

## **B.1 The Post 2010 Environment and the Longer Term**

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## B.1 The Post 2010 Environment and the Longer Term

### Executive Summary

#### Serviceability history

	Water		Wastewater	
	Below	Above	Below	Above
PR99	Stable	Stable	Barely adequate	Deteriorating
JR00	Stable	Improving	Marginal	Deteriorating
JR01	Stable	Stable	Uncertain	Deteriorating
JR02	Stable	Stable	Uncertain	Deteriorating
JR03	Stable	Stable	Stable	Deteriorating
JR04	Stable	Stable	Stable	Marginal
JR05	Stable	Stable	Stable	Deteriorating
JR06	Stable	Stable	Stable	Deteriorating
JR07	Stable	Stable	Marginal	Deteriorating
JR08	Stable	Stable *	Marginal	Stable

\* 'warning' regarding coliforms at WSWs

#### Performance in AMP4

- Improved record of capital delivery
- Marked improvement in environmental performance in 2007. This step change in performance was sustained in 2008

2007 saw a 50% reduction in Category 1 (Major) and Category 2 (Significant) pollution incidents. This level of performance was improved further in 2008.

Year	Pollution Incidents
2004	18
2005	13
2006	15
2007	7
2008	4 (TBC)

Wastewater Treatment Works failing numeric discharge consent standards

Year	Wastewater Treatment Works failing
2004	18
2005	14
2006	15
2007	3
2008	3 (TBC)

- Good progress in delivering appropriate levels of service to customers
- Stability of assets in terms of relative water Opex efficiency.

**Proposals in AMP5**

- Enhance our asset base to provide still more resilient levels of service.
- Deliver full metering, enabling customers to take control of their bill.
- Continue to maintain and improve further our record low levels of leakage.
- Reduce the number of properties at risk of flooding.
- Deliver the portfolio of Environmental Improvement Schemes required by European legislation.
- Work to mitigate our carbon footprint and explore innovative ways to source our power and energy requirements at less cost to customers and to the environment.
- Deliver improved water quality
- As required, provide new infrastructure at a pace to match economic growth in the Southern and South East regions and in line with the South East Plan.
- Ensure that if customers contact us, we will resolve their queries first time.

### **Challenges & risks**

- Introduction of competition in a way that delivers meaningful customer benefit without putting at risk current and future service provision
- Affordability and customer debt in the light of the current economic climate
- The ongoing need to finance a significant investment programme
- Climate change
- Opex pressures (including energy costs)
- Managing the effects of the Government's housing growth agenda set out in the South East Plan, whilst acknowledging the impact on those aspirations of the current economic climate
- The need to efficiently maintain an increased asset base (with increasing complexity) to preserve appropriate Serviceability standards
- Continuing our focus on the key customer issue of sewer flooding including implementing our plans to mitigate sewer flooding at Eastney Pumping Station in Portsmouth
- The need to continue to drive out efficiencies in both capital and operational expenditure whilst retaining appropriate levels of service
- Infrastructure renewal rates
- Resilience
- Adoption of private sewers

## B.1.1 Achievements to date compared with earlier plans

This section sets out the achievements of Southern Water (SWS) to date during one of our most challenging periods, both in terms of the operating environment and regulatory challenges. During this period, however, we have delivered the obligations that were set out in our monitoring plan, often ahead of schedule.

In December 2004, the Director General of Water Services determined water and sewerage charges for 2005 to 2010. The period was dominated by the need to deliver the largest investment programme ever for SWS. The determination was valued at some £1.563bn at 2002-2003 prices, which represented an average annual investment of some £313m in each of the five years.

The investment was required for:

- **Asset maintenance:** Sustain the performance of the below and above ground asset base, which had tripled in size since privatisation and addressing serviceability challenges in the wastewater non infrastructure category.
- **Customer flooding:** reduce the number of internal and external flooding incidents;
- **Environmental Improvements:** deliver the NEP improvements as defined by the Secretary of State;
- **Water resources:** implement defined water resource schemes to serve the needs of our customers by continuing to implement a longer term strategy;
- **Population growth:** provide the assets required to meet the increasing water and wastewater demands from the region.

This investment was set against a need to deliver further efficiencies to minimise the impact of future price increases on customers.

So how have we done?

### Asset maintenance

Since privatisation, the whole of the water industry in England & Wales has achieved very significant capital and operational efficiency savings – in part as a result of the incentive-based regulatory regime – whilst at the same time delivering record levels of investment and improving service levels for our customers and for the environment.

Our Serviceability Assessment for 2008 records:

Table B.1.1 - Serviceability Assessment for 2008

Service	Assessment
Water Infrastructure	Stable
Water Non-infrastructure	Stable
Sewerage Infrastructure	Marginal
Sewerage Non-infrastructure	Stable

Our view remains that Southern Water should also have been rated 'Stable' for Sewerage Infrastructure but after a number of exchanges on the issue Ofwat confirmed the assessment as 'Marginal'.

This JR08 performance follows from a concerted effort to achieve a stable serviceability base during AMP 4, which has resulted in a focussed investment portfolio. This assessment follows years of continued investment in our ever-increasing asset base.

The individual serviceability indicators continue to demonstrate continued and sustained performance across our asset base (Appendix B1). The drive for stable serviceability across the four areas has been driven through a continued and sustained investment programme, strong management, good delivery business model which has been delivered through a comprehensive understanding of the issues and the solutions. This philosophy underpins our strong managerial focus on the asset maintenance required to achieve our stable serviceability. However, it is apparent that the water non-infrastructure indicator for Coliforms at our water supply works is showing signs of deterioration which, although we are just still within the reference lines, shows an upward trend. We are continuing to invest in this area to bring address, but it shows that our current level of investment in our non-infrastructure is not sufficient.

If we consider the company's serviceability history we have the following picture:-

	Water		Wastewater	
	Below	Above	Below	Above
PR99	Stable	Stable	Barely adequate	Deteriorating
JR00	Stable	Improving	Marginal	Deteriorating
JR01	Stable	Stable	Uncertain	Deteriorating
JR02	Stable	Stable	Uncertain	Deteriorating
JR03	Stable	Stable	Stable	Deteriorating
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JR06	Stable	Stable	Stable	Deteriorating
JR07	Stable	Stable	Marginal	Deteriorating
JR08	Stable	Stable *	Marginal	Stable

\* 'warning' regarding coliforms at WSWs

Whilst we made great strides forward in Sewerage Non- Infrastructure i.e. a two category movement in one year, we narrowly failed to meet our target of a 'Stable' assessment in all four areas. However, we are determined to achieve this goal and the progress made in the AMP4 period demonstrates that the correct mechanisms are in place and that with continued investment at an appropriate level this objective will be delivered.

