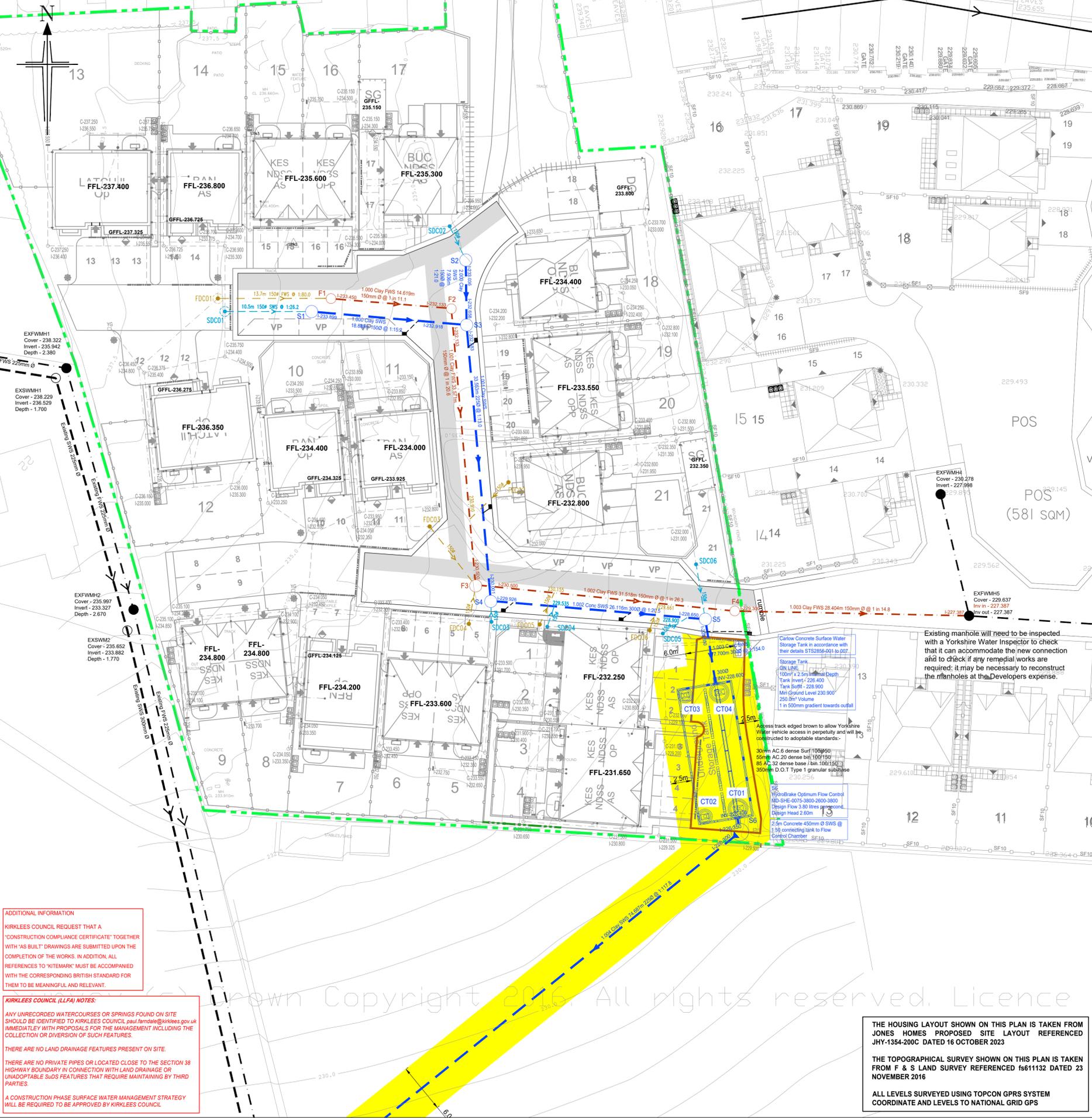


S104-2024-006



Ref (SDC)	Cover Level	Invert Level	Depth to Invert (m)	Depth to Soffit (m)	Diameter (mm)	Cover Type	Cover Size	Chamber Type	Lateral Diameter (mm)	Lateral Length (m)	D/Stream Invert	Lateral Gradient (1 in ?)
01	235.950	234.300	1.650	1.200	1200	D400	600x600	Type B	150	10.5	233.899	28.2
02	234.700	233.480	1.220	1.070	450	B125	450x450	Type D	150	4.7	233.036	10.6
03	232.700	230.330	2.364	2.170	450	B125	450x450	Type D	150	2.6	230.076	10.0
04	232.300	229.795	2.505	2.355	450	B125	450x450	Type D	150	2.6	229.535	10.0
05	231.600	228.950	2.650	2.500	450	B125	450x450	Type D	150	3.6	228.900	72.0
06	231.645	229.480	2.165	2.015	450	B125	450x450	Type D	150	6.8	228.800	10.0

