

SOUTH STAFFORDSHIRE WATER

DROUGHT PLAN

SEPTEMBER 2007

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APPENDIX A

SUMMARY OF PRE DRAFT PLAN CONSULTATION

Organisation	Main Comments	SSW Response
<p>Environment Agency</p>	<p>The Environment Agency referred the Company to its previous response to the 2003 Drought Plan. This included a requirement to:</p> <p>Consider drought permits/orders – with details of the scope of proposals, baseline data, environmental monitoring, impact assessment and mitigation measures;</p> <p>Make improvements to the communications plan, including links to drought severity stages;</p> <p>To update systems model work, and to make the drought plan consistent with the new water resources plan.</p> <p>In addition the following additional points were identified in response to the pre consultation:</p> <p>To provide a more realistic and wider range of drought options with supporting information, and to consider a range of triggers for drought management.</p>	<p>The Company has followed the relevant legislation and the Environment Agency Guidelines.</p> <p>The Company has included details of new drought permits in the plan, including work on the environmental impact of options.</p> <p>The Communication Plan has been updated.</p> <p>Further modelling work has been undertaken and the drought triggers for Blithfield have been revised. The links between the Drought Plan and the Water Resources Plan have been summarised.</p> <p>The Company has included details of new and more realistic options in section 5. These are linked to a range of new drought triggers.</p>
<p>DEFRA</p>	<p>DEFRA identified that the Company should follow the relevant legislation governing drought plans and the guidelines produced by the Environment Agency.</p>	<p>The Company has followed the relevant legislation and the Environment Agency Guidelines.</p>
<p>OFWAT</p>	<p>OFWAT identified that the Company should follow the relevant legislation governing drought plans and the guidelines produced by the Environment Agency.</p>	<p>The Company has followed the relevant legislation and the Environment Agency Guidelines.</p>

APPENDIX B

RESPONSE TO REPRESENTATIONS ON THE 2006 DRAFT DROUGHT PLAN

1. BACKGROUND

This is South Staffordshire Water's response to the representations received following the publication of their Draft Drought Plan on 28th of April 2006.

The Company made all of its customers aware of the preparation of this Draft Drought Plan and the consultation period via Waterline, the information leaflet sent to all customers with annual bills. The Company has also presented the Draft Plan to its Customer Consultative Committee (CCC) and to the Consumer Council for Water (CCW) as these are the main bodies representing customer interests. In addition, copies of the Draft Plan were sent to all the statutory consultees, as specified in the government's guidelines.

Following publication there was a 10 week period (ending 7th July 2006) for representations, during which time any comments or questions on the draft plan were sent to the Secretary of State.

South Staffordshire Water are now required to publish a response to the representations received by the 11th August 2006.

This document summarises the representations received, and it responds to the most significant and/or recurring points that have been raised. The full details of every representation are listed in Appendix A, with a response from the Company on the action it intends to take.

2. SUMMARY OF RESPONSES

In total 12 responses were received, from the following organisations;

OFWAT
Staffordshire County Council
Advantage West Midlands
British Waterways
English Heritage
Walsall MBC
Derbyshire County Council
Cannock Chase District Council
Birmingham City Council
The Environment Agency
The Consumer Council for Water (Midlands)*
English Nature*

* These representations were received after the deadline, however we have

included them in our response.

South Staffordshire Water is committed to engaging with our customers and stakeholders on the Draft Drought Plan and we have put a significant effort into our consultation process. We are pleased with the level of response, and we believe that this reflects the fact that paper copies of the report were sent out to the statutory consultees.

All of the responses to the Draft Plan were supportive, however there were over 70 specific points raised by the consultees. These are listed in Appendix A, with our response. We have also identified the following key issues that we believe merit fuller discussion;

- The Environment Agency's Representation
- The Timing of Hosepipe Bans and Non-Essential Use Bans
- Demand Management During a Drought
- The Link Between the Drought Plan and Emergency Planning
- Environmental Monitoring and Assessment
- Customer Issues
- Stakeholder Communication

3. RESPONSE TO KEY ISSUES

3.1 The Environment Agency's Representation

The Environment Agency provided the most detailed response to the Draft Plan, with a range of specific comments on how the Plan can be improved.

In general, these comments are welcomed and indeed several of these issues are already included in the Draft Plan, as further work required.

The EA have also summarised the status of the plan as follows:-

'Since 2003 the company has worked to improve its drought plan. However, the plan is still in the early stages of development and as it stands is inadequate. Much more work is required before the final plan is submitted.'

The Company was disappointed with the Agency's summary of the Draft Plan and we do not believe the description of 'inadequate' is fair or justified. The Company already has an excellent track record of managing its resources during a drought, and it has not had a hosepipe ban since 1976. We have made significant improvements to the Plan since 2003, including the identification of a number of additional drought resource options.

We acknowledge within the Draft Plan that further work is required to expand on the detail in the plan and that a significant amount of work is required on environmental assessment to support the potential drought permits.

Given our concerns over the Environment Agency's representation, the Company met with the EA on 26th July 2006 to challenge their assessment of the Draft Plan. We felt that it was important to understand why the EA described the Draft Plan as 'inadequate' and to put this description into context.

The Environment Agency believe that due to the further work required in a number of areas it would not currently be possible to implement the plan in its entirety, in the event of a drought.

The Company believes that this is an important point of clarification, and that this represents a more appropriate summary, rather than an overall description of 'Inadequate'.

We intend to work with the Environment Agency between now and the Final Plan to ensure that we complete the outstanding work required to comply with the EA's guidelines.

3.2 The Timing of Hosepipe Bans and Non-Essential Use Bans

One of the Environment Agency's key recommendations relates to the timing of hosepipe bans and non-essential use bans. The EA commented that the Company should:

'Plan hosepipe bans and non-essential use bans prior to applying for a drought permit. We recommend that South Staffordshire Water implement these demand management options in time to demonstrate savings and potentially avoid or reduce the need for drought permits. Planning to apply for a drought order to restrict non-essential use as the company approaches emergency storage is too late.'

The Draft Plan stated that hosepipe bans would be triggered immediately prior to the implementation of drought permits. We believe that this is a more equitable approach, with our customers being impacted at the same time as the implementation of drought permits. Drought permits will already be the subject of rigorous environmental assessment.

However, in response to the representation we intend to undertake further modelling work to determine the impact on levels of service of implementing hosepipe bans further in advance of drought permits. In addition we will seek a view from our customers via CCWater. The results of this work will determine the Company's final position on the timing of these measures. Further details on this issue will be included in the Final Plan. However, ultimately the Company may deem that any reduction to our customers level of service for hosepipe bans is unacceptable and there may be no change on the current position.

3.3 Demand Management

The representations by the Environment Agency, CCWater and English Nature were all concerned that the company does not intend to carry out enough demand management during a drought; in particular leakage reduction and pressure reduction.

3.3.1 Leakage Reduction

The Draft Plan identifies the constraints involved in delivering more leakage reduction in the short term during a drought. The logistics of procuring appropriately skilled additional staff to find and fix leaks in the required numbers, as well as the lead time for delivery of potential savings means that a minimum of 5 months will be required to achieve a modest leakage saving.

The Company's reported leakage level is currently below the target set by OFWAT and current levels of leakage detection and repair are designed to hold leakage steady on an annual basis, in line with our funded AMP4 leakage management strategy. Any further reduction in leakage in advance of a future drought will require a significant input of additional resources, and it would be unjustified outside of drought conditions. Although our view on this issue is unchanged we intend to include more supporting evidence of this stance, and an action for reviewing this in detail during a drought to identify any specific opportunities.

3.3.2 Pressure Reduction

The Draft Plan identifies that there is very little further scope for optimising pressure reduction further, and the impact of lower pressure is likely to result in unacceptable levels of service failures.

The likelihood of levels of service failures with further pressure reduction mean that this option has been included as an option only after all other reasonable demand management measures have been exhausted, including hosepipe bans (which have a level of service of once every 40 years on average). However, we will also include an action in the Final Drought Plan for reviewing this in detail during a drought, to identify any specific opportunities for leakage reduction that may exist under the particular circumstances of the event.

3.4 Emergency Planning

There were several representations which questioned the link between the Drought Plan and Emergency Planning issues.

The Environment Agency guidelines identify that the Drought Plan is not required to include details of arrangements for providing water supplies to

cope with situations when there is a civil emergency as a result of a water shortage. These issues are covered by the Company's Emergency Plans. South Staffordshire Water actively participates in all the relevant regional and local emergency planning resilience groups and is continuously improving its emergency plans to deal with emergencies.

Nevertheless we will improve this section of the Drought Plan to make the boundary between the Drought Plan and our Emergency Plan clearer.

3.5 Environmental Monitoring and Assessment

The Draft Plan identified that there is a significant amount of further work required in the preparation of environmental assessments to support future drought permits/orders. Work has already begun on the test pumping of the Hanch Tunnel which is required to support an environmental assessment. We intend to undertake other investigatory work and environmental assessments in time for the Final Plan.

We expect that the Environment Agency will provide the bulk of any baseline data as it already undertakes hydrological and ecological monitoring. Where additional site specific data are required these will be identified in the environmental assessments and the scope and timing of monitoring agreed with the EA in time for the Final Plan.

3.6 Customer Issues

Several of the representations questioned how customers, and in particular vulnerable customers would be affected by the actions taken by the Company to manage a future drought. South Staffordshire Water is committed to minimising the impact on our customers of future droughts, and to protecting vulnerable customers. We will be including a section in the Final Drought Plan to provide more details on this issue.

The key options in the plan which may directly affect customers are a hosepipe ban, and a ban on non-essential use. The likelihood of either of these actions taking place is rare, on average once in every 40 years (less frequently for a ban on non essential use). We do not believe that vulnerable or special needs customers will be affected by any of the measures included in the plan. Where a ban on non essential use is required we will endeavour to implement this in a sympathetic manner, which reduces the impact on business as much as possible. We will look at ways in which we can work with customers to mitigate the impact of such a ban.

The use of stand pipes and rota cuts are not options identified in the Draft Plan as we believe these are unacceptable drought management actions. They may be more appropriately dealt with through our emergency planning procedures.

3.7 Stakeholder and Customer Communication

Several of the representations identified where improvements could be made to the section of the Draft Plan dealing with communication. In particular that more information is required on the key responsibilities of the Company's Drought management Team, and on the communication that will take place with our customers and other stakeholders as a drought progresses.

The Company is committed to keeping all of its customers informed as a drought progresses and we will be expanding this section of the Draft Plan to provide more detail on how this will be achieved.

4.0 TIMETABLE FOR FURTHER WORK AND THE PUBLICATION OF THE FINAL PLAN

In the Environment Agency's representation on our Draft Drought Plan the EA stated that the Company should include a timetable for the outstanding work in its statement of response.

Having considered this further we feel that it is still too early for us to provide a breakdown of further work, especially the timetable for the required environmental assessments. Once we have appointed consultants and they have considered the scope of work we will be able to clarify the programme. Our aim is to agree a programme of work with the Environment Agency by the end of September 2006.

South Staffordshire Water intends to publish the Final Drought Plan in June 2007*. This time period is required in order to complete the environmental assessments identified within the Draft Plan, and is consistent with the statutory requirements.

(*note: it was not possible to publish the final Drought Plan in June 2007, due to the timescales DEFRA required to issue Directions to all Companies.)

Appendix C: Detailed List of Representations with Company Responses

	Organisation	Key Points Raised	Section of Plan	SSW Amendments to the Plan
1	OFWAT	<ol style="list-style-type: none"> 1. Overall the plan is well written and clearly laid out. 2. The plan identifies a once in 40 years on average level of service for introducing a hosepipe ban. However, it does not specify the expected frequency of drought permits and non-essential use drought orders. Customers should be informed of the level of service they can expect in relation to these restrictions, and even if highly unlikely, a level of service for the introduction of rota cuts/standpipes. 3. The key external contact details for OFWAT need updating. 4. Further information is required on the post drought review process. 	<p>3.2</p> <p>9.3</p> <p>9.4</p>	<p>The level of service for hosepipe bans is 1 in 40 years. Given that the Company would implement a hosepipe ban immediately prior to a drought permit, the level of service for a drought permit is also 1 in 40 years (at Hanch Tunnel and on the Blithe/Trent). A drought permit on the River Severn is only likely in a drought worse than that on record, and so is attributed a 1 in 80 year return period.</p> <p>The Company has deliberately not specified a trigger for a non essential use ban, but would consider implementing one immediately prior to a drought permit at Hampton Loade, and so is attributed a level of service of 1 in 80 years.</p> <p>Rota cuts and standpipes are not considered as an option in this Plan.</p> <p>The contact details have been updated.</p> <p>More details have been added to the Plan. In addition to the internal review process feedback will be requested from key stakeholders so that any lessons learnt can be incorporated into subsequent plans.</p> <p>The Company will also record any environmental data collected during the drought and any mitigation measures adopted.</p>

2	Staffordshire County Council	<ol style="list-style-type: none"> 1. The Plan is well laid out and appears to be thorough and comprehensive. 2. Staffordshire County Council have identified ways in which they may be able to reduce demand during periods of drought, e.g. landscaping works and gully cleaning. 3. Staffordshire County Council suggest that South Staffordshire Water consult the council's road safety unit for advice on the deployment of standpipes in the event of their use. 	<p>General</p> <p>General</p>	<p>We welcome the identification of ways in which the Council may help to reduce demand in a drought. We will be seeking to work more closely with all local government bodies to identify similar potential demand savings.</p> <p>Standpipes and rota cuts are not included as an option in the plan, and they are more aligned to emergency planning. The links to Emergency Planning are described in section 6.5.1.</p>
3	Advantage West Midlands	<ol style="list-style-type: none"> 1. Advantage West Midlands is overall supportive of the Plan. 2. How would the Plan impact on businesses, which are high water users such as breweries ? 3. Are there individual arrangements in place to minimise the impact of the plan? 	<p>General</p> <p>General</p>	<p>South Staffordshire Water is committed to minimising the impact on our customers of future droughts. The key options in the plan, which may directly affect customers, are a hosepipe ban, and a ban on non-essential use. The likelihood of either of these actions taking place is rare, on average at least once in every 40 years. Where a ban on non-essential use is required we will endeavour to implement this in a sympathetic manner, which reduces the impact on business as much as possible. Further information on a potential non essential use ban has been included in section 6.2.5.</p> <p>There are no specific arrangements with individuals, however the Company is already in close contact with large water users through its B2B process. This would continue during a drought.</p>
4	British Waterways	<ol style="list-style-type: none"> 1. The whole document is comprehensive and clearly presented. 2. The environmental assessment of abstraction from the River Trent should have due regard to the potential impacts on navigation. 3. British Waterways would like to be kept informed of any application for a drought order/permit. 	<p>6</p> <p>7.2</p>	<p>The potential impacts on navigation have been included in the environmental assessments for the 3 drought permits identified.</p> <p>Further specific reference to British Waterways has been added into the Plan, in section 7.</p>

