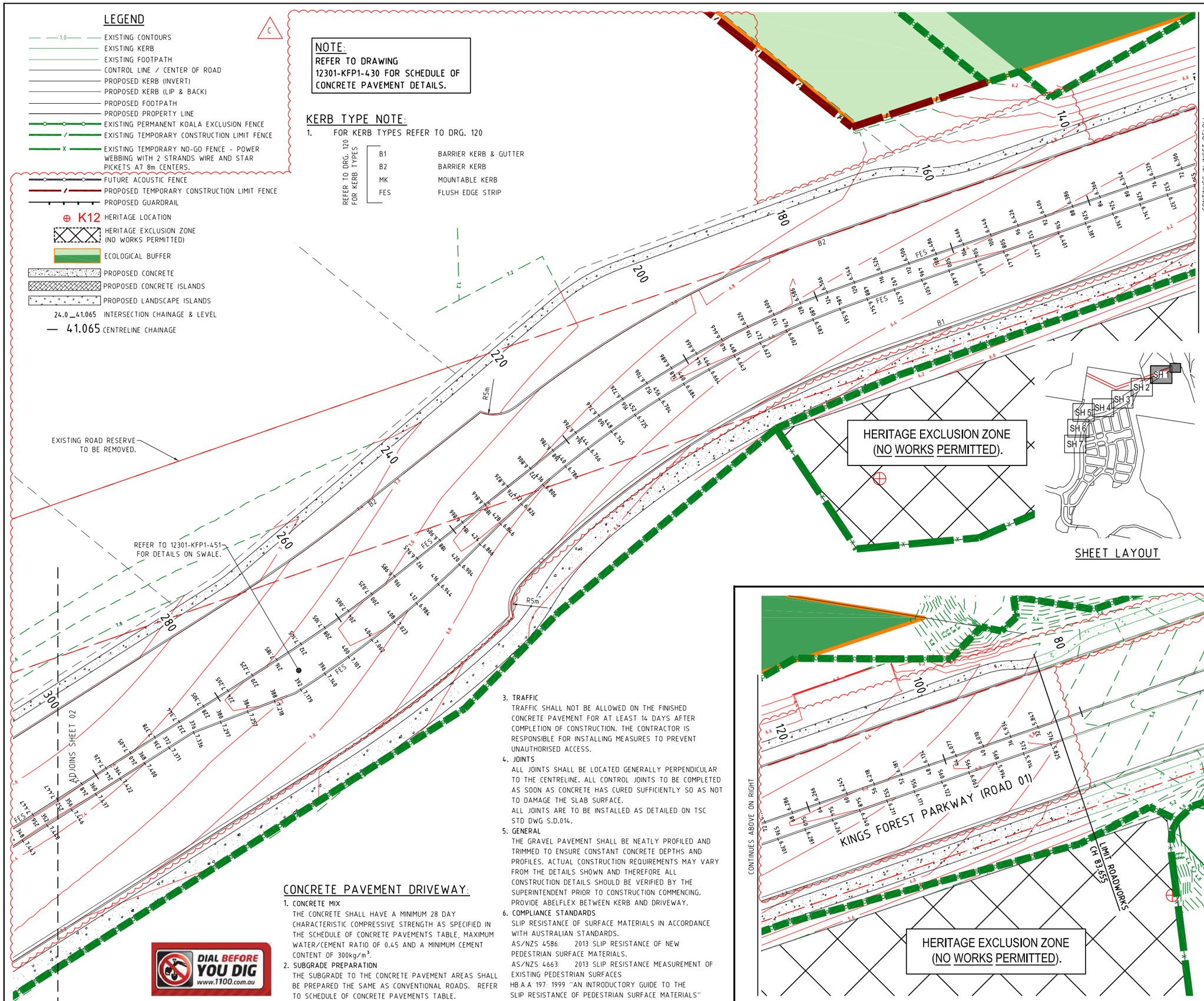
NOTE:
REFER TO DRAWING 12301-KFP1-430 FOR SCHEDULE OF CONCRETE PAVEMENT DETAILS.

KERB TYPE NOTE:

1. FOR KERB TYPES REFER TO DRG. 120

REFER TO DRG. 120 FOR KERB TYPES

B1	BARRIER KERB & GUTTER
B2	BARRIER KERB
MK	MOUNTABLE KERB
FES	FLUSH EDGE STRIP



CONCRETE PAVEMENT DRIVEWAY:

1. CONCRETE MIX
   THE CONCRETE SHALL HAVE A MINIMUM 28 DAY CHARACTERISTIC COMPRESSIVE STRENGTH AS SPECIFIED IN THE SCHEDULE OF CONCRETE PAVEMENTS TABLE, MAXIMUM WATER/CEMENT RATIO OF 0.45 AND A MINIMUM CEMENT CONTENT OF 300kg/m³.
2. SUBGRADE PREPARATION
   THE SUBGRADE TO THE CONCRETE PAVEMENT AREAS SHALL BE PREPARED THE SAME AS CONVENTIONAL ROADS. REFER TO SCHEDULE OF CONCRETE PAVEMENTS TABLE.
3. TRAFFIC
   TRAFFIC SHALL NOT BE ALLOWED ON THE FINISHED CONCRETE PAVEMENT FOR AT LEAST 14 DAYS AFTER COMPLETION OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING MEASURES TO PREVENT UNAUTHORISED ACCESS.
4. JOINTS
   ALL JOINTS SHALL BE LOCATED GENERALLY PERPENDICULAR TO THE CENTRELINE. ALL CONTROL JOINTS TO BE COMPLETED AS SOON AS CONCRETE HAS CURED SUFFICIENTLY SO AS NOT TO DAMAGE THE SLAB SURFACE.
   ALL JOINTS ARE TO BE INSTALLED AS DETAILED ON TSC STD DWG S.D.014.
5. GENERAL
   THE GRAVEL PAVEMENT SHALL BE NEATLY PROFILED AND TRIMMED TO ENSURE CONSTANT CONCRETE DEPTHS AND PROFILES. ACTUAL CONSTRUCTION REQUIREMENTS MAY VARY FROM THE DETAILS SHOWN AND THEREFORE ALL CONSTRUCTION DETAILS SHOULD BE VERIFIED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION COMMENCING. PROVIDE ABELFLEX BETWEEN KERB AND DRIVEWAY.
6. COMPLIANCE STANDARDS
   SLIP RESISTANCE OF SURFACE MATERIALS IN ACCORDANCE WITH AUSTRALIAN STANDARDS.
   AS/NZS 4586: 2013 SLIP RESISTANCE OF NEW PEDESTRIAN SURFACE MATERIALS.
   AS/NZS 4663: 2013 SLIP RESISTANCE MEASUREMENT OF EXISTING PEDESTRIAN SURFACES
   HB:A:A 197: 1999 "AN INTRODUCTORY GUIDE TO THE SLIP RESISTANCE OF PEDESTRIAN SURFACE MATERIALS"

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PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m
Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	06-07-21	LEGEND, TABLE AND CHAINAGES AMENDED
B	27-10-20	LEGEND AND FENCE AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS
LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE
ROADWORKS
INTERSECTION
GRADING DETAILS
SHEET 1

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
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www.urbansolutions.net.au
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Fax 07 5571 1088
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Southport QLD 4215
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
DATE	14-11-19		

DRAWING NUMBER 12301-KFP1-400
AMEND. C

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EXISTING ROAD RESERVE TO BE REMOVED.

REFER TO 12301-KFP1-451 FOR DETAILS ON SWALE.

REFER TO 12301-KFP1-451 FOR DETAILS ON SWALE.

INFILL ISLAND AS PER T.S.C S.D013 DWG (AS PER SCHEDULE OF CONCRETE PAVEMENTS).

ADJOINS SHEET 01

ADJOINS SHEET 03

R15m

R12m

R5m

R10m

R0.6m

R1.2m

B1

B2

FES

MK

SHEET LAYOUT

SH 1

SH 2

SH 3

SH 4

SH 5

SH 6

SH 7

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

B	06-07-21	CONCRETE ISLAND HATCH, NOTE & CHAINAGES AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
INTERSECTION
GRADING DETAILS
SHEET 2

CONSTRUCTION ISSUE

MORTONS urbansolutions
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Project Coordination

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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
DATE	14-11-19		

DRAWING NUMBER 12301-KFP1-401

AMEND. B

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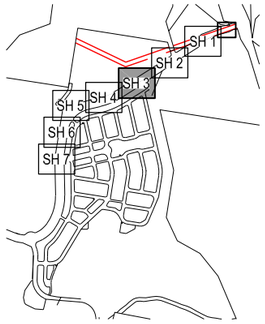

SHEET LAYOUT

KINGS FOREST PARKWAY (ROAD 01)

REFER TO 12301-KFP1-451
FOR DETAILS ON SWALE.

ADJOINS SHEET 04

ADJOINS SHEET 02

DWAY 99A

316 306 305 304 303 302 301 43

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	13-07-21	CHAINAGES AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

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GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
INTERSECTION
GRADING DETAILS
SHEET 3

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-402	B

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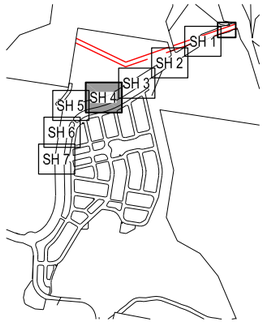

SHEET LAYOUT

ADJOINS SHEET 03

ADJOINS SHEET 05

KINGS FOREST PARKWAY (ROAD 01)

REFER TO 12301-KFP1-451 FOR DETAILS ON SWALE.

660 680 700 720 740 760 780 800 820

B2 B1 FES

211 31 32 33 34 35 36 37 38 39 40 70

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1.250 - A1 (1.500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	13-07-21	CHAINAGES AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
INTERSECTION
GRADING DETAILS
SHEET 4

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-403	B

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PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	06-07-21	CONCRETE ISLAND HATCH & CHAINAGES AMENDED
B	27-10-20	FENCE ALIGNMENT AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
INTERSECTION
GRADING DETAILS
SHEET 5

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-404	C

SHEET LAYOUT

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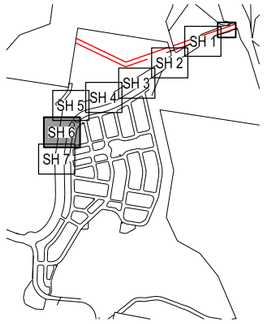

SHEET LAYOUT

ADJOINS SHEET 05

ADJOINS SHEET 07

REFER TO 12301-KFP1-451 FOR DETAILS ON SWALE.

REFER TO 12301-KFP1-451 FOR DETAILS ON SWALE.

KINGS FOREST PARKWAY (ROAD 01)

R5m

980 1000 1020 1040 1060 1080

201 202 203 204 205 206 207 222 223 3 4 5 6

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	13-07-21	CHAINAGES AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
INTERSECTION
GRADING DETAILS
SHEET 6

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-405	B

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ADJOINS SHEET 06

ROAD 51

ROAD 28

ROAD 56

DWAY 43

DWAY 99B

REFER TO 12301-KFP1-451 FOR DETAILS ON SWALE.

INFILL ISLAND AS PER T.S.C S.D013 DWG (AS PER SCHEDULE OF CONCRETE PAVEMENTS).

LIMIT ROADWORKS CH 39.585

LIMIT ROADWORKS CH 46.490

LIMIT ROADWORKS CH 36.771

CIVIL PROFILE TO BE 400mm BELOW DESIGN SURFACE TO ALLOW FOR LANDSCAPING.

CIVIL CONTRACTOR TO LEAVE 400mm VOID FOR LANDSCAPE CONTRACTOR TO PLACE 300mm IMPORTED TOPSOIL AND 100mm MULCH. REFER TO INSET 1.0 LANDSCAPE INFILL FOR DETAILS BELOW.

INFILL ISLAND AS PER T.S.C S.D013 DWG (AS PER SCHEDULE OF CONCRETE PAVEMENTS).

INFILL ISLAND AS PER T.S.C S.D013 DWG (AS PER SCHEDULE OF CONCRETE PAVEMENTS).

REFER TO 12301-KFP1-451 FOR DETAILS ON SWALE.

ADJOINS SHEET 08

SHEET LAYOUT

SH 1 SH 2 SH 3 SH 4 SH 5 SH 6 SH 7

LANDSCAPE INFILL TO ISLANDS

FALL PAVEMENT FALL PAVEMENT

300mm IMPORTED TOPSOIL

100mm MULCH

INSET 1.0 LANDSCAPE INFILL

SCALE 1:20

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	06-07-21	INSET, NOTE AMENDED AND CONCRETE HATCH ADDED
B	23-02-21	NOTE AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
INTERSECTION
GRADING DETAILS
SHEET 7

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-406

AMEND. C

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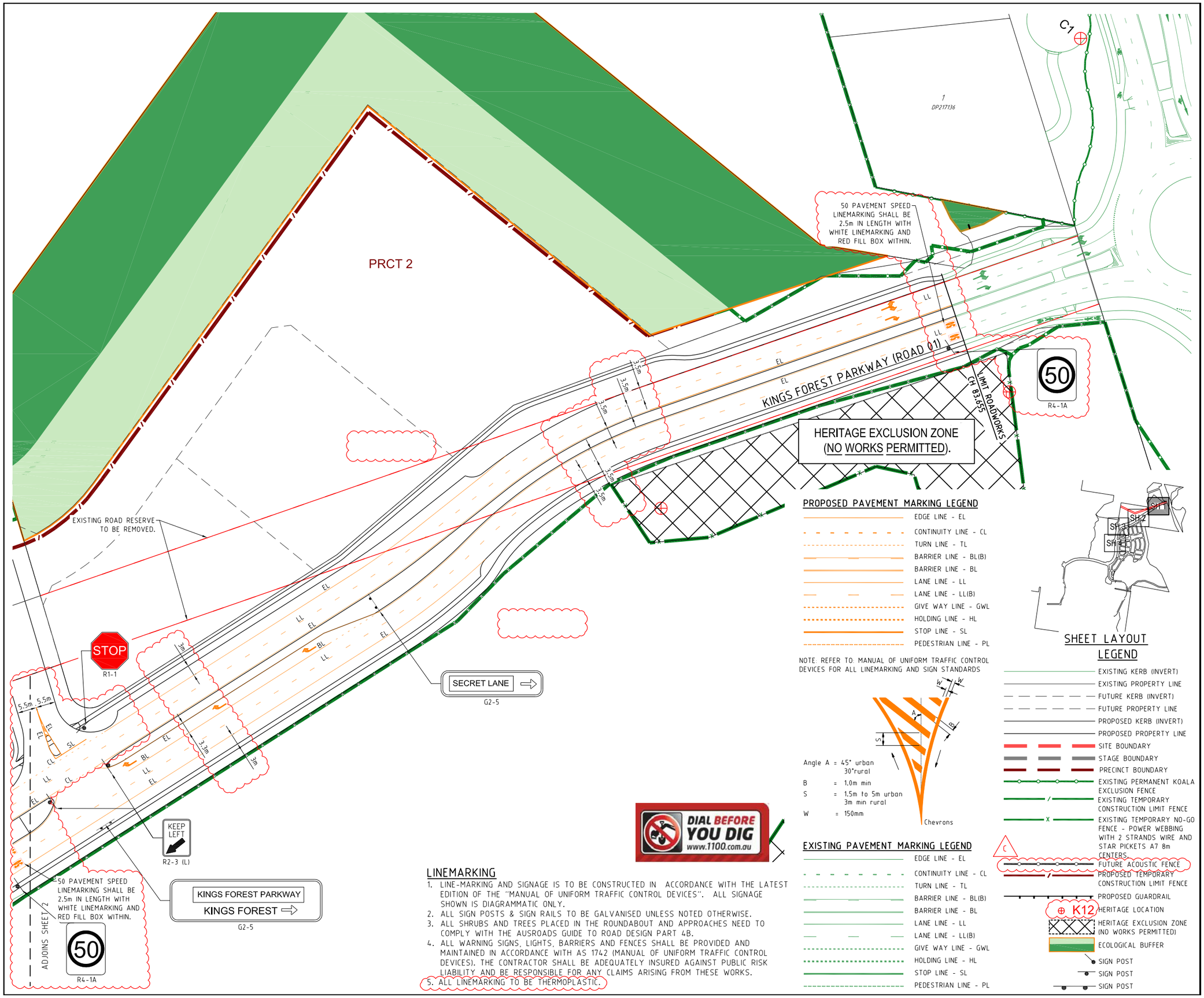

PROPOSED PAVEMENT MARKING LEGEND

- EDGE LINE - EL
- CONTINUITY LINE - CL
- TURN LINE - TL
- BARRIER LINE - BL(B)
- BARRIER LINE - BL
- LANE LINE - LL
- LANE LINE - LL(B)
- GIVE WAY LINE - GWL
- HOLDING LINE - HL
- STOP LINE - SL
- PEDESTRIAN LINE - PL

NOTE. REFER TO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ALL LINEMARKING AND SIGN STANDARDS

Angle A = 45° urban
30°rural
B = 1.0m min
S = 1.5m to 5m urban
3m min rural
W = 150mm

EXISTING PAVEMENT MARKING LEGEND

- EDGE LINE - EL
- CONTINUITY LINE - CL
- TURN LINE - TL
- BARRIER LINE - BL(B)
- BARRIER LINE - BL
- LANE LINE - LL
- LANE LINE - LL(B)
- GIVE WAY LINE - GWL
- HOLDING LINE - HL
- STOP LINE - SL
- PEDESTRIAN LINE - PL

SHEET LAYOUT LEGEND

- EXISTING KERB (INVERT)
- EXISTING PROPERTY LINE
- FUTURE KERB (INVERT)
- FUTURE PROPERTY LINE
- PROPOSED KERB (INVERT)
- PROPOSED PROPERTY LINE
- SITE BOUNDARY
- STAGE BOUNDARY
- PRECINCT BOUNDARY
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS A7 8m CENTERS.
- FUTURE ACOUSTIC FENCE
- PROPOSED TEMPORARY CONSTRUCTION LIMIT FENCE
- PROPOSED GUARDRAIL
- K12 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER
- SIGN POST
- SIGN POST
- SIGN POST

LINEMARKING

1. LINE-MARKING AND SIGNAGE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". ALL SIGNAGE SHOWN IS DIAGRAMMATIC ONLY.
2. ALL SIGN POSTS & SIGN RAILS TO BE GALVANISED UNLESS NOTED OTHERWISE.
3. ALL SHRUBS AND TREES PLACED IN THE ROUNDABOUT AND APPROACHES NEED TO COMPLY WITH THE AUSROADS GUIDE TO ROAD DESIGN PART 4B.
4. ALL WARNING SIGNS, LIGHTS, BARRIERS AND FENCES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH AS 1742 (MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES). THE CONTRACTOR SHALL BE ADEQUATELY INSURED AGAINST PUBLIC RISK LIABILITY AND BE RESPONSIBLE FOR ANY CLAIMS ARISING FROM THESE WORKS.
5. ALL LINEMARKING TO BE THERMOPLASTIC.

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PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	01-09-21	LEGEND, NOTE AND LINEMARKWING AMENDED
B	27-10-20	LEGEND AND FENCE AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LandSurv
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
LINEMARKING & SIGNAGE
PLAN
SHEET 1

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
		DATE	14-11-19

DRAWING NUMBER 12301-KFP1-420
AMEND. C

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PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	20-07-21	NOTES, SIGNS, LINEMARKING AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
LINEMARKING & SIGNAGE
PLAN
SHEET 2

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-421	B

SHEET LAYOUT

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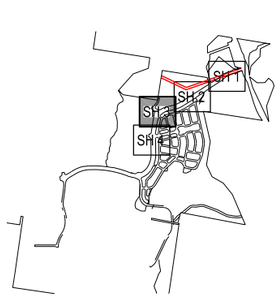

SHEET LAYOUT

D4-5
TEMPORARY HAZARD
MARKER

D4-5
TEMPORARY HAZARD
MARKER

LIMIT ROADWORKS
(H 86.413)

ROAD 04

ROAD 04
G5-1

STOP
R1-1

KEEP
RIGHT
R2-3(R)

GIVE
WAY
R1-2

D4-2-2

ROAD 05

KEEP
LEFT
R2-3 (L)

TURN
LEFT
AT ANY TIME
WITH CARE
R2-16

D4-2-2

50
R4-1A

ADJOINS SHEET 2

KINGS FOREST PARKWAY (ROAD 01)

ROAD 05
G2-5

50
R4-1A

W6-3A

KINGS FOREST PARKWAY
KINGS FOREST
G2-5

KEEP
LEFT
R2-3 (L)

R8-2

ROAD 05
G2-5

W6-3A

KINGS FOREST PARKWAY (ROAD 01)

50
R4-1A

ADJOINS SHEET 4

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R4-1A

STG 2

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PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28
PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	01-09-21	LINEMARKING, SIGN LOCATIONS & NOTES AMENDED
B	27-10-20	FENCE AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
LINEMARKING & SIGNAGE
PLAN
SHEET 3

CONSTRUCTION ISSUE

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Project Coordination
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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-422	C

SHEET LAYOUT

PRCT 4

ADJOINS SHEET 3

KINGS FOREST PARKWAY

ROAD 07

ROAD 28

ROAD 27

D4-2-2

R1-3

D4-1-2(L)

D4-5
TEMPORARY HAZARD
MARKER

R4-1A

50

R14.1m
R20m
R25.9m

3.5m
3m
9m
5.5m

EL
BL
LL
GWL

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
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Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

B	01-09-21	NOTES AND SIGNS AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
LINEMARKING & SIGNAGE
PLAN
SHEET 4

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-423
AMEND. B

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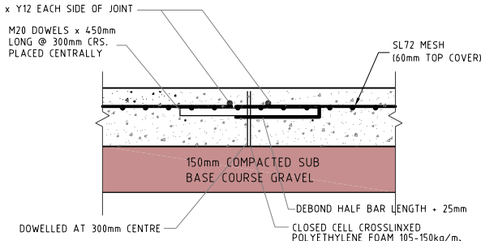
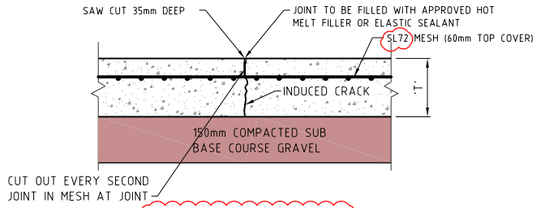


EXPANSION JOINT DETAIL (EJ)

SCALE 1:10 - A1 (1:20 - A3)



CONTROL JOINT (CJ)

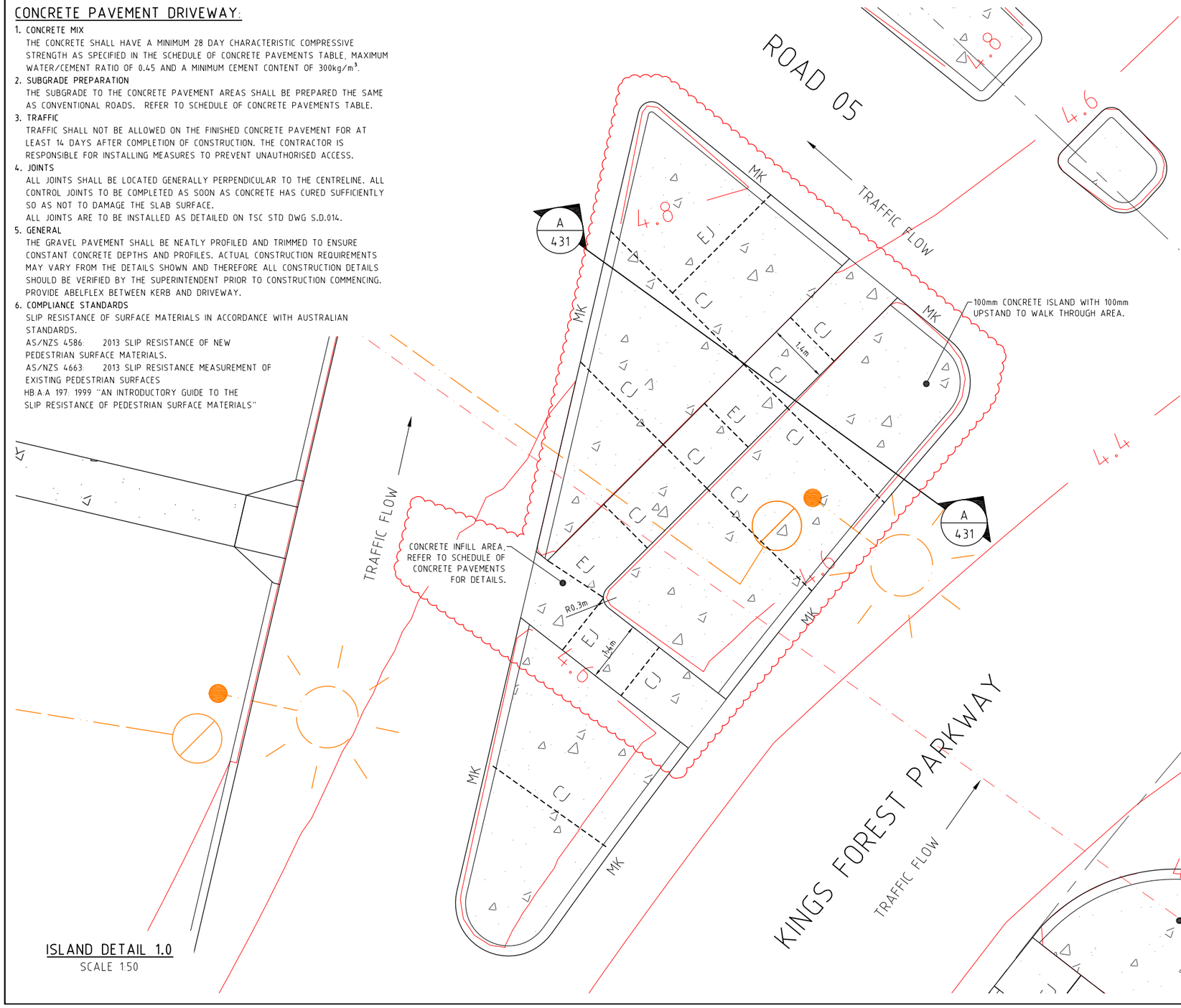
SCALE 1:10 - A1 (1:20 - A3)

SCHEDULE OF CONCRETE PAVEMENTS		
FUNCTION	ADDITIONAL INFORMATION	T.S.C STANDARD
FOOTPATH 1.5m AND 2.5m WIDE	HEAVY BROOM FINISH	S.D.013
ISLAND INFILL	HANSON EXPOSED IMAGECRETE MEDIUM EXPOSED 'MILKYWAY' PLAIN GREY CONCRETE	S.D.013

NOTE: FOOTPATH JOINTING TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL STANDARD DRAWING SD013

CONCRETE PAVEMENT DRIVEWAY:

1. CONCRETE MIX
   THE CONCRETE SHALL HAVE A MINIMUM 28 DAY CHARACTERISTIC COMPRESSIVE STRENGTH AS SPECIFIED IN THE SCHEDULE OF CONCRETE PAVEMENTS TABLE, MAXIMUM WATER/CEMENT RATIO OF 0.45 AND A MINIMUM CEMENT CONTENT OF 300kg/m^3.
2. SUBGRADE PREPARATION
   THE SUBGRADE TO THE CONCRETE PAVEMENT AREAS SHALL BE PREPARED THE SAME AS CONVENTIONAL ROADS. REFER TO SCHEDULE OF CONCRETE PAVEMENTS TABLE.
3. TRAFFIC
   TRAFFIC SHALL NOT BE ALLOWED ON THE FINISHED CONCRETE PAVEMENT FOR AT LEAST 14 DAYS AFTER COMPLETION OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING MEASURES TO PREVENT UNAUTHORISED ACCESS.
4. JOINTS
   ALL JOINTS SHALL BE LOCATED GENERALLY PERPENDICULAR TO THE CENTRELINE. ALL CONTROL JOINTS TO BE COMPLETED AS SOON AS CONCRETE HAS CURED SUFFICIENTLY SO AS NOT TO DAMAGE THE SLAB SURFACE.
   ALL JOINTS ARE TO BE INSTALLED AS DETAILED ON TSC STD DWG S.D.014.
5. GENERAL
   THE GRAVEL PAVEMENT SHALL BE NEATLY PROFILED AND TRIMMED TO ENSURE CONSTANT CONCRETE DEPTHS AND PROFILES. ACTUAL CONSTRUCTION REQUIREMENTS MAY VARY FROM THE DETAILS SHOWN AND THEREFORE ALL CONSTRUCTION DETAILS SHOULD BE VERIFIED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION COMMENCING. PROVIDE ABELFLEX BETWEEN KERB AND DRIVEWAY.
6. COMPLIANCE STANDARDS
   SLIP RESISTANCE OF SURFACE MATERIALS IN ACCORDANCE WITH AUSTRALIAN STANDARDS.
   AS/NZS 4586: 2013 SLIP RESISTANCE OF NEW PEDESTRIAN SURFACE MATERIALS.
   AS/NZS 4663: 2013 SLIP RESISTANCE MEASUREMENT OF EXISTING PEDESTRIAN SURFACES
   HB:A:A 197: 1999 "AN INTRODUCTORY GUIDE TO THE SLIP RESISTANCE OF PEDESTRIAN SURFACE MATERIALS"



ISLAND DETAIL 1.0

SCALE 1:50

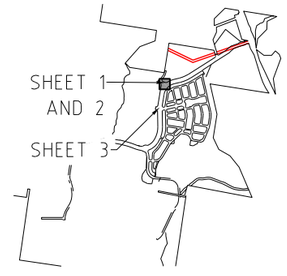
DIAL BEFORE YOU DIG www.1100.com.au

LEGEND

- EXISTING KERB (INVERT)
- EXISTING KERB (LIP & BACK)
- EXISTING FOOTPATH
- EXISTING PROPERTY LINE
- EXISTING CONTOURS
- FUTURE KERB
- FUTURE FOOTPATH
- FUTURE PROPERTY LINE
- FUTURE CONTOURS
- CONTROL LINE / CENTER OF ROAD
- PROPOSED KERB (INVERT)
- PROPOSED KERB (LIP & BACK)
- PROPOSED FOOTPATH
- PROPOSED PROPERTY LINE
- DESIGN CONTOURS
- PROPOSED CONCRETE FOOTPATH
- PROPOSED CONCRETE ISLAND
- PROPOSED LANDSCAPE ISLANDS
- PROPOSED PADMOUNT TRANSFORMER
- PROPOSED ELECTRICAL POWER POLES
- PROPOSED ELECTRICAL SERVICE PILLAR
- PROPOSED ELECTRICAL LINE - STREET LIGHT
- PROPOSED ELECTRICAL LINE - LOW VOLTAGE
- PROPOSED ELECTRICAL LINE - HIGH VOLTAGE
- PROPOSED ELECTRICAL OVERHEAD
- PROPOSED STREET LIGHT

REFER TO DRG. 120 FOR KERB TYPES

- B1 BARRIER KERB & GUTTER
- B2 BARRIER KERB
- MK MOUNTABLE KERB
- FES FLUSH EDGE STRIP
- EJ EXPANSION JOINT
- CJ CONTROL JOINT



SHEET LAYOUT

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 0.5 1.0 1.5 2.0 2.5m

Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

B	07-07-21	LEGEND, TABLE, NOTES AND DETAILS AMENDED
A	04-10-19	ISSUE FOR INFORMATION
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

ISLAND DETAIL
INTERSECTION PLAN
SHEET 1

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-430	B

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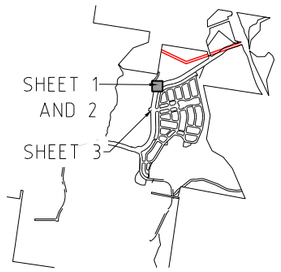

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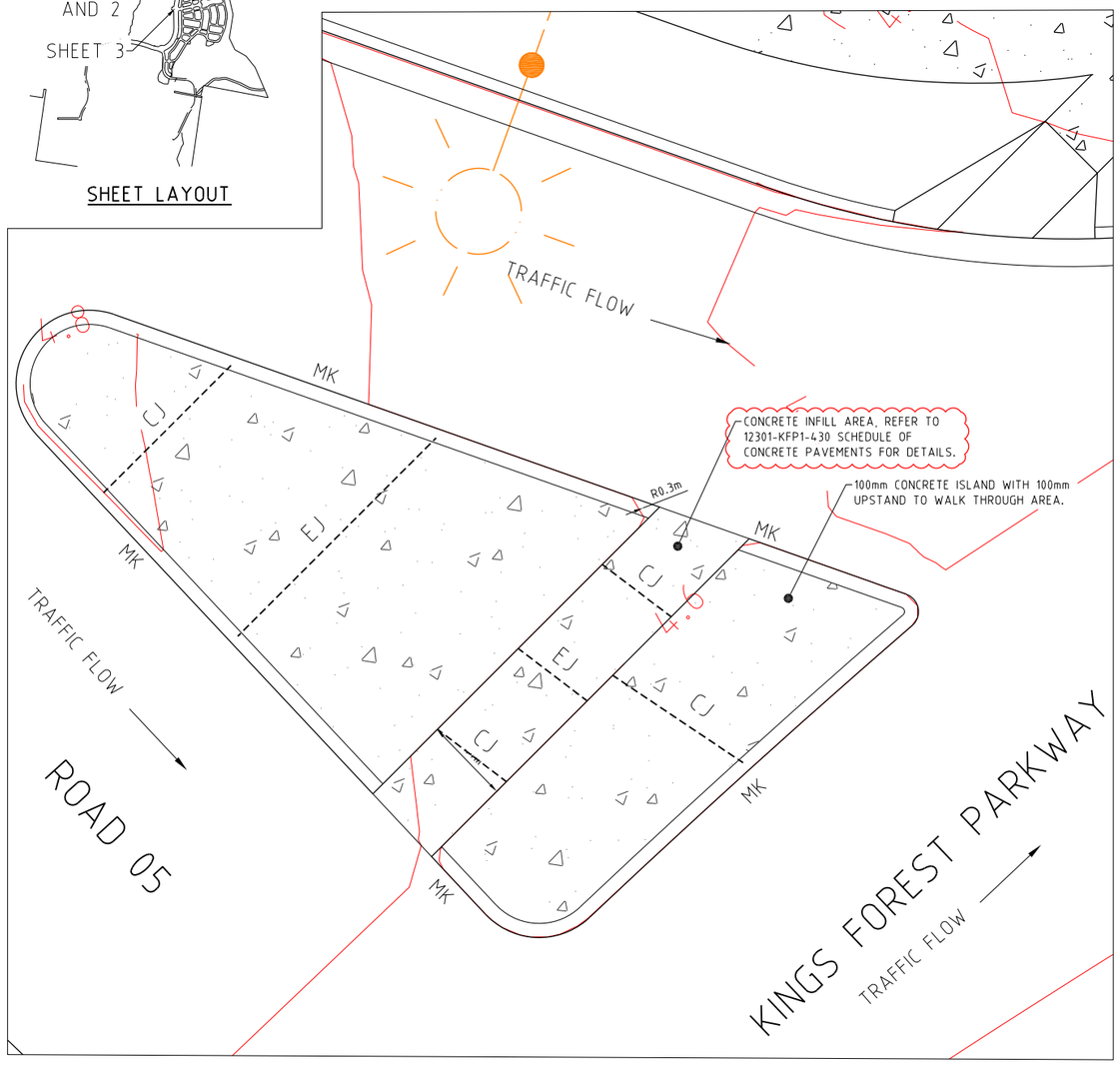
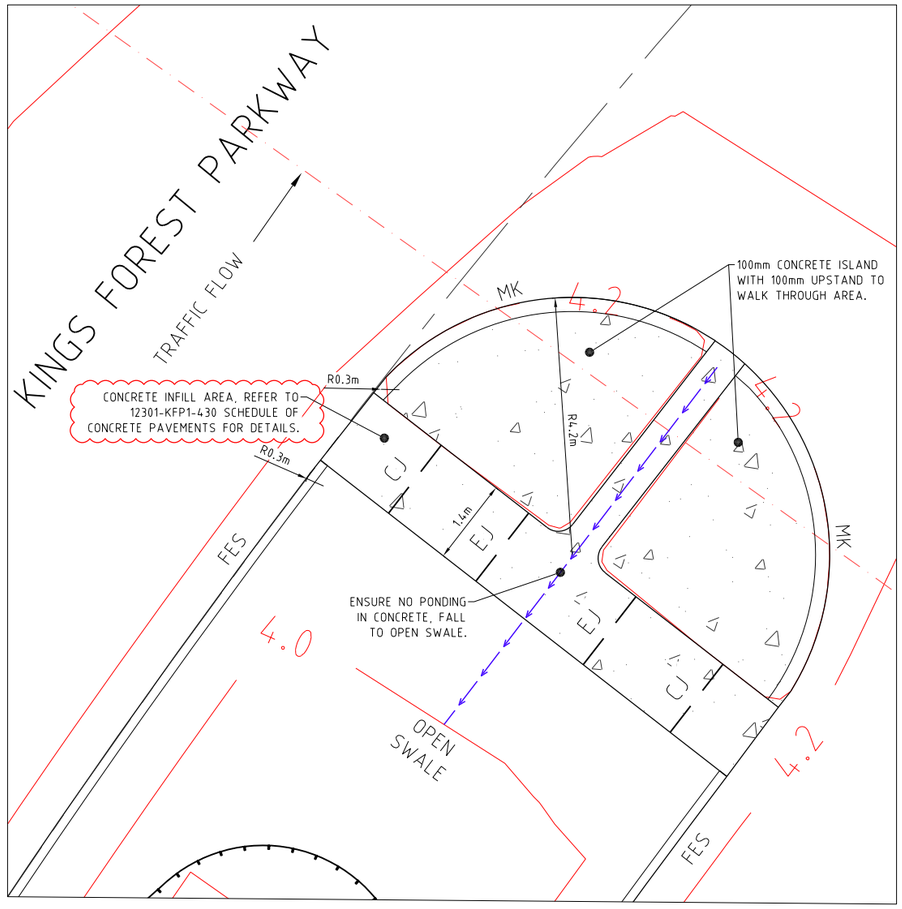
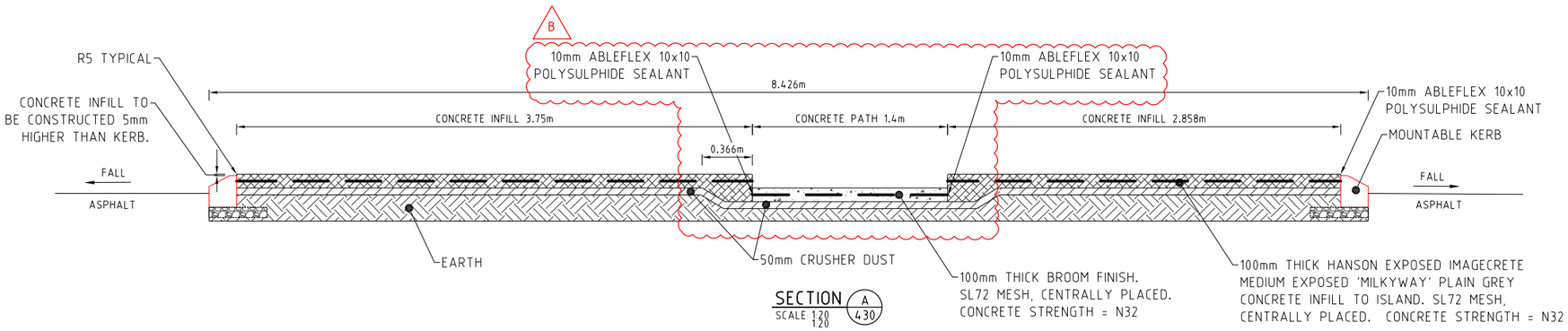


ISLAND DETAIL 1.1
SCALE 1:50



ISLAND DETAIL 1.2
SCALE 1:50



SECTION A 430
SCALE 1:20

PROJECT NAME
KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
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Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)
0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	07-07-21	NOTES, DETAIL AND DIMENSIONS AMENDED
A	04-10-19	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ISLAND DETAIL
INTERSECTION PLAN
SHEET 2

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-431
AMEND. B

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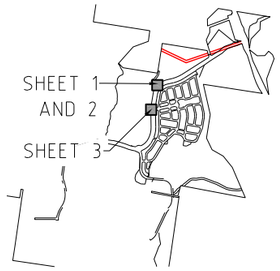
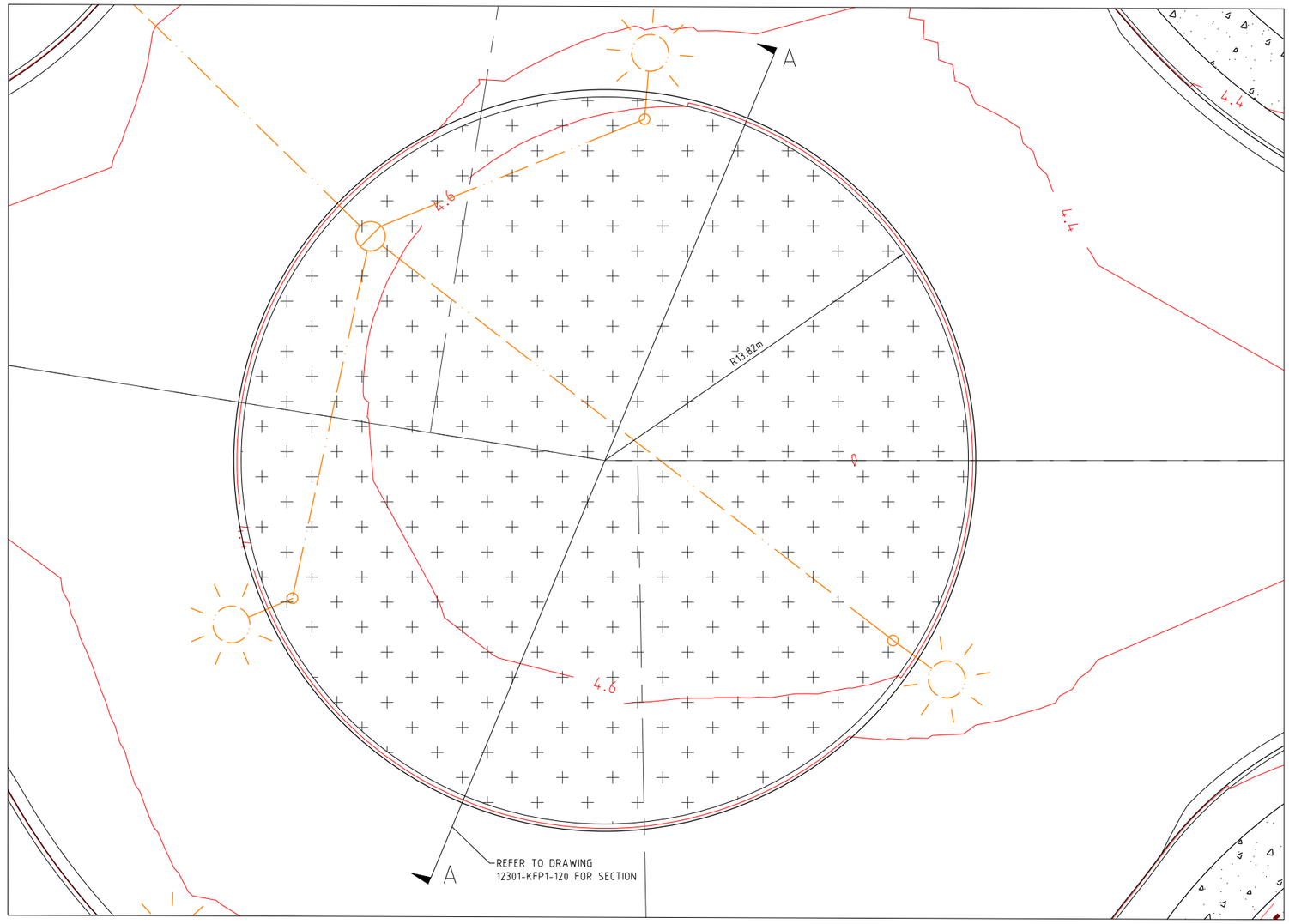


SHEET LAYOUT



ROUNDABOUT DETAIL 1.3

SCALE 1:100

C

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
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Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)
0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	07-07-21	HATCH, SECTION AND NOTE ADDED
B	25-11-20	ELECTRICAL LOCATION AMENDED
A	04-10-19	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

ROUNDABOUT DETAIL
INTERSECTION PLAN
SHEET 3

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-432	C

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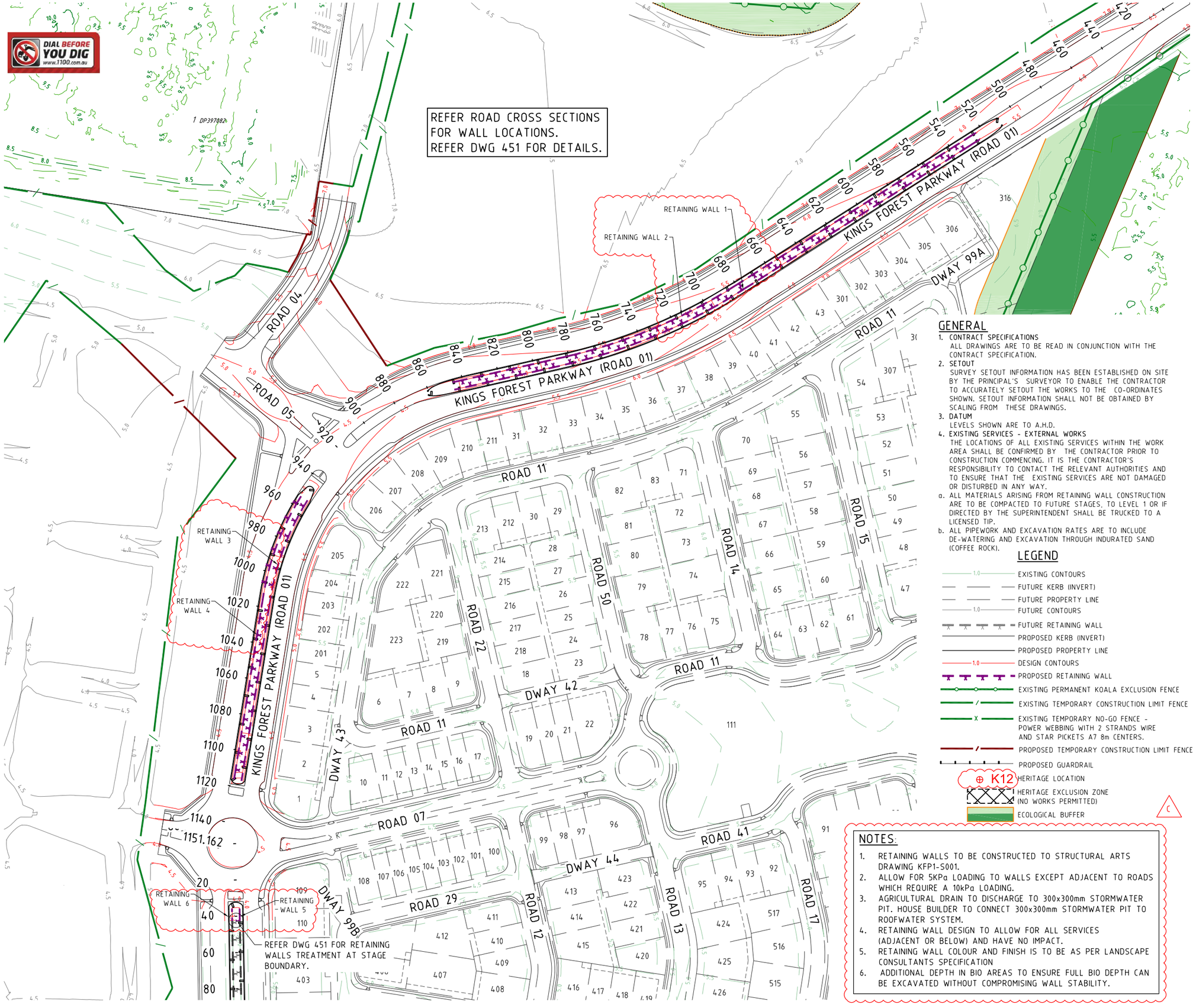

GENERAL

1. CONTRACT SPECIFICATIONS
   ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION.
2. SETOUT
   SURVEY SETOUT INFORMATION HAS BEEN ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR TO ENABLE THE CONTRACTOR TO ACCURATELY SETOUT THE WORKS TO THE CO-ORDINATES SHOWN. SETOUT INFORMATION SHALL NOT BE OBTAINED BY SCALING FROM THESE DRAWINGS.
3. DATUM
   LEVELS SHOWN ARE TO A.H.D.
4. EXISTING SERVICES - EXTERNAL WORKS
   THE LOCATIONS OF ALL EXISTING SERVICES WITHIN THE WORK AREA SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT AUTHORITIES AND TO ENSURE THAT THE EXISTING SERVICES ARE NOT DAMAGED OR DISTURBED IN ANY WAY.

a. ALL MATERIALS ARISING FROM RETAINING WALL CONSTRUCTION ARE TO BE COMPACTED TO FUTURE STAGES, TO LEVEL 1 OR IF DIRECTED BY THE SUPERINTENDENT SHALL BE TRUCKED TO A LICENSED TIP.

b. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).

LEGEND

- EXISTING CONTOURS
- FUTURE KERB (INVERT)
- FUTURE PROPERTY LINE
- FUTURE CONTOURS
- FUTURE RETAINING WALL
- PROPOSED KERB (INVERT)
- PROPOSED PROPERTY LINE
- DESIGN CONTOURS
- PROPOSED RETAINING WALL
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS A7 8m CENTERS.
- PROPOSED TEMPORARY CONSTRUCTION LIMIT FENCE
- PROPOSED GUARDRAIL
- K12 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER

NOTES:

1. RETAINING WALLS TO BE CONSTRUCTED TO STRUCTURAL ARTS DRAWING KFP1-S001.
2. ALLOW FOR 5KPa LOADING TO WALLS EXCEPT ADJACENT TO ROADS WHICH REQUIRE A 10kPa LOADING.
3. AGRICULTURAL DRAIN TO DISCHARGE TO 300x300mm STORMWATER PIT. HOUSE BUILDER TO CONNECT 300x300mm STORMWATER PIT TO ROOFWATER SYSTEM.
4. RETAINING WALL DESIGN TO ALLOW FOR ALL SERVICES (ADJACENT OR BELOW) AND HAVE NO IMPACT.
5. RETAINING WALL COLOUR AND FINISH IS TO BE AS PER LANDSCAPE CONSULTANTS SPECIFICATION
6. ADDITIONAL DEPTH IN BIO AREAS TO ENSURE FULL BIO DEPTH CAN BE EXCAVATED WITHOUT COMPROMISING WALL STABILITY.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
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PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 10 20 30 40 50m

Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	14-07-21	LEGEND AND NOTES AMENDED
B	15-02-21	LEGEND AND GUARDRAIL AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

RETAINING WALL PLAN

CONSTRUCTION ISSUE

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Civil Engineering
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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-450 | AMEND. C

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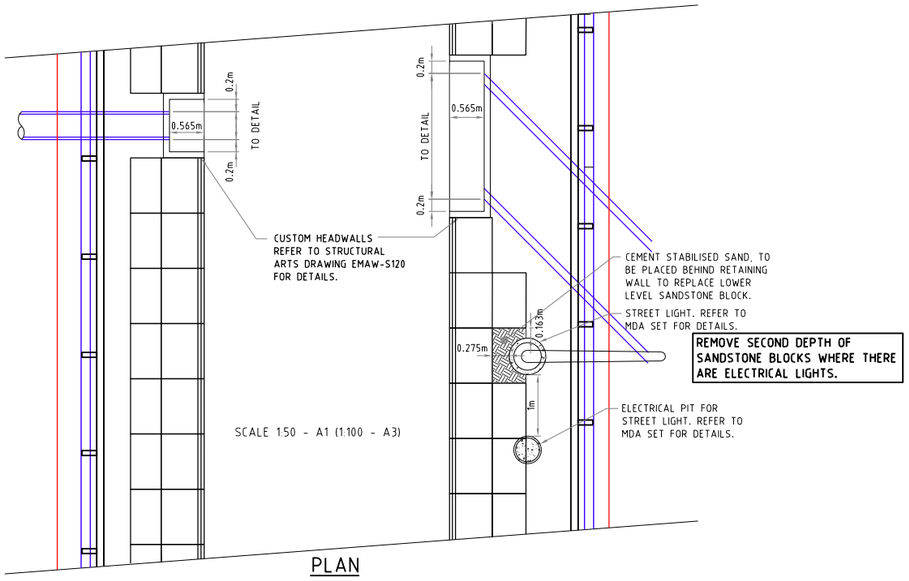

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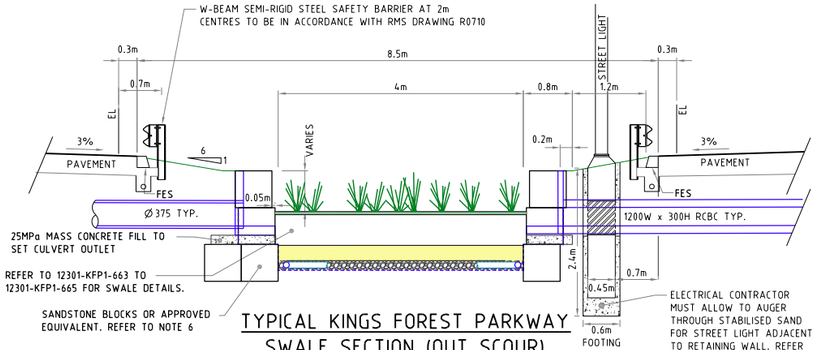
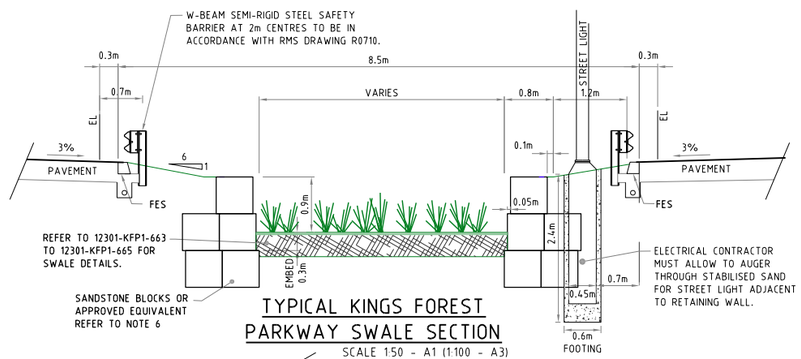
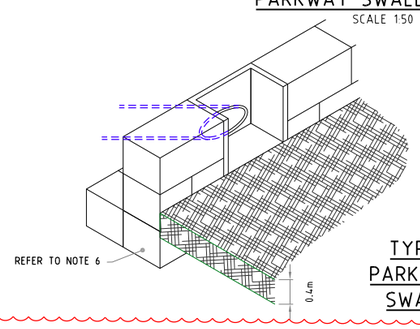


TYPICAL KINGS FOREST PARKWAY
SWALE SECTION (OUT SCOUR)
SCALE 1:50 - A1 (1:100 - A3)

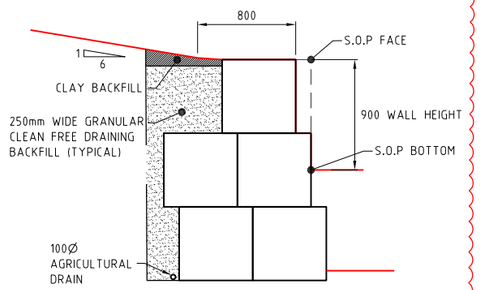


TYPICAL KINGS FOREST
PARKWAY SWALE SECTION
SCALE 1:50 - A1 (1:100 - A3)

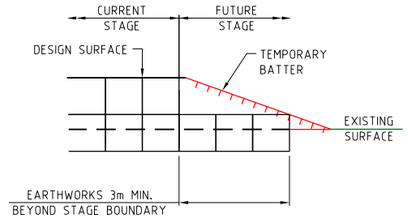


TYPICAL KINGS FOREST
PARKWAY RETAINING WALL
SWALE SECTIONAL VIEW
SCALE 1:50 - A1 (1:100 - A3)

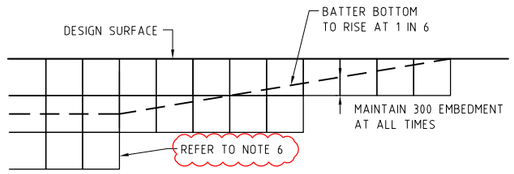
REFER TO STRUCTURAL ARTS FOR
SANDSTONE RETAINING WALL
DETAILS AND SPECIFICATIONS.