The Stable performance achieved in wastewater infrastructure between JR03 and JR06 was, in part, facilitated by favourable weather conditions during that period. The more recent return to higher rainfall patterns has seen a decline to Marginal in JR07 and JR08. This picture emphasises the need for continued investment in our wastewater infrastructure assets and the need to increase renewal rates on a prioritised basis.

#### Delivery of our obligations during AMP4

SWS is proud of our fantastic delivery record during this current AMP period. As described in Part A, many Monitoring Plan outputs have been delivered ahead of schedule. Year-on-year, we have beaten our target outputs that we set out in our monitoring plan and this is a direct result of the business model we have employed, which has been delivered through a strong executive management team structure.

Our industry leading model has been developed on the key principles of:

- Operational Compliance;
- Customer service and customer value;
- Focus on core, use expert partners to do what they do best;
- Invest in assets;
- Sound governance;
- Process centric;
- Invest in people / management culture / ethics;
- Maximise flexibility and agility.

These core values are embedded in our management culture and are translated, at operational level, into the business such that there is continuous challenge and dialogue between the business and our partners to ensure that we achieve them. Our key business partners during this Amp period are:

- 4 Delivery ~ large scale construction
- Morrisons ~ M&E maintenance
- Docwra ~ Water mains
- HMP ~ sewerage network
- RPS ~ leakage detection
- TCS ~ Engineering, HR, correspondence, training
- Atkins ~ Engineering
- Wipro ~ Finance and accounting
- RRD ~ Correspondence

At the end of AMP3, we had outstanding UWWTD obligations to install secondary treatment at three large agglomerations, namely: Broadstairs, Margate and Brighton. After lengthy planning issues a new secondary treatment facility was brought successfully on-stream in October 2007 to serve the agglomerations of Broadstairs and Margate. At Brighton & Hove, planning permission was again refused, after call-in by the Secretaries of State. However, a third application, taking account of the grounds for refusal was submitted by SWS on 31<sup>st</sup> January 2008 and was considered by the East Sussex County Council planning committee on the 6<sup>th</sup> August 2008. The planning decision granting permission was delivered by East Sussex County Council on 23<sup>rd</sup> October 2008. However, on 21<sup>st</sup> January 2009 an application for a Judicial Review was submitted by a third party.

Our much improved record of capital delivery in AMP4, coupled with a marked improvement in environmental performance in 2007 which was sustained (and in some areas improved further) in 2008 (see Appendix B.2), gives us a sound platform for the next AMP period. However, the challenge of more efficiently operating increasingly complex assets to achieve tighter quality standards means that there can be no let up in the requirement for asset maintenance spend in AMP5 to ensure these improved levels of service.

Our notable achievements in capital delivery, operational efficiency and customer service improvements have been made at a time of some extreme climate challenges in the South East of England. The recent drought of 2004 to 2006 was one of the driest periods on record since the 1930s and the South East went through a significant drought. SWS, with the help of our customers, ensured sufficient provisions were in place to deal with the ongoing situation although the drought did, in places, test the resilience of our system in the face of such water stress.

At the other extreme of the weather spectrum, we note that flooding is also a risk. In 2007 at Mythe in the Severn Trent area, a major water supply works had to be shut down as flood waters inundated the site. This led to water supply shortages for large numbers of people, damage to the economy as householders and businesses struggled to cope without piped supplies and a widespread realisation of the potential vulnerability of systems hitherto considered to be adequately protected. Both extreme weather events emphasise the need for resilience in the industry to ensure continuity of supplies to help sustain the health of individuals, businesses and thereby the economy.

In addition to the achievements outlined above, during this AMP period we have also reduced our leakage levels even further. We are now one of the best performing companies in England and Wales and have set a benchmark for other companies to follow.

Our treatment processes have become more complex and we are now pumping more water and sewerage around our system than when we were privatised. This increased asset base requires maintenance and this increases the upward pressure on our asset maintenance spend.

To date we have delivered substantial opex efficiencies - over £20m of gross efficiencies to date which has enabled us to manage the significant external cost pressures we have faced over the period. We expect to close out the AMP4 capital programme with significant capex efficiencies achieved.

Our financial structure has enabled us to maintain continued access to the financial markets, raising some £1,420m of new debt to date in AMP4. The robustness of our structure is underlined by our continued ability to access the debt markets despite the general market turmoil.

### **Customer Service**

The AMP4 period represented a period of significant change in our core customer services operation, including the development and implementation of a new billing system. We are currently achieving good performance against DG6, DG7, DG8 and DG9.

AMP4 was characterised by a renewed focus on customer needs and our commitment to delivering to those needs. As we move towards the end of the current regulatory period we have achieved good performance standards across all of the Ofwat performance measures (see Chapter B6 for a detailed account). Our recent performance represents a significant improvement and demonstrates we now have a sound foundation on which to build during AMP5.

The AMP4 period represented a period of significant change and transformation in the core customer services operation. The development and implementation of a new billing system, a key element of the PR04 Final Business Plan, led the business to identify a number of irregularities in performance data previously reported to Ofwat. This discovery resulted in a complete review of original plans and the establishment of a programme to transform existing customer service operations, making them more responsive to customer needs and providing more robust regulatory reporting protocols.

In addition to developing and implementing a new billing system, we have introduced a new telephony system, new web site, improved and enhanced processes and procedures, and recruited and trained a significant number of people. We have also undertaken comprehensive training and development of new and existing staff and enhanced data and reporting systems. These improvements will continue to enhance customer service through a reduction in the need for customers to contact us, increased first time resolution, improved service in terms of both wait times and customer experience and a significantly increased choice of service channels and the convenience of 24 hour "self-service" options.

Table B.6.1 within Chapter B6 shows that we are currently achieving good Ofwat performance standards across all the key customer service metrics. This is a firm foundation on which we propose to deliver the objectives of AMP5.

DG6 - The 2008 June Return reported 96.7% of billing queries answered within five days in 2007/08

DG7 - We continue to improve performance with respect to dealing with written complaints. The 2008 June Return reported that 64.8% of written complaints were dealt with within ten working days in 2007/08 compared to an Ofwat target of 98%. In the 2008/09 year to date to the end of February, performance had improved to 99.9%

DG 8 - The 2008 June Return reported that 99.5% of measured bills were based on a meter reading, which is directly in line with the Ofwat target for good performance

DG 9 - We have recovered from the difficulties in AMP4 and in the 2008/09 year to date to the end of February, performance had improved to reduce the rate of abandoned calls to 6.5% and calls receiving all line busy to 1.4%.

