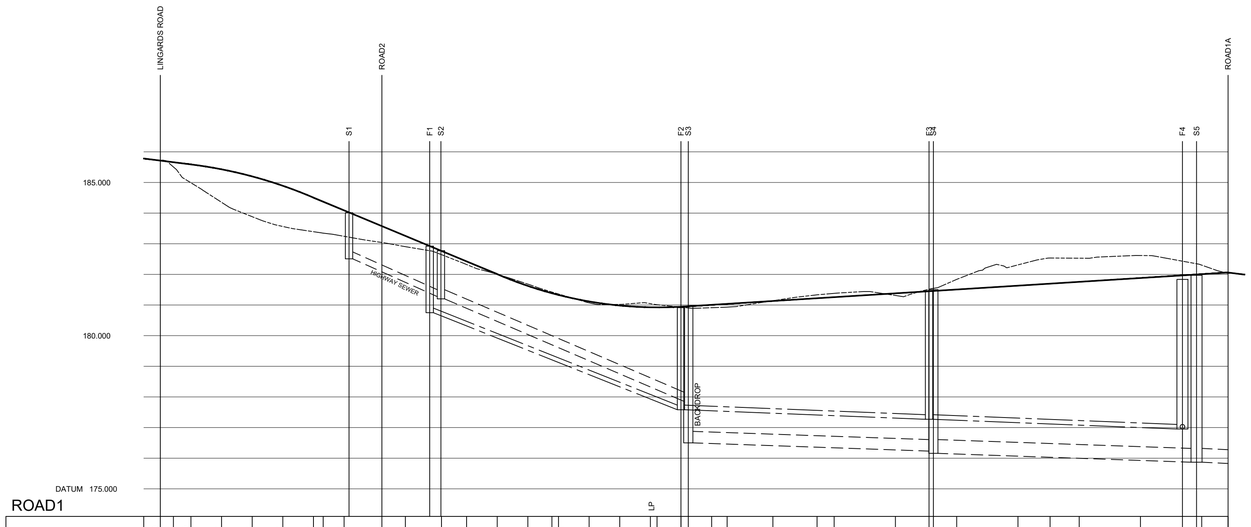
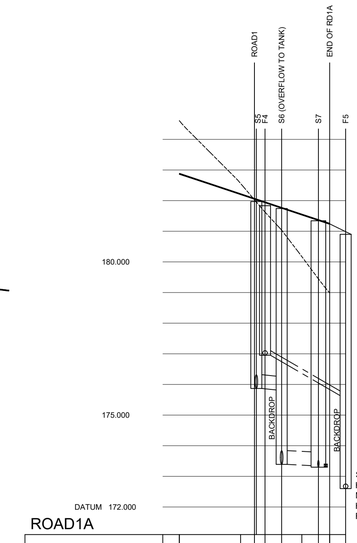
YW REF: S104-2023-005