SANDSTONE BLOCK WALL
DETAIL
SCALE 1:20 - A1 (1:40 - A3)



TYPICAL STAGE BOUNDARY CONSTRUCTION
SCALE 1:100 - A1 (1:200 - A3)



TYPICAL WALL TAPER ARRANGEMENT
SCALE 1:100 - A1 (1:200 - A3)

NOTES:

1. RETAINING WALLS TO BE CONSTRUCTED TO STRUCTURAL ARTS DRAWING KFP1-S001.
2. ALLOW FOR 5KPa LOADING TO WALLS EXCEPT ADJACENT TO ROADS WHICH REQUIRE A 10kPa LOADING.
3. AGRICULTURAL DRAIN TO DISCHARGE TO 300x300mm STORMWATER PIT. HOUSE BUILDER TO CONNECT 300x300mm STORMWATER PIT TO ROOFWATER SYSTEM.
4. RETAINING WALL DESIGN TO ALLOW FOR ALL SERVICES (ADJACENT OR BELOW) AND HAVE NO IMPACT.
5. RETAINING WALL COLOUR AND FINISH IS TO BE AS PER LANDSCAPE CONSULTANTS SPECIFICATION
6. ADDITIONAL DEPTH IN BIO AREAS TO ENSURE FULL BIO DEPTH CAN BE EXCAVATED WITHOUT COMPROMISING WALL STABILITY.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)

0 1 2 3 4 5m
Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	14-07-21	RETAINING WALL NOTES AND DETAILS AMENDED
B	25-02-21	DETAILS AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV
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DRAWING TITLE

RETAINING WALL
DETAILS

CONSTRUCTION ISSUE

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DESIGNED RB	DRAWN CB
APPROVED	NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-451	B

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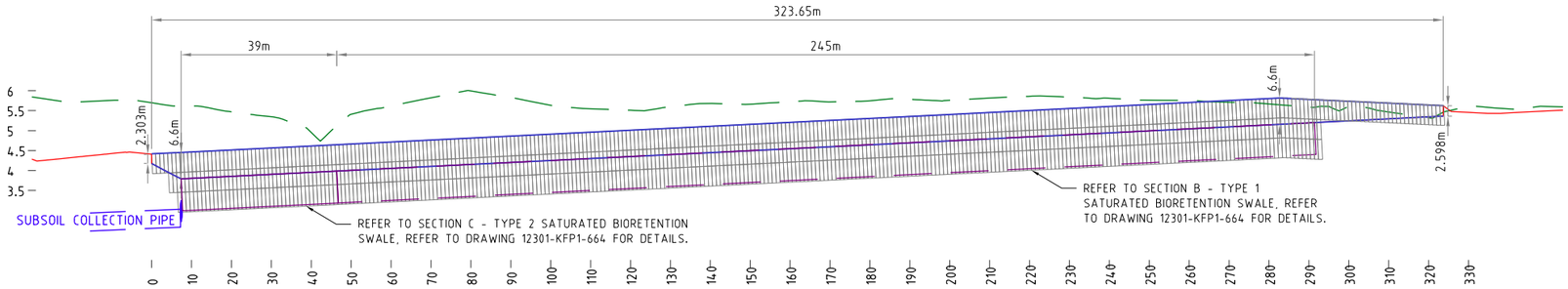
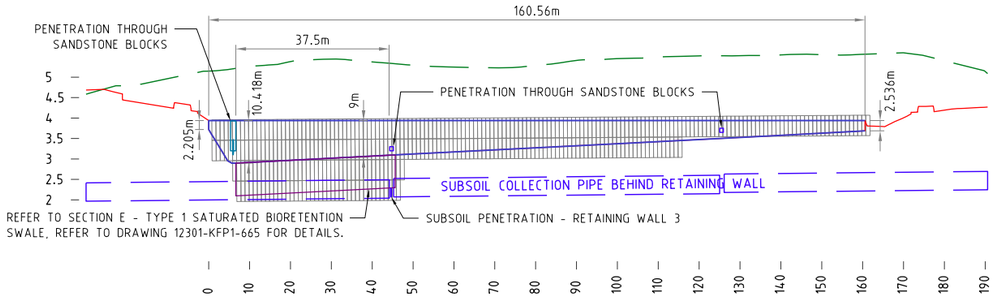


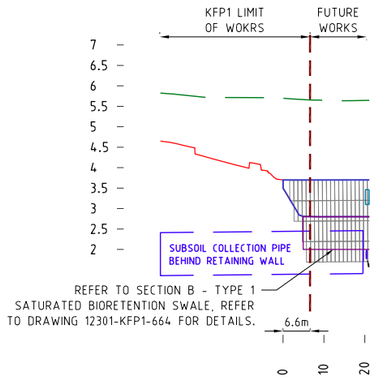
RETAINING WALL 2

VERT 1:100 HOZ. 1:1000



RETAINING WALL 4

VERT 1:100 HOZ. 1:1000



RETAINING WALL 6

VERT 1:100 HOZ. 1:1000

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 7.5 15 22.5 30 37.5m

Scale 1:750 - A1 (1:1500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	21-07-21	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LandSurv
GILBERT SUTHERLAND

DRAWING TITLE

RETAINING WALL SECTIONS SHEET 1

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-452	A

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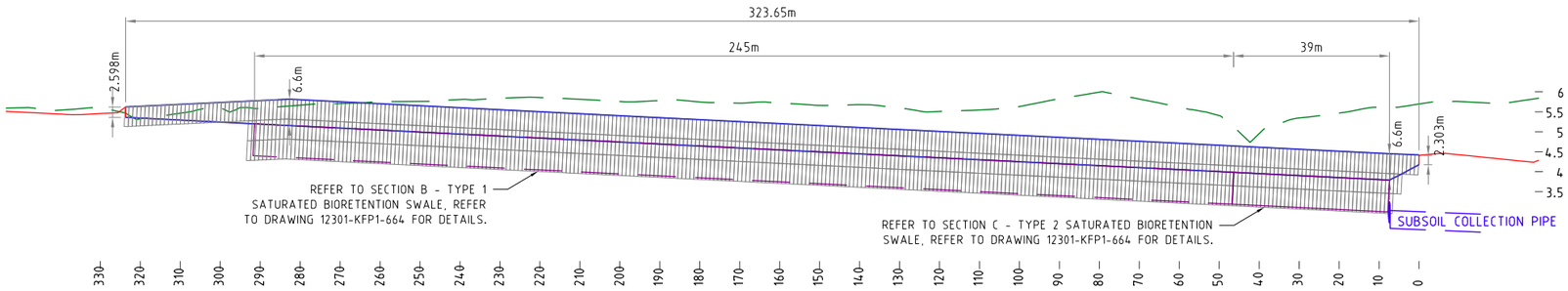
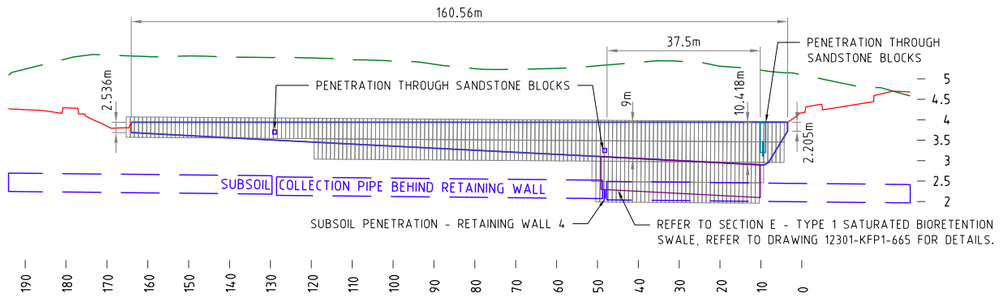


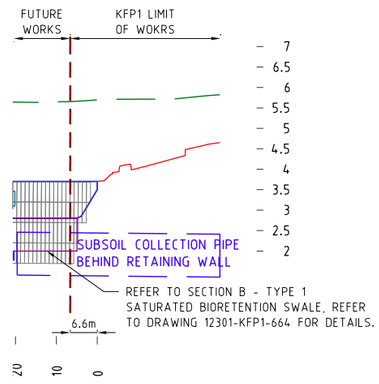
RETAINING WALL 1

VERT 1:100 HOZ. 1:1000



RETAINING WALL 3

HOZ. 1:1000 VERT 1:100



RETAINING WALL 5

HOZ. 1:1000 VERT 1:100

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
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Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 7.5 15 22.5 30 37.5m

Scale 1:750 - A1 (1:1500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

RETAINING WALL
SECTIONS
SHEET 2

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
DATE	14-11-19		

DRAWING NUMBER: 12301-KFP1-453

AMEND.: A

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SEWER NOTES

VEGETATION PROTECTION

A. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8 m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
B. TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
C. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.
C. IF ACID SULPHATE SOILS EXIST IN THE WORKS AREA, THE CONTRACTOR MUST PREPARE A RISK ASSESSMENT BASED ON THE PROJECT ACID SULPHATE MANAGEMENT PLAN PREPARED BY MESSERS GILBERT SUTHERLAND.
D. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).

CREEK CROSSINGS

A. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
B. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
C. NO SOIL SHALL BE STOCKPILED WITHIN 5 m OF THE CREEK.

REHABILITATION

A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
B. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

SAFETY

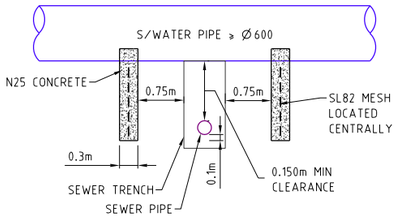
A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL NEW SOUTH WALES LEGISLATION.

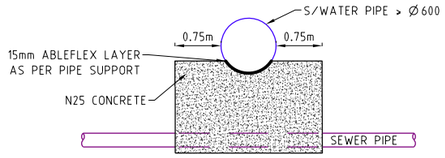
GENERAL

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH SEWERAGE CODE OF AUSTRALIA WSA 02-2014, WSA 04-2005, WSA 07-2007 UNLESS OTHERWISE SPECIFIED IN TWEED SHIRE COUNCIL DEVELOPMENT DESIGN SPECIFICATION D12, OR CONSTRUCTION SPECIFICATION C402 OR OTHERWISE SPECIFIED IN TSC SUBDIVISION MANUAL.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY A NER, TO THE SATISFACTION OF TWEED SHIRE COUNCIL. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE COUNCIL SEWERAGE SYSTEM.
4. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY DEVELOPER'S APPROVED CONTRACTOR UNDER THE SUPERVISION OF TWEED SHIRE COUNCIL'S AGENT AT THE DEVELOPER'S COST.
5. PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
6. PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300 mm AND A MAXIMUM OF 750 mm.
7. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300 mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S. 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY THE TWEED SHIRE COUNCIL UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
8. WHERE SEWERS HAVE A GRADE OF 15 TO 29% OR STEEPER, BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TWEED SHIRE COUNCIL DEVELOPMENT CONSTRUCTION SPECIFICATION C402-23.
9. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS.
10. BENCH MARK AND LEVELS TO AHD.
11. EXISTING ALLOTMENTS REQUIRING A PROPERTY CONNECTION FROM EXISTING SEWERS SHALL BE PROVIDED BY TWEED SHIRE COUNCIL AT THE DEVELOPERS COST.
12. CLEARANCES BETWEEN SEWERS AND OTHER UNDERGROUND SERVICES SHALL BE PROVIDED IN ACCORDANCE WITH WSA02-2014.3.1.
13. FALL THROUGH MHS SHALL BE IN ACCORDANCE WITH WSA 202-2014.31, INCLUDING:
    a) MIN 30mm WHERE DEFLECTION LESS THAN 90°C
    b) MIN 80mm WHERE DEFLECTION MORE THAN 90°C
    c) FALL SHALL NOT EXCEED GREATER OF 150mm OR DIFFERENCE BETWEEN IN/OUT PIPE DN (UNLESS NOTED OTHERWISE).
    FALL MINIMUM REQUIREMENTS ARE IN ACCORDANCE WITH TSC S.D 278

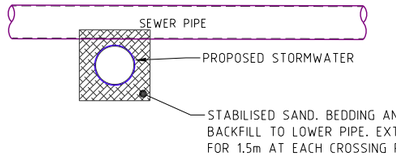
PROJECT SPECIFIC SEWER NOTES

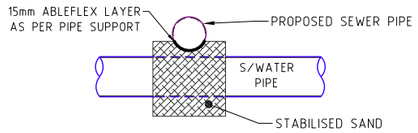
a. ALL SEWER MAIN TO BE AS PER SEWER PIPE SPECIFICATIONS TABLE.
b. NOTWITHSTANDING THE NOTES ABOVE, ALL MATERIALS AND WORKS MUST BE IN ACCORDANCE WITH THE SERVICE PROVIDER'S APPROVAL CONDITIONS AND THE TWEED SHIRE COUNCIL DEVELOPMENT DESIGN AND CONSTRUCTION SPECIFICATIONS.
c. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR SEWER RATES UNLESS SCHEDULED OTHERWISE WITHIN THE CONTRACT.
d. WATER AND ELECTRICAL CROSSING LOCATIONS ARE INDICATIVE ONLY. REFER TO PLANS TO DETERMINE PRECISE CROSSING LOCATIONS. WHERE SERVICE INDICATES CLASH WITH SEWER, SEWER TO TAKE PRECEDENCE, SERVICE TO BE CONSTRUCTED OVER OR UNDER SEWER ACCORDING TO SUPERINTENDENTS INSTRUCTION
e. CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF WORKS ON-SITE.
f. MINIMUM 25MPA THRUST BLOCKS TO BE CONSTRUCTED AT ALL FLEXIBLE JOINTED BENDS IN ACCORDANCE WITH TWEED SHIRE COUNCIL SPECIFICATIONS C402.30 AND C271.
g. CONTRACTOR TO PAY ALL FEES AND CHARGES ASSOCIATED WITH CONNECTIONS.
h. ALL SEWER MAINS CROSSING ROAD AND WITH A COVER <1.5m ARE TO BE BACKFILLED WITH STABILISED SAND UP TO UNDERSIDE OF ROAD SUB-BASE LAYER.





BRIDGING DETAILS FOR STORMWATER PIPES ≥ Ø600
NOT TO SCALE





BRIDGING DETAILS FOR SERVICES
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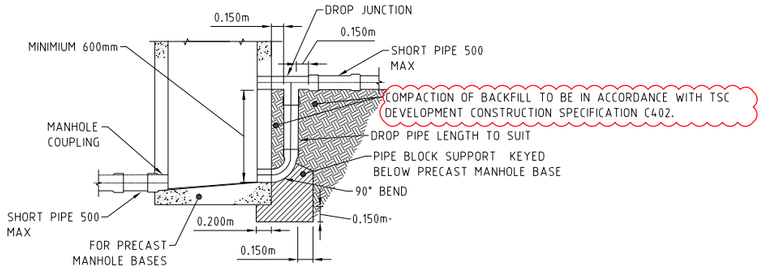

EXTERNAL DROP DETAIL
FOR NON-TRAFFICABLE AREAS ONLY
NOT TO SCALE

HORIZONTAL THRUST BLOCKS TO BE IN ACCORDANCE WITH:

Minimum Thrust Area (m^2) for Concrete Blocks given 1200kPa System Test Pressure (Sewer):

Based on Soil Classification: 100kPa					
Pipe Diameter	Bends				Tee & Dead Ends
	11.25	22.5	45	90	
100	0.21	0.21	0.21	0.21	0.21
200	0.21	0.21	0.35	0.65	0.46
375	0.32	0.66	1.28	2.38	1.68
450	0.47	0.92	1.81	3.36	2.38

Resultant Thrust (kN) given 120m Head with 1200kPa System Test Pressure (Sewer):

Pipe Diameter	Bends (kN)				Tee & Dead Ends
	11.25	22.5	45	90	
100	2.70	5.37	10.53	19.45	13.75
200	9.75	19.41	38.06	70.33	49.73
375	32.87	65.43	128.34	237.14	167.68
450	46.56	92.67	181.78	335.89	237.51

FOR FURTHER DETAIL REFER TO WSA 03-2011-3.1 TABLE 7.3.

NOTES:
a. FINISH THRUST BLOCKS APPROXIMATELY 100mm ABOVE THE TOP OF THE FITTING OR BEARING PAD AND EXTEND TO THE FLOOR OF THE TRENCH OR DEEPER IF NECESSARY, TO ACHIEVE THE REQUIRED THRUST AREA. MAXIMUM ENCASEMENT TO BE 180°.
b. FOR DOWNWARD VERTICAL THRUST, THE ALLOWABLE BEARING PRESSURES FOR VARIOUS SOILS MAY BE TAKEN AS TWICE THAT FOR HORIZONTAL THRUST SHOWN

ALL ENVIRONMENT PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

SEWER REFERENCING STANDARDS

Ø100 - Ø450 SEWER SCOUR VALVE	REFER TO DRAWING 12301-KFP1-551 & 555 FOR DETAILS
Ø100-Ø450 SEWER RISING MAIN SLUICE (ISOLATION) VALVE	REFER TO TWEED SHIRE COUNCIL STD 240 FOR DETAILS
Ø100-Ø450 SEWER RISING MAIN AIR VALVE - MANUAL	REFER TO TWEED SHIRE COUNCIL STD 243 FOR DETAILS
SEWER THRUST CALCULATIONS	REFER TO DRAWING 12301-KFP1-591 -592 FOR DETAILS

D

SEWER PIPE CLASS

GRAVITY MAINS	SN8 OR PN12 FOR ROAD CROSSINGS
PRESSURE MAINS	PN12 OR PN16 FOR ROAD CROSSINGS

DIAL BEFORE YOU DIG www.1100.com.au

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
D	11-06-21	TABLE AMENDED
C	14-04-21	TABLE AMENDED
B	23-10-20	NOTES AND DETAILS AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS
LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE
SEWER RETICULATION NOTES AND DETAILS

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-500
AMEND. D

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NOTE:
SOME SEWER BENDS OMITTED FOR CLARITY. REFER TO SEWER PROFILES FOR ALL SEWER ID DETAILS.

CONTINUES IN PLAN

CONTINUES IN INSET

KINGS FOREST PARKWAY (ROAD 01)

CONNECT TO EXISTING SEWER LINES UNDER THE AUTHORITY OF TWEED SHIRE COUNCIL.

CONNECT TO EXISTING SEWER LINE UNDER THE AUTHORITY OF TWEED SHIRE COUNCIL.

AIR VALVE AS PER TWEED SD242 BUT CONSTRUCT PIT AS 900x600 AS SHOWN.

REFER TO DRAWING 12301-KFP1-591 & 592 FOR THRUST BLOCK DETAILS.

HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED).

AIR VALVE REFER TO 12301-KFP1-552 FOR DETAILS.

50Ø AIR VALVE ON 80Ø PIPE WORK AS SHOWN ON 12301-KFP1-552.

ADJOINS SHEET 02

DIAL BEFORE YOU DIG www.1100.com.au

LEGEND

- EXISTING SEWER
- EXISTING RISING MAIN
- EXISTING KERB (INVERT)
- EXISTING PROPERTY LINE
- EXISTING CONTOURS
- FUTURE RISING MAIN
- FUTURE RISING MAIN
- FUTURE KERB (INVERT)
- FUTURE CONTOURS
- PROPOSED KERB (INVERT)
- PROPOSED PROPERTY LINE
- DESIGN CONTOURS
- PROPOSED SEWER MAIN
- SITE PRECINCT
- LIMIT OF WORKS BOUNDARY
- SEWER PIT NO/LINE
- SEWER SCOUR VALVE (<Ø 300)
- SEWER AIR VALVE (<Ø 300)
- SEWER SCOUR VALVES (Ø 450)
- SEWER AIR VALVE (Ø 450)
- SEWER SLUICE VALVE (ALL SIZES)
- SEWER PUMP STATION
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS A7 8m CENTERS.
- PROPOSED TEMPORARY CONSTRUCTION LIMIT FENCE
- PROPOSED GUARDRAIL
- HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER

SHEET LAYOUT

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
D	19-07-21	LEGEND AMENDED
C	14-04-21	VALVES AND NOTES AMENDED
B	25-02-21	SEWER ALIGNMENT AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION PLAN SHEET 1

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-501	D

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PRESSURE SEWER TO BE INSTALLED PART OF PRECINCT 2 WORKS.

PROVIDE Ø150 CONDUIT FOR KFP1 WORKS.

PRESSURE SEWER TO BE INSTALLED PART OF PRECINCT 2 WORKS.

ADJOINS SHEET 01

ADJOINS SHEET 05

05/079
24/066
15/063
06/079
07/079
26/066
16/063
10/079
17/063
27/066
18/063
37/064
38/064
35/064

AIR VALVE AS PER TWEED SD242 BUT CONSTRUCT PIT AS 900x600 AS SHOWN. CONTRACTOR TO USE JOINT DEFLECTIONS AND REDUCERS FOR ADJUSTED PIT SIZE. USE ABLEFLEX AGAINST SEWER PIPE AND PIT.

SHEET LAYOUT

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	14-04-21	AIR VALVE AND NOTE AMENEDED
B	25-02-21	SEWER ALIGNMENT AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION
PLAN
SHEET 2

CONSTRUCTION ISSUE

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APPROVED		NER	906726
DATE	14-11-19		

DRAWING NUMBER: 12301-KFP1-502
AMEND.: C

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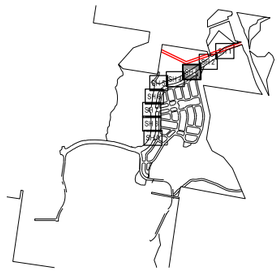

SHEET LAYOUT

FUTURE SEWER AS PART OF PRECINCT 2 WORKS

PRESSURE SEWER TO BE INSTALLED PART OF PRECINCT 2 WORKS.

PROVIDE Ø150 CONDUIT FOR KFP1 WORKS.

KINGS FOREST PARKWAY (ROAD 01)

SCOUR VALVE, REFER TO DRAWING 12301-KFP1-550 FOR DETAILS.

316 VENT POLE AS PART OF STAGE 1-3 WORKS.

SLUICE VALVE

306

305

304

303

302

301

43

DWAY 99A

STG 3

AD 11

ADJOINS SHEET 04

ADJOINS SHEET 02

12/078 13/079 14/079 15/079 16/079 17/079 18/079 19/063 38/(39/064 40/064 41/064 42/064 43/064 44/064 45/064

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
D	11-06-21	AIR VALVE REMOVED
C	14-04-21	AIR, SCOUR VALVE AND NOTES AMENDED
B	25-02-21	SEWER ALIGNMENT AMENDED
A	14-11-19	COUNCIL ISSUE

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION PLAN SHEET 3

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
DATE	14-11-19		

DRAWING NUMBER: 12301-KFP1-503

AMEND.: D

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SHEET LAYOUT

FUTURE SEWER AS PART OF PRECINCT 2 WORKS

KINGS FOREST PARKWAY (ROAD 01)

ADJOINS SHEET 05

ADJOINS SHEET 03

SLUICE VALVE

09/078 10/078 11/078 20/063 21/063 22/063 28/066 29/066 45/064 46/064 47/064 48/064

211 31 32 33 34 35 36 37 38 39 40 70

B

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	25-02-21	SEWER ALIGNMENT AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION
PLAN
SHEET 4

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-504	B

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SHEET LAYOUT

PROVIDE TEMPORARY END CAP FOR FUTURE CONNECTION

FUTURE PUMP STATION 03

PROVIDE TEMPORARY END CAP FOR FUTURE CONNECTION

PROVIDE Ø150 CONDUIT FOR FUTURE PUMP STATION.

PROVIDE TEMPORARY END CAP FOR FUTURE CONNECTION

REFER TO DRAWING 12301-KFP1-591 & 592 FOR TYPICAL THRUST BLOCK DETAILS.

SLUICE VALVE

REFER TO DRAWING 12301-KFP1-591 & 592 FOR THRUST BLOCK DETAILS.

REFER TO DRAWING 12301-KFP1-580 FOR VENT DETAILS.

ROAD 04

ROAD 05

ADJOINS SHEET 06

ADJOINS SHEET 04

13/034 12/034 11/034 10/034 09/034 08/034 07/034 06/034 05/034 04/078 03/078 05/078 06/078 07/078 08/078 23/063 24/063 25/063 26/063 27/063 30/066 31/066 32/066 22/063 48/064 49/064 02/034

210 209 208 207

D

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

D	14-07-21	SEWER ALIGNMENT AMENDED
C	14-04-21	NOTE AMENDED
B	25-02-21	SEWER ALIGNMENT AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION PLAN SHEET 5

CONSTRUCTION ISSUE

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DRAWING NUMBER 12301-KFP1-505

AMEND. D

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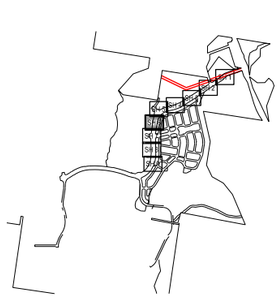

SHEET LAYOUT

ADJOINS SHEET 05

ADJOINS SHEET 07

KINGS FOREST PARKWAY (ROAD 01)

PROVIDE TEMPORARY END CAP FOR FUTURE CONNECTION

SLUICE VALVE

27/063 49/064 02/034 50/064 01/034 51/064 52/064

206 205 204 203 202 201 5 4 3 6

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	26-02-21	ISSUE FOR INFORMATION

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SEWER RETICULATION PLAN SHEET 6

CONSTRUCTION ISSUE

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DRAWING NUMBER	AMEND.
12301-KFP1-506	A

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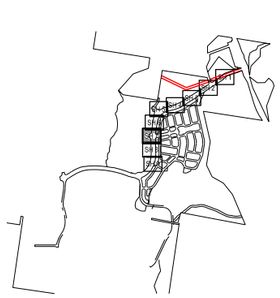

SHEET LAYOUT

ADJOINS SHEET 06

ADJOINS SHEET 08

ROAD 28

DWAY 43

DWAY 99B

SCOUR VALVE REFER TO 12301-KFP1-551 FOR DETAILS.

REFER TO DRAWING 12301-KFP1-591 & 592 FOR TYPICAL THRUST BLOCK DETAILS.

SCOUR VALVE REFER TO 12301-KFP1-551 FOR DETAILS.

34/066 28/063 29/063 53/064 54/064 55/064 56/064 57/064 58/064 59/064 60/064 30/063 35/066 31/063 36/066 37/066 32/063

1 2 3 10 108 109 110 404

B

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

B	14-04-21	SCOUR VALVES AND NOTES AMENDED
A	26-02-21	ISSUE FOR INFORMATION
PRE	DATE	AMENDMENT

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LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION PLAN
SHEET 7

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-507	B

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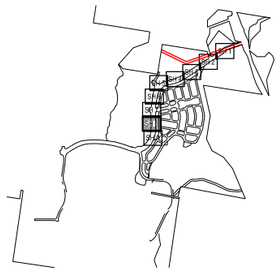

SHEET LAYOUT

ADJOINS SHEET 07

ADJOINS SHEET 09

B

AIR VALVE REFER TO 12301-KFP1-552 FOR DETAILS.

MANUAL AIR VALVE REFER TO TWEED SD.243 FOR DETAILS.

38/066
39/066
33/063
40/066
34/063
41/066
35/063
61/064

ROAD 27

ROAD 29

403
402
401
709
708
707
706
705
704
726

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

B	14-04-21	SEWER AIR VALVES AND NOTES AMENDED
A	26-02-21	ISSUE FOR INFORMATION
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION PLAN
SHEET 8

CONSTRUCTION ISSUE

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Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-508	B

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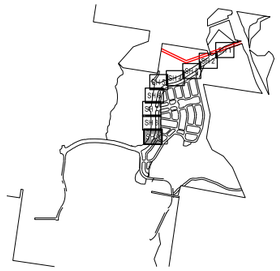


SHEET LAYOUT

ADJOINS SHEET 08

703

727

702

701

827

731

826

828

825

824

811

810

812

809

ROAD 4.7

ROAD 27

01/023

SLUICE VALVES

PROVIDE TEMPORARY END CAPS FOR FUTURE CONNECTION, REFER TO INSET 1.0 PROPOSED AND FUTURE SEWER FOR DETAILS.

PROVIDE TEMPORARY END CAPS FOR FUTURE CONNECTION.

PROPOSED LINE 23

36/063

37/063

42A/066

08/065

07A/066

40/063

41/063

62/064

63/064

64/064

AIR VALVES CONSTRUCTED AS PART OF 1-3 WORKS.

01/057

SLUICE VALVES

64B/064

65/064

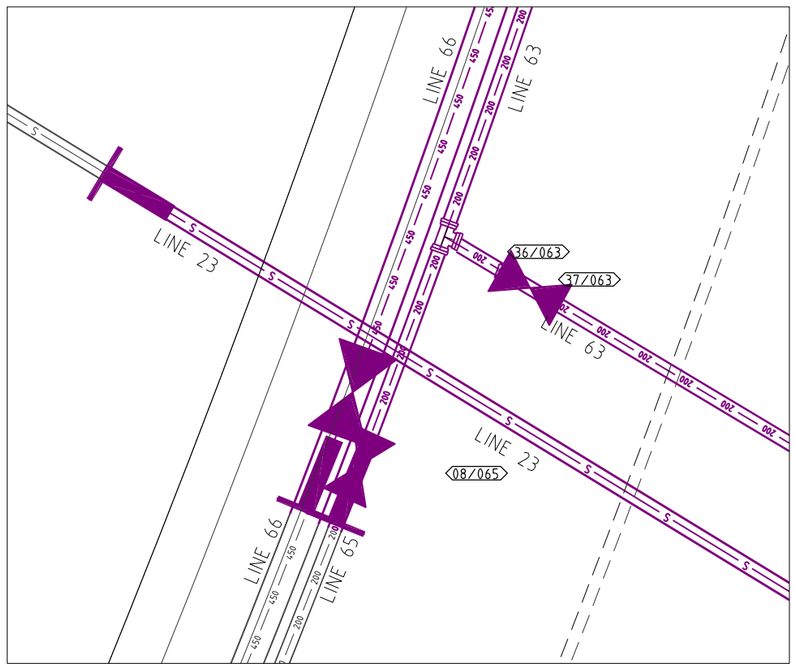
44/063

45/063

PROVIDE TEMPORARY END CAPS FOR FUTURE CONNECTION

05/017

B



INSET 1.0
PROPOSED AND FUTURE SEWER
SCALE 1:50 @ A1, 1:100 @ A3

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)
0 2.5 5 7.5 10 12.5m
Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	14-04-21	VALVES AND NOTES AMENDED
A	26-02-21	ISSUE FOR INFORMATION

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION
PLAN
SHEET 9

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
DATE	14-11-19		

DRAWING NUMBER: 12301-KFP1-509
AMEND.: B

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STRUCTURE TYPE LID CLASS

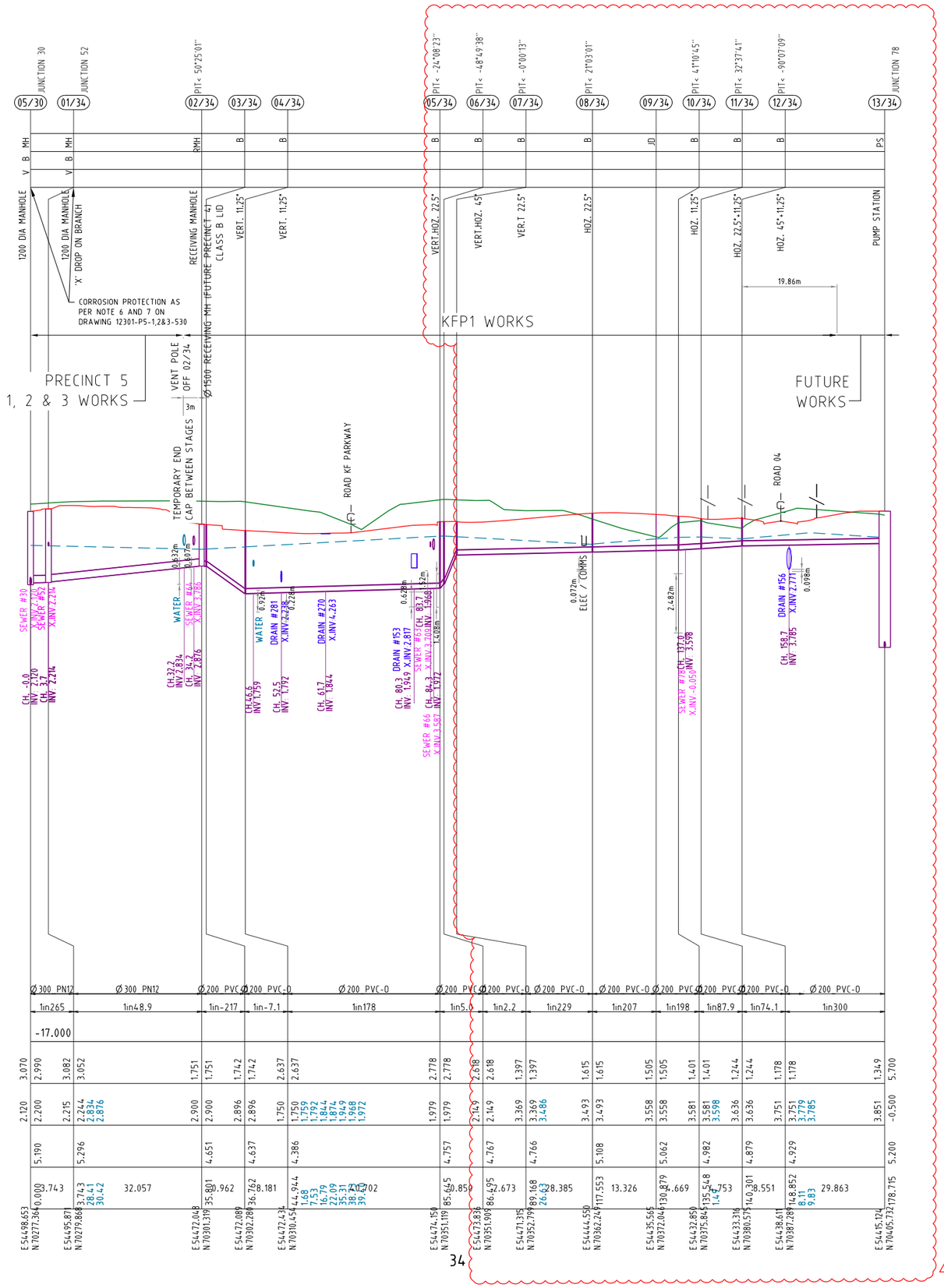
NOTE: SCOUR & AIR VALVE SHOWN INDICATIVELY, REFER TO PLANS 12301-KFP1-550 TO 12301-KFP1-552 FOR SETOUT DETAILS.

PROVIDE MINIMUM COVER 600mm IN VERGE, 750mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

LEGEND

- 4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE
- – – – APPROX LINE OF INDURATED SANDS
- B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS
- JD STRUCTURE TYPE JD = JOINT DEFLECTION

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.



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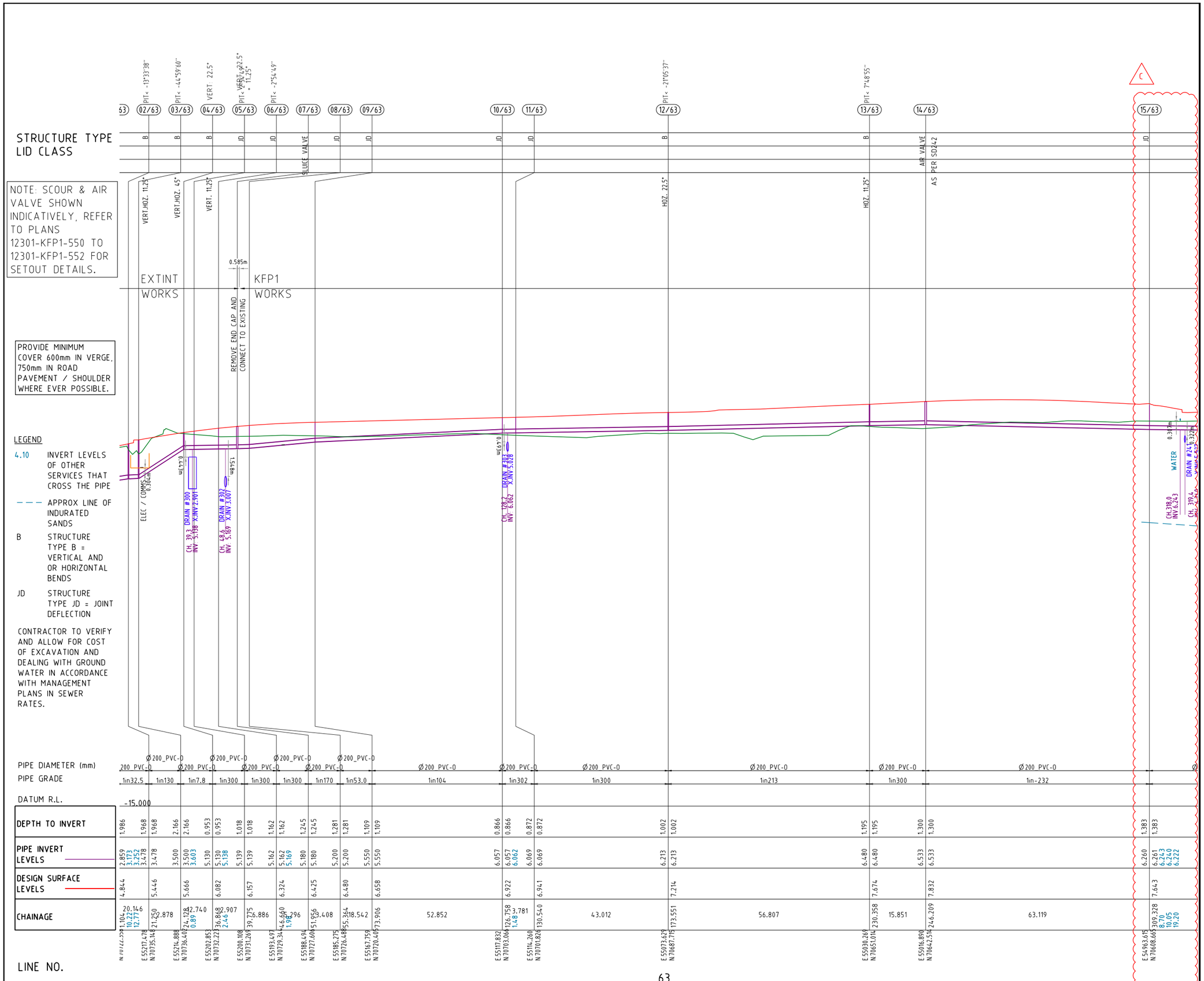
STRUCTURE TYPE
LID CLASS
NOTE: SCOUR & AIR VALVE SHOWN INDICATIVELY, REFER TO PLANS 12301-KFP1-550 TO 12301-KFP1-552 FOR SETOUT DETAILS.
PROVIDE MINIMUM COVER 600mm IN VERGE, 750mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.
LEGEND
4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE
APPROX LINE OF INDURATED SANDS
B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS
JD STRUCTURE TYPE JD = JOINT DEFLECTION
CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.
LINE NO.
EXTINT WORKS
KFP1 WORKS
0.585m
REMOVE END CAP AND CONNECT TO EXISTING
SLUICE VALVE
AIR VALVE AS PER SD242
PIT< -13°33'38"
PIT< -44°59'60"
VERT. 22.5°
PIT< VERT.&22.5° + 11.25°
PIT< -7°54'49"
PIT< -21°05'37"
PIT< 7°48'55"
VERT.HOZ. 11.25°
VERT.HOZ. 45°
VERT. 11.25°
HOZ. 22.5°
HOZ. 11.25°
02/63
03/63
04/63
05/63
06/63
07/63
08/63
09/63
10/63
11/63
12/63
13/63
14/63
15/63
ELEC / COMMS 0.364m
CH. 39.3 DRAIN #300 INV 5.138 X.INV 2.901
CH. 48.6 DRAIN #302 INV 5.169 X.INV 3.007
CH. 128.7 DRAIN #303 X.INV 5.028
CH.318.0 INV 6.243 WATER
CH. 319.4 DRAIN #214 INV 6.322
PIPE DIAMETER (mm)
PIPE GRADE
DATUM R.L.
-15.000
DEPTH TO INVERT
PIPE INVERT LEVELS
DESIGN SURFACE LEVELS
CHAINAGE
Ø200_PVC-D
1in32.5
1in130
1in7.8
1in300
1in104
1in302
1in213
1in232
20.146
10.227
12.777
21.250
2.878
12.740
0.891
2.907
2.461
6.886
1.941
3.296
3.408
18.542
52.852
1.781
1.481
43.012
56.807
15.851
63.119
8.70
10.05
19.20

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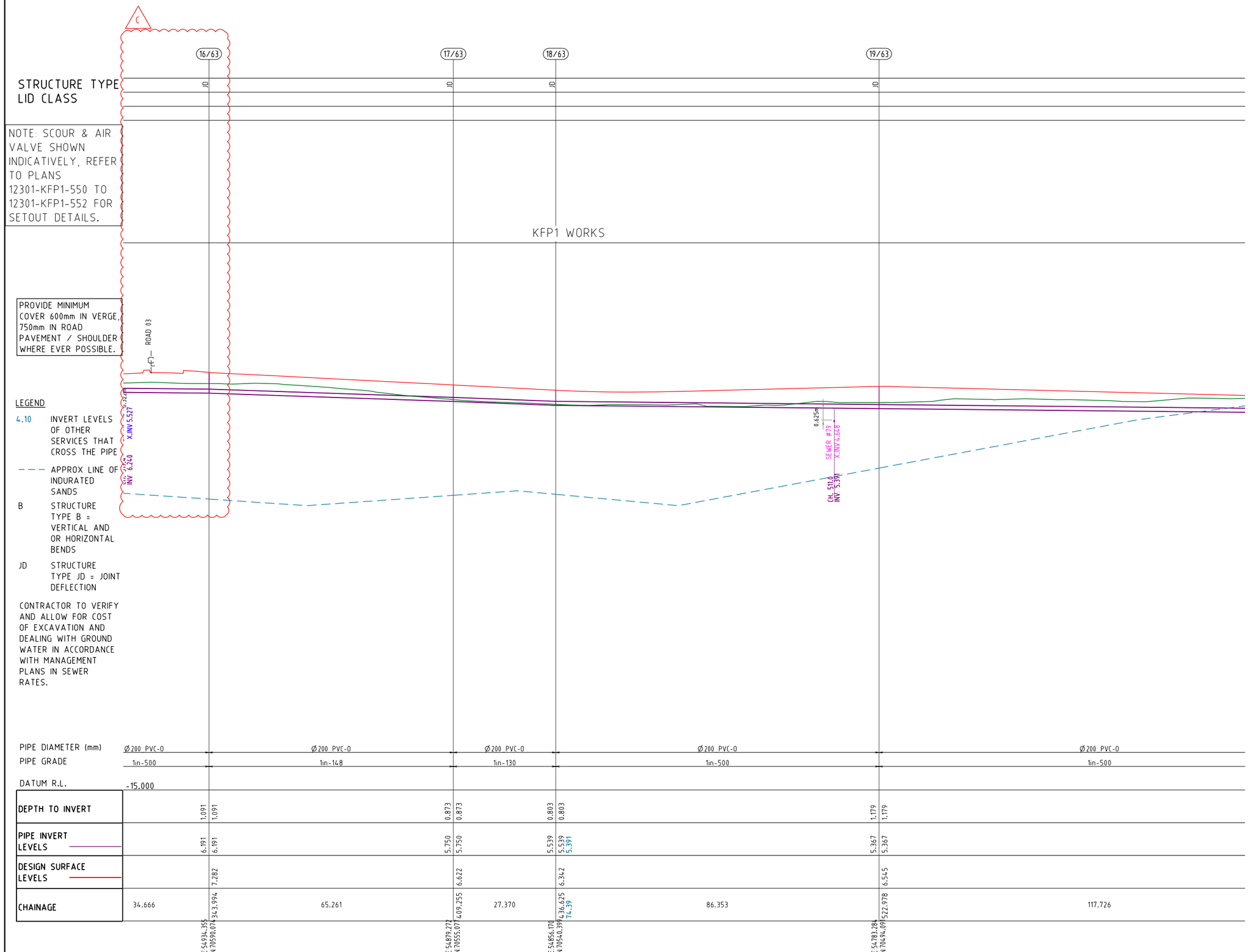

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	14-07-21	DESIGN LEVEL AMENDED
B	25-02-21	LEGEND AND PROFILE AMENDED
A	14-11-19	COUNCIL ISSUE

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LandSurv
GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION
PROFILES
SHEET 3

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
		DATE	14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-532	C

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STRUCTURE TYPE
LID CLASS

NOTE: SCOUR & AIR VALVE SHOWN INDICATIVELY, REFER TO PLANS 12301-KFP1-550 TO 12301-KFP1-552 FOR SETOUT DETAILS.

PROVIDE MINIMUM COVER 600mm IN VERGE, 750mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

LEGEND

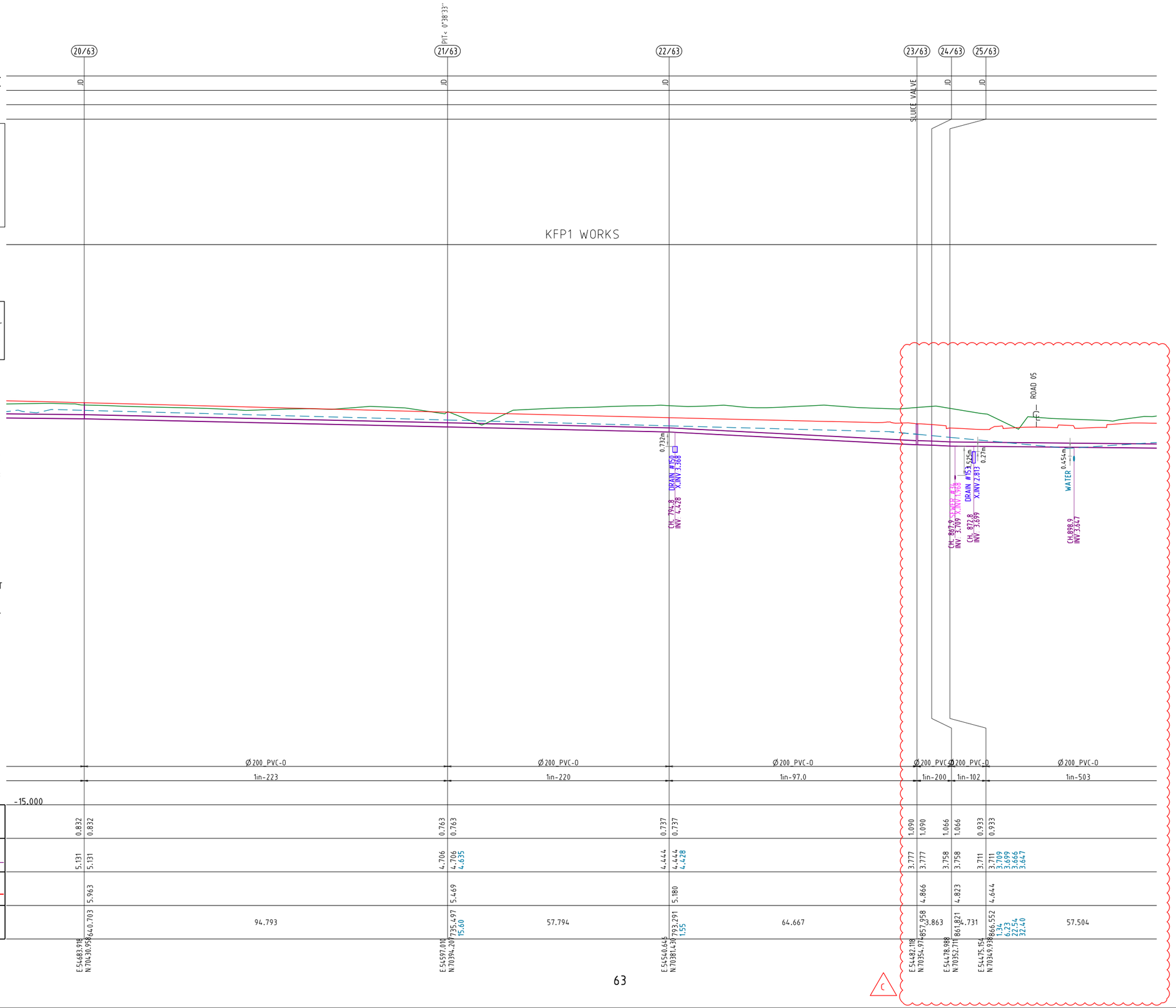
4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

– – – APPROX LINE OF INDURATED SANDS

B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS

JD STRUCTURE TYPE JD = JOINT DEFLECTION

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.



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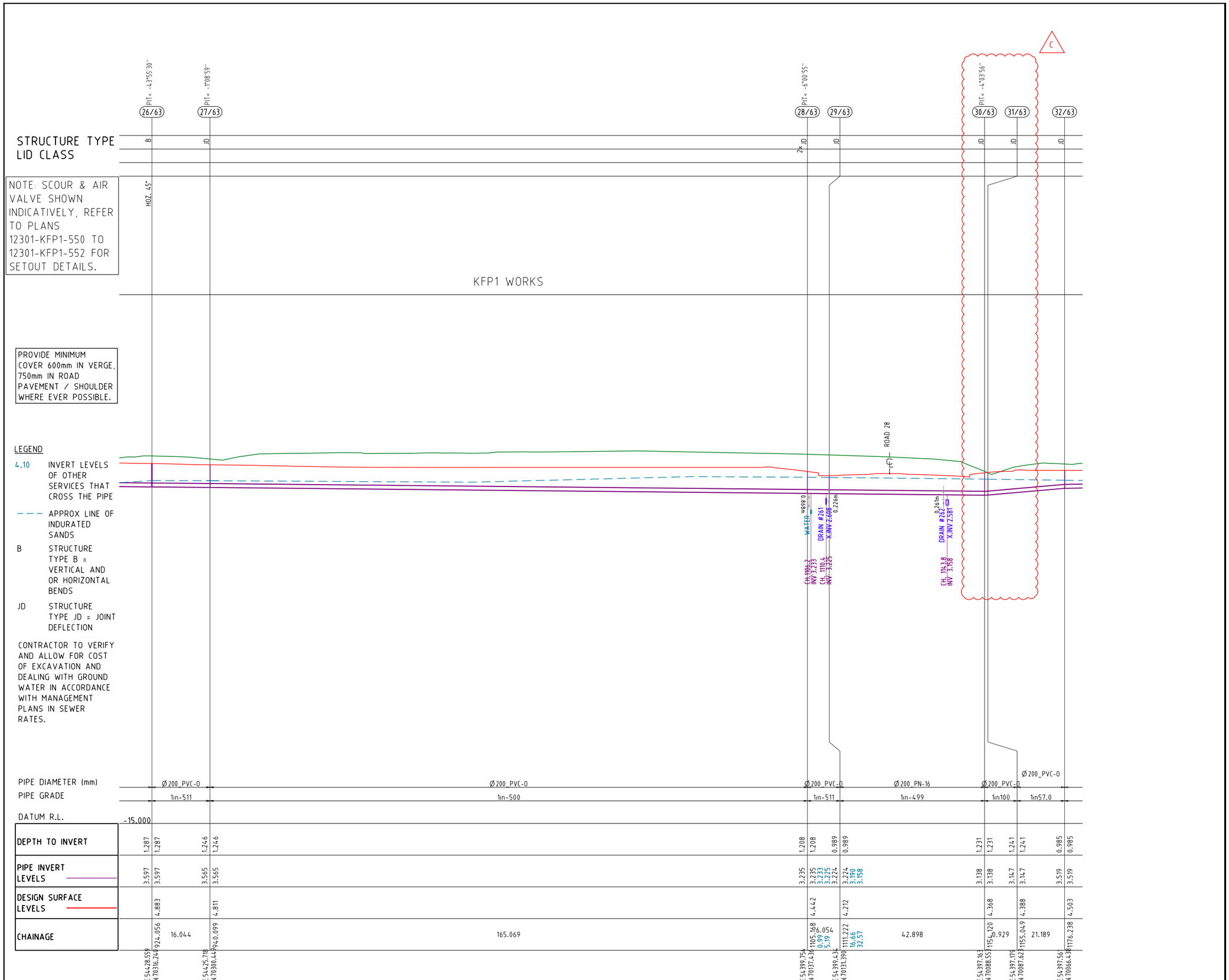

63

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	13-04-21	PROFILE AMENDED
B	25-02-21	LEGEND AND PROFILE AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION
PROFILES
SHEET 5

CONSTRUCTION ISSUE

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APPROVED		NER	906726
		DATE	14-11-19

DRAWING NUMBER: 12301-KFP1-534
AMEND.: C

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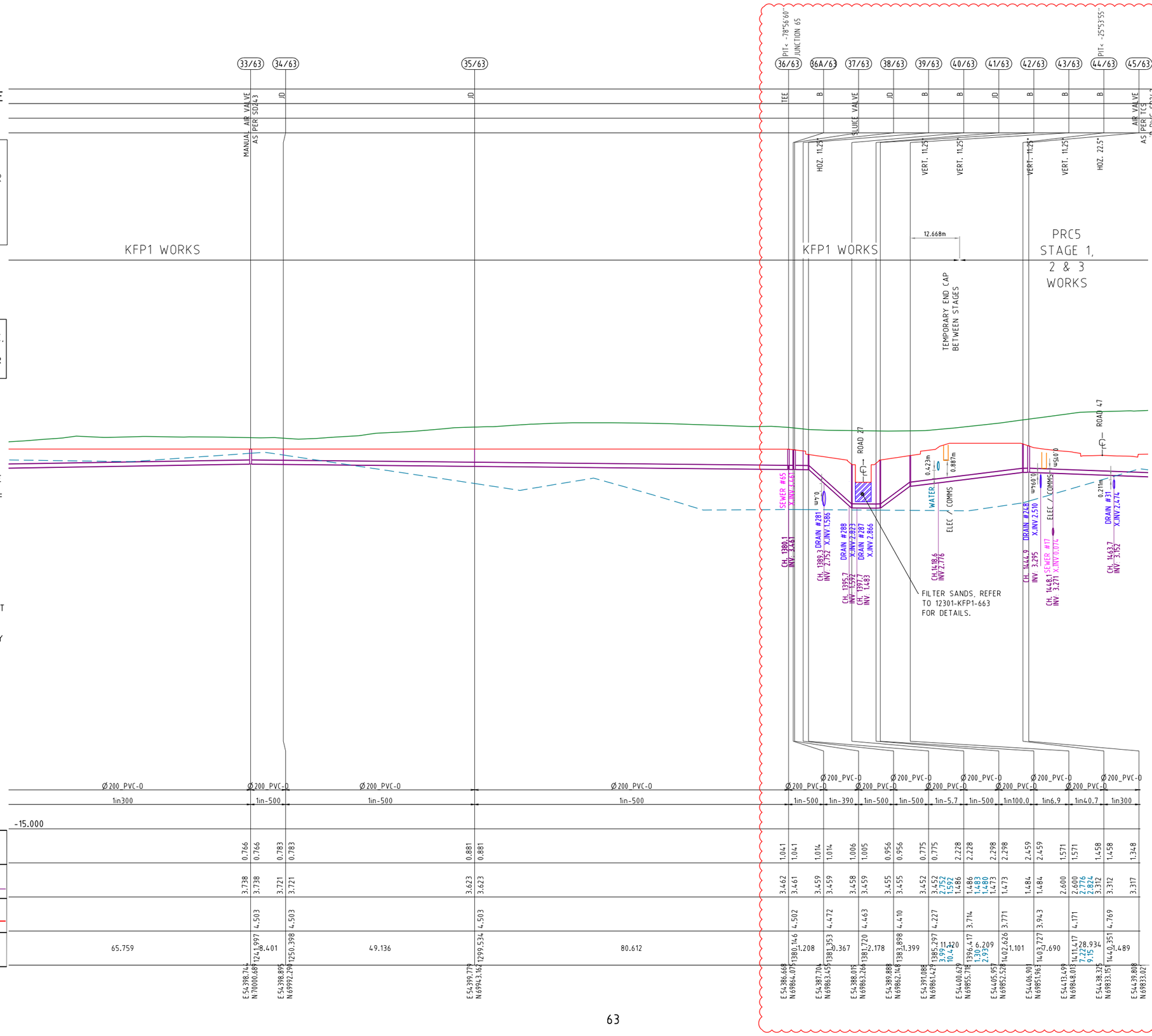

63

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	13-04-21	PROFILE AMENDED
B	25-02-21	LEGEND AND PROFILE AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION PROFILES SHEET 6

CONSTRUCTION ISSUE

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Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER: 12301-KFP1-535
AMEND.: C

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STRUCTURE TYPE
LID CLASS

NOTE: SCOUR & AIR VALVE SHOWN INDICATIVELY, REFER TO PLANS 12301-KFP1-550 TO 12301-KFP1-552 FOR SETOUT DETAILS.

PROVIDE MINIMUM COVER 600mm IN VERGE, 750mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

LEGEND

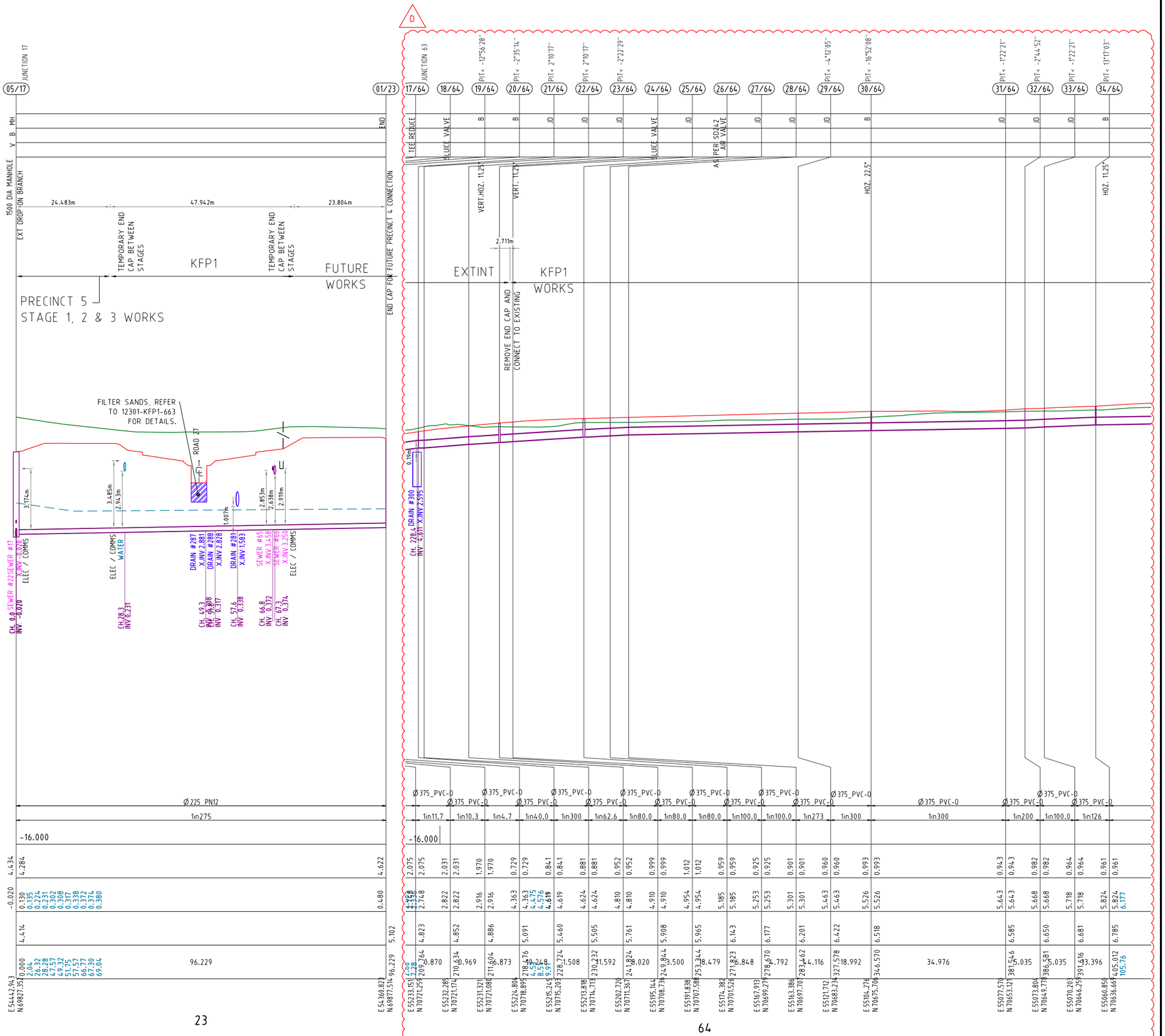
4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS

JD STRUCTURE TYPE JD = JOINT DEFLECTION

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.



PIPE DIAMETER (mm)
PIPE GRADE
DATUM R.L.

DEPTH TO INVERT	
PIPE INVERT LEVELS	
DESIGN SURFACE LEVELS	
CHAINAGE	

LINE NO. 23 64

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

D	11-06-21	PROFILE AMENDED
C	13-04-21	PROFILES AMENDED
B	25-02-21	LEGEND AND PROFILE AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE
SEWER RETICULATION PROFILES SHEET 7

CONSTRUCTION ISSUE

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Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-536
AMEND. D

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D

STRUCTURE TYPE
LID CLASS

NOTE: SCOUR & AIR VALVE SHOWN INDICATIVELY, REFER TO PLANS 12301-KFP1-550 TO 12301-KFP1-552 FOR SETOUT DETAILS.