## **B.1.2 Assessment of the post 2010 environment for the company**

This section of the plan summarises the challenges that we face after 2010 and how this plan represents our continuing aim to achieve long term sustainable future, which builds on our key core values describe above, to provide our customers with a high quality product at an affordable price which represents good value to our customers.

We are committed in this plan to delivering further net efficiency savings in AMP5. We believe the efficiency challenge in AMP5 will be the toughest yet for a number of reasons:

- All post-privatisation 'easy wins' have already been captured as noted in Ofwat's own efficiency study for PR09;
- Input prices faced by the industry are forecast to continue to increase by more than RPI, eroding productivity gains made (power and chemicals cost increases are recent examples of this trend); and
- Major construction projects in the South East and the resultant regional construction price inflation may impact particularly on our ability to deliver further cost reductions in the capital programme. In anticipation of this, our innovative approach to capital delivery with the 4D contract has some protection against such inflation built in.

In AMP5 we face the challenge of financing and delivering our largest capital investment programme yet. Following the recent market turmoil, we expect that the funding environment will be significantly more challenging than in AMP4. In particular, a period of sustained deflation would present a serious risk that debt covenants would be breached, compromising our ability to raise new debt during AMP5. In this more difficult environment the confidence of the debt markets is critical and the need for regulatory transparency and certainty is particularly pronounced.

This Final Business Plan has been developed as a five year investment plan set soundly in the context of the 25 year strategy described in our Strategic Direction Statement (SDS).

There are generic and specific issues in the South East of England, both over the next five year period and beyond, which are relevant to the development of our SDS and this Final Business Plan.

This relatively densely populated Region, as shown in Figure B.1, is subject to many environmental designations which will drive investment in AMP5 through the UWWTD and the Habitats Directive; in a similar fashion, the Water Framework Directive and its Daughter Directives will need to be strategically addressed in a way which balances the needs of the environment and customers.

Since the submission of the Draft Business Plan the growth picture has been complicated by the severe downturn in the economy and the resultant impact on the construction industry and housing markets. Our plan in relation to the short term pace of growth has been modified to reflect this.

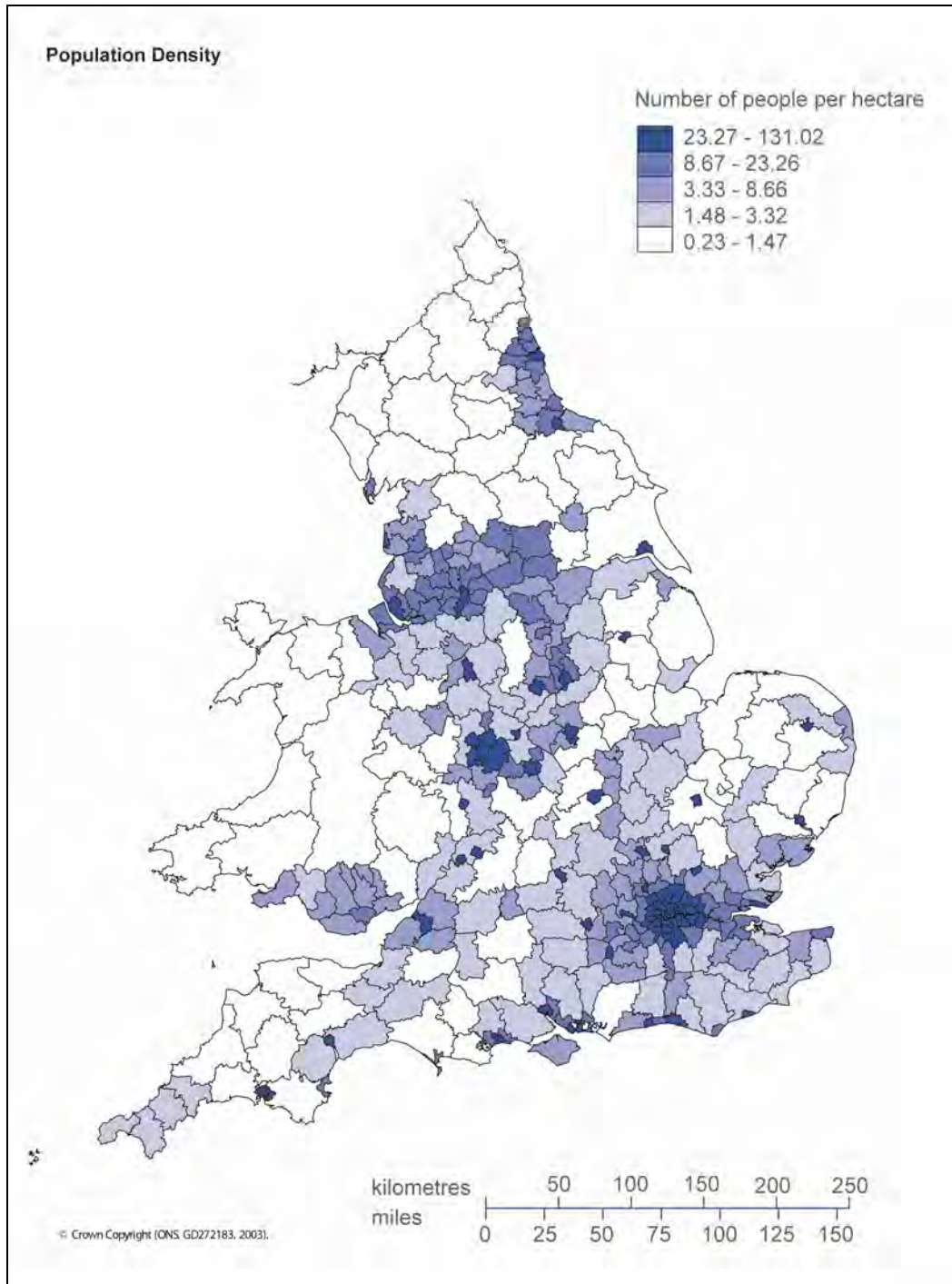


Figure B.1.1 – Population density in England and Wales (Source: 2001 Census)

Set against this economic and legislative backdrop is the need to maintain in some areas and improve in other areas the service that we provide to our existing and potentially new customers. As we look forward into the post 2010 environment there are key *generic* challenges for the industry as well as key *specific* challenges for SWS in our pursuit to provide a good service to our customers at a reasonable price:

#### **B.1.2.1 Generic Challenges**

- The ongoing need to finance a significant investment programme (set against the risk of a period of sustained deflation);
- The resilience and continuity of our service to customers during extreme weather events;
- Climate change carbon reduction targets;
- Impact of future legislation;
- Continued energy price rises and additional energy use arising from new obligations;
- Affordability and customer debt in the light of the current economic climate; and
- Introduction of competition in a way that delivers meaningful customer benefit without putting at risk current and future service provision.