5	English Heritage	1. The potential impacts on the historic environment should be considered as part of the programme of environmental assessment. This includes designated historic assets and non-designated assets.	7	Designated and non-designated historic assets have been considered in the environmental assessments where required.
6	Walsall MBC	<ol style="list-style-type: none"> 1. The Draft Plan is a very thorough and detailed framework document. 2. How does the plan link with existing emergency plans? 3. Do the consequences of a reduced supply need stating? 4. It is not clear how robust partnership agreements with other supplies are. 5. The emergency planning section is limited and does not mention the emergency services and the vulnerable. 6. There is no mention about training and exercising the plan. 7. Communications between partner organisations is not explicit enough, will South Staffordshire Water issue situation reports ? 8. Information sharing between organisations will be essential to ensure health and safety of the public 9. There is no reference to the Civil Contingencies Act (2004) 	<p>6.5.1</p> <p>4, 5</p> <p>6.3</p> <p>6.5.1</p> <p>General</p> <p>9, appendix G</p> <p>9</p> <p>6.5.1</p>	<p>The link to existing emergency plans has been explained in more detail in section 6.5.1.</p> <p>See response to point 3.2 above.</p> <p>Mutual aid issues (e.g. tankering) are covered by our Emergency Plans, rather than in the Drought Plan. Bulk supplies are dependant on Severn Trent having surplus water.</p> <p>The Drought Plan is not intended to deal with emergency planning issues. Further details on the link between emergency planning and the Drought Plan have been included in section 6.5.1.</p> <p>The plan is intended to be a framework for action rather than an emergency plan. However, we believe that it would be prudent to exercise key elements of the Plan (a severe River Severn Drought) with other stakeholders.</p> <p>The communication plan has been rewritten and includes details of the nature and timing of contacts with all our stakeholders during a drought.</p> <p>See above (6.7)</p> <p>See response to point 6.4 above.</p>

7	Derbyshire County Council	<ol style="list-style-type: none"> 1. In the event of a serious and protracted drought DCC can foresee the need for South Staffordshire Water to work closely with the regional/local resilience structures within their areas. 2. The Civil Contingencies Act (2004) identifies water companies as a Category 2 responder with a duty to cooperate and share information with a range of Category 1 responders, including local authorities. DCC suggest that South Staffordshire Water engage within the existing established emergency planning structures, at local and regional level. 3. A further indication that drought is a civil contingencies issue is that it appears on most Community Risk Registers. 4. DCC believe that South Staffordshire Water should work within the civil contingencies and resilience framework, as this will enhance the overall effectiveness of the response to drought for water providers. 	<p>6.5.1</p> <p>6.5.1</p> <p>6.5.1</p> <p>6.5.1</p>	<p>South Staffordshire Water actively participates in all the relevant regional and local resilience areas and is continuously improving its emergency plans to deal with civil emergencies. Additional information on the link between emergency planning and the drought plan has been included in this plan in section 6.5.1.</p> <p>See response to point 7.1 above.</p> <p>See response to point 7.1 above.</p> <p>See response to point 7.1 above.</p>
8	Cannock Chase District Council	<ol style="list-style-type: none"> 1. The document sets out what appear to be a set of proportionate measures to both safeguard supplies and minimise any damaging effects on the environment. No adverse comments 		

9	Birmingham City Council	<ol style="list-style-type: none"> 1. The plan is not how we would perceive a plan to be; there is no roles and responsibilities, no full contacts list etc. 2. The document is wordy and there are few visual diagrams. Consider introducing flow diagrams to illustrate the procedures, a schematic diagram of the watercourse system/controls and relevant structures and photos of the significant structures identified within the report. 3. I felt that there was some confusion between the relevant triggers. The report states that the Colour coded indicator for increasing drought severity has been simplified from 5 colours down to 4 in line with the revised control rules at Blithfield, and the Environment Agency's revised Clywedog triggers. However, figure 3 indicates Trigger 1 can be at two colour code levels which is confusing and there are only 3 Triggers of relevance. However, Figures 1 & 2 indicate a total of 5 triggers. What do the triggers 4 & 5 initiate within the procedures? 4. In the guidance it is stated that the communications plan should also contain details of liaison with a number of relevant organisations including the local authorities, however there is no specific mention to local authorities within the plan other than in the introduction. At what point should the local authorities and other Relevant agencies expect to be contacted? How will they be consulted? What information should they expect to receive? Etc. 	<p>9 appendix G</p> <p>General</p> <p>4</p> <p>7</p>	<p>The communication plan has been rewritten and includes details of the nature and timing of contacts with all our stakeholders during a drought.</p> <p>We have considered ways in which the document can be made less 'wordy'. However, site specific photos, maps and plans are not appropriate as they may compromise security issues.</p> <p>The two drought stages referred to in figure 8 (previously fig 3) are different. One is the normal operating position above trigger curve 1 (blue colour), the other is drought monitoring, below trigger curve 1 (yellow).</p> <p>The emergency storage and dead storage lines on figures 1 and 2 are not triggers in this Plan, however they are presented for completeness.</p> <p>The communication plan has been rewritten and includes details of the nature and timing of contacts with all our stakeholders during a drought.</p>
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10	Environment Agency	<p>General</p> <p>1. Since 2003 the Company has worked to improve its plan, however the plan is still in the early stages of development and as it stands is inadequate</p> <p>2. Much more work is required before the final plan is submitted and the Company should include a timetable for the outstanding work in its statement of response.</p> <p>Management and Communications</p> <p>3. The plan provides a good framework but lacks detail.</p> <p>4. The plan should be improved by including information on liaison with other stakeholders and explain the responsibilities assigned to each drought team member.</p> <p>5. A section detailing post drought communications is recommended</p> <p>Environmental Monitoring</p> <p>6. The plan provides very little information on environmental assessment and monitoring.</p>	<p>General</p> <p>9</p> <p>9</p> <p>9.4</p> <p>8</p>	<p>Given our concerns over the Environment Agency's representation, the Company met with the EA on 26th July 2006 to challenge their assessment of the Draft Plan. We felt that it was important to understand why the EA described the Draft Plan as 'Inadequate' and to put this description into context. The Environment Agency believe that due to the further work required in a number of areas it would not currently be possible to implement the plan in its entirety, in the event of a drought. The Company believes that this is an important point of clarification, and that this represents a more appropriate summary, rather than an overall description of 'Inadequate'.</p> <p>Significant further work has been completed by the Company since the draft plan, and we have been in close liaison with the EA over progress and content</p> <p>The communication plan has been rewritten and includes details of the nature and timing of contacts with all our stakeholders during a drought</p> <p>Specific information on drought team responsibilities and stakeholder liaison has been included in the revised communication plan.</p> <p>More details have been added to the Plan. In addition to the internal review process feedback will be requested from key stakeholders so that any lessons learnt can be incorporated into subsequent plans.</p> <p>The plan now includes new sections on environmental assessment and drought monitoring.</p>
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	<p>Environment Agency (cont)</p>	<p>7. What existing data is available to inform the baseline?</p> <p>8. Where are the gaps in the baseline data?</p> <p>9. Where are the gaps in the baseline data?</p> <p>10. What monitoring is required for each drought option during and after a drought?</p> <p>11. What mitigation measures will be provided to reduce or remove environmental impacts?</p> <p>12. Protected sites other than SSSI's will need to be identified.</p> <p>Drought Triggers and Actions</p> <p>13. We are concerned that South Staffordshire Water has not used scenarios to show that it can manage a range of droughts. As a result we are unable to assess whether South Staffordshire Water has included sufficient options or allowed adequate lead times to implement all drought actions.</p> <p>14. South Staffordshire Water's Plan triggers demand restrictions and drought permits at the same time. We expect the Company to take all reasonable steps to reduce customer demand prior to drought permit applications. The company should implement restrictions in advance of drought permit applications.</p>	<p>8.2</p> <p>8.2</p> <p>8.2</p> <p>8.2</p> <p>8.3</p> <p>8</p> <p>4</p> <p>4, 5</p>	<p>Table 4 in section 8 summarises the available baseline data.</p> <p>Gaps in data are discussed in the environmental assessments, summarised in section 7 and appendices I and J.</p> <p>The additional monitoring requirements associated with future drought permits have been identified and agreed in discussion with the EA. They are summarised in table 4.</p> <p>See response to query 10.9 above.</p> <p>Mitigation measures have been considered where appropriate and the details have been agreed with the EA and NE where possible. These are included in section 7</p> <p>Additional protected sites have been identified in the environmental assessments for each drought permit option.</p> <p>The scenario section of the plan has been rewritten to include reservoir storage simulations for specific drought years, and it includes a discussion of the timing of the key drought actions.</p> <p>The plan states that the Company would implement a hosepipe ban immediately prior to the triggering of a drought permit. Company has undertaken further modelling work to determine the impact on levels of service of implementing hosepipe bans earlier, however the modelling shows that to our customer's level of service for hosepipe bans would reduce considerably. Given the Company's history of managing droughts this decrease in level of</p>
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	<p>Environment Agency (cont)</p>	<p>15. Planning to apply for a drought order to restrict non-essential use only as the company approaches emergency storage is too late.</p> <p>16. The company should identify the circumstances when it would apply for a drought permit for the River Severn at Hampton Loade.</p> <p>17. We are concerned that this proposal may not be acceptable when there is a risk that a drought order might be required for the River Severn to protect the environment.</p> <p>Drought Measures (general) 18. The company should provide details on triggers, demand saving/supply increase, implementation timescales, permissions required and any risks together with an environmental assessment for each option. We expect to see this in South Staffordshire Water's final plan.</p> <p>Demand Management 19. We are concerned that the company does not intend to carry out enough demand management prior to a drought permit application. We expect South Staffordshire Water's final plan to show demand management (mains pressure reduction, hosepipe bans, leakage reduction, and non-essential use bans) options being considered prior to any application for a drought permit.</p>	<p>4,5</p> <p>6.3.7</p> <p>6.3.7, 10.2</p> <p>Appendix F</p> <p>6.2</p>	<p>service is considered unacceptable.</p> <p>The Plan has been revised slightly to say that once the enforce drought permit trigger curve has been crossed the company will consider implementing a non-essential use ban (rather than applying for one). This will require the application for a drought order several weeks in advance.</p> <p>Two drought permit scenarios have been identified, one requires an Environment Agency drought order to be in place, the other does not. The two options are described in detail in section 6.3 and 7.4, and they have been examined as part of the drought permit environmental assessment.</p> <p>A drought permit on the River Severn at Hampton Loade is only likely to be required in a drought worse than that seen in the historic 80 year record. Under such extreme circumstances there may be a direct conflict between the interests of public supply, the other river uses, and the environment. Under these circumstances we would expect the Secretary of State to determine which option had overriding public interest.</p> <p>The section on drought options has been revised and more detail has been provided on implementation timescales, permissions and risks associated with each option.</p> <p>The plan identifies that significant effort will be made to manage demand prior to the implementation of a drought permit. It also identifies the constraints involved in delivering more leakage reduction in the short term, due to logistical issues. The plan includes an action for reviewing this in detail early in the drought to identify any</p>
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	<p>Environment Agency (cont)</p>	<p>20. We want the company to reconsider its policy of not using hosepipe restrictions during winter months. We do not think the company should exclude winter hosepipe restrictions, as they are another option to manage demand and conserve resources.</p> <p>21. It is unclear if South Staffordshire Water intends to carry out any leakage reduction measures prior to a drought permit application. Although the company plans to make progress on enhanced leakage detection and repairs in the latter stages of drought it needs to do it sooner.</p> <p>Drought Order/Permits</p> <p>22. We are concerned that South Staffordshire Water has not yet decided on which of its short listed drought permit sites it will include in the final plan</p> <p>23. The plan does not include sufficient detail of sites affected, potential environmental risks and the associated impacts on other activities for all options. We want the company to provide more detail including the assumptions behind the demand saving or deployable output increase. The company should use previous experience to quantify the preparation times and savings possible.</p> <p>24. In particular, the company should provide details of the changes it would request under a drought permit to its Hampton Loade abstraction licence</p> <p>Other Supply Options</p> <p>25. We cannot comment on the company's other supply options until we see the detail of the schemes. The company should follow the guideline and continue to discuss the work with us.</p>	<p>6.2</p> <p>6.2</p> <p>6.3</p> <p>Appendix F</p> <p>6.3</p>	<p>specific opportunities.</p> <p>The company does not have a policy of excluding a winter hosepipe ban. This option was not included because of the very small demand savings that it would be likely to achieve. We have included a winter hosepipe ban as one of the options in the plan.</p> <p>The Company will review the current leakage position and circumstances at the time of the drought and give full consideration to implementation of additional leakage detection and repair activities in a single drought season.</p> <p>Three drought permit sites are included in the plan; at Hanch Tunnel, The River Trent/Blithe, and the River Severn at Hampton Loade.</p> <p>The section on drought options has been revised and more detail has been provided on implementation timescales, permissions and risks associated with each option</p> <p>Two Hampton Loade drought permit scenarios are detailed in section 7.4.</p> <p>The section on drought options has been revised and more detail has been provided on implementation timescales, permissions and risks associated with each option</p>
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11	Consumer Council for Water (Midlands)	<ol style="list-style-type: none"> 1. CCWater supports the communication on the Draft Drought Plan carried out to date with customers and other stakeholders. It is suggested that this consultation list should include Water Framework Directive contacts and stakeholders. 2. South Staffordshire Water should include communication with CCWater Midlands as part of the company's key external drought management contacts. 3. The plan should include a proposal to thank customers for their restraint on water use during a drought 4. How would South Staffordshire Water inform special needs and vulnerable customers once water scarcity become an issue and how would these customers be prioritised at each stage of the plan, especially when restrictions are considered? 5. What is proposed to inform essential services such as hospitals and schools ? 6. What provision is there to target large users of water and those for whom water is essential to their business purposes? 7. CCWater recommend that South Staffordshire Water are more specific about how they are going to communicate with customers. 	<p>7.2</p> <p>7.3</p> <p>7</p> <p>7</p> <p>7</p> <p>5.2</p> <p>7.2</p>	<p>The Environment Agency and Natural England have been consulted in the preparation of this plan, and their contact details are included in the communication plan.</p> <p>Communication with CCWater Midlands has been included as part of the company's key external drought management contacts.</p> <p>We believe that it is important to do as much as possible to maintain customer support for our drought management activities and we will recognise where customers have used restraint in their water use during a drought.</p> <p>We do not believe that vulnerable or special needs customers will be affected by any of the measures included in the plan. Should more drastic measures be necessary such as standpipes or rota cuts, then these will be covered by our Civil Emergency Plans. The Drought Plan is not intended to deal with emergency planning issues. However further details on the link between emergency planning and the Drought Plan have been provided in section 6.5.1.</p> <p>See response to point 10.4 above.</p> <p>There are no specific arrangements with individuals, however the Company is already in close contact with large water users through its B2B process. This would continue during a drought. Please refer to our response to points 3.2 and 3.3 above.</p> <p>The communication plan has been expanded and more specific detail provided.</p>
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	<p>Consumer Council for Water Midlands (cont)</p>	<p>8. CCWater believes South Staffordshire Water should step up water audits now to demonstrate that it is already doing everything it can to get drought awareness messages across.</p> <p>9. CCWater would like to see South Staffordshire Water starting a programme of increased leakage detection and repair now in order to justify customer confidence and support in advance of potential problems. This should be listed in Table 1.</p>	<p>5.2.1</p> <p>5.2.3</p>	<p>We do not believe the cost and benefit of proactively targeting customers for water audits is justified, outside of drought conditions. The Company continues to distribute the 'Water use in your business' leaflet on request and makes it available for downloading from the Company website. Although the Company receives very little direct requests for information from business customers the Company continues to develop its "Business to Business" (B2B) relationships by offering free water efficiency advice to encourage large users to reduce their water consumption wherever possible.</p> <p>The plan identifies that significant effort will be made to manage demand prior to the implementation of a drought permit. It also identifies the constraints involved in delivering more leakage reduction in the short term, due to logistical issues. The plan includes an action for reviewing this in detail early in the drought to identify any specific opportunities.</p>
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12	English Nature	<p>General</p> <ol style="list-style-type: none"> 1. English Nature welcomes the plan which is both concise and clear in its objectives, and in the proposed sequence of measures to be implemented in the event of drought conditions. 2. There is a need for an explicit statement, which provides an environmental context for the drought plan. <p>Drought Control Rules</p> <ol style="list-style-type: none"> 3. We strongly advise that the environmental triggers and implications of proposed drought permits are discussed with English Nature in advance of the preparation of the applications. <p>Drought Management Options</p> <ol style="list-style-type: none"> 4. We consider that long term demand management via reduced leakage is a critical tool in addressing drought conditions and which merits further consideration and more detailed exploration than is identified in the plan. 5. In considering the suitability of the groundwater options listed in Table 3, we advise that the investigations should also take into account an assessment of the environmental implications of each of the options. 6. We note the Company proposes to seek to temporarily increase groundwater abstraction over an above the licensed quantities during certain drought conditions. We strongly recommend that the company should involve English Nature in early discussions about these proposals where they may have a direct or indirect affect on sites designated for nature conservation and/or on protected species. 7. The assumption made in this section that a one-year increase in abstraction can be 'clawed back' in subsequent years may be acceptable for some water users, however this scenario may be disastrous for the environment and in particular for the safeguard 	<p>1</p> <p>4, 7</p> <p>6</p> <p>5, 6</p> <p>6.5</p> <p>5.3.9</p>	<p>We have included a statement in section 7.1.</p> <p>We have discussed the relevant environmental assessment work with Natural England (previously English Nature) in advance of the Final Plan.</p> <p>See response to point 10.19 above.</p> <p>Work is continuing on groundwater options for existing licensed sources which may deliver future drought support. As these sources are already licensed no further environmental assessment is required. No definitive options have been included in the plan, however section 6.4 outlines work which is ongoing.</p> <p>A groundwater modelling project has recently been undertaken, to examine the potential impact of 3 scenarios on groundwater levels and surface water flows. This is summarised in section 6.5. The study suggests that there may be some impact (albeit small in some cases) within the first year of the scenarios. As a result the Company has decided not to pursue these groundwater options further at this stage.</p> <p>See response to section 12.6 above.</p>
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		<p>of water-based ecosystems and their dependant habitats and species.</p> <p>Environmental Impact</p> <p>8. The Plan does not specify what impacts (either hydrological and or ecological) could result from the drought permits and orders. We assume and expect that these impacts will be ascertained in the next phase before submitting the final plan in summer 2007.</p> <p>9. The Plan fails to identify the responsibility of the Company as a competent authority to reduce environmental impact, which could extend over and above the current 'economic levels of leakage'.</p> <p>10. In conclusion, we would wish to emphasise the importance that English Nature, and its successor organisation Natural England, is fully involved in the next stage of environmental assessments of the proposed permits and orders.</p>	<p>6</p> <p>5</p> <p>General</p>	<p>Environmental assessments have been undertaken on the 3 drought permit options identified in the plan. Natural England have been consulted as part of this process.</p> <p>The plan includes a statement which provides an environmental context to the plan, and identifies the Company's environmental responsibilities.</p> <p>See response above.</p>
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Appendix D

