General Notes:-

A. 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.

B. 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.

C. House type working drawings are to be used in conjunction with the plot setting out drawing.

D. 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 so at risk and may be subject to change.

E. The contractor is expected to prepare appropriate construction method statements for all aspects of appointed work. This should include any temporary protection / works.

F. 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.

G. 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 interpolated.

Highways
1. All highway works to be carried out in accordance with the current local authority design guide and specification
2. 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.
3. Highway authority to be notified by the contractor prior to the commencement of works.

Adoptable Drainage
1. All adoptable drainage works to be in accordance with the water authorities publication - "Sewers For Adoption 6th Edition" aswell as the approved drawings.

2. Precast concrete manhole rings to comply with the relevant provisions of BS5911: Part 200.

3. All brickwork to be Class B engineering complying with the relevant provisions of BS 3921. Concrete bricks maybe used if their specification is the same as Class B engineering bricks. Please seek approval from relevant water authority before using.

4. Manhole covers and frames shall comply with the relevant provisions of BS EN 124 and be of a non-rocking, non-ventilating design.

5. Ladders that are required in Type A manholes are to comply with "Sewers For Adoption 6th Edition".

6. Concrete must be either C20 sulphate resistant portland cement with high strength concrete topping to the benching or C35 ordinary portland cement

7. 150mm Concrete surround is required around pipes where the depth from finished surface to soffit of pipe is less than 1200mm. This may be reduced to 900mm within open space.

8. The location of existing drainage that is within close proximity to the proposed site works, which is not to be diverted, should be confirmed by the contractor and reported to the developer to ensure it corresponds to that shown on the engineering layout and that no proposed works are affected.

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.

9. Roads and sewers contractor must inform water authority prior to works commencing

Existing Services
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 contractors responsibility to provide the following as constructed drawings to the developer upon the completion of the works covered by the contract :-

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

LEGEND

Adoptable Drainage
- Proposed adoptable Foul manhole — F1
- Proposed adoptable Storm manhole — S1
- Existing adopted Foul manhole — ex.mh
- Existing adopted Storm manhole — ex. mh
- Existing adopted Combined manhole — ex. mh

Adoptable Highways
- Proposed highway to be cambered
- Proposed highway to have crossfall
- Proposed highway gully — G

Proposed tactile pedestrian crossing (refer to construction drawing for detail) — T.C.

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 3000mm or less. Reduced access fitting required at depths greater than 1200mm

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 private storm run the pipe(s) should be upsized to 150mm dia. after the fifth property. Please refer to layout to see pipes that maybe affected.
All private drainage to have a minimum fall of 1:70
Bedding should be granular material to BS 882 : Part 2 of 10mm nominal single sized aggregate. Rigid pipes of nominal size 150mm and 160mm flexible pipes should have granular material bedding to BS 882 : Part 2 of 10mm or 14mm nominal sized aggregate or 14mm to 5mm graded aggregate.

Retaining walls and steps
- Retaining wall (retained height shown) (edge protection required over 600mm ht) — Rwall
- Tanking
- Brickwork to be shown below DPC
- Paving flag Steps - 300mm Going 150mm Rise
- Batter - these should not exceed 1:3 adjacent to adoptable highways
- Proposed finished ground level — 93.579
- Demountable bollard

DPC levels must NOT be altered without informing the designer

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

Rev E: Drawing amended to reflect new planning layout. KJH 22 09 15
Rev D: Drawing amended to reflect new planning layout. KJH 09 09 15
Rev C: Garage 36 floor level and externals amended. KJH 18 08 15
Rev B: Drawing amended to suit architects layout changes. Street lighting design added. KJH 17 08 15
Rev A: Gully positions amended. KJH 30 07 15

Drawing Status	PRELIMINARY
Title	Barratt Homes & Taylor Wimpey Luke's Lane, Monkton Phase 2 External Works Sheet 3 of 6
scale	1:200@A0
Date	July 2015
Drawn by	KJH
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Drawing no.	QD1081-04-03
Revision	E
Checked By	-

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Rec'd 17/2/16