#### **B.1.2.2 Specific Challenges for SWS**

- The completion of the last outstanding UWWTD secondary treatment scheme in the UK, i.e. Brighton;
- Managing the effects of the Government's housing growth agenda set out in the South East Plan, whilst acknowledging the impact on those aspirations of the current economic climate;
- Planning, designing and delivering solutions for Climate Change using both adaptation and mitigation measures;
- Ensuring that we have assessed resilience in our most vulnerable, strategic assets, e.g. fluvial flooding at our key works as well as implementing our plans to mitigate sewer flooding at Eastney Pumping Station in Portsmouth;
- Capturing, where proven using robust science, the requirements of new quality drivers, e.g. the Water Framework Directive and its Daughter Directives, new UWWTD designations and the Habitats Directive;
- The need to efficiently maintain an increased asset base (with increasing complexity) to preserve appropriate Serviceability standards;
- Continuing our focus on the key customer issue of sewer flooding;
- The need to continue to drive out efficiencies in both capital and operational expenditure whilst retaining appropriate levels of service;
- There is a need to diversify our sludge disposal strategy, which currently relies entirely on the agricultural route. The vulnerability of this strategy to changing perceptions of its acceptability requires action in the AMP5 period, but this is complemented by other key drivers such as:

- The short remaining asset life of the current driers will mean that now is the right time to make changes;
- The opportunity to use new technology such as CHP and co-incineration partnerships with Local Authorities will allow this waste to generate electricity in a more sustainable manner.

Figure B.2, taken from Part B.4 of our Final Business Plan shows the extent to which SWS relies on the agricultural route for disposal. Given market trends in which there are more constraints on use of the agricultural route it is essential that we pursue a more flexible approach as outlined in our sludge strategy as described in B.4.

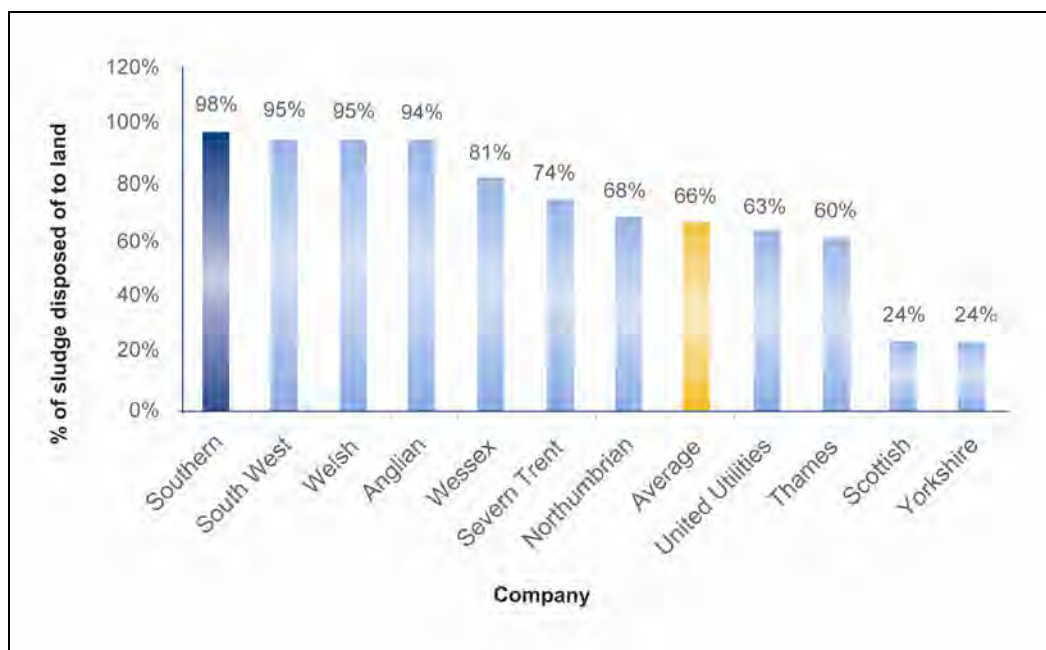


Figure B.2 – Proportion of sludge disposed of to land by water and sewerage companies

- The need to restore our target level of service of 1:10 years for hosepipe bans to our water supply customers in our central and eastern areas;
- There is a continuing need to diversify the type of sources feeding a water resource zone, particularly in our single source dominated zones to ensure better resilience of these areas to future droughts;
- Infrastructure renewal rates and longer term increased investment. We currently have the lowest mains renewal rates of all the companies in the UK (source: Ofwat). Without recognition by Ofwat of the need to increase network renewal rates, we will continue to put greater pressure on the service we can provide to our customers and will increase the reactive maintenance required on our network. As an example, Figure B.1.3 shows the outcome from our detailed asset deterioration and intervention modelling showing the expected number of bursts in our water infrastructure over time in the absence of any capital maintenance interventions. It also shows the expected number of bursts for an economically justifiable intervention plan, taken from Part B3 of our Draft Business Plan. Our water infrastructure asset base will increase over time to meet demand growth and the serviceability of the assets will inevitably deteriorate without active interventions like rehabilitation, renewal and replacement;

