

19 November 2018

Our ref: Quorn 1

Dear Sir/Madam

## Quorn Neighbourhood Plan

Thank you for the opportunity to comment on your consultation. Under section 94 of the Water Industry Act 1991, Severn Trent have a duty to provide sewerage capacity including for new development. As part of this duty we assess new development to determine the likely impact on our network. This assessment is based on an agreed design standard. As part of these design standard and in accordance with section 106 it would be anticipated that surface water is not discharged into the foul sewers. The proposed location of this site and the details within Policy H1 suggest that the site is likely to be subject to flooding, this has the potential to place additional demand on our sewerage network (or any new network that may be proposed for adoption). This would potentially be through the indirect connection of flows which do not form part of our statutory duty for example fluvial and pluvial flows from non-domestic areas, or the inability of our sewerage systems to outfall, resulting in an underlying risk to the sewers. Therefore, Severn Trent have raised the following concerns regarding the Neighbourhood Plan.

Policy H1: Residential Site Allocation, in particular issues raised in bullet point c)

*“flooding concerns are addressed through the provision of a pumping station within the development and open channels provided to enhance drainage, with appropriate landscaping to incorporate 3 soakaway areas provided;”*

There are a number of aspects of this statement that cause concern including:

- *“Flooding concerns area addressed”*, the site is the only full allocation within the Quorn neighbourhood plan (reserve site is acknowledge but limited due to clauses within the neighbourhood plan). However, the allocation is at risk of flooding, therefore Severn Trent would question if this site has been subjected to an appropriate sequential test assessment prior to its inclusion within the plan.

In accordance with the National Planning Policy Framework Paragraph 157 *“all plans should apply a sequential, risk based approach to the location of development”*

NPPF continues on in paragraph 158 *“The aim of the sequential test is to steer new development to areas with the lowest risk of flooding”*

Based on the EA maps attached to the rear of this response, the site is partially located within flood zone 3, Low risk of flooding from surface water and partly located within the flood risk from reservoir extent.

- The site is not indicated to contain any Severn Trent Water Sewers, although this will need to be checked if development is brought forward. Therefore it is understood that the flooding risk is related to either fluvial or pluvial sources. The pumping of surface or rivers water is not a sustainable method of development. Therefore this approach should be avoided where possible.

The connection of land drainage or river flows into the Severn Trent network is not permitted, therefore any pumping station introduced to manage flows from these sources would need to be operated under private ownership.

The Non-Statutory Technical Standards for sustainable drainage systems S12 states “Pumping should only be used for facilitate drainage for those parts of the site where it is not reasonably practical to drain water by gravity” demonstrating that national guidance supports the use of gravity systems.

The site is indicated to contain a watercourse and the contours on site would suggest that the majority of the site is flat, therefore surface water flows should be directed towards this outfall where possible without the use of a pumped solution.

- Based on the BGS Geindex Onshore the site is indicated to be underlain by a bedrock of Gunthorpe Member – Mudstone, which is overlain by superficial deposits of Head – Clay, Silt, Sand and Gravel. With the site being partially located within Flood zone 3 it is likely that the water levels within soil are hydraulically connected to the watercourse. Therefore it is unlikely that soakaways will be viable.

Based on the above points Severn Trent would like to raise concerns on the allocation of the housing site from a flood risk perspective, and about the viability of the detail within Policy H1. If the site is taken forward as an allocation and developed, the design of the site will need to be undertaken carefully to ensure that surface water or river water does not enter the foul sewerage network.

The Policy H2: Reserve site does not detail any flood risk concerns and is indicated to be located within Flood Zone 1 away from any watercourses

- The site is shown to contain a watercourse therefore Severn Trent would anticipate that no surface water connections will be required to the Severn Trent network. Severn Trent do not have any specific concerns regarding this potential allocation but would advise that any developer or application to progress development consult with Severn Trent to arrange for an assessment of the network at the appropriate time.

Please keep us informed when your plans are further developed when we will be able to offer more detailed comments and advice.

For your information we have set out some general guidelines that may be useful to you.

### **Position Statement**

As a water company we have an obligation to provide water supplies and sewage treatment capacity for future development. It is important for us to work collaboratively with Local Planning Authorities to provide relevant assessments of the impacts of future developments. For outline proposals we are able to provide general comments. Once detailed developments and site specific locations are confirmed by local councils, we are able to provide more specific comments and modelling of the network if required. For most developments we do not foresee any particular issues. Where we consider there may be an issue we would discuss in further detail with the Local Planning Authority. We will complete any necessary improvements to provide additional capacity once we have sufficient confidence that a development will go ahead. We do this to avoid making investments on speculative developments to minimise customer bills.