Environment Agency River Severn Drought Order Process

<p>Alert Curve</p>	<p>Drought order preparation: The Environment Agency prepares the drought order application in discussion with stakeholders (including water companies, NFU, CLA, FUW) and considers; the requirement/nature of a Section 57 ban Whether to include 'emergency storage' drought order conditions as part of the application. Whether the drought order needs to include varying the Shropshire groundwater licence. The Environment Agency and water companies circulate reservoir refill prospects.</p> <p>Communications: The Environment Agency organises a meeting with water companies* to discuss the drought situation on the Severn and wider. Further meetings may be required within this drought 'zone'.</p> <p>The Environment Agency intensifies its appeals for restraint in the media. The communication plan will be followed in liaison with water companies, to ensure conflicting messages are not delivered.</p> <p>*This initial meeting will comprise the River Severn Drought Management Group: Environment Agency, Severn Trent Water, South Staffordshire Water, Bristol Water and United Utilities. At this meeting the group will decide the frequency of further meetings and consider liaising with other groups including Eon, British Waterways, NFU and English Nature.</p>
<p>Application Curve</p>	<p>Drought order application: The Environment Agency applies for a drought order to the Secretary of State.</p> <p>Communications: The Environment Agency will seek agreement with United Utilities on opportunities for a Vyrnwy overdraft. The Environment Agency will organise a meeting of the River Severn Drought Management Group to discuss: Voluntary reductions in abstraction that could be implemented immediately. Reductions in abstractions that will be applied once the drought order is granted. The Environment Agency will inform other stakeholders of the application and the nature of its proposed conditions.</p>
<p>Enforce Curve</p>	<p>Drought order conditions become live: Prescribed flow @ Bewdley reduced to 730 MI/d. Max releases @ Clywedog capped to 300 MI/d. If agreement in place - Vyrnwy overdraft used to support estuary subject to other needs. 5% daily licence reduction in non-spray irrigation licences. The 5% reduction will be pro rata to the remaining available licence during the first 100 days of regulation.</p>

	<p>The 5% reduction will on top of daily maximum regulation constraints during maximum regulation. Reduce abstraction @ Gloucester to 195 MI/d during high tides (>9m). Section 57 ban on surface spray irrigation abstractions.</p> <p>Timing of Drought Order Conditions: It is anticipated that it will take at least 28 days for the Order to be granted, assuming a public hearing is required. This lead-time is built into the curves. If the drought order is granted sooner, conditions will not become live until the 'enforced' curve is crossed.</p> <p>Shropshire Groundwater Scheme: If the Shropshire Groundwater Scheme annual or five-year rolling licences are expected to be exceeded, the Environment Agency will consider applying to vary the licence as part of the drought order application.</p> <p>Communications: The Environment Agency will organise a joint meeting with stakeholders² to discuss the drought situation and drought order conditions. Further meetings may be required within this drought 'zone'. The meeting should look ahead to possible implementation of emergency storage conditions and amendments to the drought order if not included in original application.</p> <p>²This meeting should include: Severn Trent Water, South Staffordshire Water, Bristol Water, United Utilities, Eon, British Waterways, English Nature, NFU and Water UK.</p>
<p>Emergency Storage</p>	<p>Options considered to enhance drought order conditions: (will depend on the extent and timing of drought). Prescribed flow @ Bewdley further reduced to 650 MI/d. Releases from Clywedog Reservoir capped to 1.5% of remaining storage. Reduction in daily licensed quantities of non-spray irrigation licences above 5%.</p> <p>Communications: The Environment Agency organises a meeting with the River Severn Drought Management Group to discuss the drought situation and enhanced drought order conditions. Further meetings, with other groups may be required within this drought 'zone'.</p>
<p>Drought Order Cessation Consider withdrawing drought order application if storage rises above 'alert' curve. Consider relaxing drought order conditions once storage rises 10% above 'enforce' curve. (Note: Drought order powers are in place for six months after date granted. Conditions could be implemented again without another application if storage subsequently drops below 'enforce' curve). Consider Relaxing Emergency Storage Drought Order Once Storage Rises 5% above Emergency Storage.</p> <p>Note: Drought order powers can be extended within the last 28 days of the agreement. The Environment Agency will discuss with the River Severn Drought Management Group if it intends to apply for an extension to River Severn drought order powers.</p>	

APPENDIX F– DEMAND MANAGEMENT OPTIONS (Option 1 - Promotion of Water Efficiency)

		Option 1: Extra Promotion of Water Efficiency and Customer Drought Awareness Messages
Option Implementation Assessment	Triggers or Preceding Actions	Triggered by reservoir storage levels falling below the Blithfield Drought Monitoring Curve or EA Clywedog Drought Alert Curve. Preceded by a forecast of reservoir storage and by a meeting of the Drought Management Team.
	Estimated Demand Saving	c. 3 MI/d
	Implementation Timetable Preparation, time of year effective, duration.	It is expected that this action will take 2-4 weeks to prepare and implement. This is likely to begin at the start of the drought period, probably in late spring, early summer, and it will continue throughout the drought.
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	The timing and content of messages, and the detailed nature of the increased water efficiency campaign will be determined by the Drought Management Team. No external approvals required.
	Risks Associated with Option	None

APPENDIX F– DEMAND MANAGEMENT OPTIONS (Option 1 continued - Promotion of Water Efficiency)

Environmental Assessment	Risk to the Environment High, medium, low, or unknown	Low
	Summary of Possible Environmental Impacts	None.
	Details of Studies Undertaken or Required	None
	Monitoring Requirements	None
	Mitigation Actions	None
	Impact on Other Activities, Public, industry etc.	None.

APPENDIX F– DEMAND MANAGEMENT OPTIONS (Option 2 Increased Leakage Detection and Repair)

		Option 2: Increased Leakage Detection and Repair
Option Implementation Assessment	Triggers or Preceding Actions	<p>Triggered by reservoir storage levels falling below the Blithfield Drought Monitoring Curve or the Clywedog Drought Alert Curve.</p> <p>Preceded by a reservoir storage forecast for Blithfield by SSW, and for Clywedog (by the EA). Also preceded by a review of available leakage management resources.</p>
	Deployable Output of Option	c. 1.5 MI/d
	Implementation Timetable Preparation, time of year effective, duration.	<p>Although this action could be initiated within 2-4 weeks, the logistics of procuring staff and delivering benefits will require at least 5 months to deliver addition benefit.</p> <p>This action can take place at any time, depending on storage levels at Blithfield and the available water resource on the River Severn, however it is most likely to be initiated in the late spring early summer. This action will continue until Blithfield stocks and or Clywedog stocks increase to 5% or more above the Drought Monitoring/Alert Line.</p>
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	This action will require the approval of the Drought Management Team and the SSW Board of Directors. No external approvals are required.
	Risks Associated with Option	The main risk associated with this option is the timescale for delivery of the additional benefit, and in the uncertainty over how much additional saving would be achieved.
	Risk to the Environment High, medium, low, or unknown	Low

APPENDIX F– DEMAND MANAGEMENT OPTIONS (Option 2 continued - Increased Leakage Detection and Repair)

Environmental Assessment	Summary of Possible Environmental Impacts	None.
	Details of Studies Undertaken or Required	A review of available leakage management resources would be required in advance of implementing this action.
	Monitoring Requirements	The Company would continue to monitor and report on leakage, to try to identify any savings achieved.
	Mitigation Actions	N/A
	Impact on Other Activities, Public, industry etc.	There may be some additional disruption to the public and to business with the additional activity.

APPENDIX F– DEMAND MANAGEMENT OPTIONS (Option 3 Hosepipe and Sprinkler Bans)

		Option 3: Hosepipe and Sprinkler Bans
Option Implementation Assessment	Triggers or Preceding Actions	<p>Triggered by reservoir storage levels falling below the Implement Hosepipe Ban trigger curve at Blithfield Drought. Preceded by a reservoir storage forecast for Blithfield by SSW, and for Clywedog (by the EA).</p> <p>Preceded by an application for drought permits as required and by communication with stakeholders, including the general public.</p>
	Demand Saving	c.10-20 MI/d.
	Implementation Timetable Preparation, time of year effective, duration.	<p>This action can be implemented within 2 weeks following appropriate advertising. This action can take place at any time, this will depend on storage levels at Blithfield, and Clywedog. This action will continue until Blithfield stocks increase to 5% or more above the Drought Monitoring Line, or Clywedog storage is 5% above the Drought Alert Curve. Consideration will be given to the status of River Regulation on the River Severn, and to weather forecasts and reservoir storage predictions.</p> <p>A hosepipe ban will be implemented immediately prior to the implementation of any drought permit.</p>
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	This action will require the approval of the Drought Management Team and the SSW Board of Directors. No external approvals are required.
	Risks Associated with Option	The main risk associated with this option is the uncertainty over how much additional saving would be achieved.

APPENDIX F– DEMAND MANAGEMENT OPTIONS (Option 3 continued - Hosepipe and Sprinkler Bans)

Environmental Assessment	Risk to the Environment High, medium, low, or unknown	Low
	Summary of Possible Environmental Impacts	None.
	Details of Studies Undertaken or Required	N/A
	Monitoring Requirements	N/A
	Mitigation Actions	N/A
	Impact on Other Activities, Public, industry etc.	Customers will no longer be able to use unattended hosepipes and sprinklers.

