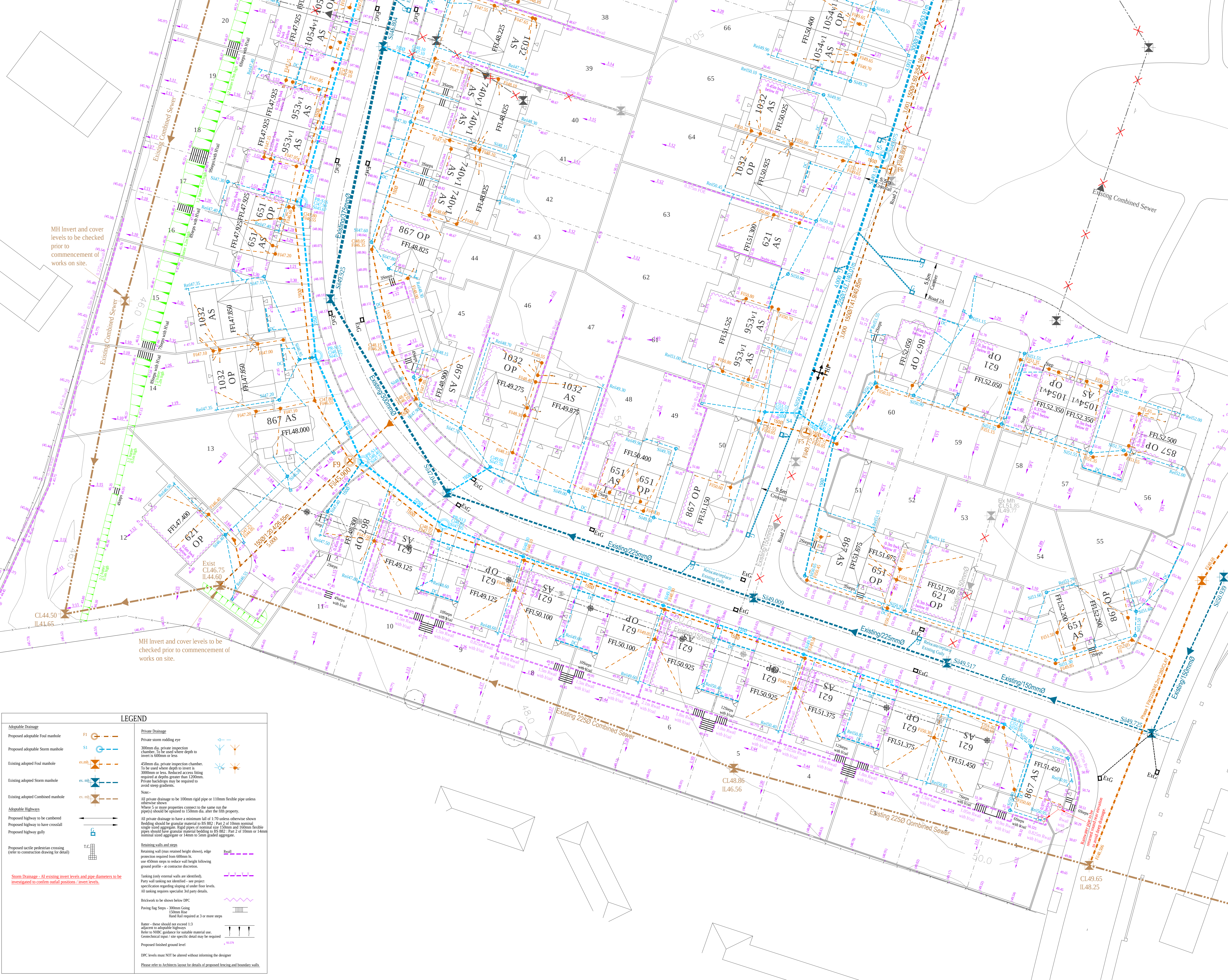




LEGEND

Adoptable Drainage

Proposed adoptable foul manhole

Proposed adoptable storm manhole

Existing adopted foul manhole

Existing adopted storm manhole

Existing adopted combined manhole

Adoptable Highways

Proposed highway to be cambered

Proposed highway to have crossfall

Proposed highway gully

Proposed tactile pedestrian crossing (refer to construction drawing for detail)

Storm Drainage - All existing invert levels and pipe diameters to be investigated to confirm outfall positions / invert levels.

