

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 EN255. 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 5 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 45kN 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.

P2	06.20	RD09 and RD09TH horizontal alignment updated with vertical alignment and drainage layout amended to suit	SM	SL
P1	05.20	First Issue	SM	SL
Rev	Date	Description	Drawn	Checked



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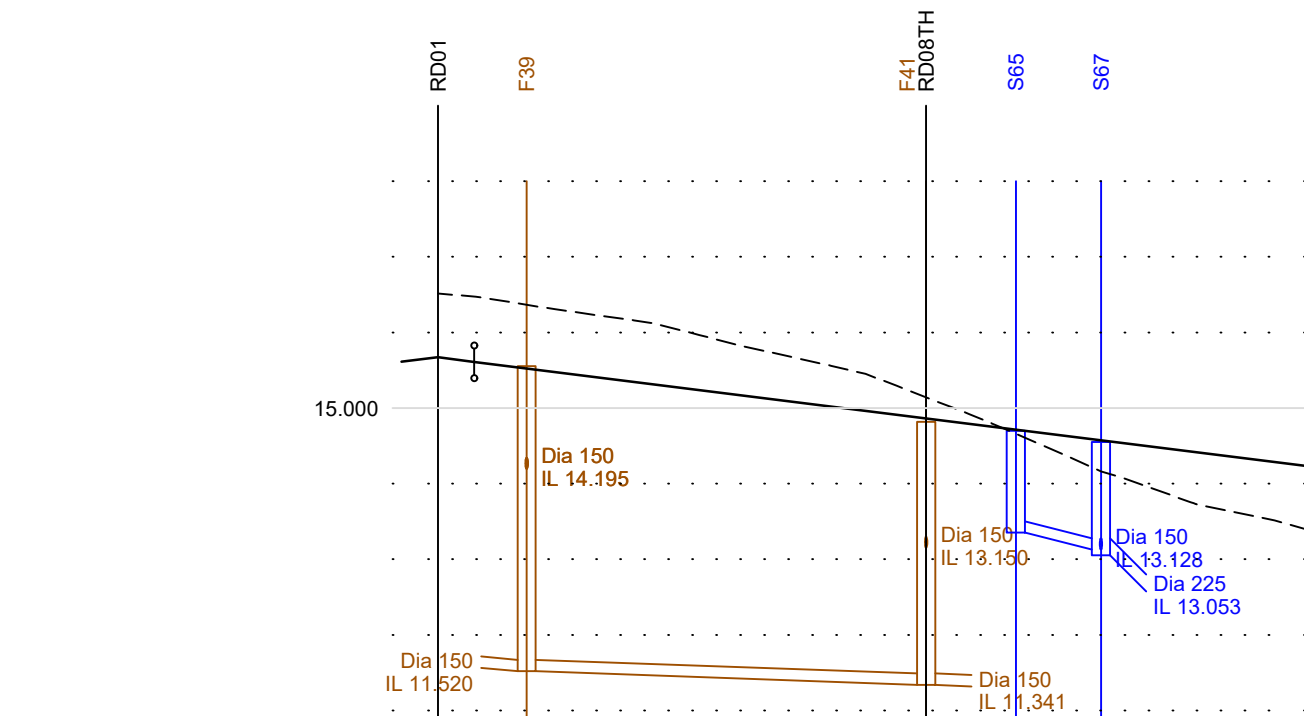
Client
**BARRATT DAVID
WILSON HOMES**

Project
WATER LANE, ANGMERING

Title
**LONG SECTIONS
SHEET 4**

Status
FOR APPROVAL

Scale 1:500 H @ A1 1:100 V	Date MAY 2020	Drawn SM	Checked SL
Drawing No A290-RM-114			Revision P2



RD08

CHAINAGE	0.000	2.401	5.889	10.000	12.950	20.000	30.000	32.277	34.686	36.287	38.224	40.000	43.441	43.849	50.694	57.275
EXISTING GROUND LEVEL	16.515			16.243				15.322								
ALIGNMENT LEVEL	15.609			15.419			15.169	15.624					14.669	14.507	14.419	14.237
VERTICAL ALIGNMENT	G= -2.500% 1: -40.0															
HORIZONTAL ALIGNMENT	R= 92.750 20.050 3.950															
STORMWATER COVER LEVEL											14.701	14.552				
STORMWATER DETAILS											13.351	Dia 150 CLAY 1 in 150 5.782	13.28			
FOULWATER COVER LEVEL	15.555						14.619									
FOULWATER DETAILS	11.520						11.341									

RD08TH

CHAINAGE	0.000	2.401	5.889	10.000	12.950	20.000	30.000	32.277	34.686	36.287	38.224	40.000	43.441	43.849	50.694	57.275
EXISTING GROUND LEVEL	15.145															
ALIGNMENT LEVEL	14.811												14.891	15.514	14.941	15.015
VERTICAL ALIGNMENT	G= 1.000% 1: 100.0															
HORIZONTAL ALIGNMENT																
STORMWATER COVER LEVEL	14.701															
STORMWATER DETAILS																
FOULWATER COVER LEVEL	14.619															
FOULWATER DETAILS	13.150						13.200									