APPENDIX F– DEMAND MANAGEMENT OPTIONS (Option 4 Enhanced Pressure Management)

		Option 4: Enhanced Pressure Management
Option Implementation Assessment	Triggers or Preceding Actions	Triggered by reservoir storage levels falling below the Implement Drought Permit/Hosepipe Ban line at Blithfield or Clywedog and following a hosepipe ban. This is because addition pressure management is likely to cause the Company to fail its level of service for mains water pressure (DG2).
	Demand Saving	c. 1.5 MI/d
	Implementation Timetable Preparation, time of year effective, duration.	Any additional pressure management activity is likely to take 2 months to plan, resource and implement. This could take place at any time of year, however it is most likely to take place in the late summer/autumn.
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	This action will require the approval of the Drought Management Team and the SSW Board of Directors. No external approvals are required.
	Risks Associated with Option	The main risks associated with this option is the uncertainty over how much additional saving would be achieved, and the risk of customer complaints due to low pressure, and DG2 failure.
Environmental Assessment	Risk to the Environment High, medium, low, or unknown	Low
	Summary of Possible Environmental Impacts	None.

APPENDIX F– DEMAND MANAGEMENT OPTIONS (Option 4 continued- Enhanced Pressure Management)

	Details of Studies Undertaken or Required	N/A
	Monitoring Requirements	None
	Mitigation Actions	N/A
	Impact on Other Activities, Public, industry etc.	Customers may be affected by low water pressure.

APPENDIX F– DEMAND MANAGEMENT OPTIONS (Option 5 Ban on Non Essential Use)

		Option 5: Bans on Non Essential Use
Option Implementation Assessment	Triggers or Preceding Actions	<p>Triggered by reservoir storage levels falling below the Implement Drought Permit\Hosepipe Ban line at Blithfield or Clywedog and following a hosepipe ban</p> <p>Preceded by a reservoir storage forecast for Blithfield, and by a forecast for Clywedog (from the EA). Preceded by the preparation of a drought order application (2 weeks) and by the determination period (up to 4 weeks).</p>
	Deployable Output of Option	Unknown.
	Implementation Timetable Preparation, time of year effective, duration.	<p>It is anticipated that it would take 2 weeks to prepare the application to DEFRA and up to 4 weeks for the order to be determined. For the order to come in force shortly after a hosepipe ban was implemented would require the preparation of the application to begin approximately 2 weeks before the Apply for Drought Permit trigger line is crossed at Blithfield. The application would be made at the same time of the drought permit application (the Apply for Drought Permit trigger curve).</p> <p>This action could take place at any time during the year. However, it is most likely to take place later on in a drought (late summer/ early autumn). The non essential use ban would remain in force until Blithfield stocks increase to 5% or more above the Drought Monitoring Line, or Clywedog storage is 5% above the Drought Alert Curve. Consideration will be given to the status of River Regulation on the River Severn, and to weather forecasts and reservoir storage predictions.</p>
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	Approval is required from the Secretary of State (DEFRA).

APPENDIX F– DEMAND MANAGEMENT OPTIONS (Option 5 - continued Ban on Non Essential Use)

	Risks Associated with Option	The main risk associated with this option is the uncertainty over how much additional saving would be achieved.
Environmental Assessment	Risk to the Environment High, medium, low, or unknown	Low
	Summary of Possible Environmental Impacts	None.
	Details of Studies Undertaken or Required	N/A
	Monitoring Requirements	None
	Mitigation Actions	N/A
	Impact on Other Activities, Public, industry etc.	Customers , in particular industrial customers, could be significantly affected by a ban on non essential use.

APPENDIX G COMMUNICATION PLAN

Stakeholders and Interested Parties	Stakeholder Contact	Information Required	SSW Coordinator	SSW Information Provider	Timing and Frequency of Communication	Communication Method
General Public	All of SSW customers	SSW's water resources position. What actions SSW are taking. Water saving messages. Identification of potential and actual restrictions (e.g. hosepipe bans) and the cessation of restrictions.	Head of Water Strategy	Water Strategy Unit	The timing and frequency of communication will depend on which drought triggers are crossed (see Section 4 of this Drought Plan). An increasing intensity of communication will take place as a drought develops.	Communication will take place via the Company Website and through specific press releases and media campaigns. Information regarding customer restrictions will be advertised in the local and regional press.
Environment Agency	Regional Drought Coordinator	SSW's water resources position. What actions SSW are taking. What external communications are proposed. Identification of potential and actual restrictions (e.g. hosepipe bans). Detailed communication on drought permit applications, and environmental monitoring. Detailed communication required on the Regulation of the River Severn by the EA, and of the potential for using Chelmarsh to manage the river flow at Bewdley.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed (see Section 4 of this Drought Plan). In particular, however there will need to be close dialogue as the Apply for Drought Permit and Hosepipe Ban triggers are approached.	Meetings. Situation reports and data exchanges by email. Drought permit applications by post.

Stakeholders and Interested Parties	Stakeholder Contact	Information Required	SSW Coordinator	SSW Information Provider	Timing and Frequency of Communication	Communication Method
Severn Trent Water	Chairman of the Drought Action Team	SSW's water resources position. What actions SSW are taking. What external communications are proposed. Identification of potential and actual restrictions (e.g. hosepipe bans). Detailed communication on the joint abstraction at Hampton Loade and Trimpley. Also on any drought permit applications, and environmental monitoring issues with respect to the River Severn. Potential use of STW's water resources model for the River Severn to examine scenarios.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed (see Section 4 of this Drought Plan). In particular, however there will need to be close dialogue as the Apply for Drought Permit and Hosepipe Ban triggers are approached.	Meetings. Situation reports and data exchanges by email. Drought permit applications by post.
Bristol Water	Water Resources Manager	SSW's water resources position. What actions SSW are taking. Detailed communication on the abstraction on the River Severn. Also on any drought permit applications, and environmental monitoring issues with respect to the River Severn. Communication wrt the potential use of STW's water resources model for the River Severn to examine scenarios.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed (see Section 4 of this Drought Plan). In particular, however there will need to be close dialogue as the Apply for Drought Permit and Hosepipe Ban triggers are approached.	Meetings. Situation reports and data exchanges by email. Drought permit applications by post.

Stakeholders and Interested Parties	Stakeholder Contact	Information Required	SSW Coordinator	SSW Information Provider	Timing and Frequency of Communication	Communication Method
OFWAT	Head of Supply Demand Balance Team	SSW's resource position and actions. Identification of any potential supply restrictions.	Head of Water Strategy/Regulation Manager	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed (see Section 4 of this Drought Plan).	By letter and email.
Drinking Water Inspectorate	Relevant Inspector appointed by the DWI.	Any concerns that SSW may have that the drought may impact on the quality of public water supplies.	Director of Water Quality	Water Quality Team	Should it appear possible that drought conditions may present concerns to customers about the quality of their supplies.	By letter and email. Subsequently by meetings if required.
DEFRA	Head of Branch, Water Supply and Regulation Division	SSW's water resources position. What actions SSW are taking. Identification of potential and actual restrictions (e.g. hosepipe bans). Detailed communication on drought permit and order applications.	Supply and Resources Director or Head of Water Strategy	Water Quality Team	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed (see Section 4 of this Drought Plan). In particular, however there will need to be close dialogue as the Apply for Drought Permit and Hosepipe Ban triggers are approached.	By letter and email.

Stakeholders and Interested Parties	Stakeholder Contact	Information Required	SSW Coordinator	SSW Information Provider	Timing and Frequency of Communication	Communication Method
CCWater Midlands	Regional Manager	SSW's water resources position. What actions SSW are taking. In particular what impact there may be on customers. What additional demand management and leakage reductions measures are planned. What water saving messages have been issues. Identification of potential and actual restrictions (e.g. hosepipe bans) and the cessation of restrictions.	Supply and Resources Director /Head of Water Strategy/Director of Customer Services	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed.	By letter and email.
SSW's Customer Consultative Committee	Chairman	SSW's water resources position. What actions SSW are taking. In particular what impact there may be on customers. What additional demand management and leakage reductions measures are planned. What water saving messages have been issues. Identification of potential and actual restrictions (e.g. hosepipe bans) and the cessation of restrictions.	Supply and Resources Director /Head of Water Strategy/Director of Customer Services	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed.	Initially by letter and email. Subsequently via meetings as required.

Stakeholders and Interested Parties	Stakeholder Contact	Information Required	SSW Coordinator	SSW Information Provider	Timing and Frequency of Communication	Communication Method
Water UK	Policy Development Advisor	SSW's water resources position. What actions SSW are taking. Identification of potential and actual restrictions (e.g. hosepipe bans). Detailed communication on drought permit and order applications.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed (see Section 4 of this Drought Plan). In particular, however there will need to be close dialogue as the Apply for Drought Permit and Hosepipe Ban triggers are approached.	By email.
British Waterways	Head of Hydrology and Water Management	SSW's water resources position. What actions SSW are taking. In particular those actions which may impact on British Waterways (e.g. drought permits or drought orders).	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed.	By letter and/or email.
East Midlands Development Agency	Director of Spatial and Sustainable Development	SSW's water resources position. What actions SSW are taking. With particular emphasis on the potential impact on commercial customers in the East Midlands.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed.	By letter and/or email.

Stakeholders and Interested Parties	Stakeholder Contact	Information Required	SSW Coordinator	SSW Information Provider	Timing and Frequency of Communication	Communication Method
West Midlands Development Agency	Chief Executive	As above, with particular emphasis on the potential impact on commercial customers in the West Midlands.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed.	By letter and/or email.
West Midlands Regional Assembly	Director of Corporate Services	SSW's water resources position. What actions SSW are taking.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed.	By letter and/or email.
East Midlands Regional Assembly	Director of Planning and Transport	SSW's water resources position. What actions SSW are taking.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed.	By letter and/or email.
Natural England (West Midlands)	Corporate Manager East Midlands	SSW's water resources position. What actions SSW are taking. Detailed communication on drought permit applications and environmental monitoring in the West Midlands, where this is associated with designated sites.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed.	By letter and/or email.
Natural England (East Midlands)	Corporate Manager West Midlands	SSW's water resources position. What actions SSW are taking. Detailed communication on drought permit applications and environmental monitoring	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which	By letter and/or email.

Stakeholders and Interested Parties	Stakeholder Contact	Information Required	SSW Coordinator	SSW Information Provider	Timing and Frequency of Communication	Communication Method
		in the East Midlands, where this is associated with designated sites.			drought triggers are crossed.	
English Heritage (West Midlands)	Regional Planner	SSW's water resources position. What actions SSW are taking. Detailed communication on drought permit applications and environmental monitoring in the West Midlands as required.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed.	By letter and/or email.
English Heritage (East Midlands)	Regional Planner	SSW's water resources position. What actions SSW are taking. With particular emphasis on the potential impact on commercial customers in the East Midlands as required.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed.	By letter and/or email.
Peak District National Park Authority	Head of Conservation	SSW's water resources position. What actions SSW are taking. With particular emphasis on the potential impact on the Peak District.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed.	By letter and/or email.
Countryside Agency (West Midlands)	Regional Director	SSW's water resources position. What actions SSW are taking. With particular emphasis on the potential impact on relevant issues in the West Midlands.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on drought triggers.	By letter and/or email.
Countryside Agency (East Midlands)	Regional Director	As above	Head of Water Strategy	Water Strategy Unit	As Above	By letter and/or email.

Stakeholders and Interested Parties	Stakeholder Contact	Information Required	SSW Coordinator	SSW Information Provider	Timing and Frequency of Communication	Communication Method
Birmingham City Council	Director of Planning	SSW's water resources position. What actions SSW are taking. Water saving messages. Identification of potential and actual restrictions (e.g. hosepipe bans) and the cessation of restrictions. Key issues of relevance to the local authority in question.	Head of Water Strategy	Water Strategy Unit	Continuous. The timing and frequency of communication will depend on which drought triggers are crossed.	By letter and/or email.
Bromsgrove District Council	Corporate Services Director					
Cannock Chase District Council	Chief Executive					
Derbyshire County Council	Chief Executive					
Dudley MBC	Chief Executive					
East Staffs Borough Council	Principal Officer					
Leicestershire County Council	Chief Executive					
Lichfield District Council	Corporate Director					
North West Leicestershire Council	Principal Planning Officer					
Sandwell MBC	Chief Executive					
South Derbyshire District Council	Deputy Chief Executive					
South Staffs Council	Chief Executive					
Staffordshire County Council	Chief Executive					
Walsall MBC	Chief Executive					
Wyre Forest District Council	Chief Executive					

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS

(Option 1 – Fully Utilise Available Sources)

		Option 1: Ensure Existing Baseline Sources are Fully Operational
Option Implementation Assessment	Triggers or Preceding Actions	Triggered by reservoir storage levels falling below the Blithfield Drought Monitoring Curve or EA Clywedog Drought Alert Curve. Preceded by a review of operational capacity and planned outages by the weekly Supply Planning team.
	Deployable Output of Option	N/A The deployable output from these sources is already assumed to be in the Company resource base.
	Implementation Timetable Preparation, time of year effective, duration.	It is expected that the majority of sources can be made fully operational in 4 weeks. This action will take place early on in the drought management sequence and is most likely to occur in the spring or early summer. Fully operational sources will continue in supply throughout the drought.
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	No approvals required, these sources would operate under existing abstraction licence conditions.
	Risks Associated with Option	The normal operational risks would apply, such as unplanned outages.
	Risk to the Environment High, medium, low, or unknown	Low, sources will abstract within existing licence constraints.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
 (Option 1 – Fully Utilise Available Sources - continued)

Environmental Assessment	Summary of Possible Environmental Impacts	None.
	Details of Studies Undertaken or Required	N/A
	Monitoring Requirements	The Company undertakes flow monitoring under existing abstraction licence conditions on the Rising Brook associated with Slitting Mill and Moors Gorse pumping stations. The EA undertake routine monitoring in all catchments
	Mitigation Actions	A compensation flow discharge is required from Moors Gorse pumping station under existing licence conditions.
	Impact on Other Activities, Public, industry etc.	None.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
(Option 2 – Preserve Blithfield Storage)

