Appendix F

Water Quality Review

<table>
<thead>
<tr>
<th>Job No</th>
<th>Report No</th>
<th>Issue no</th>
<th>Report Name</th>
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<tr>
<td>MID1051</td>
<td>R.003</td>
<td>1</td>
<td>Water Cycle Strategy: Detailed Strategy</td>
</tr>
</tbody>
</table>
Appendix F: Contents

Detailed Water Quality Review
F Water Quality

Catchments in the Newark & Sherwood District

F.1 The Newark and Sherwood District lies within the eastern part of Nottinghamshire. The Trent catchment dominates the south-east half of the District.

F.2 The River Greet rises centrally within the District and flows past Southwell to a confluence with the Trent near Fiskerton.

F.3 The River Devon enters the Trent at Newark, skirting the south side of the town: this originates farther south and west near Bingham.

F.4 In the northern part of the District, the River Maun, fed by Rainworth Water and Vicar Water, flows through Edwinstowe and Ollerton before converging with the River Meden near Bothamsall.

F.5 The River Meden flows north east through Pleasley and Warsop and temporarily with the River Maun near Bothamsall and after a short distance they divide and go on separately to Markham Moor where they combine again to form the River Idle.

F.6 The River Witham flows past the south-east side of the District towards Lincoln.

Water Quality in the Trent Catchment

F.7 The River Trent catchment incorporates several industrialised areas. During the 18th and 19th centuries the River Trent played a major part in industrial development. With increasing populations, together with industrial and agricultural development, water quality suffered a major decline. In the last few decades with a reduction in industry and an increase in environmental legislation, both water quality and wildlife has recovered.

F.8 To assess the situation with regards to water quality over the last few years, water quality data has been obtained from the Environment Agency (EA) for the period 1997 and 2007. The River Trent, including the River Greet, River Devon, River Maun and River Meden are all assessed for the following determinands:

- Biology
- Nitrates
- Phosphates
- Biological Oxygen Demand
- Ammonia
- Dissolved Oxygen

How Water Quality is Measured

F.9 The EA for many years has been using a general quality assessment (GQA) scheme to assess river water quality, in terms of chemistry, biology and nutrients. GQA has helped drive environmental improvements by addressing many of the point sources of pollutants, such as discharges from wastewater treatment works (WwTW) or industry.
F.10 The EA assesses the quality of rivers and canals by looking at nutrients, chemistry, and biology. They sample about 7,000 river and canal sites across the country 12 times a year to test their chemistry and nutrients. Currently they have a three year rolling sampling programme to test the biology of rivers, sampling about 6,000 sites twice during survey years to see what species are living in the rivers.

Biology

F.11 Biological quality is rated on the difference between the macro-invertebrate community actually found in a river and that which would be expected under natural conditions. The EA use a computer-based system (RIVPACS) to predict the macroinvertebrates that would be found if the river was unpolluted.

F.12 The analysis identifies only the major species types (taxa), mostly at the family taxonomic level and only taxa used in the Biological Monitoring Working Party (BMWP) are considered. A numerical value is assigned to about 80 different taxa according to their sensitivity to organic pollution.

F.13 The average of the values for each taxon in a sample, known as ASPT (average score per taxon) is a reliable indicator of organic pollution, so values lower than expected indicate organic pollution.

F.14 Both ASPT and number of taxa in the samples are divided by the equivalent values predicted by RIVPACS. They are expressed as the proportion of their value and are called Ecological Quality Indices (EQIs). The grade assigned to a site is whichever one is the poorest, based on either EQI ASPT or EQI for the number of taxa.

Table F.1 Ecological Quality Indices

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A – very good</td>
<td>Biology similar to that expected for an unpolluted river</td>
</tr>
<tr>
<td>B – good</td>
<td>Biology a little short of an unpolluted river</td>
</tr>
<tr>
<td>C - fairly good</td>
<td>Biology worse than expected for unpolluted river</td>
</tr>
<tr>
<td>D – fair</td>
<td>A range of pollution tolerant species present</td>
</tr>
<tr>
<td>E – poor</td>
<td>Biology restricted to pollution tolerant species</td>
</tr>
</tbody>
</table>

Source: EA

Chemistry

F.15 The EA test samples for biochemical oxygen demand (BOD), ammonia and dissolved oxygen.

