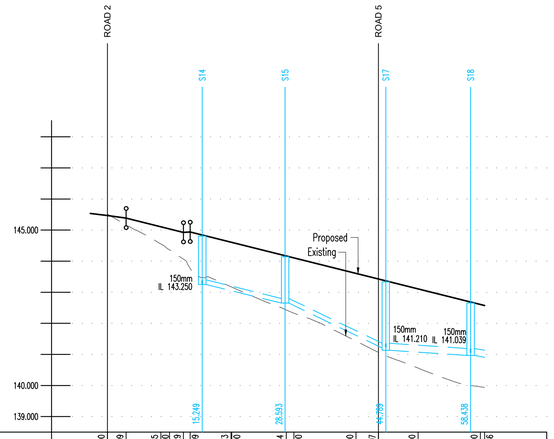
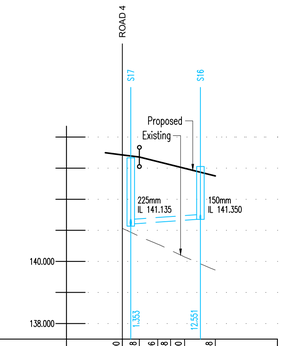
NOTE:
All UPVC pipes to be BSI Kitemarked
(certified to WIS 4-35-01 and BS EN13476

All Concrete pipes to be Class 120 to EN 1916/BS5911-1 2002



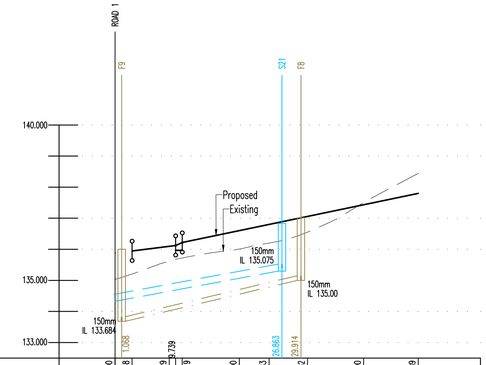
ROAD 4

CHAINAGE	0.000	3.099	8.585	10.000	12.229	15.329	19.873	20.000	28.764	30.000	40.000	43.607	50.000	60.000	60.686
EXISTING GROUND LEVEL	145.510		144.561				143.167		142.327		141.427		140.559	139.958	139.938
ALIGNMENT LEVEL	145.385		145.035		144.925		144.940		144.605		144.108		143.696	142.696	142.572
VERTICAL ALIGNMENT			G=-5.006%		300R				G= -4.998%						
			1:-20.0						1: -20.0						
HORIZONTAL ALIGNMENT								R=10.750							
LEFT HAND CHANNEL			144.967		144.786		144.537		144.284		144.038		143.788	143.538	143.288	143.425	143.173	143.037	142.787	142.537	142.503
RIGHT HAND CHANNEL		145.175		145.004		144.924		144.674		144.392		144.045		143.924		143.675		143.173		142.923		142.675	142.641
SW CL / DETAIL							144.606		Pipe 3.000 Dia 150 Circular UPVC 1 in 21		144.142		Pipe 3.001 Dia 150 Circular UPVC 1 in 11			143.333		Pipe 3.002 Dia 225 Circular UPVC 1 in 80			142.650		Pipe 3.003 Dia 225 Circular UPVC 1 in 40
SW IL / LENGTH							143.250		13.958		142.650		16.218			141.210		13.649			140.964		4.211



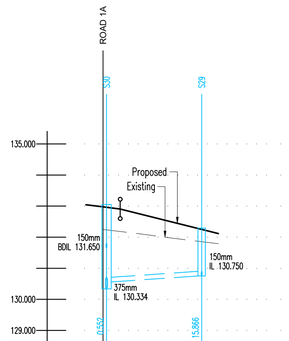
ROAD 5

CHAINAGE	0.000	2.718	5.686	7.748	10.000	14.948
EXISTING GROUND LEVEL	141.065				140.146	139.722
ALIGNMENT LEVEL		143.358			142.996	142.750
VERTICAL ALIGNMENT				G= -4.970%		
				1: -20.1		
HORIZONTAL ALIGNMENT						
LEFT HAND CHANNEL				143.279	143.177	143.065	142.819
RIGHT HAND CHANNEL				143.038	143.177	143.065	142.681
SW CL / DETAIL	143.333	Pipe 4.000 Dia 150 Circular UPVC 1 in 80				140.653	
SW IL / LENGTH		141.210		11.198		141.350	



ROAD 6

CHAINAGE	0.000	2.748	8.729	10.819	20.000	24.783	25.863	30.962	40.000	48.789
EXISTING GROUND LEVEL	135.033		135.690		136.010			136.476	137.507	138.445
ALIGNMENT LEVEL		135.948		136.217		136.600			137.434	137.800
VERTICAL ALIGNMENT			G=2.483%	300R			G= 4.167%			
			1: 40.3				1: 24.0			
HORIZONTAL ALIGNMENT							R= 7.080			
LEFT HAND CHANNEL			136.229		136.467			137.172	137.284	
RIGHT HAND CHANNEL		136.021		136.079		136.317	136.525	136.675	136.883	136.984		136.946	137.157	137.502
SW CL / DETAIL	Pipe 5.000 Dia 225 Circular UPVC 1 in 27							136.83						
SW IL / LENGTH	28.662							135.300						
FW CL / DETAIL		136.020	Pipe 2.000 Dia 150 Circular UPVC 1 in 21					144.630		
FW IL / LENGTH	133.684	133.684	28.317					142.500		



