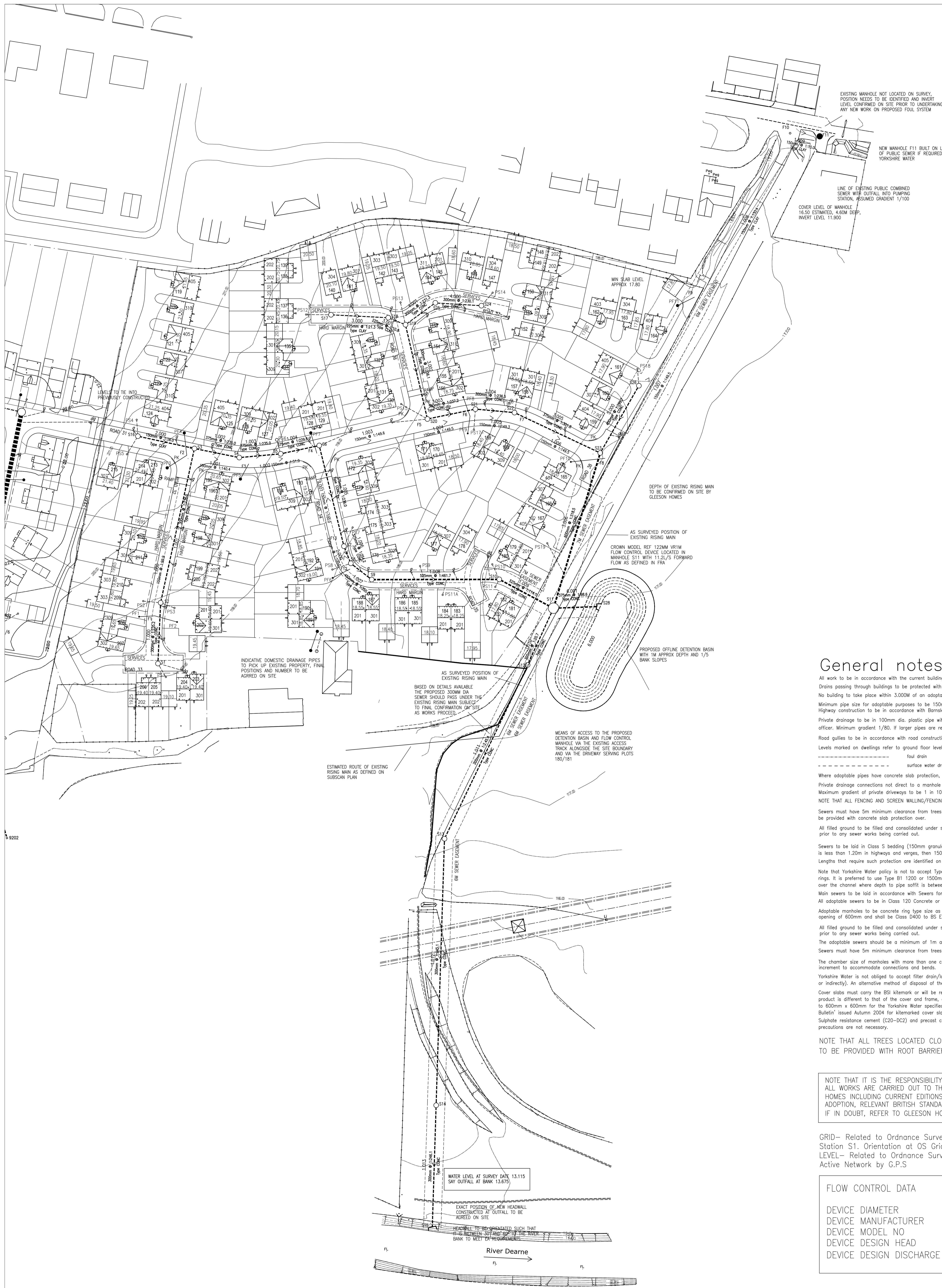
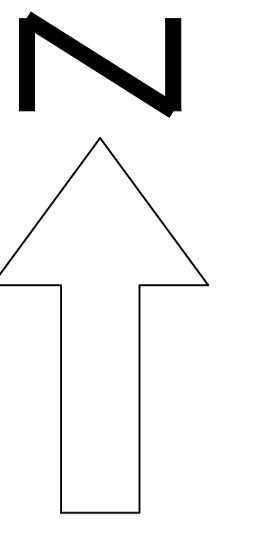