F.16 The results for each site are averaged; percentiles are calculated and a chemistry grade assigned according to the lowest grade achieved in any of the three tests.

Table F.2 Chemistry Classification Indices

<table>
<thead>
<tr>
<th>Classification</th>
<th>Likely uses and characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>A – very good</td>
<td>All abstractions&lt;br&gt;Very good salmonid fisheries&lt;br&gt;Cyprinid fisheries&lt;br&gt;Natural ecosystems</td>
</tr>
<tr>
<td>B – good</td>
<td>All abstractions&lt;br&gt;Very good salmonid fisheries&lt;br&gt;Cyprinid fisheries&lt;br&gt;Ecosystems at or close to natural</td>
</tr>
</tbody>
</table>
### Classification Likely uses and characteristics

<table>
<thead>
<tr>
<th>Classification</th>
<th>Likely uses and characteristics</th>
</tr>
</thead>
</table>
| **C - fairly good** | *Potable supply after advanced treatment*  
*Other abstractions*  
*Good cyprinid fisheries*  
*Natural ecosystems, or those corresponding to good cyprinid fisheries* |
| **D – fair** | *Potable supply after advanced treatment*  
*Other abstractions*  
*Fair cyprinid fisheries*  
*Impacted ecosystems* |
| **E – poor** | *Low grade abstraction for industry*  
*Fish absent or sporadically present, vulnerable to pollution **  
*Impoverished ecosystems *** |
| **F – bad** | *Very polluted rivers which may cause nuisance*  
*Severely restricted ecosystems* |

* *providing other standards are met  
** where the grade is caused by discharges of organic pollution

### Nutrients

**F.17** Nutrients are essential for aquatic life, but the excessive build-up of nutrients (mainly phosphorus and nitrogen) can lead to algal blooms and changes to aquatic life. This is known as ‘eutrophication’.

**F.18** The EA analyses samples for Nitrate and Phosphate and assigns a grade for each nutrient.

#### Table F.3 Classification grades for nitrate & phosphate

<table>
<thead>
<tr>
<th>Classification</th>
<th>Nitrate grade limit (mg/l)</th>
<th>Phosphate grade limit (mg/l)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>0.02</td>
<td>Very low</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>0.06</td>
<td>Low</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>0.10</td>
<td>Moderately low / Moderate</td>
</tr>
<tr>
<td>4</td>
<td>30</td>
<td>0.20</td>
<td>Moderate / High</td>
</tr>
<tr>
<td>5</td>
<td>40</td>
<td>1.00</td>
<td>High / Very high</td>
</tr>
<tr>
<td>6</td>
<td>&gt;40</td>
<td>&gt;1.0</td>
<td>Very high / Excessively high</td>
</tr>
</tbody>
</table>

*Source: EA*

### Water Framework Directive

**F.19** The EA is changing the way of monitoring river quality, as a more sophisticated way of assessing the whole water environment is required. The European Water Framework Directive (WFD) provides the means to do this as over 30 measures, grouped into ecological status and chemical status, are assessed.

**F.20** WFD monitoring is risk-based and classification is based on a far wider range of assessments than GQA. WFD uses a principle of ‘one out, all out’ which means that the poorest individual result drives the overall classification. These differences mean that WFD results will appear poorer than GQA results, even though it is the same water environment.

F.21 Urban waste water is any domestic waste water, domestic and industrial waste water mix, and/or run-off or rainwater. The aim of the Urban Waste Water Treatment Directive (UWWTD) is to protect the environment from the adverse effect of waste water discharges.

F.22 The directive sets treatment levels on the basis of sizes of sewage discharges and the sensitivity of waters receiving the discharges. It presents uniform emission standards, or percentage reductions in pollutant concentrations, for discharges from WwTWs.

F.23 Sensitive areas, such as eutrophic waters, are identified where sewage requires extra treatment before discharge. In these areas, larger sewage discharges must be treated to reduce their load of nutrients before discharge into watercourses.

Eutrophication

F.24 Eutrophication can adversely affect aquatic ecosystems but also a wider variety of water uses such as water supply, irrigation and angling.

F.25 The EA aim to reduce the risk of eutrophication through its Eutrophication Strategy, which promotes a partnership approach with Government departments, other environmental regulators, industry and interest groups. Nationally, it aims to reduce nutrient inputs to water, especially from wastewater treatment works and agriculture. On a local level, catchment-based Eutrophication Control Action Plans are being trialled to tackle specific problems but are yet to be implemented in the Newark and Sherwood District.