PROVIDE MINIMUM COVER 600mm IN VERGE, 750mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

LEGEND

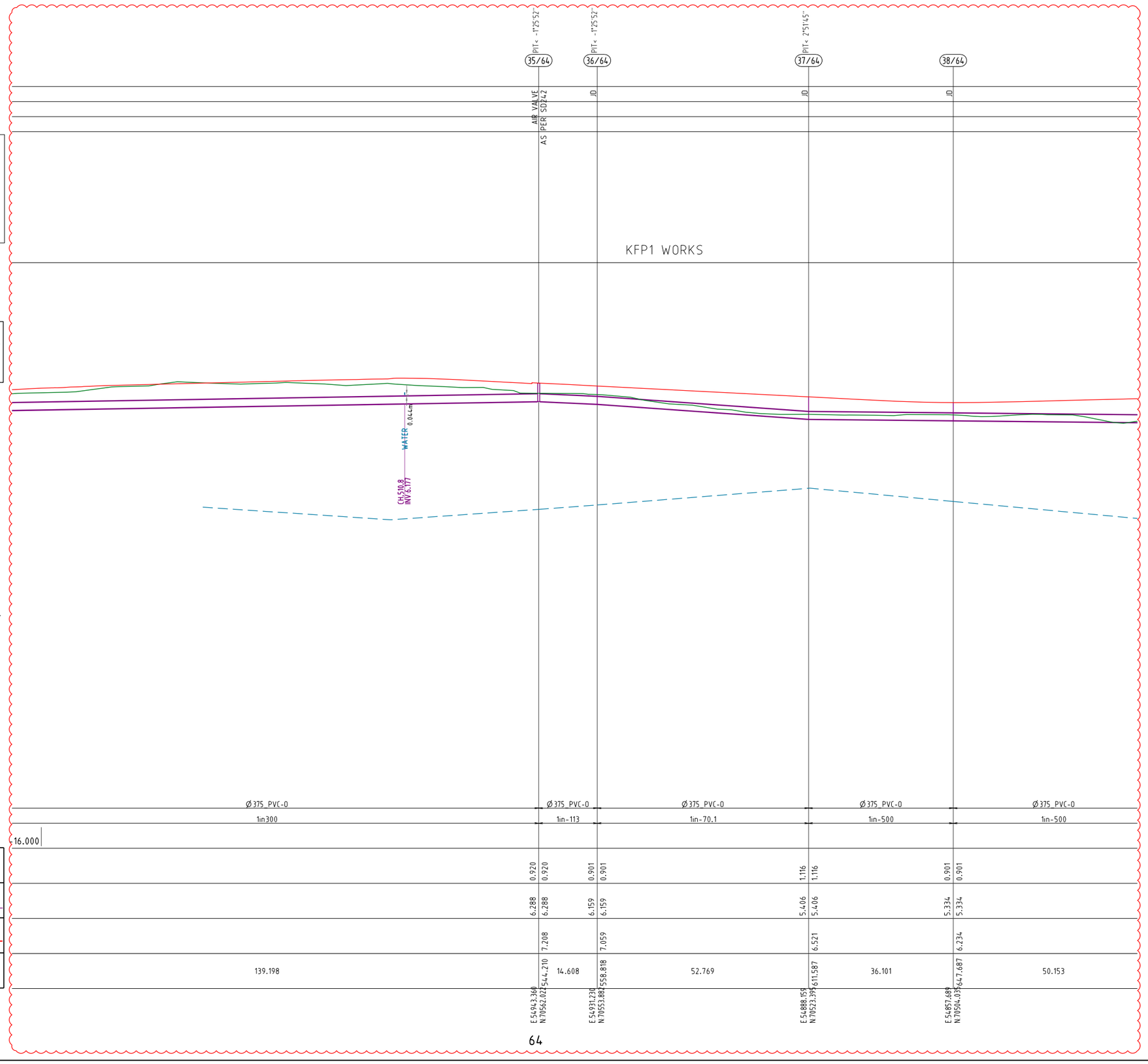
4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS

JD STRUCTURE TYPE JD = JOINT DEFLECTION

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.



PIPE DIAMETER (mm)	Ø375_PVC-0	Ø375_PVC-0	Ø375_PVC-0	Ø375_PVC-0	Ø375_PVC-0	
PIPE GRADE	1in300	1in-113	1in-70.1	1in-500	1in-500	
DATUM R.L.	16.000					
DEPTH TO INVERT		0.920 0.920	0.901 0.901	1.116 1.116	0.901 0.901	
PIPE INVERT LEVELS		6.288 6.288	6.159 6.159	5.406 5.406	5.334 5.334	
DESIGN SURFACE LEVELS		7.208	7.059	6.521	6.234	
CHAINAGE	139.198	14.608	52.769	36.101	50.153	
LINE NO.		E 54943.360 N 70562.025	E 54931.230 N 70553.382	E 54888.159 N 70523.395	E 54857.689 N 70504.035	
		54.210	58.818	611.587	647.687	

64

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
D	11-06-21	PROFILE AMENDED
C	13-04-21	PROFILE AMENDED
B	25-02-21	LEGEND AND PROFILE AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION
PROFILES
SHEET 8

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-537
AMEND. D

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C

PIT< -17°02'01"

PIT< 17°02'01"

PIT< 0°00'25"

PIT< 0°48'57"

39/64 | 40/64 | 41/64 | 42/64 | 43/64 | 44/64 | 45/64 | 46/64 | 47/64

STRUCTURE TYPE: B | JD | JD | B | SLUICE VALVE | JD | JD | JD | JD

LID CLASS

HOZ. 22.5°

HOZ. 22.5°

NOTE: SCOUR & AIR VALVE SHOWN INDICATIVELY, REFER TO PLANS 12301-KFP1-550 TO 12301-KFP1-552 FOR SETOUT DETAILS.

NOTE. 2.5° DEFLECTION REQUIRED FOR EACH DICL SOCKET JOINT TO ACHIEVE NOMINAL RADIUS 127.4°

KFP1 WORKS

PROVIDE MINIMUM COVER 600mm IN VERGE, 750mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

SEWER #28
CH 706.1
INV 5.221
X-INV 4.479
0.648

LEGEND

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS

JD STRUCTURE TYPE JD = JOINT DEFLECTION

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.

| | | |

STRUCTURE TYPE
LID CLASS

NOTE: SCOUR & AIR VALVE SHOWN INDICATIVELY, REFER TO PLANS 12301-KFP1-550 TO 12301-KFP1-552 FOR SETOUT DETAILS.

PROVIDE MINIMUM COVER 600mm IN VERGE, 750mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

LEGEND

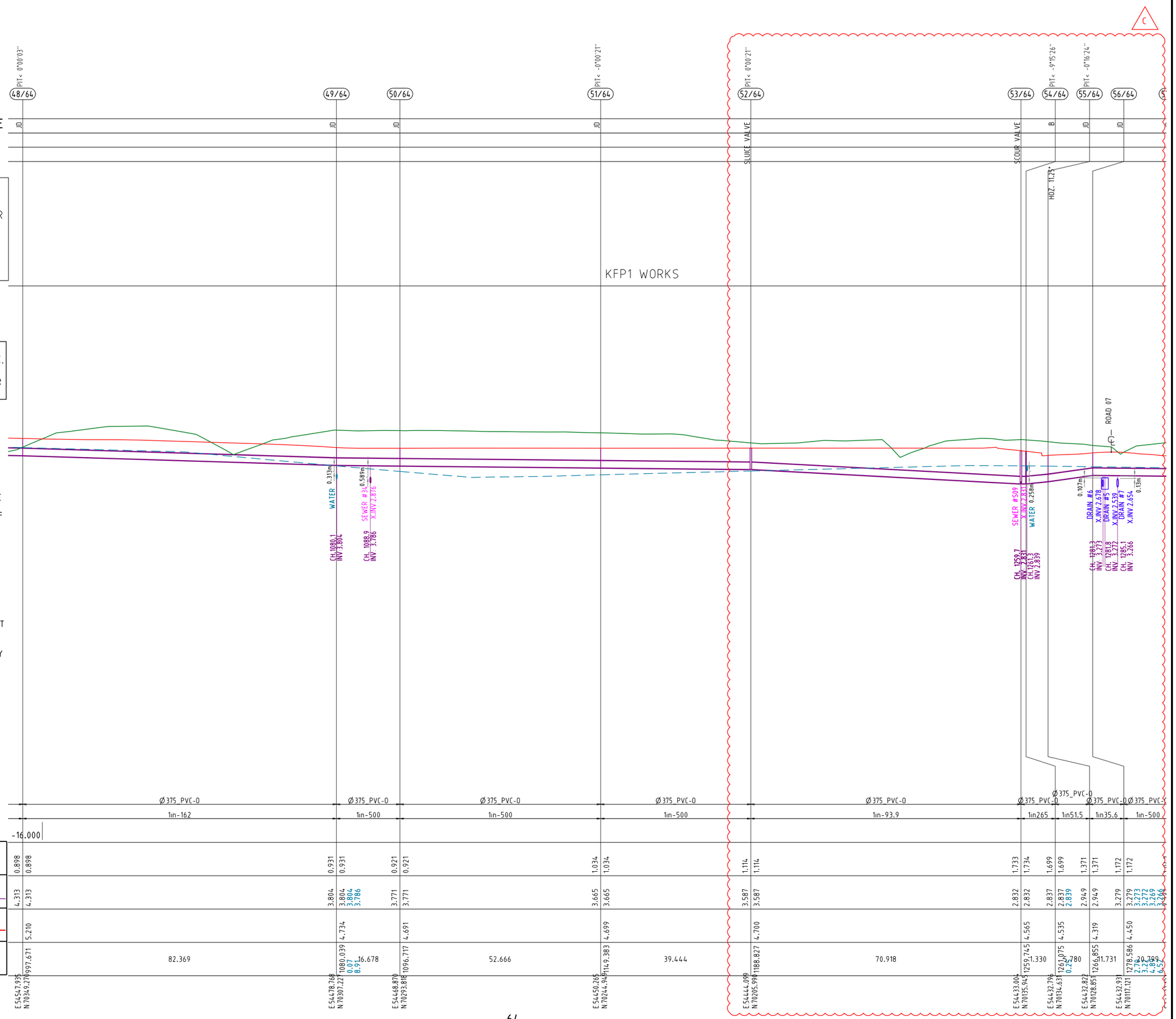
4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS

JD STRUCTURE TYPE JD = JOINT DEFLECTION

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.



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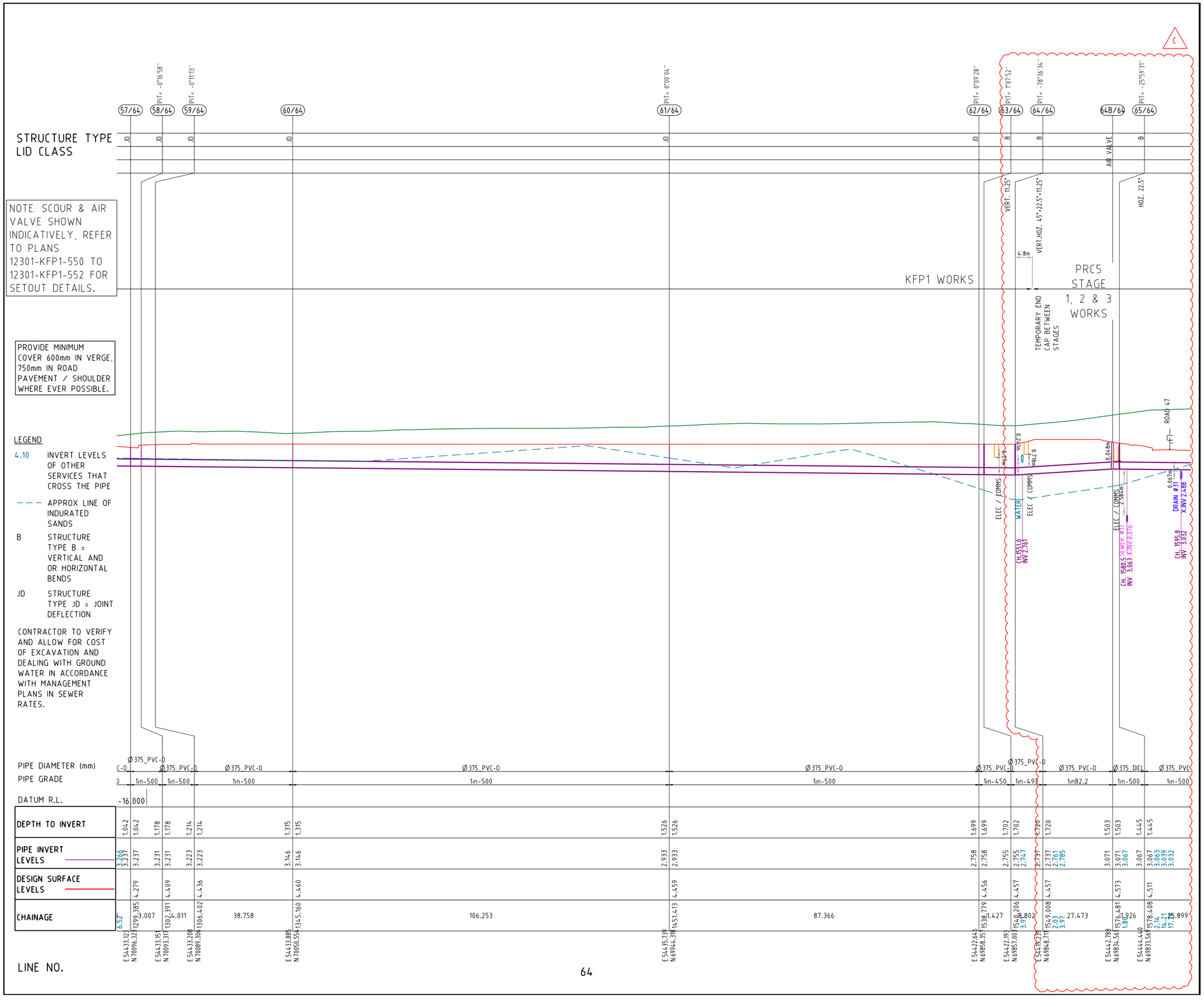

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3.237	1.042	4.279
3.231	1.178	4.409
3.231	1.178	4.409
3.223	1.214	4.436
3.223	1.214	4.436
3.146	1.315	4.460
3.146	1.315	4.460
2.933	1.526	4.459
2.933	1.526	4.459
2.758	1.699	4.456
2.758	1.699	4.456
2.755	1.702	4.457
2.755	1.702	4.457
2.747	1.720	4.467
2.737	1.720	4.457
2.761		2.03
2.785		3.97
3.071	1.503	4.573
3.071	1.503	4.573
3.067	1.445	4.511
3.067	1.445	4.511
3.063		2.14
3.039		1.74
3.032		17.75

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	13-04-21	PROFILE AMENDED
B	25-02-21	LEGEND AND PROFILE AMENDED
A	14-11-19	COUNCIL ISSUE

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION PROFILES SHEET 11

CONSTRUCTION ISSUE

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DRAWING NUMBER 12301-KFP1-540

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B

STRUCTURE TYPE
LID CLASS

NOTE: SCOUR & AIR VALVE SHOWN INDICATIVELY, REFER TO PLANS 12301-KFP1-550 TO 12301-KFP1-552 FOR SETOUT DETAILS.

PROVIDE MINIMUM COVER 600mm IN VERGE, 750mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

LEGEND

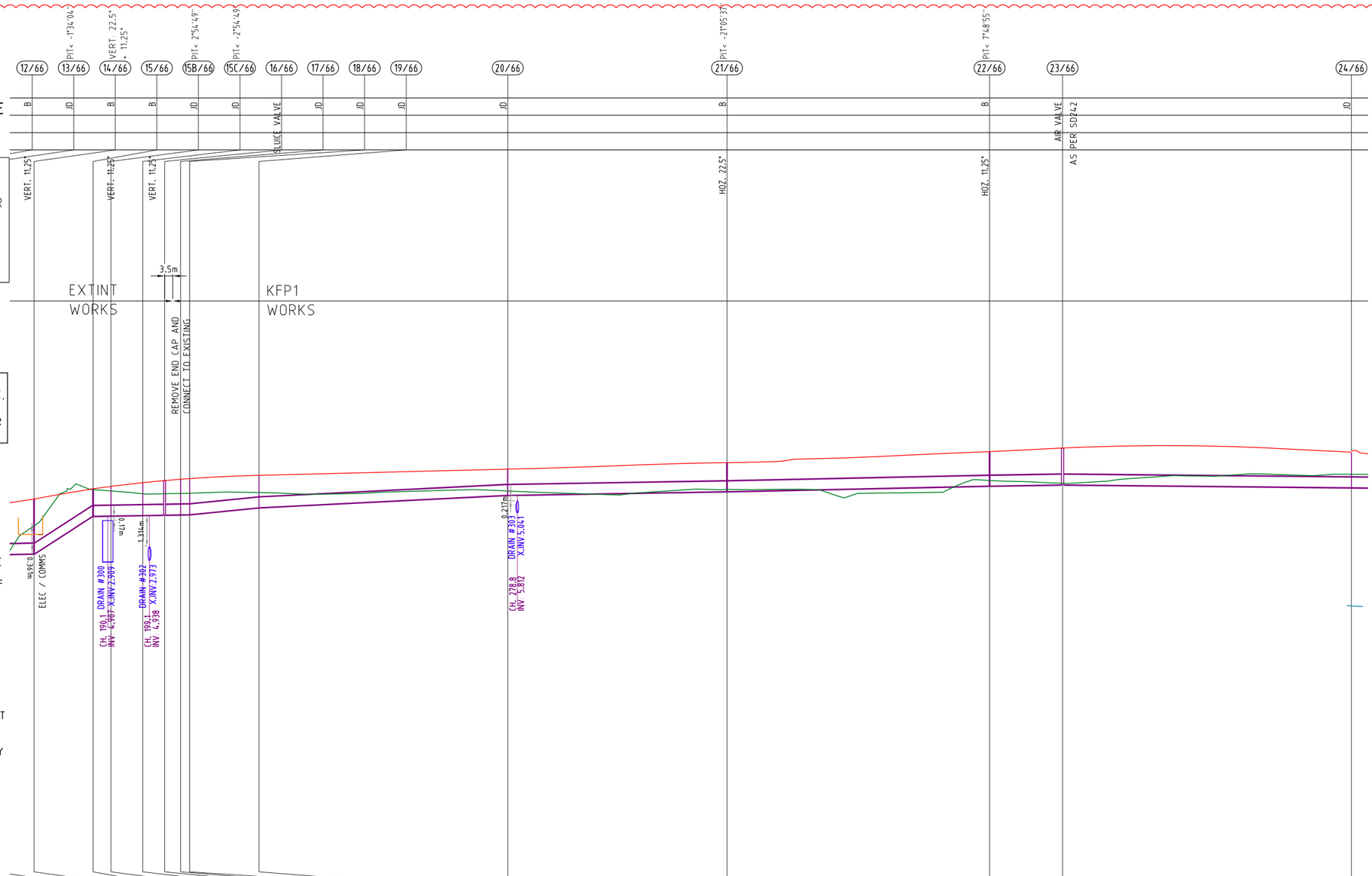
4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

– – – APPROX LINE OF INDURATED SANDS

B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS

JD STRUCTURE TYPE JD = JOINT DEFLECTION

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.



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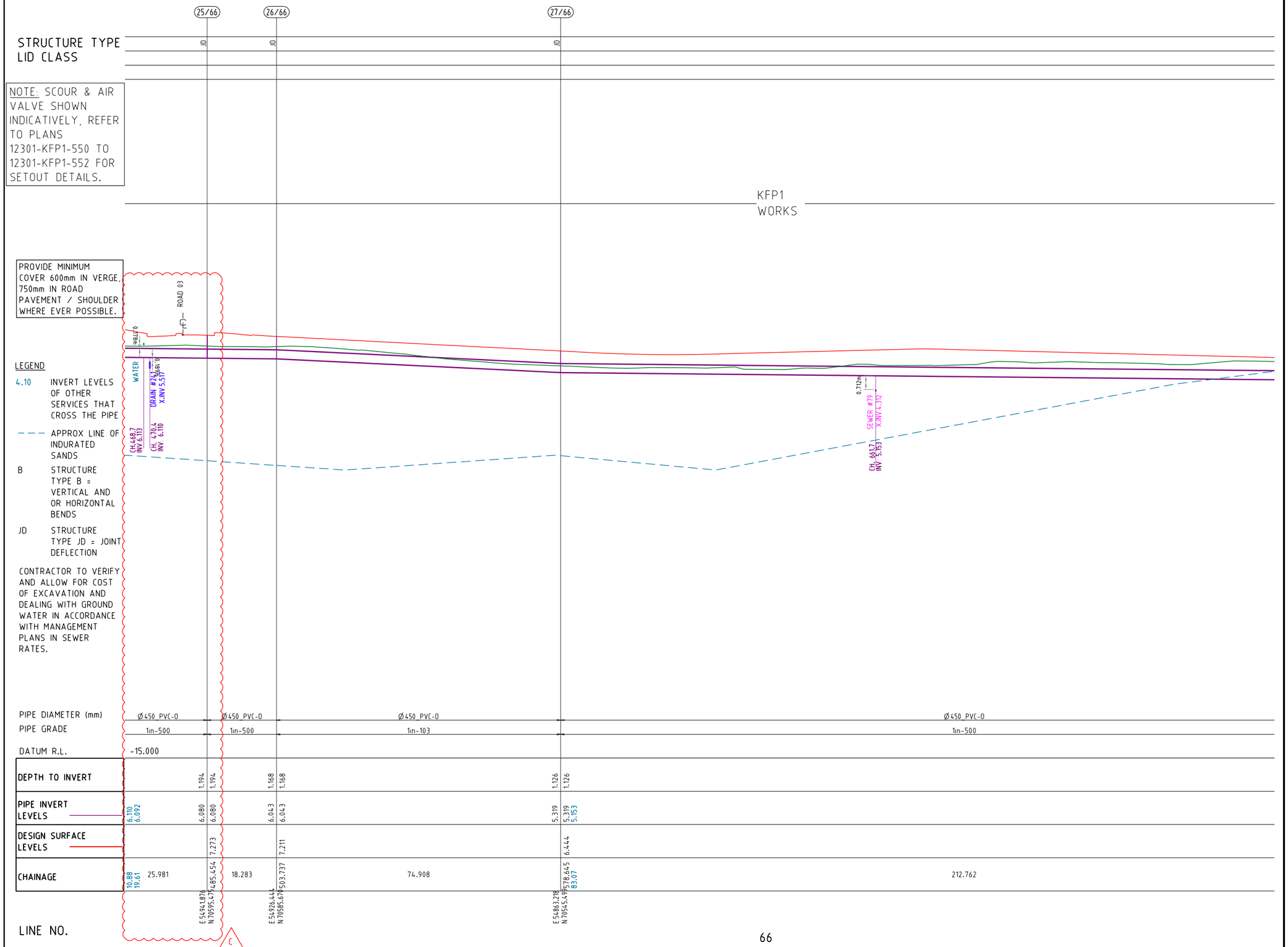

66

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	14-07-21	PROFILE AMENDED
B	25-02-21	LEGEND AND PROFILE AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION
PROFILES
SHEET 13

CONSTRUCTION ISSUE

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Southport QLD 4215

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APPROVED		NER	906726
		DATE	14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-542	C

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STRUCTURE TYPE
LID CLASS

NOTE: SCOUR & AIR VALVE SHOWN INDICATIVELY, REFER TO PLANS 12301-KFP1-550 TO 12301-KFP1-552 FOR SETOUT DETAILS.

PROVIDE MINIMUM COVER 600mm IN VERGE, 750mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

LEGEND

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

– – – APPROX LINE OF INDURATED SANDS

B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS

JD STRUCTURE TYPE JD = JOINT DEFLECTION

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.

28/66 JD | 29/66 SLUCE VALVE | PIT < 0°38'35" | 30/66 JD | 31/66 JD | 32/66 B | PIT < 44°53'42" | HDZ. 45°

KFP1 WORKS

ROAD 05

DRAIN #258 X.INV 5.411
CH. 900.2 INV 4.333

DRAIN #150 X.INV 3.394 0.39m
CH. 957.3 INV 4.103

1.388m SEWER #34 X.INV 1.972
CH. 1018.2 INV 3.587

DRAIN #153 X.INV 2.817 0.155m
CH. 1024.1 INV 3.576

WATER 0.321m
CH. 1049.8 INV 3.524

PIPE DIAMETER (mm)		Ø450 PVC-O	Ø450 PVC-O	Ø450 PVC-O	Ø450 PVC-O
PIPE GRADE		1in-193	1in-200	1in-128	1in-500
DATUM R.L.	-15.000				
DEPTH TO INVERT	1.083 1.083	1.080 1.080	1.079 1.079	1.273 1.273	1.412 1.412
PIPE INVERT LEVELS	4.893 4.893	4.403 4.333	4.114 4.103	3.606 3.587 3.576 3.544 3.524	3.474 3.474
DESIGN SURFACE LEVELS	5.976	5.482	5.193	4.879	4.885
CHAINAGE	791.407	94.616	886.024 14.18	57.791	943.815 1.50	64.879	1008.694 6.532 5.258 31.23 4.114	66.309	1075.003
	E 54683.637 N 7043140		E 54596.89 N 70394.718		E 54540.530 N 70381.944		E 54481.510 N 70355.400		E 54428.080 N 70316.354

LINE NO. 66

C

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	14-07-21	PROFILE AMENDED
B	25-02-21	LEGEND AND PROFILE AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION
PROFILES
SHEET 14

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-543
AMEND. C

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B

STRUCTURE TYPE
LID CLASS

NOTE: SCOUR & AIR VALVE SHOWN INDICATIVELY, REFER TO PLANS 12301-KFP1-550 TO 12301-KFP1-552 FOR SETOUT DETAILS.

PROVIDE MINIMUM COVER 600mm IN VERGE, 750mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

LEGEND

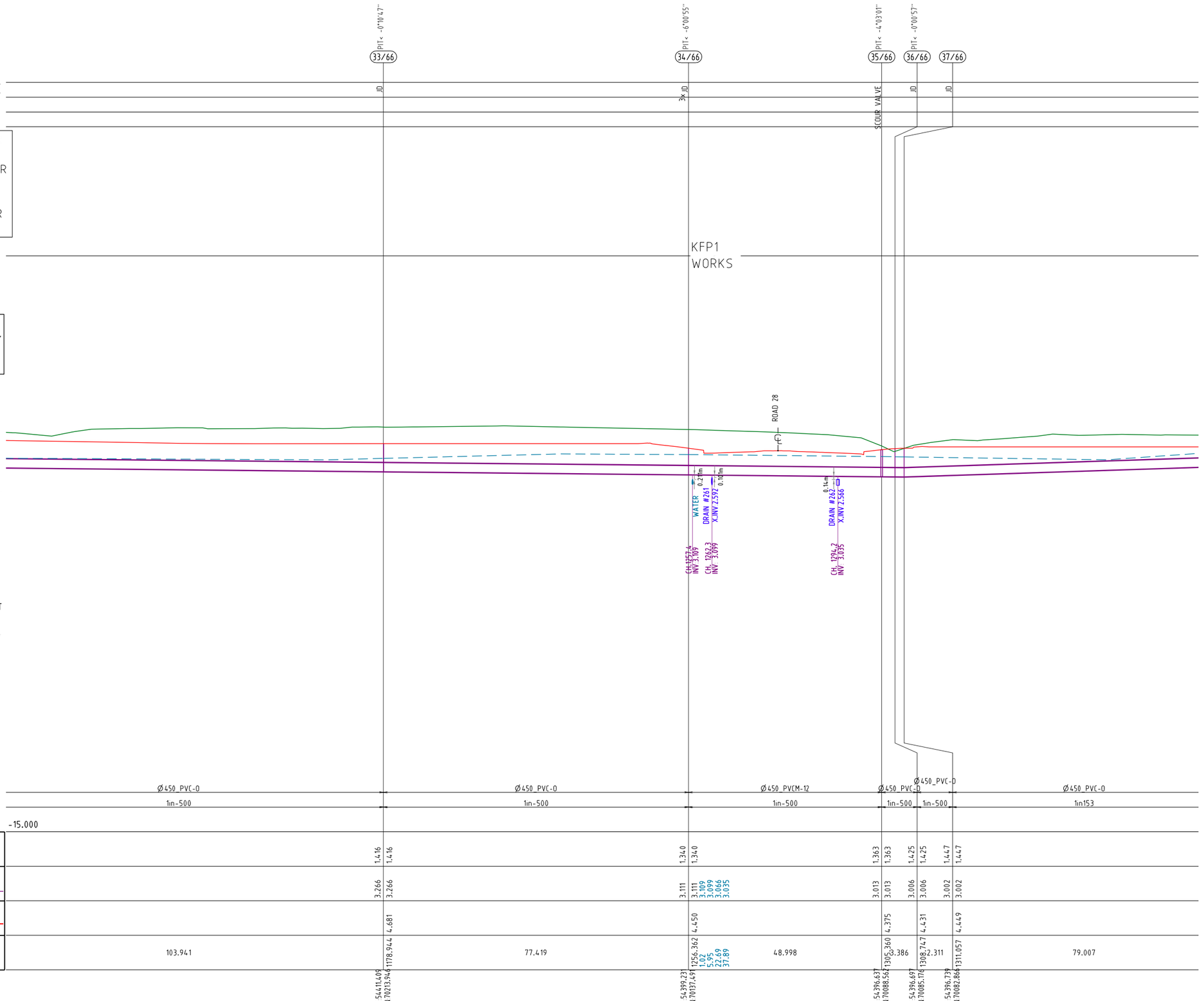
4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS

JD STRUCTURE TYPE JD = JOINT DEFLECTION

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.



| | | |

B

STRUCTURE TYPE
LID CLASS

NOTE: SCOUR & AIR VALVE SHOWN INDICATIVELY, REFER TO PLANS 12301-KFP1-550 TO 12301-KFP1-552 FOR SETOUT DETAILS.

PROVIDE MINIMUM COVER 600mm IN VERGE, 750mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

LEGEND

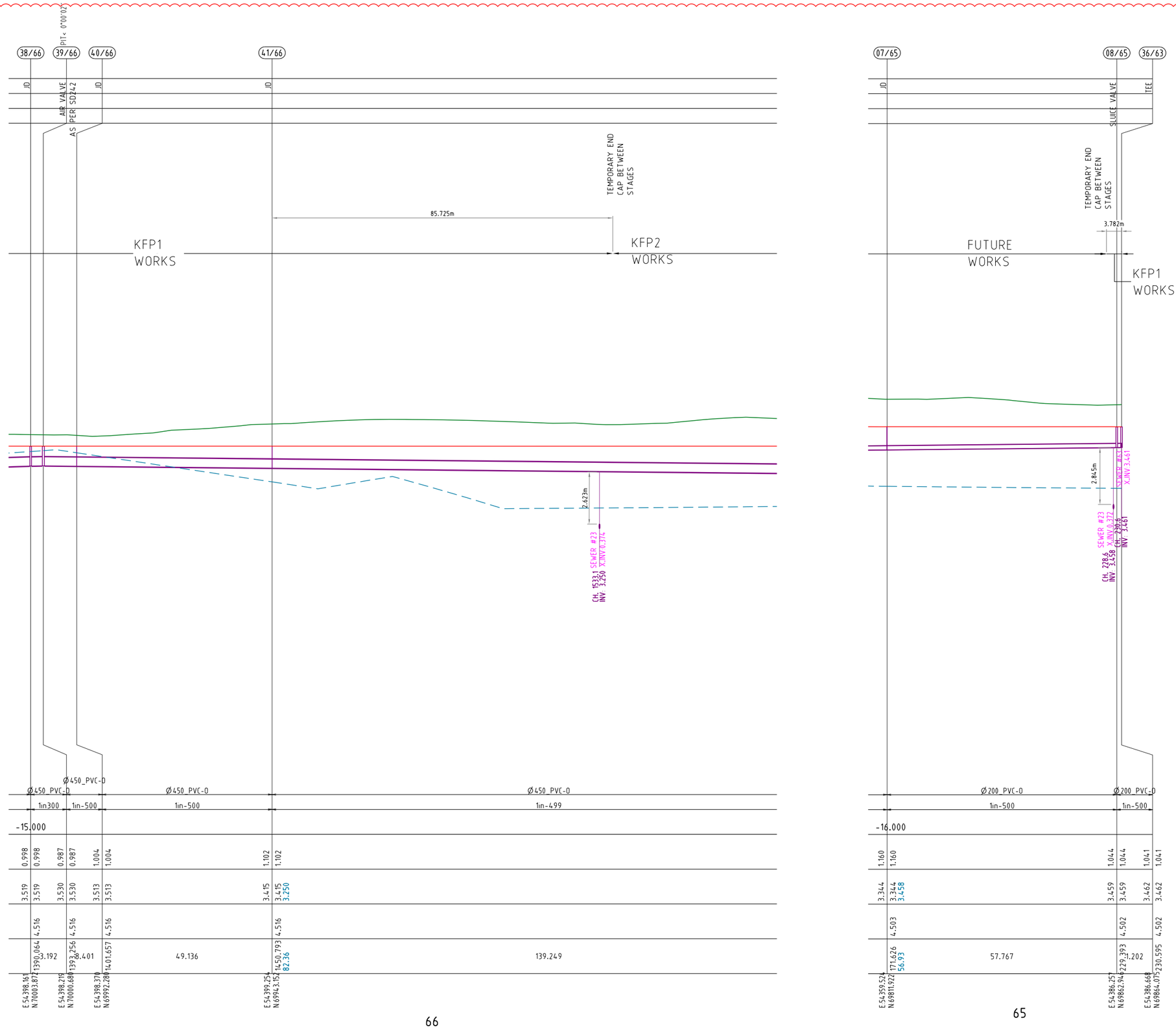
4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS

JD STRUCTURE TYPE JD = JOINT DEFLECTION

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.



PIPE DIAMETER (mm)	Ø450_PVC-D / Ø450_PVC-D / Ø450_PVC-D / Ø450_PVC-D / Ø200_PVC-D / Ø200_PVC-D
PIPE GRADE	1in300 / 1in-500 / 1in-500 / 1in-499 / 1in-500 / 1in-500
DATUM R.L.	-15.000 / -16.000
DEPTH TO INVERT	0.998 0.998 0.987 0.987 1.004 1.004 1.102 1.102 / 1.160 1.160 1.044 1.044 1.041 1.041
PIPE INVERT LEVELS	3.519 3.519 3.530 3.530 3.513 3.513 3.415 3.415 3.250 / 3.344 3.344 3.458 3.459 3.459 3.462 3.462
DESIGN SURFACE LEVELS	4.516 4.516 4.516 4.516 4.516 / 4.503 4.502 4.502
CHAINAGE	3.192 8.401 49.136 139.249 / 57.767 1.202
LINE NO.	66 / 65

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	25-02-21	LEGEND AND PROFILE AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION PROFILES SHEET 16

CONSTRUCTION ISSUE

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DRAWING NUMBER 12301-KFP1-545

AMEND. B

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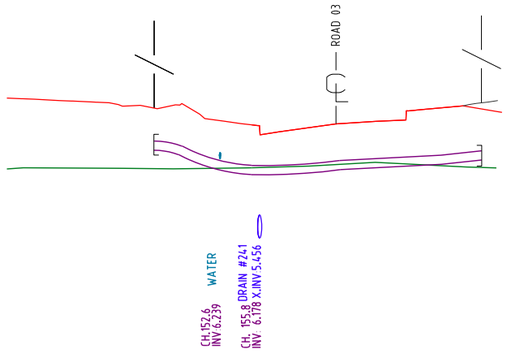
C

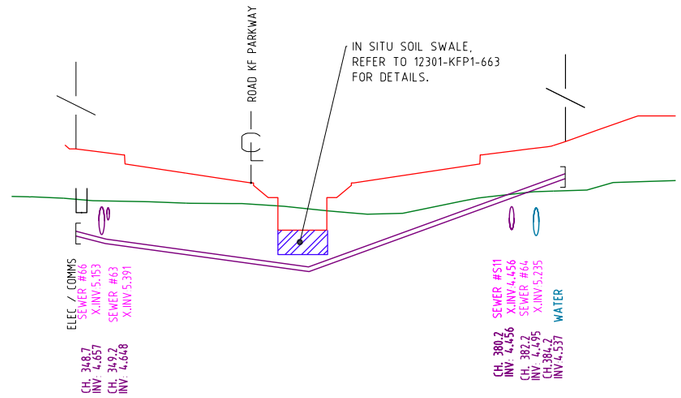
NOTE: SCOUR & AIR VALVE SHOWN INDICATIVELY, REFER TO PLANS 12301-KFP1-550 TO 12301-KFP1-552 FOR SETOUT DETAILS.

PROVIDE MINIMUM COVER 600mm IN VERGE, 750mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.



Ø 150 CONDUIT ONLY UNDER ROAD WITH 0.6m COVER

ROAD 03 CROSSING



Ø 150 CONDUIT ONLY UNDER ROAD WITH 0.6m COVER

KINGS FOREST PARKWAY CROSSING

LINE 79 79

y:\123 - feda developments pty ltd\01 - kings forest\KFP1\engineering drawings\Current\12301-KFP1-530.dwg, 1/10/2021 12:27:12 PM, 1:2

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2.5 5 7.5 10 12.5m
Horiz. Scale 1:250 - A1 (1:500 - A3)

0 0.5 1.0 1.5 2.0 2.5m
Vert. Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	13-04-21	PROFILE AND NOTES AMENDED
B	25-02-21	LEGEND AND PROFILE AMENDED
A	14-11-19	COUNCIL ISSUE

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION
PROFILES
SHEET 17

CONSTRUCTION ISSUE

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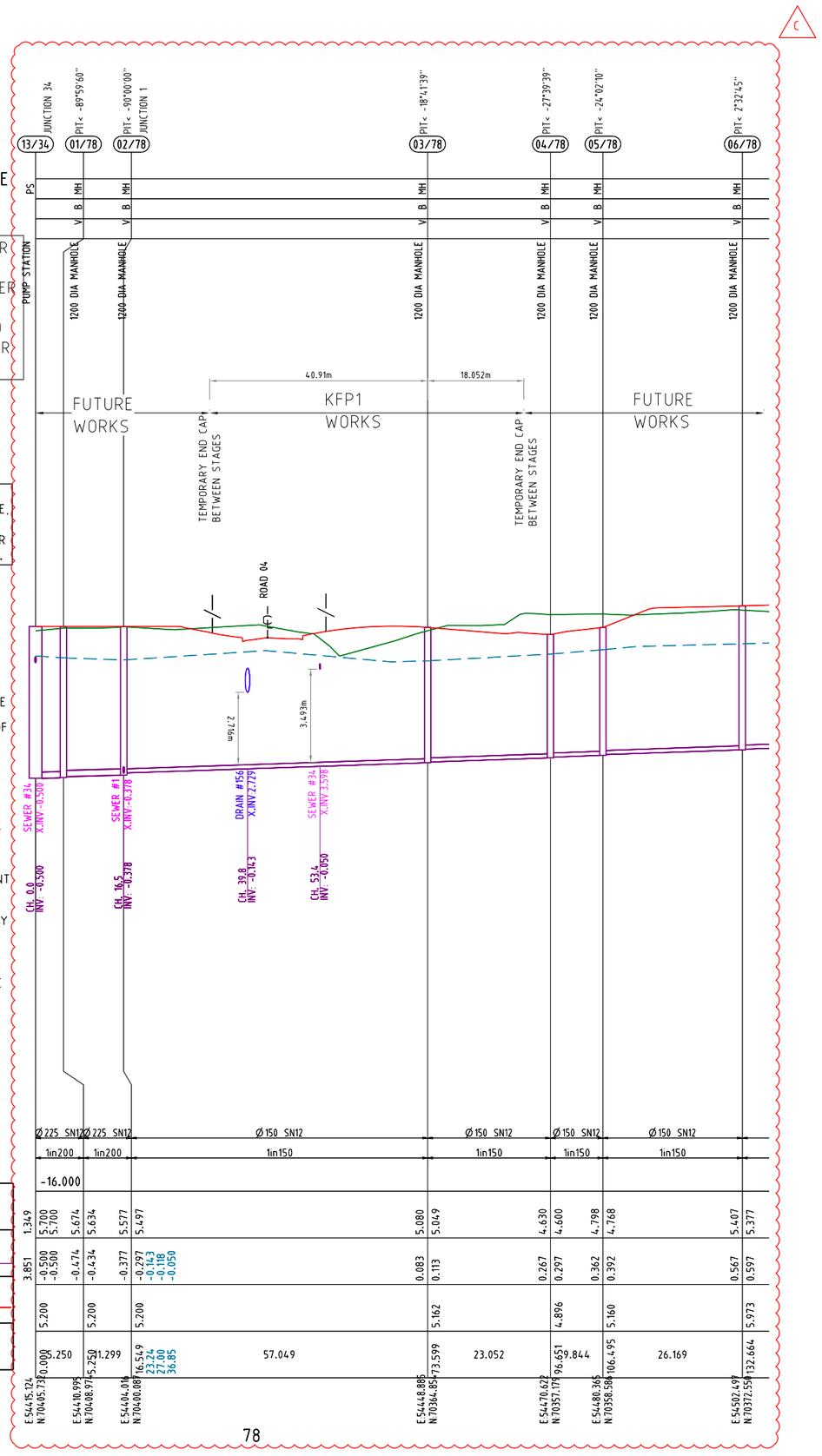
DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
DATE	14-11-19		

DRAWING NUMBER	AMEND.
12301-KFP1-546	C



PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
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Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	14-07-21	PROFILE AMENDED
B	13-04-21	PROFILE AMENDED
A	25-02-21	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION
PROFILES
SHEET 18

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
DATE	14-11-19		

DRAWING NUMBER	AMEND.
12301-KFP1-547	C

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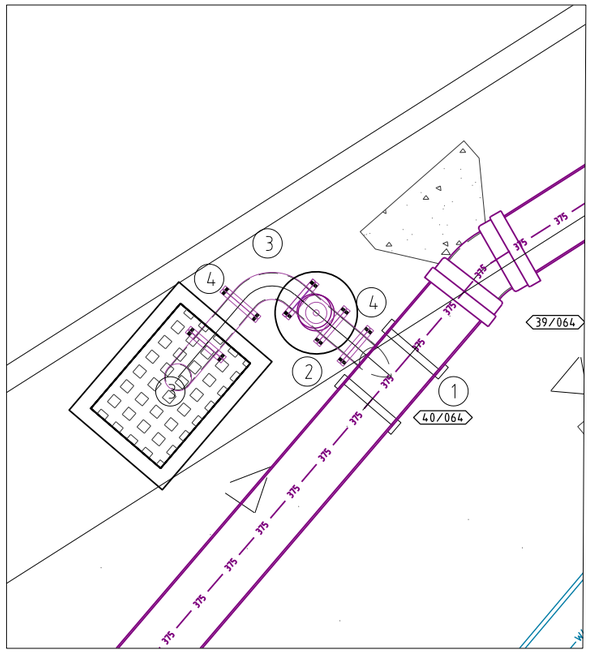
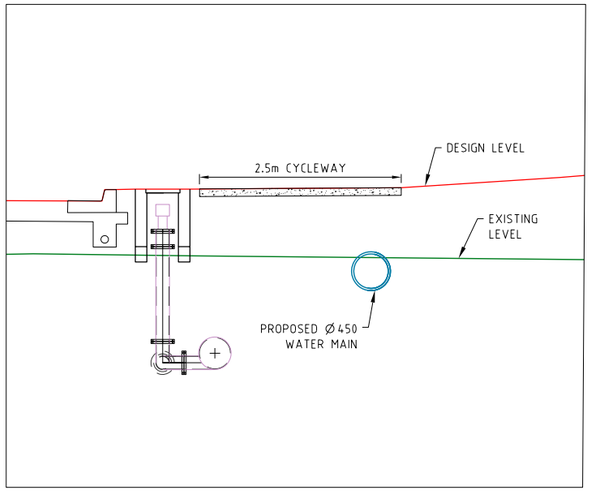


SEWER SCOUR VALVE PLAN 40/064

SCALE 1:20



SEWER SCOUR VALVE SECTION 40/064

SCALE 1:40

NOTE: VALVE SPINDLE EMITTED FROM SECTION FOR CLARITY.

SCHEDULE OF MATERIALS

ITEM	DESCRIPTION	QUANTITY
1	Ø375 SO - Ø375 SO - Ø150 FL SCOUR TEE	1
2	Ø150 FL/FL RESILIENT SEATED GATE VALVE	1
3	Ø150 FL/FL 90° BEND	2
4	Ø150 FL/FL PIPE TO SUIT	2

NOTES

1. CLASS "D" COVER & 900x600 SOLID TOP GASTIGHT LIDTO BE USED FOR VALVE PIT 40/064.
2. REFER TO DRAWING 12301-KFP1-555 FOR STANDARD SCOUR DETAILS.
3. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO MANUFACTURE.

C

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)
0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	07-04-21	VALVES, TABLE AND NOTES AMENDED
B	25-02-21	VALVES AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

SEWER SCOUR VALVE DETAILS 40/064

CONSTRUCTION ISSUE

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		DATE	04-09-17

DRAWING NUMBER: 12301-KFP1-550
AMEND.: C

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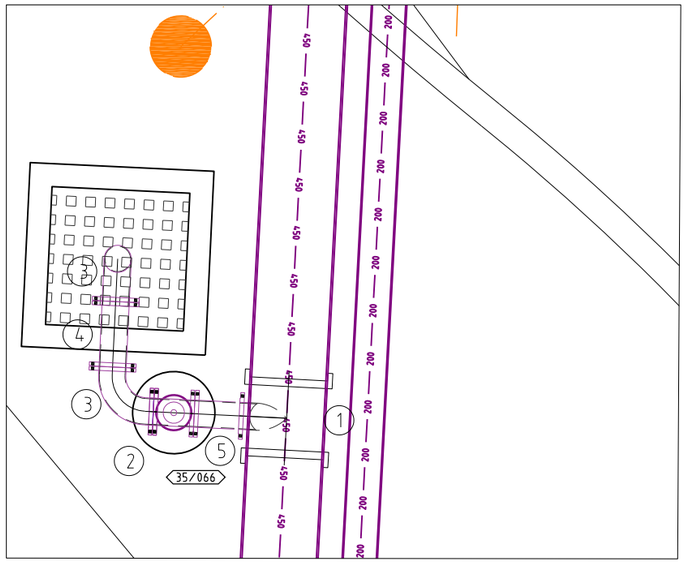
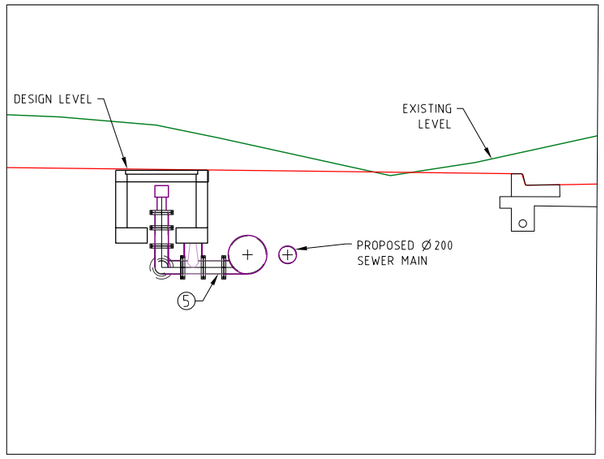


SEWER SCOUR VALVE PLAN 35/066

SCALE 1:20



SEWER SCOUR VALVE SECTION 35/066

SCALE 1:40

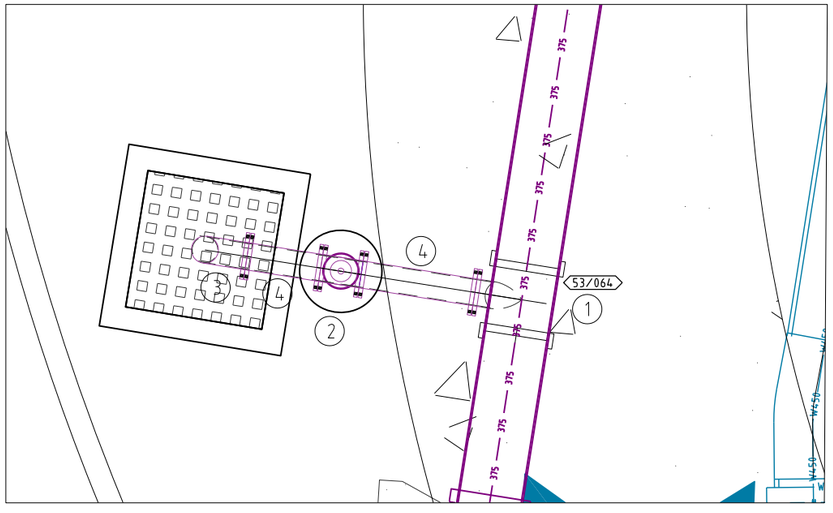
NOTE: VALVE SPINDLE EMITTED FROM SECTION FOR CLARITY.

SCHEDULE OF MATERIALS

ITEM	DESCRIPTION	QUANTITY
1	Ø450 SO - Ø450 SO & Ø150 FL SCOUR TEE	1
2	Ø150 FL/FL RESILIENT SEATED GATE VALVE	1
3	Ø150 FL/FL 90° BEND	2
4	Ø150 FL/FL PIPE TO SUIT	1
5	Ø150 FL/FL PIPE TO SUIT	1

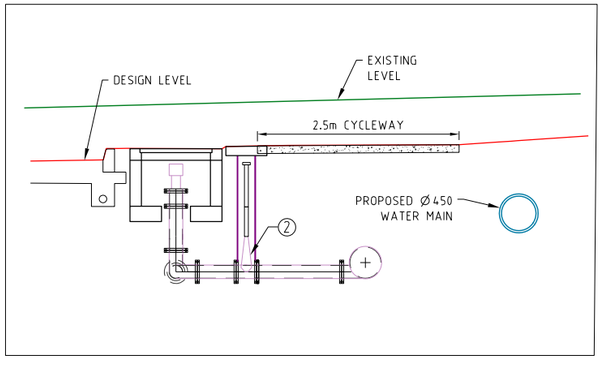
NOTES:

1. CLASS "D" COVER & 900x900 LA99D SOLID TOP GASTIGHT LID TO BE USED FOR VALVE PIT 35/066.
2. REFER TO DRAWING 12301-KFP1-555 FOR STANDARD SCOUR DETAILS.
3. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO MANUFACTURE.



SEWER SCOUR VALVE PLAN 53/064

SCALE 1:20



NOTE: VALVE SPINDLE EMITTED FROM SECTION FOR CLARITY.

SEWER SCOUR VALVE SECTION 53/064

SCALE 1:40

SCHEDULE OF MATERIALS

ITEM	DESCRIPTION	QUANTITY
1	Ø375 SO - Ø375 SO - Ø150 FL SCOUR TEE	1
2	Ø150 FL/FL RESILIENT SEATED GATE VALVE	1
3	Ø150 FL/FL 90° BEND	1
4	Ø150 FL/FL PIPE TO SUIT	2

NOTES:

1. CLASS "D" COVER & 900x900 LA99D SOLID TOP GASTIGHT LID TO BE USED FOR VALVE PIT 53/064.
2. REFER TO DRAWING 12301-KFP1-555 FOR STANDARD SCOUR DETAILS.
3. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO MANUFACTURE.

C

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)
0 0.4 0.8 1.2 1.6 2.0m
Scale 1:40 - A1 (1:80 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	07-04-21	VALVE, TABLE AND NOTES AMENDED
B	25-02-21	VALVE AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

SEWER SCOUR VALVE DETAILS 53/064

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER	AMEND.
12301-KFP1-551	C

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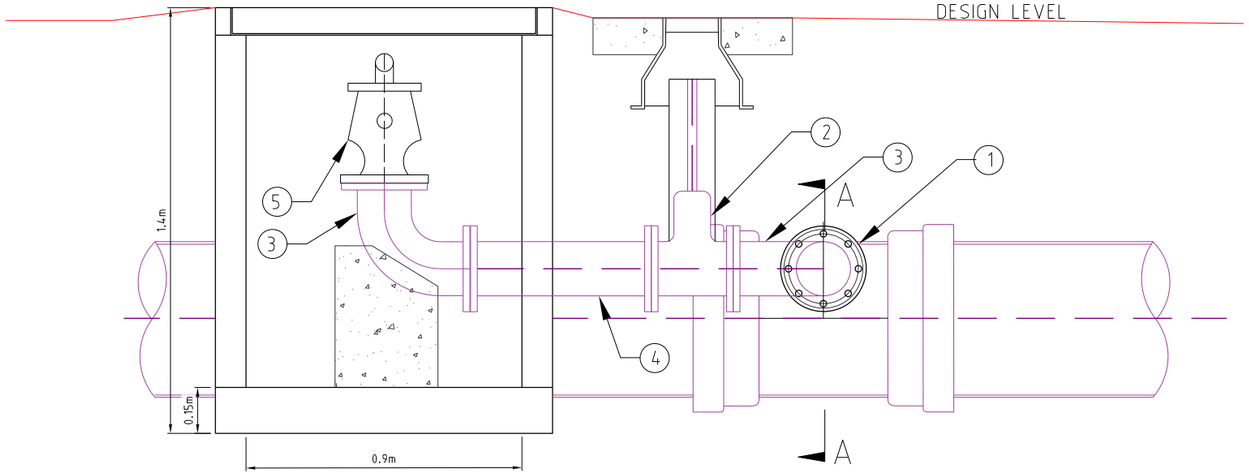
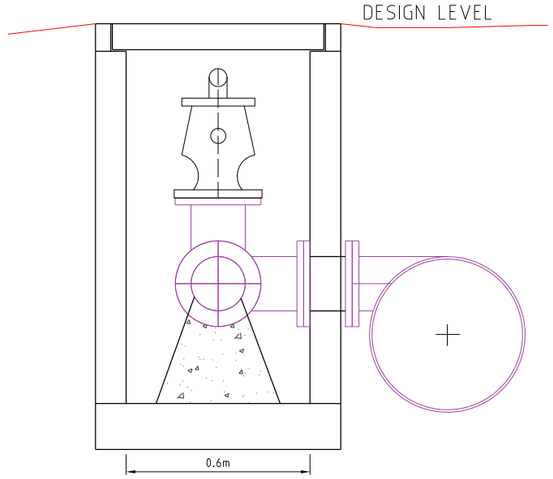


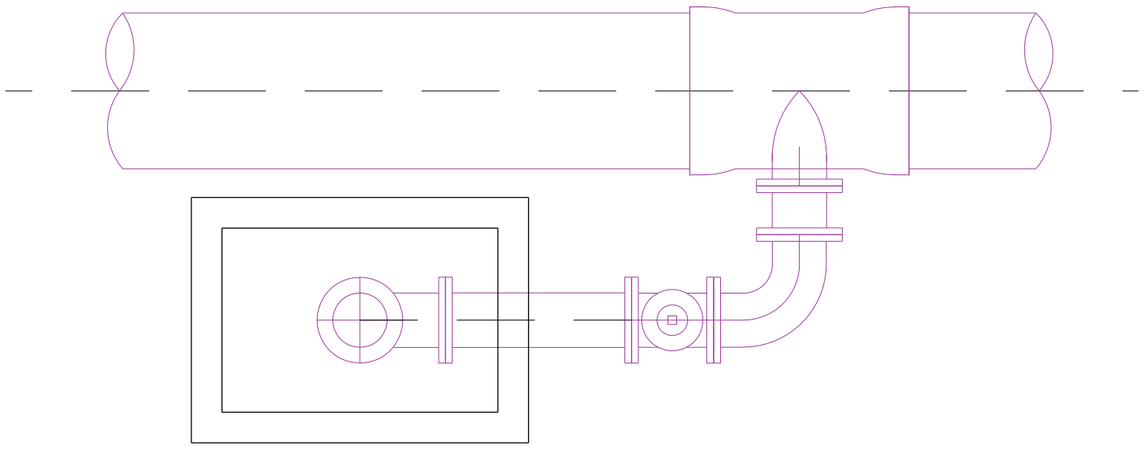
TYPICAL SECTION SEWER AIR VALVE

SCALE 1:10



1.1 SECTION A-A

SCALE 1:10



TOP VIEW

SCALE 1:10

SCHEDULE OF MATERIALS

ITEM	DESCRIPTION	QUANTITY
1	SO & SO & FL SCOUR TEE	1
2	FL/FL RESILIENT SEATED GATE VALVE	1
3	FL/FL 90° BEND	2
4	FL/FL PIPE TO SUIT	1
5	GAS RELEASE VALVE	1

NOTES:

1. CLASS "D" COVER TO BE USED.
2. 600x900 LID.
3. N25 CONCRETE
4. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO MANUFACTURE.
5. Ø375 AND DN450 SCOUR TEE IS ONLY AVAILABLE WITH Ø150 BRANCH.
6. Ø80 AIR VALVE IS REQUIRED ON MAINS GREATER THAN Ø300 MAIN REFER TO TWEED SD.242.
7. USE REDUCER WHERE REQUIRED TO REDUCE PIPEWORK TO Ø80.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
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Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.1 0.2 0.3 0.4 0.5m

Scale 1:10 - A1 (1:20 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	07-04-21	NOTES AND DETAILS AMENDED
B	25-02-21	VALVE AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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GILBERT SUTHERLAND

DRAWING TITLE

OFFSET SEWER AIR VALVE DETAILS

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER: 12301-KFP1-552

AMEND.: C

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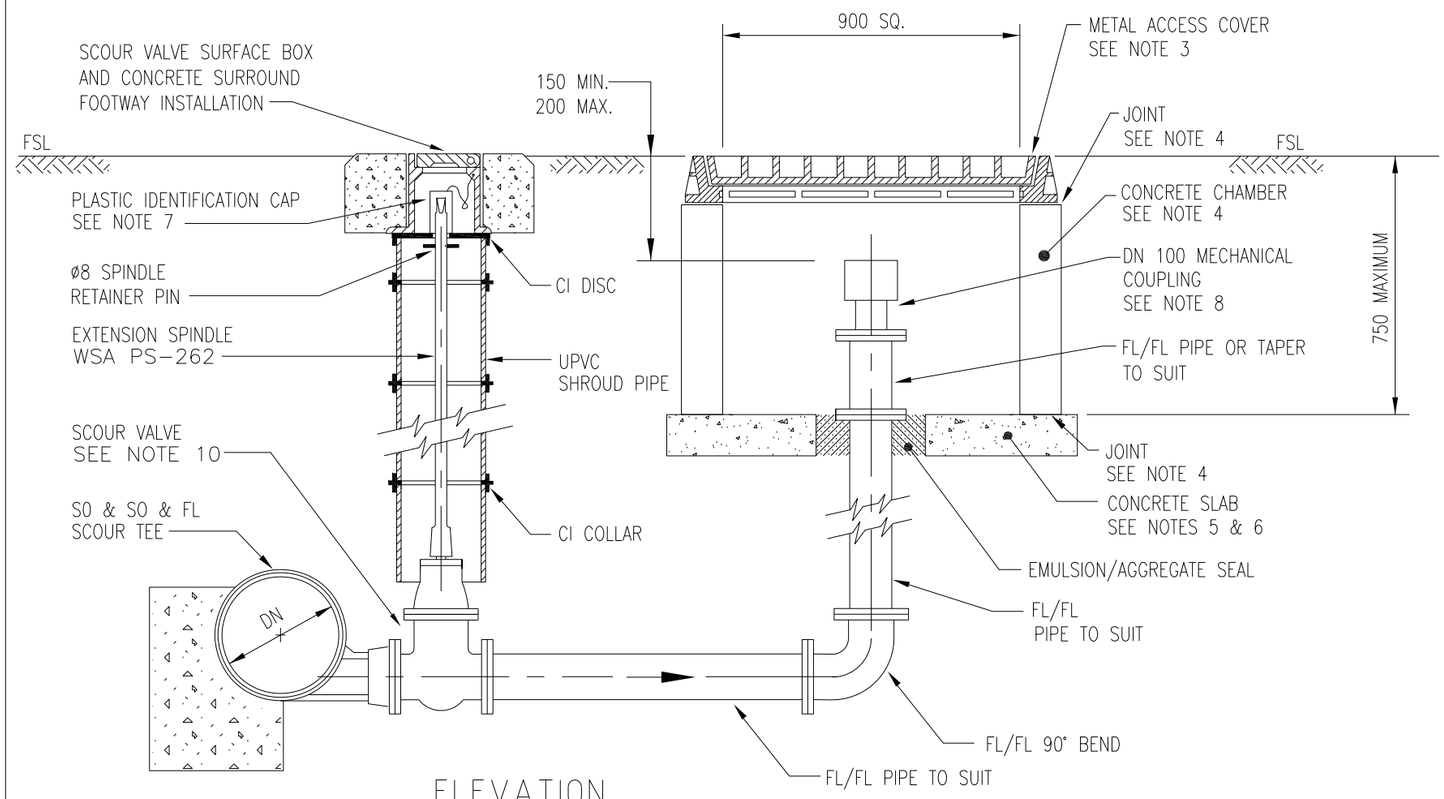
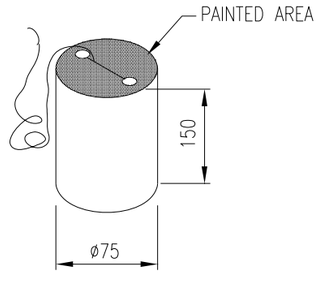


ELEVATION
PUMP SCOUR
SEE NOTE 2



PLASTIC
IDENTIFICATION CAP
SEE NOTE 8

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. LOCATION AND SIZE OF SCOUR INSTALLATION TO BE AS SHOWN ON DESIGN PLANS. FLANGED DICL PIPE AND FITTINGS SHOWN. OTHER PIPE SYSTEMS MAY BE SPECIFIED.
3. METAL ACCESS COVERS TO BE 900x900 (TWO PART):
   CLASS "B" FOR FOOTWAYS
   CLASS "D" FOR ROADWAYS.
   ACCESS COVERS FOR SCOUR CHAMBERS TO BE MARKED "Sc".
4. PRECAST CHAMBERS MAY BE USED IN NON-TRAFFICABLE AREAS. JOINTS TO BE 20 TO 50 THICK FOR CEMENT MORTAR. ALTERNATIVELY, A 6 THICK BED OF BUTYL MASTIC MAY BE USED.
5. CONCRETE FOR SLAB TO BE N20.
6. REINFORCING FABRIC FOR CONCRETE SLAB TO BE TO AS 1304. EQUIVALENT REINFORCEMENT IN DEFORMED BARS MAY BE USED IN PLACE OF REINFORCING FABRIC.
7. PLASTIC IDENTIFICATION COVERS TO BE PAINTED A STANDARD COLOUR AS REQUIRED BY WATER AGENCY'S STANDARD COLOUR SYSTEM ADOPTED FOR SURFACE FITTINGS AND PLASTIC IDENTIFICATION COVERS.
8. MALE CAMLOCK-TYPE COUPLING TO SUIT:
   (i) TRAILER MOUNTED PUMP UNITS AS USED BY WATER AGENCY AND
   (ii) TANKERS WITH 16,000/21,000 LITRES CAPACITY.
9. RESILIENT SEATED GATE VALVE TO WSA PS-260.

