

North Norfolk Local Plan Examination

Anglian Water Written Statement – Matter 2

Spatial Strategy (SS Policies)

Question 2.11 Are there any village specific issues, eg scale or location of growth or detailed definition of settlement boundaries:

j) Horning

Anglian Water wishes to raise the matter of identifying Horning as a Small Growth Village within the Spatial Strategy for the North Norfolk Local Plan and the proposed housing allowance of 29 dwellings (amended to 31 dwellings) for the settlement. We suggest that Horning should not be identified as a location for future sustainable and resilient growth, given the environmental constraints affecting the sewerage and surface water networks that will only become more challenging with the current and longer-term impacts of climate change. These conditions include:

- a porous soil profile subject to continual movement that impacts on our pipe network leading to displaced pipe joints and collapse due to lack of ground support
- permanently high water table results in high level of groundwater infiltration to our network
- river flooding and overtopping resulting in inundation of our network through multiple points

Anglian Water recognises that Horning has a range of services and facilities that would ordinarily suggest inclusion in a spatial strategy for a level of growth appropriate to its scale and function. However, as part of the assessment of suitable locations and spatial distribution of growth, there are additional factors and constraints that should also inform the suitability of settlements to accommodate sustainable growth. The NPPF (paras. 158-159) is clear that Plans should take account the long-term implications for flood risk and support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts.

Whilst our Reg.19 representation on the Local Plan did not specifically object to Horning as a Small Growth Village, we did refer to the issues we are facing in Horning and that growth in Small Villages can be delivered through development in more sustainable locations. Anglian Water has engaged with the District Council, The Broads Authority and the Environment Agency over a long period regarding the issues currently affecting the capacity of our water recycling centre (Horning-Knackers Wood WRC) and current non-compliance with the Dry Weather Flow permit, which means we do not have the capacity to accept further flows from new development.

A Joint Position Statement between the Environment Agency, North Norfolk District Council and The Broads Authority already outlines the position held in relation to Horning, which is appended by our Statement of Fact (see Appendix 1). The Statement of Fact clearly identifies the current and ongoing challenges we are working with others to address in order to work towards Horning-Knackers Wood

WRC becoming compliant with the Dry Weather Flow permit in the future. Anglian Water continues to provide support to implement effective solutions to address these challenges for our infrastructure by working in partnership with stakeholders and the local businesses/community.

The proposed minor modifications [A5.11 Schedule of Proposed Additional Minor Modifications] in response to the objections raised by the Environment Agency [PMIN/4.1/03] is not adequate given the position and long-term challenges for Horning. Anglian Water is supportive of the statement provided in A5.11 PMIN/4.1/04 but suggests that the fact that the statement is proposed for inclusion in the Local Plan, indicates that identifying Horning as a location suitable for growth is a contradiction in terms.

We consider that future growth will only exacerbate the fragile situation which is requiring more carbon intensive solutions to manage and maintain our existing infrastructure and wastewater flows. Climate change impacts such as a greater frequency of extreme weather events, leading to more extreme and frequent flood events, means that the settlement and our infrastructure will continue to be vulnerable. As a result of these factors, we therefore suggest that Horning is not identified as a sustainable location for future growth in the Local Plan, and this growth should be directed to other more sustainable locations in the district.

Appendix 1:



HORNING STATEMENT OF FACT

ISSUE DATE: August 2023

Summary

A conventional sewerage network in the Riverside area of Horning has proven to be unsustainable due to changes in ground conditions and prevailing hydrology in the area. Ground conditions in this area are the cause of structural failures of both the public sewerage network managed by Anglian Water and privately-owned drainage network. Soil in the area is predominantly peat over laying crag (sand and gravel), which is porous and has low cohesion and as such is subject to continual movement. This results in displaced pipe joints and collapse due to lack of ground support. This is endemic in the area and will affect both the public sewerage and private networks. When combined with the permanently high-water table this results in a high level of groundwater infiltration.

Also, in times of river flooding much of the area is underwater resulting in inundation to the public and private foul water drainage networks through multiple and various points. It should be noted that much of this excess surface water ingress is not intentionally connected but enters the system through defects and overland flooding.