- All work to be in accordance with the current Building Regulations
- Only written dimensions to be used
- Discrepancies and abnormalities to be reported.
- If in doubt Ask.



General notes :

All work to be in accordance with the current building regulations.
 Drains passing through buildings to be protected with lintel over.
 No building to take place within 3.000M of an adoptable sewer.
 Minimum pipe size for adoptable purposes to be 150mm with flexible mechanical joints.
 Highway construction to be in accordance with Boreassey MBC Highways Department.
 Private drainage to be in 100mm dia. plastic pipe with granular bed & surround to the satisfaction of the building control officer. Minimum gradient 1/80. If larger pipes are required, these will be defined on the Domestic Drainage Layouts.
 Road gullies to be in accordance with road construction details drawing.
 Levels marked on drawings refer to ground floor level.
 - - - - - foul drain
 - - - - - surface water drain

Where adoptable pipes have concrete slab protection, all joints to be provided with 18mm thick flexible filler.
 Private drainage connections not direct to a manhole are to be made via a 45 degree junction and not saddles.
 Maximum gradient of private driveways to be 1 in 10.
 NOTE THAT ALL FENCING AND SCREEN WALLING/FENCING DETAILS TO BE AS DEFINED ON PLANNING DRAWING
 Sewers must have 5m minimum clearance from trees and hedges, otherwise they must be provided with concrete slab protection over.
 All filled ground to be filled and consolidated under supervision and to the satisfaction of Yorkshire Water prior to any sewer works being carried out.
 Sewers to be laid in Class S bedding (150mm granular bed and surround). Where depth of cover to top of sewer is less than 1.20m in highways and verges, then 150mm concrete slab protection is to be provided.
 Lengths that require such protection are identified on Long Sections drawing.
 Note that Yorkshire Water policy is not to accept Type C brick manholes and 1050 dia concrete manhole rings. It is preferred to use Type B1 1200 or 1500mm dia concrete manholes with the opening sited centrally over the channel where depth to pipe soffit is between 1.0-1.5m.
 Main sewers to be laid in accordance with Sewers for Adoption (6th edition) and to the satisfaction of Yorkshire Water and be kitemarked.
 All adoptable sewers to be in Class 120 Concrete or 40KN/m (150X) 45KN/m (225) with class S bedding as specified on Long Sections drawing.
 Adoptable manholes to be concrete ring type size as specified in schedules. Manhole covers must/shall have a clear opening of 600mm and shall be Class D400 to BS EN 124. Covers in highways to have 150mm deep frames.
 All filled ground to be filled and consolidated under supervision and to the satisfaction of Yorkshire Water prior to any sewer works being carried out.
 The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
 Sewers must have 5m minimum clearance from trees and hedges, otherwise they must be provided with concrete slab protection.
 The chamber size of manholes with more than one connection in them may need to be increased by an increment to accommodate connections and bends.
 Yorkshire Water is not obliged to accept filter drain/land drainage run-off into public sewers or adoptable drainage systems (directly or indirectly). An alternative method of disposal of the land drainage run-off will be required to be agreed with the Local Drainage Section.
 Cover slabs must carry the BSI kitemark or will be rejected by the Yorkshire Water inspector. Where the clear opening of the kitemarked product is different to that of the cover and frame, a load bearing slab should be fitted above the cover slab to bring the size down to 600mm x 600mm 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.
 Sulphate resistance cement (C20-C22) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
 NOTE THAT ALL TREES LOCATED CLOSE TO THE ADOPTABLE ESTATE ROADS TO BE PROVIDED WITH ROOT BARRIER PROTECTION (BY MESSRS GREENLEAF OR SIMILAR)

