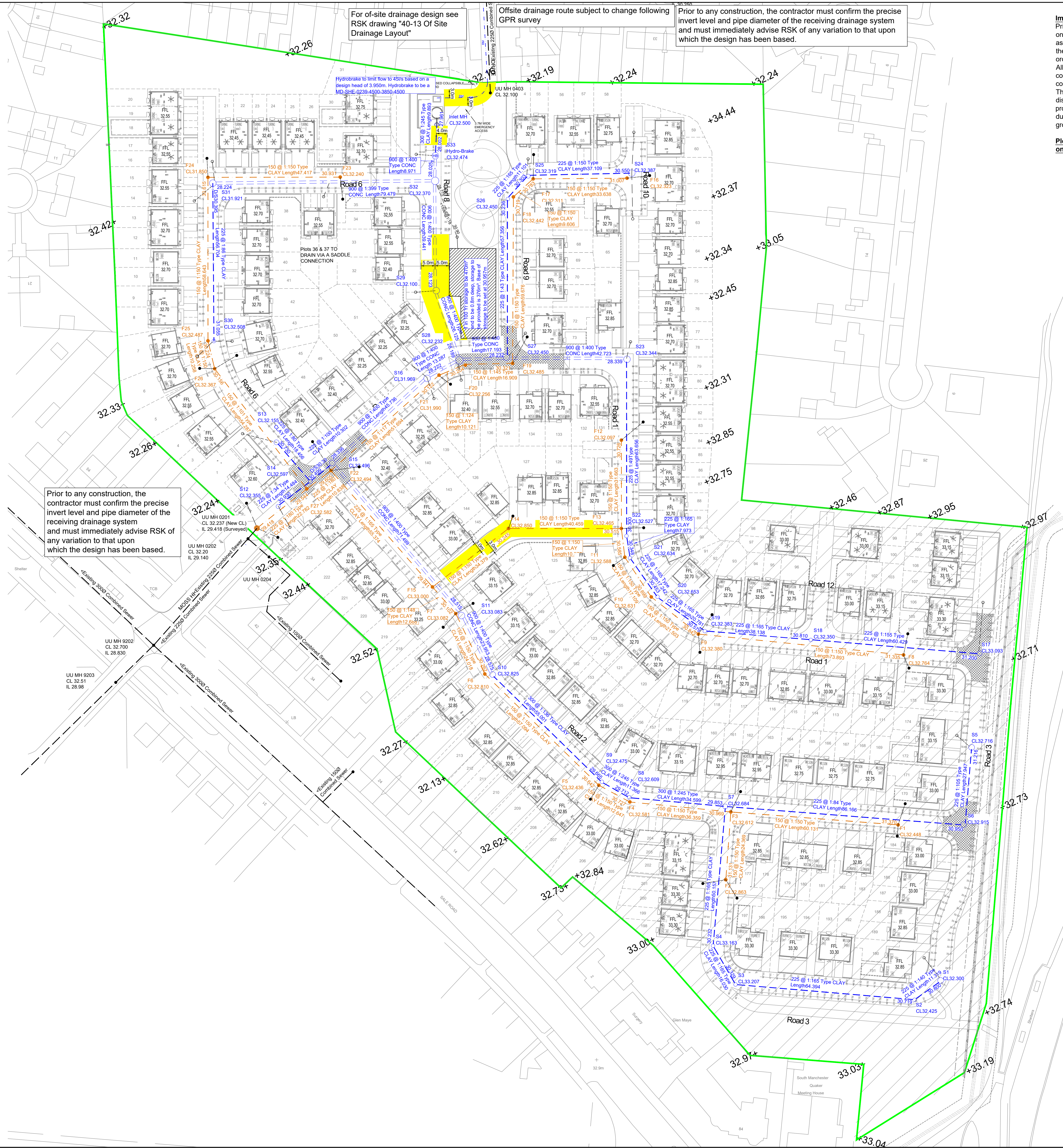




Important Note

Prior to any Adoptable drainage groundworks being undertaken on site the contractor must confirm back to RSK the precise as-built or existing invert level, pipe diameter and condition of the receiving drainage system, watercourse and / or manhole in order to allow design reviewed if required.

All proposed private drainage groundworks must also prior to construction start on site first establish that a viable outfall connection can be made into the receiving drainage system. The contractor must also immediately advise RSK should any discrepancy or perceived conflict between as-built level and proposed design level information become apparent / identified during the implementation of any ongoing drainage / groundworks construction.

**Please telephone RSK - Land and Development Engineering
on 01942 493255**

Legend

-  Proposed foul water sewer and manhole by Developer
-  Proposed surface water sewer and manhole by Developer
-  Proposed surface water rising main
-  Existing Combined water sewer and manhole
-  Proposed foul water dragouts
-  Proposed surface water dragouts