F.26 The European Nitrates, Urban Waste Water Treatment and Habitats Directives set measures to reduce nutrient inputs to water from diffuse and point sources. In the future, more stringent controls are likely to be required through implementation of the EC Water Framework Directive.

River Trent

F.27 The River Trent is 171 miles long (274 kms), beginning at its source in North Staffordshire and ending at the mouth of the Humber Estuary where it enters the North Sea. The River Trent contains 42 tributaries.

F.28 The River Trent catchment dominates the south-east half of the Newark and Sherwood District. The major tributary in this district is the River Greet which flows past Southwell to a confluence with the Trent just down from Newark at Fiskerton. Just before the River Greet enters the River Trent, the Halloughton Dumble has flowed into the River Greet. Another significant tributary is the River Devon which enters at Newark after flowing around the south side of the town.

F.29 The River Trent is one of only two bore rivers in England, the other being the River Severn. Downstream of Cromwell Lock (north of Newark) the River Trent becomes tidal and is subject to a periodic tidal bore and is locally known as an ‘aegir’. The Cromwell Lock enables river craft to continue upstream towards Newark and the weir by the side of the lock is one of the largest on the River Trent.
Wastewater Treatment Works

F.30 The WwTW sites within the District that discharges within the River Trent catchment are:

- Balderton (Middle Beck into the River Devon)
- Farndon (River Devon – tributary)
- Farnsfield (River Greet – tributary)
- Halam (River Greet – tributary)
- Kirklinton (River Greet)
- Southwell (Halloughton Dumble – into the River Greet)

Within the Asset Management Period, AMP4 (2005-2010), Southwell WwTW is to move its final effluent discharge point from Halloughton Dumble so it discharges directly into the River Trent, which will have a greater dilution than Halloughton Dumble.

- Newark
- Collingham (River Fleet)
- Cromwell (tributary)
- Eakring (The Beck – tributary)
- Knessall (The Beck – tributary)
- Laxton (un-named)

F.31 The Stoke Bardolph WwTW, which serves a large part of the Nottingham conurbation and other surrounding settlements, enters the River Trent upstream of the District, although it lies outside of the District.

F.32 Principle sewage loads into the River Trent within the District are from Southwell and Newark WwTWs. There are issues of capacity at Newark WwTW so Severn Trent Water are currently investigating expansion. As the site lies on a floodplain, extension on the current site is limited, so options of diverting flows to other wastewater treatment works are currently being considered. The EA (2005) undertook a risk assessment to assess the potential impacts of increased growth and this works was assigned a high risk factor. The assessment analysed flow, ammonia and BOD.

Urban Waste Water Treatment Directive

F.33 The River Trent was designated under the UWWTD from October 2007 as a Sensitive Area (Eutrophic). The stretch of the Trent is from National Grid Reference (NGR) SJ 87900 38750 to SE 86590 23460 which covers 270.40km.

F.34 The EA (2009) are unable at present to confirm which WwTW will have a UWWTD phosphate consent. Phosphate removal plants will have to be installed to ensure that the consent level of phosphate is reached in the final effluent, before it is discharged to the River Trent. The AMP5 (2010-2015) Business Plans are yet to be finalised so until so this information is unknown.
**Industry**

F.35 A large industrial load on the River Trent is from British Sugar plc who own the Newark Sugar Factory site at Great North Road, Newark. The site has an effluent treatment system which treats discharges prior to discharge into the River Trent.

F.36 Another issue that can affect water quality is coolant water from power stations. The Staythorpe Power Station is a 1650MW gas-fired power station between Southwell and Newark-on-Trent that will open in 2010. The EA regulate such plants by implementing environmental permits – issued under the Pollution Prevention and Control Regulations (PPC).

F.37 The EA (2009) are not overly concerned with industrial effluents or coolant waters into the River Trent as they are heavily regulated and rarely cause any problems in the area.

**Water Quality Data**

F.38 Water quality in the River Trent catchment has been obtained for the following watercourses: Dover Beck, Causeway Dyke, Holme Dyke, The Greet, The Devon, The Trent, The Beck and The Fleet. The location of each site is shown in Figure F.1.