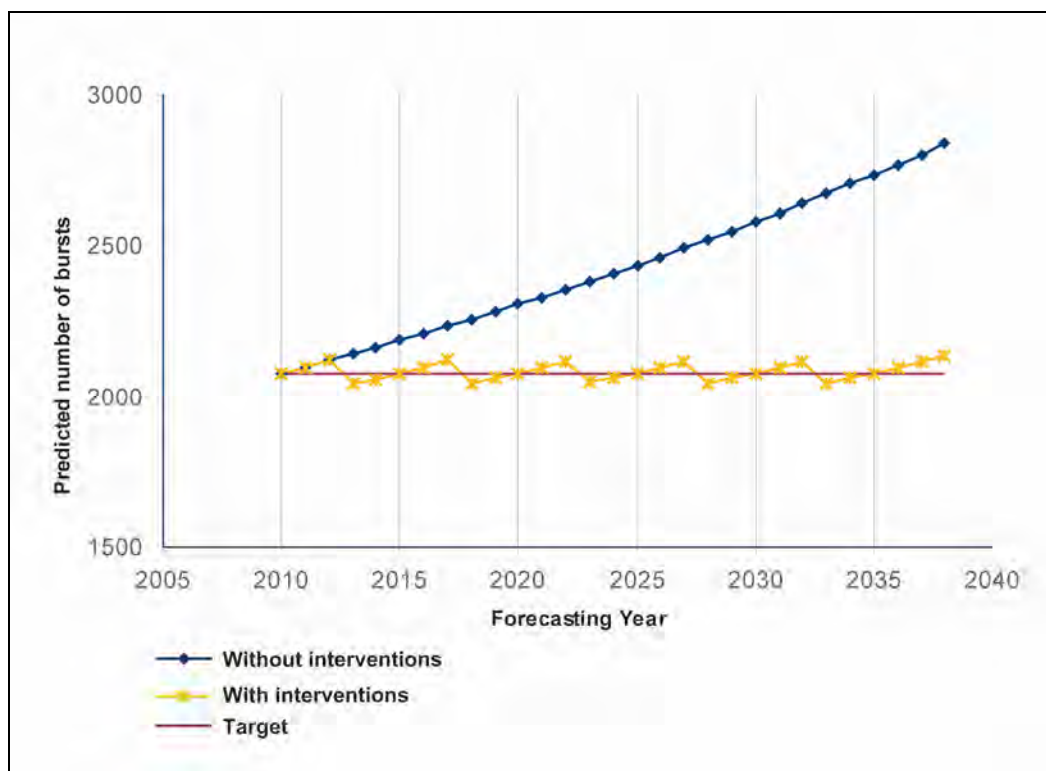


Figure B.1.3 – Predicted number of water infrastructure bursts with and without interventions

- Increases in NEP requirements which may put further pressure on customer bills.
- We reported our views on special factors in September 2008 in line with Ofwat guidance.

### B.1.3 Managing the key risks and uncertainties

In this section we outline the key risks and uncertainties associated with our FBP and where appropriate identify mitigation measures. Whilst we believe our five year AMP5 investment plan is well grounded and is consistent within our 25 year strategy, there are uncertainties and risks that we need to acknowledge, as follows:-

#### B.1.3.1 Competition

Competition represents a significant opportunity for the industry and offers the potential for delivering greater innovation and choice for customers. However, it is important that the risks associated with its introduction are carefully managed so that the costs of competition do not outweigh the benefits. We note that:

- In difficult market conditions, continued uncertainty about the direction and scope for competition in the industry may increase our financing costs (we have not accounted for this in our Final Business Plan);

- The proposals for accounting separation, splitting of price limits after PR09 and, in particular, separation of the RCV represent potential risks to investors, for which they may require remuneration (we have not accounted for this in our plan); and
- The costs of implementing competition, particularly the costs of establishing and managing the processes necessary to facilitate large-scale switching of customers between suppliers, may be substantial as they were in the gas and electricity markets, and we need to learn from those processes. Companies need to be sure both that these costs will not be expected to be funded by shareholders and that the benefits clearly outweigh these costs (we have not accounted for these potential additional costs in our plan).
- The prospect of competition leads to great uncertainty and the likely outcome is that in addition to the actual change (increase) in risk, capital providers (debt and equity, but mostly debt) will add an additional margin of cost. Any expected gains will need to cover or more than cover this aspect of competition. We understand the desire for market based price/value indicators for the allocation of resource and capital solutions but the risk of undermining a system that has and continues to deliver capital and efficiency should be monitored very carefully. Learning from all of the lessons of separation in other industries will be key.

### **B.1.3.2 The Water Framework Directive and its Daughter Directives**

The final River Basin Management Plans are not due to be published until December 2009, i.e. after the PR09 Final Determination. We are working closely with the Environment Agency (EA) to gather early clarity on the requirements in this area but a risk remains that obligations may emerge post the current business planning round. Such issues are likely to lead to logging up in the early part of the AMP5 period or, for larger impacts, the possible need for an IDoK.

#### *Mitigation*

We have worked closely with the EA and other stakeholders over the last two years via our participation in the South East River Basin District Liaison Panel. Our CEO has represented the Water Sector on this panel. We have ensured that, as well as focussing on the Water Framework Directive (WFD) objectives of 'good ecological status', the panel has also focussed on appropriate apportionment. That is, we have stressed that other sectors, e.g. agriculture, local authorities, etc, have a role to play in co-delivering the WFD objectives.

### **B.1.3.3 The Urban Wastewater Treatment Directive**

#### The 'Six Estuaries' Case

The UWWTD so called 'six estuaries' case regarding the alleged under-designation of Sensitive Areas by the UK is proceeding through the Commission's Infraction route. The oral hearing on this European Court of Justice case took place on 5<sup>th</sup> March 2009.

If Southampton Water and Thames estuaries are eventually designated as Sensitive under the UWWTD then this will drive further (at present unrecognised) investment for SWS. Current indications are that the European Court of Justice ruling will not be made until late 2009 so, again, this will not be captured by the Final Determination. Depending on the scale of issue this could lead to the need for an IDoK or logging up in the early part of the AMP5 period.

We have prepared indicative costs to estimate the impact on SWS based on the parameters and a list of captured WTWs supplied by the EA. This early work reveals that for the identified ten sites in Southampton Water requiring phosphorous removal and the twenty sites in the Thames estuary requiring nitrogen removal the capital costs would be circa £250m.

### *Mitigation*

We have worked, for a number of years, with both Defra and the EA, to ensure that decisions on this case are informed by the correct data. This has included providing information on the load reductions to these estuaries already achieved through investment in previous AMP rounds.

### Additional Reasoned Opinion (No 1999/5132)

Southern Water are aware of the Additional Reasoned Opinion (No 1999/5132) issued by the EU to the UK on 27<sup>th</sup> November 2008 in relation to the UWWTD further to the original Reasoned Opinion issued on 10<sup>th</sup> April 2006. The investment proposals within our FBP are based on there being no change to current UK policy on intermittent discharges and no change to the current interpretation of our statutory liabilities.

### *Mitigation*

We will continue to monitor the progress of this Additional Reasoned Opinion and contribute to the UK position when and where appropriate

### **B.1.3.4 The IPPC Directive**

The recast IPPC Directive will have significant implications for SWS particularly if the exemption for the 'recovery' route is removed. The EA has specifically excluded the IPPC driver from their NEP owing to the current lack of certainty regarding this driver.

### *Mitigation*

We have pro-actively worked via Water UK to influence the debate in this area and to steer appropriate rather than 'gold plated' legislation.

### **B.1.3.5 Construction activity**

Despite the recent changing economic environment which is showing evidence of slowing down house building, construction activity in the South East is likely to continue at a high level with competition for resources from the high profile rail network and the Olympics projects. These major infrastructure projects are likely to mean that the regional construction market remains buoyant with the potential to impact on our AMP5 programme delivery costs.

