

DRAINAGE NOTES:

- Do not scale.
- Refer to all other Project Drawings and supporting notes.
- All adoptable drainage works to be constructed as detailed in Sewers for Adoption, 7th edition or as stipulated in the Water Authorities Addendum.
- All public sewers are to be the subject of a Section 104 agreement of the Water Industry Act 1991.
- Invert levels of existing manholes and sewers are to be checked on site before construction commences and results reported to engineers.
- The Contractor is responsible for maintaining continuity of flow for all existing sewers within the site boundary and limit of works for the duration of the project.
- All manhole ironworks to comply with BS EN124, and be stamped with BSI Kitemark. Covers to suit loading as below;
 - Carriageways and Roads - D400
 - Driveways and Verges - C250
 - Footways and Pedestrian Areas - B125
 - Gardens/Landscaping - A15
- All sewer pipes, up to, and including 225mm are to be vitrified clay to BS EN252. All sewer pipes 300mm diameter and above to concrete pipes to BS EN1916.
- All drainage shall be installed and tested strictly in accordance with the Manufacturers' printed instructions, BS EN 752, BS EN 1601, Local Water Authority requirements and the Building Regulations.
- All bedding shall be Class S unless noted otherwise.
- All trenches under existing and proposed public highways are to be backfilled with thoroughly compacted Type 1 granular sub-base material.
- Drainage laid beneath roads and areas of vehicular access (car parking etc) with less than 1200mm of cover shall be encased in concrete bed and surround with associated movement joints. Drainage laid beneath paths, footways and pedestrian areas with less than 900mm of cover shall be similarly treated.
- Chambers with outgoing pipes greater than 600mm diameter shall be fitted with guard bars, safety chains or other approved safety devices.
- The use of precast concrete products made with sulphate resisting cement is mandatory, unless a laboratory report proves such precautions are not necessary.
- All gully connections to use a minimum diameter pipe of 150mm and to be surrounded by a minimum of 150mm of grade C8/C10 concrete over its full length (which should not exceed 15m) and its connection to the carrier system.
- All sewers to be abandoned must be surveyed to identify any lateral connections that are still live with any found to be reported to the Engineer.
- All laterals to be 150mm laid at 1:80 (surface) or 1:60 (foul) unless otherwise stated.
- All private drains to be 100mm diameter unless otherwise stated.
- All foul and storm water drains which are not to be adopted as public sewers shall be in accordance with Document H of the Building regulations, together with NHBC Standards Chapter 5.3 and BS8301.
- Where pipes pass through footings, retaining or screen walls,lintels to be provided over drains.
- Where inverts are less than 0.6m deep inspection chambers (min dia. 190mm) or access fittings (225 x 100mm) to be used, elsewhere proprietary plastic, brick or pcc is to be used and sized in accordance with Table 11 of Document H of the Building Regulations <0.6m to invert min DN300, >0.6m to invert min DN475).
- All gullies connected direct to drains to be roddable.
- Rainwater downpipes to be easily removable for rodding or to be provided with rodding access at ground level.
- Unless noted otherwise FW IC's and RE's to be 0.6m below DPC level, SW IC's and RE's to be 0.45m.
- Adequate precautions in accordance with Approved Document H and manufacturer's recommendations to be taken to protect drains (particularly plastic) at shallow depths.
- Catchpits to be as IC's but with 300mm sump below outgoing pipe invert level except where detailed elsewhere.
- Trees and shrubs of a large size or heavy canopy with a moderate or high water demand must not be planted within any sewer easement.
- Gullies within and adjacent to area of site works to be suction cleansed at commencement and completion of works.
- 1m deep root barrier of an approved type to be installed vertically along the back edging kerb of all areas of footway/ demarcation to protect from both proposed and future plantation.

PERMITTED PIPE MATERIALS

CLAYWARE (FOR SEWERS 150mm & 225mm)

All clayware pipes to be vitrified clay to BS EN 295-1:1991 and of minimum crushing strength of 45N/4 Class 200 for diameters of 225mm. For 150mm diameter pipes a minimum crushing strength of 28kN shall be used.

CONCRETE (FOR SEWERS 300mm AND ABOVE)

All concrete pipes are to be pipe strength Class 120 to BS 5911-1:2004 unless indicated otherwise on the drawings.