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
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Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NOT TO SCALE

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
A	19-05-20	ISSUE FOR INFORMATION

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GILBERT SUTHERLAND

DRAWING TITLE
TYPICAL
SEWER SCOUR
STANDARD
DETAILS

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 19-05-20

DRAWING NUMBER: 12301-KFP1-555
AMEND.: A

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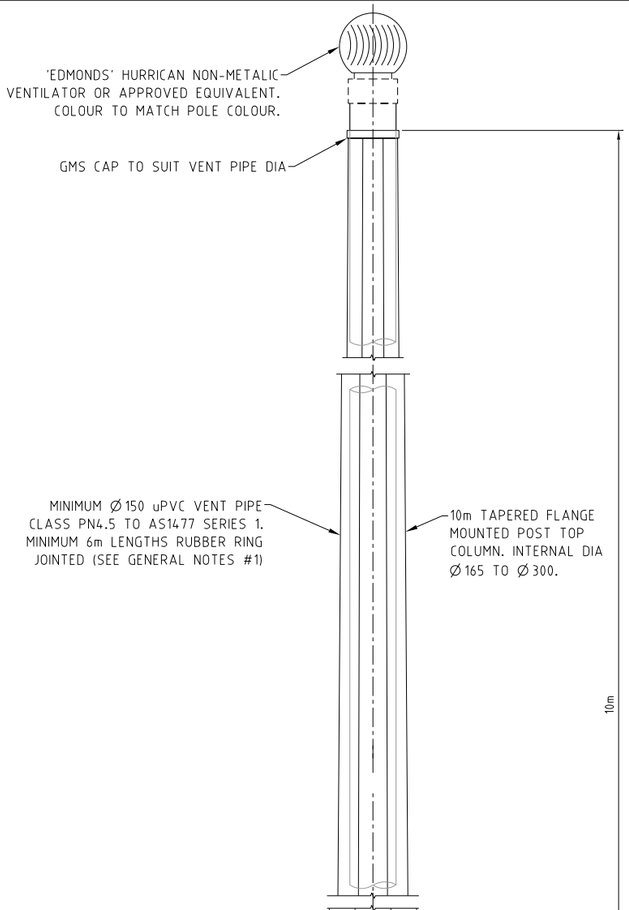

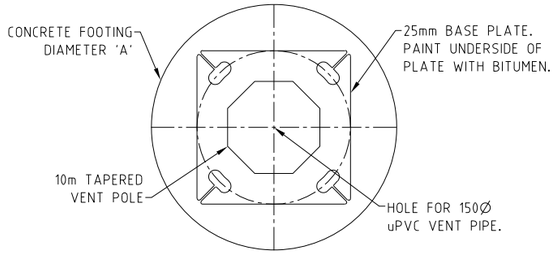

PLAN
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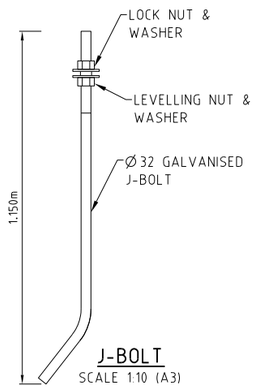
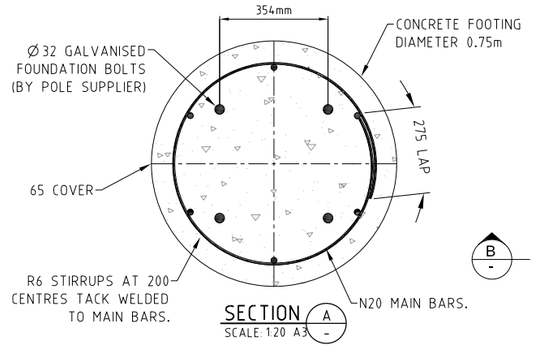
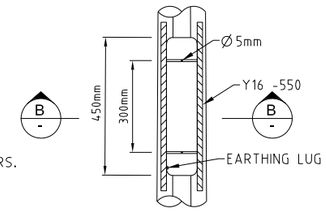


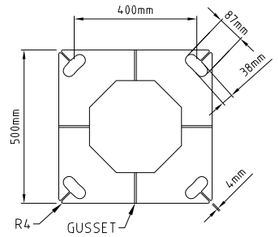
J-BOLT
SCALE 1:10 (A3)



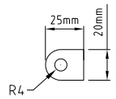
SECTION A
SCALE: 1:20 A3



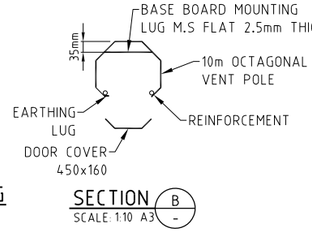
SERVICE DOOR DETAIL
SCALE 1:10 (A3)



25mm THICK BASE PLATE
SCALE 1:10 (A3)



EARTHING LUG
SCALE 1:2 (A3)



SECTION B
SCALE: 1:10 A3

GENERAL NOTES:

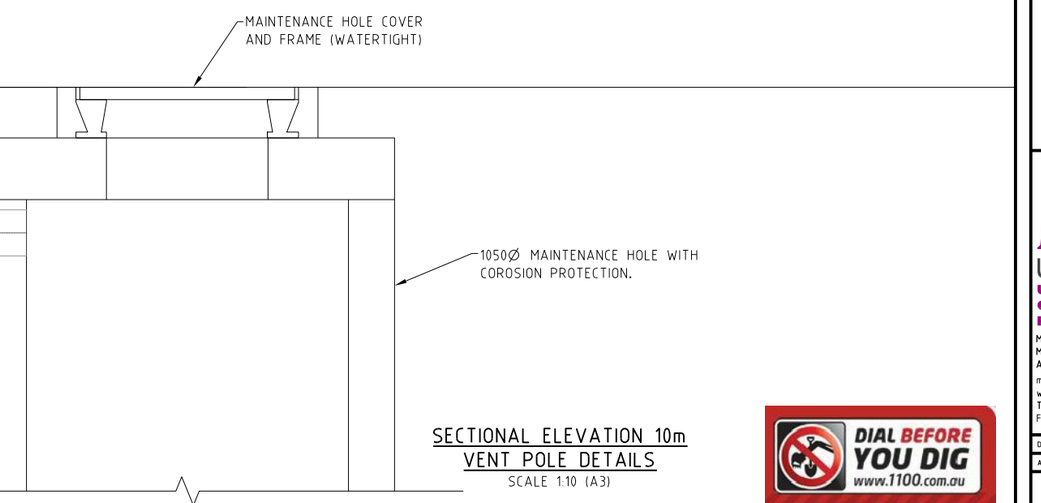
1. BACKFILL IN VENT TRENCH SHALL BE COMPACTED TO AT LEAST THE SAME DENSITY AS THE SURROUNDING SOIL.
2. ALL STEELWORK TO BE FULLY HOT DIP GALVANISED AFTER FABRICATION TO AS/NZS 4680.
3. ALL STEEL PLATES TO CONFORM TO AS/NZS 3678 GRADE 250 U.N.O.
4. ALL STEEL BARS AND SECTIONS TO CONFORM TO AS/NZS 3679 GRADE 250 U.N.O.
5. ALL WELDS TO CONFORM TO AS/NZS 1554 PART 1.
6. ALL NUTS, BOLTS AND WASHERS TO BE STAINLESS STEEL GRADE 316 U.N.O.
7. ALL TAPER LOCK JOINT LENGTHS ARE NOMINAL U.N.O.
8. ANTI-GALLING LUBRICANT 'LOCTILE 222 OR 567' OR SIMILAR APPROVED SHALL BE USED ON ALL THREADS AND BETWEEN ALL STAINLESS STEEL ABUTTING SURFACES.
9. VENT POLE TO BE POWDER COATED - FINISH - 'MATT', COLOUR - 'DARK GREEN'.
10. ALL DIMENSIONS IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED.

FOOTING NOTES:

1. THIS FOOTING DRAWING HAS BEEN DESIGNED BY STRUCTURAL ARTS CERTIFIED BY THE ENGINEER FOR THE SITE.THE CONTRACTOR SHALL REQUEST SITE CONFIRMATION THAT SITE SOIL CONDITIONS ARE SUITABLE FOR THE DESIGN.
2. CONCRETE N32MPa, SUPPLY AND LAY TO AS3600. 65mm MINIMUM COVER TO ALL REINFORCING. LAP HD BOLTS WITH MAIN BARS.
3. PREPARE SITE SUCH THAT SURFACE RUNOFF CANNOT DRAIN OVER OR POND ADJACENT TO FOUNDATIONS.

POLE INSTALLATION NOTES:

1. BEFORE INSTALLATION OF POLE, ADJUST ALL LEVELING NUTS TO LEVEL FIRST.
2. PLACE POLE ON LEVELING NUTS AND LOCK WITH LOCKING NUTS AND WASHERS.
3. FILL GAP BETWEEN FLANGE PLATE OF POLE AND CONCRETE FOOTING WITH 40MPa NON-SHRINK GROUT.
4. THE uPVC VENT PIPE IS TO PROTRUDE AT LEAST 50mm ABOVE THE TOP OF THE COLUMN. FILL THE ANNULUS AROUND THE TOP OF THE COLUMN WITH AN WEATHER SEALANT.
5. PROVIDE A DRAINAGE POINT AT THE BASE OF THE COLUMN.



SECTIONAL ELEVATION 10m VENT POLE DETAILS
SCALE 1:10 (A3)

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PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 0.1 0.2 0.3 0.4 0.5m
Scale 1:10 - A1 (1:20 - A3)

ISSUES	DATE	
TENDER	20-12-19	
COUNCIL	24-01-20	
CONSTRUCTION	..	

A	24-01-20	ISSUE FOR INFORMATION
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

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DRAWING TITLE

SEWER AIR VENT DETAILS

CONSTRUCTION ISSUE

MORTONS urbansolutions
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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER 12301-KFP1-580
AMEND. A

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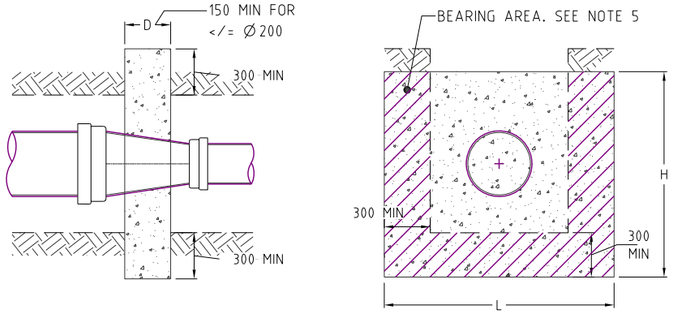
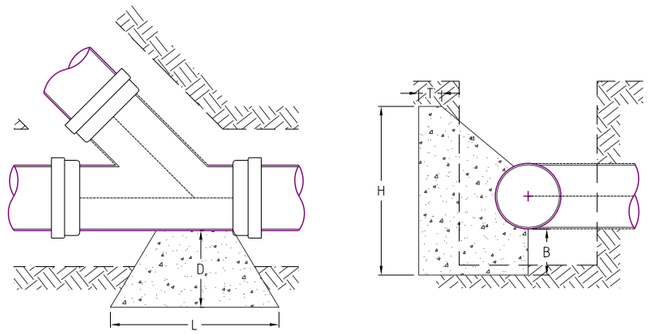
C

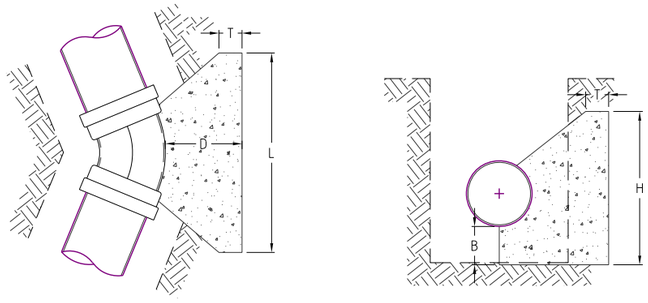
TYPICAL THRUST BLOCK FOR REDUCERS



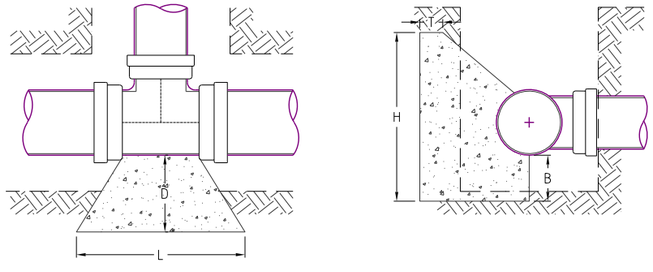
TYPICAL THRUST BLOCK FOR WYES (SPIGOT)



TYPICAL THRUST BLOCK FOR BENDS



TYPICAL THRUST BLOCK FOR TEES



HORIZONTAL THRUST BLOCK CONSTRUCTION NOTES:

1. POUR BASE CONCRETE AGAINST A SOLID EXCAVATION FACE.
2. USE GRADE N20 CONCRETE. TABLE OF DIMENSIONS BASED ON REQUIRED TEST PRESSURE OF 1200kPa AND ACTUAL PIPE DIAMETERS.
3. KEEP CONCRETE CLEAR OF ALL BOLTS, NUTS AND PIPE JOINTS.
4. FINISH THRUST BLOCKS APPROXIMATELY 100mm ABOVE THE TOP OF THE FITTING OR BEARING PAD AND EXTEND TO THE FLOOR OF THE TRENCH OR DEEPER IF NECESSARY, TO ACHIEVE THE REQUIRED THRUST AREA. MAXIMUM ENCASEMENT TO BE 180°.
5. THE MINIMUM THRUST AREA FOR TAPER THRUST BLOCK TO BE EQUAL TO THE DIFFERENCE BETWEEN THE THRUST AREA FOR TEES OF EQUIVALENT DIAMETER TO THOSE EACH SIDE OF TAPER. FOR MAINS LARGER THAN DN 200, THE TAPER THRUST BLOCK SHALL BE REINFORCED.
6. THRUST BLOCK DIMENSIONS CAN BE INDIVIDUALLY ADJUSTED TO SUIT LOCATION. MINIMUM THRUST AREA MUST BE ACHIEVED.

NOTE: THRUST AREAS AND DIMENSIONS ARE GIVEN AS A GUIDE ONLY. FINAL THRUST BLOCK DESIGN IS TO BE DETERMINED BY CONTRACTOR AFTER DETERMINATION OF SOIL CLASSIFICATION TESTING.

Horizontal Thrust Block Dimensions for Sewer Reducers (mm). 1200kPa Test Pressure. See Note 5.

Reducer Size		300-200	375-225	375-300	600-375
Min Thrust Area (m^2)		**0.64**	**1.06**	**0.58**	**2.44**
Resultant Thrust (kN)		**60.25**	**105.70**	**57.70**	**243.39**
Dimension	L	1200	1500	1500	1850
	H	1050	1300	1300	1800
	D	300	400	400	600

NOTE: REFER TO DRAWING 12301-KFP1-592 FOR VERTICAL THRUST DETAILS AND 12301-KFP1-593 FOR VALVE THRUST DETAILS.

Horizontal Thrust Block Dimensions for Sewer Wyes (mm). 1200kPa Test Pressure

Wye Size		375x375x375	300x300x225	300x300x300	375x375x200
Min Thrust Area (m^2)		**1.28**	**0.84**	**0.84**	**1.28**
Resultant Thrust (kN)		**128.34**	**84.17**	**84.17**	**128.34**
Dimension	L	1300	1000	1000	1300
	H	1000	900	900	1000
	D	500	450	450	500
	B	300	150	150	300
	T	150	125	125	150

Horizontal Thrust Block Dimensions for Sewer Tees, Bends and Dead Ends (1200kPa Test Pressure)

Pipe Diameter		Bends (°)				Tees and Dead Ends
		11.25	22.5	45	90	
100 (122 OD)	Min Thrust Area (m^2)	**0.21**	**0.21**	**0.21**	**0.21**	**0.21**
	Resultant Thrust (kN)	**2.70**	**5.37**	**10.53**	**19.45**	**13.75**
Dimension (mm)	L	600	600	600	600	600
	H	600	600	600	600	600
	D	300	300	300	300	300
	B	150	150	150	150	150
	T	100	100	100	100	100
150 (177 OD)	Min Thrust Area (m^2)	**0.21**	**0.21**	**0.21**	**0.41**	**0.29**
	Resultant Thrust (kN)	**5.67**	**11.29**	**22.16**	**40.94**	**28.95**
Dimension (mm)	L	600	600	600	700	600
	H	600	600	600	600	600
	D	300	300	300	300	300
	B	150	150	150	150	150
	T	100	100	100	100	100
200 (OD 232)	Min Thrust Area (m^2)	**0.21**	**0.21**	**0.35**	**0.65**	**0.46**
	Resultant Thrust (kN)	**9.75**	**19.41**	**38.06**	**70.33**	**49.73**
Dimension (mm)	L	600	600	600	1100	700
	H	600	600	600	600	700
	D	300	300	300	300	300
	B	150	150	150	150	150
	T	100	100	100	100	100
225 (OD 259)	Min Thrust Area (m^2)	**0.21**	**0.24**	**0.48**	**0.88**	**0.62**
	Resultant Thrust (kN)	**12.15**	**24.18**	**47.44**	**87.66**	**61.98**
Dimension (mm)	L	600	600	800	1000	900
	H	600	600	600	900	700
	D	300	300	300	300	300
	B	150	150	150	150	150
	T	100	100	100	100	100
250 (286 OD)	Min Thrust Area (m^2)	**0.21**	**0.28**	**0.53**	**0.98**	**0.70**
	Resultant Thrust (kN)	**14.82**	**29.49**	**57.85**	**106.89**	**75.58**
Dimension (mm)	L	600	600	800	1000	900
	H	600	600	700	1000	800
	D	300	300	600	600	600
	B	150	150	250	300	300
	T	100	100	200	200	200
300 (OD 345)	Min Thrust Area (m^2)	**0.21**	**0.43**	**0.84**	**1.56**	**1.10**
	Resultant Thrust (kN)	**21.56**	**42.91**	**84.17**	**155.53**	**109.98**
Dimension (mm)	L	600	800	1000	1400	1100
	H	600	600	900	1200	1000
	D	450	450	450	450	450
	B	150	150	150	150	150
	T	125	125	125	125	125
375 (OD 426)	Min Thrust Area (m^2)	**0.32**	**0.66**	**1.28**	**2.38**	**1.68**
	Resultant Thrust (kN)	**32.87**	**65.43**	**128.34**	**237.14**	**167.68**
Dimension (mm)	L	600	900	1300	2000	1300
	H	600	800	1000	1200	1300
	D	500	500	500	500	500
	B	250	250	250	250	250
	T	150	150	150	150	150
450 (OD 507)	Min Thrust Area (m^2)	**0.47**	**0.92**	**1.81**	**3.36**	**2.38**
	Resultant Thrust (kN)	**46.56**	**92.67**	**181.78**	**335.89**	**237.51**
Dimension (mm)	L	700	1000	1600	2400	1800
	H	700	1000	1150	1400	1350
	D	600	600	600	600	600
	B	250	300	350	350	350
	T	200	200	200	200	200

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
C	17-06-21	DETAILS, NOTES AND TABLES AMENDED
B	09-06-21	NOTES AND TABLES AMENDED
A	09-02-21	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS
LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE
SEWER HORIZONTAL THRUST BLOCK DETAILS

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER 12301-KFP1-591
AMEND. C

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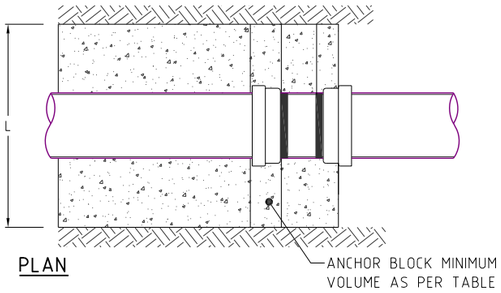
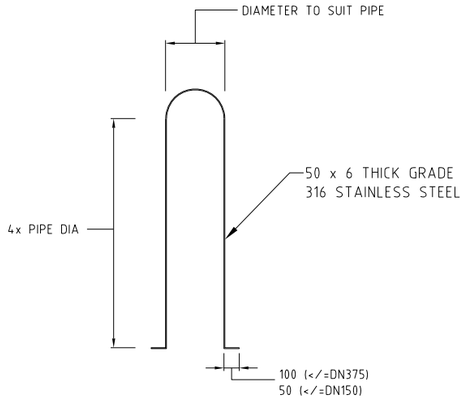
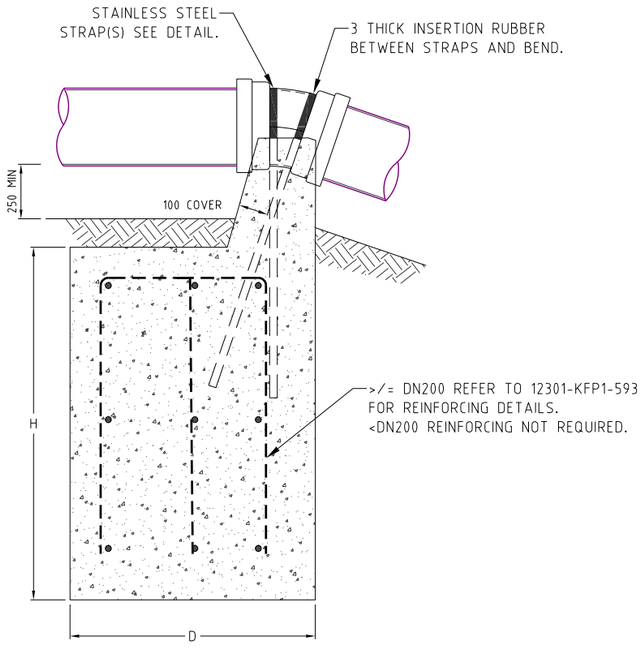


PLAN



TYPICAL STAINLESS STEEL STRAP



ELEVATION VERTICAL BENDS

Sewer Typical Thrust and Anchor Blocks for Vertical Bends
Minimum Block Volume for Anchorage of Vertical Component of Thrust
Vertical Bends for Test Pressure of 1200kPa and minimum soil allowable horizontal bearing pressure of 50kPa (See Notes)

Pipe DN	Fitting	Bend		
		11.25	22.5	45
100 (122OD)	Min Block Volume (m^3)	**0.12**	**0.23**	**0.42**
	Resultant Thrust	**2.70**	**5.37**	**10.53**
Dimensions	L	750	800	750
	D	400	400	600
	H	400	750	950
150 (177OD)	Min Block Volume (m^3)	**0.24**	**0.48**	**0.89**
	Resultant Thrust	**5.67**	**11.29**	**22.16**
Dimensions	L	750	800	800
	D	450	800	900
	H	750	800	1250
200 (232OD)	Min Block Volume (m^3)	**0.42**	**0.83**	**1.53**
	Resultant Thrust	**9.75**	**19.41**	**38.06**
Dimensions	L	800	900	950
	D	750	950	1200
	H	750	1000	1350
225 (OD)	Min Block Volume (m^3)	**0.52**	**1.03**	**1.90**
	Resultant Thrust	**12.15**	**24.18**	**47.44**
Dimensions	L	850	900	1000
	D	700	1050	1250
	H	900	1100	1550
250 (286OD)	Min Block Volume (m^3)	**0.64**	**1.25**	**2.32**
	Resultant Thrust	**14.82**	**29.49**	**57.85**
Dimensions	L	800	1000	1200
	D	800	1050	1200
	H	1000	1200	1650
300 (345OD)	Min Block Volume (m^3)	**0.93**	**1.83**	**3.37**
	Resultant Thrust	**21.56**	**42.91**	**84.17**
Dimensions	L	900	1150	1250
	D	900	1150	1350
	H	1150	1400	2000
375 (426OD)	Min Block Volume (m^3)	**1.42**	**2.78**	**5.14**
	Resultant Thrust	**32.87**	**65.43**	**128.34**
Dimensions	L	1050	1300	1400
	D	1050	1300	1600
	H	1300	1650	2300
450 (507OD)	Min Block Volume (m^3)	**2.01**	**3.94**	**7.28**
	Resultant Thrust	**46.56**	**92.67**	**181.78**
Dimensions	L	1200	1250	1750
	D	1200	1600	1750
	H	1400	2050	2400

NOTE: THRUST AREAS AND DIMENSIONS ARE GIVEN AS A GUIDE ONLY. FINAL THRUST BLOCK DESIGN IS TO BE DETERMINED BY CONTRACTOR AFTER DETERMINATION OF SOIL CLASSIFICATION TESTING.

VERTICAL THRUST BLOCK CONSTRUCTION NOTES:

1. POUR BASE CONCRETE AGAINST A SOLID EXCAVATION FACE.
2. USE GRADE N20 CONCRETE FOR NON REINFORCED THRUST BLOCKS AND N32 FOR REINFORCED THRUST BLOCKS. TABLE OF DIMENSIONS BASED ON REQUIRED TEST PRESSURE OF 1200kPa AND ACTUAL PIPE DIAMETERS.
3. KEEP CONCRETE CLEAR OF ALL BOLTS, NUTS AND PIPE JOINTS.
4. LOCATE ANCHOR BLOCK CENTRALLY AROUND FITTING.
5. DESIGN OF ANCHOR BLOCKS AT VERTICAL BENDS INCLUDE ALLOWANCE FOR THE HORIZONTAL COMPONENT OF THRUST.
6. THRUST BLOCK DIMENSIONS CAN BE INDIVIDUALLY ADJUSTED TO SUIT LOCATION. MINIMUM BLOCK VOLUME MUST BE ACHIEVED.

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
C	17-06-21	DETAILS, NOTES AND TABLES AMENDED
B	09-06-21	DETAILS, NOTES AND TABLES AMENDED
A	09-02-21	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

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DRAWING TITLE

SEWER VERTICAL
THRUST BLOCK DETAILS

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER: 12301-KFP1-592
AMEND.: C

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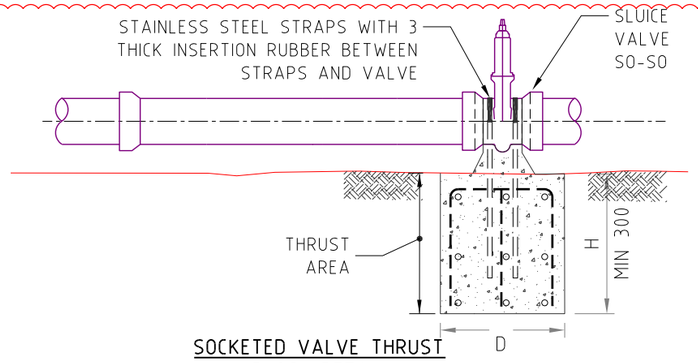
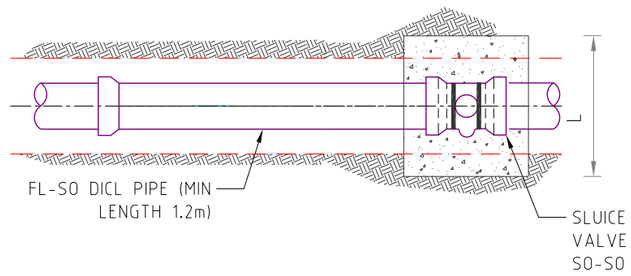
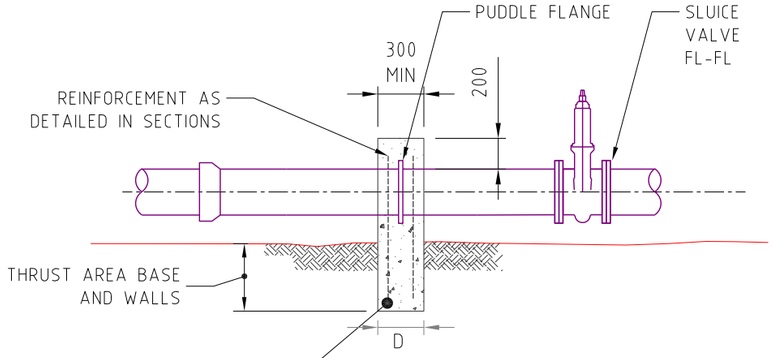


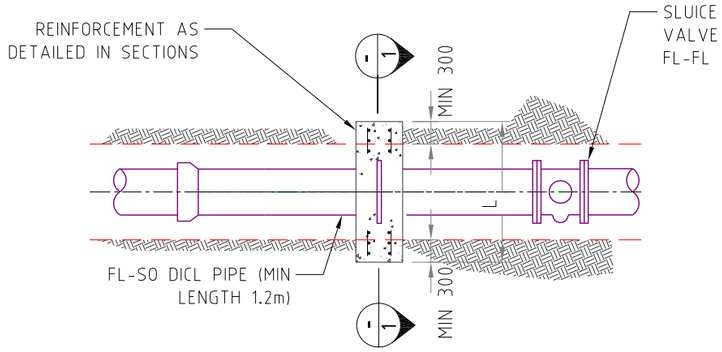
SOCKETED VALVE THRUST BLOCK DETAIL



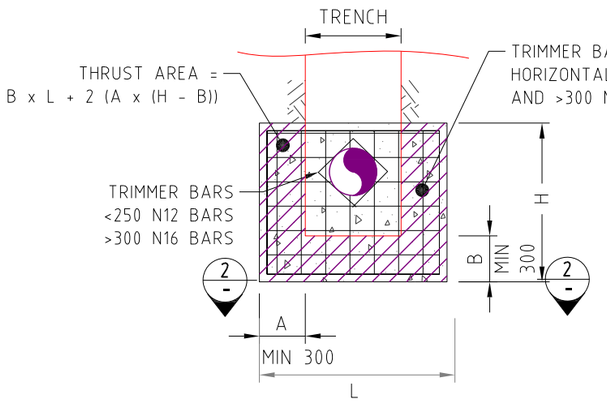
SOCKETED VALVE -TOP VIEW
FOR ALL PIPE SIZES



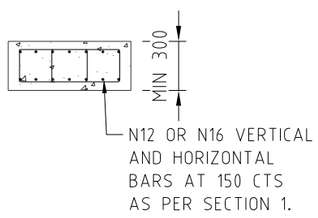
FLANGED VALVE THRUST BLOCK DETAIL



FLANGED VALVE THRUST BLOCK -TOP VIEW
FOR ALL PIPE SIZES



SECTION 1 / -



SECTION 2 / -

Horizontal Thrust Block Dimensions for Sewer Valve (mm). 1200kPa Test Pressure. See Note 5.

Valve Type	Valve Size		100 (122 OD)	150 (177 OD)	200 (232 OD)	225 (259 OD)	250 (286 OD)	300 (345 OD)	375 (OD 426)	450 (507 OD)
	Min Thrust Area (m^2)		**0.21**	**0.29**	**0.46**	**0.62**	**0.70**	**1.10**	**1.68**	**2.38**
	Resultant Thrust (kN)		**13.75**	**28.95**	**49.73**	**61.98**	**75.58**	**109.98**	**167.68**	**237.51**
Socketed	Dimension	L	700	1000	1150	1200	1200	1200	1500	1700
		H	300	300	400	550	600	950	1150	1400
		D	300	300	300	300	300	300	400	600
Flanged	Dimension	L	1050	1050	1200	1200	1200	1200	1500	1700
		H	600	650	700	750	750	1100	1450	1700
		D	300	300	300	300	300	300	400	600

NOTES
1. POUR BASE CONCRETE AGAINST A SOLID EXCAVATION FACE.
2. USE N32 GRADE CONCRETE.
3. KEEP CONCRETE CLEAR OF ALL BOLT, NUTS AND PIPE JOINTS.
4. LOCATE ANCHOR BLOCK CENTRALLY AROUND FITTING.
5. THRUST BLOCK DIMENSIONS CAN BE INDIVIDUALLY ADJUSTED TO SUIT LOCATION. MINIMUM THRUST AREA MUST BE ACHIEVED WHERE SITE CONDITIONS ALLOW, KEY INTO SIDES OF TRENCH TO REDUCE THRUST BLOCK DEPTH.

NOTE:
THRUST AREAS AND DIMENSIONS ARE GIVEN AS A GUIDE ONLY. FINAL THRUST BLOCK DESIGN IS TO BE DETERMINED BY CONTRACTOR AFTER DETERMINATION OF SOIL CLASSIFICATION TESTING.

B

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
B	17-06-21	NOTES, DETAILS AND TABLE AMENDED
A	09-06-21	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS
LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE
SEWER VALVE THRUST DETAILS

CONSTRUCTION ISSUE

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Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
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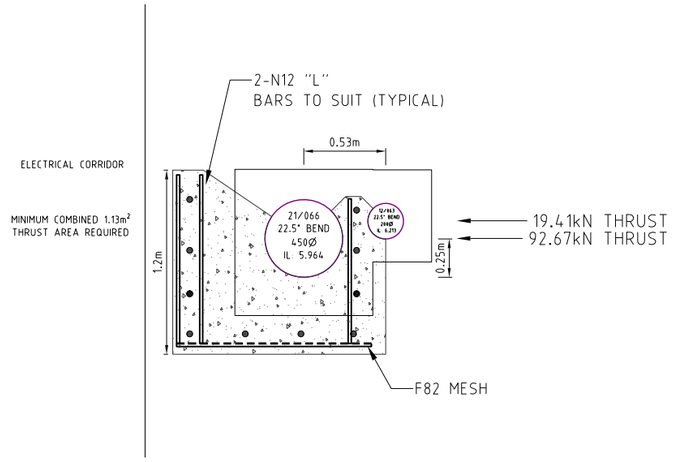
DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

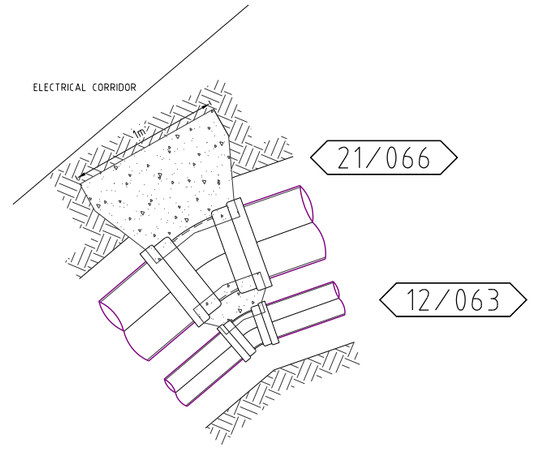
DRAWING NUMBER 12301-KFP1-593
AMEND. B

y:\123 - feda developments pty ltd\01 - kings forest\KFP1\engineering drawings\Current\12301-KFP1-591.dwg, 1/10/2021 12:32:10 PM, 1:2

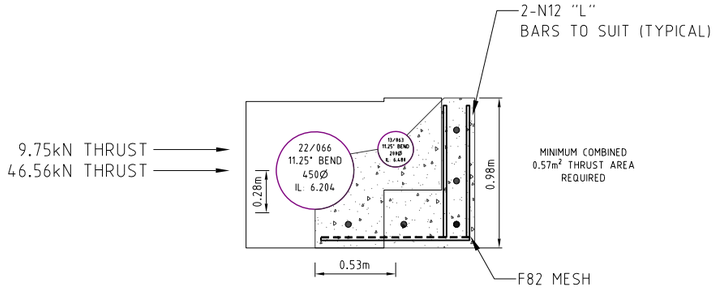
CUSTOM SECTION THRUST BLOCK FOR 21/066 AND 12/063



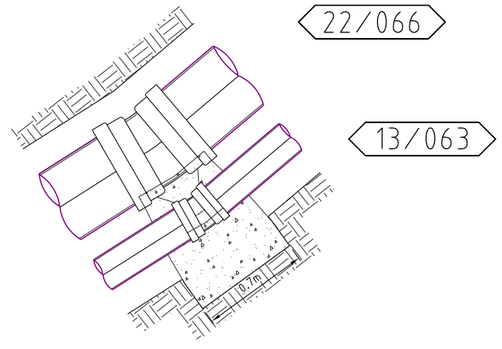
CUSTOM PLAN THRUST BLOCK FOR 21/066 AND 12/063



CUSTOM SECTION THRUST BLOCK FOR 22/066 AND 13/063



CUSTOM PLAN THRUST BLOCK FOR 22/066 AND 13/063



THRUST BLOCK CONSTRUCTION NOTES:

1. POUR BASE CONCRETE AGAINST A SOLID EXCAVATION FACE.
2. USE GRADE N20 CONCRETE. DIMENSIONS BASED ON REQUIRED TEST PRESSURE OF 1200kPa AND ACTUAL PIPE DIAMETERS.
3. KEEP CONCRETE CLEAR OF ALL BOLTS, NUTS AND PIPE JOINTS.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
A	29-06-21	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

SEWER CUSTOM
THRUST BLOCK DETAILS
SHEET 01

CONSTRUCTION ISSUE

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Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER: 12301-KFP1-594
AMEND.: A

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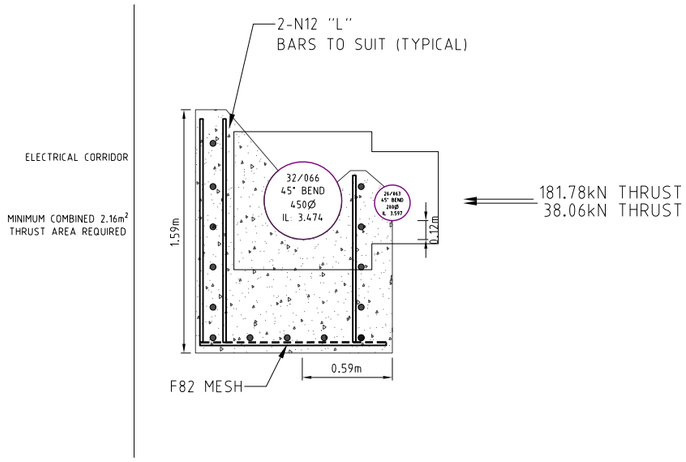
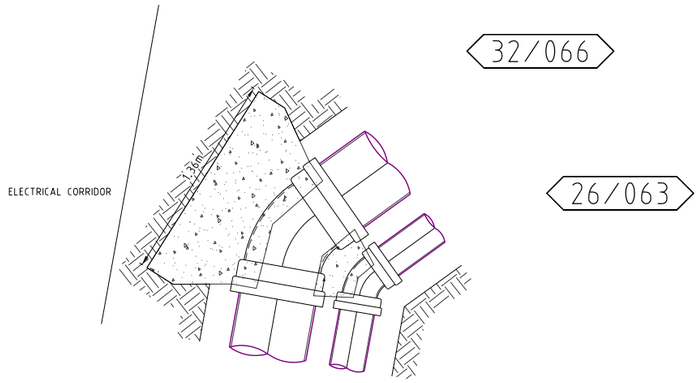
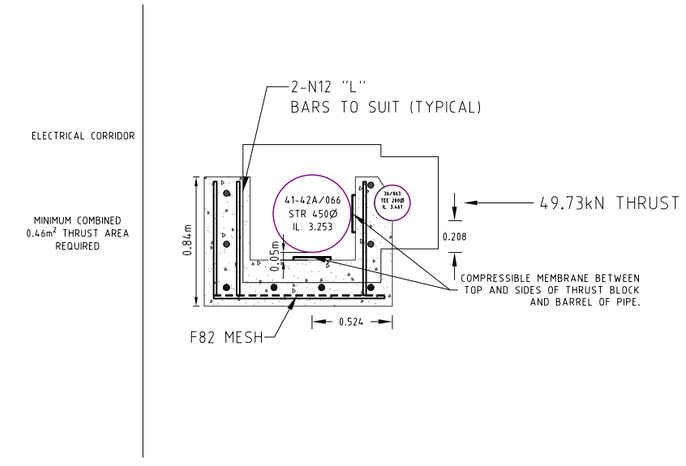
CUSTOM SECTION THRUST BLOCK FOR 32/066 AND 26/063



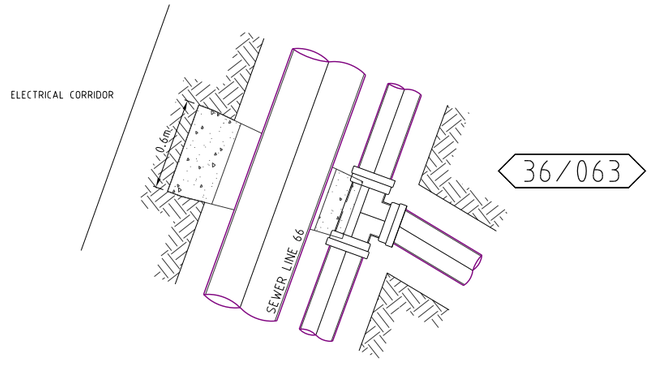
CUSTOM PLAN THRUST BLOCK FOR 32/066 AND 26/063



CUSTOM SECTION THRUST BLOCK FOR 36/063



CUSTOM PLAN THRUST BLOCK FOR 36/063



THRUST BLOCK CONSTRUCTION NOTES:

1. POUR BASE CONCRETE AGAINST A SOLID EXCAVATION FACE.
2. USE GRADE N20 CONCRETE. DIMENSIONS BASED ON REQUIRED TEST PRESSURE OF 1200kPa AND ACTUAL PIPE DIAMETERS.
3. KEEP CONCRETE CLEAR OF ALL BOLTS, NUTS AND PIPE JOINTS.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
A	29-06-21	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

SEWER CUSTOM
THRUST BLOCK DETAILS
SHEET 02

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER: 12301-KFP1-595
AMEND.: A

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REFERENCE POINT LOCATION FOR DRAINAGE STRUCTURES

STRUCTURE TYPE	HORIZONTAL CONTROL (Reference Point Location)	VERTICAL CONTROL (Reference Level)
MANHOLE	CENTRE OF MANHOLE	FINISHED SURFACE LEVEL
GULLY PIT	LIP AT CENTRE OF PIT	FINISHED SURFACE LEVEL (LIP OF CHANNEL)
HEADWALL	INTERSECTION OF HEADWALL FACE & PIPE CENTRELINE	INVERT LEVEL

REFER TO DWG SERIES 640 FOR ALL DRAINAGE STRUCTURE SETOUT AND/OR CUSTOM DETAILS.

SHEET LAYOUT

SECRET LANE

KINGS FOREST PARKWAY (ROAD 01)

CONNECTION BY CONTRACTOR UNDER TWEED SHIRE COUNCILS SUPERVISION.

HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED).

ADJOINS SHEET 2

DIAL BEFORE YOU DIG www.1100.com.au

STORM REFERENCING STANDARDS

PRECAST CULVERT HEADWALLS (DRAWING 3 OF 3)	T.M.R S.D 1243 'HEADWALL CONNECTIONS FOR BOX CULVERTS HEIGHT >1200'
R C BOX CULVERTS AND SLAB LINK BOX CULVERTS (DRAWING 1)	T.M.R S.D 1250 'CULVERTS HEIGHT >600 GENERAL ARRANGEMENT AND NOTES'
R C BOX CULVERTS AND SLAB LINK BOX CULVERTS (DRAWING 2)	T.M.R S.D 1250 'CULVERTS HEIGHT >600 CONSTRUCTION OF SLAB BASES AND APRONS'
R C BOX CULVERTS AND SLAB LINK BOX CULVERTS (DRAWING 3)	T.M.R S.D 1250 'CULVERTS HEIGHT >600 INSTALLATION OF PRECAST UNITS AND CONSTRUCTION OF HEADWALLS & WINGWALLS'

LEGEND

- EXISTING KERB (INVERT)
- EXISTING PROPERTY LINE
- EXISTING STORMWATER
- EXISTING CONTOURS
- FUTURE KERB
- FUTURE PROPERTY LINE
- FUTURE RETAINING WALL
- FUTURE STORMWATER
- SITE BOUNDARY
- PRECINCT BOUNDARY
- STAGE BOUNDARY
- CONTROL LINE / CENTER OF ROAD
- PROPOSED KERB (INVERT)
- PROPOSED KERB (LIP & BACK)
- PROPOSED PROPERTY LINE
- PROPOSED RETAINING WALL
- DESIGN CONTOURS
- PROPOSED STORMWATER
- MANHOLE
- KERB INLET (ON GRADE) PIT
- KERB INLET (SAG) PIT
- HEADWALL
- SCOUR PROTECTION
- 10/001 DRAINAGE PIT & LINE NO.
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS AT 8m CENTERS.
- PROPOSED TEMPORARY CONSTRUCTION LIMIT FENCE
- PROPOSED GUARDRAIL
- C / K12 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER

STORMWATER

1. STORMWATER INFRASTRUCTURE TO BE INSTALLED IN ACCORDANCE WITH TWEED SHIRE COUNCIL CONSTRUCTION SPECIFICATIONS AND STANDARD DRAWINGS.
2. ALL FIELD GULLIES SHALL CONTAIN A 150mm DIA STUB 600mm BELOW GRADE LEVEL FOR FUTURE ROOFWATER DRAINAGE.
3. MANHOLES AND FIELD INLETS TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL SD 106 OR STRUCTURAL DRAWINGS (STRUCTURAL DRAWINGS TAKE PRECEDENCE).
4. OUTLET HEADWALLS TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARD DRAWINGS.
5. ALL HEADWALLS WITH A HEIGHT GREATER THAN 900mm HIGH REQUIRE INSTALLATION OF PEDESTRIAN SAFETY FENCES.
6. ALL PIPES 600mm DIA OR LESS TO BE SOCKETED CONCRETE PIPES WITH RUBBER RING JOINTS.
7. ALL ALLOTMENTS TO BE GRADED SUCH THAT FUTURE ROOFWATER DRAINAGE DISCHARGES TO KERB OR TO PIPED DRAINAGE SYSTEM.
8. ALL PIPE 375mm DIA AND GREATER SHALL BE CONSTRUCTED USING SRC PIPES.
9. FOR SETOUT DETAILS REFER TO 640 SERIES DRAWINGS (PROFILES AND PIT DETAILS).
10. GULLY PITS TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL SD 103 AND SD 104
11. LOTS WHICH CAN DRAIN OVERLAND FLOW TO THE STREET SWALE / DRAINAGE WITHOUT FLOWING THROUGH ADJOINING PROPERTIES NEED TO PROVIDE FOR Q100 OVERLAND FLOW TO THE ROAD
12. LOT EARTHWORKS DURING BUILDING CONSTRUCTION MUST NOT CHANGE FLOW PATH DIRECTION UNLESS IT IS REPLACED WITH ANOTHER FLOW PATH DRAINING TO THE ROAD SWALE / DRAINAGE.
13. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR STORMWATER RATE.
14. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
15. PIPE CLASS - PIPE CLASSES/TRENCH BEDDING SHOWN ON THE DRAWINGS ARE SUBJECT TO THE CONTRACTORS PREFERRED INSTALLATION METHOD. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE APPROPRIATE PIPE CLASSES AND BEDDING.
16. KERB ADAPTORS ARE TO BE INSTALLED TO AUTHORITY'S REQUIREMENTS.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
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PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	19-07-21	LEGEND AND NOTES AMENDED
B	23-10-20	NOTES AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER DRAINAGE PLAN SHEET 1

CONSTRUCTION ISSUE

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Urban & Regional Planning
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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
DATE	14-11-19		

DRAWING NUMBER 12301-KFP1-600 AMEND. C

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ROAD

K12

DEPOT ROAD (EXISTING)

ADJOINS SHEET 2

KINGS FOREST PARKWAY (ROAD 01)

KINGS FOREST PARKWAY (ROAD 01)

DWAY 99A

ROAD 11

SIG 3

ADJOINS SHEET 3

316

306

305

304

303

302

301

43

42

41

40

39

38

37

36

35

34

308

307

309

54

310

53

55

SHEET LAYOUT

SHT 1

SHT 2

SHT 3

SHT 4

SHT 5

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
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Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m

Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

B	21-07-21	SWALE INFILATRATION REMOVED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER
DRAINAGE
PLAN
SHEET 2

CONSTRUCTION ISSUE

MORTONS urbansolutions
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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-601	B

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SHEET LAYOUT

PROVIDE TEMPORARY END CAP FOR FUTURE CONNECTION

PROVIDE TEMPORARY HEADWALL FOR FUTURE CONNECTION

PROVIDE TEMPORARY HEADWALL FOR FUTURE CONNECTION

ROAD 04

ROAD 05

KINGS FOREST PARKWAY (ROAD 01)

ROAD 11

ROAD 22

ROAD 50

STG 2

ADJOINS SHEET 2

ADJOINS SHEET 4

01/269 02/269 06/156 01/242 07/156 01/240 06/153 01/157 08/156 01/158 05/153 01/155 04/153 01/154 03/153 03/281 02/282 04/281 03/150 01/153 01/281 02/281 02/153

205 204 203 202 201 221 222 220 223 219 209 208 207 206 211 210 213 212 214 215 216 217 218 31 32 33 34 30 29 28 27 26 25 24 23 18

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
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Lot 38B on DP13727, Lot 1 on DP706497,
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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m

Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	19-07-21	STORMWATER & SWALE INFILATRATION AMENDED
B	23-10-20	STORMWATER AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER DRAINAGE PLAN SHEET 3

CONSTRUCTION ISSUE

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Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-602 AMEND. C

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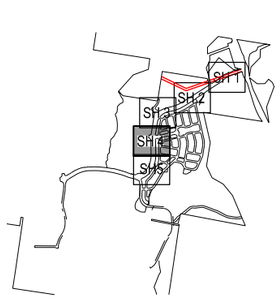

SHEET LAYOUT

ADJOINS SHEET 3

ADJOIN SHEET 5

PRCT 4

ROAD 28

ROAD 11

ROAD 07

ROAD 29

ROAD 27

DWAY 43

DWAY 99B

PROVIDE TEMPORARY HEADWALL FOR FUTURE CONNECTION

BLANK OFF ENDS FOR FUTURE CONNECTION

CONSTRUCTION PHASE PUMP OUT TO BE OPERATIONAL UNTIL DOWNSTREAM PIPE IS CONSTRUCTED.

BLANK OFF ENDS FOR FUTURE CONNECTION

02/283 05/281 01/261 02/220 01/220 01/022 06/281 01/006 06/005 01/007 05/005 01/262 02/022 03/022 07/281 02/284 08/281 02/285

STG 4

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
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Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m

Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	21-07-21	SWALE INFILATRATION REMOVED
B	23-10-20	STORMWATER ALIGNMENT AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LandSurv

GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER DRAINAGE PLAN SHEET 4

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 14-11-19

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12301-KFP1-603	C

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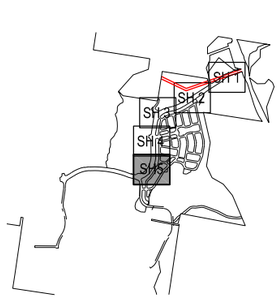

SHEET LAYOUT

ROAD 27
ROAD 47
ROAD 29
ROAD 57
ROAD 08
ROAD 13
ROAD 09
ROAD

09/281
02/286
01/248
02/248
03/021

PROVIDE TEMPORARY END CAP FOR FUTURE CONNECITON. REFER TO PRECINCT 5 FOR CONNECTION OF WORKS.

STG 8

K7

705 704 703 702 701 827 826 825 824 823 822 821 820 916 915 914 913 912 917 918 926 811 810 809 808 807 806 805 804 803 802 801 726 725 724 723 722 727 728 729 730 731 732 733 828 830 831 829 812 813 814 815 816 817 818 819 832 113

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	21-07-21	SWALE INFILATRATION REMOVED
B	23-10-20	STORMWATER ALIGNMENT AND NOTE AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER
DRAINAGE
PLAN
SHEET 5

CONSTRUCTION ISSUE

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DRAWING NUMBER 12301-KFP1-604 | AMEND. C

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SWALE CONSTRUCTION

1. PRIOR TO COMMENCING CONSTRUCTION OF THE SWALE THE DIVERSION OF SURFACE WATER FROM THE PROPOSED WORKS AREA, USING MEASURES SUCH AS OPEN DRAINS/SUMPS, ARE REQUIRED TO AID IN SITE DEWATERING.
2. FOR THE ENTIRE EMBANKMENT AREA STRIPPING OF VEGETATION AND ANY HIGHLY ORGANIC TOP SOILS AND ANY SOFT CLAYS TO DEPTHS OF APPROXIMATELY 0.3m IS REQUIRED.
3. THE STRIPPED SURFACE IS TO BE INSPECTED AND TESTED BY A GEOTECHNICAL ENGINEER.

LEGEND

- EXISTING PROPERTY LINE
- FUTURE PROPERTY LINE
- SW — PROPOSED STORMWATER
- ECOLOGICAL BUFFER
- TYPE 1 SATURATED BIO-RETENTION SWALE
- TYPE 2 FREE DRAINING BIO-RETENTION SWALE

B

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K12

SW MS

A 664 · 1 617 · C 664 · F 665 · D 665 · E 665 · B 664

0 15 30 45 60 75m

Scale 1:1500 - A1 (1:3000 - A3)

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	xx-xx-xx	
CONSTRUCTION	xx-xx-xx	

PRE	DATE	AMENDMENT
B	04-08-21	LEGEND, RETAINING WALLS & SWALES AMENDED
A	12-10-20	PRIVATE CERTIFIER

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER BIORETENTION & INFILTRATION PLAN

CONSTRUCTION ISSUE

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DRAWING NUMBER 12301-KFP1-609 · AMEND. B

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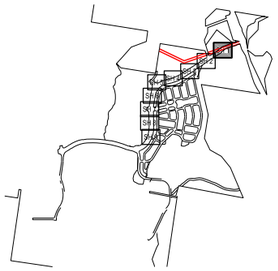


SHEET LAYOUT

LEGEND

- EXISTING KERB (INVERT)
- EXISTING PROPERTY LINE
- EXISTING STORMWATER (SW)
- EXISTING CONTOURS (1.0)
- FUTURE KERB
- FUTURE PROPERTY LINE
- FUTURE RETAINING WALL
- FUTURE STORMWATER (SW)
- SITE BOUNDARY
- PRECINCT BOUNDARY
- STAGE BOUNDARY
- CONTROL LINE / CENTER OF ROAD
- PROPOSED KERB (INVERT)
- PROPOSED KERB (LIP & BACK)
- PROPOSED PROPERTY LINE
- PROPOSED RETAINING WALL
- DESIGN CONTOURS (1.0)
- PROPOSED STORMWATER (SW)
- MANHOLE
- KERB INLET (ON GRADE) PIT
- KERB INLET (SAG) PIT
- HEADWALL
- SCOUR PROTECTION
- 10/001 DRAINAGE PIT & LINE NO.
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS A7 8m CENTERS.
- PROPOSED TEMPORARY CONSTRUCTION LIMIT FENCE
- PROPOSED GUARDRAIL
- K12 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER

TREATMENT LEGEND

- BIO RETENTION SWALE
- TYPE 1 SATURATED BIO-RETENTION SWALE
- TYPE 2 FREE DRAINING BIO-RETENTION SWALE
- 250 HEADER PIPE
- SS SUBSOIL PIPE
- INSPECTION OPENINGS

C

12m x 0.5m= 6.0m²

12m x 0.5m= 6m²

15.6m x 0.5m= 7.8m²

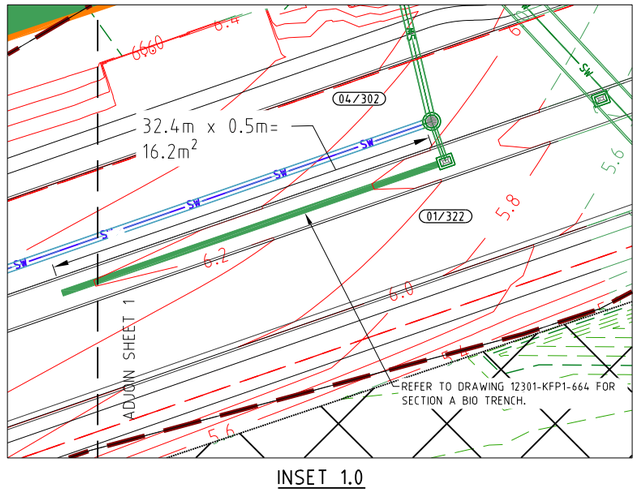
01/303 · 03/302 · 02/302 · 01/302 · 03/326 · 02/326 · 01/326

HERITAGE EXCLUSION ZONE
(NO WORKS PERMITTED).

REFER TO DRAWING 12301-KFP1-664 FOR SECTION A BIO TRENCH.

ADJOINS SHEET 02

ADJOIN INSET 1.0



INSET 1.0
SCALE 1:250

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PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m
Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	03-08-21	LEGEND AMENDED
B	10-11-20	LEGEND AND FENCE AMENDED
A	04-10-19	ISSUE FOR INFORMATION
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER TREATMENT PLAN SHEET 1

CONSTRUCTION ISSUE

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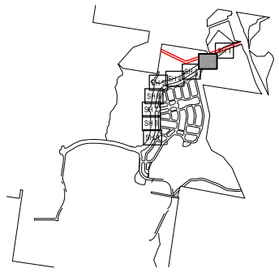

SHEET LAYOUT

27.6m x 0.5m= 13.8m²

02/241

01/241

ADJOINS SHEET 01

ADJOINS SHEET 03

REFER TO DRAWING 12301-KFP1-664 FOR SECTION A BIO TRENCH.

REFER TO DRAWING 12301-KFP1-617 SECTION 1 FOR TYPICAL KINGS FOREST PARKWAY INSITU SWALE SECTION.