### **Sewage Strategy**

Once detailed plans are available and we have modelled the additional capacity, in areas where sufficient capacity is not currently available and we have sufficient confidence that developments will be built, we will complete necessary improvements to provide the capacity. We will ensure that our assets have no adverse effect on the environment and that we provide appropriate levels of treatment at each of our sewage treatment works.

### **Surface Water and Sewer Flooding**

We expect surface water to be managed in line with the Government's Water Strategy, Future Water. The strategy sets out a vision for more effective management of surface water to deal with the dual pressures of climate change and housing development. Surface water needs to be managed sustainably. For new developments we would not expect surface water to be conveyed to our foul or combined sewage system and, where practicable, we support the removal of surface water already connected to foul or combined sewer.

We believe that greater emphasis needs to be paid to consequences of extreme rainfall. In the past, even outside of the flood plain, some properties have been built in natural drainage paths. We request that developers providing sewers on new developments should safely accommodate floods which exceed the design capacity of the sewers.

To encourage developers to consider sustainable drainage, Severn Trent currently offer a 100% discount on the sewerage infrastructure charge if there is no surface water connection and a 75% discount if there is a surface water connection via a sustainable drainage system. More details can be found on our website

<https://www.stwater.co.uk/building-and-developing/regulations-and-forms/application-forms-and-guidance/infrastructure-charges/>

### **Water Quality**

Good quality river water and groundwater is vital for provision of good quality drinking water. We work closely with the Environment Agency and local farmers to ensure that water quality of supplies are not impacted by our or others operations. The Environment Agency's Source Protection Zone (SPZ) and Safe Guarding Zone policy should provide guidance on development. Any proposals should take into account the principles of the Water Framework Directive and River Basin Management Plan for the Severn River basin unit as prepared by the Environment Agency.

## Water Supply

When specific detail of planned development location and sizes are available a site specific assessment of the capacity of our water supply network could be made. Any assessment will involve carrying out a network analysis exercise to investigate any potential impacts.

We would not anticipate capacity problems within the urban areas of our network, any issues can be addressed through reinforcing our network. However, the ability to support significant development in the rural areas is likely to have a greater impact and require greater reinforcement to accommodate greater demands.

## Water Efficiency

Part G of Building Regulations specify that new homes must consume no more than 125 litres of water per person per day. We recommend that you consider taking an approach of installing specifically designed water efficient fittings in all areas of the property rather than focus on the overall consumption of the property. This should help to achieve a lower overall consumption than the maximum volume specified in the Building Regulations.

We recommend that in all cases you consider:

- Single flush siphon toilet cistern and those with a flush volume of 4 litres.
- Showers designed to operate efficiently and with a maximum flow rate of 8 litres per minute.
- Hand wash basin taps with low flow rates of 4 litres or less.
- Water butts for external use in properties with gardens.

To further encourage developers to act sustainably Severn Trent currently offer a 100% discount on the clean water infrastructure charge if properties are built so consumption per person is 110 litres per person per day or less. More details can be found on our website

<https://www.stwater.co.uk/building-and-developing/regulations-and-forms/application-forms-and-guidance/infrastructure-charges/>

We would encourage you to impose the expectation on developers that properties are built to the optional requirement in Building Regulations of 110 litres of water per person per day.

We hope this information has been useful to you and we look forward in hearing from you in the near future.