Private Drainage

Private storm rodding eye

300mm dia. private inspection chamber. To be used where depth to invert is 600mm or less.

450mm dia. private inspection chamber. To be used where depth to invert is 300mm or less. Reduced access fitting required at depths greater than 1200mm. Private backdrops may be required to avoid steep gradients.

Note:-

All private drainage to be 100mm rigid pipe or 110mm flexible pipe unless otherwise shown.

Where 5 or more properties connect to the same run the pipes should be upsized to 150mm dia. after the fifth property.

All private drainage to have a minimum fall of 1:70 unless otherwise shown.

Bedding should be granular material to BS 882 - Part 2 at 100mm nominal single sized aggregate. Rigid pipes of nominal size 150mm and 160mm flexible pipes should have granular material bedding to BS 882 - Part 2 at 100mm or 140mm nominal sized aggregate or 140mm to 5mm graded aggregate.

Retaining walls and steps

Retaining wall (max retained height shown), edge protection required from 600mm to use 450mm steps to reduce wall height following ground profile - at contractor discretion.

Tanking (only external walls are identified). Party wall tanking not identified - see project specification regarding sloping of under floor levels. All tanking requires specialist 3rd party details.

Backwork to be shown below DPC

Paving flag Steps - 300mm Going 150mm Rise

Hand Rail required at 3 or more steps

Batter - these should not exceed 1:3 adjacent to adoptable highways

Refer to VMEC guidance for suitable material use.

Geotechnical input / site specific detail may be required

Proposed finished ground level

DPC levels must NOT be altered without informing the designer

Please refer to Architects layout for details of proposed fencing and boundary walls.

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Proposed finished ground level

DPC levels must NOT be altered without informing the designer

Please refer to Architects layout for details of proposed fencing and boundary walls.

General Notes:

- DO NOT USE THIS DRAWING IN ISOLATION. This drawing has been prepared as part of a set, and must therefore be read in conjunction with all other drawings. Any discrepancies must be reported to the engineer prior to commencing works.
- Third party information is used to prepare the engineering design (including, architectural layout, ground investigation, existing utilities records, and specialist design items). The engineering design must therefore be read in conjunction with all third party information prior to commencing work. Queensberry Design Ltd are not responsible for any third party information or details.
- House type working drawings are to be used in conjunction with the plot setting out drawing.
- Drawing status will remain preliminary until full technical approval is received from local authority and sewerage undertaker. Works commenced prior to technical approval are done at risk and may be subject to change.
- The contractor is expected to prepare appropriate construction method statements for all aspects of appointed work. This should include any temporary protection / works.
- Land drainage is not permitted to discharge into the public sewer network. Any need for land drainage should be assessed by the ground worker and landscaper during construction and placement of gardens on an individual plot basis. If land drainage designs are required, they should be appointed prior to plot completion.
- The contractor is expected to cross check all drainage inverts prior to commencing work, this may involve completion of trial holes if invert levels have been interpreted.
- The position, line and diameter of all existing drainage apparatus should be confirmed on site prior to the commencement of the works. Any discrepancies must be reported to the engineer immediately.
- The connection of foul and surface water drainage to the existing public sewer system shall be subject to the approval of the local sewerage undertaker. The contractor is expected to apply for relevant permits prior to commencing the work.

Highways

- All highway works to be carried out in accordance with the current South Yorkshire Design Guide and Specification.
- All excavations below proposed and existing highways to be back filled with granular Type 1 sub base and well compacted in layers not exceeding 150mm, unless otherwise agreed.
- Highway authority to be notified by the contractor prior to the commencement of works.