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	22-07-21	STORMWATER LIMIT AMENDED
B	29-04-21	SWALE AND NOTES AMENDED
A	04-10-19	ISSUE FOR INFORMATION
PRE	DATE	AMENDMENT

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GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER TREATMENT PLAN SHEET 2

CONSTRUCTION ISSUE

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DRAWING NUMBER	AMEND.
12301-KFP1-611	C

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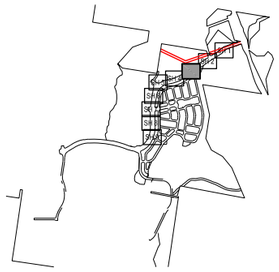

SHEET LAYOUT

REFER TO DRAWING 12301-KFP1-617 SECTION 1 FOR TYPICAL KINGS FOREST PARKWAY INSITU SWALE SECTION.

REFER TO DRAWING 12301-KFP1-665 SECTION F FOR TYPICAL KINGS FOREST PARKWAY SWALE SECTION.

ADJOINS SHEET 02

ADJOINS SHEET 04

STG 3

316

306

305

304

303

302

301

43

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	22-07-21	STORMWATER LIMIT, BASIN AND NOTES AMENDED
B	29-04-21	STORMWATER AND NOTES AMNEDED
A	04-10-19	ISSUE FOR INFORMATION

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LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER TREATMENT PLAN SHEET 3

CONSTRUCTION ISSUE

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DRAWING NUMBER	AMEND.
12301-KFP1-612	C

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SHEET LAYOUT

TYPE 2 FREE DRAINING BIORETENTION SWALE NOTES:
FILTER MEDIA AREA = 492m^2
FILTER LAYER THICKNESS = 500mm
MINIMUM DRAINAGE LATER THICKNESS = 320mm
TRANSITION LAYER = 250mm

ADJOINS SHEET 03

ADJOINS SHEET 05

INSPECTION OPENINGS LOCATED EVERY 50m ALONG HEADER PIPE

REFER TO DRAWING 12301-KFP1-665 SECTION F FOR TYPICAL KINGS FOREST PARKWAY SWALE SECTION.

REFER TO DRAWING 12301-KFP1-664 SECTION C FOR TYPICAL KINGS FOREST PARKWAY SWALE SECTION.

Ø225 HEADER PIPE

Ø150 PERFORATED PVC PIPES

50m

01/281

02/281

SW

SS

MS

211 31 32 33 34 35 36 37 38 39 40 70

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	22-07-21	STORMWATER LIMIT AMENDED
B	29-04-21	STORMWATER ALIGNMENT AND NOTES MENDED
A	04-10-19	ISSUE FOR INFORMATION
PRE	DATE	AMENDMENT

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LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER TREATMENT PLAN SHEET 4

CONSTRUCTION ISSUE

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DRAWING NUMBER	AMEND.
12301-KFP1-613	C

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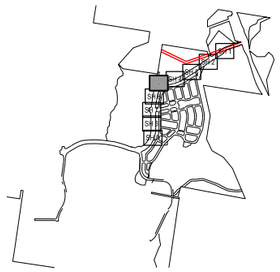

ADJOINS SHEET 04

ADJOINS SHEET 06

REFER TO DRAWING 12301-KFP1-665 SECTION D FOR TYPICAL KINGS FOREST PARKWAY SWALE SECTION.

REFER TO DRAWING 12301-KFP1-617 FOR TYPICAL KINGS FOREST PARKWAY INSITU SWALE SECTION 1.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	10-11-20	STORMWATER ALIGNMENT AMENDED
A	04-10-19	ISSUE FOR INFORMATION

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LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER TREATMENT PLAN SHEET 5

CONSTRUCTION ISSUE

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Southport QLD 4215

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APPROVED		NER 906726	DATE 04-10-19

DRAWING NUMBER	AMEND.
12301-KFP1-614	B

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SHEET LAYOUT

C

TYPE 1 SATURATED BIORETENTION SWALE DESIGN NOTES:
FILTER MEDIA AREA = 139m^2
FILTER LAYER THICKNESS = 500mm
MINIMUM DRAINAGE LAYER THICKNESS = 200mm
TRANSITION LAYER = 250mm

ADJOINS SHEET 05

02/282

04/281

REFER TO DRAWING 12301-KFP1-665 SECTION D FOR TYPICAL KINGS FOREST PARKWAY SWALE SECTION.

205

204

203

202

201

207

206

223

22

6

REFER TO DRAWING 12301-KFP1-665 SECTION E FOR CLARIFICATION OF TREATMENT ZONES.

Ø150 HEADER PIPE

02/283

Ø150 PERFORATED PVC PIPES

05/281

REFER TO DRAWING 12301-KFP1-664 SECTION B FOR TYPICAL KINGS FOREST PARKWAY SWALE SECTION.

SECTION 2 - REFER TO B1 NOTES

ADJOINS SHEET 07

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	03-08-21	STORMWATER AND NOTES AMENDED
B	10-11-20	STORMWATER ALIGNMENT AMENDED
A	04-10-19	ISSUE FOR INFORMATION

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LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER TREATMENT PLAN SHEET 6

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-10-19

DRAWING NUMBER	AMEND.
12301-KFP1-615	C

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SHEET LAYOUT

TYPE 1 SATURATED BIORETENTION SWALE DESIGN NOTES:
FILTER MEDIA AREA = 139m²
FILTER LAYER THICKNESS = 500mm
MINIMUM DRAINAGE LAYER THICKNESS = 200mm
TRANSITION LAYER = 250mm

ADJOINS SHEET 06

Ø150 PERFORATED PVC PIPES

SECTION 2 - REFER TO B1 NOTES

REFER TO DRAWING 12301-KFP1-665 SECTION B FOR TYPICAL KINGS FOREST PARKWAY SWALE SECTION.

REFER TO DRAWING 12301-KFP1-665 SECTION D FOR TYPICAL KINGS FOREST PARKWAY SWALE SECTION.

ADJOINS SHEET 08

ADJOINS SHEET 07

01/261 01/220 02/220 01/022 06/281 01/006 06/005 01/007 01/262 02/022 03/022 07/281 02/284

109 110 404

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2.5 5 7.5 10 12.5m

Scale 1:250 - A1 (1:500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	03-08-21	STORMWATER AND NOTES AMENDED
B	10-11-20	STORMWATER ALIGNMENT AMENDED
A	04-10-19	ISSUE FOR INFORMATION

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GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER TREATMENT PLAN SHEET 7

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
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DRAWING NUMBER 12301-KFP1-616

AMEND. C

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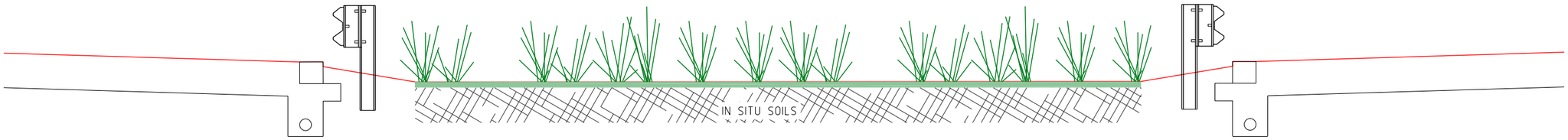
NOTES:

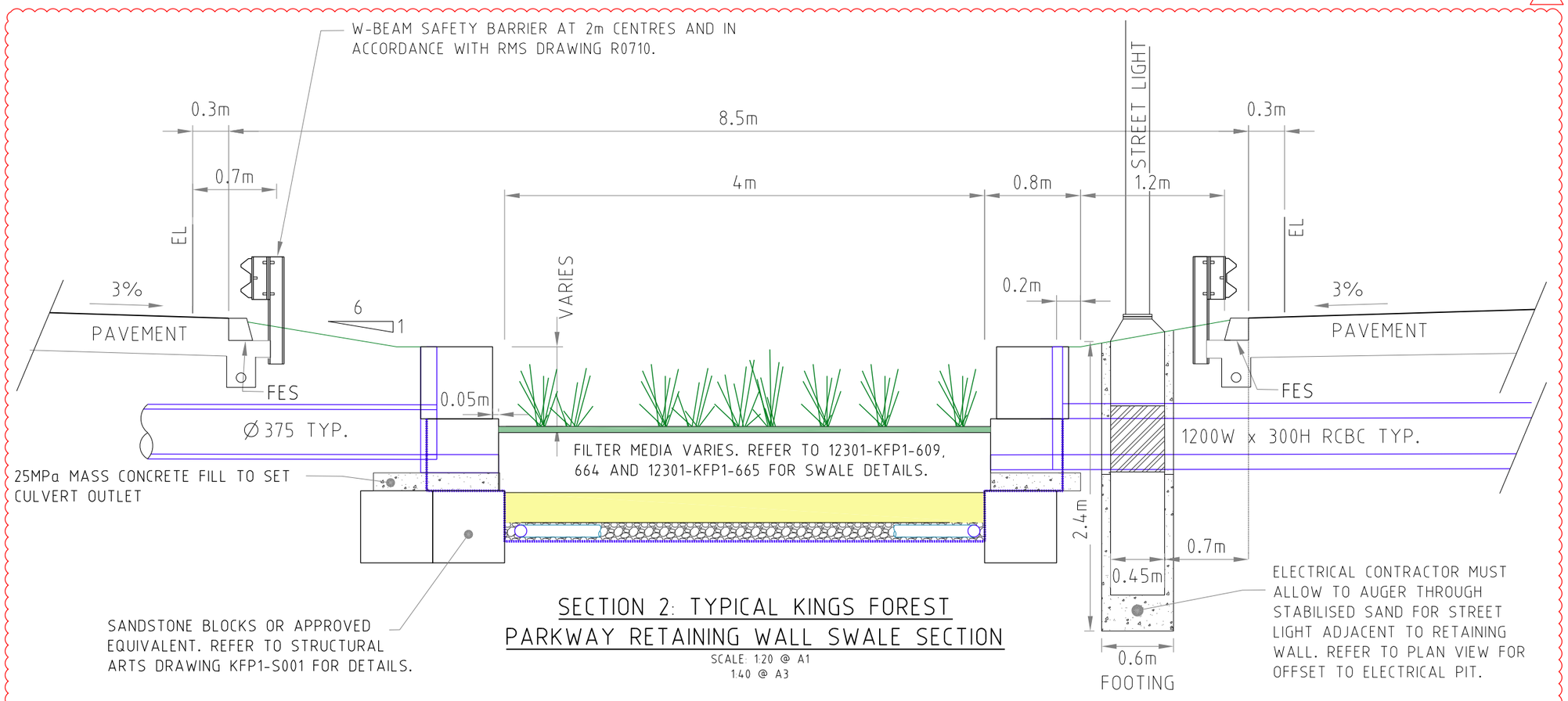
1. FILTER MEDIA, TRANSITION LAYER AND DRAINAGE LAYER SHALL COMPLY WITH WATER BY DEIGN'S BIORETENTION TECHNICAL GUIDELINE, VERSION 1.1 OCTOBER 2014.
2. THE TRANSITION LAYER MATERIAL SHALL BE A CLEAN, WELL-GRADED SAND MATERIAL CONTAINING <2% FINES AND THE DRAINAGE LAYER MATERIAL IS TO BE CLEAN, FINE GRAVEL SUCH AS A 2 - 5mm WASHED SCREENINGS.
3. THE GRAVEL DRAINAGE LAYER TO COMPLY WITH THE FOLLOWING PARTICLE SIZE DISTRIBUTION:
   - 1.4mm - 100% PASSING
   - 1.0mm - 80% PASSING
   - 0.7mm - 44% PASSING
   - 0.5mm - 8.5% PASSING
4. FILTER MEDIA IS TO BE FREE OR RUBBISH AND DELETERIOUS MATERIAL AND LIGHTLY COMPACTED ONLY (TO 90% STANDARD COMPACTION).
5. BIO-RETENTION FILTER MEDIA PARTICLE SIZE DISTRIBUTION IS TO BE AS FOLLOWS:

CLAY & SILT 3% (0.05 mm)
VERY FINE SAND 5-30% (0.05-0.15mm)
FINE SAND 10-30% (0.15-0.25mm)
MEDIUM TO COARSE SAND 40-60% (0.25-0.1mm)
COARSE SAND 7-10% (1.0-2.0mm)
FINE GRAVEL <3% (2.0-3.4mm)
THE COMBINED PERCENTAGE OF CLAY AND SILT MAY NOT EXCEED 12% UNDER ANY CIRCUMSTANCES.

6. FILTER MEDIA TO COMPLY WITH AS4419 (SOILS FOR LANDSCAPING AND GARDEN USE), INCLUDING TESTING REQUIREMENTS AND THE FOLLOWING:
   a. BULK DENSITY - AS SPECIFIED FOR NATURAL SOILS AND SOIL BLENDS >0.7 kg/L.
   b. ORGANIC MATTER CONTENT - BETWEEN 3 AND 10%.
   c. WETABILITY - AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS' >5 mm/hr.
   d. PH - 5.5 - 7.5 (PH 1:5 IN WATER).
   e. ELECTRICAL CONDUCTIVITY (EC) AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS' <1.2DS/M.
   f. ORTHOPHOSPHATE CONCENTRATION - <50mg/kg
   g. NITROGEN DRAWDOWN (NDI) AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS' >0.5 ND1150.
   h. TOXICITY - AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS'.
   i. DISPERSIBILITY - AS SPECIFIED 'NATURAL SOILS AND SOIL BLENDS' CATEGORY 1 OR 2.
   j. PERMEABILITY - SATURATED HYDRAULIC CONDUCTIVITY 180mm/hr ±20% AT 90% STANDARD COMPACTION.
   k. TEXTURE - SANDY LOAM
   l. LARGE PARTICLES - AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS'.
7. FILTER MEDIA WATER HOLDING CAPACITY IS TO BE AT LEAST 15-20% BY VOLUME AT 300mm OF SUCTION USING THE MCINTYRE AND JACKOBSEN (1998) METHOD.
8. ANY COMPONENT OF FILTER MEDIA FOUND TO CONTAIN HIGH LEVELS OF SALT, HIGH LEVELS OF CLAY OR SILT PARTICLES, EXTREMELY LOW LEVELS OF ORGANIC CARBON OR ANY OTHER EXTREMES WHICH MAY BE CONSIDERED RETARDANT TO PLANT GROWTH AND DENITRIFICATION IS TO BE REJECTED.



SECTION 1 - IN SITU SOIL SWALE



SECTION 2: TYPICAL KINGS FOREST PARKWAY RETAINING WALL SWALE SECTION

SCALE: 1:20 @ A1
1:40 @ A3

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	19-07-21	RETAINING WALLS, DETAIL AND NOTES AMENDED
B	18-02-21	DETAIL AMENDED
A	13-11-19	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER SWALE DETAILS

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-10-19

DRAWING NUMBER: 12301-KFP1-617
AMEND.: C

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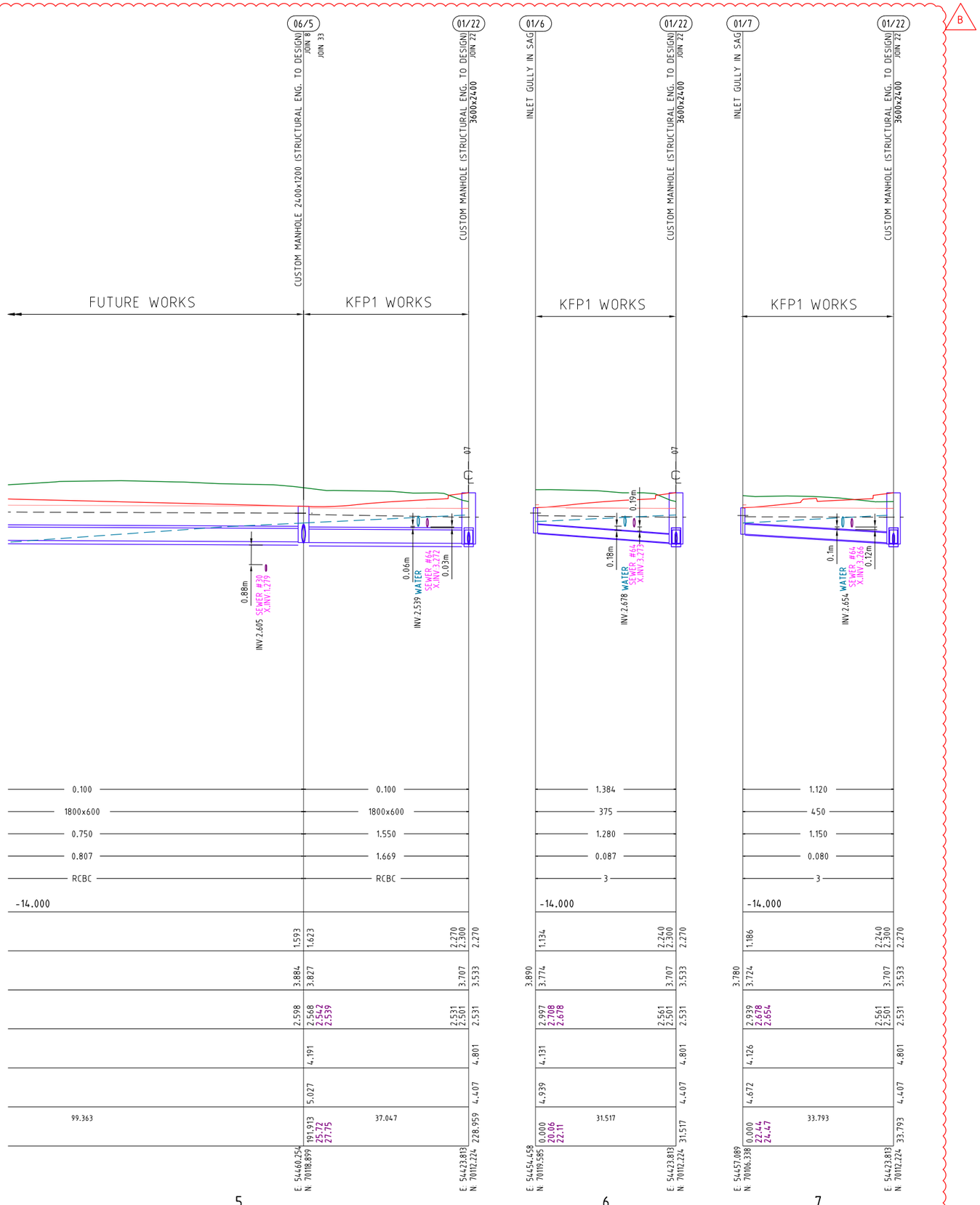
STRUCTURE NAME

STRUCTURE DESCRIPTION

ALL TYPE D TRAFFICABLE LIDS



LEGEND

Q100 HYDRAULIC GRADE LINE

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLA-US IN SEWER RATES.

	5		6		7	
PIPE GRADE (%)	0.100	0.100	1.384		1.120	
PIPE DIAMETER (mm)	1800x600	1800x600	375		450	
VELOCITY (m/s)	0.750	1.550	1.280		1.150	
PIPE FLOW (m3/s)	0.807	1.669	0.087		0.080	
PIPE CLASS	RCBC	RCBC	3		3	
DATUM R.L.	-14.000		-14.000		-14.000	
DEPTH TO INVERT	1.593	1.623	1.134	2.240 2.300	1.186	2.240 2.300
HYDRAULIC GRADE LINE	3.884	3.827	3.774	3.707 3.533	3.724	3.707 3.533
PIPE INVERT LEVELS	2.598	2.568 2.542 2.539	2.997 2.798 2.678	2.561 2.501 2.531	2.939 2.678 2.654	2.561 2.501 2.531
DESIGN SURFACE LEVELS	4.191		4.131	4.801	4.126	4.801
EXISTING SURFACE LEVELS	5.027		4.939	4.407	4.672	4.407
CHAINAGE	99.363	191.913 25.72 27.75 37.047	0.000 20.06 22.11 31.517	228.959	0.000 22.44 24.47 33.793	
	E 54460.254 N 70118.899		E 54544.458 N 70119.585 E 54423.813 N 70112.224		E 54457.089 N 70106.338 E 54423.813 N 70112.224	

DRAINAGE LINE

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	22-10-20	LEGEND AND PROFILES AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER PROFILES SHEET 1

CONSTRUCTION ISSUE

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DRAWING NUMBER	AMEND.
12301-KFP1-620	B

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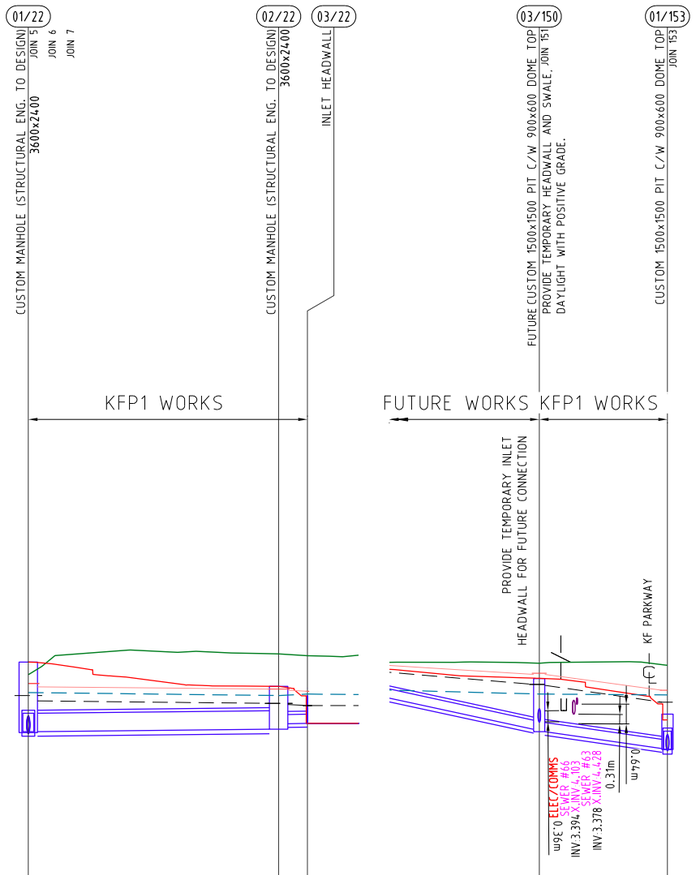
B

STRUCTURE NAME

STRUCTURE DESCRIPTION

ALL TYPE D TRAFFICABLE LIDS



LEGEND

Q100 HYDRAULIC GRADE LINE

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLA-US IN SEWER RATES.

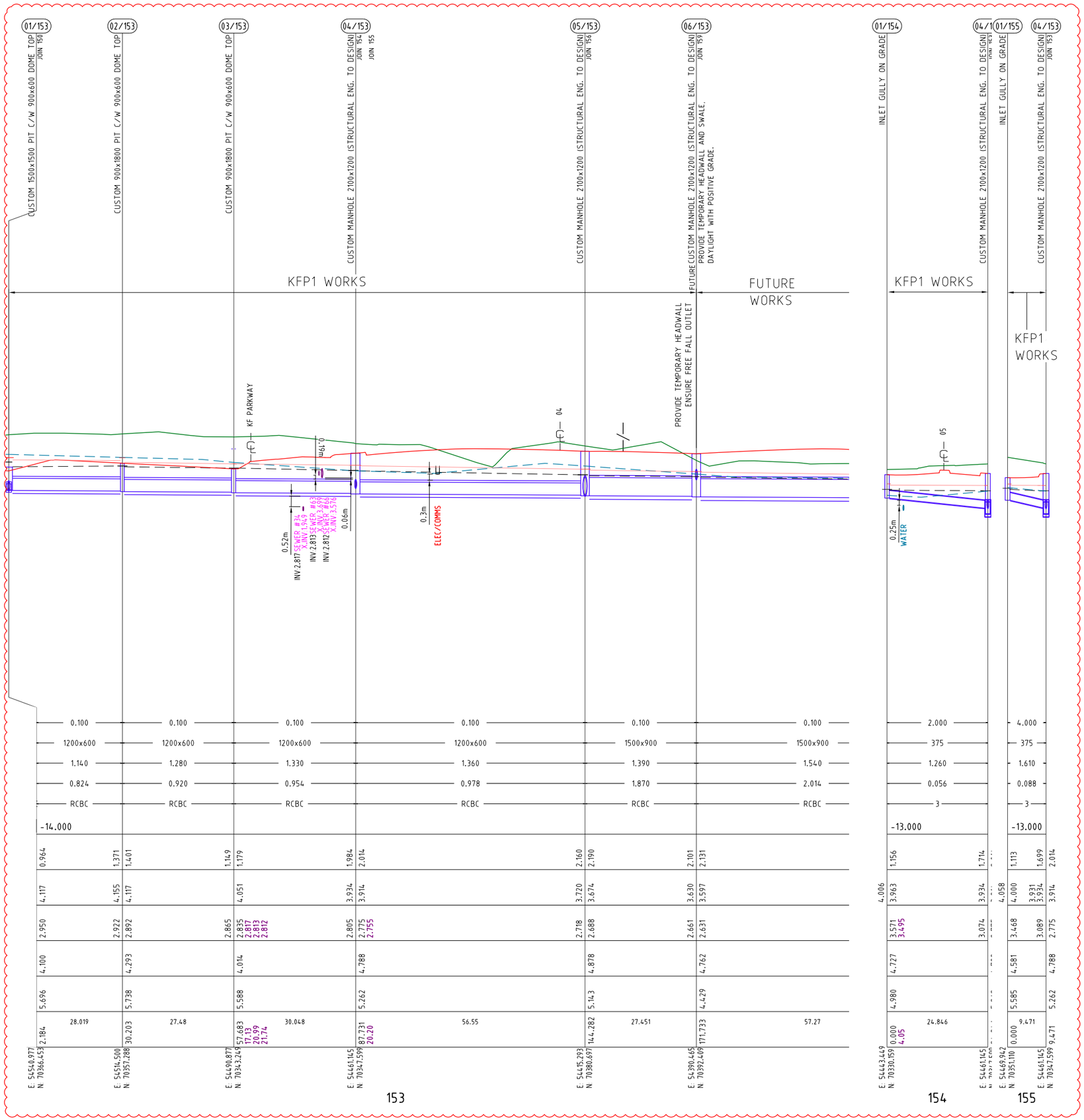
| | | |

C

STRUCTURE NAME

STRUCTURE DESCRIPTION

ALL TYPE D TRAFFICABLE LIDS



	153							154		155	
PIPE GRADE (%)	0.100	0.100	0.100	0.100	0.100	0.100		2.000		4.000	
PIPE DIAMETER (mm)	1200x600	1200x600	1200x600	1200x600	1500x900	1500x900		375		375	
VELOCITY (m/s)	1.140	1.280	1.330	1.360	1.390	1.540		1.260		1.610	
PIPE FLOW (m3/s)	0.824	0.920	0.954	0.978	1.870	2.014		0.056		0.088	
PIPE CLASS	RCBC	RCBC	RCBC	RCBC	RCBC	RCBC		3		3	
DATUM R.L.	-14.000							-13.000		-13.000	
DEPTH TO INVERT	0.964	1.371	1.401	1.149	1.179	1.984	2.014	2.160	2.190	2.101	2.131	1.156	1.714	1.113	1.699
HYDRAULIC GRADE LINE	4.117	4.155	4.117		4.051	3.934	3.914	3.720	3.674	3.630	3.597	3.963	3.934	4.000	3.931	3.914
PIPE INVERT LEVELS	2.950	2.922	2.892	2.865	2.835 2.817 2.813 2.812	2.805	2.775 2.755	2.718	2.688	2.661	2.631	3.571 3.495	3.074	3.468	3.089	2.775
DESIGN SURFACE LEVELS	4.100	4.293	4.014		4.788			4.878		4.762		4.727		4.581		4.788	
EXISTING SURFACE LEVELS	5.696	5.738	5.588		5.262			5.143		4.429		4.980		5.585		5.262	
CHAINAGE	28.019		27.48		30.048			56.55		27.451		57.27		24.846		9.471	
	2.184		30.203		57.683 57.89 71.09 71.74		87.731 87.94 101.14 101.79 20.20		144.282		171.733		0.000 4.05		0.000		9.471
	E 54540.977 N 70366.453		E 54514.500 N 70357.288		E 54490.877 N 70343.248		E 54461.145 N 70347.599		E 54415.293 N 70380.697		E 54390.465 N 70392.409		E 54443.449 N 70330.159		E 54469.942 N 70351.110		E 54461.145 N 70347.599

LEGEND

Q100 HYDRAULIC GRADE LINE

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLA-US IN SEWER RATES.

DRAINAGE LINE

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	19-07-21	PROFILES AMENDED
B	22-10-20	LEGEND AND PROFILES AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER PROFILES SHEET 3

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER	906726
		DATE	14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-622	C

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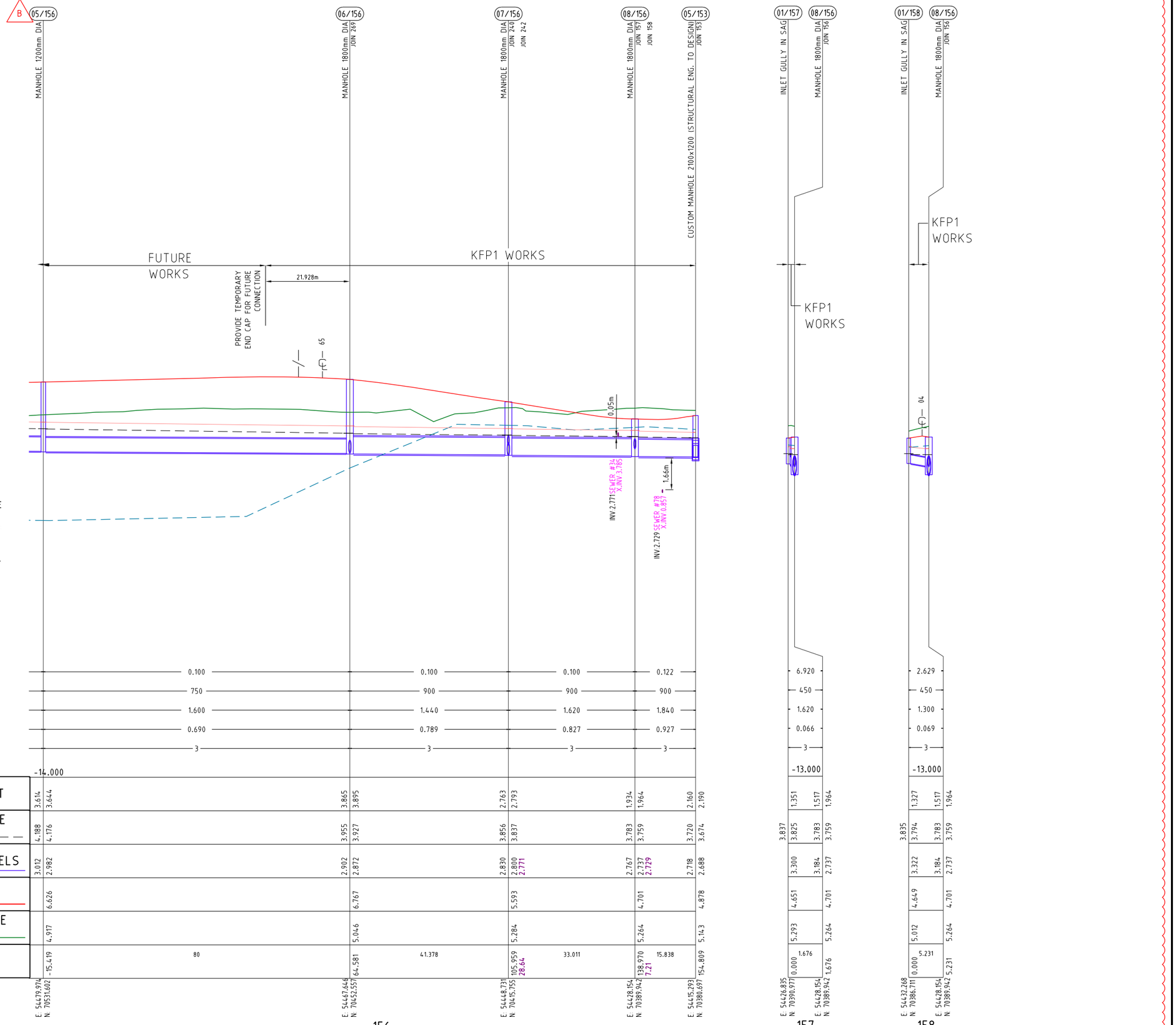
STRUCTURE NAME

STRUCTURE DESCRIPTION

ALL TYPE D TRAFFICABLE LIDS



LEGEND

Q100 HYDRAULIC GRADE LINE

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLA-US IN SEWER RATES.

| | | |

STRUCTURE NAME

STRUCTURE DESCRIPTION

ALL TYPE D TRAFFICABLE LIDS

LEGEND

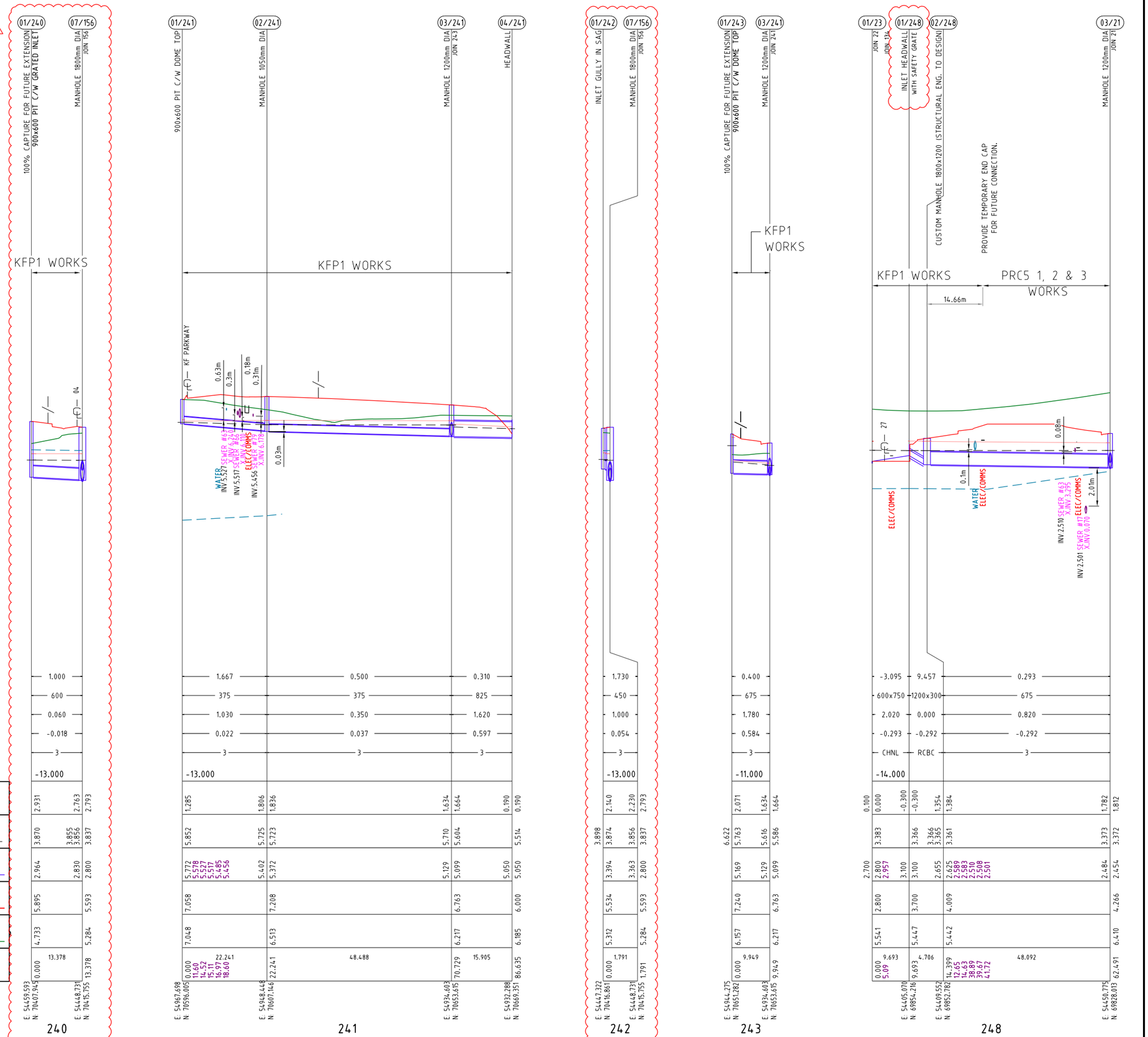
Q100 HYDRAULIC GRADE LINE

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLA-US IN SEWER RATES.

DRAINAGE LINE



	240						241						242			243		248					
PIPE GRADE (%)		1.000					1.667		0.500			0.310		1.730			0.400		-3.095	9.457		0.293	
PIPE DIAMETER (mm)		600					375		375			825		450			675		600x750	1200x300		675	
VELOCITY (m/s)		0.060					1.030		0.350			1.620		1.000			1.780		2.020	0.000		0.820	
PIPE FLOW (m3/s)		-0.018					0.022		0.037			0.597		0.054			0.584		-0.293	-0.292		-0.292	
PIPE CLASS		3					3		3			3		3			3		CHNL	RCBC		3	
DATUM R.L.		-13.000					-13.000							-13.000			-11.000		-14.000				
DEPTH TO INVERT		2.931				2.763	1.285			1.806		1.634		2.140			2.071		0.100	0.000		-0.300	1.782
HYDRAULIC GRADE LINE		3.870			3.855	3.837	5.852			5.725		5.710		3.874		6.622	5.763		3.383			-0.300	3.373
PIPE INVERT LEVELS		2.964			2.830	2.800	5.772	5.578	5.527	5.402		5.129	3.898	3.394		5.169	5.129	2.700	2.800	2.957	3.100	3.366	2.484
DESIGN SURFACE LEVELS		5.895				5.593	7.058			7.208		6.763		5.534		7.240	6.763		2.800		3.700	4.009	4.266
EXISTING SURFACE LEVELS		4.733				5.284	7.048			6.513		6.217		5.312		6.157	6.217		5.541		5.447	5.442	6.410
CHAINAGE	0.000		13.378			13.378	0.000	11.60	14.52	15.91	18.60	70.729	0.000		1.791	0.000	9.949	0.000	5.09	9.693	4.706	14.399	12.65	14.63	38.89	39.67	41.72	62.491
			22.241						48.488			15.905											48.092					
	E 54459.593 N 70407.945					E 54448.731 N 70415.755	E 54967.698 N 70596.005			E 54948.448 N 70607.146		E 54934.603 N 70653.615		E 54447.322 N 70416.861		E 54448.731 N 70415.755	E 54944.275 N 70651.282		E 54934.603 N 70653.615			E 54405.070 N 69854.216	E 54409.552 N 69852.782					E 54450.275 N 69828.013

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	19-07-21	PROFILES AMENDED
B	22-10-20	LEGEND AND PROFILES AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

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GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER PROFILES SHEET 5

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-624

AMEND. C

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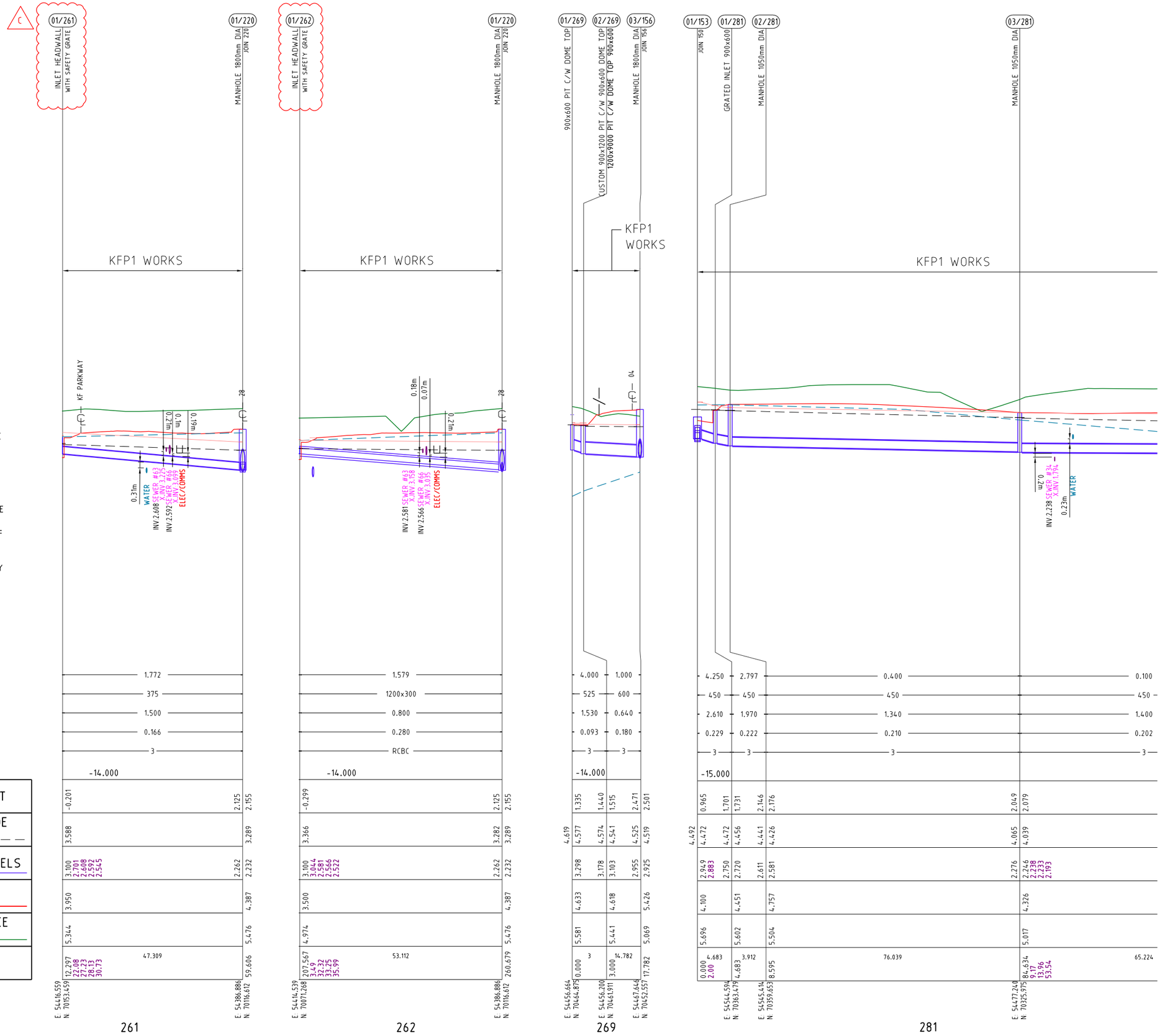
STRUCTURE NAME

STRUCTURE DESCRIPTION

ALL TYPE D TRAFFICABLE LIDS



LEGEND

Q100 HYDRAULIC GRADE LINE

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLA-US IN SEWER RATES.

DRAINAGE LINE

261 262 269 281

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	06-09-21	PROFILE AMENDED
B	22-10-20	LEGEND AND PROFILES AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER PROFILES SHEET 6

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-625

AMEND. C

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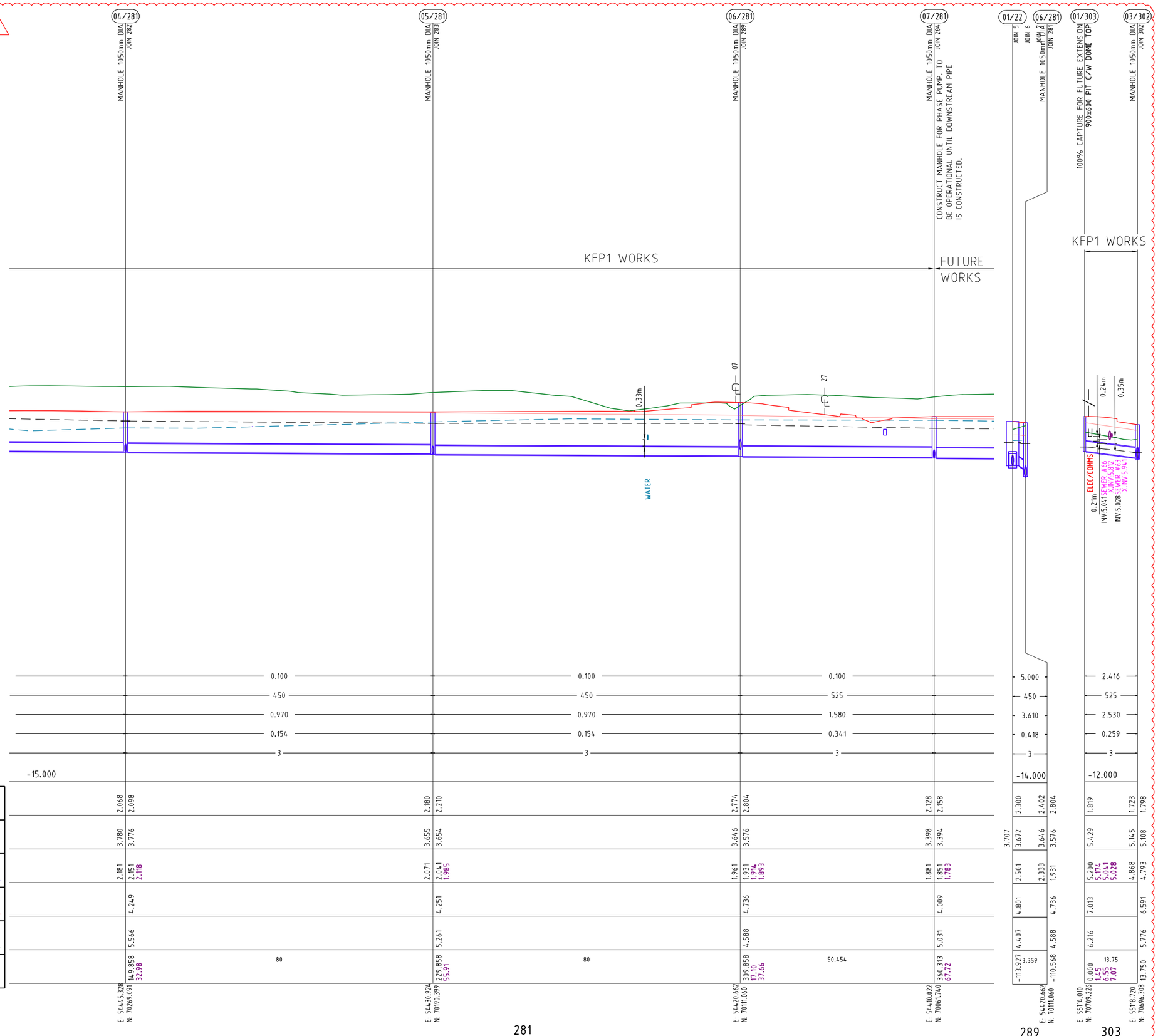
STRUCTURE NAME

STRUCTURE DESCRIPTION

ALL TYPE D TRAFFICABLE LIDS

B



LEGEND

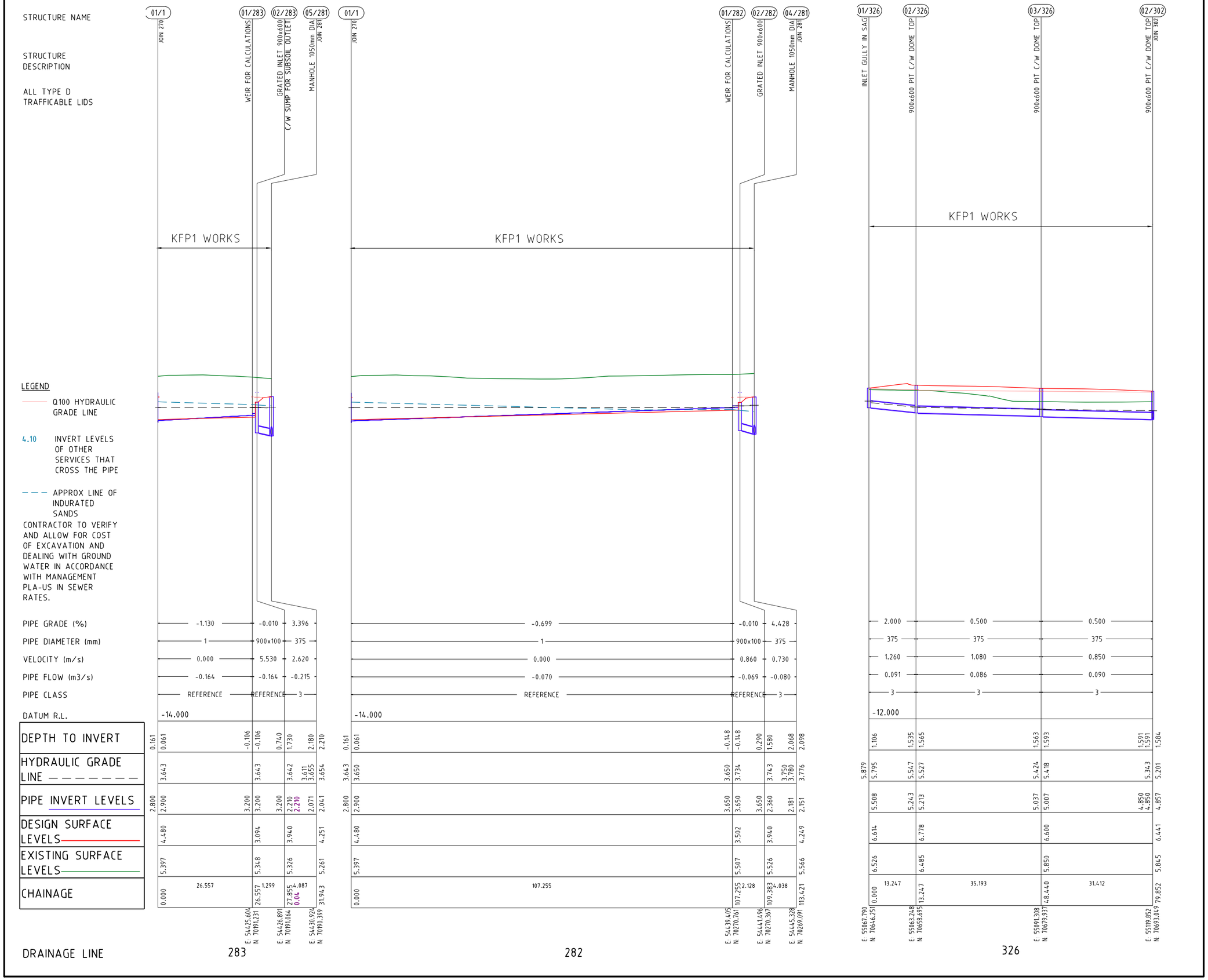
Q100 HYDRAULIC GRADE LINE

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLA-US IN SEWER RATES.

| | | |



PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	"	

PRE	DATE	AMENDMENT
A	23-10-20	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER PROFILES SHEET 8

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-627
AMEND. A

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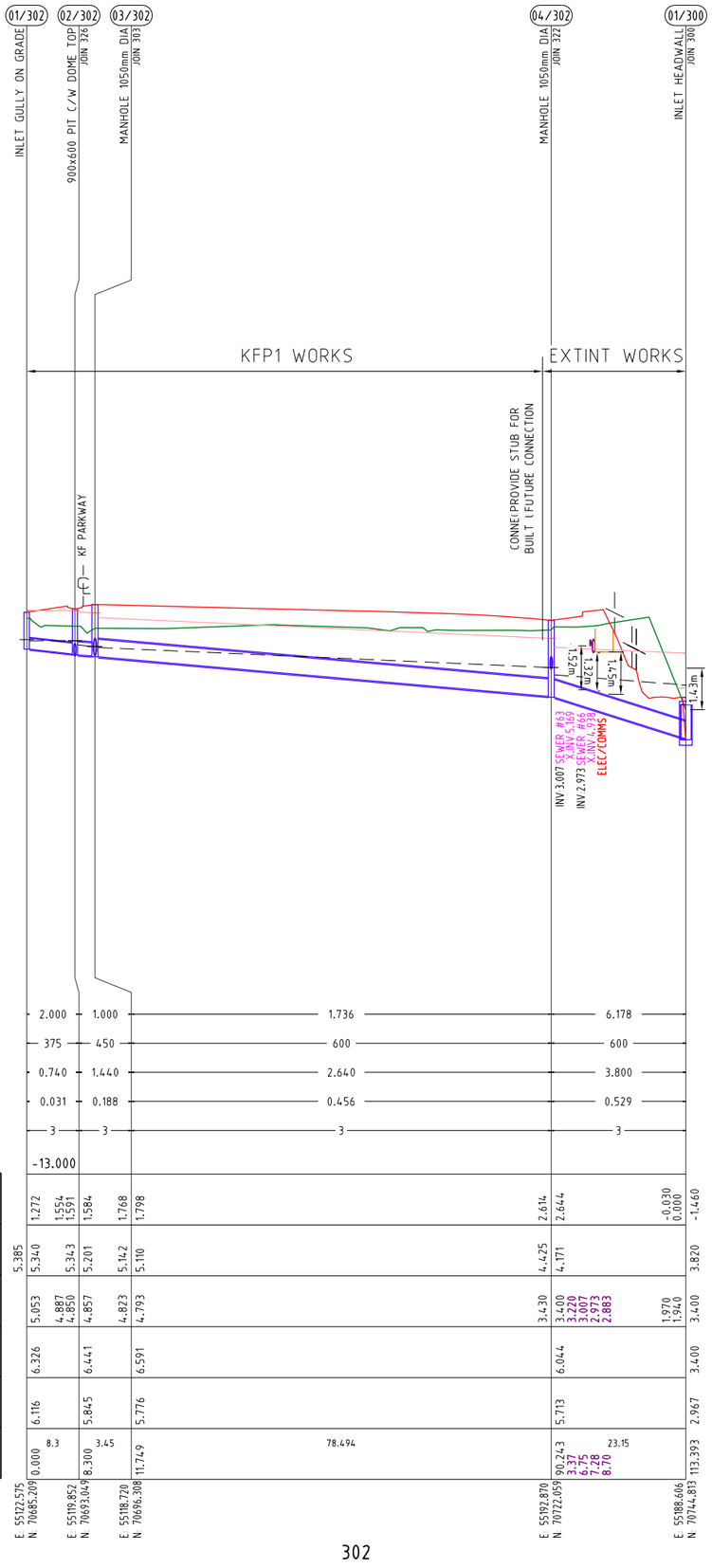
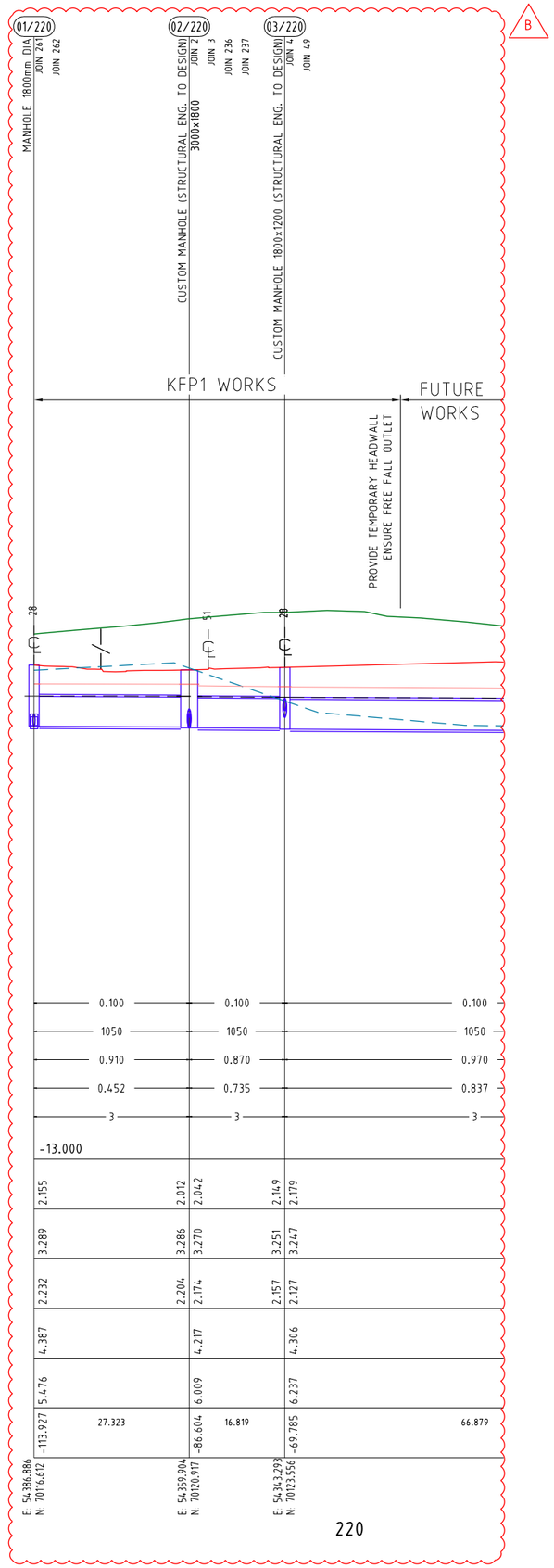
STRUCTURE NAME

STRUCTURE DESCRIPTION

ALL TYPE D TRAFFICABLE LIDS





LEGEND

Q100 HYDRAULIC GRADE LINE

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLA-US IN SEWER RATES.