Rev	Date	Description	Drawn	Checked
P2	06.20	RD01 horizontal alignment updated with vertical alignment and drainage layout amended to suit	SM	SL
P1	05.20	First Issue	SM	SL



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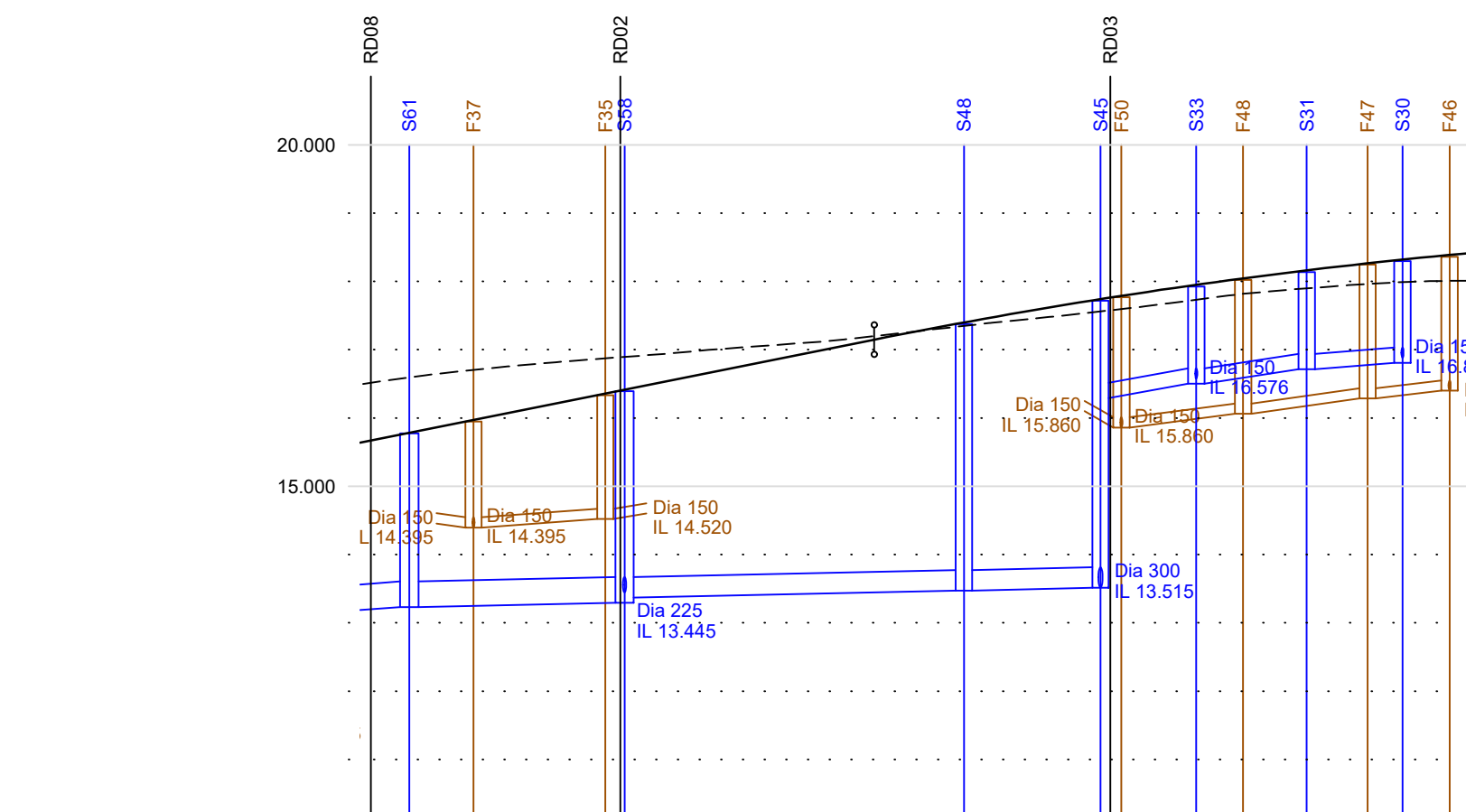
Client:
BARRATT DAVID WILSON HOMES