ROAD 7

CHAINAGE	0.000	2.750	6.758	10.000	16.555
EXISTING GROUND LEVEL	132.246				131.790
ALIGNMENT LEVEL		132.907		132.544		132.117
VERTICAL ALIGNMENT			G= -5.000%		
			1: -20.0		
HORIZONTAL ALIGNMENT					
LEFT HAND CHANNEL			132.782	132.620	132.370	132.192
RIGHT HAND CHANNEL		132.631	132.469	132.219	132.041
SW CL / DETAIL	133.053	Pipe 8.000 Dia 150 Circular UPVC 1 in 80			132.291	
SW IL / LENGTH	130.559	15.305			130.750	

N O T E S

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

DO NOT SCALE | ORIGINAL DRAWING SIZE A1

Water Authority's General Notes

1. This drawing is to be read in conjunction with all relevant OEC Consulting Engineers and Architects drawings and project specifications.
2. All adoptable sewer works and material to be in accordance with Sewerage Sector Guidance Design and Construction Guidance [Code for Adoption]. The Relevant British/European and the Water Authority's Standards/Requirements/Local Practice for the Adoption of Small Submersible Foul and Surface Water Pumping Stations and must be Kitemarked.
3. The location, size and depth of all existing drains/sewers and services shall be established by the contractor prior to commencement of works on site. Any discrepancies from the information indicated on these drawings shall immediately be brought to the attention of the engineers.
4. All levels and dimensions shall be verified on site prior to commencement of any works. Any discrepancies shall immediately be brought to the attention of the engineers.
5. Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height. (please also refer to Figure 2.3 on page 33 in "Sewers for Adoption" 6th Edition for restrictions on tree planting adjacent to Sewers).
6. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
7. All connections to public sewers to be a minimum of 150mm ø via a 45° junction.
8. 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 concrete slab should be provided above the granular bed and surround.
9. The Water Authority's policy is that brick manhole and 1050mm dia manhole rings are not preferred. Instead it is preferred that you use a type "B" manhole with 1200mm dia, 1,350mm dia or 1500mm dia rings, with the opening sited over the channel where depth of cover to pipe soffit is 1-1.5m.
10. 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.
11. 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. 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.
12. Cover slabs must carry the BSI Kitemark or will be rejected by the Water Authority 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 Water Authority's specified cover size. Please refer to the Concrete Pipe Systems Association (CPSA), "Technical Bulletin" issued autumn 2004 for kitemarked cover slab opening sizes.
13. Plastic channel sections in manholes are not acceptable and clayware is preferable. Plastic channels are difficult to set in concrete and a satisfactory finish cannot be obtained on the benching.
14. Maximum depth of demarcation chamber to be 2m, where depth exceeds 2m, manhole to be constructed as type B manhole.
15. Demarcation chambers to be a min. 450mmø chambers for 100mmø foul & 150mmø surface water pipes up to 1.2m deep. For depths greater than 1.2m, restricted access opening to 350mm is required for safety reasons.
16. Where plastic pipes are proposed for adoptable sewers, structural calculations for the plastic pipes and a site investigation report to prove that the ground condition is suitable for the plastic pipes are to be produced.
17. There should be enough clearance to accommodate the bedding for both pipes, approx 300mm. If the crossover is near the rocker then the clearance needed may be increased.
18. If plastic pipes are to be used then the following should apply:-

    a) All adoptable sewers to be BSI Kitemark (certified to WIS 4-35-01 and BS EN13476)

    b) Bedding and backfill material to conform to the requirements of the Water Industry Specification 4-08-02 (Table A1)

19. Adoptable plastic sewer pipes to be BSI Kitemarked (Certified to WIS 4-35-01 and BS/EN13476). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer.
20. Filled ground or soft spots must be excavated, backfilled and consolidated under the supervision, and to the satisfaction, of the Water Authority before any sewer works are carried out.
21. Sulphate resisting cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
22. The minimum crushing strength for clay pipes should be as follows : 100mm dia. 40KN/m, 150mm dia. 40KN/m, 225mm dia. 45KN/m and 300mm dia. 72KN/m. The minimum crushing strength for concrete pipes should be – (Class 120 to EN 1916/BS5911-1 2002). Plastic pipes should conform to WIS 4-35-01 and BS EN13476.
23. Surface water and foul rising mains to be provided with marker tape above the rising mains.
24. The Water Authority is not obliged to accept filter drain/land drainage runoff into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage runoff will therefore be required and you will have to liaise with the Land Drainage Authority/Land Drainage Section with regard to the disposal of the filter drain/land drainage runoff is required.
25. All excavations in areas of high water tables and granular materials with high sand/silt contents shall be wrapped with a suitable geotextile filter membrane to prevent migration of sands/silts. Full height clay stanks across trenches and/or at manhole locations at 25m intervals to restrict water movement along the excavation shall be provided.
26. All works within the public highway to be reinstated to the highway authority requirements. All drainage connections onto adoptable drainage systems shall be carried out to the water authority's approval.
27. The contractor must allow for any fee's required for road and sewer opening permits, sewer connections and make the appropriate applications.
28. Where there are double road gullies, the gully leads shall be connected onto separate pipe lengths.

Rev	By	Date	Description	Chk
/	RB	11.05.26	Issued for approval.	WW

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Client
KEEPMOAT HOMES WEST YORKSHIRE

Project
GOMERSAL

Title
LONGITUDINAL SECTIONS
SHEET 3 OF 3

Scale	Drawn	Checked	Date
1:500	RB	WW	MAY.26

Drawing Status
APPROVAL

Job No.	Drawing No.	Revision
104.019	06.02	/