DRAINAGE LINE

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	19-07-21	PROFILE ADDED
A	23-10-20	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

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GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER PROFILES SHEET 9

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED	NER 906726	DATE	14-11-19

DRAWING NUMBER 12301-KFP1-628

AMEND. B

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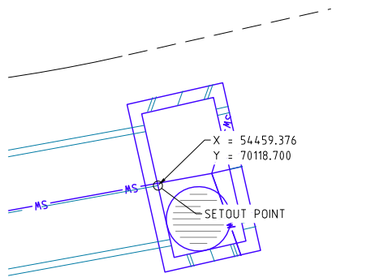

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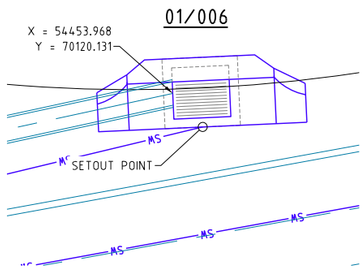
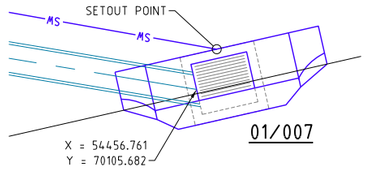
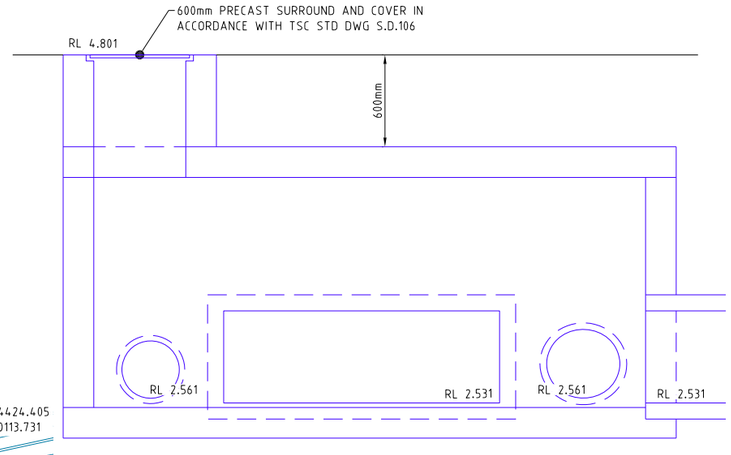
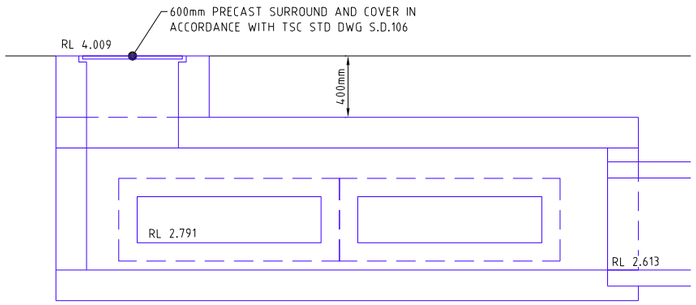






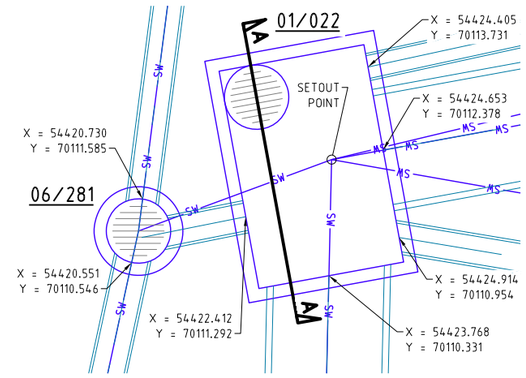
SECTION A

SCALE 1:20



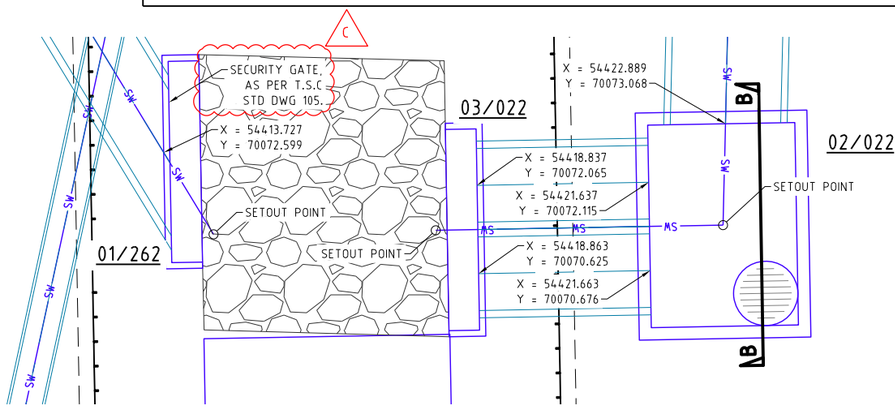
SECTION B

SCALE 1:20



SCOUR PROTECTION DESIGN	
HW 03/022	SIZE (2x) 1200x300
VELOCITY = 2.28m/s	
LENGTH = 4m	
SCOUR PROTECTION TYPE = RENO MATTRESS 170mm THICK	

CALCULATIONS UNDERTAKEN USING PROPRIETARY PRODUCT DATA



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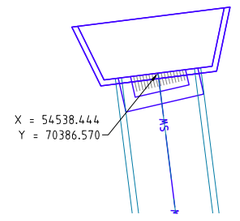
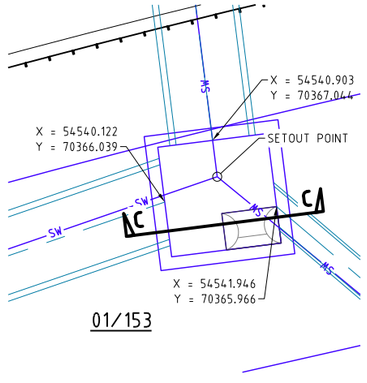
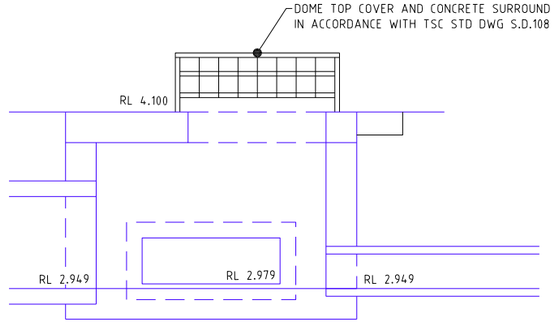
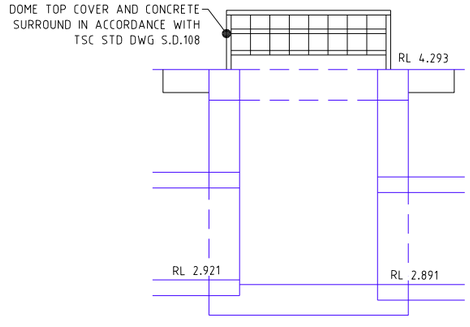






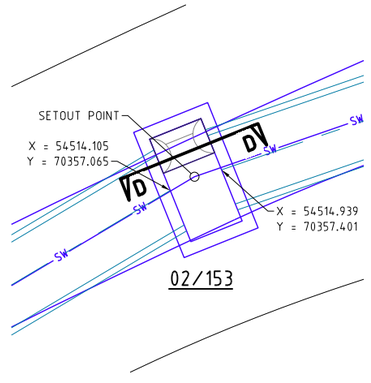
SECTION C

SCALE 1:20



SECTION D

SCALE 1:20



PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.5 1.0 1.5 2.0 2.5m

Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	03-09-21	NOTES AMENDED
B	23-10-20	PITS AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER STRUCTURE DETAILS SHEET 1

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER: 12301-KFP1-640

AMEND.: C

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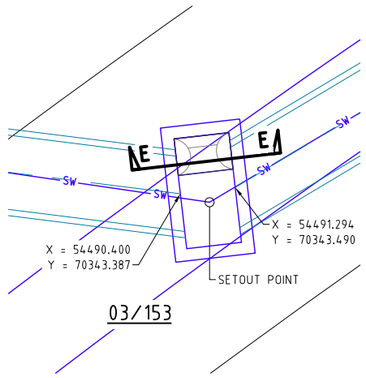
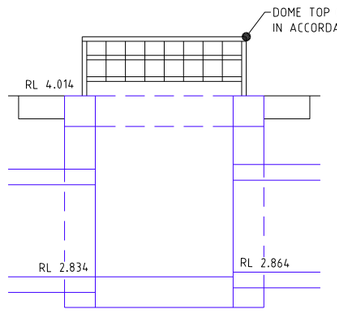
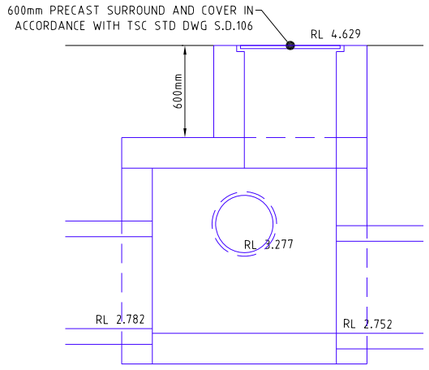


03/153



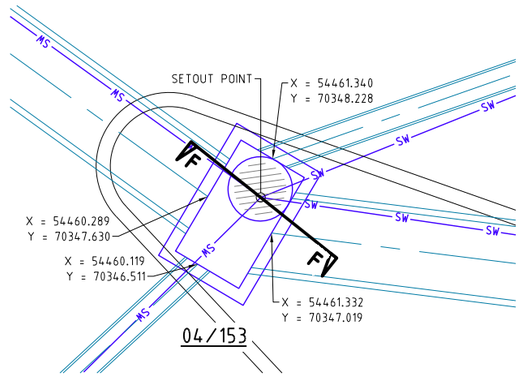
SECTION E

SCALE 1:20



SECTION F

SCALE 1:20



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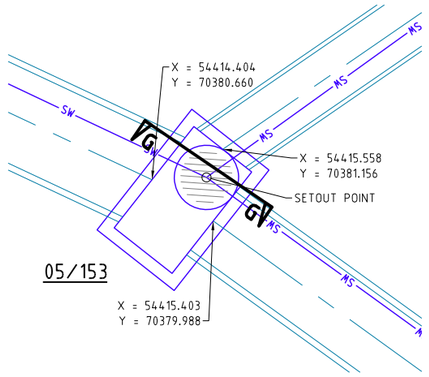

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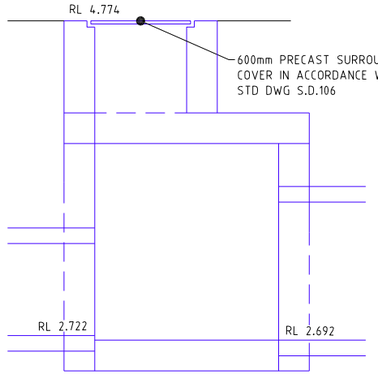
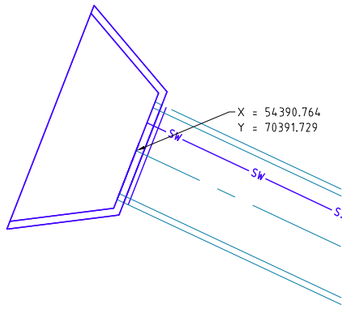
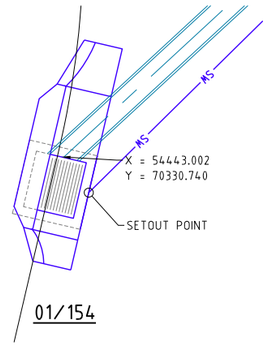


SECTION G

SCALE 1:20

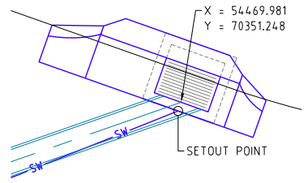


TEMP OUTLET 06/153

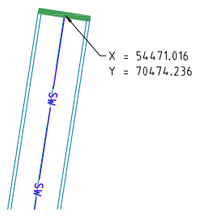


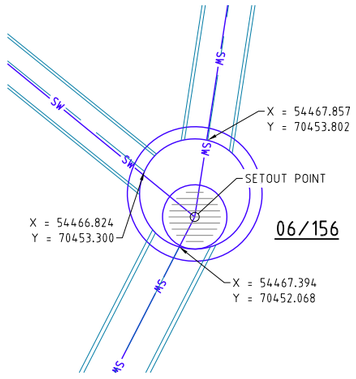
01/154

01/155



TEMP INLET /156





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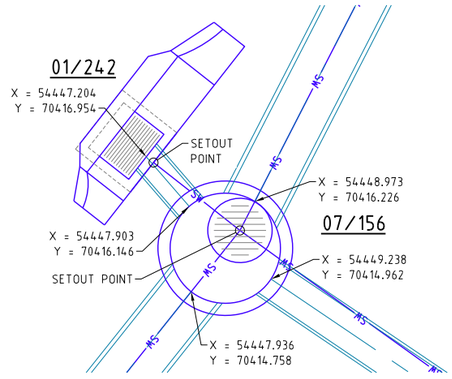
01/242



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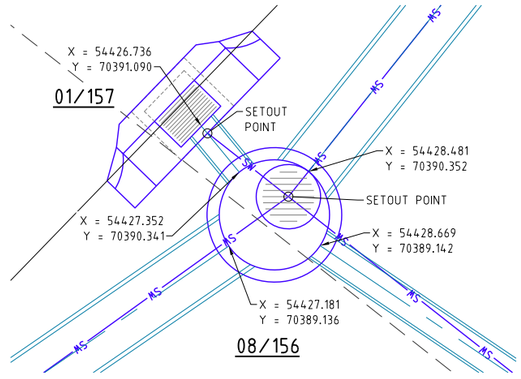

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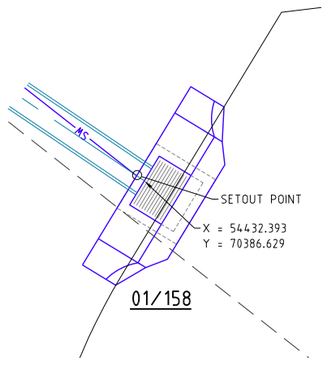

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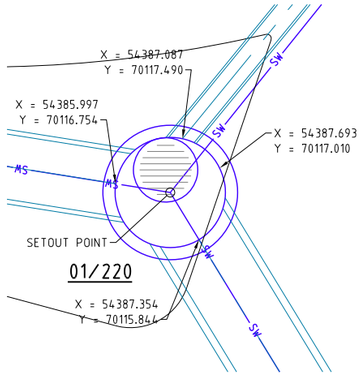

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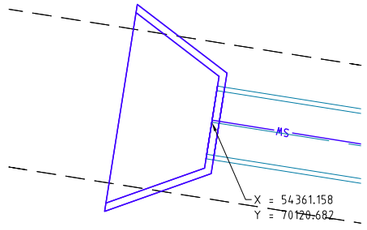

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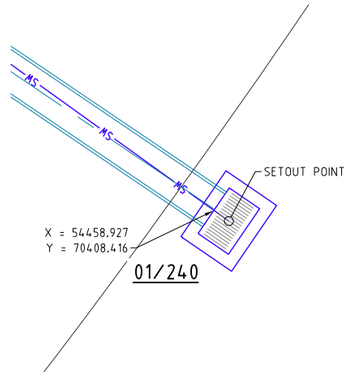

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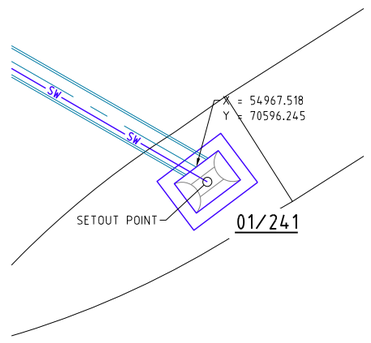

01/241

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.5 1.0 1.5 2.0 2.5m

Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	14-07-21	PIT LOCATIONS AND COORDINATES AMENDED
B	23-10-20	PITS AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER
STRUCTURE DETAILS
SHEET 2

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As
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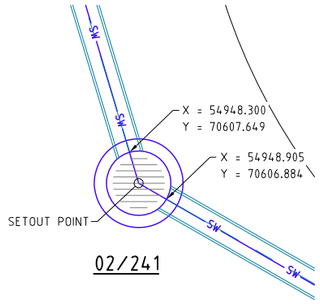
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

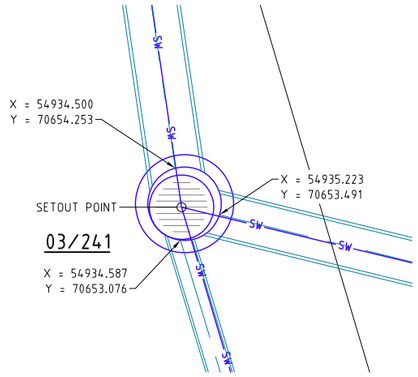
DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

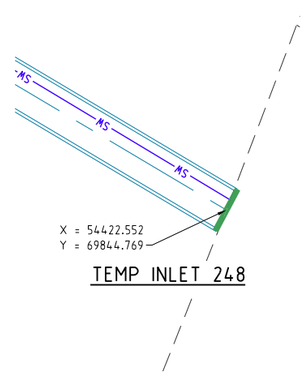
DRAWING NUMBER 12301-KFP1-641

AMEND. C

y:\123 - lecta developments pty ltd\01 - kings forest\KFP1\engineering drawings\Current\12301-KFP1-640.dwg, 1/10/2021 12:53:18 PM, 1:2

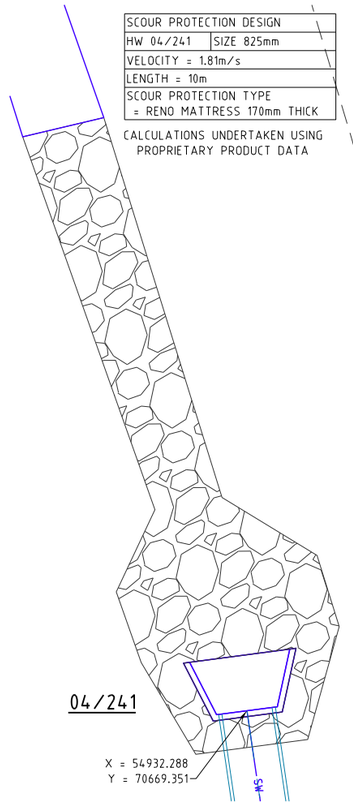


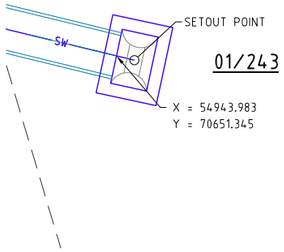


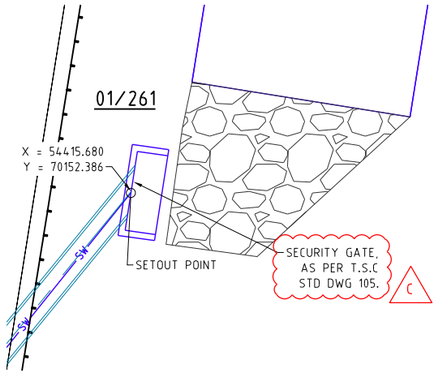


SCOUR PROTECTION DESIGN	
HW 04/241	SIZE 825mm
VELOCITY = 1.81m/s	
LENGTH = 10m	
SCOUR PROTECTION TYPE = RENO MATTRESS 170mm THICK	

CALCULATIONS UNDERTAKEN USING PROPRIETARY PRODUCT DATA



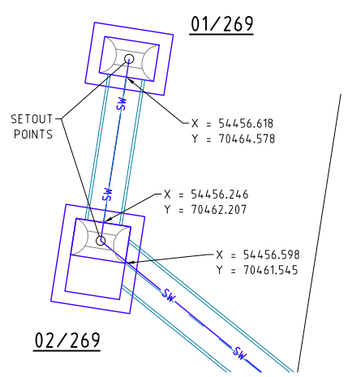


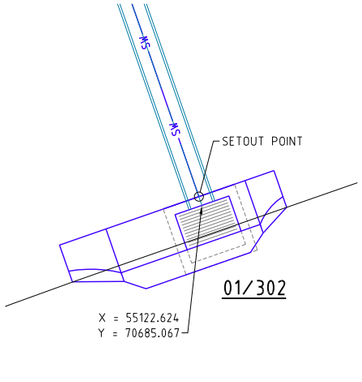


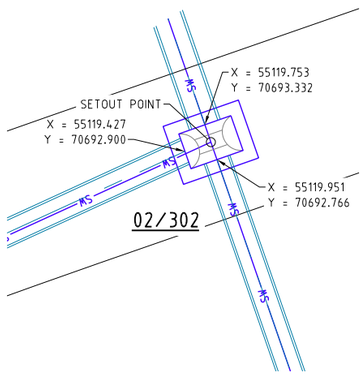
SCOUR PROTECTION DESIGN	
HW 01/261	SIZE 375mm
VELOCITY = 2.09m/s	
LENGTH = 3.6m	
SCOUR PROTECTION TYPE = RENO MATTRESS 170mm THICK	

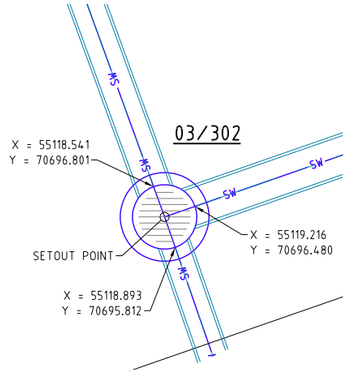
CALCULATIONS UNDERTAKEN USING PROPRIETARY PRODUCT DATA

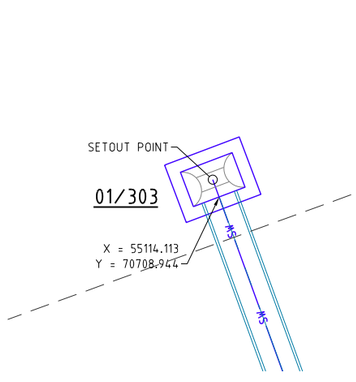
REFER TO DRAWING 12301-KFP1-451 FOR SECTIONAL VIEW OF STORMWATER 01/261

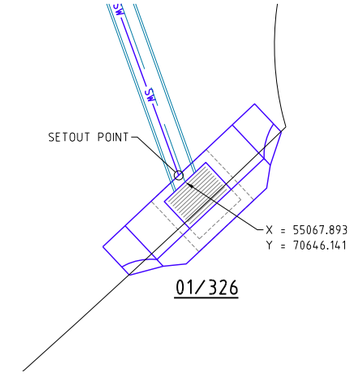


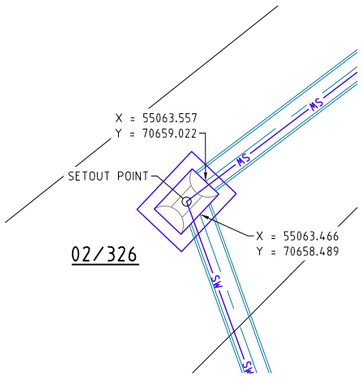


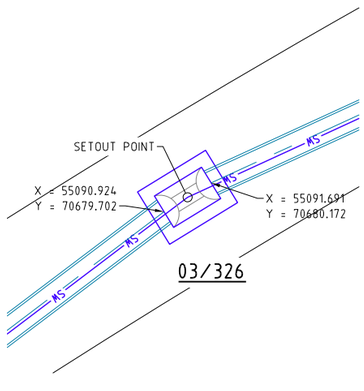


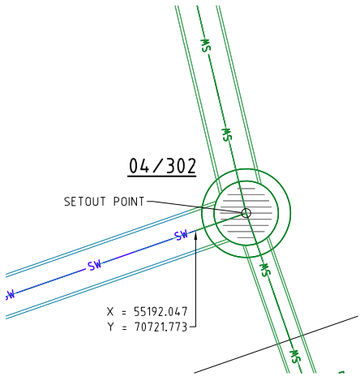


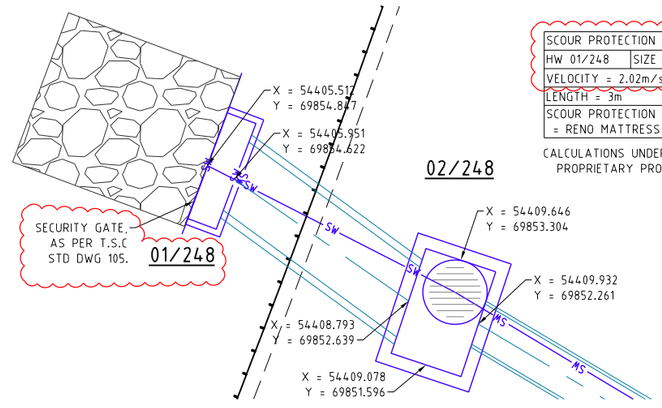












SCOUR PROTECTION DESIGN	
HW 01/248	SIZE 1200 x 300
VELOCITY = 2.02m/s	
LENGTH = 3m	
SCOUR PROTECTION TYPE = RENO MATTRESS 170mm THICK	

CALCULATIONS UNDERTAKEN USING PROPRIETARY PRODUCT DATA

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	03-09-21	NOTES, TABLE AND ID AMENDED
B	23-10-20	PITS AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER
STRUCTURE DETAILS
SHEET 3

CONSTRUCTION ISSUE

MORTONS urbansolutions
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Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-642	C

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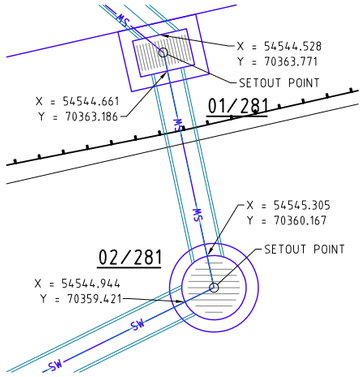

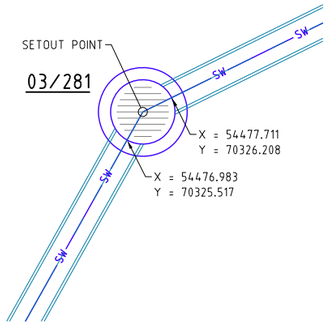

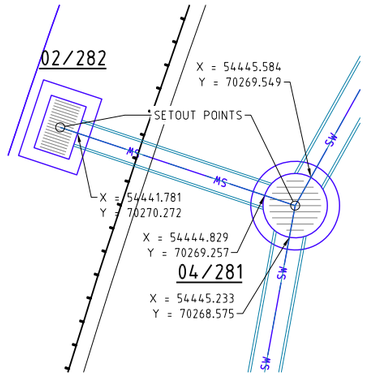

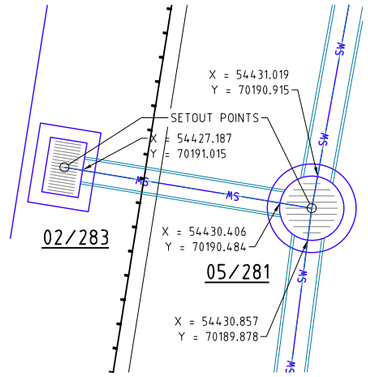

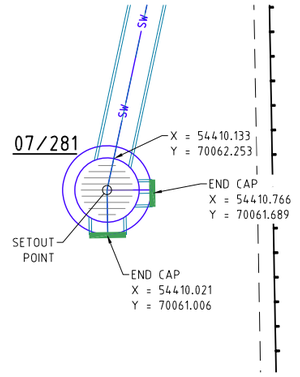

B

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	23-10-20	PITS AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER
STRUCTURE DETAILS
SHEET 4

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER
12301-KFP1-643

AMEND.
B

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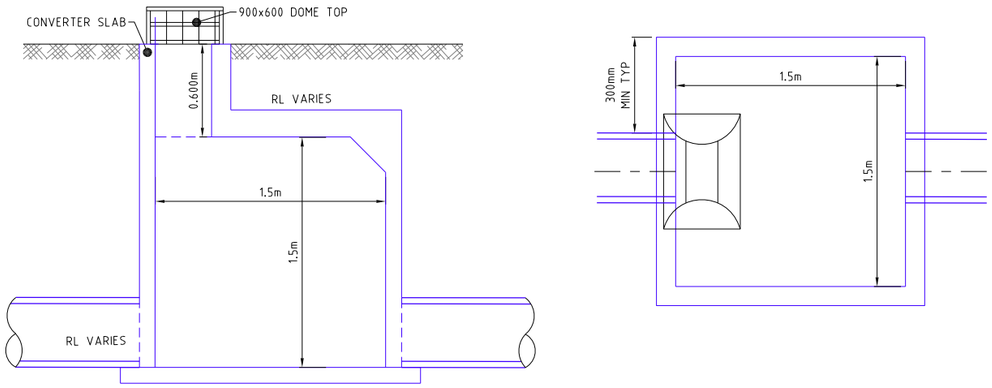
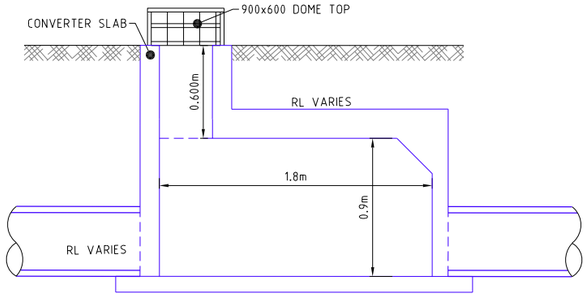
TYPE 1 1500x1500



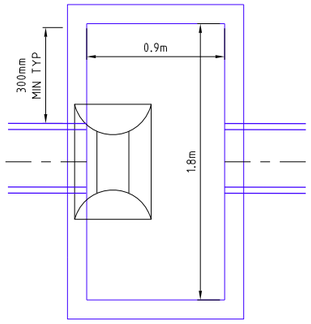
TYPE 1
N.T.S

REFER TO STRUCTURAL ARTS DRAWINGS
FOR REINFORCEMENT DETAILS.

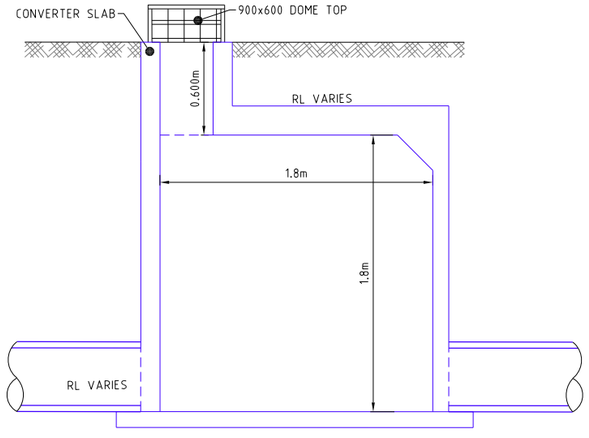
TYPE 2 900x1800



TYPE 2
N.T.S



TYPE 3 1800x1800



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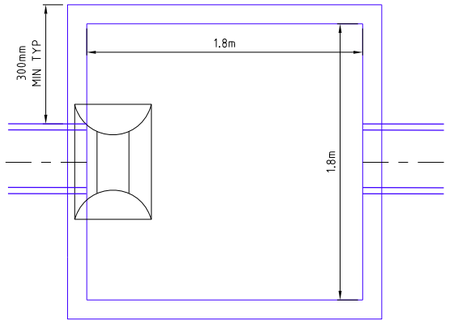
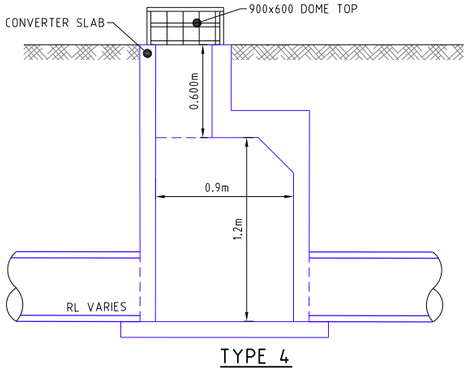


TYPE 3 1200x900



TYPE 4
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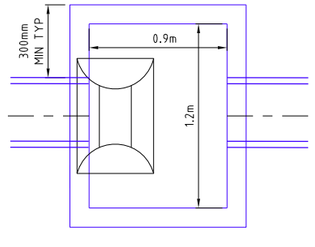

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER
STRUCTURE DETAILS
SHEET 5

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
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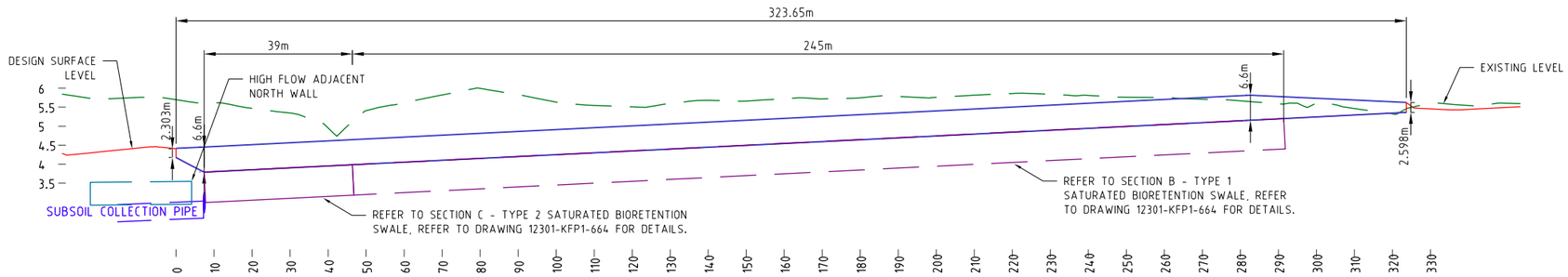
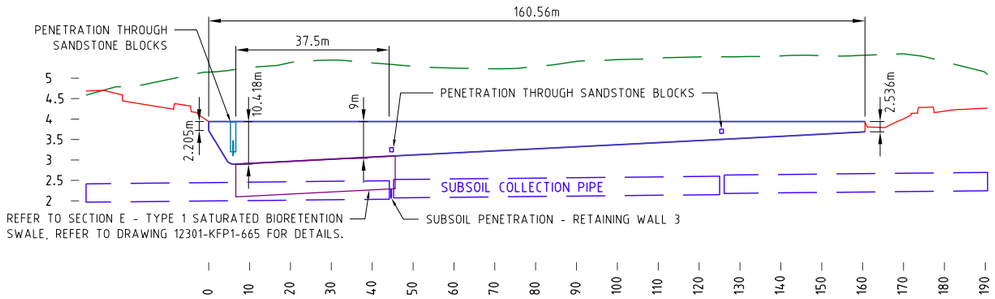
DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER: 12301-KFP1-644
AMEND.: B

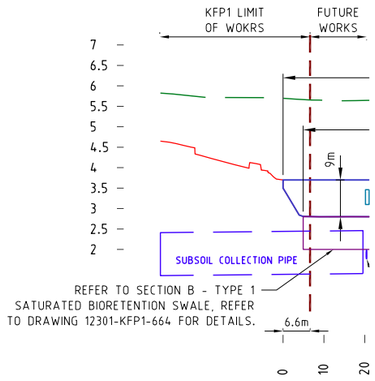
y:\123 - feda developments pty ltd\01 - kings forest\KFP1\engineering drawings\Current\12301-KFP1-640.dwg, 1/10/2021 12:54:27 PM, 1:2



SWALE LONGSECTION 1



SWALE LONGSECTION 2



SWALE LONGSECTION 3

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 7.5 15 22.5 30 37.5m

Scale 1:750 - A1 (1:1500 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	21-07-21	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

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GILBERT SUTHERLAND

DRAWING TITLE

SWALE SECTIONS SHEET 1

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-660	A

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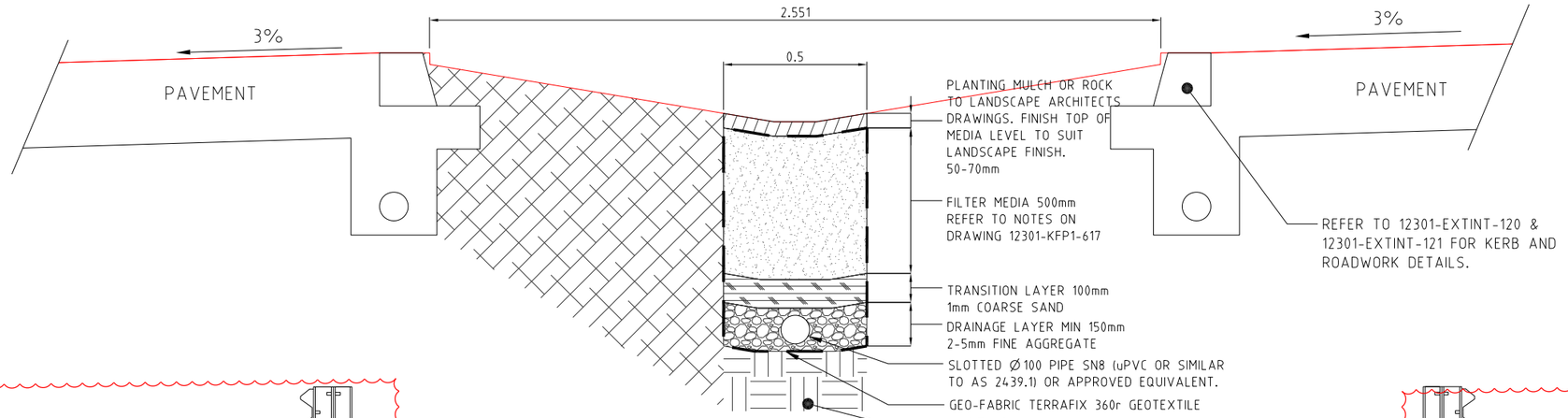
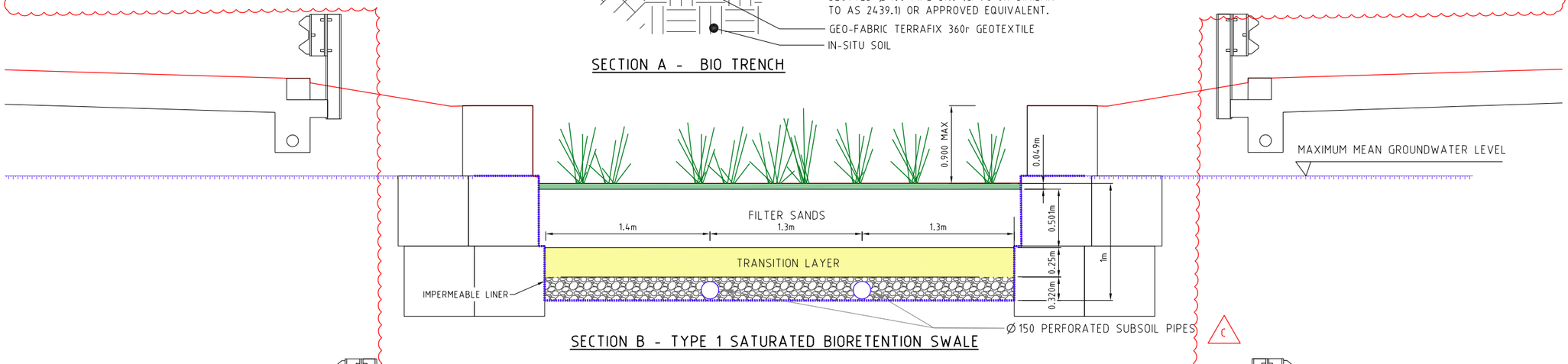
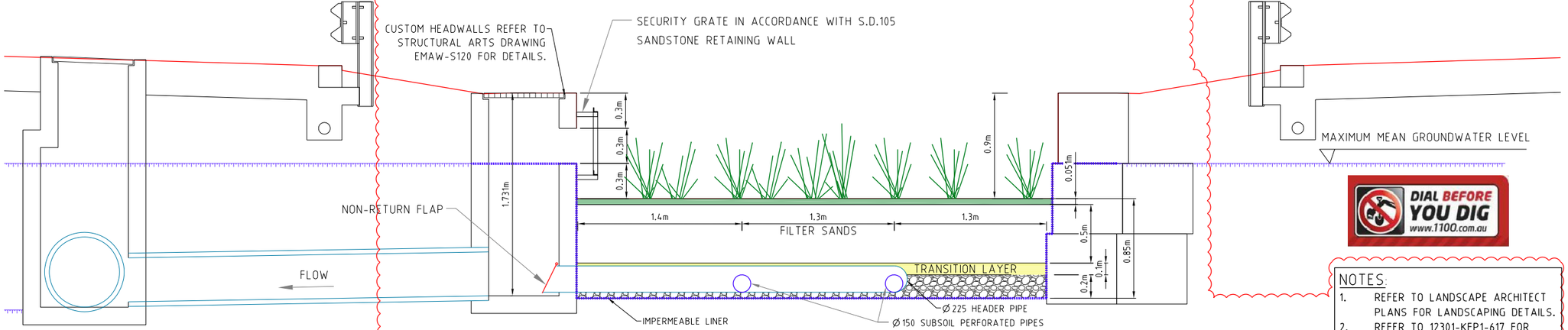


SECTION A - BIO TRENCH

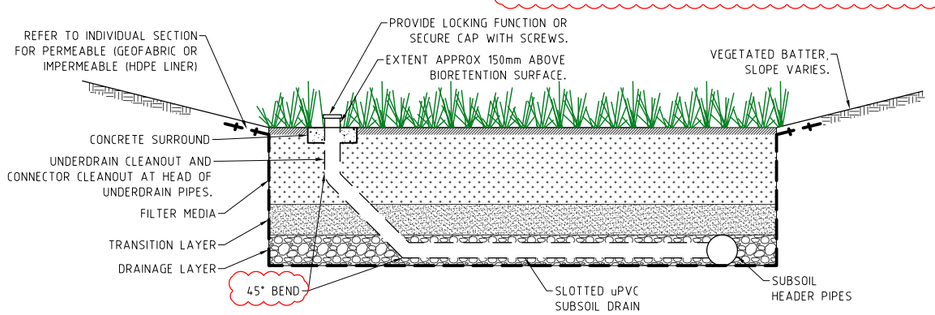


SECTION B - TYPE 1 SATURATED BIORETENTION SWALE



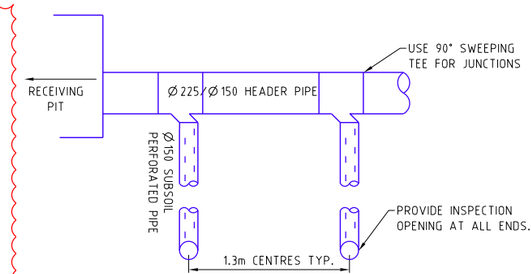
SECTION C - TYPE 2 FREE DRAINING BIORETENTION SWALE

NOTES:
1. REFER TO LANDSCAPE ARCHITECT PLANS FOR LANDSCAPING DETAILS.
2. REFER TO 12301-KFP1-617 FOR BIOSWALE MATERIAL DETAILS.



BIORETENTION FILTER TYPICAL SECTION

N.T.S.



SUBSOIL PIPE TYPICAL SECTION

N.T.S.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	xx-xx-xx	
CONSTRUCTION	xx-xx-xx	

PRE	DATE	AMENDMENT
C	21-07-21	RETAINING WALLS AMENDED
B	29-04-21	SECTIONS AMENDED
A	12-10-20	PRIVATE CERTIFIER

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER SWALE TYPE DETAILS SHEET 1

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 27-11-18

DRAWING NUMBER 12301-KFP1-664

AMEND. C

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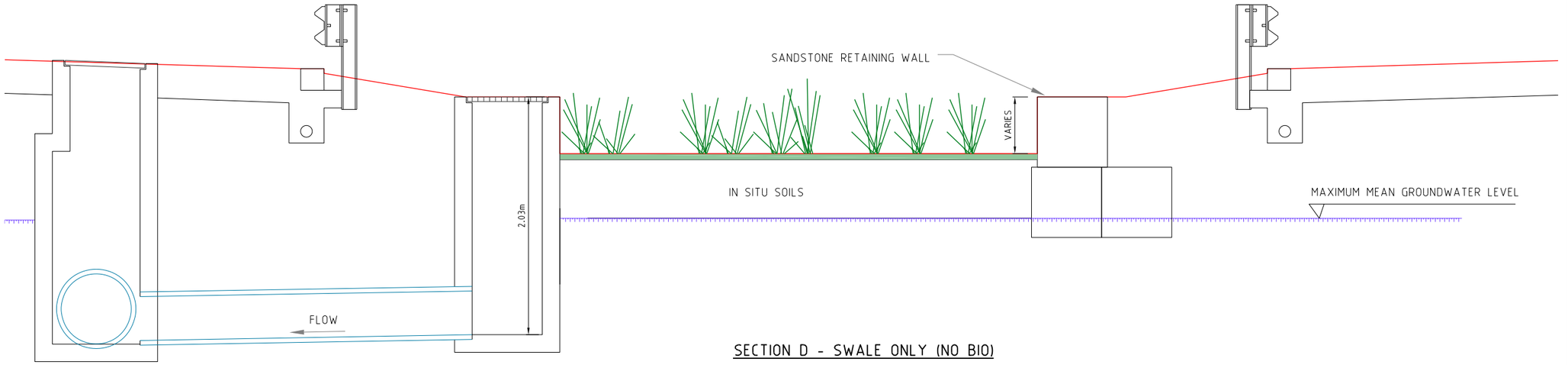
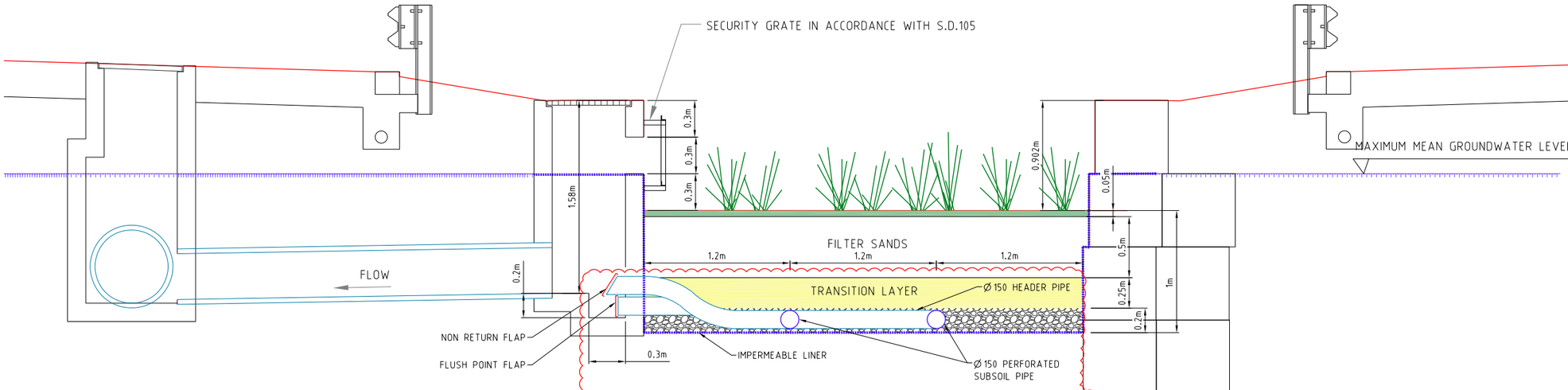
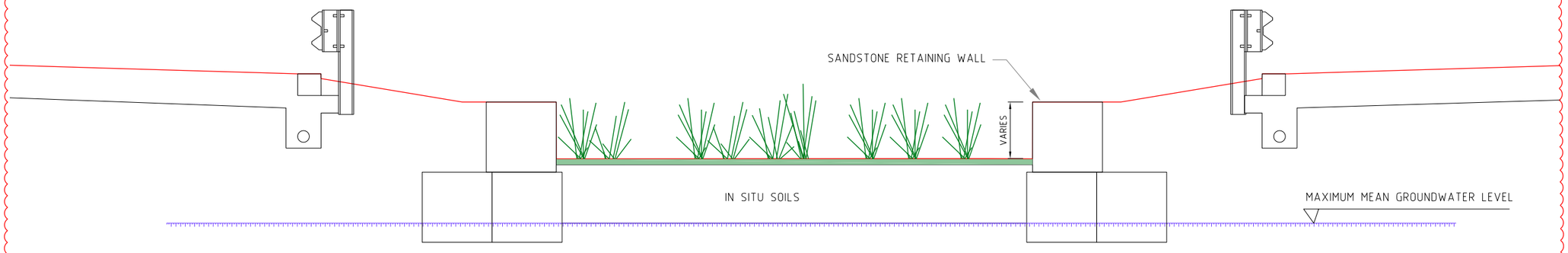


SECTION D - SWALE ONLY (NO BIO)



SECTION E - TYPE 1 SATURATED BIORETENTION SWALE



SECTION F - SWALE ONLY (NO BIO)

NOTES:
1. REFER TO LANDSCAPE ARCHITECT PLANS FOR LANDSCAPING DETAILS.
2. REFER TO 12301-KFP1-617 FOR BIOSWALE MATERIAL DETAILS.

D

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	xx-xx-xx	
CONSTRUCTION	xx-xx-xx	

D	14-09-21	SECTIONS AMENDED
C	29-07-21	RETAINING WALLS AMENDED
B	28-04-21	DIMENSIONS AND RETAINING WALL AMENDED
A	12-10-20	PRIVATE CERTIFIER
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER
SWALE
TYPE DETAILS
SHEET 2

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 27-11-18

DRAWING NUMBER: 12301-KFP1-665
AMEND.: D

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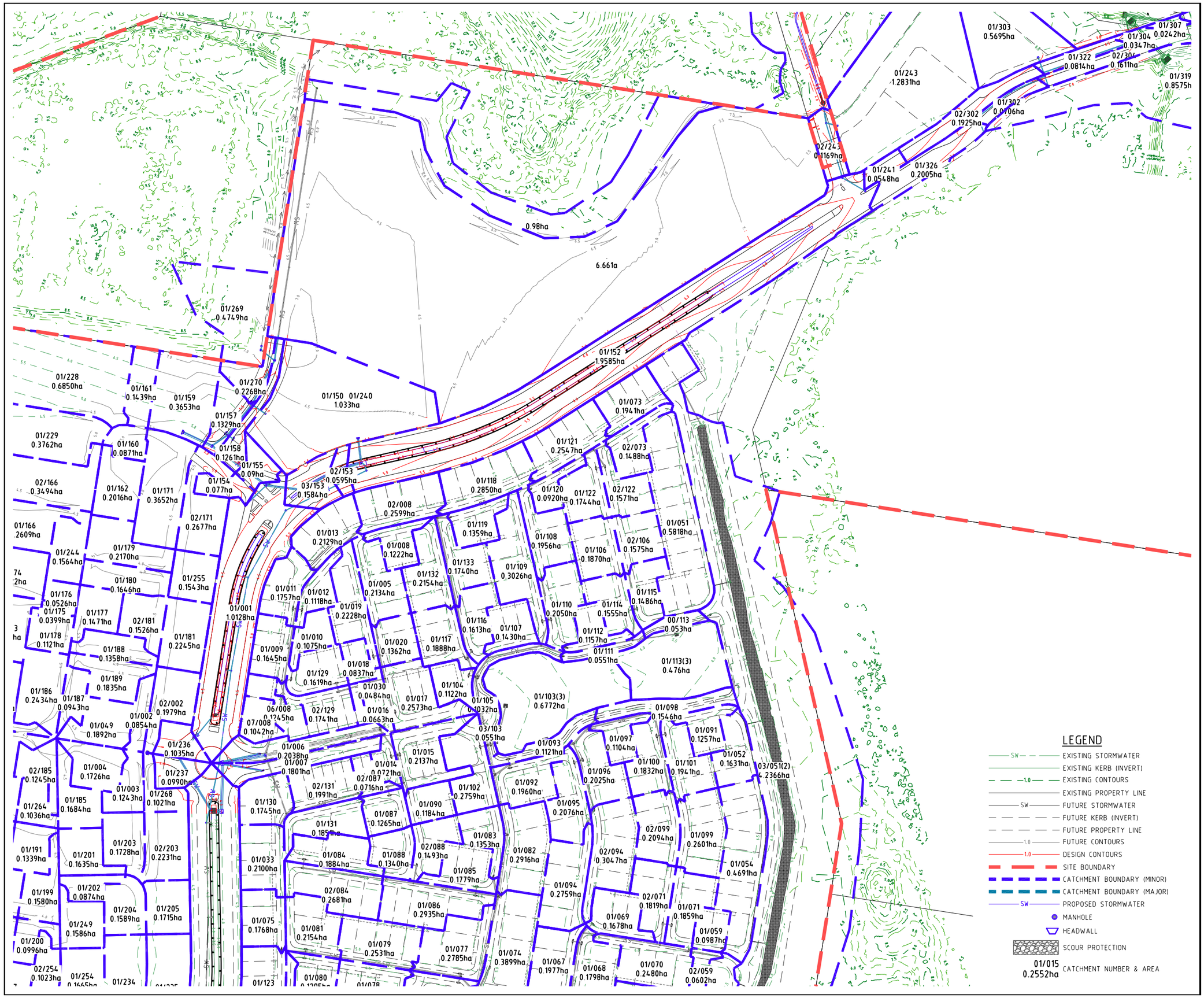

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 15 30 45 60 75m

Scale 1:1500 - A1 (1:3000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	14-11-19	COUNCIL ISSUE