Project:
WATER LANE, ANGMERING

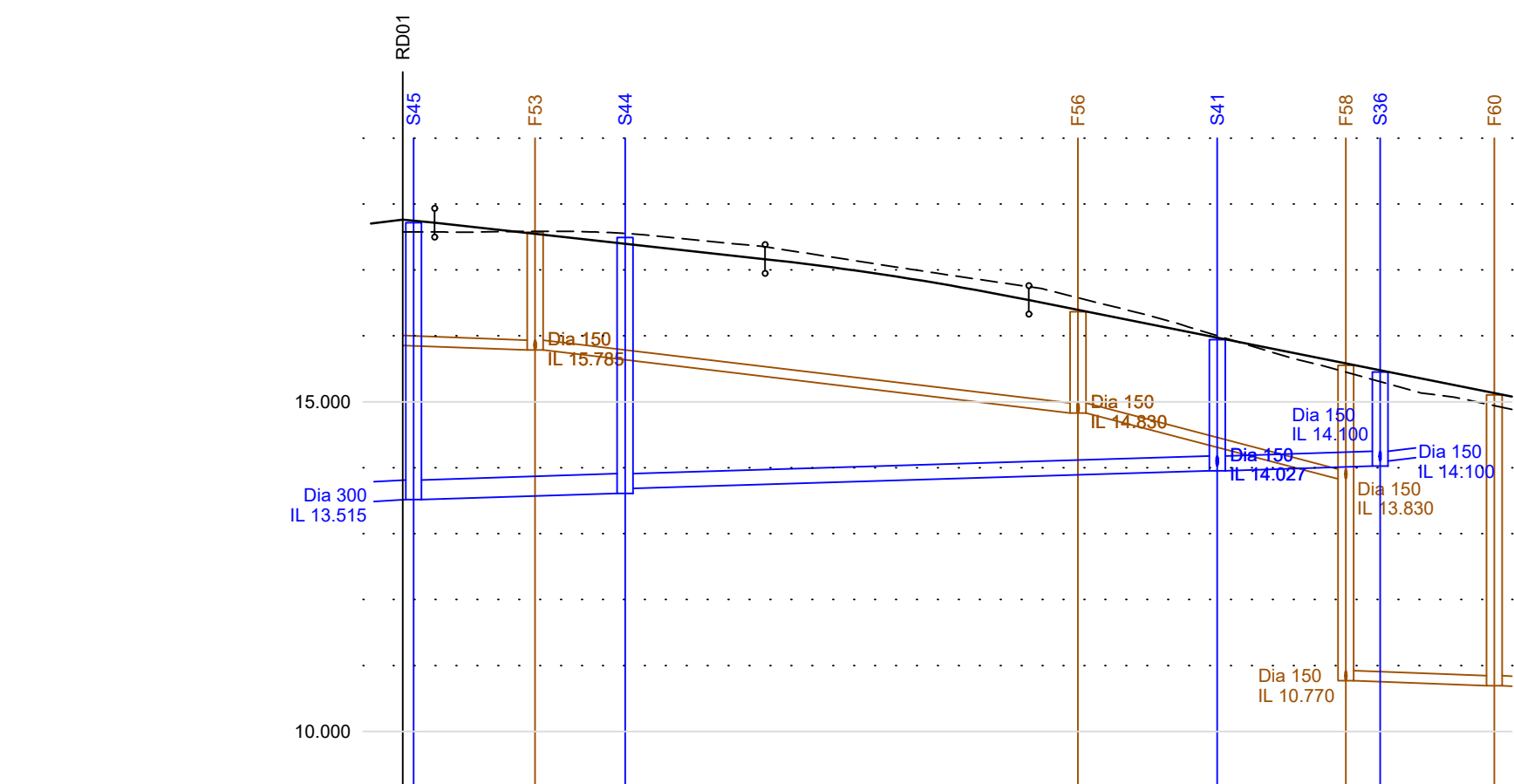
Title:
LONG SECTIONS SHEET 2

Status:
FOR APPROVAL

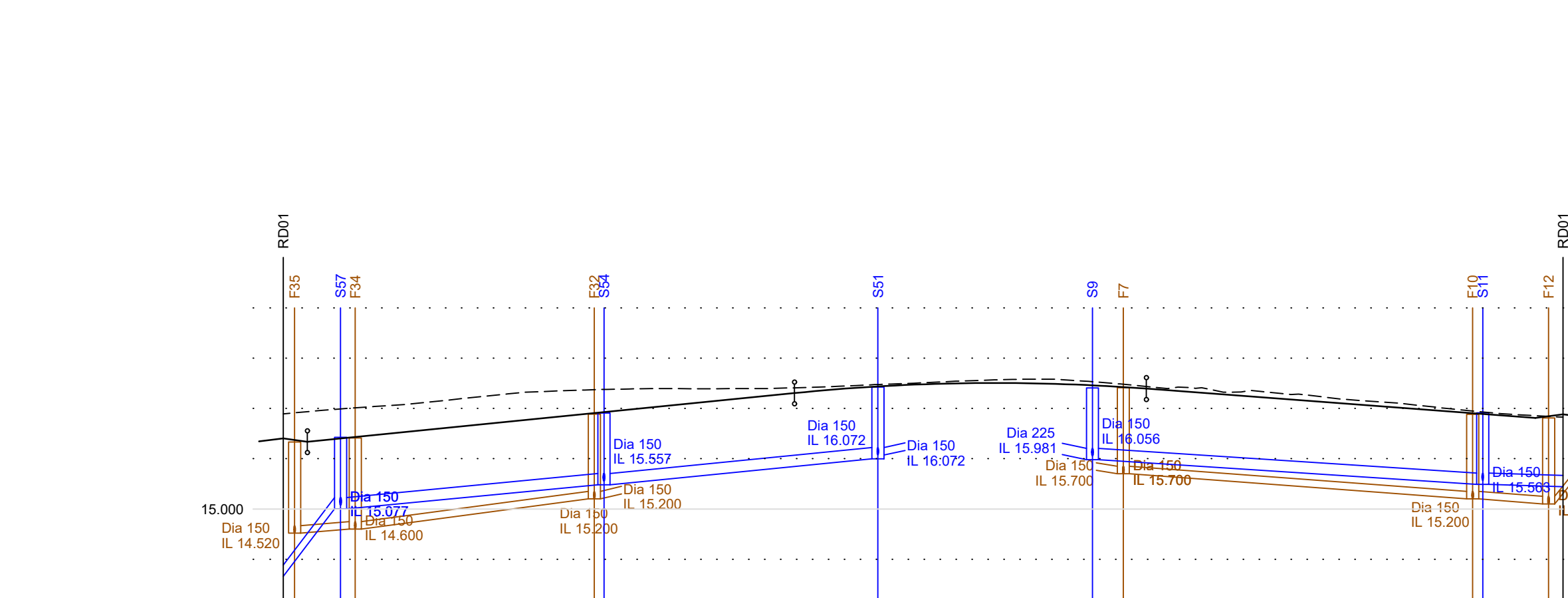
Scale 1:500 H @ A1 1:100 V	Date MAY 2020	Drawn SM	Checked SL
Drawing No A290-RM-112			Revision P2



CHAINAGE	0.000	651.185	655.885	660.000	661.902	666.614	669.000	728.646
EXISTING GROUND LEVEL	16.562							
ALIGNMENT LEVEL	15.738	16.783	16.138	16.538	16.938	17.098	17.146	17.332
VERTICAL ALIGNMENT	G= 4.000% 1: 25.0			L= 43.449 KF= -20.0				
HORIZONTAL ALIGNMENT	R= 57.250			R= 20.400				
STORMWATER COVER LEVEL	15.772			16.393			17.376	
STORMWATER INVERT	13.230	Dia 375 CONC 1 in 242 15.613	13.295	Dia 300 CLAY 1 in 242 24.854	13.472	Dia 300 CLAY 1 in 242 24.854	13.472	17.376
FOULWATER COVER LEVEL	15.948		16.532		17.788		18.246	18.361
FOULWATER INVERT	14.385	Dia 150 CLAY 1 in 75 9.751	14.520	Dia 150 CLAY 1 in 75 9.751	15.860	Dia 150 CLAY 1 in 42 8.481	16.060	Dia 150 CLAY 1 in 39 8.678



