

23 November 2017

Our ref: Rushcliffe 2

Dear Sir/Madam

Rushcliffe Local Plan consultation

Thank you for the opportunity to comment on your consultation. In addition to the Sewerage Capacity Study attached we have set out some general guidelines for your information 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

Rebecca McLean

Lead Catchment Planner

Rushcliffe County Council LDP

Potential impact of proposed developments on sewerage infrastructure assets

Date 15/11/2017

NOTE: The purpose of these desktop based assessments are to indicate where proposed development **MAY** have a detrimental impact on the performance of the existing public sewerage network taking into account the size of the development proposals. For most new development provided the surface water in managed sustainably through use of a SuDS the additional foul only flows will have a negligible impact on existing sewer performance but where there are pre-existing capacity constraints additional capacity improvements may be required.

Where subsequent detailed modelling indicates capacity improvements are required such work will be phased to align with development occupancy with capacity improvement works will be funded by Severn Trent Water. However, whilst Severn Trent have a duty to provide additional capacity to accommodate planned development, we also have a requirement to manage our assets efficiently to minimise our customers' bills. Consequently to avoid potential inefficient investment we generally do not provide additional capacity until there is certainty that the development is due to commence. Where development proposals are likely to require additional capacity upgrades to accommodate new development flows it is highly recommended that potential developers contact Severn Trent as early as possible to confirm flow rates and intended connection points. This will ensure provision of additional capacity can be planned into our investment programme to ensure development is not delayed.

Site Ref	Site Name	Domestic/ Business	Size	Units	Sewage Treatment Works Catchment	Sewerage Comment	Potential impact on sewerage infrastructure
----------	-----------	-----------------------	------	-------	---	------------------	---

West Bridgeford

WB01	Abbey Road Depot	Domestic			Stoke Bardolph STW	Flows from the development are likely to drain to a 225 mm dia foul pipe on Gardens Court. Flooding is predicted on low return periods by Return Period Analysis (RPA). Flows from the development will gravitate to Eltham Road Pumping Station. There are no pollutions recorded at this Pumping Station (PS).	Low
	Melton Road, Edwalton	Domestic & Business		1500		Flou flows from the development will likely to gravitate towards a 225 mm dia foul sewer on Edwalton Lodge Close. Due to the topography it is likely the southern part of the site will have to be pumped. Surface water flows from the development will be able to join a 450 mm dia surface water pipe on Edwalton Lodge Close or will have to be dealt with on site by SUDs system. There are no recorded hydraulic flooding incidents Down Stream of the development or flooding in low Return Periods predicted by RPA.	Medium
	South of Clifton	Domestic & Business		3000	Cotgrave STW or Radcliffe on Trent STW	Flou flows from the development will likely join a foul 225 mm dia sewer on Summerwood Lane. The topography of the site means that all flows will have to be pumped to join the existing network. A higher pumped rate of flow discharging to the network may cause surcharging in Dry Weather Flow (DWF) and result in flooding. A cluster of flooding incidents has been recorded on Summerwood Lane in 1993. The size of the development may cause flooding to reoccur at this location.	High
	East of Gamston/North of Tollerton	Domestic & Business		2500		Foul flows from the development will be best dealt with if they gravitate towards Tollerton. Surface water flows from the development can discharge to local watercourses within the proximity. The development would join a 150 mm dia combined sewer. RPA analysis doesn't predict flooding. However there is a flooding incident recorded in 1999. There is a pollution recorded at Cotgrave Lane Sewage Pumping Station (SPS). A catchment reconfiguration is scheduled to take Cotgrave Lane SPS to Radcliffe Trent Sewage Treatment Works (STW) instead of Cotgrave STW. Due to the size of the development the PS may have to be upgraded to deal with incoming flows.	Medium
	Bingham	Domestic & Business		1000			

Cotgrave

COT01	Land rear of Mill Lane/The Old Park	Domestic		170	Cotgrave STW or Radcliffe on Trent STW	Flou flows from the development will gravitate to a 150 mm dia pipe off The Old Park. RPA does not predict flooding on this sewer leg or sewers further D/S. However in 2009 a flooding incident was recorded on Bingham Road. Surface Water from the development will be able to drain to a brook to the east of the site. Foul flows gravitate to Cotgrave - Main Road SPS, there are no pollutions recorded here.	Low
		Domestic		180		Flou flows from the development will gravitate toward a 100 mm dia pipe on Bingham Road. RPA does not predict flooding on this sewer leg or sewers further D/S. However in 2009 a flooding incident was recorded on Bingham Road. Surface Water from the development will have to gravitate to the surface water network on Bingham Rd. Flooding is predicted in low RPs from the surface water system. It is recommended that SUDs are utilised to limit surface water discharge. Foul flows gravitate to Cotgrave - Main Road SPS, there are no pollutions recorded here.	Low
COT09/CO	Land south of Hollygate Lane						

East Leake

EL01	Land North of Lantern Lane	Domestic		170	East Leake STW	Flou flows from the development will join a 225 mm dia foul sewer on Lantern Lane. No flooding is predicted by RPA. An SCA was carried out on a developers proposals concluding there was a low impact to STW's infrastructure. Surface Water is likely to join the existing surface water system on Manor Road. No flooding is predicted on the surface water network.	Low
		Domestic		150		Development already built	NA
		Domestic		300		Development will drain to a 225 mm dia pipe on Brookside Rd. RPA predicts flooding in low RPs. There are external flooding incidents recorded U/S and D/S of the development. There are also pollution incidents recorded on Brookside Rd. Surface from the development would be able to drain directly to a local watercourse.	Medium
EL04	East of Kirk Ley	Domestic					