Yorkshire Water Notes

- All adoptable sewer works and material to be in accordance with "Sewers for Adoption" 6th Edition. The Relevant British/European and Yorkshire Water's Standards/Requirements/Adoption and Kitemarked.
- Manhole covers shall have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
- Fil ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.
- Yorkshire Water is not obliged to accept filter drain/land drainage runoff into the public sewer network or adoptable drainage system (directly or indirectly). An alternative method of disposal of the land drainage runoff 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 runoff.
- Cover slabs must carry the BSI Kitemark or will be rejected by Yorkshire 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 600mm x 600mm for the Yorkshire Water cover size. Please refer to Concrete Pipe Systems Association (CPSA) "Technical Bulletin" issued autumn 2004 for Kitemarked cover slab opening sizes.
- Sulphur resistant concrete (C20-DCE) 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" 6th 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 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 4-06-02 (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.
- Yorkshire Water policy is not to accept Type "C" brick manholes and 1050mm Ø manhole rings. Instead it is preferred that you use a Type "B" manhole with 1200mm Ø or 1500mm Ø rings, with the opening sized over the channel where depth of cover to pipe is 1 - 1.5m.
- All adoptable sewers to be BSI Kitemark (Certified to WIS 4-5001).
- Adoptable sewer pipes to be laid in maximum 3m lengths unless there is a specific operational need to lay longer lengths.
- Bedding and backfill material to conform to the requirement of Water Industry Specification 4-06-02 (Table A2).
- 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 bedding.
- Yorkshire Water policy is not to accept Type "C" brick manholes and 1050mm Ø or manhole rings. Instead it is preferred that you use a Type "B" manhole with 1200mm Ø or 1500mm Ø rings, with the opening sized over the channel where depth of cover to pipe is 1 - 1.5m.
- Concrete pipes should be Class 120 to EN 1916: BS 5911:1 - 2002.
- The position, line and diameter of all existing drainage apparatus should be confirmed on site prior to the commencement of the works. Any discrepancies must be reported to the engineer immediately.
- The connection of foul and surface water drainage to the existing public sewer system shall be subject to the approval of the local sewerage undertaker. The contractor is expected to apply for relevant permits prior to commencing the work.
- 1500D chamber rings are allowed on the adoptable network and are to be Kitemarked.
- The position, line and diameter of all existing drainage apparatus should be confirmed on site prior to the commencement of the works. Any discrepancies must be reported to the engineer immediately.
- The connection of foul and surface water drainage to the existing public sewer system shall be subject to the approval of the local sewerage undertaker. The contractor is expected to apply for relevant permits prior to commencing the work.

Existing Services

Prior to the commencement of any works under ground mapping surveys and constraints plan is to be referred to any discrepancies are to be reported to engineer.

Any existing services which may be affected by the proposed works should be located by means of a hand dig in close liaison with the statutory service authorities. The contractor shall inform the developer of any services that may affect the proposed design. Contractor to notify statutory service authorities prior to commencement of work. As Constructed information it is the contractor's responsibility to provide the following as constructed drawings to the developer upon the completion of the works covered by the contract:-

- Position/co-ordinates of all adoptable manholes.
- Invert and cover levels of all adoptable manholes.
- New gully positions and connections.
- Position and depth of service ducts for water, gas, electric, BT, cable and street lighting, stating size and number of ducts.

REV	REVISION	BY	DATE
B	Revised layout resulting in redesign of substituted plots	AL	21.11.17
A	Private storm drainage to plots 21-28 and 112-115	NL	22.08.17
-	First Issue	NL	29.07.17

Drawing Status

PRELIMINARY

Title

Keepmoat Homes

Thurnscoe Phase 2

Phase 2 External Levels St 1

Scale

1:250 @ A1

Date

July 2017

Drawn by

NL

e-mail

Drawing no.

QD814-04-01

Revision

B

Checked by

JM

QUEENSBERRY DESIGN

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