Demarcation Chambers to be WAVIN OSMA ULTRARIB POLYPROPYLENE Inspection Chambers  
 Demarcation chambers to be constructed as a TYPE A, B or C manhole if depth to soffit exceeds 3.0m  
 Lateral Drains to be WAVIN OSMA ULTRARIB UPVC Pipes  
 Demarcation chambers located in non trafficked areas then 150mm granular bed and surround required  
 Demarcation chambers located in single private drives to receive 150mm Gens3 concrete bed and surround will be required  
 Access Opening restricted to 350mmØ or 350 x350mm if depth to soffit is greater than 1.0m  
**DEMARCATION CHAMBERS AND LATERAL DRAINS TO BE ADOPTED**

Ref (FDC)	Cover Level	Invert Level	Depth to Invert (m)	Depth to Soffit (m)	Diameter (mm)	Cover Type	Cover Size	Chamber Type	Lateral Diameter (mm)	Lateral Length (m)	D/Stream Invert	Lateral Gradient (1 in ?)
01	236.150	233.625	2.525	2.375	1200	D400	600x600	Type B	150	13.7	233.450	80.0
02	232.800	231.300	1.500	1.350	450	B125	450x450	Type D	150	5.7	230.910	14.6
03	233.350	231.450	1.900	1.750	450	B125	450x450	Type D	150	9.5	230.500	10.0
04	233.100	231.100	2.000	1.850	450	B125	450x450	Type D	150	6.0	230.500	10.0
05	232.350	230.225	2.125	1.975	450	B125	450x450	Type D	150	3.9	230.155	55.7
06	231.650	230.000	1.650	1.500	450	B125	450x450	Type D	150	3.5	229.661	10.3

Demarcation Chambers to be WAVIN OSMA ULTRARIB POLYPROPYLENE Inspection Chambers  
 Demarcation chambers to be constructed as a TYPE A, B or C manhole if depth to soffit exceeds 3.0m  
 Lateral Drains to be WAVIN OSMA ULTRARIB UPVC Pipes  
 Demarcation chambers located in non trafficked areas then 150mm granular bed and surround required  
 Demarcation chambers located in single private drives to receive 150mm Gens3 concrete bed and surround will be required  
 Access Opening restricted to 350mmØ or 350 x350mm if depth to soffit is greater than 1.0m  
**DEMARCATION CHAMBERS AND LATERAL DRAINS TO BE ADOPTED**

- YORKSHIRE WATER NOTES:**
- All dimensions in millimeters unless stated otherwise.
  - All adoptable sewer works and material to be in accordance with The Water Services Association 'Code for Adoption Design and Construction Guidance', The Relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
  - All oversized manhole products (circular vertical units, cover slabs, adjusting and corbel units) and all ancillary concrete products are to be built in full compliance with BS EN1917 and BS 2911-3A-1
  - All precast concrete units in oversized manholes must have a design working life of 100 year minimum in accordance with BS8500-1:2015-A2:2019 - Table A.5.
  - DC-4 design chemical class for concrete in precast concrete manholes (circular vertical units, cover slabs, adjusting and corbel units) including all ancillary concrete products should be constructed for an intended design life of 100 year minimum.
  - Manhole covers shall have a clear opening of 600mm 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 the Yorkshire Water before any sewer works are carried out.
  - Yorkshire Water is not obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage run-off 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 run-off.
  - Cover slabs must carry the BS1 Kitemark or 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 leading 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.
  - 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 or the width of the canopy at mature height.
  - 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 non vehicular access areas) then a concrete slab should be provided 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 an increment to accommodate the connections and bends.
  - Yorkshire Water's policy is that brick manholes and 1050mm diameter manhole rings are not preferred. Instead, it is preferred that you use a type 'B' manhole with 1200mm diameter, 1350mm diameter or 1500mm diameter rings, with the opening sited over the channel where depth of cover to pipe soffit is 1 - 1.5m
  - Adoptable plastic sewer pipes to be BS1 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 lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would prefer clayware channel in manholes. We have found that plastic channels are difficult to set in concrete because they float and a satisfactory finish cannot be obtained on the benching.
  - 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.
  - 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.

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**KEY:**

- Existing Surface Water Sewer and Manhole
- Existing Foul Water Sewer and Manhole
- Existing Combined Sewer and Manhole
- Proposed Surface Water Sewer and Manhole
- Proposed Surface Water Sewer and Manhole and Backdrop
- Proposed Surface Water Flow Control Manhole
- Proposed Surface Water Lateral Drain and Demarcation Chamber
- Proposed Private Surface Water Drain and Inspection Chamber (100mm Ø at 1 in 80 unless specified otherwise)
- Rainwater Down Pipe
- Rodding Eye
- Yard Gully
- ACO drainage Channel or Similar
- Concrete Dish Channel and gully
- Proposed Foul Water Sewer and Manhole
- Proposed Foul Water Sewer and Manhole and Backdrop
- Proposed Foul Water Lateral Drain and Demarcation Chamber
- Proposed Private Foul Water Drain and Inspection Chamber (100mm Ø at 1 in 40m at top of run and 1 in 80 minimum elsewhere unless specified otherwise)
- Proposed Private Foul Water Mini Inspection Chamber
- Soil Vent Pipe or Foul Direct Connection
- Proposed Combined Water Sewer and Manhole
- Proposed Combined Water Sewer and Manhole and Backdrop
- Proposed Highway Drain and Manhole
- Proposed Highway Drain and Manhole and Backdrop
- Proposed Highway Gully and 150mm Ø Connection
- Proposed Easement