Keyworth

KEY04a	Land off Nicker Hill	domestic		150	Keyworth STW	Flou flows from the development will drain to a 150mm dia foul sewer on Nicker Hill. There is one incident of external flooding D/S from the development. There are also three pollution incidents recorded at Keyworth Platt Lane SPS which flows from the development will drain to. Surface water will be able to drain to a local watercourse.	Low
		domestic		190		Flou flows from the development will drain to a 450 mm dia foul sewer on Station Road. RPA predicts flooding U/S of the development's discharge point. There are also recorded flooding incidents. Immediately D/S of the development flows will gravitate to Keyworth Platts lane SPS. There are a number of pollution incidents recorded at the PS.	Low
		domestic		190		Flou flows from the development will drain to a 300 mm dia foul sewer on Bunny Ln. There is a large flooding cluster on Bunny Lane that the development might impact. Half of the site may have to drain to the north to Debadale PS. There are pollutions recorded at this location. Storm water will drain to the water course at the northern boundary at the site.	Medium
		domestic		50		Flou flows from the development will drain to a 150mm dia foul sewer to the south of the development site. RPA predicts flooding in a low RP. There is a flooding cluster to the north of the development on Bunny Ln.	Low

Radcliffe on Trent

RAD01	Land North of Nottingham Road	Domestic		150	Radcliffe - on Trent (STW)	Some parts of the development may require pumping. The majority of foul flows from the development will gravitate towards Sydney Grove TPS. Flooding is predicted on low RPs on Greenway Close, flooding is also recorded on Greenway Close. There is no surface water network for the development to discharge to, the development will have to utilise SUDs to deal with surface water flows.	Low
		Domestic		75		Flou flows from the development will join a 150 mm dia foul flow sewer on Clumber Drive. There are low RPs predicted D/S and flooding incidents reported on Bingham Rd. Surface water will be able to discharge to the south of the development to a local watercourse.	Low
RAD02	Land adjacent Grooms Cottage	Domestic		50		Flou flows from the development will join a 150 mm dia foul flow sewer on Clumber Drive. There are low RPs predicted D/S and flooding incidents reported on Bingham Rd. Surface water will be able to discharge to the south of the development to a local watercourse.	Medium
RAD03	Land off Shelford Road	Domestic		400		Flou flows from the development are likely to drain directly to Hudson Way SPS. There is a cluster of reported flooding and predicted flooding in low RPs D/S on Bingham Road. There are no pollutions reported at the pumping station. Surface water from the development will be able to discharge into a local watercourse.	Low
RAD05a	Land North of Grantham Road			140			

Ruddington

RUD01	Land to the west of Wilford Road	Domestic		180	Stoke Bardolph	Flou flows from the development will drain to a 375 mm dia pipe running through the development site. RPA doesn't indicate flooding in low RPs. There are some flooding incidents of flooding reported U/S of the development, however the development is unlikely to effect them. Surface water from the development will be able to drain to a local watercourse running through the site.	Low
		Domestic		50		Flou flows from the development will drain to a 225 mm dia pipe on Flawforth Lane. RPA predicts flooding in one and two year RPs. However, due to the size of the development, it is unlikely to increase the risk of flooding. Surface water flows can drain to a local watercourse to the east of the site.	Low
		Domestic		170		Flou flows from the development will discharge into a 300 mm dia combined sewer on Loughborough Rd. RPA predicts flooding in low RPs downstream from the development. Due to topography flows may have to be pumped. Surface Water can be drained to a watercourse to the east of the development	Medium

Cropwell Bishop

CB102	Land North of Memorial Hall	Domestic		90	Cropwell Bishop STW	Flou flows from the development will join a 150 mm dia sewer on Hoe View Road. Surface water will join the existing surface water network on Hoe View Road. There are reported flood incidents, pollutions, and flooding predicted in low RPs. D/S close to Cropwell Bishop STW.	Low
		Domestic		70		Flou flows will join a 225 mm dia sewer off Hardys Close. Flooding in low RPs is predicted and there are flooding incidents reported U/S. Surface water from the development will drain to a local brook.	Low

East Bridgeford

EBR06	Closes Side Lane (West)	Domestic		20	East Bridge STW	Size of the development means impact on STW sewers will be negligible	Low
EBR07	Closes Side Lane (East)	Domestic		20			
EBR08	Land North of Butt Lane	Domestic		15			
EBR10	Land South of Butt Lane	Domestic		45			

Gotham

GOT05a	Land East of Gypsum Way	Domestic		100	Gotham STW	Flou flows from the development are likely to drain to a 150 mm dia pipe on Monks Lane. It is predicted to flood in low RPs. D/S of the development there is a large cluster of internal flooding on Curzon Street. There is a brook on the opposite side of Leake Rd that the development could discharge too. However, a pipe underneath the road would have to be constructed.	Medium
--------	-------------------------	----------	--	-----	------------	---	--------

Bunny Brickworks

BUN01	Former Bunny Brickworks	Domestic & Business		101		Flou flows from the development would have to drain to a 150 mm dia foul sewer on Gotham Lane. RPA predicts flooding in low RPs on sewers D/S from the development. Flou flows gravitate towards Loughborough Road SPS. There are no pollutions recorded at the PS. Surface water will have to be dealt with by SUDs as there is not a local network or watercourse suitable.	Low
-------	-------------------------	---------------------	--	-----	--	---	-----

Flintham

FL101	Former Islamic Institute	Domestic		95		Flou flows from the development will join a 225 mm dia foul pipe running across the development. The foul network is predicted to flood in low RPs. Flintham STW is immediately D/S. There is no surface water network in the area. The development will have to deal with surface water flows on site using a SUDs system. If surface water flows join the foul system it is likely to cause flooding.	Low
-------	--------------------------	----------	--	----	--	---	-----