### *Mitigation*

We took note of this likely risk early-on and have secured a reasonable proportion of our supply chain already, locking in some of the resources and managing some of the construction inflation through contract terms.

### **B.1.3.6 Customer expectations**

As with most other industry sectors, our customers' expectations on resilient service delivery and customer management continue to rise.

### *Mitigation*

We maintain good contacts with customer representatives and directly with customers through our consultation processes. We are able to test perceptions of our successes and failures and modify approaches to suit. We have also invested in improved customer management systems and processes following our well-publicised failures in reporting during

AMP4. We have established customer forums to which customers who have complained to us are invited, to help us better understand customer expectations.

#### **B.1.3.7 Asset base**

The asset base will continue to grow and become more complex as we are required to meet new obligations.

##### *Mitigation*

We will continue to work with our delivery partners to ensure that the solutions that are put in place are developed to achieve a 'least cost' solution for SWS and customers.

#### **B.1.3.8 Terrorism**

The threat from terrorism continues to represent a vital challenge for the whole industry.

##### *Mitigation*

We continue to work with the Security Services to ensure that appropriate safeguards are developed to meet current and future threats. We will also undertake further work to better understand the potential scale of the issue in the SWS Region.

#### **B.1.3.9 Asset resilience**

We need to ensure appropriate levels of resilience especially from the threat of flood water inundation. There has been an increase in customer perception of the risk of flooding and service interruptions caused by other drivers.

##### *Mitigation*

Our extensive consultation with our customers allows us to understand and respond to customer's expectations and to meet or manage these expectations appropriately.

In terms of flood resilience, risk of failure is dependent on flood depth and asset location. For the Final Business Plan, flood depth data has been derived for the 1-in-1000 year event based on the EA website data. However, as water depths for lesser events are not available for each site, a generic relationship has been assumed, based on the average or real data obtained as part of other studies for other sites. It is acknowledged that this is an idealised situation and that local topographical characteristics will significantly influence site specific relationships.

The Final Business Plan therefore include a sum of £2m to allow for detailed flood modelling and the determination of optimum solutions that will be progressed during AMP5 with a view to the delivery of the solutions in AMP6 or, if appropriate, AMP5 logging-up.

#### **B.1.3.10 The adoption of private sewers**

The announcement by Defra Ministers that private sewers are to be transferred to the water companies establishes one key objective for our 25 year strategy. The intention is to achieve this transfer at a pace and a cost to customers that is acceptable. Early assessments have estimated that adopting these private assets may extend the public sewer network by as much as 50%. Since the submission of the Draft Business Plan, Defra have announced that the proposed transfer will take place in 2011, although there is still much detail in terms of scope and pace to be clarified.

#### *Mitigation*

We continue to work, via Water UK, with Defra to ensure that an appropriate scope and phasing is developed to meet the needs of customers going forward. We have also undertaken work to understand the potential scale of the issue in the SWS Region.

#### **B.1.3.11 The adoption of private supply pipes**

Ministers have not pushed this issue as much as the adoption of private sewers. However we would expect that the adoption of private supply pipes would follow the adoption of the private sewers. We would support adoption because it would add clarity to ownership and would also be consistent with other utilities where responsibility for services is assumed by the householder at the boundary wall. Our current leakage policy offers customers three free supply pipe repairs per occupancy and therefore in practice we offer a pseudo supply pipe adoption.

#### *Mitigation*

We continue to work, via Water UK, with Defra to ensure that an appropriate scope and phasing is developed to meet the needs of customers going forward. We will also undertake work to understand the potential scale of the issue in the SWS Region.

#### **B.1.3.12 Infrastructure renewal rates**

Our infrastructure renewal rates still suggest that this asset base will have an expected life span much greater than 100 years at the end of AMP5.

#### *Mitigation*

We will work with Ofwat to explore the appropriate measures and economic assessments to ensure that an appropriate scope and renewal of our infrastructure is developed to ensure that customers pay a fair proportion of the asset deterioration at the time of consumption and not leave this to subsequent generations of paying customers.

#### **B.1.3.13 Operational cost pressures**

During this current AMP period there have been significant increases in operational costs. Some of these have been mitigated through long term contracts such as power; others such as bad debt are continuing to grow in spite of the measures implemented by us. Cost pressures include:-

- The cost of meeting pension obligations (costs included in our Final Business Plan);
- The path of energy prices during AMP5 (cost included in our Final Business Plan);
- Rating valuations for wastewater treatment works;
- The impact on bad debts of the current recession, the duration of which we cannot predict, as we go into AMP5 (these have been accounted for in this plan).

#### *Mitigation*

We will continue to work on a series of mitigation measures to protect customers where we are able to.

## B.1.4 Achieving the right balance for consumers and the environment

Customer views have been sought and incorporated into this Final Business Plan through our 'Willingness to Pay' programme. This programme is covered in detail in Part C1.

Our 'Willingness to Pay' research has been carried out using best practice and the principles outlined in UKWIR reports and the Treasury Green Book guidelines. Extensive consultation was carried out using independent experts in this field with review by appropriate independent academics.

The feedback from this exercise has shaped the content of this Final Business Plan.

The table below shows the feedback from key opinion formers, when asked 'Which areas are of priority for improvement?'

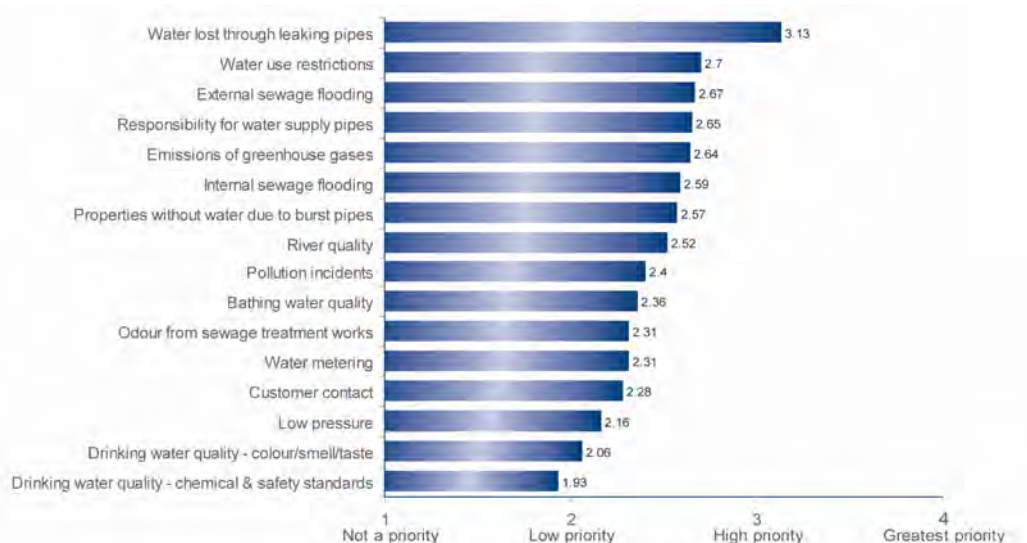


Figure B.1.6 - Feedback from key opinion formers

This feedback, the consideration of affordability and our Cost Benefit Analysis have been key drivers of the development of a balanced plan.