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DRAWING TITLE

STORMWATER CATCHMENT PLAN

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER 12301-KFP1-670
AMEND. A

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0.2 ARI (Q5) MINOR FLOW - 12D DYNAMIC DRAINAGE RESULTS

* REFER TO IFD TABLE FOR MAXIMUM INTENSITY DURING STORM

NOTE: NEGATIVE FLOW VALUES INDICATE REVERSE FLOWS			CATCHMENT AREA			RAINFALL VOLUME*		RAINFALL Coef.		CATCHMENT FLOW				APPROACH FLOW				FLOW AT PIT				PIT	HGL				PIPE	HEADLOSSES						
NODE	"TO:		A.1	A.2	A.3	CRITICAL	INTENSITY		CURRENT	A.1	A.2	A.3	CRITICAL	GRADE	FLOW			CAPTURED	BYPASS			GRADE	GRATE	PIT	PIPE		GRADE	FLOW	COEFFICIENT		HEADLOSS		CAPACITY	VELOCITY	NODE
FROM:	NODE TYPE		HA	HA	HA	STORM	MM/HR	10 YR	Storm	HA	HA	HA	ARI MIN.	%	L/S	WIDTH	DxV	L/S	L/S	DxV	NODE	%	RL.	RL	U/S RL.	D/S RL.	%	M3/S	Ku	Kw	Ku	Kw	RATIO	M/S	
05/5	06/5	CUSTOM MANHOLE 2400x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.579	3.95	3.95	3.87	0.03	0.81	0.7	0.0	0.0	0.0	0.83	0.75	05/5
06/5	01/22	CUSTOM MANHOLE 2400x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.19	3.87	3.81	3.70	0.32	1.67	0.6	0.0	0.1	0.0	1.72	1.55	06/5
01/22	02/22	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.80	3.70											01/22
01/6	01/22	INLET GULLY IN SAG	0.204			25	43.0	0.819	0.801	0.093			25	0.4	93	0.40	0.00	89	1	0.00	01/7	0.380	4.13	3.87	3.76	3.70	0.22	0.09	7.0	0.0	0.2	0.0	0.42	1.28	01/6
01/22	02/22	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.80	3.70											01/22
01/7	01/22	INLET GULLY IN SAG	0.180			25	43.0	0.819	0.801	0.082			25		82	0.00	0.00	81	0	0.00	01/284		4.12	3.76	3.71	3.70	0.03	0.08	7.0	0.0	0.1	0.0	0.26	1.15	01/7
01/22	02/22	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.80	3.70											01/22
01/22	02/22	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.80	3.70	3.53	3.45	0.19	1.54	1.6	0.0	0.2	0.0	1.12	1.43	01/22
02/22	03/22	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.00	3.45	3.41	3.38	0.65	1.53	0.2	0.0	0.0	0.0	2.54	2.13	02/22
03/22	01/23	INLET HEADWALL											25		0			0					3.70	3.38	3.38	3.38	0.00	1.53	0.0	0.0	0.0	0.0			03/22
01/150	01/153	CUSTOM 900x3000 PIT C/W GRATED INLET 900x600	1.033			25	43.0	0.819	0.801	0.470			25		470	4.09	0.15	216	253	0.15	O 01/150		6.18	4.47	4.41	4.35	0.30	0.26	9.7	0.0	0.2	0.0	0.23	1.39	01/150
01/153	02/153	CUSTOM 1500x1500 PIT C/W 300x600 DOME TOP											25		738	14.42	0.11	711	27	0.01	02/153		4.10	4.35											01/153
01/153	02/153	CUSTOM 1500x1500 PIT C/W 300x600 DOME TOP											25		738	14.42	0.11	711	27	0.01	02/153		4.10	4.35	4.12	4.16	-0.14	0.82	4.9	0.0	0.3	0.0	1.38	1.14	01/153
02/153	03/153	CUSTOM 900x1800 PIT C/W 600x600 DOME TOP	0.056			25	43.0	0.819	0.801	0.026			25		79	2.91	0.04	72	-28	0.03	03/153		4.29	4.16	4.12	4.05	0.24	0.92	0.5	0.0	0.0	0.0	1.54	1.28	02/153
03/153	04/153	CUSTOM 900x1800 PIT C/W 600x600 DOME TOP	0.156			25	43.0	0.819	0.801	0.071			25		71	0.47	0.01	39	3	0.01	01/282		4.01	4.05	4.05	3.93	0.39	0.95	0.0	0.0	0.0	0.0	1.59	1.33	03/153
04/153	05/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.78	3.93	3.91	3.72	0.34	0.98	0.5	0.0	0.0	0.0	1.63	1.36	04/153
05/153	06/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.87	3.72	3.67	3.63	0.13	1.87	0.5	0.0	0.0	0.0	1.33	1.39	05/153
06/153	07/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.76	3.63	3.60	3.47	0.22	2.01	0.3	0.0	0.0	0.0	1.43	1.54	06/153
07/153	08/153	CUSTOM MANHOLE 2700x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.82	3.47	3.45	3.42	0.23	2.04	0.2	0.0	0.0	0.0	1.45	1.54	07/153
08/153	09/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.60	3.42	3.39	3.20	0.25	2.09	0.2	0.0	0.0	0.0	1.48	1.7	08/153
09/153	10/153	CUSTOM MANHOLE 2400x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.23	3.20	3.16	3.01	0.38	2.47	0.3	0.0	0.0	0.0	1.75	2.26	09/153
10/153	11/153	CUSTOM MANHOLE 2400x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.14	2.77	2.92	2.90	0.10	2.60	0.2	0.0	0.0	0.0	1.47	6.46	10/153
11/153	01/165	INLET HEADWALL											25		0			0					3.70	2.30	2.30	2.30	0.00	2.60	0.0	0.0	0.0	0.0			11/153
01/165	02/165	BASIN NODE FOR CALCULATIONS		1.569							0.713		25		8698			375					2.30	3.50											01/165
01/154	04/153	INLET GULLY ON GRADE	0.077			25	43.0	0.819	0.801	0.035			25	0.7	35	0.00	0.00	35	0	0.00	01/1	0.693	4.72	4.01	3.96	3.93	0.12	0.06	5.2	0.0	0.1	0.0	0.23	1.26	01/154
04/153	05/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.78	3.93											04/153
01/155	04/153	INLET GULLY ON GRADE	0.090			25	43.0	0.819	0.801	0.041			25	0.6	41	0.00	0.00	41	0	0.00	02/283	0.584	4.58	4.06	4.00	3.93	0.73	0.09	9.7	0.0	0.1	0.0	0.25	1.61	01/155
04/153	05/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.78	3.93											04/153
01/156	02/156	BASIN NODE FOR CALCULATIONS	7.640			25	43.0	0.819	0.801	3.474			25		3474	0.00	0.00	3474	0	0.00	02/156		4.79	5.30	5.30	5.30	0.00	0.69	0.0	0.0	0.0	0.0			01/156
02/156	03/156	CUSTOM 1200x1200 PIT C/W GRATED INLET 900x600											25		0	0.00	0.00	0	0	0.00	03/156		4.81	4.81	5.16	4.82	0.40	0.69	1.1	0.0	0.1	0.0	1.96	1.56	02/156
03/156	04/156	CUSTOM 1200x1200 PIT C/W GRATED INLET 900x600											25		0	0.00	0.00	0	0	0.00	01/242		4.95	4.82	4.64	4.42	0.31	0.69	1.8	0.0	0.2	0.0	1.95	1.56	03/156
04/156	05/156	MANHOLE 1050mm DIA											25		0			0					6.22	4.42	4.41	4.19	0.28	0.69	0.2	0.0	0.0	0.0	1.96	1.56	04/156
05/156	06/156	MANHOLE 1200mm DIA											25		0			0					6.62	4.19	4.18	3.96	0.28	0.69	0.2	0.0	0.0	0.0	1.96	1.6	05/156
06/156	07/156	MANHOLE 1800mm DIA											25		0			0					6.76	3.96	3.93	3.86	0.17	0.79	0.5	0.0	0.0	0.0	1.38	1.44	06/156
07/156	08/156	MANHOLE 1800mm DIA											25		0			0					5.59	3.86	3.84	3.78	0.13	0.83	0.3	0.0	0.0	0.0	1.44	1.62	07/156
08/156	05/153	MANHOLE 1800mm DIA											25		0			0					4.70	3.78	3.76	3.72	0.25	0.93	0.3	0.0	0.0	0.0	1.47	1.84	08/156
05/153	06/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.87	3.72											05/153
01/157	08/156	INLET GULLY IN SAG	0.133			25	43.0	0.819	0.801	0.060			25		60	0.13	0.00	60	0	0.00	01/158		4.65	3.84	3.83	3.78	2.51	0.07	9.7	0.0	0.1	0.0	0.09	1.62	01/157
08/156	05/153	MANHOLE 1800mm DIA											25		0			0					4.70	3.78											08/156
01/158	08/156	INLET GULLY IN SAG	0.126			25	43.0	0.819	0.801	0.057			25		57			57					4.64	3.84	3.79	3.78	0.21	0.07	9.7	0.0	0.1	0.0	0.15	1.3	01/158
08/156	05/153	MANHOLE 1800mm DIA											25		0			0					4.70	3.78											08/156
01/220	02/220	MANHOLE 1800mm DIA											25	-1.4	0			0				-1.412	4.38	3.29	3.29	3.29	0.01	0.45	2.1	0.0	0.0	0.0	0.52	0.89	01/220
02/220	03/220	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.21	3.29	3.27	3.25	0.12	0.73	1.4	0.0	0.0	0.0	0.84	0.87	02/220
03/220	07/181	CUSTOM MANHOLE 1800x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.30	3.25	3.25	3.20	0.07	0.83	0.5	0.0	0.0	0.0	0.96	0.97	03/220
07/181	08/181	CUSTOM MANHOLE 1800x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.66	3.20											07/181
01/240	07/156	100% CAPTURE FOR FUTURE EXTENSION											25		0	0.00	0.00	0	0	0.00	01/158		5.89	3.87	3.87	3.86	0.11	-0.02	1.9	0.0	0.0	0.0	-0.03	0.06	01/240
07/156	08/156	MANHOLE 1800mm DIA											25		0			0					5.59	3.86											07/156
01/241	02/241	900x600 PIT C/W DOME TOP	0.055			25	43.0	0.819	0.801	0.025			25		25	0.32	0.01	22	1	0.00	01/153		7.05	5.85	5.85	5.73	0.57	0.02	9.7	0.0	0.0	0.0	0.1	1.03	01/241
02/241	03/241	MANHOLE 1050mm DIA											25		0			0					7.20	5.73	5.72	5.71	0.03	0.04	0.7	0.0	0.0	0.0	0.29	0.35	02/241
03/241	04/241	MANHOLE 1200mm DIA											25		0			0					6.76	5.71	5.60	5.51	0.57	0.60	1.3	0.0	0.1	0.0	0.75	1.62	03/241
04/241		HEADWALL											25		0			0					6.00	5.51											04/241
01/242	07/156	INLET GULLY IN SAG	0.112			25	43.0	0.819	0.801	0.051			25		51	0.04	0.00	50	0	0.00	01/157		5.53	3.90	3.87	3.86	1.00	0.05	9.7	0.0	0.1	0.0	0.14	1	01/242
07/156	08/156	MANHOLE 1800mm DIA											25		0			0					5.59	3.86											07/156
01/243	03/241	100% CAPTURE FOR FUTURE EXTENSION	1.283			25	43.0	0.819	0.801	0.583			25	1.1	583	0.00	0.00	583	0	0.00	01/300	1.139	7.24	6.40	5.80	5.71	0.85	0.58	4.5	0.0	0.6	0.0	1.1	1.68	01/243
03/241	04/241	MANHOLE 1200mm DIA											25		0			0					6.76	5.71											03/241
01/248	02/248	INLET HEADWALL											25		0			0					3.70	3.36	3.36	3.36	0.00	-0.29	0.0	0.0	0.0	0.0			01/248
02/248	03/21	CUSTOM MANHOLE 1800x1200 (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.00	3.36	3.36	3.37	-0.03	-0.29	2.1	0.0	0.1	0.0	-0.64	0.82	02/248
03/21	04/21	MANHOLE 1200mm DIA											25		0			0					4.26	3.37											03/21
01/261	01/220	INLET HEADWALL											25		0			0					3.95	3.61	3.56	3.29	0.58	0.16	0.5	0.0	0.1	0.0	0.66	1.4	01/261
01/220	02/220	MANHOLE 1800mm DIA											25	-1.4	0			0				-1.412	4.38	3.29											01/220
01/23	02/23	BASIN NODE FOR CALCULATIONS	1.861			25	43.0	0.819	0.801	0.846			25		846			846					2.80	3.38	3.38	3.38	0.00	0.28	0.0	0.0	0.0	0.0			01/23
01/262	01/220	INLET HEADWALL											25		0			0					3.50	3.38	3.36	3.28	0.13	0.28	0.5	0.0	0.1	0.0	0.33	0.79	01/262
01/220	02/220	MANHOLE 1800mm DIA											25	-1.4	0			0				-1.412	4.38	3.29											01/220
01/269	02/269	900x600 PIT C/W DOME TOP	0.475			25	43.0	0.741	0.716	0.183			25		183	0.00	0.00	183	0	0.00	02/269		6.72	4.18	4.11	3.98	4.03	0.18	7.0	0.0	0.1	0.0	0.21	0.84	01/269
02/269	06/156	CUSTOM 900x1200 PIT C/W 600x600 DOME TOP											25		0	0.00	0.00	0	0	0.00	O 02/269		6.87	3.98	3.97	3.96	0.09	0.18	0.9	0.0	0.0	0.0	0.3	0.64	02/269
06/156	07/156	MANHOLE 1800mm DIA											25		0			0					6.76	3.96											06/156
03/153	04/153	CUSTOM 900x1800 PIT C/W 600x600 DOME TOP	0.156			25	43.0	0.819	0.801	0.071			25		71	0.47	0.01	39	3	0.01	01/282		4.01	4.05	4.05	4.30	-1.30	0.00	0.0	0.0	0.0	0.0	0	0	03/153
01/281	02/281	GRATED INLET 900x600											25		0	0.00	0.00	0	0	0.00	02/153		4.45	4.24	4.24	4.21	0.89	0.18	0.2	0.0	0.0	0.0	0.38	1.8	01/281
02/281	03/281	MANHOLE 1050mm DIA											25		0			0					4.75	4.21	4.20	3.97	0.31	0.14	1.7	0.0	0.1	0.0	0.79	1.13	02/281
03/281	04/281	MANHOLE 1050mm DIA											25		0			0					4.32	3.97	3.95	3.73	0.33	0.15	0.5	0.0	0.0	0.0	1.63	0.95	03/281
04/281	05/281	MANHOLE 1050mm DIA											25		0			0					4.24	3.73	3.73	3.63	0.12	-0.13	2.1	0.0	0.1	0.0	-1.47	0.86	04/281
05/281	06/281	MANHOLE 1050mm DIA											25		0			0					4.25	3.63	3.63	3.63	0.00	-0.15	2.1	0.0	0.2	0.0	-1.67	0.98	05/281
06/281	07/281	MANHOLE 1050mm DIA											25		0			0					4.73	3.63	3.56	3.39	0.33	0.34	2.0	0.0	0.2	0.0	2.48	1.56	06/281
07/281	08/281	MANHOLE 1050mm DIA											25		0			0					4.00	3.39	3.39	3.27	0.15	0.35	0.3	0.0	0.0	0.0	2.6	1.63	07/281
01/282	02/282	WEIR FOR CALCU..ATIONS											25		3	0.00	0.00	3	0	0.00	01/283		3.50	3.65	3.71	3.72	-0.42	-0.04	0.0	0.0	0.0	0.0	-2.91	0.7	01/282
02/282	04/281	GRATED INLET 900x600											25		0			0					3.94	3.72	3.72	3.72	-0.07	-0.14	2.0	0.0	0.3	0.0	-0.39	1.29	02/282
04/281	05/281	MANHOLE 1050mm DIA											25		0			0					4.24	3.73											04/281
01/1	02/1	BASIN NODE FOR CALCULATIONS	1.007			25	43.0	0.819	0.801	0.458			25		458			458					4.49	3.61	3.61	3.61	0.00	-0.15	0.0	0.0	0.0	0.0			01/1
01/283	02/283	WEIR FOR CALCU..ATIONS											25		0	0.00	0.00	0	0	0.00	01/1		3.09	3.61	3.61	3.61	0.08	-0.15	0.9	0.0	0.0	0.0	-8.97	2.46	01/283
02/283	05/281	GRATED INLET 900x600											25		0	0.00	0.00	0	0	0.00	01/1		3.94	3.61	3.61	3.58	0.55	-0.19	2.1	0.0	0.1	0.0	-0.58	1.71	02/283
05/281	06/281	MANHOLE 1050mm DIA											25		0			0					4.25	3.63											05/281
11/281	12/281	MANHOLE 1800mm DIA											25		0			0					4.00	2.79											11/281
01/22	02/22	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											25		0			0					4.80	3.70	3.66	3.63	0.85	0.45	0.2	0.0	0.1	0.0	0.71	3.58	01/22
06/281	07/281	MANHOLE 1050mm DIA											25		0			0					4.73	3.63											06/281
01/302	02/302	INLET GULLY ON GRADE	0.071			25	43.0	0.819	0.801	0.032			25		32	0.00	0.00	32	0	0.00	02/304		6.32	5.39	5.34	5.34	-0.04	0.03	9.7	0.0	0.1	0.0	0.13	0.74	01/302
02/302	03/302	900x600 PIT C/W DOME TOP	0.193			25	43.0	0.819	0.801	0.088			25		88	1.17	0.03	75	11	0.03	01/322		6.44	5.34	5.20	5.14	1.71	0.19	2.0	0.0	0.1	0.0	0.66	1.44	02/302
03/302	04/302	MANHOLE 1050mm DIA											25		0			0					6.59	5.14	5.11	4.42	0.87	0.46	2.1	0.0	0.0	0.0	0.56	2.64	03/302
04/302	01/300	MANHOLE 1050mm DIA											25		0			0					6.04	4.42	4.17	3.82	1.51	0.53	1.8	0.0	0.3	0.0	0.35	3.8	04/302
01/300	02/300	INLET HEADWALL											25		0			0					3.40	3.82											01/300
01/303	03/302	100% CAPTURE FOR FUTURE EXTENSION	0.570			25	43.0	0.819	0.801	0.259			25	0.5	259	0.00	0.00	259	0	0.00	01/322	0.479	7.01	5.80	5.51	5.14	2.64	0.26	6.7	0.0	0.3	0.0	0.39	1.71	01/303
03/302	04/302	MANHOLE 1050mm DIA											25		0			0					6.59	5.14											03/302
01/326	02/326	INLET GULLY IN SAG	0.201			25	43.0	0.819	0.801	0.091			25		91			91					6.61	5.88	5.80	5.55	1.87	0.09	8.6	0.0	0.1	0.0	0.37	1.26	01/326
02/326	03/326	900x600 PIT C/W DOME TOP											25		0			0					6.77	5.55	5.53	5.42	0.29	0.09	1.6	0.0	0.0	0.0	0.69	1.08	02/326
03/326	02/302	900x600 PIT C/W DOME TOP											25		0			0					6.60	5.42	5.42	5.34	0.24	0.09	0.2	0.0	0.0	0.0	0.72	0.85	03/326
02/302	03/302	900x600 PIT C/W DOME TOP	0.193			25	43.0	0.819	0.801	0.088			25		88	1.17	0.03	75	11	0.03	01/322		6.44	5.34											02/302

NOTES:

MINOR STORM (20% AEP / Q5 EVENT):

THE "CRITICAL STORM" DURATION IS SET TO 25 MINUTES USING ILSAX2 SOFTWARE, REFLECTING THE STORM DURATION REQUIRED TO ATTAIN PEAK FLOWS IN THE PIPED NETWORK. NOTE THE STORM DURATION IS DIFFERENT FROM THE TIME OF CONCENTRATION TO INDIVIDUAL PITS WHICH IS TYPICALLY 6 MINUTES FOR IMPERVIOUS SURFACES AND 8 MINUTES FOR IMPERVIOUS SURFACES IN MINIMAL GRADE RESIDENTIAL AREAS. STORM DURATIONS OF 20, 25, 30, 45 AND 60 MINUTES HAVE BEEN TESTED TO ENSURE THE APPROPRIATE STORM DURATION IS BEING USED TO DERIVE PEAK FLOWS.

C

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	20-07-21	CALCULATION TABLE AMENDED
B	23-10-20	TABLES AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

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GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER
CALCULATION TABLES
MINOR STORM EVENT

CONSTRUCTION ISSUE

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APPROVED		NER	906726
DATE	14-11-19		

DRAWING NUMBER: 12301-KFP1-680
AMEND.: C

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0.01 AR&R (Q100) Major FLOW - 12D DYNAMIC DRAINAGE RESULTS — REFER TO IFD TABLE FOR MAXIMUM INTENSITY DURING STORM

NOTE: NEGATIVE FLOW VALUES INDICATE REVERSE FLOWS			CATCHMENT AREA			RAINFALL VOLUME*		RAINFALL Coef.	CATCHMENT FLOW				APPROACH FLOW				FLOW AT PIT				PIT	HGL			PIPE	HEADLOSSES						
NODE						CRITICAL	INTENSITY	CURRENT																			COEFFICIENT		HEADLOSS		CAPACITY	VELOCITY	
FROM:	TO:	NODE TYPE	A1 HA	A2 HA	A3 HA	STORM	MM/HR	10 YR	Storm	A1 HA	A2 HA	A3 HA	CRITICAL AR MIN.	GRADE %	FLOW L/S	WIDTH	DxV	CAPTURED L/S	BYPASS L/S	DxV	NODE	GRADE %	GRATE RL.	PIT RL	PIPE U/S RL.	PIPE D/S RL.	GRADE %	FLOW M3S	Ku	Kw	Ku	Kw	RATIO	M/S	
05/5	06/5	CUSTOM MANHOLE 2400x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.579	4.30	4.30	4.27	0.03	0.89	0.7	0.0	0.0	0.0	0.92	0.83	05/5
06/5	01/22	CUSTOM MANHOLE 2400x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.191	4.27	4.21	4.13	0.22	1.87	0.6	0.0	0.1	0.0	1.92	1.73	06/5
01/22	02/22	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.801	4.13											01/22
01/6	01/22	INLET GULLY IN SAG	0.294			60	102.9	0.819	0.896	0.135			30	0.4	166	3.69	0.03	104	41	0.03	01/7	0.380	4.131	4.26	4.18	4.13	0.16	0.10	6.4	0.0	0.1	0.0	0.5	1.22	01/6
01/22	02/22	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.801	4.13											01/22
01/7	01/22	INLET GULLY IN SAG	0.130			60	102.9	0.819	0.896	0.119			30		179	3.82	0.06	127	8	0.00	01/284		4.126	4.26	4.18	4.13	0.13	0.13	7.0	0.0	0.1	0.0	0.42	1.1	01/7
01/22	02/22	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.801	4.13	4.02	3.95	0.18	1.71	1.5	0.0	0.2	0.0	1.24	1.58	01/22
02/22	03/22	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.009	3.95	3.92	3.87	0.92	1.70	0.2	0.0	0.1	0.0	2.81	2.36	02/22
03/22	01/23	INLET HEADWALL											30		0			0					3.700	3.87	3.87	3.87	0.00	1.70	0.0	0.0	0.0	0.0			03/22
01/23	02/23	BASIN NODE FOR CALCULATIONS	1.881			60	102.9	0.819	0.896	1.232			30		1239			1239					2.800	3.87											01/23
01/150	01/153	CUSTOM 900x3000 PIT C/W GRATED INLET 900x600	1.033			60	102.9	0.819	0.896	0.684			30		684	5.40	0.19	286	398	0.19	O 01/150		6.182	4.65	4.58	4.57	0.06	0.29	9.7	0.0	0.2	0.0	0.26	1.32	01/150
01/153	02/153	CUSTOM 1500x1500 PIT C/W 900x600 DOME TOP											30		825	26.58	0.15	658	439	0.02	02/153		4.100	4.57	4.46	4.42	0.13	0.71	5.2	0.0	0.2	0.0	1.18	0.98	01/153
02/153	03/153	CUSTOM 500x1800 PIT C/W 900x600 DOME TOP	0.036			60	102.9	0.819	0.896	0.037			30		536	13.53	0.24	357	-65	0.03	03/153		4.293	4.56	4.34	4.26	0.26	0.69	1.3	0.0	0.1	0.0	1.65	1.38	02/153
03/153	04/153	CUSTOM 500x1800 PIT C/W 900x600 DOME TOP	0.156			60	102.9	0.819	0.896	0.103			30		103	0.93	0.02	30	6	0.02	01/282		4.014	4.26	4.26	4.20	0.23	1.01	0.0	0.0	0.0	0.0	1.69	1.4	03/153
04/153	05/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.788	4.20	4.16	4.00	0.29	1.07	0.4	0.0	0.0	0.0	1.79	1.49	04/153
05/153	06/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.678	4.00	3.95	3.86	0.26	2.03	0.6	0.0	0.1	0.0	1.44	1.5	05/153
06/153	07/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.762	3.88	3.85	3.70	0.27	2.20	0.3	0.0	0.0	0.0	1.56	1.63	06/153
07/153	08/153	CUSTOM MANHOLE 2700x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.821	3.70	3.67	3.63	0.33	2.34	0.2	0.0	0.0	0.0	1.66	1.73	07/153
08/153	09/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.608	3.63	3.60	3.42	0.23	2.44	0.2	0.0	0.0	0.0	1.73	1.8	08/153
09/153	10/153	CUSTOM MANHOLE 2400x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.232	3.42	3.37	3.11	0.63	3.09	0.3	0.0	0.1	0.0	2.19	2.49	09/153
10/153	11/153	CUSTOM MANHOLE 2400x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.145	2.84	3.02	3.00	0.09	3.29	0.2	0.0	0.0	0.0	1.86	7.15	10/153
11/153	01/165	INLET HEADWALL											30		0			0					3.700	2.30	2.30	2.30	0.00	3.29	0.0	0.0	0.0	0.0			11/153
01/165	02/165	BASIN NODE FOR CALCULATIONS		1.569							1.039		30		11866			333					2.300	3.50											01/165
01/154	04/153	INLET GULLY ON GRADE	0.077			60	102.9	0.819	0.896	0.051			30	0.7	51	0.14	0.00	49	0	0.00	01/1	0.693	4.727	4.28	4.21	4.20	0.06	0.05	9.7	0.0	0.1	0.0	0.2	1.24	01/154
04/153	05/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.788	4.20											04/153
01/155	04/153	INLET GULLY ON GRADE	0.090			60	102.9	0.819	0.896	0.060			30	0.6	60	0.40	0.00	55	0	0.00	02/283	0.584	4.581	4.27	4.20	4.20	0.05	0.06	9.7	0.0	0.1	0.0	0.16	1.59	01/155
04/153	05/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.788	4.20											04/153
01/156	02/156	BASIN NODE FOR CALCULATIONS	7.640			60	102.9	0.819	0.896	5.061			30		5061	0.00	0.00	5061	0	0.00	02/156		4.793	5.44	5.44	5.44	0.00	0.71	0.0	0.0	0.0	0.0			01/156
02/156	03/156	CUSTOM 1200x1200 PIT C/W GRATED INLET 900x600											30		35	10.09	0.11	8	253	48.98	03/156		4.613	4.95	5.35	5.06	0.34	0.71	2.1	0.0	0.1	0.0	2.01	1.6	02/156
03/156	04/156	CUSTOM 1200x1200 PIT C/W GRATED INLET 900x600											30		316	2.65	0.02	154	-3	0.01	01/242		4.658	5.06	4.93	4.73	0.27	0.90	1.8	0.0	0.2	0.0	2	1.59	03/156
04/156	05/156	MANHOLE 1050mm D/A											30		0			0					6.226	4.73	4.73	4.53	0.24	0.70	0.2	0.0	0.0	0.0	2	1.59	04/156
05/156	06/156	MANHOLE 1200mm D/A											30		0			0					6.626	4.53	4.53	4.34	0.24	0.71	0.2	0.0	0.0	0.0	2.01	1.63	05/156
06/156	07/156	MANHOLE 1800mm D/A											30		0			0					6.767	4.34	4.30	4.20	0.24	0.62	0.6	0.0	0.0	0.0	1.43	1.45	06/156
07/156	08/156	MANHOLE 1800mm D/A											30		0			0					5.593	4.20	4.19	4.10	0.26	0.67	0.2	0.0	0.0	0.0	1.52	1.63	07/156
08/156	05/153	MANHOLE 1800mm D/A											30		0			0					4.701	4.10	4.06	4.00	0.39	1.05	0.3	0.0	0.0	0.0	1.66	1.86	08/156
05/153	06/153	CUSTOM MANHOLE 2100x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.678	4.00											05/153
01/157	08/156	INLET GULLY IN SAG	0.133			60	102.9	0.819	0.896	0.088			30		98	1.97	0.01	88	8	0.01	01/158		4.651	4.20	4.18	4.10	4.89	0.09	9.7	0.0	0.1	0.0	0.12	1.62	01/157
08/156	05/153	MANHOLE 1800mm D/A											30		0			0					4.701	4.10											08/156
01/158	08/156	INLET GULLY IN SAG	0.126			60	102.9	0.819	0.896	0.084			30		91			88					4.649	4.20	4.17	4.10	1.36	0.09	9.7	0.0	0.1	0.0	0.19	1.27	01/158
08/156	05/153	MANHOLE 1800mm D/A											30		0			0					4.701	4.10											08/156
01/220	02/220	MANHOLE 1800mm D/A											30	-1.4	0			0				-1.412	4.387	3.73	3.73	3.72	0.02	0.75	2.1	0.0	0.0	0.0	0.86	0.93	01/220
02/220	03/220	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.217	3.72	3.67	3.63	0.19	1.08	1.1	0.0	0.1	0.0	1.25	1.25	02/220
03/220	07/181	CUSTOM MANHOLE 1800x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.306	3.63	3.62	3.51	0.17	1.20	0.2	0.0	0.0	0.0	1.38	1.38	03/220
01/240	07/156	100% CAPTURE FOR FUTURE EXTENSION											30		0	0.00	0.00	0	0	0.00	01/158		5.695	4.20	4.20	4.20	0.00	-0.01	1.9	0.0	0.0	0.0	-0.02	0.11	01/240
07/156	08/156	MANHOLE 1800mm D/A											30		0			0					5.593	4.20											07/156
01/241	02/241	900x900 PIT C/W DOME TOP	0.055			60	102.9	0.819	0.896	0.036			30		36	0.74	0.02	26	5	0.00	01/153		7.058	5.98	5.91	5.95	-0.18	0.03	6.6	0.0	0.1	0.0	0.14	1.08	01/241
02/241	03/241	MANHOLE 1050mm D/A											30		0			0					7.208	5.95	5.95	5.94	0.03	0.04	0.7	0.0	0.0	0.0	0.28	0.34	02/241
03/241	04/241	MANHOLE 1200mm D/A											30		0			0					6.763	5.94	5.76	5.61	0.91	0.67	1.4	0.0	0.2	0.0	1.08	1.8	03/241
04/241		HEADWALL											30		0			0					6.000	5.61											04/241
01/242	07/156	INLET GULLY IN SAG	0.112			60	102.9	0.819	0.896	0.074			30		74	0.77	0.04	54	11	0.02	01/157		5.534	4.24	4.23	4.20	1.73	0.06	9.7	0.0	0.1	0.0	0.15	1	01/242
07/156	08/156	MANHOLE 1800mm D/A											30		0			0					5.593	4.20											07/156
01/243	03/241	100% CAPTURE FOR FUTURE EXTENSION	1.233			60	102.9	0.819	0.896	0.850			30	1.1	850	0.00	0.00	850	0	0.00	01/300	1.139	7.240	6.88	6.07	5.94	1.37	0.65	3.0	0.0	0.8	0.0	1.6	2.37	01/243
03/241	04/241	MANHOLE 1200mm D/A											30		0			0					6.763	5.94											03/241
01/248	02/248	INLET HEADWALL											30		0			0					3.700	3.87	3.87	3.87	0.00	0.30	0.0	0.0	0.0	0.0			01/248
02/248	03/21	CUSTOM MANHOLE 1800x1200 (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.009	3.86	3.83	3.79	0.09	0.21	2.1	0.0	0.1	0.0	0.67	0.85	02/248
03/21	04/21	MANHOLE 1200mm D/A											30		0			0					4.266	3.79											03/21
01/261	01/220	INLET HEADWALL											30		0			0					3.950	4.05	4.09	3.73	0.75	0.21	0.5	0.0	0.1	0.0	0.9	1.89	01/261
01/220	02/220	MANHOLE 1800mm D/A											30	-1.4	0			0				-1.412	4.387	3.73											01/220
01/23	02/23	BASIN NODE FOR CALCULATIONS	1.881			60	102.9	0.819	0.896	1.232			30		1239			1239					2.800	3.87	3.87	3.87	0.00	0.55	0.0	0.0	0.0	0.0			01/23
01/262	01/220	INLET HEADWALL											30		0			0					3.500	3.87	3.83	3.73	0.19	0.55	0.5	0.0	0.1	0.0	0.65	1.52	01/262
01/220	02/220	MANHOLE 1800mm D/A											30	-1.4	0			0				-1.412	4.387	3.73											01/220
01/269	02/269	900x800 PIT C/W DOME TOP	0.475			60	102.9	0.741	0.846	0.289			30		289	0.00	0.00	288	0	0.00	02/269		6.725	4.73	4.54	4.41	4.10	0.29	3.5	0.0	0.2	0.0	0.33	1.32	01/269
02/269	06/156	CUSTOM 500x1200 PIT C/W 900x600 DOME TOP											30		0	0.00	0.00	0	0	0.00	O 02/269		6.676	4.41	4.37	4.34	0.22	0.29	0.9	0.0	0.0	0.0	0.47	1.01	02/269
06/156	07/156	MANHOLE 1800mm D/A											30		0			0					6.767	4.34											06/156
03/153	04/153	CUSTOM 500x1800 PIT C/W 900x600 DOME TOP	0.156			60	102.9	0.819	0.896	0.103			30		103	0.93	0.02	30	6	0.02	01/282		4.014	4.26	4.26	4.30	-0.19	0.00	0.0	0.0	0.0	0.0	0	0	03/153
01/281	02/281	GRATED INLET 900x600											30		65	2.58	0.06	64	-65	0.02	02/153		4.451	4.53	4.48	4.47	0.23	0.15	1.2	0.0	0.0	0.0	0.32	1.82	01/281
02/281	03/281	MANHOLE 1050mm D/A											30		0			0					4.757	4.47	4.46	4.26	0.26	0.15	1.7	0.0	0.1	0.0	0.84	1.09	02/281
03/281	04/281	MANHOLE 1050mm D/A											30		0			0					4.326	4.26	4.25	4.14	0.17	0.15	2.1	0.0	0.0	0.0	1.67	0.95	03/281
04/281	05/281	MANHOLE 1050mm D/A											30		0			0					4.249	4.14	4.14	4.12	0.02	-0.04	1.8	0.0	0.0	0.0	-1.51	0.88	04/281
05/281	06/281	MANHOLE 1050mm D/A											30		0			0					4.251	4.12	4.12	4.10	0.02	-0.04	2.1	0.0	0.1	0.0	-1.51	0.86	05/281
06/281	07/281	MANHOLE 1050mm D/A											30		0			0					4.736	4.10	4.07	3.93	0.28	0.34	1.9	0.0	0.2	0.0	2.49	1.57	06/281
07/281	08/281	MANHOLE 1050mm D/A											30		0			0					4.009	3.93	3.93	3.84	0.11	0.25	0.3	0.0	0.0	0.0	2.58	1.62	07/281
01/282	02/282	WEIR FOR CALCULATIONS											30		6	0.00	0.00	6	0	0.00	01/283		3.502	4.12	4.12	4.12	0.00	0.11	0.8	0.0	0.1	0.0	7.89	1.18	01/282
02/282	04/281	GRATED INLET 900x600											30		0			0					3.940	4.12	4.12	4.11	0.15	-0.04	1.9	0.0	0.1	0.0	-0.38	1.27	02/282
04/281	05/281	MANHOLE 1050mm D/A											30		0			0					4.249	4.14											04/281
01/1	02/1	BASIN NODE FOR CALCULATIONS	1.097			60	102.9	0.819	0.896	0.667			30		667			667					4.480	4.12	4.12	4.12	0.00	-0.03	0.0	0.0	0.0	0.0			01/1
01/283	02/283	WEIR FOR CALCULATIONS											30		0	0.00	0.00	0	0	0.00	01/1		3.094	4.12	4.12	4.12	0.00	-0.03	0.8	0.0	0.1	0.0	-7.79	1.49	01/283
02/283	05/281	GRATED INLET 900x600											30		0	0.00	0.00	0	0	0.00	01/1		3.940	4.12	4.12	4.10	0.37	-0.05	2.1	0.0	0.1	0.0	-0.46	1.35	02/283
05/281	06/281	MANHOLE 1050mm D/A											30		0			0					4.251	4.12											05/281
01/22	02/22	CUSTOM MANHOLE (STRUCTURAL ENG. TO DESIGN)											30		0			0					4.801	4.13	4.11	4.10	0.39	0.42	0.2	0.0	0.1	0.0	0.65	3.61	01/22
06/281	07/281	MANHOLE 1050mm D/A											30		0			0					4.736	4.10											06/281
01/302	02/302	INLET GULLY ON GRADE	0.071			60	102.9	0.819	0.896	0.047			30		47	1.20	0.04	42	18	0.04	02/304		6.326	6.39	6.38	6.38	0.00	0.04	9.7	0.0	0.1	0.0	0.17	0.7	01/302
02/302	03/302	900x600 PIT C/W DOME TOP	0.193			60	102.9	0.819	0.896	0.128			30		128	2.33	0.06	72	51	0.06	01/322		6.441	6.38	6.34	6.30	1.16	0.20	1.9	0.0	0.1	0.0	0.7	1.47	02/302
03/302	04/302	MANHOLE 1050mm D/A											30		0			0					6.591	6.30	6.14	5.42	0.91	0.53	1.8	0.0	0.2	0.0	0.65	2.66	03/302
04/302	01/300	MANHOLE 1050mm D/A											30		0			0					6.044	5.42	5.12	4.91	0.89	0.58	1.4	0.0	0.3	0.0	0.38	3.72	04/302
01/300	02/300	INLET HEADWALL											30		0			0					3.400	4.91											01/300
01/303	03/302	100% CAPTURE FOR FUTURE EXTENSION	0.570			60	102.9	0.819	0.896	0.377			30	0.5	377	0.00	0.00	377	0	0.00	01/322	0.479	7.019	6.83	6.67	6.30	2.70	0.38	7.3	0.0	0.3	0.0	0.56	1.74	01/303
03/302	04/302	MANHOLE 1050mm D/A											30		0			0					6.591	6.30											03/302
01/326	02/326	INLET GULLY IN SAG	0.201			60	102.9	0.819	0.896	0.133			30		133			133					6.614	6.62	6.56	6.52	0.32	0.10	7.7	0.0	0.1	0.0	0.41	1.25	01/326
02/326	03/326	900x600 PIT C/W DOME TOP											30		0			0					6.778	6.52	6.49	6.44	0.16	0.10	1.6	0.0	0.1	0.0	0.8	1.11	02/326
03/326	02/302	900x600 PIT C/W DOME TOP											30		0			0					6.600	6.44	6.43	6.38	0.17	0.10	0.2	0.0	0.0	0.0	0.83	0.93	03/326
02/302	03/302	900x600 PIT C/W DOME TOP	0.193			60	102.9	0.819	0.896	0.128			30		128	2.33	0.06	72	51	0.06	01/322		6.441	6.38											02/302

INTENSITY - FREQUENCY - DURATION (IFD) TABLE

DURATION	ARI INTENSITY (YEAR)								
MINUTES	TREAT	1	2	5	10	20	50	100
5	65.7	131.5	165.5	199.8	218.4	244.7	278.3	303.2
5.5	63.6	127.2	160.0	193.4	211.5	236.9	269.6	293.8
6	61.6	123.2	155.0	187.5	205.1	229.9	261.8	285.3
6.5	59.8	119.6	150.5	182.2	199.4	223.5	254.6	277.6
7	58.1	116.3	146.4	177.3	194.1	217.7	248.0	270.5
7.5	56.6	113.2	142.6	172.8	189.2	212.3	241.9	263.9
8	55.2	110.4	139.0	168.6	184.7	207.3	236.3	257.8
8.5	53.9	107.8	135.8	164.8	180.5	202.7	231.1	252.2
9	52.8	105.3	132.7	161.1	176.6	198.3	226.2	246.9
9.5	51.5	103.0	129.9	157.8	173.0	194.2	221.6	241.9
10	50.4	100.9	127.2	154.6	169.5	190.4	217.3	237.3
12	46.7	93.4	117.8	143.5	157.5	177.1	202.3	221.0
13	45.1	90.2	113.8	138.8	152.4	171.4	195.9	214.0
14	43.6	87.3	110.2	134.4	147.7	166.2	190.0	207.7
15	42.3	84.6	106.9	130.5	143.4	161.4	184.6	201.8
16	41.1	82.2	103.8	126.8	139.4	157.0	179.6	196.5
17	39.9	79.9	101.0	123.5	135.8	153.0	175.0	191.5
18	38.9	77.8	98.4	120.3	132.4	149.2	170.7	186.8
19	37.9	75.8	95.9	117.4	129.2	145.6	166.7	182.5
20	37.0	74.0	93.6	114.6	126.2	142.3	162.9	178.4
21	36.1	72.3	91.4	112.0	123.4	139.2	159.4	174.5
22	35.3	70.6	89.4	109.6	120.7	136.2	156.1	170.9
23	34.5	69.1	87.5	107.3	118.2	133.4	152.9	167.5
24	33.8	67.7	85.7	105.1	115.9	130.8	149.9	164.2
25	33.1	66.3	83.9	103.1	113.6	128.3	147.1	161.1
26	32.5	65.0	82.3	101.1	111.5	125.9	144.4	158.2
27	31.8	63.7	80.7	99.2	109.4	123.6	141.8	155.4
28	31.2	62.5	79.2	97.5	107.5	121.4	139.3	152.7
29	30.7	61.4	77.8	95.7	105.6	119.4	137.0	150.2
30	30.1	60.3	76.5	94.1	103.9	117.4	134.7	147.7
32	29.1	58.3	73.9	91.1	100.5	113.7	130.5	143.2
34	28.2	56.4	71.6	88.2	97.5	110.2	126.6	138.9
36	27.3	54.7	69.4	85.6	94.6	107.0	123.0	135.0
38	26.5	53.1	67.4	83.2	92.0	104.1	119.7	131.3
40	25.8	51.6	65.5	80.9	89.5	101.3	116.5	127.9
45	24.1	48.3	61.3	75.9	84.0	95.1	109.5	120.3
50	22.7	45.5	57.8	71.6	79.3	89.8	103.5	113.7
55

HORIZONTAL THRUST BLOCKS TO BE IN ACCORDANCE WITH:

Minimum Thrust Area (m^2) for Concrete Blocks given 1350kPa System Test Pressure (Water):

Based on Soil Classification: 100kPa

Pipe Diameter	Bends				Tee & Dead Ends
	11.25	22.5	45	90	
100	0.21	0.21	0.21	0.21	0.21
150	0.21	0.21	0.21	0.46	0.32
200	0.21	0.21	0.39	0.73	0.51
250	0.21	0.31	0.59	1.11	0.78
450	0.53	1.04	2.04	3.78	2.67

Resultant Thrust (kN) given 135m Head with 1350kPa System Test Pressure (Water):

Pipe Diameter	Bends				Tee & Dead Ends
	11.25	22.5	45	90	
100	3.03	6.04	11.84	21.88	15.47
150	6.38	12.71	24.93	46.06	32.57
200	10.97	21.83	42.82	79.13	55.95
250	16.67	33.18	65.08	120.25	85.03
450	52.38	104.26	204.51	377.88	267.20

FOR FURTHER DETAIL REFER TO WSA 03-2011-3.1 TABLE 7.3.

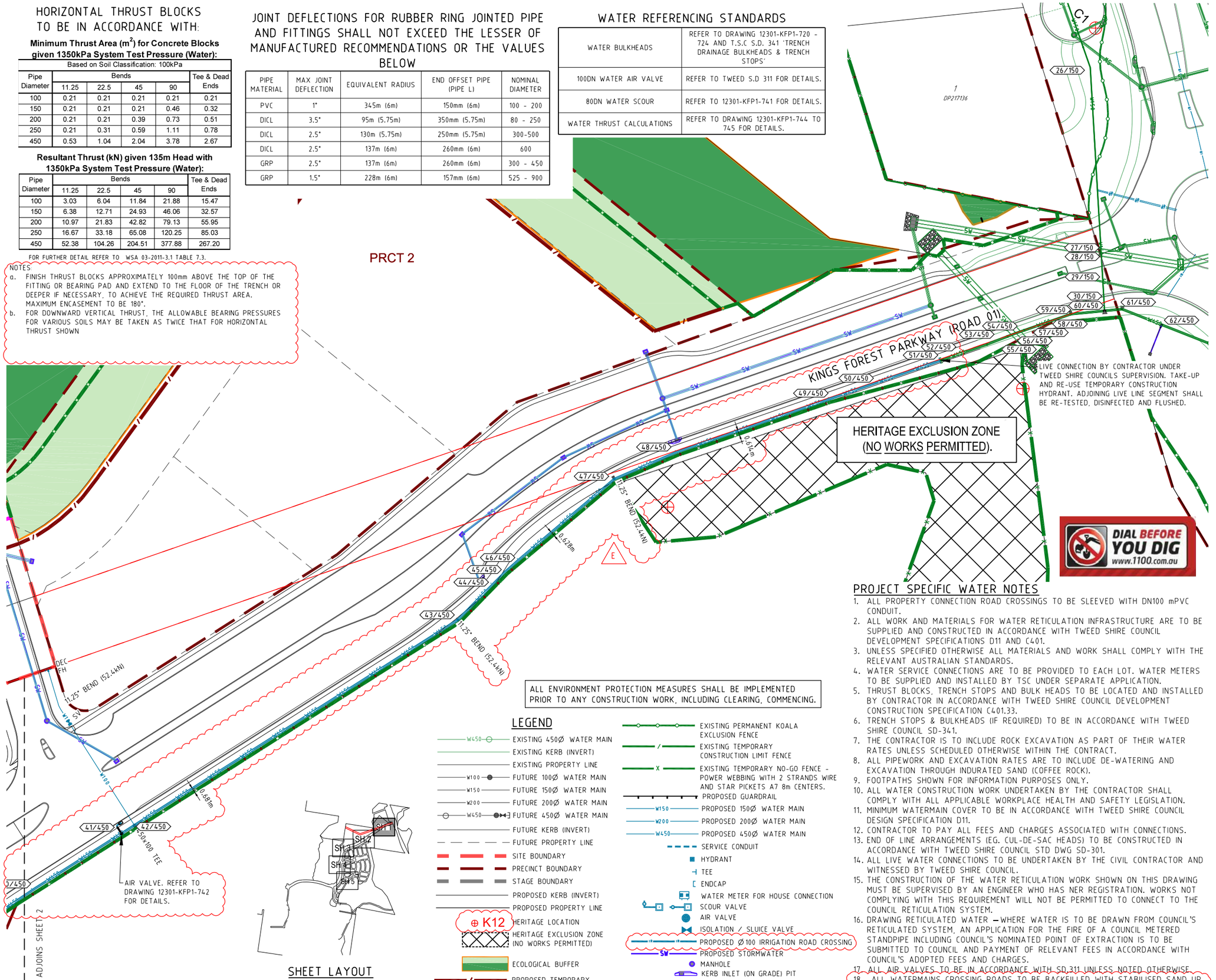
NOTES:
a. FINISH THRUST BLOCKS APPROXIMATELY 100mm ABOVE THE TOP OF THE FITTING OR BEARING PAD AND EXTEND TO THE FLOOR OF THE TRENCH OR DEEPER IF NECESSARY, TO ACHIEVE THE REQUIRED THRUST AREA. MAXIMUM ENCASEMENT TO BE 180°.
b. FOR DOWNWARD VERTICAL THRUST, THE ALLOWABLE BEARING PRESSURES FOR VARIOUS SOILS MAY BE TAKEN AS TWICE THAT FOR HORIZONTAL THRUST SHOWN

JOINT DEFLECTIONS FOR RUBBER RING JOINTED PIPE AND FITTINGS SHALL NOT EXCEED THE LESSER OF MANUFACTURED RECOMMENDATIONS OR THE VALUES BELOW

PIPE MATERIAL	MAX JOINT DEFLECTION	EQUIVALENT RADIUS	END OFFSET PIPE (PIPE L)	NOMINAL DIAMETER
PVC	1°	345m (6m)	150mm (6m)	100 - 200
DICL	3.5°	95m (5.75m)	350mm (5.75m)	80 - 250
DICL	2.5°	130m (5.75m)	250mm (5.75m)	300-500
DICL	2.5°	137m (6m)	260mm (6m)	600
GRP	2.5°	137m (6m)	260mm (6m)	300 - 450
GRP	1.5°	228m (6m)	157mm (6m)	525 - 900

WATER REFERENCING STANDARDS

WATER BULKHEADS	REFER TO DRAWING 12301-KFP1-720 - 724 AND T.S.C S.D. 341 'TRENCH DRAINAGE BULKHEADS & TRENCH STOPS'
100DN WATER AIR VALVE	REFER TO TWEED S.D 311 FOR DETAILS.
80DN WATER SCOUR	REFER TO 12301-KFP1-741 FOR DETAILS.
WATER THRUST CALCULATIONS	REFER TO DRAWING 12301-KFP1-744 TO 745 FOR DETAILS.



ALL ENVIRONMENT PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

LEGEND

- EXISTING 450Ø WATER MAIN
- EXISTING KERB (INVERT)
- EXISTING PROPERTY LINE
- FUTURE 100Ø WATER MAIN
- FUTURE 150Ø WATER MAIN
- FUTURE 200Ø WATER MAIN
- FUTURE 450Ø WATER MAIN
- FUTURE KERB (INVERT)
- FUTURE PROPERTY LINE
- SITE BOUNDARY
- PRECINCT BOUNDARY
- STAGE BOUNDARY
- PROPOSED KERB (INVERT)
- PROPOSED PROPERTY LINE
- K12 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER
- PROPOSED TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS A7 8m CENTERS.
- PROPOSED GUARDRAIL
- PROPOSED 150Ø WATER MAIN
- PROPOSED 200Ø WATER MAIN
- PROPOSED 450Ø WATER MAIN
- SERVICE CONDUIT
- HYDRANT
- TEE
- ENDCAP
- WATER METER FOR HOUSE CONNECTION
- SCOUR VALVE
- AIR VALVE
- ISOLATION / SLUICE VALVE
- PROPOSED Ø100 IRRIGATION ROAD CROSSING
- PROPOSED STORMWATER
- MANHOLE
- KERB INLET (ON GRADE) PIT
- KERB INLET (SAG) PIT
- HEADWALL

PROJECT SPECIFIC WATER NOTES

1. ALL PROPERTY CONNECTION ROAD CROSSINGS TO BE SLEEVED WITH DN100 mPVC CONDUIT.
2. ALL WORK AND MATERIALS FOR WATER RETICULATION INFRASTRUCTURE ARE TO BE SUPPLIED AND CONSTRUCTED IN ACCORDANCE WITH TWEED SHIRE COUNCIL DEVELOPMENT SPECIFICATIONS D11 AND C401.
3. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
4. WATER SERVICE CONNECTIONS ARE TO BE PROVIDED TO EACH LOT. WATER METERS TO BE SUPPLIED AND INSTALLED BY TSC UNDER SEPARATE APPLICATION.
5. THRUST BLOCKS, TRENCH STOPS AND BULK HEADS TO BE LOCATED AND INSTALLED BY CONTRACTOR IN ACCORDANCE WITH TWEED SHIRE COUNCIL DEVELOPMENT CONSTRUCTION SPECIFICATION C401.33.
6. TRENCH STOPS & BULKHEADS (IF REQUIRED) TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL SD-341.
7. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR WATER RATES UNLESS SCHEDULED OTHERWISE WITHIN THE CONTRACT.
8. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
9. FOOTPATHS SHOWN FOR INFORMATION PURPOSES ONLY.
10. ALL WATER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE WORKPLACE HEALTH AND SAFETY LEGISLATION.
11. MINIMUM WATERMAIN COVER TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL DESIGN SPECIFICATION D11.
12. CONTRACTOR TO PAY ALL FEES AND CHARGES ASSOCIATED WITH CONNECTIONS.
13. END OF LINE ARRANGEMENTS (EG. CUL-DE-SAC HEADS) TO BE CONSTRUCTED IN ACCORDANCE WITH TWEED SHIRE COUNCIL STD DWG SD-301.
14. ALL LIVE WATER CONNECTIONS TO BE UNDERTAKEN BY THE CIVIL CONTRACTOR AND WITNESSED BY TWEED SHIRE COUNCIL.
15. THE CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS NER REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE COUNCIL RETICULATION SYSTEM.
16. DRAWING RETICULATED WATER – WHERE WATER IS TO BE DRAWN FROM COUNCIL'S RETICULATED SYSTEM, AN APPLICATION FOR THE FIRE OF A COUNCIL METERED STANDPIPE INCLUDING COUNCIL'S NOMINATED POINT OF EXTRACTION IS TO BE SUBMITTED TO COUNCIL AND PAYMENT OF RELEVANT FEES IN ACCORDANCE WITH COUNCIL'S ADOPTED FEES AND CHARGES.
17. ALL AIR VALVES TO BE IN ACCORDANCE WITH SD.311 UNLESS NOTED OTHERWISE
18. ALL WATERMAINS CROSSING ROADS TO BE BACKFILLED WITH STABILISED SAND UP TO UNDERSIDE OF SUB-BASE LAYER.

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

E	11-06-21	WATER ALIGNMENT AND DIMENSIONS AMENDED
D	07-05-21	BEND AMENDED
C	25-03-21	LEGEND, NOTES, TABLE AND STORMWATER AMENDED
B	25-02-21	WATER ALIGNMENT, TABLES AND NOTES AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS
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DRAWING TITLE
WATER RETICULATION PLAN SHEET 1

CONSTRUCTION ISSUE

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APPROVED		NER	906726
		DATE	14-11-19

DRAWING NUMBER 12301-KFP1-700
AMEND. E

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PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

D	11-06-21	WATER ALIGNEMENT AND DIMENSIONS AMENDED
C	15-04-21	STORMWATER AMENDED
B	18-02-20	WATER ALIGNMENT AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

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GILBERT SUTHERLAND

DRAWING TITLE

WATER RETICULATION PLAN SHEET 2

CONSTRUCTION ISSUE

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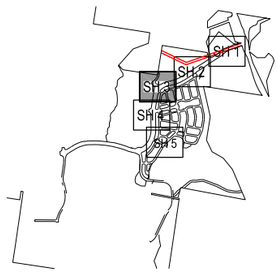

SHEET LAYOUT

PROVIDE TEMPORARY STAGING ARRANGEMENT BETWEEN WORKS.
INSTALL STOP VALVE, HYDRANT BEND AND TEMPORARY CONSTRUCTION HYDRANT IN ACCORDANCE WITH D11.06.4 OF TWEED SHIRE COUNCIL SUBDIVISION MANUAL

LIVE CONNECTION BY CONTRACTOR UNDER TWEED SHIRE COUNCIL SUPERVISION. TAKE UP AND RE-USE TEMPORARY CONSTRUCTION HYDRANT, MAY INCLUDE STOP VALVE. ADDITIONAL STOP VALVES ARE TO BE PROVIDED WHERE SHOWN AS X SV

SCOUR VALVE, 100Ø uPVC PIPE TO STORMWATER PIT 3/281. REFER TO DRAWING 12301-FKP1-741 FOR DETAILS.

LIVE CONNECTION BY CONTRACTOR UNDER TWEED SHIRE COUNCIL SUPERVISION. TAKE UP AND RE-USE TEMPORARY CONSTRUCTION HYDRANT, MAY INCLUDE STOP VALVE. ADDITIONAL STOP VALVES ARE TO BE PROVIDED WHERE SHOWN AS X SV

SLUICE VALVE.

ADJOINS SHEET 2

ADJOINS SHEET 4

ROAD 04
ROAD 05
KINGS FOREST PARKWAY (ROAD 01)
ROAD 11
ROAD 22
ROAD 50
STG 2

TEMP FH SV
1/D
2/D
4/D
250x150 TEE
2.356m
2.150m
450x100 TEE
450x250 TEE
32/450
33/450
31/450
30/450
29/450
28/450

201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223
5 18 23 24 25 26 27 28 29 30 31 32 33 34

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

D	19-07-21	WATER ALIGNMENT AND NOTES AMENDED
C	25-03-21	STORMWATER, WATER SIZE AND NOTES AMENDED
B	18-02-20	WATER ALIGNMENT AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

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GILBERT SUTHERLAND

DRAWING TITLE

WATER RETICULATION PLAN SHEET 3

CONSTRUCTION ISSUE

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SHEET LAYOUT

PRCT 4

ADJOINS SHEET 3

ADJOINS SHEET 5

PROVIDE TEMPORARY STAGING ARRANGEMENT BETWEEN WORKS.
INSTALL STOP VALVE, HYDRANT BEND AND TEMPORARY CONSTRUCTION HYDRANT IN ACCORDANCE WITH D11.06.4 OF TWEED SHIRE COUNCIL SUBDIVISION MANUAL

SCOUR VALVE, 100Ø uPVC PIPE TO STORMWATER PIT 1/022. REFER TO DRAWING 12301-FKP1-741 FOR DETAILS.

45° BEND (24.9kN)

TEMP FH

SLUICE VALVE
11.25° BEND (52.4kN)
450x250 TEE
450x200 TEE
22.5° BEND (21.8kN)

45° BEND (42.8kN)

PROVIDE TEMPORARY STAGING ARRANGEMENT BETWEEN WORKS.
INSTALL STOP VALVE, HYDRANT BEND AND TEMPORARY CONSTRUCTION HYDRANT IN ACCORDANCE WITH D11.06.4 OF TWEED SHIRE COUNCIL SUBDIVISION MANUAL

SCOUR VALVE, 100Ø uPVC CORE DRILLED TO STORMWATER LINE 22. REFER TO DRAWING 12301-FKP1-741 FOR DETAILS.

MOUND GARDEN BED LOCALLY TO MATCH PIT LID LEVEL APPROX RL 5.0

AIR VALVE, REFER TO TWEED SHIRE COUNCIL SD.311 FOR DETAILS.

2.150m

ROAD 11
ROAD 07
ROAD 29
ROAD 27
ROAD 30
DWAY 43
DWAY 99B

PROJECT NAME
KINGS FOREST
KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

E	08-09-21	IRRIGATION ADDED
D	07-05-21	VALVE ADDED
C	25-03-21	STORMWATER AND NOTES AMENDED
B	18-02-20	WATER ALIGNMENT AMENDED
A	14-11-19	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

WATER RETICULATION PLAN SHEET 4

CONSTRUCTION ISSUE

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DRAWING NUMBER	AMEND.
12301-KFP1-703	E

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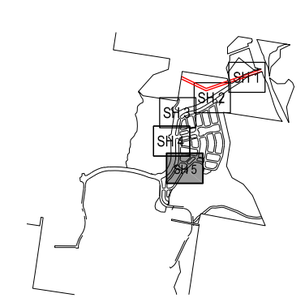
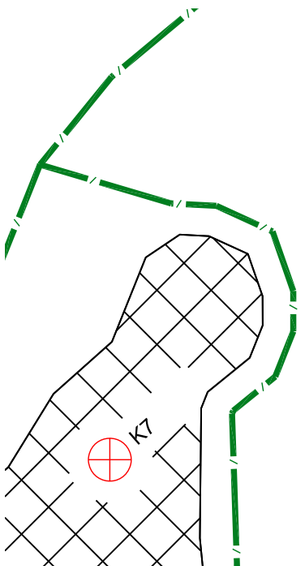


SHEET LAYOUT



ADJOINS SHEET 4

ROAD 30

ROAD 40

STG 7

ROAD 29

ROAD 47

ROAD 13

ROAD 08

STG 8

ROAD 57

ROAD 09

19/450
18/450
17/450
16/450
15/450
14/450
13A/450
13/450
12/450
11/450
10/450
9/450
8/450
4/450
5/450
6/450
7/450
15/300
14/300
13/300

2.150m

REFER TO 12301-KFP1-098 FOR DETAILS.

REFER TO STAGES 1 TO 3 DRAWINGS FOR CONTINUATION OF WATERMAIN TO PROVIDE WATER TO SEWER PUMPS STAIN PS.02.

DEC 450x100 TEE TEMP FH
11.25° BEND (52.4kN)
DEC
SLUICE VALVES.

705 704 703 702 701 727 728 729 730 726 725 724 723 722 721 736 735 734 731 732 733 831 830 829 828 827 826 825 824 811 810 809 812 813 808 823 822 814 807 815 806 821 820 816 805 916 915 817 804 818 803 914 819 802 913 917 801 918 912 926 832 113

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	15-04-21	NOTE AMENDED
B	18-02-20	WATER ALIGNMENT AMENDED
A	14-11-19	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

WATER RETICULATION PLAN SHEET 4

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
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DRAWING NUMBER 12301-KFP1-704

AMEND. C

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C

1/450 | 1B/450 | 12/450 | 13/450 | 13A/450 | 14/450 | 15/450 | 16/450 | 17/450 | 18/450 | 19/450 | 20/450 | 21/450 | 22/450 | 23/450 | 24/450 | 25/450

PIT< 0°00'03" | PIT< 0°00'10" | PIT< 0°00'08" | PIT< -0°00'01" | PIT< 0°00'07" JUNCTION H | PIT< 0°00'14" | PIT< 0°00'07" | PIT< 0°00'09" | PIT< 0°00'09" | PIT< -0°00'02" | VERT 11.25° | PIT< 0°11'13" | PIT< 0°16'58" | VERT 11.25°

JD | JD | JD | SLUICE VALVE | JD | TEE REDUCE | JD | JD | JD | JD | JD | AIR VALVE AS PER SD311 | JD | SCOUR VALVE | JD | JD | JD

1m

FUTURE WORKS

KFP1 WORKS

ROAD 07

LEGEND

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS

JD STRUCTURE TYPE JD = JOINT DEFLECTION

PROVIDE MINIMUM COVER 600mm IN VERGE, 600mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

PIPE CLASS: PN20

0.4m | 0.13m | 0.26m | 2.93m | 0.17m

LINE 71 63 225mm IL 0.23 CH 284.9 RL 3.413
LINE 63 63 200mm IL 2.78 CH 287.3 RL 3.417
LINE 64 64 375mm IL 2.59 CH 290.9 RL 3.420
LINE 64 64 375mm IL 2.76 CH 298.5 RL 3.377 ELEC-COMMS 250mm IL 3.77

7 450mm IL 2.68 CH 541.652 RL 4.447
5 600mm IL 2.54 CH 541.123 RL 4.418
6 375mm IL 2.71 CH 541.652 RL 4.447

PIPE DIAMETER (mm)	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL	Ø450 DICL
PIPE GRADE	1in-995	1in-608	1in-485	1in-315	1in-449	1in-568	1in-1000	1in-1000	1in-1000	1in-650	1in-868	1in97.6	1in209	1in-500	1in-1000	1in-2000	1in	
DATUM R.L.	-16.000																	
DEPTH TO INVERT	1.200	1.208	1.199	1.199	1.195	1.195	1.190	1.190	1.189	1.189	1.188	1.188	1.182	1.182	1.112	1.112	1.120	1.120	1.113	1.113	1.154	1.154	1.079	1.079	1.194	1.194	1.183	1.183	1.139	1.139	1.128	1.128	1.029	1.029	
PIPE INVERT LEVELS	2.396	3.388	3.398	3.398	3.400	3.400	3.407	3.407	3.409	3.409	3.410	3.410	3.416	3.416	3.419	3.420	3.425	3.425	3.426	3.430	3.430	3.567	3.567	3.690	3.690	3.292	3.292	3.273	3.273	3.279	3.279	3.293	3.293	3.300	3.300	3.303	3.303	
DESIGN SURF. LEVEL	4.596		4.597		4.594		4.597		4.598		4.599		4.598		4.531		4.545			4.542		4.721		4.768		4.487		4.456		4.418		4.428		4.333		
CHAINAGE	E 54417.809 N 69826.436	7.821	9.595	E 54415.889 N 69835.154	7.416	1.159	E 54416.353 N 69836.217	8.375	2.523	E 54417.729 N 69839.469	8.098	0.616	E 54417.965 N 69840.029	7.714	0.710	E 54418.235 N 69840.685	7.424	1.524	0.380	E 54419.498 N 69843.821	7.804	0.573	2.673	E 54420.189 N 69847.157	8.377	0.573	0.573	E 54422.628 N 69852.151	7.703	0.574	2.424	E 54424.077 N 69856.331	7.127	89.516	E 54437.739 N 69944.355	89.643	106.250	E 54435.881 N 70050.586	5.893	38.754	E 54435.208 N 70089.338	4.648	5.003	E 54435.151 N 70093.340	8.551	3.002	E 54435.123 N 70096.342	1.652	2.811	13.847	15.658	17.469	18.564	E 54434.931 N 70117.140	6.451	16.390	E 54434.872 N 70123.529	8.841	6.333	

450

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	15-04-21	LEGEND AND PROFILE AMENDED
B	25-02-21	LEGEND AND PROFILE AMENDED
A	06-08-19	ISSUE FOR INFORMATION

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LANDSURV
GILBERT SUTHERLAND

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WATER
PROFILE
SHEET 1 OF 6

CONSTRUCTION ISSUE

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		DATE	14-11-19

DRAWING NUMBER 12301-KFP1-720

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C

25/450 JD
26/450 PIT < -0°02'04" JUNCTION G TEE REDUCE
27/450 PIT < 9°33'55" JUNCTION C TEE
27A/450 PIT < -0°00'08" B HOZ. 11.25°
28/450 PIT < -0°04'39" JD
29/450 PIT < -0°05'46" SLUICE VALVE
30/450 PIT < -0°02'47" JUNCTION E TEE REDUCE
31/450 PIT < -0°11'04" JUNCTION D TEE
32/450 PIT < -0°09'19" JD

NOTE. 2.5° DEFLECTION REQUIRED FOR EACH DICL SOCKET JOINT TO ACHIEVE NOMINAL RADIUS 125.4°

KFP1 WORKS

LEGEND

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS

JD STRUCTURE TYPE JD = JOINT DEFLECTION

PROVIDE MINIMUM COVER 600mm IN VERGE, 600mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

PIPE CLASS PN20

LINE 34 (CH. 750.6 RL. 3.765
34 300mm IL 2.83 0.6m

| | | |

C

LEGEND

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

B STRUCTURE TYPE B = VERTICAL AND OR HORIZONTAL BENDS

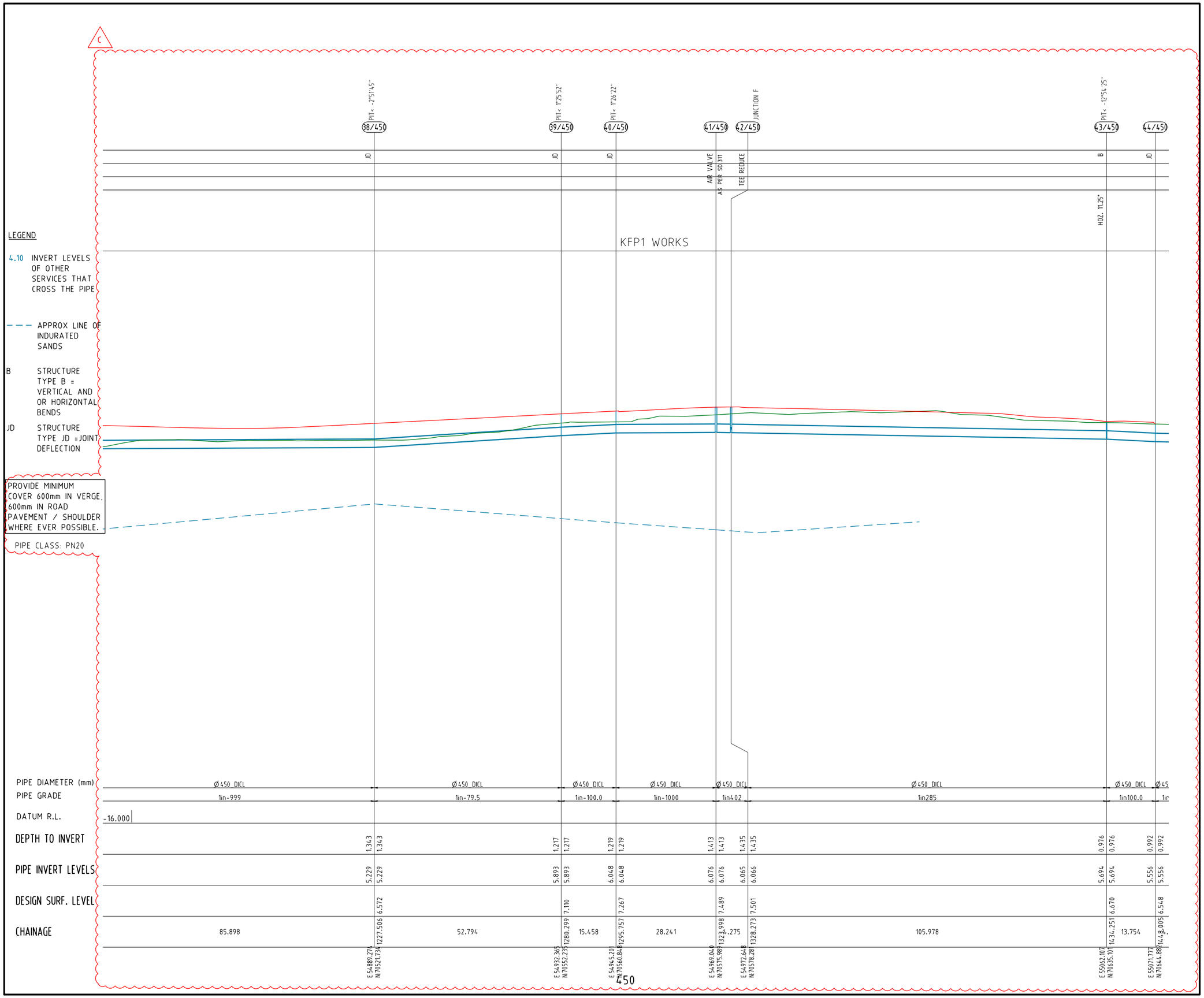
JD STRUCTURE TYPE JD =JOINT DEFLECTION

PROVIDE MINIMUM COVER 600mm IN VERGE, 600mm IN ROAD PAVEMENT / SHOULDER WHERE EVER POSSIBLE.