Horning Knackers Wood Water Recycling Centre (WRC)

The river flooding and groundwater infiltration into the network results in the WRC being flow non-compliant. However, an assessment of legitimate flows to the WRC based on the potable water supplied to the area and the population it serves, shows the WRC would be compliant with its permit without the excess surface water ingress. If circumstances allowed for the foul water sewerage network to operate within the intended parameters, the WRC would be compliant with its permit.

Historic Investigations and Works

DATE	INVESTIGATIONS AND WORKS BY ANGLIAN WATER
2000	Groundwater/surface water Infiltration along Ferry View Road found that large scale groundwater/surface water inundation was present as a result of damage to private laterals.
2002	CCTV survey was undertaken.
2014	Sewer rehabilitation scheme completed.
2015	Excess flows still an issue at Ferry View Terminal Pumping Station.
2016	Survey identified infiltration into both public and private systems together with surface water connections.
2017	Horning Flooding Assessment undertaken – conclusion; continued settlement of the ground leads to more operational issues.

2018	Horning Road sewer collapse, refurbishment of subsided sewer on Ferry Road completed Feb 2018.
2018	Requests made to property owners to remove surface water connections.
July 2021	CCTV surveyed the sewers connecting in Ferry View Road and Ferry Road.
Aug 2021	Further survey work in Ferry View Road.
2022 – Jul 2023	<p>Works undertaken to address infiltration and surface water inundation has included:</p> <ul style="list-style-type: none"> • extensive repairs on a manhole on Ferry View Road to prevent persistent infiltration. • We identified and contributed to the repair of a private lateral drain that was found to be disconnected and was being inundated by river water. • On Ferry Cott Lane and Ferry Road three manholes have been internally sealed to prevent infiltration into the network. • Re-laid 60m of new sewer from Ferry View

Rainfall Data

From the investigations completed it is likely that the amount of rainfall is not the most significant influence on the sewerage system. There are some direct surface water connections to the foul water network, however, the impact of these is insignificant compared to the impact of river/ground water infiltration.

Groundwater Levels

The groundwater level is directly linked to the river level. Much of the public sewerage network is below the low water level of the river and the surrounding soil type is porous

Highway Drainage

The road gully on Ferry Road is connected to the foul sewer. Various discussions have taken place with the Norfolk County Council as Local Highway Authority and Lead Local Flood Authority, North Norfolk District Council as Local Planning Authority, businesses and the Environment Agency regarding its removal. The highway at this location is unadopted and the ownership of the gully has not been established.

Long-term Flooding Vulnerability

Climate change observation and predictions indicate increases in high river levels and the frequency of high flow conditions. This will expose more of the FW networks to surface water inundation and may also increase ground movement around pipework, leading to more points of infiltration.

Next Steps

Despite the investigations and works undertaken by Anglian Water to date, the WRC remains uncompliant with the Dry Weather Flow permit for the WRC. Anglian Water will continue to operate and maintain the public sewerage network in Horning and will respond to loss of services as appropriate. We will continue to discuss with the Environment Agency and look at other possible

interventions in relation to WRC compliance and the operation of the public sewerage network.
Remaining works to be undertaken:

- Ferry View Road:
 - Inspect and repair any damaged lateral connections
 - Patch repair to be installed to prevent infiltration at joint in sewer
 - Ferry View Road Pumping Station - Raise cover level and install new sealed cover of wet well
- Ferry Road:
 - Disconnect surface water road gully from the foul system to ensure it flows out to the Broads

Our Water Recycling Long Term Plan (WRLTP) outlined a scheme, then proposed in business plan, to increase dry weather flow (DWF) at Horning Knackers Wood WRC. However, this will not improve the existing issues of infiltration. Consequently, we have not committed to the increase of DWF at the WRC, as we need to understand the impact of the infiltration removal work to be able to correctly design for the increase in capacity. The Drainage and Wastewater Management Plan 2025-2050 (DWMP) identifies a medium term need to apply for a new permit, once all infiltration removal solutions have been pursued. Anglian Water is continuing to investigate potential solutions at the WRC to realise the strategies identified in the DWMP

However, as the issues are predominantly related to river flooding, it involves assets outside of our ownership and prevailing environmental conditions that compromise standard drainage techniques / practices. Therefore, there is no immediate engineering solution available to Anglian Water that can provide effective mitigation of the impact of the excess surface water ingress. Furthermore, Anglian Water does not have the remit under Water Industry Act 1991 to entirely fund all solutions.