F.39 The Biology Score data was only retrievable for the River Fleet and the River Trent. It is evident that where data is available, the Biology is considered good as all samples scored an EQI of B or C so good or fairly good.

F.40 At the Trent monitoring point, the biology has improved from a score of C (Fairly Good) to a score of B (Good) since 2000. This may be as a result in improvements at wastewater treatment works upstream and notably Newark WwTW.

F.41 At The Fleet monitoring point the biology score reduced from B to C in 2007. This may be as a result of discharges from the river having flowed past Collingham WwTW.

F.42 Nitrate levels on the River Trent have remained at a constant ‘high’ at a classification of 5 (or 40mg/l) from 1997 to 2007. Phosphate levels have improved since 2006 from an ‘excessively high’ classification of 6 (<1mg/l) to a ‘very high’ 5 (1mg/l.)

F.43 Ammonia scores have been classified as either A (very good) or B (good) since 1998 at all sites except The Beck. The Beck has seen an improvement in Ammonia from grade D (fair) till 2000 to C (fairly good) till 2004 and now records an A (very good) in 2007. The Beck receives sewage loads from Eakring WwTW and Knessall WwTW via tributaries, so over the years with improvements in sewage effluent quality, ammonia levels will have reduced.

F.44 No BOD data was provided for any of the sites.

F.45 The dissolved oxygen grade varies throughout the River Trent catchment. At the most upstream sample point at Caythorpe the classification is A (very good). However by Fiskerton the classification is E (poor) since 2004 when it dropped from D (fair). The Greet then enters the River Trent where samples are classified as A (very good) followed by the River Devon where samples are now classified as C (fairly good). However at the next sampling point at Gunthorpe Bridge, north of Winthorpe, the River Trent has been classified as A (very good) since 1998. The dissolved oxygen then gradually reduces so by the sample downstream of Collingham WWTW at the River Fleet (neat Girton) and River Trent confluence, it is classified as E (poor).
F.46 The dissolved oxygen levels can fluctuate very easily through water bodies but particularly so on the River Trent due to the river’s tidal nature and also the numerous weirs introducing oxygen. The fluctuating levels and the eventual A classification at Gunthorpe Bridge can be perhaps attributed to the Newark Weir into Newark town.

Figure F.1 Water Quality Data Sites: River Trent
River Devon

F.47 The River Devon flows into Newark on the south side and enters the River Trent at the Marina on the west side. The river originates further south and west near Bingham.

Wastewater Treatment Works

F.48 Both wastewater treatment works into the River Devon initially discharge into tributaries. Balderton WwTW discharges into the Middle Beck: further downstream Farndon WwTW outfalls into a smaller tributary of the Devon.

F.49 The River Devon is not designated under the UWWTD.

Figure F.2 Water Quality Data Sites: River Devon
**Water Quality Data**

F.50 Water quality information on the River Devon has been obtained for the following sites, as shown on Figure F.2:

- River Devon (Upstream) - Croxton Park Brook to Fb Nr. Bottesford
- River Devon (Mid-stream) - Fb Nr. Bottesford To Conf. With R. Smite
- River Devon (Downstream) – Cotham to Conf. With R. Trent

F.51 No chemistry is sampled in any of the three sites and only Biology is sampled at the Croxton Park (upstream sample) site. Here the sample is scored at EQI C (‘fairly good’). This has remained constant since sampling began in 2000.

F.52 Nitrates have improved at all the three sites with classifications now at grade 5 (high) at the downstream site, to grade 3 (20mg/l moderately low) at the upstream site. The phosphates have remained constant since 1999 with the upstream site being classified as 4 (‘high’) and the downstream sample classed as 5 (‘very high’). The high nutrients could perhaps be attributed to the largely agricultural areas this river flows through.

F.53 No BOD data was provided for any of the sites.

F.54 All three sites were classified as A, ‘very good’, for ammonia.

F.55 The dissolved oxygen samples were seen to decrease gradually as the River Devon flowed downstream from an A (very good) at the Bottesford site sample to a C (fairly good) at the confluence with the River Trent.

**River Maun**

F.56 The River Maun flows in the north part of NSD and is fed by Rainworth Water at New Ollerton and Vicar Water. The river flows through Edwinstowe and Ollerton before converging with the River Meden near Bothamsall and after a short distance they divide and go on separately. At Markham Moor they combine again to form the River Idle.