PIPE CLASS PN20

KFP1 WORKS

| | | |



PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
C	16-04-21	LEGEND AND PROFILE AMENDED
B	25-02-21	LEGEND AND PROFILE AMENDED
A	06-08-19	ISSUE FOR INFORMATION

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GILBERT SUTHERLAND

DRAWING TITLE

WATER
PROFILE
SHEET 4 OF 6

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DRAWING NUMBER: 12301-KFP1-723
AMEND.: C

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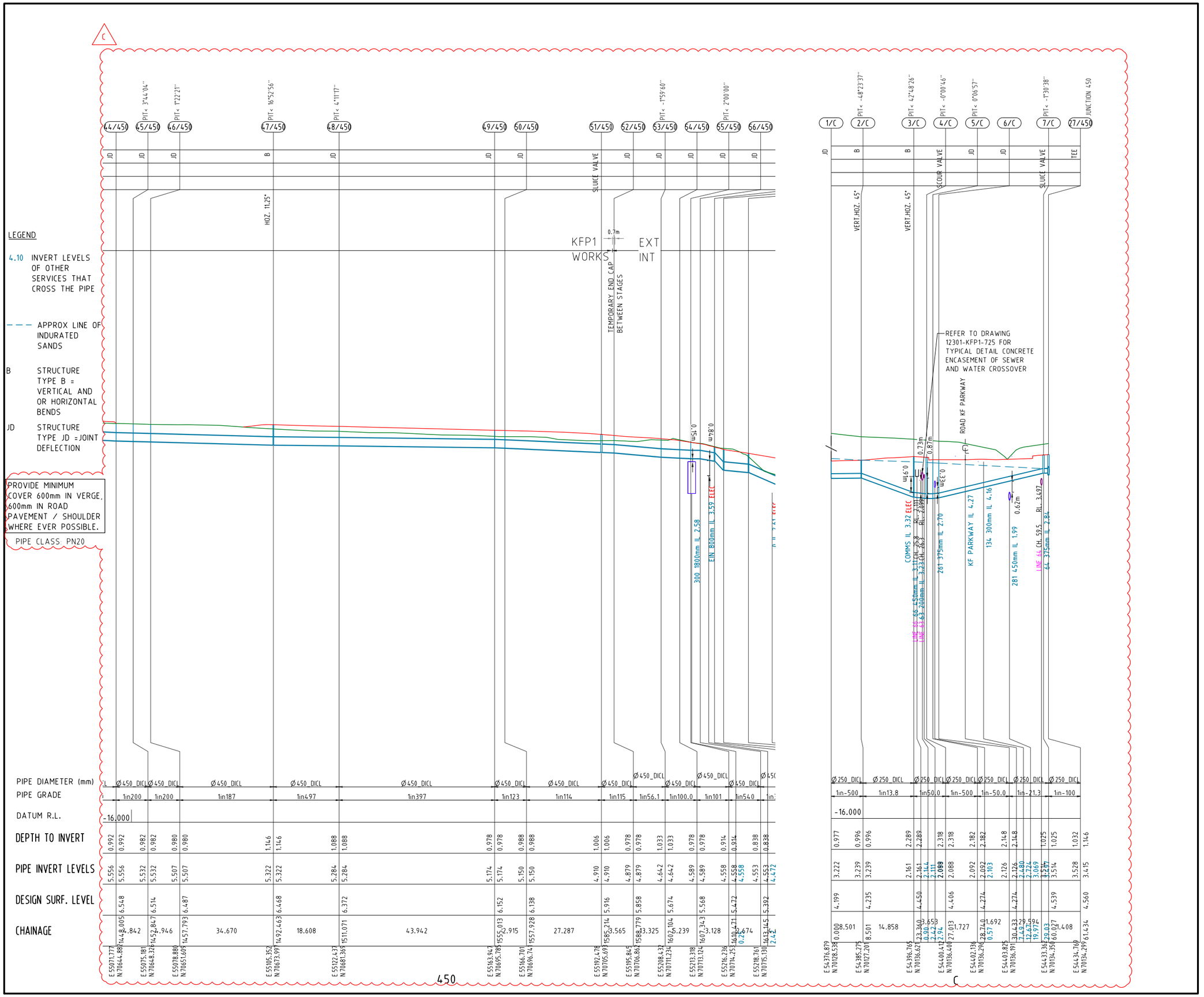

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

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PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

C	16-04-21	LEGEND AND PROFILE AMENDED
B	25-02-21	LEGEND AND PROFILE AMENDED
A	06-08-19	ISSUE FOR INFORMATION
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WATER
PROFILE
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DRAWING NUMBER 12301-KFP1-724	AMEND. C

DATE 14-11-19

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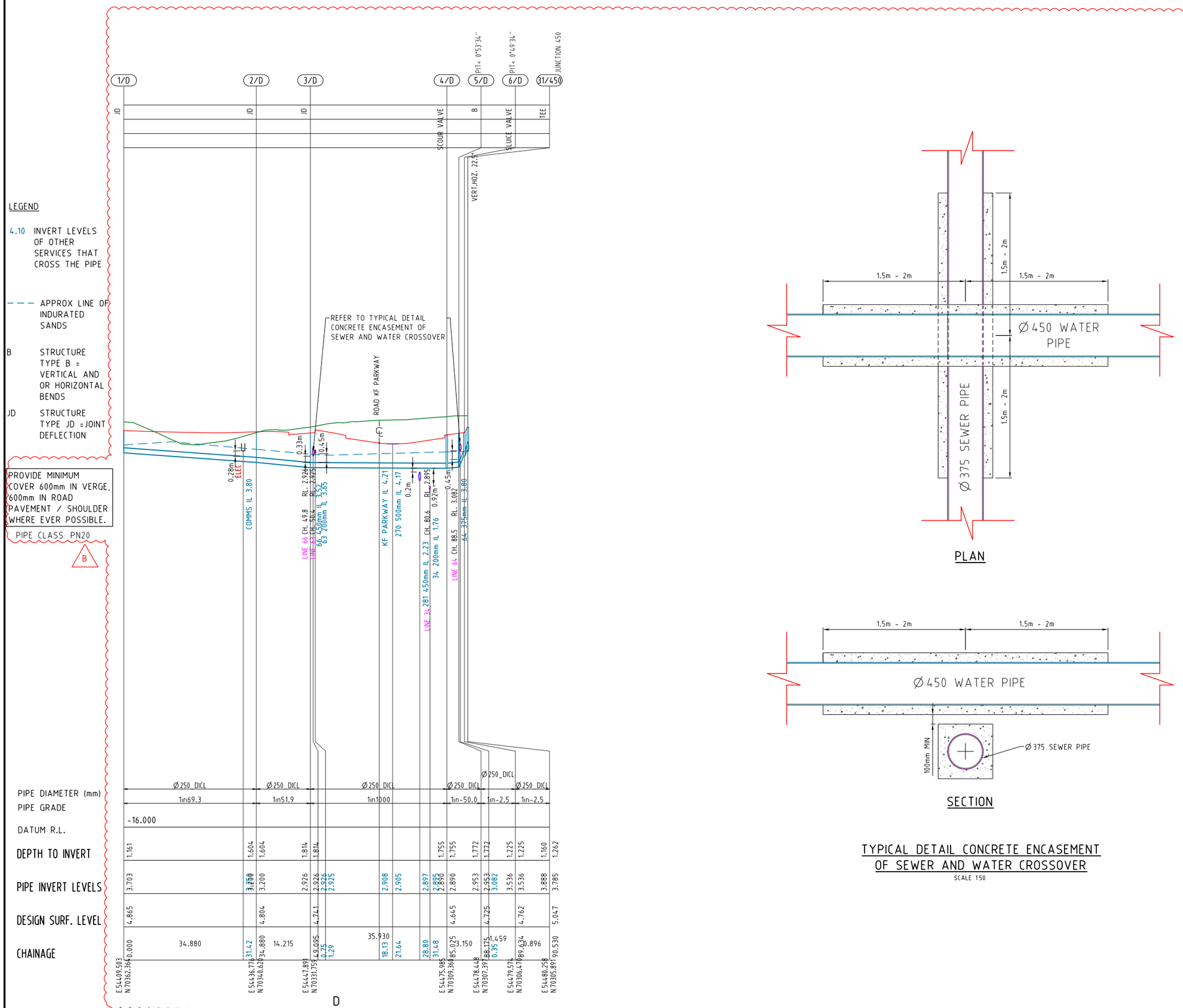

PLAN

SECTION

TYPICAL DETAIL CONCRETE ENCASEMENT OF SEWER AND WATER CROSSOVER

SCALE 1:50

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
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Lot 37A on DP13727, Lot 38A on DP13727,
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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	14-11-19	
CONSTRUCTION	..	

B	15-04-21	LEGEND, DETAIL AND PROFILE AMENDED
A	23-02-21	ISSUE FOR INFORMATION
PRE	DATE	AMENDMENT

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WATER
PROFILE
SHEET 6 OF 6

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 14-11-19

DRAWING NUMBER	AMEND.
12301-KFP1-725	B

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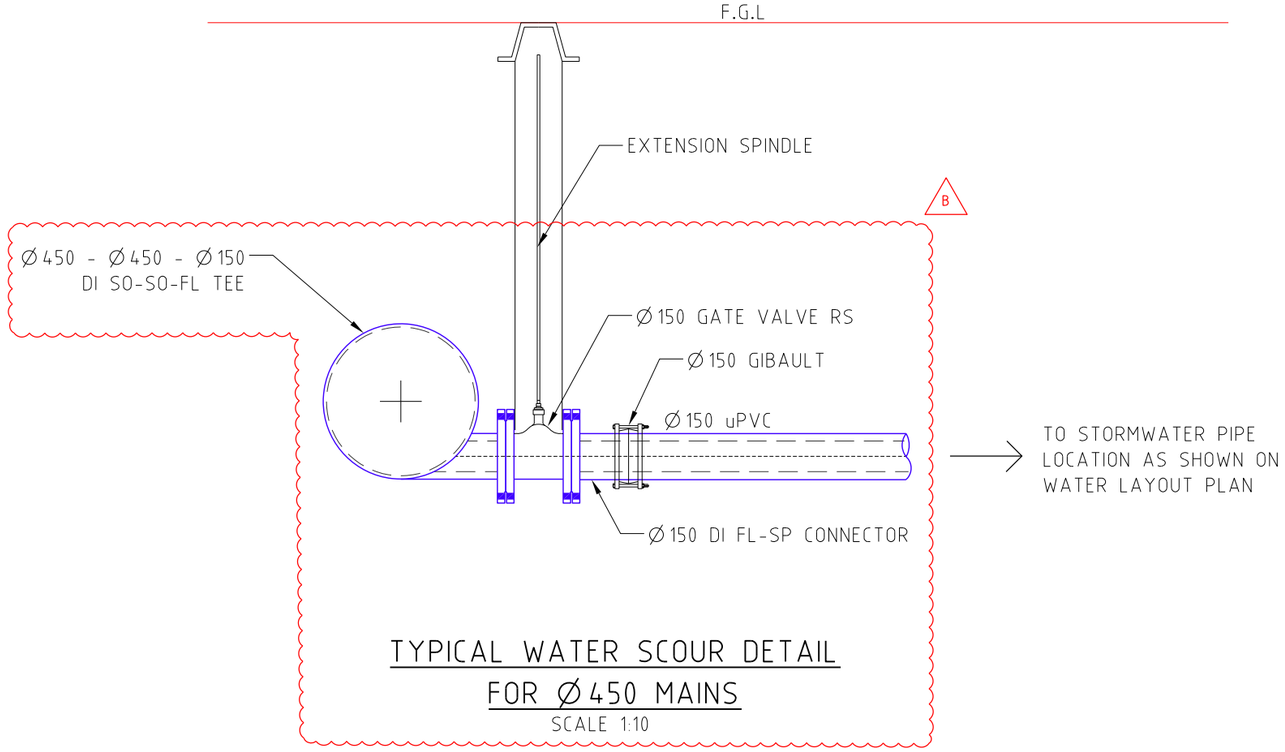

TYPICAL WATER SCOUR DETAIL
FOR Ø450 MAINS
SCALE 1:10

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.1 0.2 0.3 0.4 0.5m
Scale 1:10 - A1 (1:20 - A3)

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
B	08-06-21	NOTES AND FITTINGS AMENDED
A	21-04-21	ISSUE FOR INFORMATION

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GILBERT SUTHERLAND

DRAWING TITLE

TYPICAL
WATER SCOUR
STANDARD
DETAILS

CONSTRUCTION ISSUE

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Southport QLD 4215

DESIGNED	RB	DRAWN	JB
APPROVED		NER 906726	DATE 19-05-20

DRAWING NUMBER: 12301-KFP1-741
AMEND.: B

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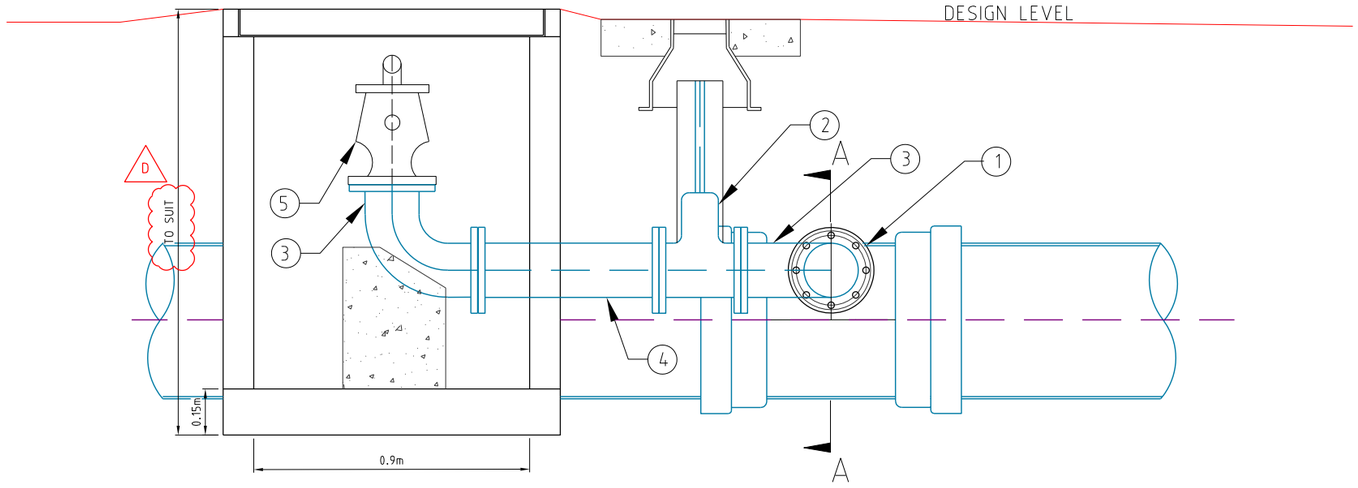
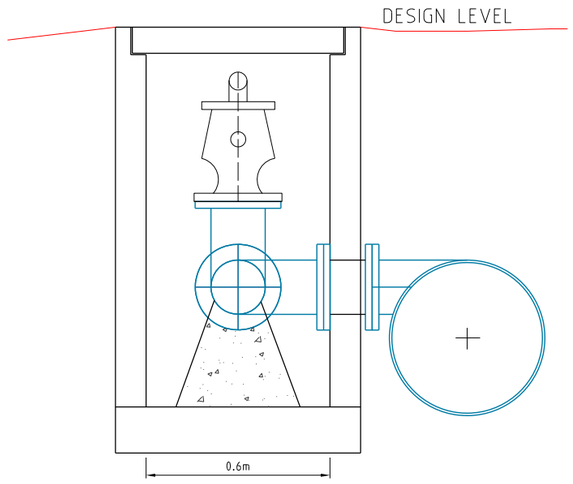


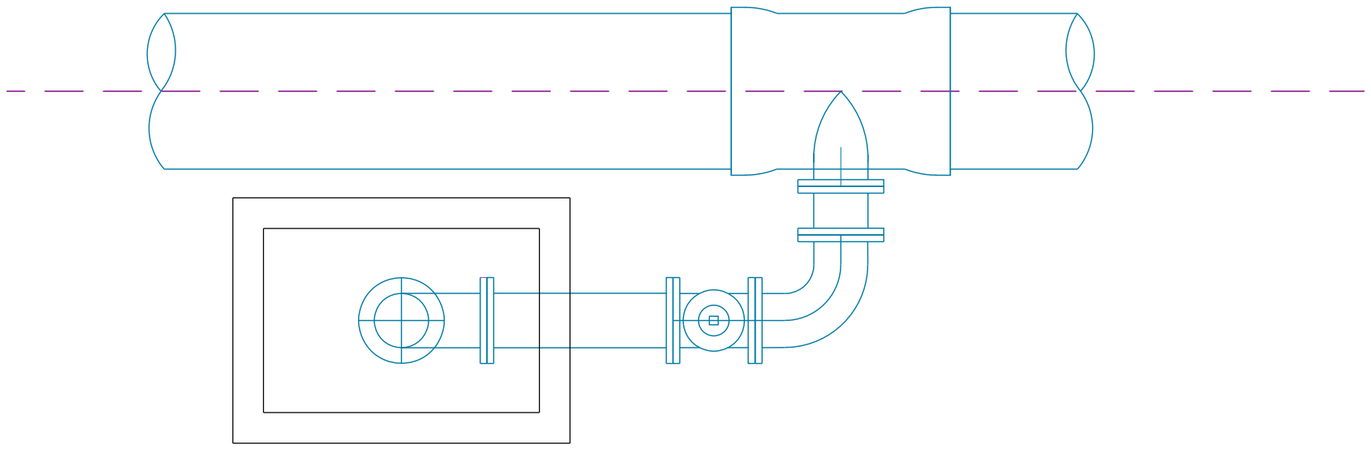
TYPICAL OFFSET WATER AIR VALVE

SCALE 1:10



SECTION A-A

SCALE 1:10



PLAN VIEW

SCALE 1:10

SCHEDULE OF MATERIALS

ITEM	DESCRIPTION	QUANTITY
1	SO & SO & FL SCOUR TEE	1
2	FL/FL RESILIENT SEATED GATE VALVE	1
3	FL/FL 90° BEND	2
4	FL/FL PIPE TO SUIT	1
5	AIR RELIEF VALVE	1

NOTES

1. CLASS "D" COVER & 600x900 LID TO BE USED.
2. N25 CONCRETE
3. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO MANUFACTURE.
5. Ø375 AND Ø450 SCOUR TEE IS ONLY AVAILABLE WITH Ø150 BRANCH.
6. Ø100 AIR VALVE IS REQUIRED ON Ø450 MAIN REFER TO TWEED SD.311.
7. REDUCER CAN BE USED TO REDUCE PIPEWORK TO Ø80.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

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& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NOT TO SCALE

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
D	17-06-21	DIMENSION AMENDED
C	08-06-21	TITLE AND DRAWING TITLE AMENDED
B	16-04-21	TABLE AND NOTES AMENDED
A	01-09-20	ISSUE FOR INFORMATION

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LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

TYPICAL OFFSET WATER AIR VALVE STANDARD DETAILS

CONSTRUCTION ISSUE

MORTONS urbansolutions
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DESIGNED	RB	DRAWN	JB
APPROVED		NER 906726	DATE 19-05-20

DRAWING NUMBER: 12301-KFP1-742

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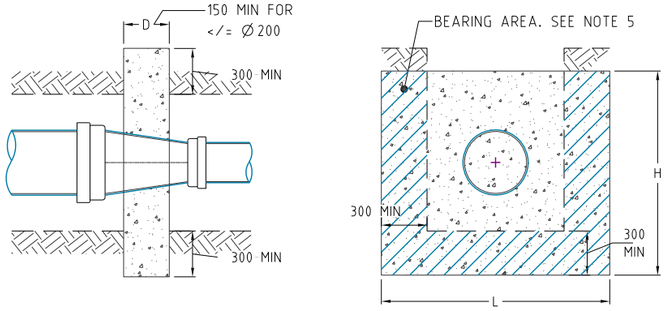
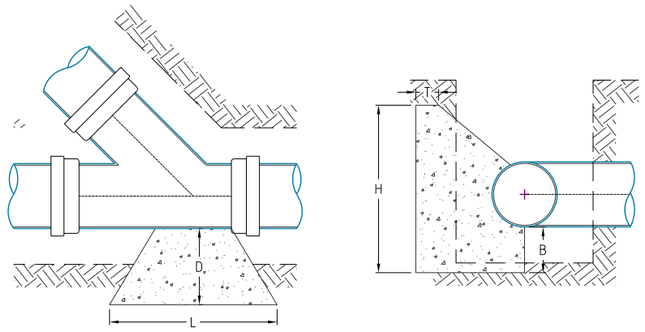
C

TYPICAL THRUST BLOCK FOR REDUCERS

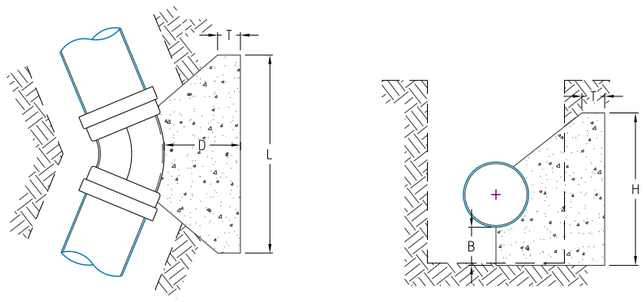


NOTE. REFER TO DRAWING 12301-KFP1-745 FOR VERTICAL THRUST DETAILS AND 12301-KFP1-746 FOR VALVE THRUST DETAILS.

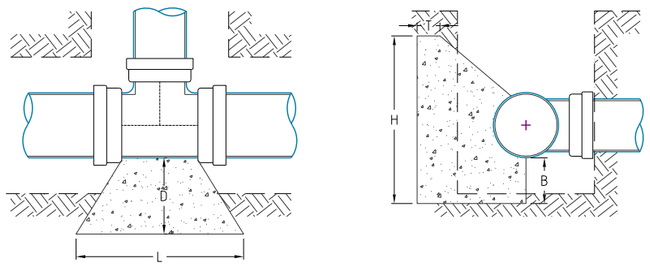
TYPICAL THRUST BLOCK FOR WYES (SPIGOT)



TYPICAL THRUST BLOCK FOR BENDS



TYPICAL THRUST BLOCK FOR TEES



THRUST BLOCK CONSTRUCTION NOTES:

1. POUR BASE CONCRETE AGAINST A SOLID EXCAVATION FACE.
2. USE GRADE N20 CONCRETE. TABLE OF DIMENSIONS BASED ON REQUIRED TEST PRESSURE OF 1200kPa AND ACTUAL PIPE DIAMETERS.
3. KEEP CONCRETE CLEAR OF ALL BOLTS, NUTS AND PIPE JOINTS.
4. FINISH THRUST BLOCKS APPROXIMATELY 100mm ABOVE THE TOP OF THE FITTING OR BEARING PAD AND EXTEND TO THE FLOOR OF THE TRENCH OR DEEPER IF NECESSARY, TO ACHIEVE THE REQUIRED THRUST AREA. MAXIMUM ENCASEMENT TO BE 180°.
5. THE MINIMUM THRUST AREA FOR TAPER THRUST BLOCK TO BE EQUAL TO THE DIFFERENCE BETWEEN THE THRUST AREA FOR TEES OF EQUIVALENT DIAMETER TO THOSE EACH SIDE OF TAPER. FOR MAINS LARGER THAN DN 200, THE TAPER THRUST BLOCK SHALL BE REINFORCED.
6. THRUST BLOCK DIMENSIONS CAN BE INDIVIDUALLY ADJUSTED TO SUIT LOCATION. MINIMUM THRUST AREA MUST BE ACHIEVED.

NOTE: THRUST AREAS AND DIMENSIONS ARE GIVEN AS A GUIDE ONLY. FINAL THRUST BLOCK DESIGN IS TO BE DETERMINED BY CONTRACTOR AFTER DETERMINATION OF SOIL CLASSIFICATION TESTING.

Horizontal Thrust Block Dimensions for Water Reducers (mm). 1350kPa Test Pressure. See Note 5.

Reducer Size		200-150
Min Thrust Area (m^2)		**0.19**
Resultant Thrust (kN)		**23.38**
Dimension	L	1200
	H	850
	D	150

Horizontal Thrust Block Dimensions for Water Tees, Bends and Dead Ends (1350kPa Test Pressure)

Diameter		Bends (°)				Tees and Dead Ends
		11.25	22.5	45	90	
100 (122 OD)	Min Thrust Area (m^2)	**0.21**	**0.21**	**0.21**	**0.21**	**0.21**
	Resultant Thrust (kN)	**3.03**	**6.04**	**11.84**	**21.88**	**15.47**
Dimension (mm)	L	600	600	600	600	600
	H	600	600	600	600	600
	D	300	300	300	300	300
	B	150	150	150	150	150
	T	100	100	100	100	100
150 (177 OD)	Min Thrust Area (m^2)	**0.21**	**0.21**	**0.21**	**0.46**	**0.32**
	Resultant Thrust (kN)	**6.38**	**12.71**	**24.93**	**46.06**	**32.57**
Dimension (mm)	L	600	600	600	800	600
	H	600	600	600	600	600
	D	300	300	300	300	300
	B	150	150	150	150	150
	T	100	100	100	100	100
200 (232 OD)	Min Thrust Area (m^2)	**0.21**	**0.21**	**0.39**	**0.73**	**0.51**
	Resultant Thrust (kN)	**10.97**	**21.83**	**42.82**	**79.13**	**55.95**
Dimension (mm)	L	600	600	800	950	800
	H	600	600	500	800	650
	D	300	300	300	600	600
	B	150	150	150	300	250
	T	100	100	100	200	200
225 (259 OD)	Min Thrust Area (m^2)	**0.21**	**0.27**	**0.54**	**0.99**	**0.70**
	Resultant Thrust (kN)	**13.67**	**27.21**	**53.37**	**98.61**	**69.73**
Dimension (mm)	L	600	600	800	1000	1000
	H	600	600	700	1000	750
	D	300	300	600	600	600
	B	150	150	250	300	300
	T	100	100	200	200	200
250 (286 OD)	Min Thrust Area (m^2)	**0.21**	**0.31**	**0.59**	**1.11**	**0.78**
	Resultant Thrust (kN)	**16.67**	**33.18**	**65.08**	**120.25**	**85.03**
Dimension (mm)	L	600	600	850	1150	1000
	H	600	600	700	1000	800
	D	300	300	600	600	600
	B	150	150	250	300	300
	T	100	100	200	200	200
300 (345 OD)	Min Thrust Area (m^2)	**0.21**	**0.49**	**0.95**	**1.76**	**1.24**
	Resultant Thrust (kN)	**24.25**	**48.28**	**94.7**	**174.98**	**123.73**
Dimension (mm)	L	600	800	1000	1500	1200
	H	600	650	1000	1200	1050
	D	300	300	600	600	600
	B	150	150	300	350	300
	T	100	100	200	200	200
375 (OD 426)	Min Thrust Area (m^2)	**0.36**	**0.74**	**1.44**	**2.67**	**1.89**
	Resultant Thrust (kN)	**36.98**	**73.61**	**144.38**	**266.78**	**188.64**
Dimension (mm)	L	600	900	1300	1800	1500
	H	600	850	1150	1500	1300
	D	500	600	600	600	600
	B	250	300	300	350	300
	T	150	200	200	200	200
450 (507 OD)	Min Thrust Area (m^2)	**0.53**	**1.04**	**2.04**	**3.78**	**2.67**
	Resultant Thrust (kN)	**52.38**	**104.26**	**204.51**	**377.88**	**267.2**
Dimension (mm)	L	800	1100	1600	2400	1800
	H	700	1000	1300	1600	1500
	D	600	600	600	600	600
	B	250	300	350	350	350
	T	200	200	200	200	200

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
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PARISH OF CUDGEN .
COUNTY OF ROUS .

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PROJECT 28 PTY LTD

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LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

WATER HORIZONTAL THRUST BLOCK DETAILS

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 04-09-17

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AMEND.: C

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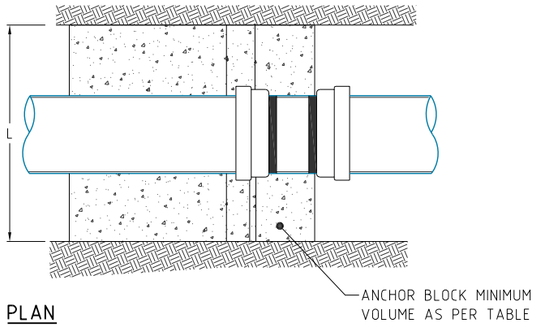
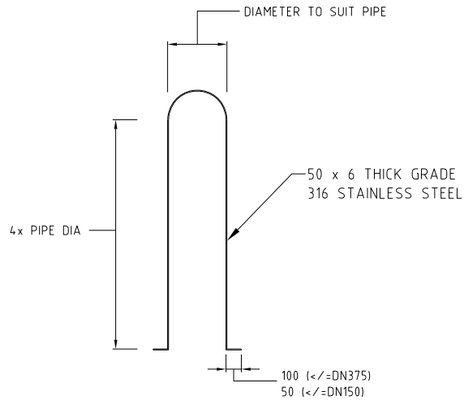
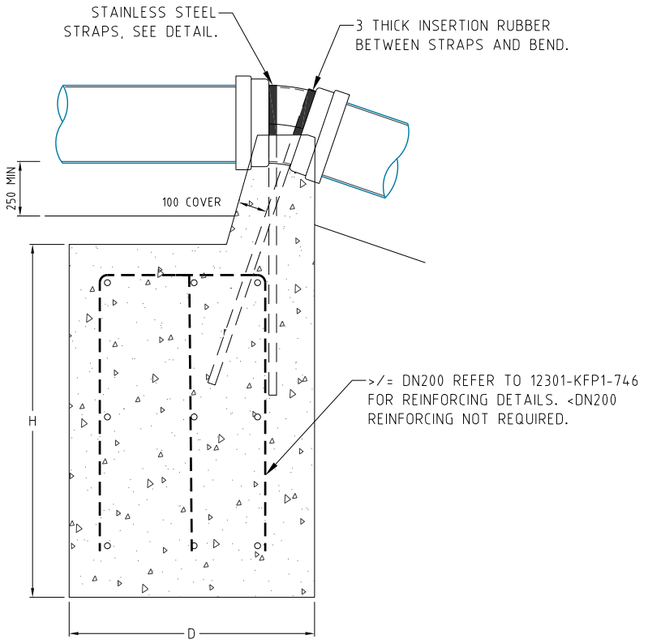
C



PLAN



TYPICAL STAINLESS STEEL STRAP



ELEVATION VERTICAL BENDS

Water Typical Thrust and Anchor Blocks for Vertical Bends

Minimum Block Volume for Anchorage of Vertical Component of Thrust

Vertical Bends for Test Pressure of 1350kPa and minimum soil allowable horizontal bearing pressure of 50kPa (See Notes)

Pipe DN	Fitting	Bend		
		11.25	22.5	45
100 (122OD)	Min Block Volume (m^3)	**0.13**	**0.26**	**0.47**
	Resultant Thrust	**3.03**	**6.04**	**11.84**
Dimensions	L	800	850	800
	D	400	400	600
	H	450	800	1000
150 (177OD)	Min Block Volume (m^3)	**0.28**	**0.54**	**1.00**
	Resultant Thrust	**6.38**	**12.71**	**24.93**
Dimensions	L	800	800	800
	D	450	800	1000
	H	800	850	1250
200 (232OD)	Min Block Volume (m^3)	**0.47**	**0.93**	**1.72**
	Resultant Thrust	**10.97**	**21.83**	**42.82**
Dimensions	L	900	950	1000
	D	700	950	1200
	H	800	1050	1450
225 (OD)	Min Block Volume (m^3)	**0.59**	**1.16**	**2.14**
	Resultant Thrust	**13.67**	**27.21**	**53.37**
Dimensions	L	950	1000	1100
	D	650	1050	1250
	H	1000	1150	1600
250 (286OD)	Min Block Volume (m^3)	**0.72**	**1.41**	**2.61**
	Resultant Thrust	**16.67**	**33.18**	**65.08**
Dimensions	L	850	1050	1250
	D	850	1100	1250
	H	1050	1250	1700
300 (345OD)	Min Block Volume (m^3)	**1.05**	**2.05**	**3.79**
	Resultant Thrust	**24.25**	**48.28**	**94.70**
Dimensions	L	950	1200	1300
	D	950	1200	1400
	H	1200	1450	2100
450 (507OD)	Min Block Volume (m^3)	**2.26**	**4.43**	**8.19**
	Resultant Thrust	**52.38**	**104.26**	**204.51**
Dimensions	L	1200	1250	1800
	D	1200	1600	1800
	H	1600	2300	2550

VERTICAL THRUST BLOCK CONSTRUCTION NOTES:

1. POUR BASE CONCRETE AGAINST A SOLID EXCAVATION FACE.
2. USE GRADE N20 CONCRETE FOR NON REINFORCED THRUST BLOCKS AND N32 FOR REINFORCED THRUST BLOCKS. TABLE OF DIMENSIONS BASED ON REQUIRED TEST PRESSURE OF 1200kPa AND ACTUAL PIPE DIAMETERS.
3. KEEP CONCRETE CLEAR OF ALL BOLTS, NUTS AND PIPE JOINTS.
4. LOCATE ANCHOR BLOCK CENTRALLY AROUND FITTING.
5. DESIGN OF ANCHOR BLOCKS AT VERTICAL BENDS INCLUDE ALLOWANCE FOR THE HORIZONTAL COMPONENT OF THRUST.
6. THRUST BLOCK DIMENSIONS CAN BE INDIVIDUALLY ADJUSTED TO SUIT LOCATION. MINIMUM BLOCK VOLUME MUST BE ACHIEVED.

NOTE: THRUST AREAS AND DIMENSIONS ARE GIVEN AS A GUIDE ONLY. FINAL THRUST BLOCK DESIGN IS TO BE DETERMINED BY CONTRACTOR AFTER DETERMINATION OF SOIL CLASSIFICATION TESTING.

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

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Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

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ASSOCIATED CONSULTANTS

LandSurv
GILBERT SUTHERLAND

DRAWING TITLE

WATER VERTICAL
THRUST BLOCK DETAILS

CONSTRUCTION ISSUE

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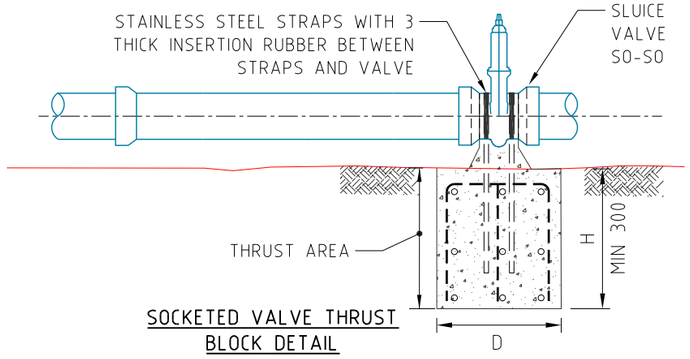
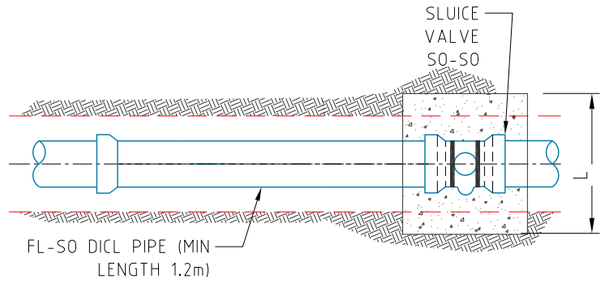
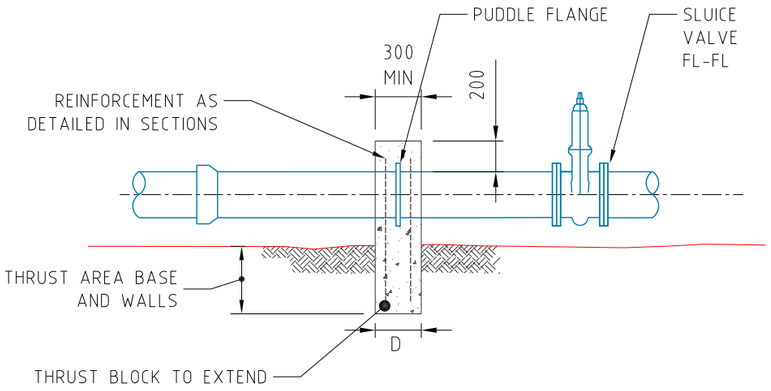
B



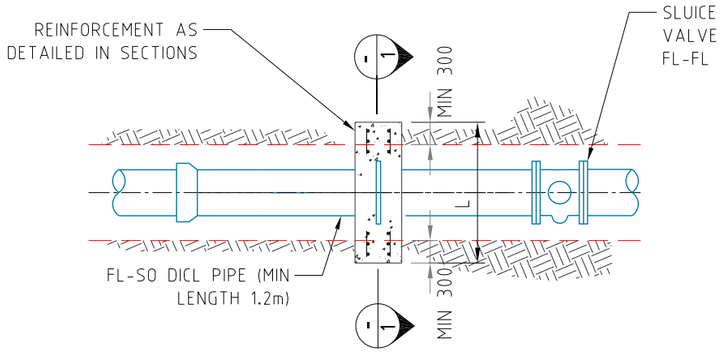
SOCKETED VALVE THRUST BLOCK DETAIL



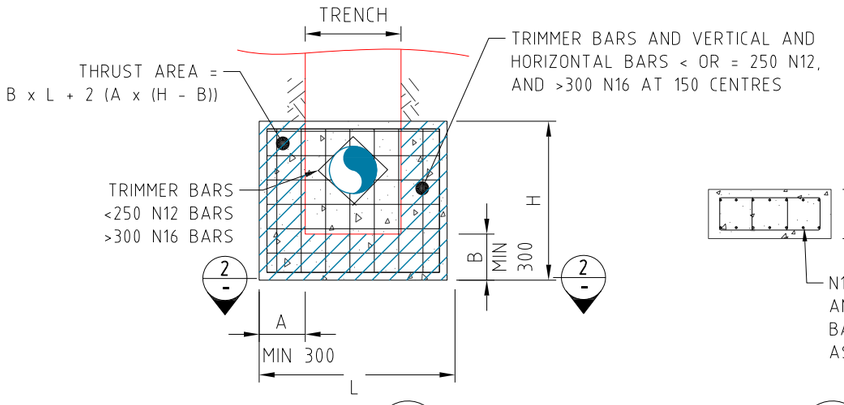
SOCKETED VALVE -TOP VIEW
FOR ALL PIPE SIZES



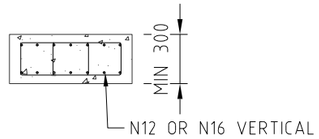
FLANGED VALVE THRUST BLOCK DETAIL



FLANGED VALVE THRUST BLOCK -TOP VIEW
FOR ALL PIPE SIZES



SECTION 1



SECTION 2

Horizontal Thrust Block Dimensions for Water Valve (mm). 1350kPa Test Pressure. See Note 5.

Valve Type	Valve Size		100 (122 OD)	150 (177 OD)	200 (232 OD)	225 (259 OD)	250 (286 OD)	300 (345 OD)	375 (OD 426)	450 (507 OD)
	Min Thrust Area (m^2)		**0.21**	**0.32**	**0.51**	**0.70**	**0.78**	**1.24**	**1.89**	**2.67**
	Resultant Thrust (kN)		**15.47**	**32.57**	**55.95**	**69.73**	**85.03**	**123.73**	**188.64**	**267.20**
Socketed	Dimension	L	700	950	1150	1200	1200	1200	1500	1800
		H	300	350	450	600	650	1050	1300	1500
		D	300	300	300	300	300	300	400	600
Flanged	Dimension	L	1050	1050	1200	1200	1200	1200	1500	1800
		H	600	650	700	750	800	1250	1550	1750
		D	300	300	300	300	300	300	400	600

NOTES:
1. POUR BASE CONCRETE AGAINST A SOLID EXCAVATION FACE.
2. USE N32 GRADE CONCRETE.
3. KEEP CONCRETE CLEAR OF ALL BOLT, NUTS AND PIPE JOINTS.
4. LOCATE ANCHOR BLOCK CENTRALLY AROUND FITTING.
5. THRUST BLOCK DIMENSIONS CAN BE INDIVIDUALLY ADJUSTED TO SUIT LOCATION. MINIMUM THRUST AREA MUST BE ACHIEVED WHERE SITE CONDITIONS ALLOW, KEY INTO SIDES OF TRENCH TO REDUCE THRUST BLOCK DEPTH.

NOTE:
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KINGS FOREST PARKWAY

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PARISH OF CUDGEN .
COUNTY OF ROUS .

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE
WATER VALVE THRUST DETAILS

CONSTRUCTION ISSUE

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KINGS FOREST PARKWAY (ROAD 01)

ALL WORKS SHOWN IN THE ROAD RESERVE WILL BE APPROVED UNDER SECTION 138 AND S.68 APPROVALS.

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PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

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PROJECT 28 PTY LTD

NORTH

0 1.25 1.5 3.75 5 6.25m

Scale 1:125 - A1 (1:250 - A3)

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NOTES AND WORKS PROPOSED IN S138 PLAN

CONSTRUCTION ISSUE

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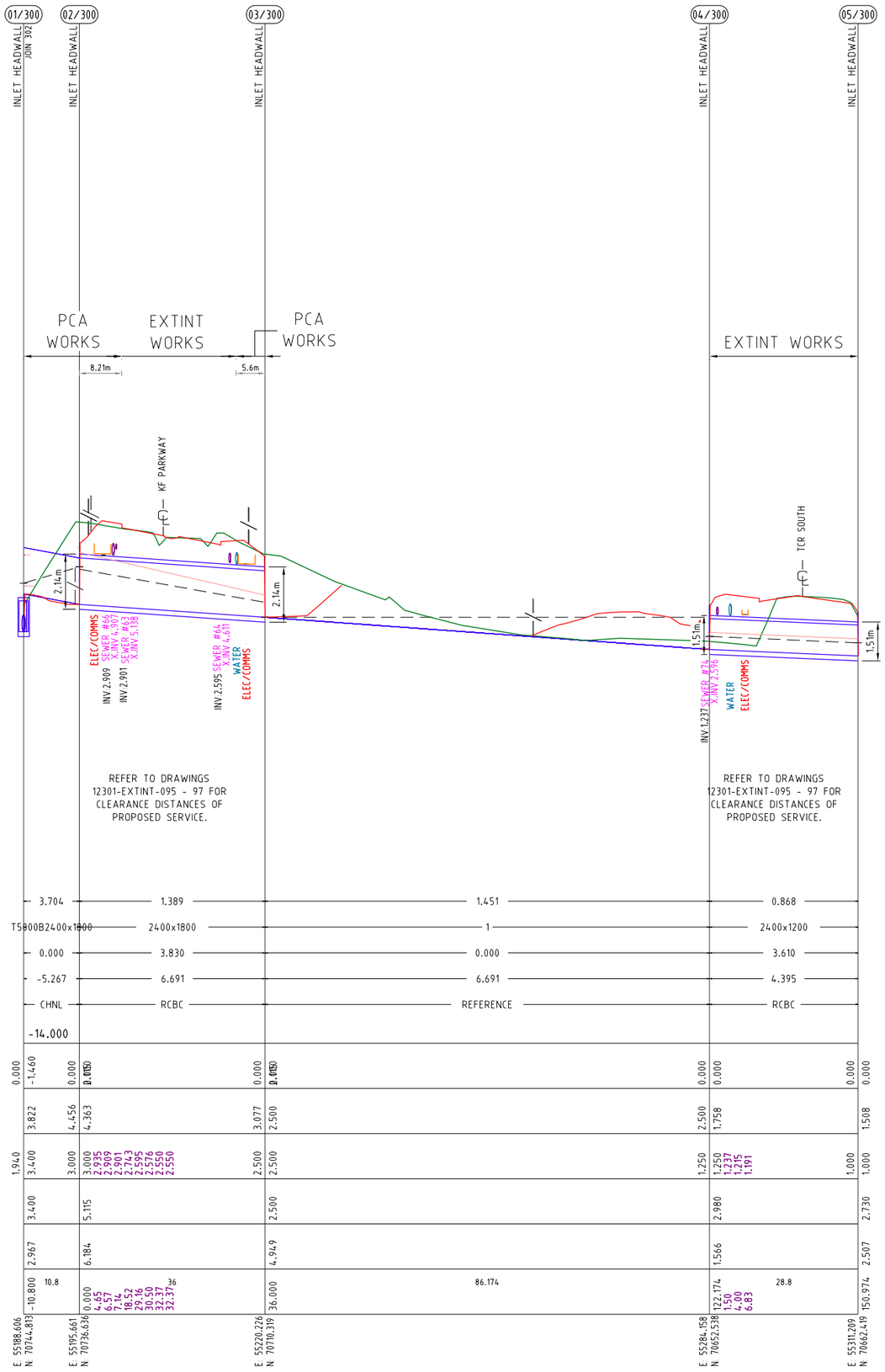
STRUCTURE NAME

STRUCTURE DESCRIPTION

ALL TYPE D TRAFFICABLE LIDS



LEGEND

Q100 HYDRAULIC GRADE LINE

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLA-US IN SEWER RATES.

DRAINAGE LINE

300

NOTES:

MINOR STORM (20% AEP / Q5 EVENT):
THE "CRITICAL STORM" DURATION IS SET TO 25 MINUTES USING ILSAX2 SOFTWARE, REFLECTING THE STORM DURATION REQUIRED TO ATTAIN PEAK FLOWS IN THE PIPED NETWORK. NOTE THE STORM DURATION IS DIFFERENT FROM THE TIME OF CONCENTRATION TO INDIVIDUAL PITS WHICH IS TYPICALLY 6 MINUTES FOR IMPERVIOUS SURFACES AND 8 MINUTES FOR IMPERVIOUS SURFACES IN MINIMAL GRADE RESIDENTIAL AREAS. STORM DURATIONS OF 20, 25, 30, 45 AND 60 MINUTES HAVE BEEN TESTED TO ENSURE THE APPROPRIATE STORM DURATION IS BEING USED TO DERIVE PEAK FLOWS.

MAJOR STORM (1% AEP / Q100 EVENT):
THE "CRITICAL STORM" DURATION IS SET TO 60 MINUTES USING ILSAX2 SOFTWARE, REFLECTING THE STORM DURATION REQUIRED TO ATTAIN PEAK FLOWS IN THE OVERLAND NETWORK AND INFILTRATION SWALES. AS WITH THE MINOR SYSTEM, THE STORM DURATION IS DIFFERENT FROM THE TIME OF CONCENTRATION TO INDIVIDUAL PITS. STORM DURATIONS OF 25, 45, 60, 90, 120, 360 AND 720 MINUTES HAVE BEEN TESTED TO ENSURE THE APPROPRIATE STORM DURATION IS BEING USED TO DERIVE PEAK FLOWS AND WATER LEVELS.

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PARISH OF CUDGEN .
COUNTY OF ROUS .

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0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

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GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER PROFILES SHEET 1 OF 2

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED		NER 906726	DATE 04-09-17

DRAWING NUMBER: 12301-KFP1-991
AMEND.: A

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STRUCTURE NAME

STRUCTURE DESCRIPTION

ALL TYPE D TRAFFICABLE LIDS

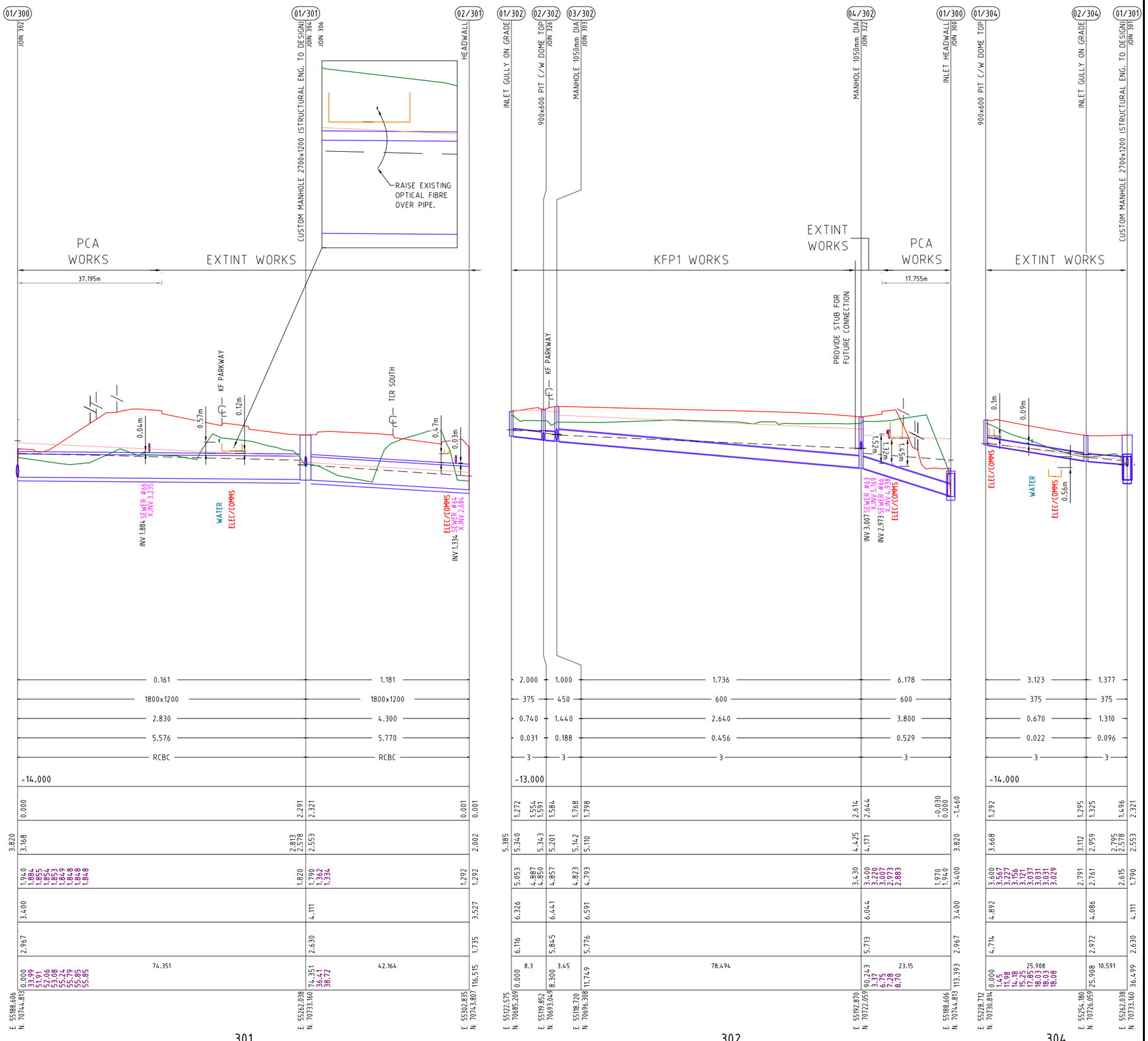
LEGEND

Q100 HYDRAULIC GRADE LINE

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLA-US IN SEWER RATES.



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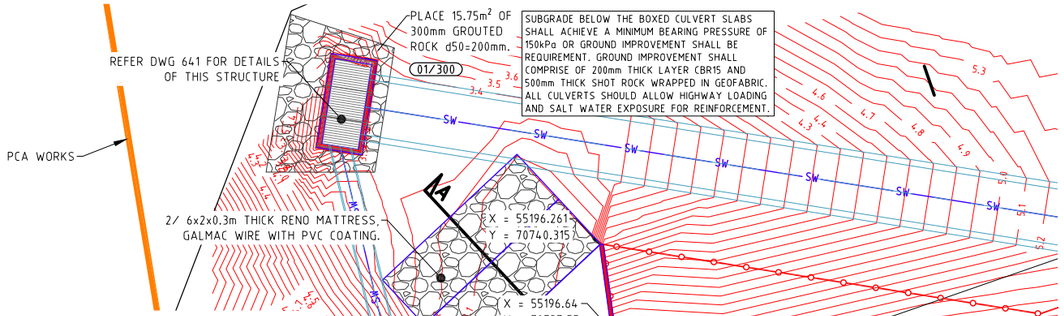
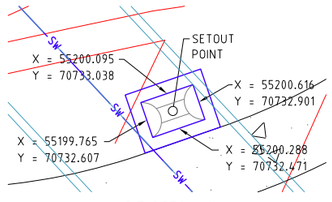
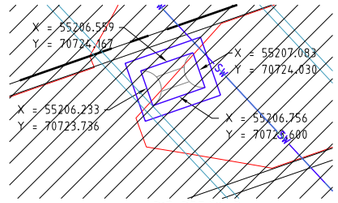
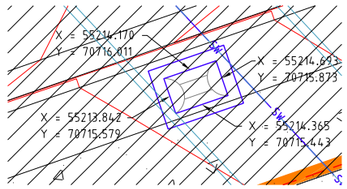




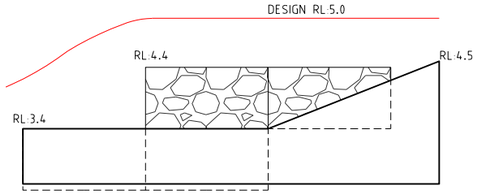
PIT DETAIL A
SCALE 1:50 @ A3 1:100 @ A1



PIT DETAIL B
SCALE 1:50 @ A3 1:100 @ A1



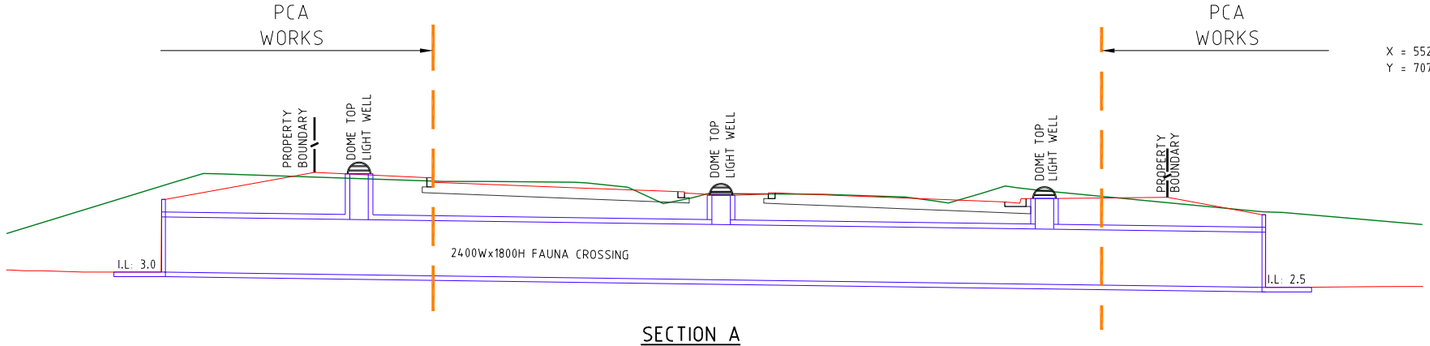
PIT DETAIL C
SCALE 1:50 @ A3 1:100 @ A1



SECTION C
SCALE 1:50

SUBGRADE BELOW THE BOXED CULVERT SLABS SHALL ACHIEVE A MINIMUM BEARING PRESSURE OF 150kPa OR GROUND IMPROVEMENT SHALL BE REQUIREMENT. GROUND IMPROVEMENT SHALL COMPRISE OF 200mm THICK LAYER CBR15 AND 500mm THICK SHOT ROCK WRAPPED IN GEOFABRIC. ALL CULVERTS SHOULD ALLOW HIGHWAY LOADING AND SALT WATER EXPOSURE FOR REINFORCEMENT.

TYPICAL CROSSING FLOW DEPTHS
SCALE 1:50



SECTION A
SCALE 1:100

PROJECT NAME

KINGS FOREST

KINGS FOREST PARKWAY

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 1 2 3 4 5m
Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	14-03-19	
COUNCIL	19-12-18	
CONSTRUCTION	01-09-20	

PRE	DATE	AMENDMENT
A	19-12-18	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER STRUCTURE DETAILS SHEET 1 OF 2

CONSTRUCTION ISSUE

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12301-KFP1-993	A

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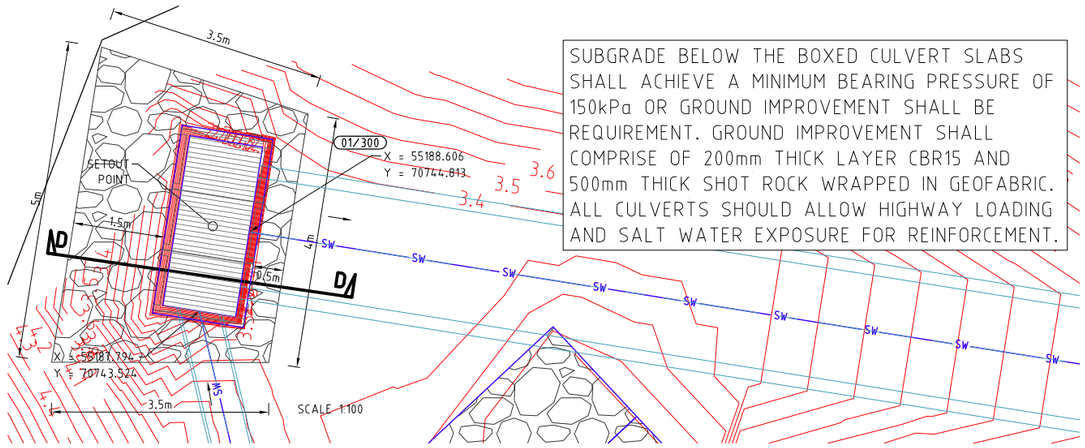
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3.6
3.5
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SW
SW
SW