ROAD1

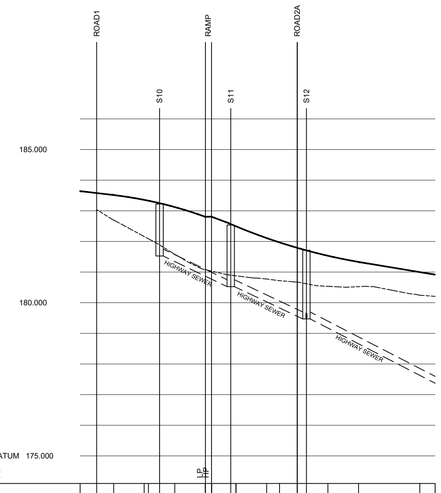
CHAINAGE	0.000	2.142	5.000	10.000	15.000	20.000	25.000	26.588	30.000	36.171	40.000	45.901	50.000	55.000	60.000	63.925	65.000	70.000	75.000	80.000	81.097	85.000	86.188	90.000	92.526	100.000	107.207	110.000	120.000	125.488	126.194	130.000	140.000	145.248	150.000	160.000	166.851	169.155	170.000	174.301
EXISTING GROUND LEVEL	185.713			184.346		183.557		183.243		182.905		182.322			181.682			181.069		181.038			180.903		181.140		181.391	181.317		181.837		182.320		182.529		182.615		182.301		182.029
ALIGNMENT LEVEL	185.714	185.589		185.428	185.194	184.886	184.505	184.090		183.256		182.423		182.006	181.630		181.333	181.116	180.979	180.921	180.919	180.844	181.006		181.131		181.256	181.381		181.506		181.631		181.756		181.881		182.006		182.080
VERTICAL ALIGNMENT	G= -2.500% 1: -40.0		L= 20.000 KF= -3.42877				G= -8.333% 1: -12.0				KF= 3.13054 L= 30.000																		G= 1.250% 1: 80.0											
HORIZONTAL ALIGNMENT			R= 45.000										R= 90.000				R= 52.000												R= 82.000											
STORMWATER COVER LEVEL										184.050		182.772								180.961										181.501							181.971			
STORMWATER INVERT									182.429		181.275	181.200							177.659	176.500									176.232	176.157						175.869	175.869		
STORMWATER DETAILS									Pipe 1.000 Dia 225 Circular CLAY 1 in 13			Pipe 1.001 Dia 300 Circular CLAY 1 in 12								Pipe 1.002 Dia 375 Circular CONC 1 in 150										Pipe 1.003 Dia 450 Circular CONC 1 in 150							Pipe 1.004 Dia 450 Circular CONC 1 in 150		
STORMWATER LENGTHS									15.000			40.095								40.214										43.182							7.275			
FOULWATER COVER LEVEL													182.900								180.915										181.461							181.835		
FOULWATER INVERT													180.750								177.582	177.582									177.270	177.270						176.952		
FOULWATER DETAILS													Pipe 1.000 Dia 150 Circular CLAY 1 in 13								Pipe 1.001 Dia 150 Circular CLAY 1 in 130										Pipe 1.002 Dia 150 Circular CLAY 1 in 130							
FOULWATER LENGTHS													41.017								40.595										41.276										



SHE-0100-6600-2500-6600
HYDROBRAKE FITTED TO MANHOLE S7.
HEAD: 2.5m
FLOW RATE: 6.6lit/sec.

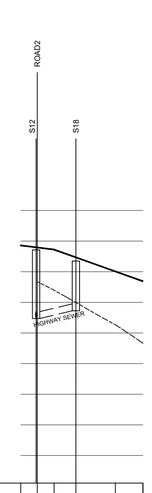
ROAD1A

CHAINAGE	0.000			10.000	12.261	13.983	16.701	20.000	22.701	24.542
EXISTING GROUND LEVEL	184.611			182.560			180.171		178.867	
ALIGNMENT LEVEL	182.677			182.211			181.544		181.241	
VERTICAL ALIGNMENT				G= -6.667% 1: -15.0						
HORIZONTAL ALIGNMENT										
STORMWATER COVER LEVEL						181.971	181.743		181.342	
STORMWATER INVERT						175.869	175.820	173.220	173.180	173.130
STORMWATER DETAILS						Pipe 1.004 Dia 450 Circular CONC 1 in 150		Pipe 1.005 Dia 450 Circular CONC 1 in 150		
STORMWATER LENGTHS						7.275		6.000		
FOULWATER COVER LEVEL						181.835			180.900	
FOULWATER INVERT						176.952			176.636	172.600
FOULWATER DETAILS								Pipe 1.003 Dia 150 Circular CLAY 1 in 10		
FOULWATER LENGTHS								13.160		