There will be continued focus in AMP5 on the key customer issues of sewer flooding and odour from Wastewater Treatment Works. We have developed prioritised investment plans based on specific problems as described in great detail in Part B3 of this Final Business Plan.

Our Draft Business Plan was launched as a formal 12 week consultation. We collected customer views on our proposals to understand the degree of their support, which is important. For example, our consultation on our draft water resource plan reveals that our proposal for universal metering by 2015 has widespread support (>75%).

We have sought to achieve a balanced programme of works in the AMP5 period recognising issues such as; affordability, customer expectations, regulatory drivers, customers willingness to pay and more recently the significant economic downturn.

We have focussed on customer priorities for the AMP5 period but recognised that some programmes of work need to be phased over more than one AMP period, for example:-

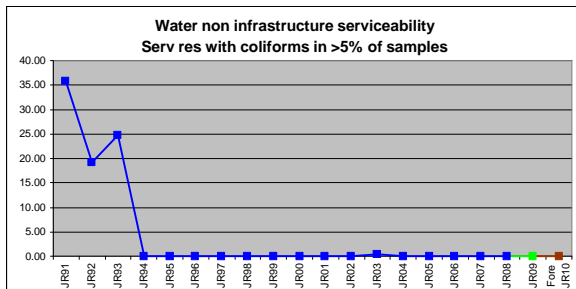
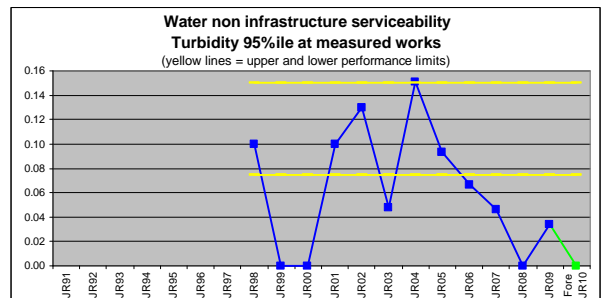
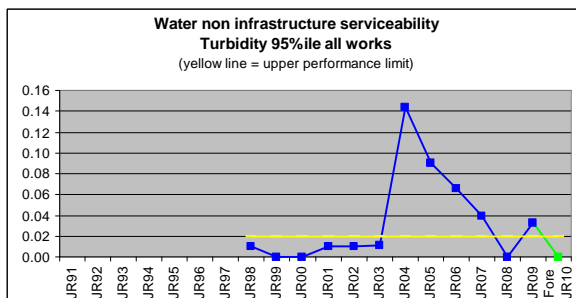
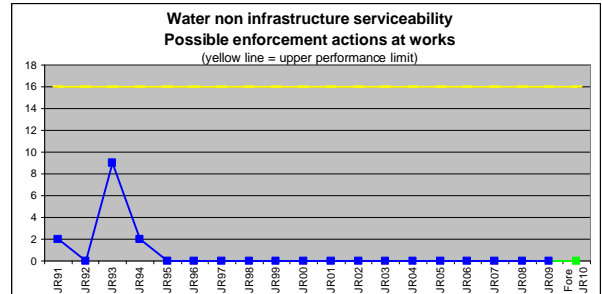
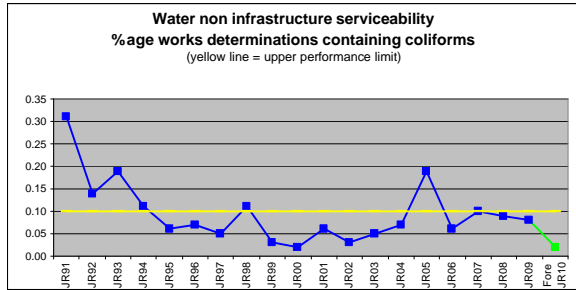
- Much of our Draft Business Plan proposed expenditure on growth schemes has been deferred, where appropriate, into AMP6 to recognise the downturn in housing development etc

- Our proposals for asset maintenance on sewers and rising mains, whilst prioritised, are phased over three AMP periods
- Works to comply with SEMD are phased over two AMP periods

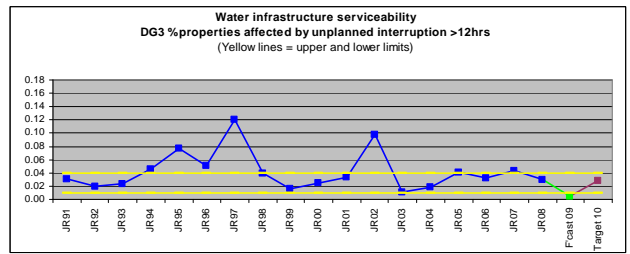
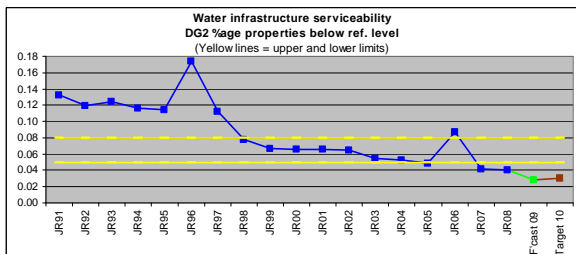
We have a wide range of functions to fulfil as an Appointed water and sewerage company. Some of the requirements we must meet are set out in law and in the interpretations of the Minister and the quality regulators. For our other requirements, we are guided by the priorities our customers and the community place on changing aspects of our service and our wider impacts. We must at all times balance the requirements against the impact on customers through the bills for our services. This will continue to be the case as long as the Government looks to us as private sector entities to deliver our programmes without financial support from central government. To establish the priorities and balance the understandable aspirations for immediate improvements against the associated effects on bill, we have in PR09 sought substantial direct input from a wide range of customers and stakeholders, and have sought evidence of the benefits of programmes and schemes to place against the better-known costs. This evidence has been used to arrive at a programme which has a good balance – it represents steady and noticeable progress, as requested by customers, while leaving further improvements for the future within a clear 25-year plan. We will continue to take this approach to arriving at a balance Final Business Plan in future.

