

[illegible]

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

2. Do not scale.
3. Refer to all other Project Drawings and supporting notes.
4. All adoptable drainage works to be constructed as detailed in Sewerage Regulations, 2nd edition or as stipulated in the Water Authorities Addendum.
5. All public sewers are to be the subject of a Section 104 agreement of the Water Industry Act 1991.
6. Invert levels of existing manholes and sewers are to be checked once the concrete construction commences and results reported to engineers.
7. The Contractor is responsible for maintaining continuity of flow for all existing sewers within the site boundary and limit of works.
8. 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 Pedestrianways - B125
 - Gardens/Landscaping - A15
9. All sewer pipes, up to and including 225mm are to be vitrified clay to BS EN259, all sewer pipes 300mm diameter and above to concrete pipes to BS EN1916.
10. 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.
11. All bedding shall be Class 5 unloosed net otherwise.
12. All trenches under existing and proposed public highways are to be backfilled with thoroughly compacted Type 1 granular sub-base material.
13. Drainage laid beneath roads and areas of vehicular access (car parking) shall have a minimum 100mm of cover shall be encased in concrete bed and surrounded with associated movement joints. Drainage laid beneath paths, footways and pedestrian areas with less than 900mm of cover shall be similarly treated.
14. Chambers with guard pipes greater than 600mm diameter shall be covered with guard bars, safety chains or other approved safety devices.
15. The use of precast concrete products made with sulphate resisting cement is mandatory, unless a laboratory report proves such precautions are not necessary.
16. 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.
17. All existing and proposed manholes to be surveyed to identify any lateral connections that are still live with any found to be reported to the Engineer.
18. All laterals to be 150mm laid at 1:80 (surface) or 1:60 (foul) unless otherwise stated.
19. All laterals to be 100mm diameter (unfused) unless otherwise stated.
20. 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 BS8303.
21. All drains pass through footings, retaining or screen walls, lintels to be provided over drains.
22. Where inverts are less than 0.6m deep inspection chambers (min dia. 190mm) or access fittings (225 x 100) to be used, elsewhere appropriate flasks, bricks or pcc to be used and sized to comply with Table 1 of Document H of the Building Regulations (<0.6m to invert min DN300, >0.6m to invert min DN475).
23. All gullys connected direct to drains to be roddable.
24. All existing gullies to be easily removable for rodding or to be provided with rodding access at ground level.
25. 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.
26. Adequate precautions in accordance with Approved Document H of the Building Regulations to be taken to protect to drains (particularly plastic) at shallow depths.
27. Catchpits to be as IC's but with 300mm spigud below outgoing pipe invert level except where detailed elsewhere.
28. 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.
29. Gullies within and adjacent to area of site works to be suction cleansed at commencement and completion of works.
30. All drains and gullies to be installed vertically, to be installed vertically along the back edging kerb of all areas of footway/ demarcation to protect from both proposed and future plantation.

CLAYWARE (FOR SEWERS 150mm & 225mm)

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.

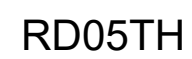
ABLEY LETCHFORD
PARTNERSHIP
Consulting Engineers

Client
**BARRATT DAVID
WILSON HOMES**

Title
LONG SECTIONS
SHEET 3

Status **FOR APPROVAL**

Scale 1:500 H @ A1 1:100 V	Date MAY 2020	Drawn SM	Checked SL
Drawing No A290-RM-113			Revision P3



CHAINAGE	0.000	1.340	8.488	10.978	12.875	13.962	20.000	27.684
EXISTING GROUND LEVEL	14.985		15.163				15.238	15.286
ALIGNMENT LEVEL	15.229		15.129				15.029	14.952
VERTICAL ALIGNMENT		G= -1:000% 1:-100.0						
HORIZONTAL ALIGNMENT				R= 71.063				
STORMWATER COVER LEVEL	15.180				15.063			
STORMWATER DETAILS		13.638	Dia 150 CLAY 1 in 31 12.749	13.433				
FOULWATER COVER LEVEL	15.320			15.101				
FOULWATER DETAILS		13.650	Dia 150 CLAY 1 in 50 10.864	13.431				



CHAINAGE	0.000	1.018	7.829	10.235	20.000		28.728	30.000	35.000	38.728	40.000	45.000	48.728	50.000	60.000	70.000		80.000	82.072	87.269	91.820	93.028
EXISTING GROUND LEVEL	17.228		17.234		17.307		17.433		18.215	19.246	19.253	17.555		17.655		17.714		17.785	17.832		17.893	17.899
ALIGNMENT LEVEL		17.994	18.016		18.116		18.203	18.215	19.246	19.253	18.252	18.233	18.203	18.190		18.090		17.990	17.890		17.801	
VERTICAL ALIGNMENT		G= 1.000% 1: 100.0					L= 20.000 KF= -10.0					G= -1.000% 1: -100.0										
HORIZONTAL ALIGNMENT		R= 232.095																				
STORMWATER COVER LEVEL	17.761		17.960																		17.805	17.642
STORMWATER DETAILS		16.955 Dia 150 CLAY 1 in 14 7.746	16.538																	16.455 Dia 150 CLAY 1 in 26 4.738	16.029	16.029
FOULWATER COVER LEVEL			17.994																17.843			17.652
FOULWATER DETAILS		Dia 150 CLAY 1 in 55 10.988	15.680																	16.000 Dia 150 CLAY 1 in 56 11.265	15.600	15.600



CHAINAGE		0.000	1400 4.878	10.000	14.343	15.000	20.000	25.000	30.000	34.343	40.000	45.388 47.865	48.748
EXISTING GROUND LEVEL	17.230			17.138					16.986		16.898		16.842
ALIGNMENT LEVEL		17.722		17.619	17.552	17.519	17.427	17.348	17.281	17.232	17.176		17.078
VERTICAL ALIGNMENT			G = -2.000% 1: -50.0				KF= 20.0 L= 20.000				G = -1.000% 1: -100.0		
HORIZONTAL ALIGNMENT							R= 52.050						
STORMWATER COVER LEVEL												17.115	
STORMWATER DETAILS												15.765 Dia 1 1 in 150 19.6	
FOULWATER COVER LEVEL	17.598											17.112	
FOULWATER DETAILS	14.680						Dia 150 CLAY 1 in 150 42.532					14.598	