ROAD2

CHAINAGE	-2.750	0.025	5.000	5.700	7.517	10.000	15.000	16.000	19.138	20.000	25.000	27.101	30.000	31.493	35.000	40.000	50.000	52.502
EXISTING GROUND LEVEL	183.040	182.699			181.579				180.887			180.672			180.524		180.244	180.208
ALIGNMENT LEVEL	183.575	183.506	183.345		183.111		182.865	182.808	182.500	182.113		181.790		181.530	181.332		180.998	180.915
VERTICAL ALIGNMENT	G= -2.500% 1: -40.0		KF= -3.41738	L= 20.000	KF= -3.38591	G= -8.333% 1: -12.0				KF= 4.0	L= 20.000		G= -3.333% 1: -30.0					
HORIZONTAL ALIGNMENT							R= 22.500											
STORMWATER COVER LEVEL					183.220			182.537				181.710						
STORMWATER INVERT				181.525			180.525	180.525		180.525		179.472	179.472					
STORMWATER DETAILS				Pipe 1.000 Dia 225 Circular CLAY 1 in 12			Pipe 1.001 Dia 225 Circular CLAY 1 in 12			Pipe 1.002 Dia 225 Circular CLAY 1 in 10								
STORMWATER LENGTHS				12.000			12.634			23.366								



ROAD2A

CHAINAGE	-2.750	0.000	3.557	10.000	14.500
EXISTING GROUND LEVEL	180.672	180.395		179.266	178.664
ALIGNMENT LEVEL	181.722			181.008	180.687
VERTICAL ALIGNMENT		G= -7.143% 1: -14.0			
HORIZONTAL ALIGNMENT					
STORMWATER COVER LEVEL	181.710		181.348		
STORMWATER INVERT	179.472	179.472	179.725		
STORMWATER DETAILS		Pipe 2.000 Dia 225 Circular CLAY 1 in 26			
STORMWATER LENGTHS		6.500			