		Option 2: Increase abstraction from the River Severn and reduce abstraction from Blithfield Reservoir
Option Implementation Assessment	Triggers or Preceding Actions	<p>Triggered by reservoir storage levels falling below the Blithfield Drought Monitoring Curve. As storage continues to fall in Blithfield abstraction will be progressively reduced to preserve storage (see section 5.3)</p> <p>Preceded by a review of operational capacity and resource availability on the River Severn at Hampton Loade by the Drought Management Team, and by a reservoir storage forecast for Blithfield.</p>
	Deployable Output of Option	N/A The deployable output from this action is already accounted for in the Company resource base.
	Implementation Timetable Preparation, time of year effective, duration.	<p>This action can be implemented immediately.</p> <p>This action can take place at any time, depending on storage levels at Blithfield and the available water resource on the River Severn. This action will continue until Blithfield stocks increase to 5% or more above the Drought Monitoring Line.</p>
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	No approvals required, these sources would operate under existing abstraction licence conditions.
	Risks Associated with Option	The normal operational risks would apply, such as unplanned outages, for example poor raw water quality.
	Risk to the Environment High, medium, low, or unknown	Low, sources will abstract within existing licence constraints.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
 (Option 2 continued – Preserve Blithfield Storage)

Environmental Assessment	Summary of Possible Environmental Impacts	None.
	Details of Studies Undertaken or Required	N/A
	Monitoring Requirements	The Company monitors storage levels at Blithfield Reservoir, and receives Clywedog storage and River Severn flow at Bewdley from the EA.
	Mitigation Actions	N/A
	Impact on Other Activities, Public, industry etc.	None.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
(Option 3– Use Nethertown Pumpback)

		Option 3: River Blithe (Nethertown) Pumpback
Option Implementation Assessment	Triggers or Preceding Actions	Triggered by reservoir storage levels falling below the Blithfield Drought Monitoring Curve. Abstraction from the River Blithe is pumped up to Blithfield. Preceded by a review of operational readiness and resource availability on the River Blithe and flow conditions on the River Trent (see below).
	Deployable Output of Option	N/A The deployable output from this action is already accounted for in the Company resource base.
	Implementation Timetable Preparation, time of year effective, duration.	This action can be implemented immediately. This action can take place at any time, this will depend on storage levels at Blithfield and the flow on the Blithe and Trent. This action will continue until Blithfield stocks increase to 5% or more above the Drought Monitoring Line.
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	No approvals required, these sources would operate under existing abstraction licence conditions. A residual flow (normally 9 MI/d) must be maintained on the Blithe at Nethertown. The abstraction from Nethertown (and the supporting River Trent abstraction) is restricted by a flow condition on the abstraction licence. When flow on the River Trent at North Muskham (near Newark) falls below 2,650 MI/d abstraction must cease at Nethertown and on the Trent.
	Risks Associated with Option	The normal operational risks would apply, such as unplanned outages, e.g. pump failure. The main problem with this option is that it is likely that for long periods in a drought, the flow on the Trent at North Muskham is likely to be below 2,650 MI/d.
	Risk to the Environment High, medium, low, or unknown	Low, sources will abstract within existing licence constraints.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
 (Option 3 continued – Use Nethertown Pumpback)

Environmental Assessment	Summary of Possible Environmental Impacts	None.
	Details of Studies Undertaken or Required	N/A
	Monitoring Requirements	The Company monitors storage levels at Blithfield Reservoir, compensation releases from Blithfield, and flow on the River Blithe at Nethertown. The EA monitor river Flow at North Muskham on the Trent, and inform South Staffs when and receives Clywedog storage and River Severn flow at Bewdley from the EA.
	Mitigation Actions	Abstraction from the River Trent is required to maintain the residual flow on the Blithe at Nethertown (usually 9 MI/d) when flows are low on the Blithe.
	Impact on Other Activities, Public, industry etc.	None.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
(Option 4– Use Nitrate Treatment Sources)

		Option 4: Introduce Standby Nitrate Treatment Sources
Option Implementation Assessment	Triggers or Preceding Actions	Triggered by reservoir storage levels falling below the Blithfield Drought Monitoring Curve. Operation of Little Hay and Shenstone are preceded by a 2 week process to get their nitrate treatment works up and running. Sandhills source can be pumped directly to Pipe Hill treatment works which is already operational.
	Deployable Output of Option	N/A The deployable output from this action is already accounted for in the Company resource base.
	Implementation Timetable Preparation, time of year effective, duration.	Operation of Little Hay and Shenstone are preceded by a 2 week process to get their nitrate treatment works up and running. Sandhills source can be pumped directly to Pipe Hill treatment works at short notice,as this is already operational. This action can take place at any time, this will depend on storage levels at Blithfield and the flow on the Blithe and Trent. However it is most likely to take place early on in a drought (spring/early summer) and continue until Blithfield stocks increase to 5% or more above the Drought Monitoring Line.
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	No approvals required, these sources would operate under existing abstraction licence conditions.
	Risks Associated with Option	The normal operational risks would apply, such as unplanned outages, e.g. pump failure.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
 (Option 4 continued – Use Nitrate Treatment Sources)

Environmental Assessment	Risk to the Environment High, medium, low, or unknown	Low, sources will abstract within existing licence constraints.
	Summary of Possible Environmental Impacts	None.
	Details of Studies Undertaken or Required	N/A
	Monitoring Requirements	None
	Mitigation Actions	N/A
	Impact on Other Activities, Public, industry etc.	None.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
(Option 5– Bulk Supply)

		Option 5: Bulk Supply from Severn Trent Water
Option Implementation Assessment	Triggers or Preceding Actions	<p>Triggered by reservoir storage levels falling below the Apply for Drought Permit curve at Blithfield or Clwedog.</p> <p>Preceded by a reservoir storage forecast for Blithfield, and by a forecast for Clywedog (from the EA and STW)., and by a meeting with STW to examine the potential for any bulk supplies. This is unlikely (see section 5.3.5), however the option has been included for completeness.</p>
	Deployable Output of Option	The existing emergency bulk supply agreements allow for c. 5 Ml/d, however this is only likely to be available for a few weeks.
	Implementation Timetable Preparation, time of year effective, duration.	<p>It is anticipated that it would take 2-3 weeks to meet with STW and to consider the local network issues and detailed feasibility at the time.</p> <p>This action could take place at any time during the year. However, it is most likely to take place later on in a drought (late summer/ early autumn). The maximum duration of the emergency bulk supply is likely to be less than 1 month.</p>
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	Any increase in bulk supply would require the approval of STW, and this would require that STW did not have a predicted or actual resource issue (this is a condition in the agreement). This is most unlikely if SSW are experiencing a drought.
	Risks Associated with Option	The risks are that STW will not have available resources, that the bulk supply requires additional treatment or additional infrastructure or network modifications (as they have never been used).

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
 (Option 5 continued – Bulk Supply)

Environmental Assessment	Risk to the Environment High, medium, low, or unknown	Low
	Summary of Possible Environmental Impacts	None.
	Details of Studies Undertaken or Required	N/A
	Monitoring Requirements	None
	Mitigation Actions	N/A
	Impact on Other Activities, Public, industry etc.	None.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
(Option 6– Hanch Tunnel)

		Option 6: Hanch Tunnel Drought Permit
Option Implementation Assessment	Triggers or Preceding Actions	<p>Triggered by reservoir storage levels falling below the Apply for Drought Permit trigger curve at Blithfield or Clywedog.</p> <p>Preceded by a reservoir storage forecast for Blithfield, and by a forecast for Clywedog (from the EA and STW), and by a meeting with the EA to discuss the proposed application. See also demand management options.</p>
	Deployable Output of Option	Up to 3 Ml/d
	Implementation Timetable Preparation, time of year effective, duration.	It is expected that preparation of the drought permit application and the meeting with the EA will begin 3-4 weeks before the trigger line is crossed. This action could take place at any time during the year. However, it is most likely to take place later on in a drought (late summer/ early autumn). The drought permit is likely to remain in place for at least 12 weeks, and until reservoir storage at Blithfield and Clywedog is 5% above the Drought Monitoring/Alert trigger.
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	Application would be to the Environment Agency who are responsible for determining drought permit applications. This may then require DEFRA approval if referred by the EA (and may require a Drought Order). Liaison with the EA would take place 3-4 weeks prior to the application. Liaison would include Natural England as the Stow Pool SSSI is within the catchment of the abstraction.
	Risks Associated with Option	The risks are that the drought permit application will not be accepted by EA and/or DEFRA, or that a public inquiry is required which would delay implementation. However given the low environmental impact this is unlikely.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
 (Option 6 continued – Hanch Tunnel Drought Permit)

	Risk to the Environment High, medium, low, or unknown	Low, based on test pumping and environmental assessment (see section 7.2).
Environmental	Summary of Possible Environmental Impacts	The test pumping and monitoring programme has shown that this permit is very unlikely have any impact on the Leamonsley Brook or the Stowe Pool. Mitigation measure are available if required.
	Details of Studies Undertaken or Required	3 month test pumping, with environmental monitoring and sampling, to support an environmental assessment (see section 7.2)
	Monitoring Requirements	The existing baseline monitoring by the Environment Agency will continue. The Company will continuously measure overflow from the tunnel. (see section 8 – Environmental Monitoring Plan)
	Mitigation Actions	South Staffs Water have the capability to abstract water from Shaft 20 of the Hanch Tunnel (adjacent to the Leamonsley Brook) and discharge this to the Leamonsley Brook, by consent from the EA, to support brook flows and levels in Stow Pool SSSI. This discharge is linked to a trigger level in Stow Pool. This measure will be included in any permit application.
	Impact on Other Activities, Public, industry etc.	None.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
 (Option 6– Blithe/Trent Drought Permit)

		Option 7: Drought Permit for River Blithe (Nethertown) and River Trent
Option Implementation Assessment	Triggers or Preceding Actions	<p>Triggered by reservoir storage levels falling below the Apply for Drought Permit trigger curve at Blithfield or Clywedog, and river flows on the Trent at North Muskham falling below 2,650 MI/d</p> <p>Preceded by a reservoir storage forecast for Blithfield, a forecast for Clywedog (from the EA and STW), and by a meeting with the EA to discuss the proposed application. See also demand management options.</p>
	Deployable Output of Option	1-2 MI/d annual Average (although this is constrained by the modelling scenario and could be significantly higher – see section 7.3)
	Implementation Timetable Preparation, time of year effective, duration.	It is expected that preparation of the drought permit application and the meeting with the EA will begin 3-4 weeks before the trigger line is crossed. This action could take place at any time during the year. However, it is most likely to take place later on in a drought (late summer/ early autumn). The drought permit is likely to remain in place for at least 12 weeks, and until reservoir storage at Blithfield and Clywedog is 5% above the Drought Monitoring/Alert trigger.
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	Application would be to the Environment Agency who are responsible for determining drought permit applications. This may then require DEFRA approval if referred by the EA (and may require a Drought Order). Liaison with the EA would take place 3-4 weeks prior to the application.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
 (Option 6 continued – Blithe/Trent Drought Permit)

	Risks Associated with Option	The risks are that the drought permit application will not be accepted by EA and/or DEFRA, or that a public inquiry is required which would delay implementation. However given the low level of environmental or other stakeholder impact, this risk is considered to be low.
Environmental Assessment	Risk to the Environment High, medium, low, or unknown	Low, based on environmental assessment(see section 7.3 and Appendix I)
	Summary of Possible Environmental Impacts	There are no significant environmental impacts likely from the permit (see section 7.3 Appendix I)
	Details of Studies Undertaken or Required	A detailed environmental assessment has been completed (see section 7.3)
	Monitoring Requirements	Given that there are no significant impacts identified, no monitoring is proposed, other than the existing monitoring undertaken by the EA (see section 6 – Environmental Monitoring Plan)
	Mitigation Actions	None required
	Impact on Other Activities, Public, industry etc.	None.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
(Option 7– River Severn Drought Permit)

		Option 8: Drought Permit for River Severn at Hampton Loade
Option Implementation Assessment	Triggers or Preceding Actions	<p>Triggered by reservoir storage levels falling below the Implement Drought Order trigger curve at Clywedog and Maximum Regulation in place on the River Severn. In addition projected storage levels at Blithfield will be considered before applying for this permit (see additional discussion in section 4 and 5). It is likely that a drought permit would already be in place on the Blithe before this option was pursued.</p> <p>Preceded by a reservoir storage forecast for Blithfield, and by a forecast for Clywedog (from the EA and STW), and by a meeting with the EA to discuss the proposed application. See also demand management options.</p>
	Deployable Output of Option	1-2 MI/d annual average (although this is constrained by the modelling scenario and could be significantly higher – see section 7.3), 10-40MI/d peak week
	Implementation Timetable Preparation, time of year effective, duration.	It is expected that preparation of the drought permit application and the meeting with the EA will begin 3-4 weeks before the trigger line is crossed. This action is likely to be restricted to the late summer/ early autumn. The drought permit is likely to remain in place for at least 12 weeks, and until reservoir storage at Clywedog and/or Blithfield is 5% above the Drought Alert/Monitoring trigger.
	Permissions Required and Constraints Including details of liaison with bodies responsible for giving permits or approvals	Application would be to the Environment Agency who are responsible for determining drought permit applications. This is likely to require DEFRA approval given the conflict of interest with an EA Drought Order. Liaison with the EA would take place 3-4 weeks prior to the application.
	Risks Associated with Option	The risks are that the drought permit application will not be accepted by EA and/or DEFRA, or that a public enquiry is required which would delay implementation.