NOTE THAT IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL WORKS ARE CARRIED OUT TO THE REQUIRED STANDARD STIPULATED BY GLEESON HOMES INCLUDING CURRENT EDITIONS OF THE BUILDING REGULATIONS, SEWER FOR ADOPTION, RELEVANT BRITISH STANDARDS, EUROCODES AND GOOD BUILDING PRACTICE. IF IN DOUBT, REFER TO GLEESON HOMES TECHNICAL DEPARTMENT FOR CLARIFICATION.

GRID- Related to Ordnance Survey using One Point Localisation on Station S1. Orientation at OS Grid North.
 LEVEL- Related to Ordnance Survey by connection to the OS Active Network by G.P.S

FLOW CONTROL DATA	
DEVICE DIAMETER	122MM
DEVICE MANUFACTURER	CROWN
DEVICE MODEL NO	122-VR1M
DEVICE DESIGN HEAD	1.525M
DEVICE DESIGN DISCHARGE	11.2L/S

LATERAL MANHOLE SCHEDULE									
REF	EASTING	NORTHING	APP COVER LEVEL	INVERT LEVEL	DEPTH	SIZE	TYPE	PIPE SIZE	BACK DROP
SURFACE WATER									
PS1	446026.326	402319.781	19.20	17.75	1.45	500	PPIC	150	18.25
PS2	446018.527	402345.895	19.70	18.00	1.70	500	PPIC	150	
PS3	446029.272	402343.529	19.55	17.90	1.65	500	PPIC	150	
PS4	446016.292	402408.240	21.20	19.80	1.40	500	PPIC	150	
PS5	446012.947	402396.372	21.50	20.00	1.50	500	PPIC	150	
PS6	446024.467	402401.334	19.80	17.50	2.30	1050	CONC	150	
PS7	446090.524	402371.211	18.70	17.20	1.50	500	PPIC	150	
PS8	446083.554	402356.733	18.75	17.25	1.50	500	PPIC	150	
PS9	446113.682	402357.947	18.05	16.82	1.23	500	PPIC	150	
PS10	446138.530	402358.549	17.60	16.70	0.90	500	PPIC	150	
PS11	446139.560	402350.768	17.70	16.67	1.03	500	PPIC	150	
PS11A	446121.462	402348.018	18.00	16.82	1.18	500	PPIC	150	
PS12	446074.504	402444.406	20.28	18.93	1.35	500	PPIC	150	
PS13	446106.377	402445.593	19.30	17.90	1.40	500	PPIC	150	
PS14	446138.641	402451.927	18.60	17.20	1.40	500	PPIC	150	
PS15	446107.202	402413.641	18.90	17.40	1.50	500	PPIC	150	
PS16	446146.963	402415.139	18.20	16.85	1.35	500	PPIC	150	
PS17	446132.199	402404.811	18.50	17.00	1.50	500	PPIC	150	
PS18	446188.435	402425.699	17.70	16.78	0.92	500	PPIC	150	
PS19	446157.424	402365.789	17.60	16.65	0.95	500	PPIC	150	
FOUL WATER									
PF1	446017.142	402340.532	19.55	17.50	2.05	500	PPIC	150	18.75
PF2	446030.178	402338.710	19.50	17.50	2.00	500	PPIC	150	
PF3	446026.784	402391.705	20.95	17.25	3.70	1050	CONC	150	
PF4	446032.854	402403.715	20.90	17.30	3.60	1050	CONC	150	
PF5	446051.952	402387.865	20.40	16.85	3.55	1050	CONC	150	
PF6	446083.638	402353.885	18.80	16.60	2.20	500	PPIC	150	
PF7	446076.151	402403.745	19.50	16.50	3.00	1050	CONC	150	
PF8	446128.535	402416.041	18.55	16.15	2.40	500	PPIC	150	
PF9	446130.094	402403.545	18.50	16.15	2.35	500	PPIC	150	
PF10	446165.538	402393.769	17.90	15.65	2.25	500	PPIC	150	
PF11	446202.221	402447.514	17.60	15.33	2.27	500	PPIC	150	

