



- 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 or design queries must be reported to the engineer prior to commencement of works. Following completion of tender it is assumed that the engineer and contractor are in full agreement with the design drawings (with the exception of any tender queries only).
 - This party information is used to prepare the engineering design (including architectural layout, ground investigation, existing utility records, and specialist design items). The engineering design must therefore be read in conjunction with all third party information prior to commencing work. Quaternary Design Ltd are not responsible for any third party information or errors.
 - 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 so 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 interrupted.
 - The contractor must monitor the "as built" progress of each construction stage (roads/sewers/plot works/ etc), to ensure the next stages of construction to be checked before installation. For this reason the design of floor levels, external works, retaining walls, and plot drainage are to be read as guidance only.
- Highways:**
- All highway works to be carried out in accordance with the current local authority 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.

- Concrete Work:**
- All concrete drainage works to be in accordance with the water authority's publication "Sewers for Adoption Edition 2000" and as the approved drawings.
 - Precast concrete manholes to comply with the relevant provisions of BS 5512:17 on 200.
 - All brickwork to be Class B engineering complying with the relevant provisions of BS 3951. Concrete bricks may be used if their specification is the same as Class B engineering bricks. Please seek approval from relevant water authority before using.
 - Manhole covers and frames that comply with the relevant provisions of BS EN 124 and be of a non-slip, non-ventilating design.
 - Ladders that are required in Type A manholes are to comply with "Sewers for Adoption Edition 2000".
 - Concrete must be either C30/37 or white resistant portland cement with high strength concrete topping to the bedding or C35 ordinary portland cement.
 - 150mm Concrete surround a 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 spaces.
 - 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, size 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.
- Results and sewer 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:**
- Refer to note 11 above. 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 admissible manholes.
 - Invert and cover levels of all admissible manholes.
 - Three 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
-	First Issue	DH	30.11.17
A	Proposed white lining added, extent of Section 278 area extended following client instruction.	DH	14.12.17

Rev.	Description	Drawn	Date

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Project Title
Miller Homes
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Hebburn

Drawing Title
Section 278

Scale	Drawn By	Checked By	Authorised By
1:500	D.Henry		
	Date 30.11.17	Date	Date

Job No.	Drawing No.	Revision
	QD1183-16-02	A

Original Sheet Size A3

SECTION 278 ADOPTABLE LIGHTING DESIGN

ADOPTABLE STREET LIGHTING LEGEND

	COLUMN HEIGHT: 10m BRACKET: 2m POST TOP EXTENSION WITH 76mm SPIGOT LANTERN: 76mm SPIGOT MOUNTED PHILIPS IRIUM SGS254 LANTERN OPTIC: OS CP 250W TILT: POS 2 LAMP: 5 DEGREES PEC/DIMMING: 250W SONTIP PHILIPS STARSENSE 'OLC' NODE
	REUSE LANTERN FROM NLC7396 COLUMN HEIGHT: 10m BRACKET: 2m POST TOP EXTENSION WITH 76mm SPIGOT LANTERN: 76mm SPIGOT MOUNTED PHILIPS IRIUM SGS254 LANTERN OPTIC: OS CP 250W TILT: POS 2 LAMP: 5 DEGREES PEC/DIMMING: 250W SONTIP PHILIPS STARSENSE 'OLC' NODE
	EXISTING LIGHTING COLUMN TO BE REMOVED

REFER TO DRAWING BBLP - Q5403 FOR PROPOSED STREET LIGHTING DESIGN