APPENDIX H DROUGHT OPTIONS – SUPPLY MANAGEMENT OPTIONS
 (Option 7 continued– River Severn Drought Permit)

Environmental Assessment	<p>Risk to the Environment High, medium, low, or unknown</p>	<p>Low for a South Staffordshire Water permit in isolation, based on the environmental assessment (see section 7.4 and Appendix J). Medium for a South Staffs permit in combination with a Severn Trent permit at Trimley.</p>
	<p>Summary of Possible Environmental Impacts</p>	<p>It is possible that there could be some impacts of a South Staffs permit in-combination with a Severn Trent permit. Impacts are possible in the upper estuary for fish/angling and for the navigation/abstraction issues associated with Gloucester & Sharpness Canal. These impacts are a direct result of the water quality problems (saline intrusion, high turbidity and DO sags) associated with the critical combination of very low flow and Spring tides in the upper estuary.</p>
	<p>Details of Studies Undertaken or Required</p>	<p>Detailed environmental assessment (see section 7.4 and Appendix J)</p>
	<p>Monitoring Requirements</p>	<p>Additional dissolved oxygen, turbidity and salinity measurements. Monitoring requirements and ownership needs to be agree with a range of stakeholders on the river (see section 8 – Environmental Monitoring Plan)</p>
	<p>Mitigation Actions</p>	<p>Existing and potential mitigation actions have been identified, however these have not been examined in detail or agreed. The environment report highlights that there are options that have already been initiated that could substantially alleviate the water quality and related problems in the upper estuary during critical flow-tide periods, and that further options are available. The mitigation options include changes to abstraction operations and river regulation, with the aim of alleviating water quality problems (dissolved oxygen sags, turbidity, and saline intrusion) in the Upper Estuary and associated impacts to fisheries and the abstraction to the Gloucester & Sharpness Canal. Most of these actions are under the remit of the EA and are already under consideration.</p>
	<p>Impact on Other Activities, Public, industry etc.</p>	<p>None.</p>

APPENDIX I HAMPTON LOADE ENVIRONMENTAL ASSESSMENT (EXECUTIVE SUMMARY)

(taken from the environmental assessment by ENVIROS, which is available in full from the Water Resources Manager at South Staffs Water, Green Lane, Walsall, WS2 7PD)

Background

The River Severn provides a source of drinking water to approximately 6 million people throughout the Midlands as well as meeting demands for a range of agriculture, industry and navigation purposes.

The River Severn is highly regulated with flows supported by releases from Clywedog and Vyrnwy reservoirs and from the Shropshire Groundwater Scheme (SGWS). The regulation system is designed to meet demands for public water supply, irrigation, industry and navigation as well as maintaining minimum flow levels of 850 M/d (5 day average) at Bewdley, which is considered necessary to support biodiversity and conservation interests.

South Staffordshire Water (SSW) abstracts water from the River Severn at Hampton Loade, upstream from the Bewdley flow gauge. Depending on the status of river regulation or flow at Bewdley, there can be significant constraints imposed on the permitted rate of abstraction at Hampton Loade, resulting in significant pressure on SSW's ability to meet Public Water Supply during periods of very low flow. In order to maintain public supply during the most severe drought conditions SSW intends to include the option of a Drought Permit at Hampton Loade in their Final Drought Plan (due for publication in June 2007).

Purpose

The purpose of the study was to investigate the potential hydrological and ecological impacts of the proposed Drought Permit at Hampton Loade and to provide an Environmental Report for use in support of the future Drought Permit application. This report outlines the environmental assessments undertaken to determine the likely impacts of the proposal on the main human and ecological interests of the River Severn Corridor. These include riverine, estuarine and riparian ecology, heritage and archaeology, navigation and amenity (including angling) and protected rights (i.e. abstractions and discharges).

Preliminary Risk Assessment

Following the process of conceptualisation of the River Severn catchment and identification of sources, pathways and receptors an initial risk assessment was undertaken, in accordance with precautionary principles, to determine the likely significant impacts associated with the operation of a Drought Permit at Hampton Loade. Those risks identified as being low (or

greater) were initially deemed to be significant and were subjected to further, more detailed assessments.

The risk assessment was undertaken for four scenarios looking at different changes to the current abstraction regime (under maximum regulation conditions) at Hampton Loade and cumulative pressure that may result from a simultaneous drought permit at Trimpley (operated by Severn Trent Water). The most severe scenario tested was Scenario 3 where abstraction at Hampton Loade was maintained at 245MI/d (up from 192MI/d) and an additional 120MI/d was modelled as being abstracted at Trimpley (this is the difference between the normal 60MI/d abstraction and the maximum drought permit abstraction of 180MI/d under consideration).

The outcomes of the initial risk assessment indicated that when the proposed Hampton Loade drought permit was considered in isolation almost all of the risks were negligible or very low. However; when analysing in combination effects the risk levels increased. For scenario 3 risks (from low to medium) were evident for a number of receptors in all reaches of the River downstream of the abstraction.

Outcomes of Further Assessment

Based on the outcomes of the initial risk assessment (for Scenario 3), a number of receptors (including riverine and estuarine ecology, protected rights, navigation and amenity, riparian ecology and heritage) were identified as being at low or greater risk and were subjected to additional level and flow related analysis to further quantify the likely impacts.

Subsequent to the additional level and flow related assessments it was concluded that most receptors are unlikely to be impacted significantly by the operation of a Drought Permit at Hampton Loade (even when considered in combination with additional abstraction at Trimpley). However, significant impacts are likely in the upper estuary (reaches 7-8) for fish/angling and for the navigation/abstraction issues associated with Gloucester & Sharpness Canal.

These impacts are a direct result of the water quality problems (saline intrusion, high turbidity and DO sags) associated with the critical combination of very low flow and spring tides in the upper estuary. Whilst it is acknowledged that measures have been put in place to reduce such occurrences, it is felt that such impacts could still potentially occur during extreme periods of low flow in combination with Spring tides.

Although these issues have already been highlighted as a concern to the upper estuary, the proposed additional abstraction during these critical periods is likely to exacerbate existing impacts. While all assessments were undertaken using very precautionary approaches, consideration of the available mitigation measures is necessary to ensure the ecology and protected rights of the upper estuary are protected.

A number of mitigation options have been identified for consideration which could be carried out, either in isolation or through a combination of activities, which would substantially alleviate the water quality and related problems in the upper estuary during these critical flow-tide periods. Finally, it was concluded that the adoption of a more flexible approach to abstraction operations, regulation operations and the terms of associated licences could enable an overall increase in abstraction, whilst maintaining (or possibly improving) the safeguards to the environment.

Under prevailing low flow conditions it is envisaged that this would involve abstractions on the river that vary according to the tidal situation in the estuary. Under these circumstances higher rates of abstraction could be sustained during neap tide conditions. Part of this additional abstraction would be used to either replenish bankside storage or conserve reservoir stocks. This would allow selected abstractions to be safely limited during Spring tides enabling residual flows to the estuary to be transitorily increased.

In conjunction with the above enhanced water quality monitoring in the upper estuary is also recommended that consideration should also be given to enhance monitoring of the associated fishery.

APPENDIX J BLITHE/TRENT ENVIRONMENTAL ASSESSMENT (EXECUTIVE SUMMARY)

(taken from the environmental assessment by ENVIROS, which is available in full from the Water Resources Manager at South Staffs Water, Green Lane, Walsall, WS2 7PD)

Background

The River Trent is the second largest river in England (in terms of river flow) and provides a source of public water supply (PWS) to a number of large urban areas throughout the West Midlands, including Stoke on Trent, Burton on Trent and Nottingham. In addition, the river provides a source of water for agriculture, industry and navigation purposes. The middle reaches of the River are dominated by agriculture, in addition to industrial areas comprising sand and gravel quarrying. Electricity production is also a key feature along the River Trent and is associated with large water abstractions.

The major tributaries of the River Trent include the Rivers Sow, Blithe, Tame, Dove, Derwent, Soar, Devon and Idle. The River Trent meets the River Ouse at Trent Falls, where the two rivers discharge into the Humber Estuary.

There are a number of conservation sites dependent upon water from the River Trent. Designated sites include those that have been recognised for both their national and international importance, as well as areas with regional or local significance due to the presence of a valuable habitat or species. The Humber Estuary is proposed as a Special Area of Conservation (SAC), is designated as a Special Protection Area (SPA) and listed as an internationally important wetland site under the Ramsar Convention.

South Staffordshire Water (SSW) is responsible for water abstraction, treatment and PWS across part of the West Midlands serving some 1.25 million people. SSW abstracts water from Blithfield Reservoir on the River Blithe, on the lower Blithe (at Nethertown) and on the River Trent upstream of the Blithe Tributary.

The Environment Agency operates a regulatory 'Hands off Flow' (HoF) of 2650 Ml/d on the River Trent at the North Muskhams gauging station (near Newark). SSW intend to submit a Drought Permit Application which would seek to remove these control flow restrictions on their Blithe and Trent operations and thereby maintain inflows to Blithfield Reservoir and compensatory augmentation of the River Blithe along the stretch downstream of the intake.

Following criticisms by the Environment Agency on SSWs 2003 Drought Plan, a review of options in the current draft Drought Plan (March 2006) identified a range of new options, one of which was the Blithe / Trent Drought Permit. This is considered necessary to help to manage water supply operations through future droughts.

Purpose

The purpose of the study was to investigate the potential hydrological and ecological impacts of SSWs proposed Blithe and Trent Drought Permit and to provide an Environmental Report for use in support of the future Drought Permit application. This report outlines the environmental assessments undertaken to determine the likely impacts of the proposal on the main human and ecological interests of the Rivers Blithe and Trent. These include chemical water quality, riverine ecology, heritage, navigation and amenity (including angling) and protected rights (i.e. abstractions and discharges).

Preliminary Risk Assessment

Following the process of conceptualisation of the River Trent catchment and identification of sources, pathways and receptors an initial risk assessment was undertaken, in accordance with precautionary principles, to determine the likely significant impacts associated with the operation of the Blithe/Trent Drought Permit. As a precautionary approach, those risks identified as being low (or greater) were initially deemed to be significant and were subjected to further, more detailed assessments.

The risk assessment was undertaken for the following four scenarios:

- (i) Operation of the Blithe and Trent Drought Permit in isolation;
- (ii) Operation of the Blithe and Trent Drought Permit in combination with the additional lower drought related licensed control flow conditions on the River Dove;
- (iii) Operation of the Blithe and Trent Drought Permit in combination with Severn Trent Water Ltds (STWL) Derwent Drought Permit; and,
- (iv) Operation of the Blithe and Trent Drought Permit in combination with both the River Derwent Drought Permit and additional drought related licence conditions on the River Dove.

The outcomes of the initial risk assessment indicated that the risk of impact to the Rivers Blithe and Trent were generally very low or less resulting from the operation of the proposed Drought Permit. A number of reaches and receptors showed 'Low' risks of impact. No additional impacts were evident when the proposed Drought Permit operated in combination with STWLs Drought Permit on the River Derwent (Scenario 3), or when both Drought Permits operated concurrently with additional abstractions on the River Dove (Scenario 4).

Two receptors (angling and riparian ecology) showed increased risks, from 'Very Low' to 'Low' associated with operation of both the Blithe and Trent Drought Permit and additional abstraction on the River Dove.

Outcomes of Further Assessment

Based on the outcomes of the initial risk assessment, a number of receptors (including chemical water quality, invertebrates, fisheries, protected rights, riparian ecology and heritage) were identified as being at low risk, particularly in Reaches 1b, 5, 6, 7 and 8 and were subjected to further assessment (including level analysis) to further quantify the likely impacts.

Subsequent to the additional level and flow related assessments it was concluded that all reaches and receptors are unlikely to be impacted significantly by the operation of the proposed Blithe and Trent Drought Permit.

Although additional mitigation measures were not deemed necessary because of the low levels of associated impact, it was recommended that further consultation is undertaken to determine the appropriateness of adding an additional control flow at Yoxall. It was also recommended that SSW keep a watching brief on water quality and ecology in reaches 1b, 6, 7 and 8 to ensure there are no long term impacts to the environment in these reaches.

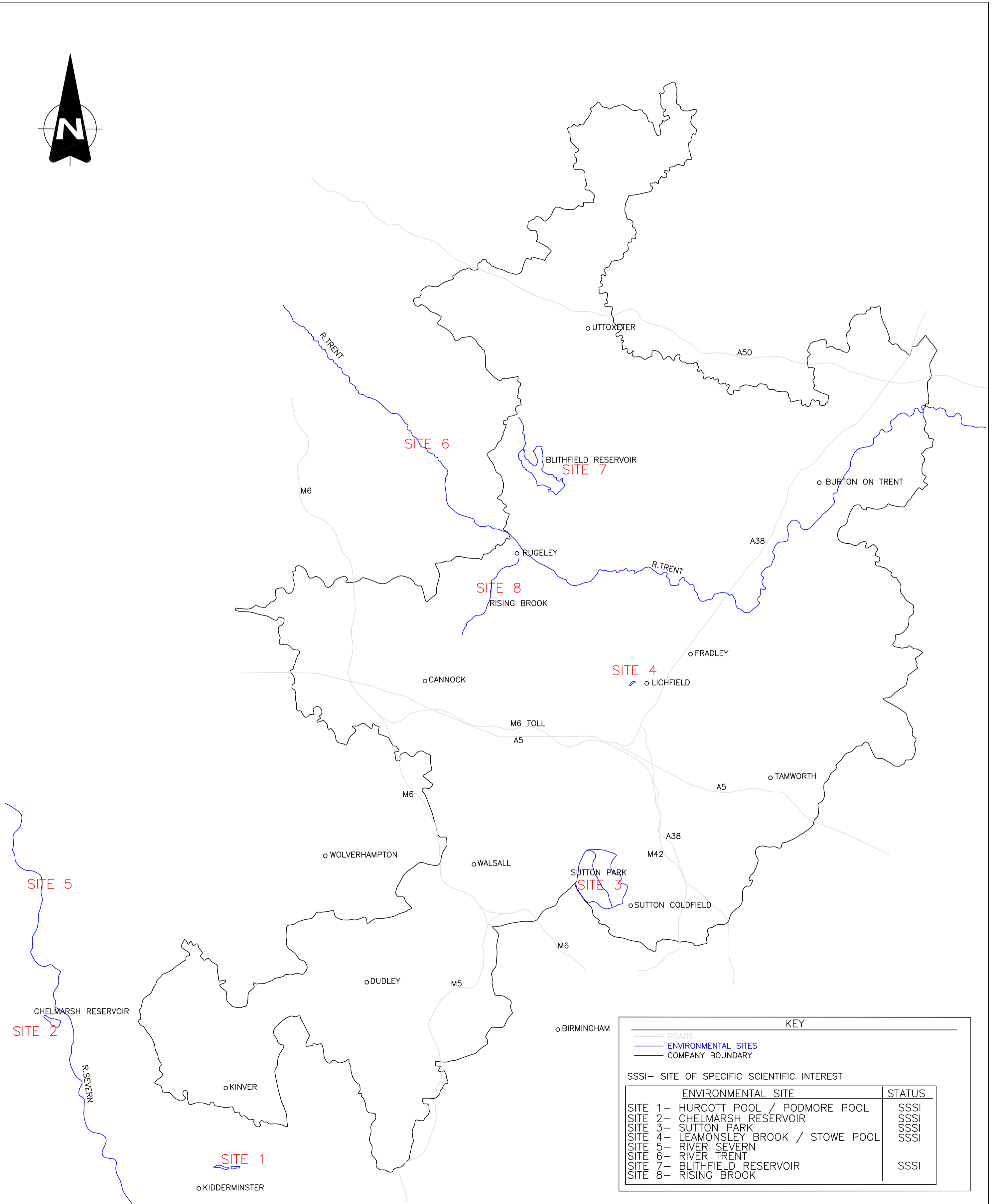
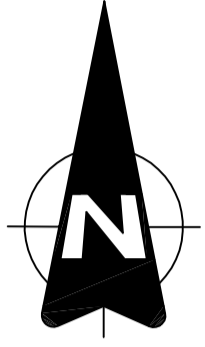
It can be concluded that the proposed Blithe and Trent Drought Permit would enable an overall increase in abstractions for PWS during severe drought periods, without causing any significant impacts to the environment, either alone or in combination with other key abstractions within the River Trent catchment.