**ADDITIONAL INFORMATION**  
 KIRKLEES COUNCIL REQUEST THAT A "CONSTRUCTION COMPLIANCE CERTIFICATE" TOGETHER WITH "AS BUILT" DRAWINGS ARE SUBMITTED UPON THE COMPLETION OF THE WORKS. IN ADDITION, ALL REFERENCES TO "KITEMARK" MUST BE ACCOMPANIED WITH THE CORRESPONDING BRITISH STANDARD FOR THEM TO BE MEANINGFUL AND RELEVANT.

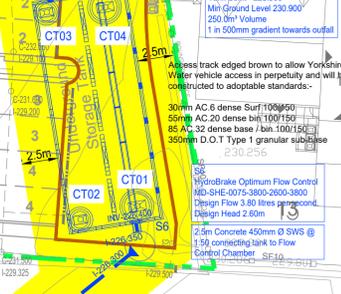
**KIRKLEES COUNCIL (LLFA) NOTES:**  
 ANY UNRECORDED WATERCOURSES OR SPRINGS FOUND ON SITE SHOULD BE IDENTIFIED TO KIRKLEES COUNCIL, paul.farndale@kirklees.gov.uk IMMEDIATELY WITH PROPOSALS FOR THE MAINTENANCE INCLUDING THE COLLECTION OR DIVERSION OF SUCH FEATURES.

THERE ARE NO LAND DRAINAGE FEATURES PRESENT ON SITE.

THERE ARE NO PRIVATE PIPES OR LOCATED CLOSE TO THE SECTION 38 HIGHWAY BOUNDARY IN CONNECTION WITH LAND DRAINAGE OR UNADAPTABLE SUDS FEATURES THAT REQUIRE MAINTAINING BY THIRD PARTIES.

A CONSTRUCTION PHASE SURFACE WATER MANAGEMENT STRATEGY WILL BE REQUIRED TO BE APPROVED BY KIRKLEES COUNCIL.

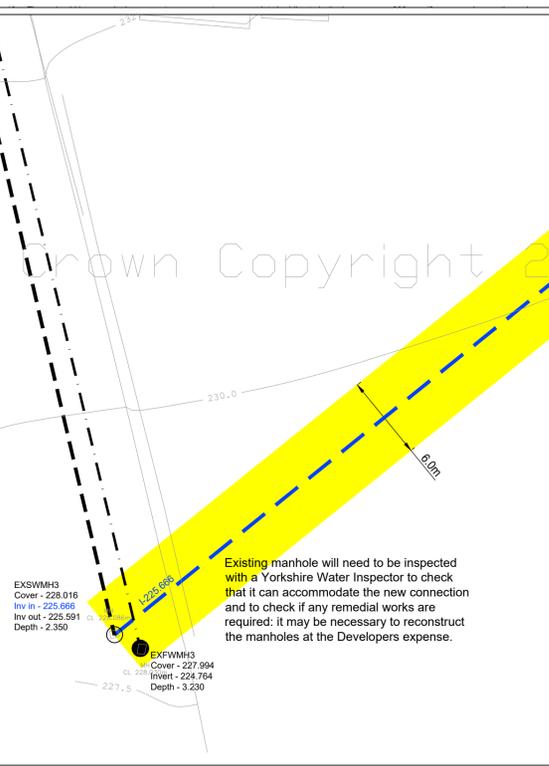
Existing manhole will need to be inspected with a Yorkshire Water Inspector to check that it can accommodate the new connection and to check if any remedial works are required; it may be necessary to reconstruct the manholes at the Developers expense.



THE HOUSING LAYOUT SHOWN ON THIS PLAN IS TAKEN FROM JONES HOMES PROPOSED SITE LAYOUT REFERENCED JHY-1354-200C DATED 16 OCTOBER 2023

THE TOPOGRAPHICAL SURVEY SHOWN ON THIS PLAN IS TAKEN FROM F & S LAND SURVEY REFERENCED IS611132 DATED 23 NOVEMBER 2016

ALL LEVELS SURVEYED USING TOPCON GPRS SYSTEM COORDINATE AND LEVELS TO NATIONAL GRID GPS



Rev.	Date:	Amendment:	DRN	CHK	APR
K	22.07.24	Kirklees Council LLFA notes added and notes amended	IE		
J	16.07.24	Kirklees Council notes added to layout	IE		
I	02.07.24	Existing surface water sewer details amended	IE		

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Client: Jones Homes (Yorkshire) Limited

Status:

Scale: 1:250  
 Size: A1 - 841 x 594      Drawn: IE      Chkd: NB      Appvd:

Project: Residential Development  
 Swallow Lane, Golcar,  
 Phase 2

Title: Drainage Layout

Drawing No: 22/278/500/001      Revision: K  
 Job No: 22-278      Date: 24.06.22

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