

Our Ref: NB/LMO/15114

Date: November 2015

PROPOSED RE-DEVELOPMENT

CARE HOME

18 GROSVENOR ROAD

WREXHAM

DRAINAGE DESIGN PHILOSOPHY

Client: Montpelier Estates
Middle Hedge Barn
Chilton Business Centre
Chilton
Aylesbury
HP18 9LS

Distribution	No. of Copies	Revision	Date
Mr. J Horsman	1- Email	Original	12/11/15

1.0 THE SITE

- 1.1** The site is located on the South Eastern side of Grosvenor Road, Wrexham, as indicated on the appended site location plan. At the present time the site is occupied by disused two and three storey offices and associated car parking areas.
- 1.2** It is proposed that the existing buildings be demolished and the site re-developed by the construction of a new care home.
- 1.3** This report presents an initial appraisal of the existing foul and surface water disposal from the site and the effect of the new development.

2.0 DEVELOPMENT PROPOSALS

2.1 Existing Infrastructure

A Drainage and Water enquiry has been made of Welsh Water and their reply of 18/03/2015 confirms that both foul and surface water from the existing site drains to a public sewer. A copy of the sewer record drawing for the area is appended and this indicates a public foul water sewer in Grosvenor Road and a public combined sewer in King Street to the South of the site. The existing site topographical survey identifies storm and foul water manholes adjacent to the site frontage to Grosvenor Street.

2.2 Surface Water Disposal

- a) The existing site is approximately 2750m² in extent and is completely covered by buildings or hardstanding, all of which are positively drained by gullies and rainwater downpipes.
- b) The proposed development comprises a two storey building of approximately 800m² in plan with an access road and car parking of some 630m² with the remainders of the site being given over to landscape areas and garden. The total proposed impermeable area of the development is 1430m², which is a reduction of impermeable area of some 1320m² i.e. approximately 48% of the site area.
- c) Under Building Regulations requirements the preferred method of surface water disposal is direct soakage into the ground. A site investigation has not yet been carried out but desk studies indicate the ground conditions to be superficial deposits of sand and gravel overlying

Mudstones and Sandstones. The permeability of these deposits will need to be examined by site testing to determine the suitability of soakaway for this site. Should the ground prove unsuitable then it is considered that the requirement of Sustainable Urban Drainage System (SUDS) design will be satisfied by re-using the existing outfall pipe which will result in a reduction of surface water discharge of some 48%.

2.3 Foul Water Disposal

The proposed development is a 34-bed Care Home. Average water consumption figures for various categories of buildings are published by British Water and by applying their water usage of 350 l/person/day a design flow of 0.95l/sec would be generated for the site. This should be easily accommodated by the public sewer.

3.0 Conclusions and Recommendations

3.1 Surface Water

The development will result in a 48% reduction of surface water outflow into the surrounding sewers, should soakaway not prove to be applicable.

3.2 Foul Water

The foul water outflow will be less than 1.0l/sec which should be easily accepted by the existing public sewer in Grosvenor Road.

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12th November 2015



GROSVENOR ROAD
WREXHAM

SITE PLAN

1:500 @ A3