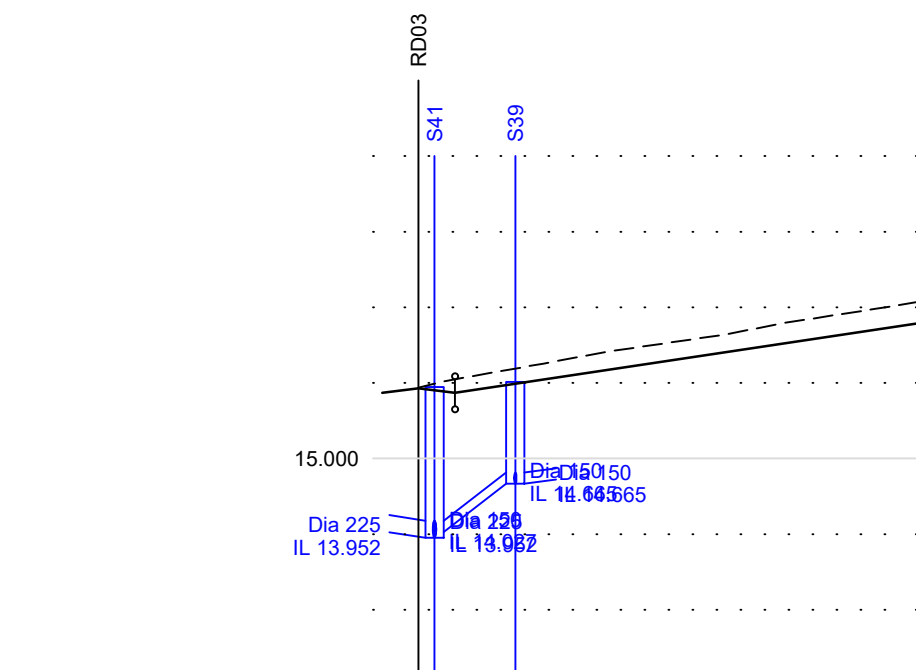
RD03	DATUM 9000																												
CHAINAGE	0.000	13.515	17.114	17.576	17.596	17.975	18.047	18.870	19.138	20.000	27.470	30.000	35.000	40.000	45.000	47.470	50.000	51.211	60.000	61.772	70.000	71.525	74.128	80.000	82.788	84.128			
EXISTING GROUND LEVEL	17.576		17.714	17.576	17.596	17.547	17.596	17.547	17.596	17.547	17.63	17.73	17.82	17.965	18.000	18.039	18.047	18.047	18.109	18.109	18.162	18.162	18.215	18.215	18.268	18.268			
ALIGNMENT LEVEL	17.714		17.547	17.547	17.596	17.547	17.596	17.547	17.596	17.547	17.63	17.73	17.82	17.965	18.000	18.039	18.047	18.047	18.109	18.109	18.162	18.162	18.215	18.215	18.268	18.268			
VERTICAL ALIGNMENT			G= -2.200% 1: -45.5					L= 20.000 KF= -11.11111					G= -4.000% 1: -25.0																
HORIZONTAL ALIGNMENT						R= 13.400																							
STORMWATER COVER LEVEL	17.716			17.483																15.944					15.430				
STORMWATER DETAILS	13.515	Dia 300 CLAY 1 in 169 16.249	13.611	13.686											Dia 225 CLAY 1 in 169 44.923				13.952	13.952	Dia 225 CLAY 1 in 169 13.356			14.025					
FOULWATER COVER LEVEL			17.573																						15.554	15.104			
FOULWATER DETAILS		Dia 150 CLAY 1 in 145 10.742	15.785												Dia 150 CLAY 1 in 43 41.290				14.630	14.630	Dia 150 CLAY 1 in 20 20.315			13.930	10.770	Dia 150 CLAY 1 in 150 11.262	Dia 150 CLAY 1 in 150 11.262		



RD02		DATUM 13.000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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- KEY:
- EXISTING GROUND PROFILE
 - PROPOSED CENTRELINE PROFILE
 - PROPOSED FOUL SEWER
 - PROPOSED STORM SEWER