FFL
102.85 Finished Floor Level

Notes

- All adoptable sewer works and material to be in accordance with *Sewers for Adoption* 6th Edition. The Relevant British/European and United Utilities' Standards/Requirements/Addendum and Kitemark.
 - Manhole covers shall have a minimum 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 United Utilities before any sewer works are carried out.
- United Utilities is not obliged to accept filter drain/land drainage or the public sewer network or adoptable drainage system (directly or indirectly). 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 for the Drainage and Sewerage with regard to the disposal of the filter drain/land drainage run-off.
- Cover slabs must carry the BSI Kitemark or will be rejected by United Utilities Inspector. Where the clear opening of the Kitemarked product is different to that of the cover and frame, a Kitemarked cover slab should be fitted above the cover slab to bring the size down to 600mm x 600mm for the United Utilities 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 proving 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 6 metres clearance from trees and hedges (please also refer to Figure 2.3 on page 33 in *Sewers for Adoption* 6th Edition) or restrictions from planting adjacent to sewers).
 - Unless noted otherwise, sewers are to be laid in Class B bedding in accordance with United Utilities standard details. Refer to RSK drawing 40-17 for pipe embedment details. Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 0.90m in non highway areas) then a concrete bed and surround shall be provided.
 - United Utilities policy is not to accept Type "C" brick manholes and 1050mm dia manhole rings. Instead it is preferred that you use a traditional 1.2m dia manhole with a 1050mm dia opening sited over the channel where depth of cover to pipe soffit is 1 - 1.5m.
 - All lateral drains to the 150mm dia.

Drainage Statement - Surface Water

- Surface water for plots 90-106, 111-125, 141-171, 177-187, & 192-217 to drain to private soakaways.
- The proposed surface water drainage connection point is the 2250mm diameter combined sewer beneath Yew Tree Lane, the agreed discharge rate is 45l/s As agreed with UU
- The proposed surface water drainage system is designed to drain to a new pump station located to the north of the proposed development prior to pumping the flows to the agreed point of connect beneath Yew Tree Lane. A discharge MH will be required prior to draining into the existing sewer.
- System designed not to flood in 30yrs and surcharge in the 2yr events
- The surface water power failure storage is catered for within the 1:100 Yr + 40% CC storage - This is subject to agreement with United Utilities

Drainage Statement - Foul Water

- Proposed foul drainage is to drain into the existing 225mm diameter sewer located beneath Moss Hey Drive as agreed with United Utilities
- Receiving drain may require CCTV investigation/further investigation to prove condition of receiving pipework or Manholes.

Prior to detailed design, the Client must confirm the precise invert level, condition, location and pipe diameter of the receiving drainage system and must immediately advise RSK of any variation to that upon which the design has been based.

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 Miller Homes risk and no liability will be accepted by RSK. Scheme based on Miller Homes site plan 2131/SL/01 Rev F.

Proposed discharge rate into existing drainage network has been agreed with United Utilities for both foul and surface water 10.06.21

De-watering is likely to be required to construct the sewers

The proposed plots are set above the existing ground level in order to aid with the private soakaway drainage within the gardens

CIVIL / STRUCTURAL DESIGN RISK MANAGEMENT	
Abnormal or unusual residual risks associated with the design outcomes shown on this drawing are -	
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

	Proposed foul water sewer and manhole by Developer
	Proposed surface water sewer and manhole by Developer
	Proposed surface water rising main
	Existing Combined water sewer and manhole
	Proposed foul water dragouts
	Proposed surface water dragouts
	Proposed S104 Drainage Easement

FFL
102.85

Finished Floor Level

Notes

- * All adaptable sewer works and material to be in accordance with **Sewers for Adoption (6th Edition)** The Relevant British/European and United Utilities' Standards/Requirements/Addendum and Kitemarked.
- * Manhole covers shall have a minimum 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 United Utilities before any sewer works are carried out.
- * United Utilities is not obliged to accept fire drain/landfill drainage and the contractor shall be responsible for adopting drainage (directly or in-indirect). An alternative method of disposal of the landfill 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 fire drain/landfill drainage run-off.
- * Cover slabs must carry the BS1 Kitemark or will be rejected by United Utilities Inspector. Where the clearing of opening of the manhole and disposal of the debris to the cover and frame, a loading bearing slab should be fitted above the manhole to bring the size down to 600mm x 600mm for the United Utilities specified size. The Contractor to consult Fire Protection Systems Association (CPSA), "Technical Bulletin" issued Autumn 2004 for Kitemarked cover slab opening sizes.
- * Sulphate resistant cement (C20-D20) and precast concrete products must be used or a laboratory report providing proof that the above calculations 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 6 metres clearance from trees and hedges (please also refer to Figure 2.3 on page 33 in **Sewers for Adoption (6th Edition)** for restrictions on tree planting adjacent to sewers).
- * Unless noted otherwise, sewers are to be laid in Class B bedding (see **Sewers for Adoption (6th Edition)** standard details. Refer to R08 drawing 40-17 for pipe embedment details. Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 0.75m in other areas) the depth of cover to pipe should be and surround shall be not accepted Type "C" brick manholes and 1050mm dia manhole rings. Instead it is preferred that you use a type "B" manhole with 1200mm dia or 1500mm dia rings, with the opening to the sewer at the shallowest depth of cover to pipe soft 1.1 - 1.5m.
- * All lateral drains to be 150mm dia.

P2	26.11.21	Revised following completion of EW & PD	AP	MAR	
P1	22.10.21	First Issue	AP	MAR	
Rev.	Date	Amendment	Drawn	Chkol.	Appo

RSK

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Client **Miller Homes**

Project Title

Northenden

Manchester

Status	DETAILED DESIGN
Drawing Title	

S104 Agreement Plan

Drawn Date		Checked Date		Approved Date	

AP	Oct 20	MAR	Oct 20	
Scale		Orig Size		Dimensions
1:500		A0		m

Project No. 882187	Drawing File
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Drawing No. 40-17	Rev. P2
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Scale 1:500