Yours sincerely

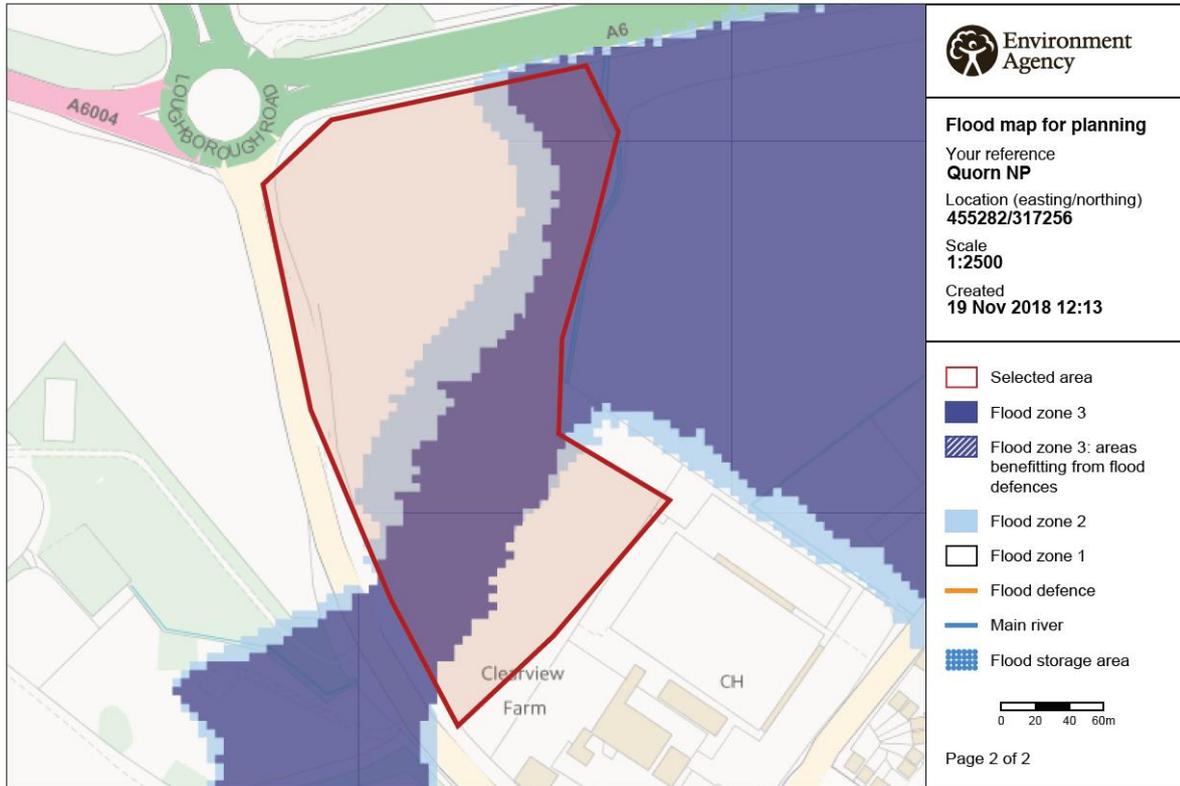
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**Figure 1 – Fluvial Flood risk Map (River flooding)**

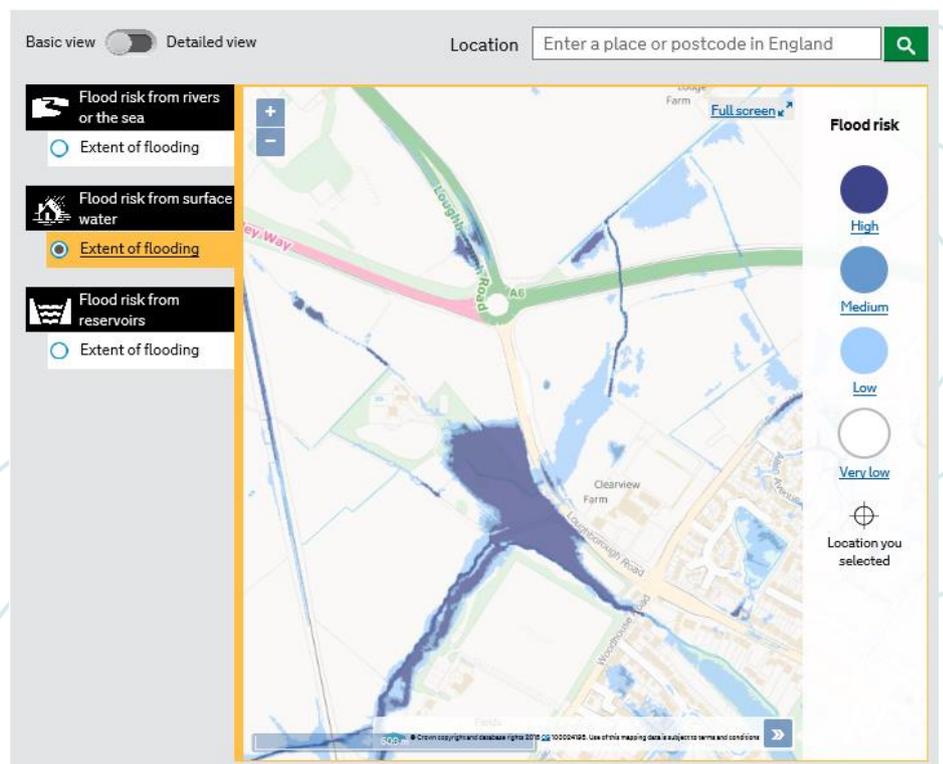
Extracted from the Environment Agency website



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**Figure 2 – Risk of flooding from Surface water**

Extracted from <https://flood-warning-information.service.gov.uk/long-term-flood-risk/map>



### Figure 3 – Risk of Flooding from Reservoir

Extracted from <https://flood-warning-information.service.gov.uk/long-term-flood-risk/map>