RISK ASSESSMENT - SIGNIFICANT RISKS THAT CANNOT BE DESIGNED OUT	LEVEL OF RISK (H/M/L)	SUGGESTED ACTION
DEEP EXCAVATIONS ASSOCIATED WITH NEW DRAINAGE WORKS.	HIGH	ENSURE ALL EXCAVATIONS HAVE ADEQUATE TRENCH SUPPORTS.
HANDLING LARGE DIAMETER MANHOLE RINGS	HIGH	USE CORRECT LIFTING EQUIPMENT AND ENSURE OPERATIVES WEAR APPROPRIATE PROTECTIVE CLOTHING/HARD HATS.
CONTACT WITH SERVICES.	MED	OPERATIVES TO USE CORRECT BREAKING EQUIPMENT.
NOISE.	MED	OPERATIVES TO USE CORRECT EAR PROTECTION.
DRAINAGE EXCAVATIONS ADJACENT EXISTING BOUNDARY STRUCTURES AND CREATING PROPOSED POND/DETENTION BASIN.	HIGH	ENSURE CORRECT SUPPORTS ARE PROVIDED TO TRENCHES AND BUILDINGS WHERE REQUIRED.
EXCAVATION IN PUBLIC HIGHWAY.	HIGH	ENSURE CORRECT USE OF TRENCH SUPPORTS IN EXCAVATION AND SCREEN BARRIERS TO PROTECT MEMBERS OF THE PUBLIC.
MAINTAIN ACCESS TO ADJACENT PROPERTIES AND OCCUPIERS.	HIGH	ENSURE WORKS ARE PROTECTED WITH BARRIERS AND SIGNS TO GUIDE THE PUBLIC AWAY FROM THE WORKS.
CARRYING OUT EXCAVATIONS NEAR TO EXISTING SERVICES	HIGH	ENSURE ALL EXCAVATIONS WITHIN EXISTENCE AREAS ARE CARRIED OUT USING CORRECT MECHANICAL EQUIPMENT, SIGNAGES, TRENCH SUPPORTS AND BARRIERS TO BE DIRECTED TO PROTECT THE PUBLIC.
EXCAVATIONS ASSOCIATED WITH NEW SURFACE WATER OUTFALL AND WORKING ADJACENT TO FAST FLOWING RIVER.	HIGH	ENSURE ALL EXCAVATIONS HAVE ADEQUATE TRENCH SUPPORTS AND CORRECT BARRIERS ARE USED TO PROTECT OPERATIVES.
IT IS ASSUMED THAT WORKS ASSOCIATED WITH THIS DESIGN WILL BE UNDERTAKEN BY A PERSON OR PERSONS WHO ARE COMPETENT AND HAVE THE REQUIRED LEVEL OF EXPERIENCE AND EXPERTISE		

D. 14/10/19 further amendments to outfall sewer route and SW system updated to receive storm drives (MB/GH)
 C. 04/01/19 amended to latest JW comments & outfall sewer route amended (MB/GH)
 B. 31/10/17 amended to suit JW requirements (CW)
 A. 19/08/16 F14-F15 deleted in road 36 (PS)
 Revision.

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AO

Client: **Gleeson Homes**
 Site: **Lowfield Road, Bolton on Dearne - Phase 3.**
 Title: **Engineering Layout**

Date: Aug 2016 Scales: 1/500 Drawing No.: 16/664/79070