

REPORT

Land Adjacent to Church Farm
Ingham Road
Stalham

Wastewater Drainage for Proposed Development

July 2010

REPORT CONTROL

Document: Options for wastewater drainage

Project: Land Adjacent to Church Farm Ingham Road Stalham

Client: Savills (L and P) Ltd – Cambridge (on behalf of landowners)

Job Number: 2475

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Executive Summary

Land at Church Farm, Ingham Road, Stalham has been identified for the development of around 160 residential dwellings and a 60 bed care home.

The purpose of this report is to assess the options for disposal of foul sewage from the proposed development.

The site is bounded on two sides by public highway, mains sewers are located in both roads. The site topography indicates that the development can drain by gravity to either or both of these sewers.

A pre-development enquiry has been made to Anglian Water to determine the available capacity in the sewerage network.

Anglian Water have advised that currently the local sewerage network has inadequate capacity to serve the development. AW will undertake an appraisal (at their cost) to evaluate the capital works required to upgrade the sewerage network.

Anglian Water have advised that the Stalham Sewage treatment plant has adequate capacity for the development.

The preferred means of sewage disposal from the site is to the adjacent mains sewers. It is not considered to be practical or economical to treat sewage in an on-site treatment plant.

1. Instruction

- 1.1 Bingham Hall Associates have been instructed by Savills to investigate and report on options available for the wastewater drainage provision for a proposed residential development at Church Farm, Ingham Road, Stalham.

2. Background

- 2.1 The proposed development site comprises 8.5Ha of land currently in arable usage. The site is on the eastern edge of Stalham with Ingham Road on the northwest boundary, and Yarmouth Road on the southern boundary. To the northeast and east the land is in agricultural use. There are existing residential properties adjacent to and opposite the site fronting onto Yarmouth Road.
- 2.2 The land is identified by North Norfolk District Council as a site for development in its Site Allocation DPD. Proposed development is for 160 residential dwellings and employment uses. The landowner proposes that the employment element be replaced by a use such as a care home.
- 2.3 This report provides an initial assessment of the wastewater drainage option for the proposed development.

3. Wastewater Infrastructure

3.1 Anglian Water have provided details of their network sewerage assets for the locality – see Appendix B. A Pre-Development Enquiry has been submitted to Anglian Water to establish the sewerage network capacity.

3.2 The site slopes slightly from the east and north towards Yarmouth Road and Ingham Road, consequently the site foul drainage system can drain by gravity in this direction. If falls are inadequate a pumping station may be required within the development site.

3.3 Disposal to wastewater sewer.

- a) Anglian Water foul sewers are located in Yarmouth Road and Ingham Road, both immediately adjacent to the site. Sewers are 150mm diameter and meet at the junction with Lower Staithe Road to continue along this road in a southerly direction in a 225mm diameter sewer to an Anglian Water pumping station. In addition there is a separate sewer in Yarmouth Road with the head of the sewer being a short distance east of the site. This sewer flows in an easterly direction along Yarmouth Road. All sewers in the area discharge via local pumping stations to the Stalham wastewater treatment works.
- b) Anglian Water have advised that the foul sewerage network has inadequate capacity to accommodate flows from the development. Anglian Water raised no in principle objection to development and have acknowledged that it is their responsibility to undertake an appraisal to assess how the network can be reinforced to increase the capacity to service the proposed development. They will undertake this appraisal and advise on the capital works required to increase capacity.
- c) The AW report notes that currently there is sewer flooding in the area resulting from inadequate capacity in the sewer network. The appraisal will incorporate means of reducing or eliminating this flooding.
- d) Capital works likely to be considered are re-laying of some sewers in larger diameter pipework and possibly upgrading the local pumping station.
- e) The NNDC Site Specifics Proposal Draft Plan – Water Infrastructure Plan does not identify any specific wastewater infrastructure or treatment capacity issues for Stalham. The Stalham WwTW is shown as having capacity for around 3100 additional dwellings. Anglian Water have confirmed that the treatment plant has adequate capacity for the development.

3.4 On-site sewage treatment.

On-site sewage treatment is not considered to be a viable option on the grounds of technical restrictions and problems with long term ownership and adoption.

3.5 Based on the outcome of the pre-development enquiry, and our assessment of the local drainage infrastructure it is recommended that foul wastewater from the development is discharged to the local sewerage network and that this network is upgraded to provide adequate capacity

3.6 At this stage it is difficult to be certain of costs for off-site infrastructure works, and also of the liability for these works. However I suggest a provisional allowance of £150 000 is made in budgeting for these works subject to the outcome of the appraisal being undertaken by Anglian Water.



A V Bingham C. Eng MCIWEM

For and on behalf of Bingham Hall Associates

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Appendices (see separate files)

Appendix A: Location Plan

Appendix B: Anglian Water sewerage asset plan

Appendix C: Anglian Water Pre-Development Enquiry Report (8 July 2010)