APPENDIX K KEY ENVIRONMENTAL SITES



SOUTH STAFFORDSHIRE
WATER PLC

DROUGHT PLAN ENVIRONMENTAL SITES



KEY	
	ROADS
	ENVIRONMENTAL SITES
	COMPANY BOUNDARY
SSSI- SITE OF SPECIFIC SCIENTIFIC INTEREST	
ENVIRONMENTAL SITE	STATUS
SITE 1- HURCOTT POOL / PODMORE POOL	SSSI
SITE 2- CHELMARSH RESERVOIR	SSSI
SITE 3- SUTTON PARK	SSSI
SITE 4- LEAMONSLEY BROOK / STOWE POOL	SSSI
SITE 5- RIVER SEVERN	
SITE 6- RIVER TRENT	
SITE 7- BLITHFIELD RESERVOIR	SSSI
SITE 8- RISING BROOK	

APPENDIX L COMPANY DROUGHT MANAGEMENT STRUCTURE

Role Responsibility	Supply and Resources Director	Head of Water Strategy	Water Resources Manager	Northern Production Manager	Southern Production Manager	Network Controller	Director of Customer Services	First Tier Media team	Second Tier Media Team
Drought Plan Preparation									
	Review and Sign off Plan	Review and Sign off Plan	Update plan every 3 years and where material changes occur	Input to review of Plan	Input to review of Plan	Input to review of Plan	Input to review of Plan		
Normal Operation (Reservoir storage above the Drought Monitoring Trigger Curve)									
	Attend weekly Supply Planning Meetings as required	Attend weekly Supply Planning Meetings		Attend weekly Supply Planning Meetings	Attend weekly Supply Planning Meetings	Attend weekly Supply Planning Meetings			
		Identify when reservoir storage is approaching 1st trigger curve	Identify when reservoir storage is approaching 1st trigger curve						
			Produce Blithfield refill scenarios						

APPENDIX L COMPANY DROUGHT MANAGEMENT STRUCTURE (cont)

Role Responsibility	Supply and Resources Director	Head of Water Strategy	Water Resources Manager	Northern Production Manager	Southern Production Manager	Network Controller	Director of Customer Services	First Tier Media team	Second Tier Media Team
Drought Monitoring (Reservoir storage below the Drought Monitoring Trigger Curve at Blithfield or the Drought Alert Curve at Clywedog)									
	Set up Drought Management Team when storage crosses 1st curve		Contact EA Regional Drought Coordinator					Prepare to respond to media queries	Prepare to respond to media queries
			Produce Blithfield refill scenarios /seek Clywedog refill forecast from EA						
	Fortnightly meeting of Drought Management Team	Fortnightly meeting of Drought Management Team	Fortnightly meeting of Drought Management Team	Fortnightly meeting of Drought Management Team	Fortnightly meeting of Drought Management Team	Fortnightly meeting of Drought Management Team	Fortnightly meeting of Drought Management Team		
	Identify proposed drought mitigation options	Identify proposed drought mitigation options	Identify proposed drought mitigation options	Identify proposed drought mitigation options	Identify proposed drought mitigation options	Identify proposed drought mitigation options			
	Identify internal and external communications	Identify internal and external communications	Identify internal and external communications	Identify internal and external communications	Identify internal and external communications	Identify internal and external communications	Identify internal and external communications	Respond to media queries as required	Respond to media queries as required

APPENDIX L COMPANY DROUGHT MANAGEMENT STRUCTURE (cont)

Role Responsibility	Supply and Resources Director	Head of Water Strategy	Water Resources Manager	Northern Production Manager	Southern Production Manager	Network Controller	Director of Customer Services	First Tier Media team	Second Tier Media Team
Drought Monitoring (continued)									
	Confirm proposed drought mitigation options and communications with Board of Directors as Required	Coordinate Drought Communications	Instigate drought mitigation actions	Instigate drought mitigation actions	Instigate drought mitigation actions	Instigate drought mitigation actions	Confirm external drought communications with Board of Directors as Required		
		Identify when reservoir storage is approaching 2nd trigger curve	Identify when reservoir storage is approaching 2nd trigger curve.						
			Prepare Drought Permit Applications, Contact EA Regional Drought Coordinator.						

APPENDIX L COMPANY DROUGHT MANAGEMENT STRUCTURE (cont)

Role Responsibility	Supply and Resources Director	Head of Water Strategy	Water Resources Manager	Northern Production Manager	Southern Production Manager	Network Controller	Director of Customer Services	First Tier Media team	Second Tier Media Team
Drought Management (Reservoir Storage below the Apply for Drought Permit Trigger Curve)									
			Contact EA Regional Drought Coordinator					Prepare to respond to media queries	Prepare to respond to media queries
			Produce Blithfield refill scenarios /seek Clywedog refill forecast from EA						
	Weekly meeting of Drought Management Team	Weekly meeting of Drought Management Team	Weekly meeting of Drought Management Team	Weekly meeting of Drought Management Team	Weekly meeting of Drought Management Team	Weekly meeting of Drought Management Team			
	Identify proposed drought mitigation options	Identify proposed drought mitigation options	Identify proposed drought mitigation options	Identify proposed drought mitigation options	Identify proposed drought mitigation options	Identify proposed drought mitigation options			
	Agree internal and external communications	Agree internal and external communications	Agree internal and external communications	Agree internal and external communications	Agree internal and external communications	Agree internal and external communications		Respond to media queries as required	Respond to media queries as required

APPENDIX L COMPANY DROUGHT MANAGEMENT STRUCTURE (cont)

Role Responsibility	Supply and Resources Director	Head of Water Strategy	Water Resources Manager	Northern Production Manager	Southern Production Manager	Network Controller	Director of Customer Services	First Tier Media team	Second Tier Media Team
Drought Management (Continued)									
		Identify when reservoir storage is approaching 3rd trigger curve	Identify when reservoir storage is approaching 3rd trigger curve						
	Confirm Hosepipe Ban implementation with the Board of Directors	Instigate Hosepipe Ban	Instigate Hosepipe Ban						

APPENDIX L COMPANY DROUGHT MANAGEMENT STRUCTURE (cont)

Role Responsibility	Supply and Resources Director	Head of Water Strategy	Water Resources Manager	Northern Production Manager	Southern Production Manager	Network Controller	Director of Customer Services	First Tier Media team	Second Tier Media Team
Severe Drought Management (Reservoir Storage below the Implement Drought Permit/and Hose Pipe Ban Trigger Curve)									
			Contact EA Regional Drought Coordinator					Prepare to respond to media queries	Prepare to respond to media queries
			Produce Blithfield refill scenarios /seek Clywedog refill forecast from EA						
	Weekly meeting of Drought Management Team	Weekly meeting of Drought Management Team	Weekly meeting of Drought Management Team	Weekly meeting of Drought Management Team	Weekly meeting of Drought Management Team	Weekly meeting of Drought Management Team			
	Identify additional drought mitigation options	Identify additional drought mitigation options	Identify additional drought mitigation options	Identify additional drought mitigation options	Identify additional drought mitigation options	Identify additional drought mitigation options			

APPENDIX L COMPANY DROUGHT MANAGEMENT STRUCTURE (cont)

Role Responsibility	Supply and Resources Director	Head of Water Strategy	Water Resources Manager	Northern Production Manager	Southern Production Manager	Network Controller	Director of Customer Services	First Tier Media team	Second Tier Media Team
Severe Drought Management (Continued)									
	Agree proposed internal and external communications	Agree proposed internal and external communications	Agree proposed internal and external communications	Agree proposed internal and external communications	Agree proposed internal and external communications	Agree proposed internal and external communications		Respond to media queries as required	Respond to media queries as required
	Confirm additional proposed drought mitigation options and communications with Board of Directors as required (e.g. Non Essential Use Ban)	Coordinate drought communications. Instigate Non Essential Use Ban	Continue to liase with stakeholders over the detail of any drought permits. Cordinate additional drought monitoring.	Instigate drought mitigation actions	Instigate drought mitigation actions	Instigate drought mitigation actions			

APPENDIX L COMPANY DROUGHT MANAGEMENT STRUCTURE (cont)

Role Responsibility	Supply and Resources Director	Head of Water Strategy	Water Resources Manager	Northern Production Manager	Southern Production Manager	Network Controller	Director of Customer Services	First Tier Media team	Second Tier Media Team
Drought Cessation (Reservoir Storage at least 5% above the Drought Monitoring trigger curve)									
			Contact EA Regional Drought Coordinator						
			Produce Blithfield refill scenarios /seek Clywedog refill forecast from EA						
	Final meeting of Drought Management Team	Final meeting of Drought Management Team	Final meeting of Drought Management Team	Final meeting of Drought Management Team	Final meeting of Drought Management Team	Final meeting of Drought Management Team			
	Identify proposed drought cessation actions	Identify proposed drought cessation actions	Identify proposed drought cessation actions	Identify proposed drought cessation actions	Identify proposed drought cessation actions	Identify proposed drought cessation actions			

APPENDIX L COMPANY DROUGHT MANAGEMENT STRUCTURE (cont)

Role Responsibility	Supply and Resources Director	Head of Water Strategy	Water Resources Manager	Northern Production Manager	Southern Production Manager	Network Controller	Director of Customer Services	First Tier Media team	Second Tier Media Team
Drought Cessation (continued)									
	Identify proposed internal and external communications	Identify proposed internal and external communications	Identify proposed internal and external communications	Identify proposed internal and external communications	Identify proposed internal and external communications	Identify proposed internal and external communications		Respond to media queries as required	Respond to media queries as required
		Coordinate drought communications.	Coordinate residual drought monitoring and reporting.	Restore normal operation	Restore normal operation	Restore normal operation			
			Review and Report on drought and amend Drought Plan as required.						

APPENDIX M EXAMPLE OF AN APPEAL FOR CUSTOMER DEMAND SAVINGS

South Staffordshire Water asks customers to use water wisely:

The recent hot spell has come at the end of a very dry period and has resulted in unprecedented demand for water throughout the whole of the Company's area.

Some customers have been affected by reductions in pressure, particularly in isolated areas and the Company has taken positive action to improve the situation.

Although the Company currently has adequate resources to provide sufficient water for domestic use, we are asking customers not to use hosepipes or sprinklers, but to use a garden watering can instead. We are also asking that non-essential uses of water are postponed e.g. car washing and patio pressure-washing.

A spokesperson for the Company said: "With the continuing hot weather and little prospect of prolonged rain, unless customers avoid the unnecessary use of water, reservoirs will be depleted and customers may find themselves without water. Common sense use of water will ensure that all customers will receive an adequate amount of water for their essential domestic use".

We would like to thank customers in anticipation of their help and co-operation.

Dr J Carnell
Managing Director
South Staffordshire Water PLC

Tel: 01922 638282

APPENDIX N EXAMPLE OF A HOSEPIPE BAN NOTIFICATION

SOUTH STAFFORDSHIRE WATER PLC
WATER INDUSTRY ACT 1991

PROHIBITION OF THE USE OF WATER THROUGH HOSEPIPES AND SIMILAR APPARATUS

Notice is hereby given that a serious deficiency of water available for distribution by South Staffordshire Water PLC exists or is threatened in the area specified in the Schedule hereto.

Under powers conferred by Section 76 of the Water Industry Act 1991, South Staffordshire Water PLC therefore prohibit the use of water supplied by the Company and drawn through hosepipe or similar apparatus for the purpose of watering private gardens or washing private motor cars in the area specified in the Schedule below.

This prohibition shall take effect from XXXXX until further notice.

AREA AFFECTED BY THE PROHIBITION

Those customers supplied by South Staffordshire Water PLC in the following areas:

East Staffordshire Borough Council (including Burton, Abbots Bromley, Uttoxeter, Mayfield)
Cannock Chase District Council (including Rugeley, Cannock)
South Staffordshire District Council (including Penkridge, Kinver)
Lichfield District Council
Tamworth Borough Council
Birmingham City Council (Sutton Coldfield)
Walsall Metropolitan Borough (including Aldridge)
Sandwell Metropolitan Borough (including West Bromwich, Smethwick, Blackheath)
Dudley Metropolitan Borough (including Halesowen)
Bromsgrove District Council (Romsley)
South Derbyshire District Council (Castle Gresley, Overseal)
North West Leicestershire District Council (Chilcote)

Dr J Carnell
Managing Director

South Staffordshire Water PLC
Green Lane
Walsall
West Midlands
WS2 7PD

APPENDIX O EXAMPLE OF A HOSEPIPE BAN CESSATION NOTICE

SOUTH STAFFORDSHIRE WATER PLC
WATER INDUSTRY ACT 1991

RELAXATION OF PROHIBITION OF THE USE OF WATER THROUGH HOSEPIPES AND SIMILAR APPARATUS

Recent weather conditions and a positive response to our appeals have meant a substantial reduction in our peak demand and a significant increase of our reservoir levels. Subsequently, South Staffordshire Water is pleased to announce to our customers the relaxation of the ban on the use of hosepipes and garden sprinklers.

We would like to take this opportunity to thank customers for their help and co-operation during this difficult time and remind them that if they do operate a garden watering system, such as a sprinkler or hosepipe running unattended, they must have a water meter fitted to their property.

