

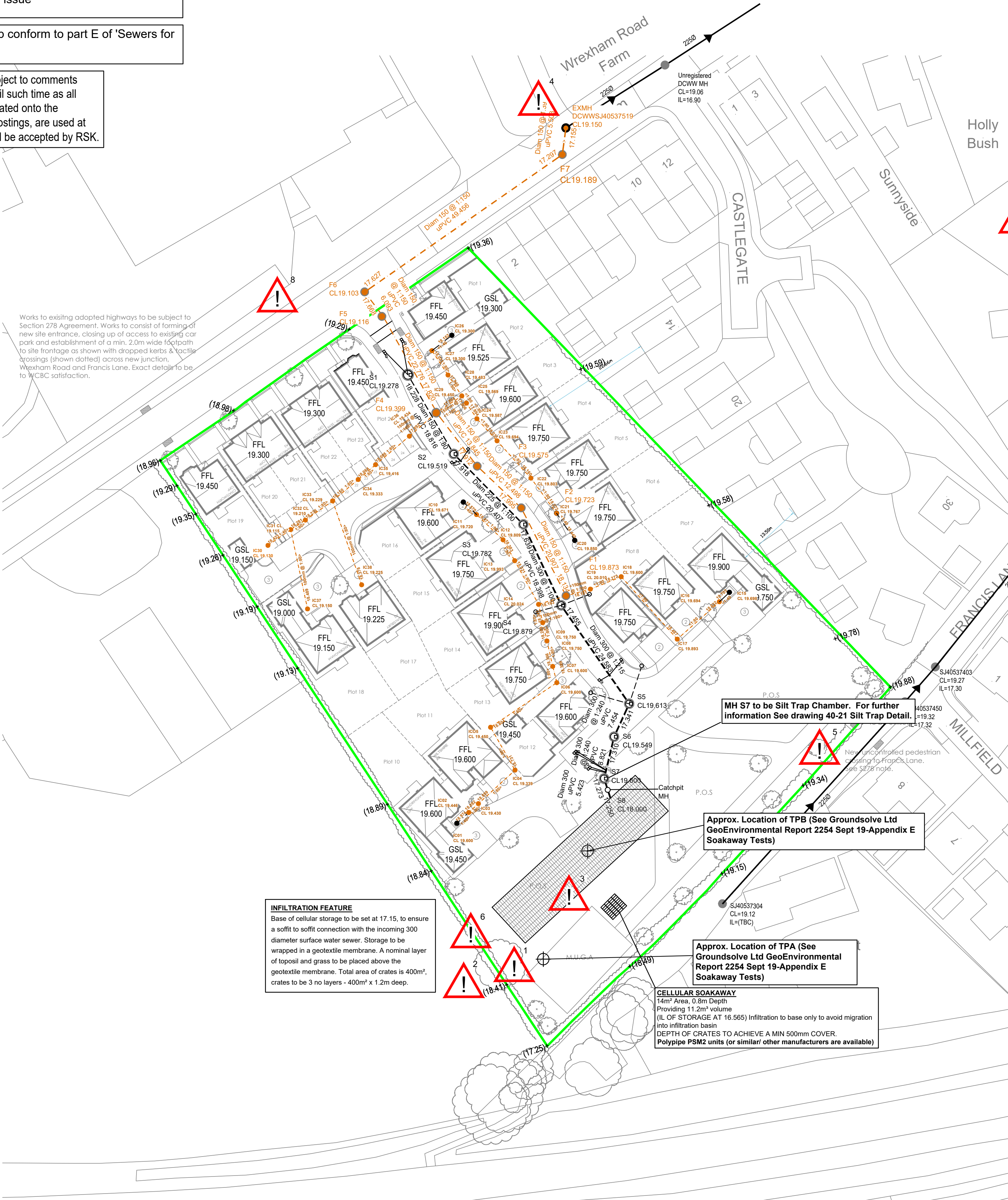
THIS DRAWING IS FOR TECHNICAL APPROVAL AND TENDER PURPOSES ONLY AND IS NOT FOR CONSTRUCTION

Drainage Layout to be read in conjunction with 40-06 Plot Drainage. Information to be reviewed and any discrepancies to be raised with the designer as early prior to construction issue

Adoptable materials and workmanship conform to part E of 'Sewers for Adoption' 7th Edition.

The details provided on this drawing are subject to comments by all the relevant approving authorities. Until such time as all comments have been received and incorporated onto the drawings, all the information provided and costings, are used at MACBRYDE HOMES risk and no liability will be accepted by RSK.

Works to existing adopted highways to be subject to Section 278 Agreement. Works to consist of forming of new site entrance, closing up of access to existing car park and establishment of a min. 2.0m wide footpath to site frontage as shown with dropped kerbs & tactile crossings (shown dotted) across new junction. Wrexham Road and Francis Lane. Exact details to be to W/CBC satisfaction.