**Wastewater Treatment Works**

F.57 The wastewater treatment works on the River Maun, starting downstream are Edwinstowe, Boughton (Bevercotes Beck), and Perlethorpe.

F.58 Rainworth WwTW discharges into Rainworth Water which converges with the River Maun at New Ollerton. The EA (2005) undertook a risk assessment to assess the potential impacts of increased growth and this works was assigned a high risk factor. The assessment analysed flow, ammonia and BOD.

F.59 Edwinstowe WwTW is a large works whose load could affect the quality of the River Maun. The works was assigned in the risk assessment, a medium risk factor (EA. 2005).

**Urban Waste Water Treatment Directive**

F.60 The River Idle, Maun, Meden and Ryton are designated under the UWWTD from July 1998, as a Sensitive Area (Eutrophic). The stretch is from National Grid Reference (NGR) SK 55000 61900 to SK 78500 94700 which is a length of 64.78km.
F.61 The EA records phosphate consents for the WwTWs on the Idle, Maun and Meden as:

- Boughton WWTW - Bevercotes Beck – P consent 2mg/l - 31/03/02
- Edwinstowe WWTW - River Maun – P consent 2mg/l - 31/03/02
- Rainworth - Rainworth Water – P consent 2mg/l - 31/03/03.

F.62 The final effluent quality from all these works has to achieve a phosphate level of no more than 2mg/l.

**Water Quality Data**

F.63 Water quality on the River Maun has been obtained for the following site, as shown in Figure F.3:

- River Maun - Conf.R. Meden To Conf. Bevercotes Beck

F.64 No chemistry was recorded for the site but biology was sampled from 2002. The score has increased from grade C (fairly good) initially to B in 2006 (good).

F.65 Both the ammonia and dissolved oxygen classification were good and very good respectively. No BOD data was provided.

F.66 The nitrate and phosphates were both classified as very high in the sample site. The high nutrients could perhaps be attributed to both the WwTW discharges and the agricultural area.

**Figure F.3 Water Quality Data Sites: River Maun**

F.67 The source of the River Meden lies north of Huthwaite, near the Derbyshire border, and from there it flows north east through Pleasley and Warsop. It then merges temporarily with the River Maun near Bothamsall and after a short distance they divide and go on separately. At Markham Moor they combine again to form the River Idle.

**Wastewater Treatment Works**

F.68 There are no wastewater treatment works, within the Newark and Sherwood District that discharge into the River Meden. However further upstream, outside of the district, in the River Meden there are substantial effluent loads from Mansfield, Shirebrook and Church Warsop WwTWs.
The capacity of the Mansfield WwTW is presently fully committed to meeting existing developments. Any additional allocations will require extension of the works. Both Warsop and Edwinstowe works (River Maun) are very limited due to the effects of mining subsidence.

(Mansfield District Council, 1998)

**Urban Waste Water Treatment Directive**

The River Idle, Maun, Meden and Ryton are designated under the UWWTD from July 1998, as a Sensitive Area (Eutrophic). The stretch is from National Grid Reference (NGR) SK 55000 61900 to SK 78500 94700 which is a length of 64.78km.

WwTWs on the Idle, Maun and Meden that have phosphate consents are:

- Boughton WWTW - Bevercotes Beck (River Maun),
- Edwinstowe WWTW - River Maun
- Rainworth - Rainworth Water

All these works discharge into the River Maun so no wastewater treatment works on the River Meden are regulated by the UWWTD.

**Water Quality Data**

Water quality on the River Meden has been obtained for the following sites:

- Skegby Brook (River Meden)
- Whiteborough to A617 Bridge, Pleasley
- A617 Bridge, Pleasley to railway bridge, Littlewood
- Mansfield WWTW to confluence of River Meden, nr Spion Kop
- Source at Sookholme Bath to River Meden, Warsop

*(all the above sample sites are outside of NSDC)*

- Warsop WWTW outfall to inlet to Thoresby Lake, nr Budby
- Inlet to Thoresby Lake to the confluence of River Maun, east of Thoresby
- Confluence of River Maun to Confluence of River Idle at A1 road bridge, west of West Drayton

The location of each site is shown in Figure F.4.

Only the River Meden sample at A617 Pleasley Bridge was analysed for biology. Since 2000 it has been scored at an EQI of B (good).