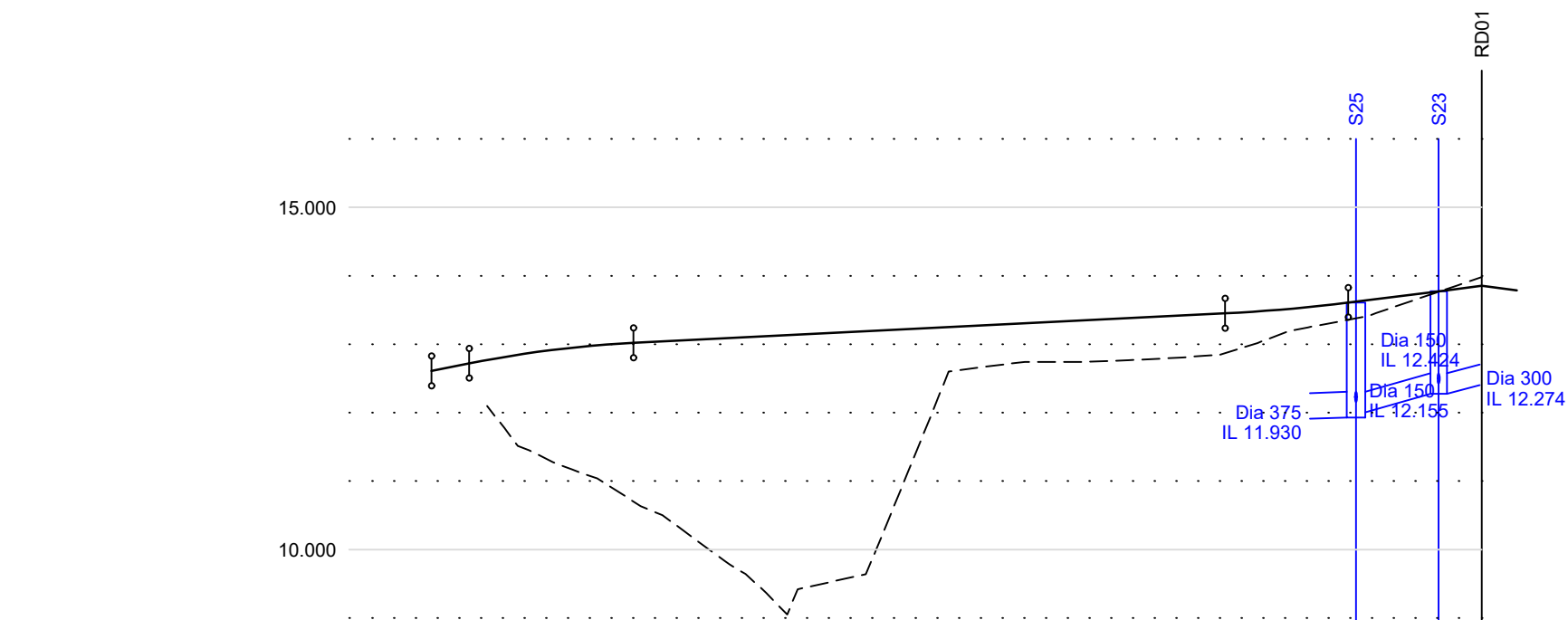
RD09

CHAINAGE	0.000	2.771	2.749	10.000	14.482	15.000	20.000	23.558	23.566	30.000	34.482	35.444	40.944	42.252	50.000	53.390	55.428	59.506	62.081	63.866	65.477	67.819	70.000	72.934
EXISTING GROUND LEVEL	16.712			16.683						16.683			16.650		16.653				16.609				16.647	16.652
ALIGNMENT LEVEL	17.069			17.141	17.186	17.191	17.226	16.662	17.236	17.236	17.221	17.186	17.131		17.031	16.931						16.831	16.802	
VERTICAL ALIGNMENT	G= 1.000% 1: 100.0				L= 20.000 KF= -10.0				G= -1.000% 1: -100.0															
HORIZONTAL ALIGNMENT											R= 177.950		R= 34.050		R= 1.050		R= 14.050							
STORMWATER COVER LEVEL	17.086							17.213					17.092			16.932						16.860		
STORMWATER INVERT		15.511			Dia 375 CONC 1 in 300 20.387		15.443	15.443		Dia 375 CONC 1 in 300 19.583		15.378	15.378	Dia 375 CONC 1 in 300 17.038	15.321	Dia 375 CONC 1 in 160 15.768	15.255	Dia 375 CONC 1 in 300 21.490						
FOULWATER COVER LEVEL	17.070							17.215				17.100			16.855									
FOULWATER INVERT	15.019				Dia 150 CLAY 1 in 150 21.432		14.876	14.876		Dia 150 CLAY 1 in 150 16.957		14.763	14.763	Dia 150 CLAY 1 in 150 21.918	14.617	14.617	Dia 150 CLAY 1 in 150 25.864							

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**



BRDG

CHAINAGE	0.000	3.022	5.775	10.000	15.000	20.000	30.000	40.000	50.000	60.000	60.999	65.000	69.241	70.565	73.899	76.603	79.749
EXISTING GROUND LEVEL				11.463									13.358				13.981
ALIGNMENT LEVEL	12.609	12.719		12.866	12.962	13.019	13.041		13.141	13.241	13.441	13.451	13.609	13.788			
VERTICAL ALIGNMENT	G= 4.000% 1: 25.0																
HORIZONTAL ALIGNMENT	R= 9.000																
STORMWATER COVER LEVEL													13.610	13.774			
STORMWATER DETAILS													12.005	Dia 300 CLAY 1 in 25 6.158			
FOULWATER COVER LEVEL																	
FOULWATER DETAILS																	