- All adoptable sewer works and material to be in accordance with "Sewers for Adoption" 7th Edition, The Relevant British/European and Welsh Water Standards/Requirements/Addendum and "Kitemarked".
- Manhole covers shall/must have a minimum clear opening of 675mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
- Filled ground must be filled and consolidated under the supervision and to the satisfaction of Welsh Water before any sewer works are carried out.
- Cover slabs must carry the BSI Kitemark or will be rejected by Welsh 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 675mm x 675mm for the Welsh Water specified cover size. Please refer to Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued Autumn 2004 for Kitemarked cover slab opening sizes.
- Sulphate resistant cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
- The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
- Sewers must have 5 metres clearance from trees and hedges (please also refer to Figure 2.3 on page 33 in "Sewers for Adoption" 7th Edition for restrictions on tree planting adjacent to sewers).
- 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 provide above granular bed and surround.
- Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
- 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.
- All lateral drains to be 150mm dia. laid at 1 in 100 gradient minimum.

1. The developer must self-vet and certify that the design criteria, material standards and workmanship specifications for the proposed adoptable sewers are in accordance with those set out in 'Sewers for Adoption' 7th Edition (SFA 7th). The Welsh Ministers Standards and the requirement of DCWW as the Statutory Sewerage Undertaker.
2. Subject to a Section 104 Adoption Agreement being complete, a Section 106 application to connect must be made to DCWW the developer shall give 21 days notice prior to connection. The works may only be undertaken by an SSIP Heath & Safety approved contractor.

uPVC pipes where used should achieve all relevant BS benchmarks and are subject to pre approval from DCWW prior to installation

CIVIL / STRUCTURAL DESIGN RISK MANAGEMENT

Abnormal or unusual residual risks associated with the design outcomes shown on this drawing are:-

- 1: Infiltration rate of 2.238m/s used as worst recorded rate in vicinity of PDS, taken from GroundSolve Geo-environmental Report Note: Tests are recorded as being carried out in July and August and are not representative of Winter performance
- 2: RSK accepts no responsibility for the accuracy of third party information
- 3: Base of infiltration basin is approximately at the limit of depth of infiltration test results. A safety margin of test results beyond this depth would be preferable
- 4: Invert levels and locations of existing network to be confirmed prior to construction
- 5: Land drainage features included in Weetwood drainage strategy dwg. Proposed Drainage Layout drawing number 100 Rev P1, omitted due to location at top of existing embankment/high infiltration rates. Client to confirm requirement
- 6: Infiltration basin to take whole site impermeable areas and designed to operate independently of permeable paving due to inconsistent infiltration rates recorded across site.
- 7: General Design Notes are taken from another authority and subject to change following review by DCWW
- 8: GPRS survey is advised where proposed FW crosses existing footway to ensure no clashes occur. This should be undertook in advance of construction phase.

RSK LDE LTD has followed its Design Risk Management process for Hazard Elimination and Risk reduction in developing the designs shown on this drawing. Abnormal or unusual residual risks may be shown above where it is considered that such risk may not normally be expected by competent persons engaged on work of this nature or type.

Legend:

- Development Boundary
- Proposed adoptable foul water sewer and manhole
- Foul water lateral connection and demarcation manhole
- Proposed adoptable surface water sewer and manhole
- Surface water lateral connection and demarcation manhole
- Existing Welsh Water combined water sewer and manhole

Rev.	Date	Amendment	Drawn	Chkd.	Appd.
P15	18.08.22	Infiltration feature revised in accordance with client comments	MAR		
P14	17.06.22	Infiltration feature revised in accordance with client comments	MAR		
P13	18.08.21	Gullies at site entrance moved as per client comments	EP	MS	
P12	26.10.20	Updated to suit new layout Rev U	LGS	MAR	
P11	07.09.2020	Updated to suit new layout Rev T, amendments to House type Wiltshire & Salisbury	JW	MAR	
P10	13.08.20	Updated to suit layout Rev S	LGS	GPY	
P9	23.07.20	Clay amended to uPVC, F7 relocated	GPY	GPY	
P8	20.07.20	silt trap note amended	GPY	GPY	
P7	31.03.20	IC30, 37, 38 amended to brown	GPY	GPY	



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Client
MACBRYDE HOMES

Project Title
Wrexham Road Holt

Status
Detailed Design

Drawing Title
Adoptable Drainage Layout

Drawn LGS	Date NOV 19	Checked GPY	Date NOV 19	Approved Date
Scale 1:500	Orig Size A1	Dimensions m		

Project No.
881986

Drawing No.
40-01

Rev.
P15

