

An Investigation as to whether the current Sewerage System has Sufficient Capacity to Accommodate the proposed Housing developments in Fressingfield.

Introduction

Anglian Water are responsible for providing sewerage systems to Fressingfield. Anglian Water have consistently maintained their position that the sewerage system, as existing, can accommodate the additional projected 286 houses (See appendix A). The only caveat has been in respect of the Post Mill development. There has been a long history of flooding and egress of sewage which has not been addressed by the Developers in their current Planning Applications. Since Anglian responded on the sewerage capacity to Mid Suffolk there have been at least four incidents of manhole covers



lifted and sewage being deposited on the road (27 December; 12 March; 31 March; 2 April) All of these incidents are fully documented. The most recent was accompanied by flooding along Low Road. At least three manhole covers lifted and foul waste was widely distributed, to include gardens. There is therefore widespread concern in the village over this issue. All of the incidents occurred at the time of heavy rainfall. (see SAFE web site fressingfieldhousing.org)

This paper attempts to test whether the assumptions made by Anglian Water are valid.

The sewerage System in Fressingfield

The current sewer covers the central area of the village. There are four main branches to the system.

New Street.- A sewer runs east/west along New street. Sewage from the Post Mill development is pumped **up hill** in to this sewer.

Church Hill.- This sewer run down hill from the north of the village and joins the sewer which runs east west along Low Road/ Cratfield road.

Back Street.- A further sewer runs north from the village and joins the Low Road sewer near the War Memorial. All the sewage is then piped a further 75 yards to the pumping station before being pumped to Weybread to the treatment plant.

We believe that at times of heavy rainfall water comes downhill in the Back Street sewer causing back pressure in the Low Road sewer and combined with the limited capacity and increased flow in the Low Road sewer causes the manhole covers to lift.



Background to the existing sewer

The main sewer was built in 1946. The plan to build it in 1938 were shelved because of the War. There are no records on the number of properties connected at that time. A search of census data; historical records and maps and Anglian Water's own search have been unable to identify this.

Anglian Water Planning Assumptions

When assessing capacity of the sewerage system Anglian Water do not return to the original design assumptions, but instead use desk top modelling. Existing flows through the sewerage systems are monitored and storm conditions and climate change are factored in, together with the impact of the houses generated from Approved Outline Planning Applications. The cumulative impact of all current Applications is not assessed.

For domestic properties Anglian factor in 25% of total volume for ingress of surface water into the sewerage system. We have used this figure, but it is believed that in Fressingfield this figure is much higher. If this figure is adjusted upward within the model very different result occurs. As there are already problems with the egress of sewage onto the highway and issues within people's homes we believe that the current system is already overloaded. SAFE has adopted an alternative realistic methodology to test whether the sewerage system is capable of accommodating any of the proposed developments without modification.

SAFE Methodology

Using a map provided by Anglian Water it was possible to identify all houses currently connected to the main sewer. Anglian Water confirmed that in 2017 there were 401 properties being billed in Fressingfield for sewerage. A physical inspection of the houses in the village connected to the sewer was undertaken, the aim was to identify all properties built post 1946. The total of 295 is appended (Appendix B.) It is reasonable to assume therefore that **106 properties** were connected to the sewer in 1946 (401-295)



Initial Design Assumptions

As sewers are very expensive to install and modify Anglian Water has a design guide which allows for significant future growth. This assumption takes the number of properties to be connected to a new sewer then to provide a projected sixfold increase in capacity together with the loss of 25% in capacity for the ingress on surface water into the sewer. In the case of the Fressingfield's sewer this would result in a **total projected capacity of 477 properties** (106×6 minus 25%). This figure would indicate that the 53 houses already approved, but not built would take up most of the theoretical design capacity.

Weybread

All of the sewage from Fressingfield is pumped to Weybread. We have no data to support whether the sewer connection to Weybread or the treatment plant at Weybread has capacity. There is an Application for an additional 110 houses to be built there. An additional 396 houses (Fressingfield 286 and Weybread 110) would seem excessive.

Discussion

Inevitably an investigation of this type is not scientifically rigorous, but a serious doubt must be raised over the ability of the existing sewerage system to cope with any of the proposed developments, particularly in the light of the recent serious overflow incidents. This is an attempt to quantify the capacity of the sewer and to highlight the limitations. These limitations are particularly worrying as there is already a serious issue with the egress of sewage from the main sewer on Low road and this is with only 401 properties linked into the sewer. We have made no adjustments for climate change.

Conclusion

The whole issue of the capacity of the sewerage system need to be re-evaluated in the light of the proposed developments in Fressingfield as the above would indicate there is insufficient capacity for any further development other than “windfall” houses.

Pam Castro and Dawn Cavilla on behalf of SAFE

5th April 2018

Appendix A

Properties Not Yet Built

Red House Farm and scout hut	-	29*
School Lane and chapel	-	19*
Windfall	-	5*
Post Mill	-	24
Stradbroke Road	-	85
John Shepherd	-	99
Future "Windfall" homes	-	25

Total 286

* - Approved but not yet built

Appendix B

HOUSES BUILT IN THE VILLAGE SINCE 1947:

HARLESTON Road	6
CRATFIELD Rd incl Becklands, Angel Pightle (front and rear), M Miles The Low, Briars/Hardy's +Buckenham Hills	21
THE GULL incl The Manse, new build + Housing Assn houses	27
CHURCH HILL	6
VICTORIA TERRACE	4*
LAXFIELD RD /PILGRIMS GREEN + NEW BUILDS	32
SANDPATH	25
BROADWAY	20
STRADBROKE RD /THE LAURELS/SCHOOL ROAD	15
NEW STREET INCL Tansy, The Close, Feveryears,	24
CARPENTER'S YARD	8
PRIORY CRESCENT	15
PRIORY RD/OATFIELDS/SANCROFT WAY	29
POST MILL	17
JOHN SHEPHERD/SAMUAL VINCE/CHURCH FARM	38
Miscellaneous properties (e.g Medical Centre)	8
TOTAL	= 295

*Including the house currently being built, as it will soon be on the system

NOT including any holiday lets/conversions as these will generally be on the main property system and are only in use periodically.