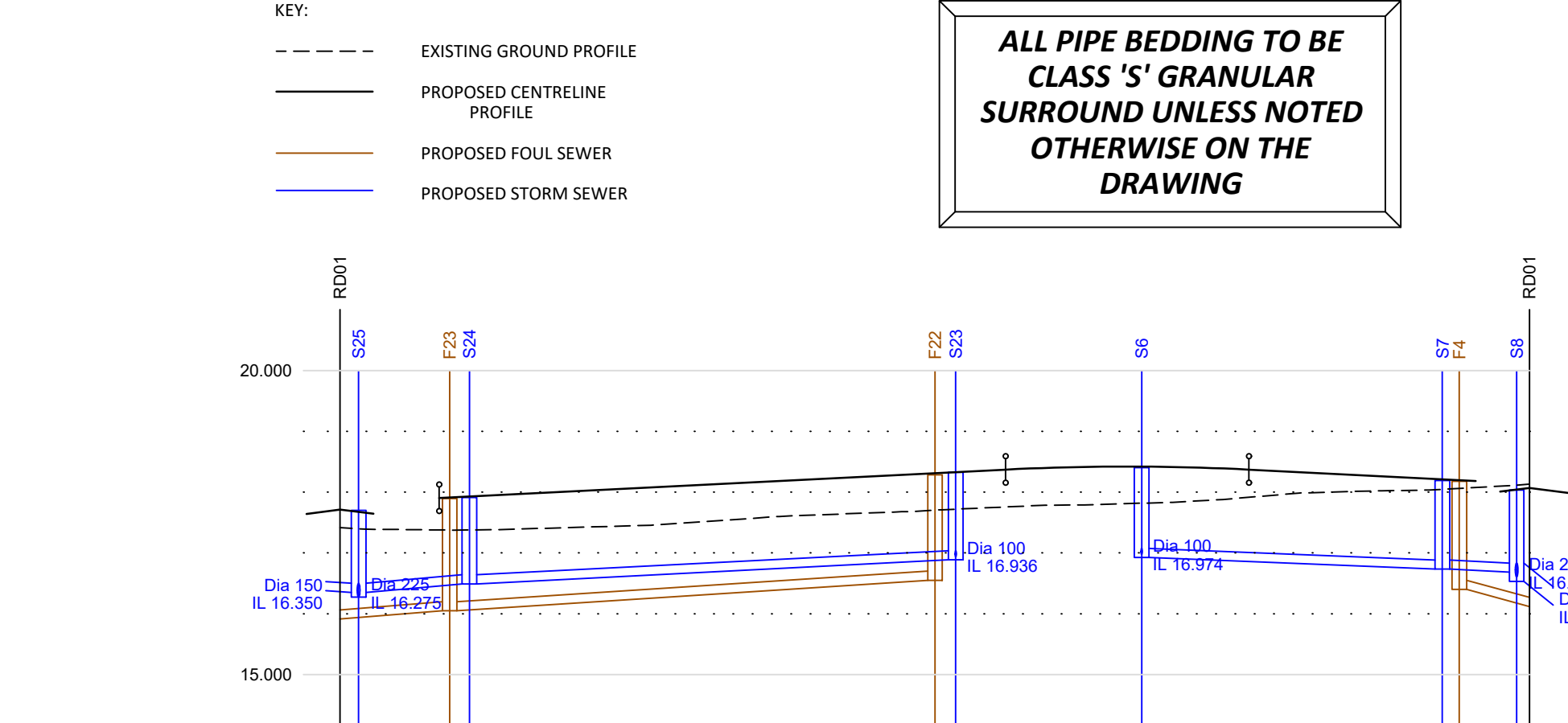
**ALL PIPE BEDDING TO BE
CLASS 'S' GRANULAR
SURROUND UNLESS NOTED
OTHERWISE ON THE
DRAWING**



RD03TH

DATE: 2020-01-01

CHAINAGE	0.000	2.400	6.403	10.000	20.000	30.000	32.889
EXISTING GROUND LEVEL	15.938			16.320	16.531	16.973	17.096
ALIGNMENT LEVEL	15.868		16.096		16.396	16.696	16.723
VERTICAL ALIGNMENT		G= 3.000% 1: 33.3					
HORIZONTAL ALIGNMENT							
STORMWATER COVER LEVEL	15.944		16.015				
STORMWATER DETAILS	14.027	Dia 150 CLAY 1 in 8 5.342	14.065				
FOULWATER COVER LEVEL							
FOULWATER DETAILS							



RD04	DATE: 14.06.2024																				
CHAINAGE	0.000	1.533	8.199	10.644	20.000																
EXISTING GROUND LEVEL	17.417		17.936		18.023	17.424	20.000														
ALIGNMENT LEVEL		17.905	17.923		18.023	18.123	17.516	30.000		18.223	17.631	40.000		45.477	47.225	48.919	50.621	54.710	55.000	60.000	64.710