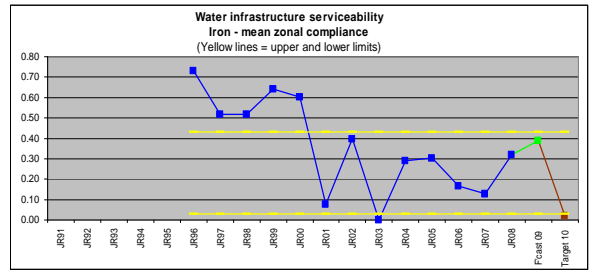
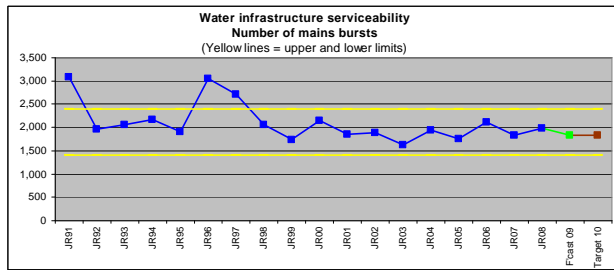
## Appendix B1.1: Serviceability graphs

### Serviceability graphs for water non-infrastructure

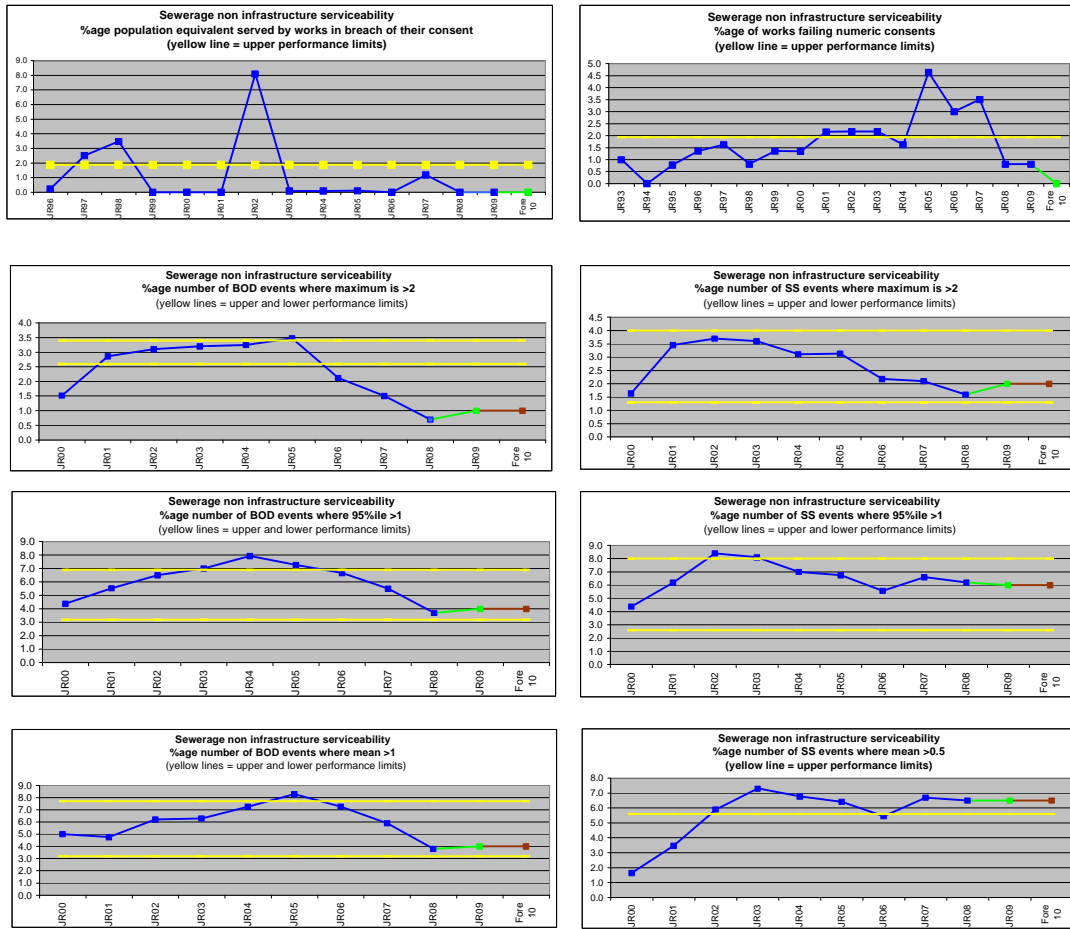


### Water infrastructure

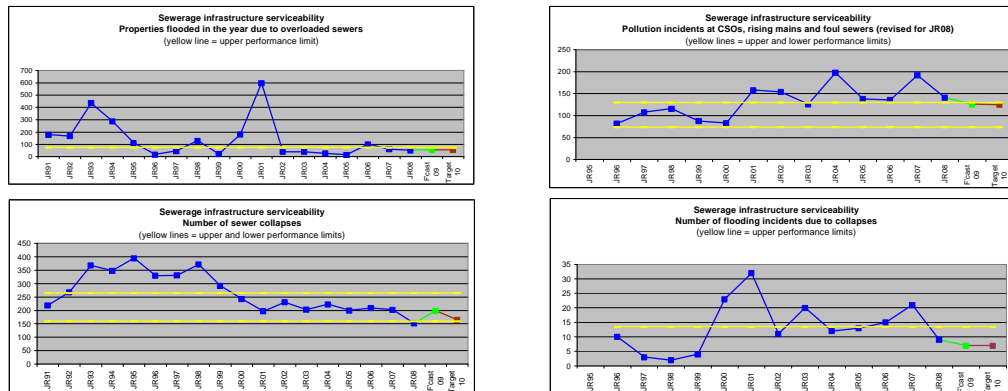




## Wastewater non-infrastructure serviceability indicators



## Sewerage infrastructure serviceability indicators



## Appendix B.1.2: Improved Environmental Performance

We delivered a marked improvement in environmental performance in 2007 in many ways a step change from previous years. This step change in performance was sustained and improved in 2008

The following measures demonstrate this step change:-

- 2007 saw a 50% reduction in Category 1 (Major) and Category 2 (Significant) pollution incidents. This level of performance was improved further in 2008.

Year	Pollution Incident
2004	18
2005	13
2006	15
2007	7
2008	4

- Wastewater Treatment Works failing numeric discharge consent standards

Year	Treatment Works failing
2004	18
2005	14
2006	15
2007	3
2008	3

In summary, 2007 was our best year ever in terms of improved environmental performance  
In 2008 we improved on this step change in performance. This has been driven by:-

- § Targeted investment
- § Management focus
- § Cultural change
- § Working with the regulator