All of the sites score 6 for nitrate (very high). Phosphate levels decrease through the river samples to a 3 (moderate) score after Mansfield WwTW. They then average around 4-5 (high/very high) in all samples thereafter downstream.

*Figure F.4 Water Quality Data Sites: River Meden*
F.77 No BOD data was provided for any of the sites.

F.78 All samples score either A or B (very good or good) for Ammonia apart from the Sookholme Brook which is classified as C (fairly good). Dissolved oxygen has generally remained constant in all samples with the majority being classified as ‘very good’ (A).

F.79 Overall the River Meden has a satisfactory level of water quality. The only exception is the level of nitrates and phosphates.
River Witham

F.80 No water quality for the River Witham has been analysed but the river is designated as sensitive under the UWWTD. Barnby in the Willows is the only Anglian Water WwTW in the catchment but with a population of 244 in the village it is not regulated by the UWWTD. The only works on this river that is, is Marston WwTW which is outside the NSDC border and upstream, near Grantham.

Summary

F.81 Industrial effluents or coolant waters into the River Trent are heavily regulated and rarely cause any major quantity and quality issues.

F.82 The EA (2005) undertook a risk assessment to assess the potential impacts of increased growth and Newark and Rainworth were assigned a high risk factor. The assessment analysed flow, ammonia and BOD.

River Trent

F.83 Biology is considered good as all samples scored ‘good’ or ‘fairly good’. Nitrate levels have remained at a constant ‘high’ whereas phosphate levels have improved since 2006 from an ‘excessively high’ to a ‘very high’ classification.

F.84 Ammonia scores have at all samples apart from The Beck been classified as either ‘very good’ or ‘good’ since 1998. The Beck has seen an improvement and now records a ‘very good’ in 2007.

F.85 The dissolved oxygen varies throughout the stretch of the River Trent and can perhaps be attributed to the rivers tidal nature and also the numerous weirs introducing oxygen.

River Devon

F.86 Nitrates have improved at all sites with classifications now at ‘high’ at the downstream site, to ‘moderately low’ at the upstream site. The phosphates have remained constant since 1999 with the downstream sample scoring a ‘very high’.

F.87 The dissolved oxygen samples were seen to decrease gradually as the River Devon flowed downstream from a ‘very good’ at the Bottesford site sample to a ‘fairly good’ at the confluence with the River Trent.

River Maun

F.88 Biology and ammonia in the River Maun are scored ‘good’ and the dissolved oxygen classification a ‘very good’. However nitrate and phosphates were both classified as ‘very high’.

River Meden

F.89 Since 2000 the biology at the A617 Pleasley Bridge sample scored ‘good’.

F.90 All of the sites are ‘very high’ in nitrates, whereas phosphate levels decrease through the river samples to a ‘moderate’ score after Mansfield WwTW. They then average around ‘high/very high’ in all samples there after.

F.91 The ammonia is all sites range from ‘very good’ to ‘fairly good’ at Sookholme Brook. Dissolved oxygen has generally remained constant in all samples with the majority being classified as ‘very good’.
Conclusion

F.92 All the rivers studied were of good chemical and biological quality but there seem problems with high levels of nitrate and phosphate. These nutrients can come from principally from wastewater treatment works effluents and agriculture.

F.93 To address the nutrient issue with regards to wastewater treatment effluents, the River Trent and its catchment, from October 2007 has been designated under the Urban Waste Water Treatment Directive. The EA is unable at present to confirm which wastewater treatment works will have UWWTD consents. The consent will place a phosphate level on the final effluent. To ensure this level is met a phosphate removal plants will have to be installed. The AMP5 (2010-2015) Business Plans are yet to be finalised so until so this information is unknown.

F.94 Future development in parts of the district may be limited due to the current sewage treatment infrastructure. Many of the wastewater treatment works may already be using the best technology to produce a good standard final effluent quality. Legislation may have enforced this if the works serves a large population, it discharges into a sensitive watercourse and/or there is limited dilution of the receiving watercourse. In such circumstances it may not be feasible due to cost and technology to further improve a works effluent. Without an improvement in wastewater treatment effluent, no future development and therefore increased discharge volumes would be accepted. Other options would have to be considered such as pumping to nearby wastewater treatment works which has capacity.

References

- Environment Agency website – What’s in your Backyard?