1. ALL ADOPTABLE SEWER WORKS AND MATERIAL TO BE IN ACCORDANCE WITH "CODES FOR ADOPTION",THE RELEVANT BRITISH/EUROPEAN AND YORKSHIRE WATER'S STANDARDS/REQUIREMENTS/ADDENDUM TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND KITEMARKED.
2. MANHOLE COVERS SHALL/MUST HAVE A CLEAR OPENING OF 600mm AND SHALL BE CLASS D400 TO BS EN 124 WITH 150mm DEEP FRAMES IN HIGHWAYS.
3. FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT.
4. YORKSHIRE WATER IS **NOT** OBLIGED TO ACCEPT FILTER DRAIN/LAND DRAINAGE RUNOFF INTO THE PUBLIC SEWER NETWORK OR ADOPTABLE DRAINAGE SYSTEM (DIRECTLY OR INDIRECTLY). AN ALTERNATIVE METHOD OF DISPOSAL OF THE LAND DRAINAGE RUNOFF WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LIAISE WITH THE LOCAL AUTHORITY, LAND DRAINAGE SECTION WITH REGARD TO THE DISPOSAL OF THE FILTER DRAIN/LAND DRAINAGE RUNOFF.
5. COVER SLABS MUST CARRY THE BSI KITEMARK OR WILL BE REJECTED BY YORKSHIRE WATER INSPECTOR. WHERE THE CLEAR OPENING OF THE KITEMARKED PRODUCT IS DIFFERENT TO THAT OF THE COVER AND FRAME, A LOADING BEARING SLAB SHOULD BE FITTED ABOVE THE COVER SLAB TO BRING THE SIZE DOWN TO 600x600mm FOR THE YORKSHIRE WATER SPECIFIED COVER SIZE. PLEASE REFER TO CONCRETE PIPE SYSTEMS ASSOCIATION (CPSA), 'TECHNICAL BULLETIN' ISSUED AUTUMN 2004 FOR KITEMARKED COVER SLAB OPENING SIZES.
6. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.
7. THE ADOPTABLE SEWERS SHOULD BE A MINIMUM OF 1m AND MANHOLES 0.5m FROM KERB FACES.
8. SEWERS MUST HAVE 5m CLEARANCE FROM TREES AND HEDGES
9. SEWERS TO BE LAID IN CLASS "S" BEDDING (150mm GRANULAR BED AND SURROUND). WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.2m IN HIGHWAYS AND VERGES (OR LESS THAN 900mm IN NONE VEHICULAR ACCESS AREAS) THEN A 175mm CONCRETE SLAB OVER SEWER SHALL BE PROVIDED.
10. ALL PIPEWORK 300mm DIAM. OR LESS TO BE VITRIFIED CLAY CONFORMING WITH BS 65. MINIMUM CRUSHING STRENGTHS TO BE AS FOLLOWS: 100mm DIA. 40kN/m, 150mm DIA 40kN/m, 225mm DIA 45kN/m, 300mm DIA 72kN/m.
11. ALL PIPEWORK 375mm DIAM. OR GREATER TO BE CONCRETE CLASS 120 TO EN 1916/ BS 5911-1: 2002,
12. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
13.YORKSHIRE WATER POLICY IS NOT TO ACCEPT TYPE "C" BRICK MANHOLES AND 1050mm DIAM. MANHOLE RINGS. INSTEAD IT IS PREFERRED THAT YOU USE A TYPE "B" MANHOLE WITH 1200mm DIAM. OR 1500mm DIAM. RINGS, WITH THE OPENING SIGHTED OVER THE CHANNEL WHERE DEPTH OF COVER TO PIPE SOFFIT IS 1-1.5m.
14. ALL HIGHWAY WORKS AND MATERIAL TO CONFORM WITH KIRKLEES COUNCIL DESIGN GUIDANCE AND SPECIFICATION.
15. GULLY COVER AND FRAMES SHALL BE D400 DUCTILE IRON AND COMPLY WITH EUROPEAN STANDARD BS EN 124. THOSE SIGHTED IN ACCESSWAYS AND MEWS COURTS MUST BE SUITABLE FOR USE IN PEDESTRIAN AREAS.
16. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENT OF WATER INDUSTRY SPECIFICATION 4-08--2 (TABLE A2).
17. PLASTIC CHANNEL SECTIONS IN MANHOLES ARE NOT ACCEPTABLE AND YORKSHIRE WATER WOULD PREFER CLAYWARE CHANNELS IN MANHOLES. YORKSHIRE WATER HAVE FOUND THAT PLASTIC CHANNELS ARE DIFFICULT TO SET IN CONCRETE AS THEY FLOAT AND A SATISFACTORY FINISH CANNOT BE OBTAINED ON BENCHING.
18. WHERE A B125 COVER AND FRAME HAS BEEN APPROVED, THIS **MUST NOT** BE COATED IN PLASTIC AND MUST HAVE LIFTING EYES SUITABLY SIZED TO ACCOMMODATE STANDARD LIFTING KEYS. SCREW DOWN COVERS ARE **NOT** ACCEPTABLE.
19. THERE SHOULD BE ENOUGH CLEARANCE TO ACCOMMODATE THE BEDDING FOR BOTH PIPES, APPROX 300mm : IF CROSSOVER IS NEAR THE ROCKER THEN THE CLEARANCE NEEDED MAY BE INCREASED.

Rev G Foul water sewer amended to suit clients instruction	25.09.24 HH
Rev F S1-S2, S10-S13 & S18-S12 amended to suit Kirklees comments	28.08.24 HH
Rev E Highway sewers indicated	14.02.24 HH
Rev D Proposed drainage design updated	13.02.24 HH
Rev C F1-F2 amended. S12 added to Road 1	21.08.23 HH
Rev B Road 2 / 2A updated to suit latest planning layout rev N	23.01.23 HH
Rev A Road 2 / 2A updated to suit latest planning layout	23.11.22 HH

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e trevor.haigh@haighhuddleston.co.uk

Client
SB HOMES

Project
LINGARD ROAD, SLAITHWAITE

Detail
ROAD & SEWER LONG SECTIONS

Dwn	Chkd	Date	Scale	Dwg No.
HH		JUL-22	1:500hor 1:100ver@A1	E19/7567/005-01G