AREA AFFECTED BY THE RELAXATION OF PROHIBITION

Those customers supplied by South Staffordshire Water PLC in the following areas:

East Staffordshire Borough Council (including Burton, Abbots Bromley, Uttoxeter, Mayfield)
Cannock Chase District Council (including Rugeley, Cannock)
South Staffordshire District Council (including Penkridge, Kinver)
Lichfield District Council
Tamworth Borough Council
Birmingham City Council (Sutton Coldfield)
Walsall Metropolitan Borough (including Aldridge)
Sandwell Metropolitan Borough (including West Bromwich, Smethwick, Blackheath)
Dudley Metropolitan Borough (including Halesowen)
Bromsgrove District Council (Romsley)
South Derbyshire District Council (Castle Gresley, Overseal)
North West Leicestershire District Council (Chilcote)

Dr J Carnell
Managing Director
South Staffordshire Water PLC

Tel: 01922 638282

APPENDIX P

SOUTH STAFFS WATER

2007 DROUGHT PLAN

SUMMARY

1. Background

The past few years have seen a series of very dry summers and winters across England and Wales, and the 2005/6 drought affected much of the south of England, resulting in several Water Companies imposing restrictions on their customers. At South Staffordshire Water we are proud of our record of not having a hosepipe ban since the drought of 1976. However, we recognise the importance of managing these extreme events.

Our Drought Plan sets out how we will manage future droughts in order to maintain public supplies, whilst minimising the impact on our customers and on the environment.

The publication of the Draft Drought Plan in March 2006 was the first time that our Drought Plan has been made public and we are pleased to be able to show that we have incorporated comments from all of our stakeholders in our Final Drought Plan for 2007.

This document is a summary of the key elements of the Drought Plan, however should you wish to access the full document then this can be found on the Company's website, www.south-staffs-water.co.uk, or a copy can be requested by writing to the Water Resources Manager at South Staffs Water, Green Lane, Walsall, WS2 7PD.

2. Overview

The 2007 Drought Plan has been prepared in line with the Environment Agency's Planning Guideline issued in October 2005 and is an update of the Company's second Drought Contingency Plan, submitted to the Environment Agency in March 2003.

A draft of the plan was published on the Company's website in March 2006 and the plan was sent to a wide range of stakeholders. The representations received on the Draft Drought Plan have been considered and the plan has been amended where necessary.

Following the Water Act of 2003 drought plans are now statutory documents, which are submitted to the Secretary of State (DEFRA). The Secretary of State has considered the Company's response to the representations received on the Draft Drought Plan and has issued Directions to the Company (instructions on how the plan should be updated). These Directions have also been incorporated into this plan.

The plan will form the basis of internal procedures should a drought appear a realistic possibility in any one year, however it is not intended that the plan provides prescriptive rules to be followed in the event of a drought. The plan details the framework within which the Company will operate in such

circumstances, and every effort has been made to ensure that this framework reflects the practical operational issues that may arise. All droughts will be unique in terms of the exact impact on the Company and therefore decisions regarding appropriate actions to be taken will be made on a case by case basis.

The plan is intended to be sufficiently flexible so that we are able to respond to a range of drought scenarios, and these are described in the main report.

The Drought Plan includes:

- A summary of the Company's Supply / Demand position, and an indication of the drought conditions that could threaten the Company's ability to provide reliable water supplies to its customers.
- A detailed drought planning framework with triggers for operational changes that would be implemented as a drought develops.
- The Company's preferred sequence of demand and supply measures and their likely timing / impact, so as to ensure that any drought is managed effectively.
- The environmental monitoring and assessment that will accompany the drought actions.
- The internal and external drought management and reporting structure and the content and timing of communications messages to customers in the event of a drought.

3. Company Resource Position

The Company's 2004 Water Resources Plan includes details of our current and projected resource position. The 2004 plan confirmed that the Company currently has sufficient resources to meet dry year demand on an annual average, and a peak week basis, but that there may be a shortfall to meet peak demand in the year 2010/11. In the 2004 Water Resources Plan the Company planned that sufficient resources would be available to meet future dry year annual average and peak week demands, beyond the year 2030. The plan proposed that this would be achieved by reducing levels of leakage and by developing more resource capacity. The draft of the next water resources plan is due for publication on 1st April 2008, when the Company's supply demand forecast will be updated.

4. Levels of Service for Hosepipe Bans

Despite the drought conditions experienced in 1995, and 2005/6 the Company has not imposed a hosepipe ban since the record drought on the River Severn in 1976. This level of service was confirmed in the 2004 Water Resources

Plan.

Under exceptional circumstances the Company would consider implementation of a hosepipe ban, and this would be a requirement prior to any drought permit conditions becoming active. To implement a hosepipe ban earlier would result in an unacceptable level of service to our customers, as hosepipe bans would be in place more frequently, and in some years would not coincide with the benefit of drought permits.

The Company uses a water resources model to examine the availability of water resources during historic drought years. This model simulates the historic 84 year climate sequence (of reservoir inflows) for Blithfield Reservoir, and includes water resources availability for the River Severn. The latest model simulations suggest that a hosepipe ban could be required twice if this period of climate was repeated. A hosepipe ban frequency equivalent to once in every 40 years has therefore been used in this plan. The 84 year record includes the most severe drought on record (1976) and the more recent severe drought in 1995/6.

The Drought Plan provides information on the triggers and actions that will be necessary given a recurrence of these historic droughts, but also to manage as efficiently as possible, a drought event which is more severe than this. The plan includes a number of scenarios which demonstrate the robustness of the Companies triggers and options for managing a drought.

5. Drought Triggers

Drought triggers are used to initiate drought management actions, and to identify the need for more intense drought management activity as a drought becomes more severe.

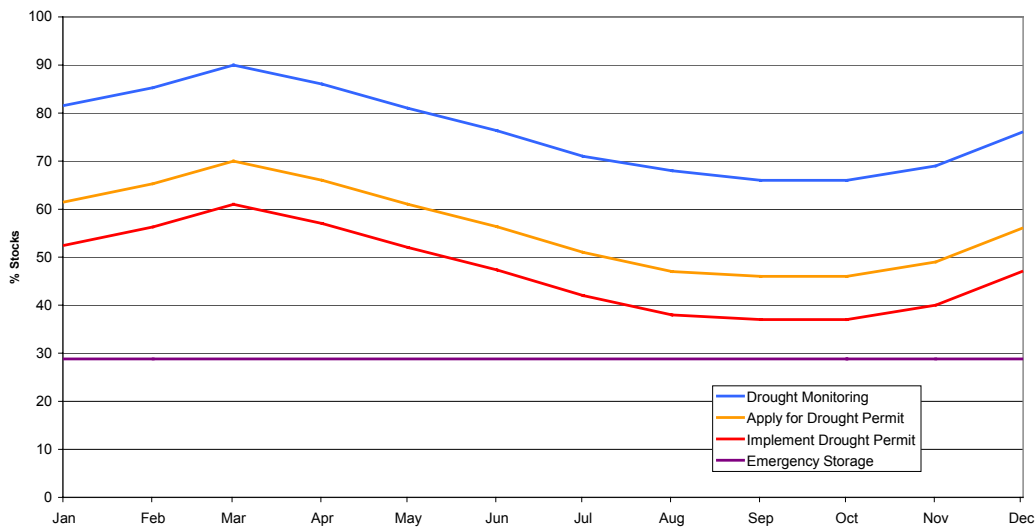
The Company's triggers for action are based on storage levels within Blithfield Reservoir, and in Clywedog Reservoir (at the head of the River Severn).

As storage falls and specific trigger curves are cut then this results in increasing demand management activity and water resource optimisation.

Blithfield Reservoir Triggers

The Blithfield reservoir trigger curves are shown below, with a summary of the key management actions.

Blithfield reservoir - Drought Trigger Curves



- Normal operation takes place when reservoir storage is above the drought monitoring curve.
- When the drought monitoring trigger curve is crossed the Company moves from the normal cost minimisation mode to a resource conservation mode of operation. More expensive sources of water can be brought on line in order to preserve storage in Blithfield.
- When the apply for drought permit curve is crossed the Company will consider applying for a drought permit. 3 potential permits have been identified (see options below).
- The implement drought permit curve is used to illustrate when the drought permits would be operational. A hosepipe ban would precede implementation of a drought permit.
- The Emergency Storage Curve is set 4% above the dead storage level. This water will only to be used as a last resort and represents 30 days storage. Dead storage (25%) represents the level of storage below which it is extremely difficult to abstract water because of the hydraulics of the system and the quality of the water would be so poor that it will probably be unacceptable to utilise it.

Clywedog Reservoir Triggers

The River Severn is managed by the Environment Agency in order to protect public water supplies and other abstraction rights, to maintain the environmental habitat of the river, to maintain freshwater flows into the Severn Estuary, and to protect navigation rights and the other amenity uses.

The Midland Region of the Environment Agency is responsible for producing

the drought contingency plan for the River and this plan has recently been updated by the Environment Agency (and is available on their website).

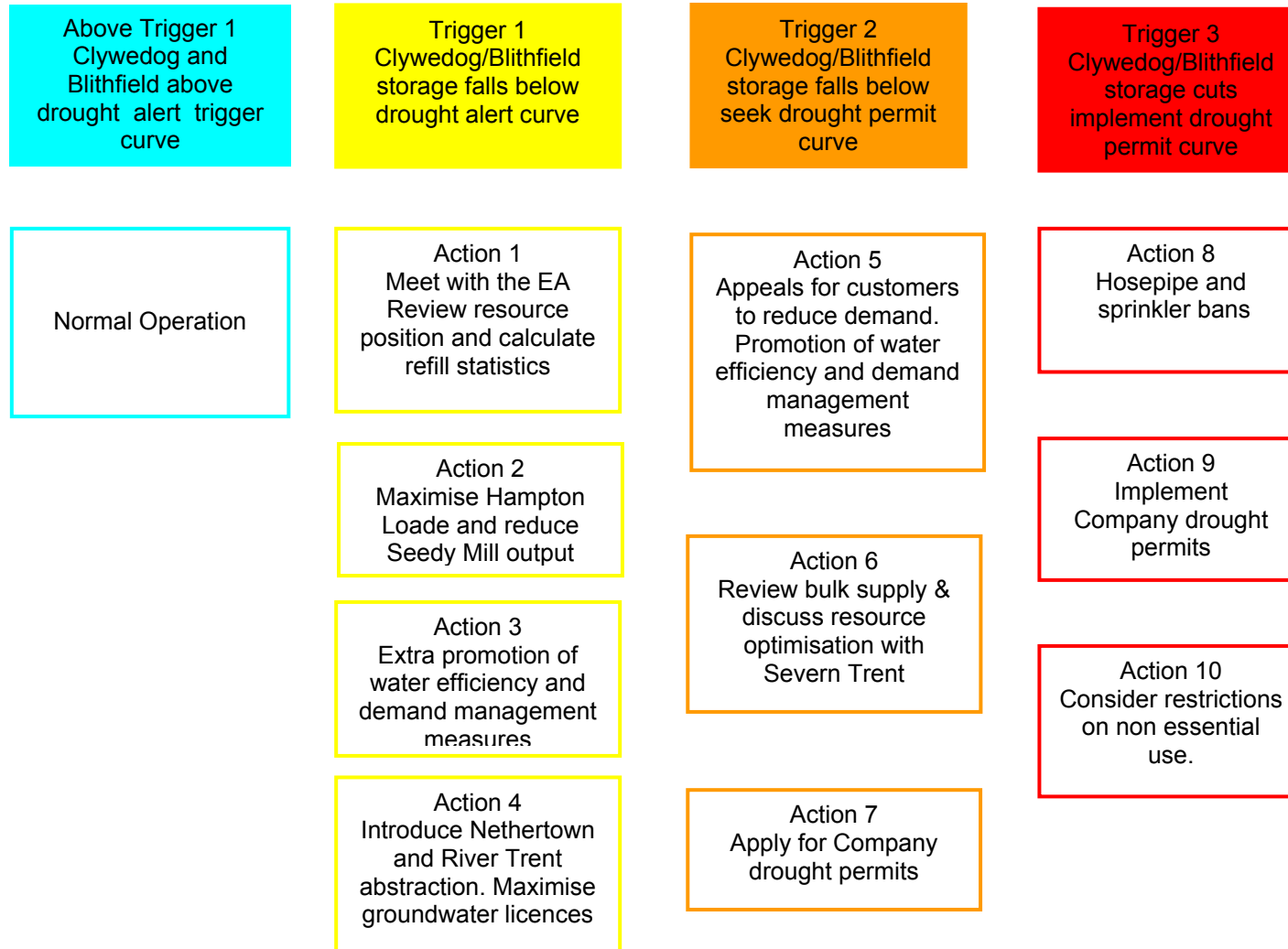
The Environment Agency trigger curves for the River Severn are based on storage levels at Clywedog Reservoir (the main source of river regulation operated by the Environment Agency.) These triggers have also been adopted by South Staffs Water, and are used as a secondary trigger for action. Further details can be found in the full Drought Plan.

In addition to these control rules the Company will give due regard to a number of other factors when considering whether to implement its drought management actions. These factors include, the demand for water, sources which may be out of supply, the medium term weather forecast, the soil moisture deficit, the time of year, and whether the level in Blithfield Reservoir is rising or falling. The Company reserves the right to use its discretion in the interpretation of the control rules and the implementation of the available actions.

The Company's triggers and main actions for managing a drought are summarised below. These triggers and actions are colour coded to identify the increasing severity of a drought. The key supply and demand management options that may be implemented at each trigger are also shown.

The triggers and actions are described in more detail in the full Drought Plan.

DROUGHT CONTROL RULES: TRIGGERS & MAIN ACTIONS



Note: The order of actions is an indication of priority, however the Company reserves the right to change the order as circumstances dictate.

6. Drought Management Options

The Company has a number of demand and supply options that could be implemented during a drought. These represent measures that could be implemented in addition to those which already form part of the Company's Strategic Business Plan and Water Resources Plan. The Company recognises that some of these measures will call for close liaison with Severn Trent and the Environment Agency.

The demand management options include, extra promotion of water efficiency measures by our customers, increased leakage detection and repair (over and above current levels), hosepipe bans, pressure reduction, and ultimately non essential use bans. These demand options are summarised in table 1 below, along with their respective triggers.

The supply options include, preserving storage at Blithfield by maximising other sources, using the Nethertown pumpback scheme, introducing the standby nitrate treatment works, reviewing emergency bulk supplies, and ultimately drought permits.

Drought permits enable abstraction to take place outside of existing abstraction licence limits, and are subject to the approval of the Environment Agency. Water Companies are required to identify all potential drought permits within their drought plans, regardless of how unlikely it is that they may be required. South Staffordshire Water has identified 3 potential drought permits which could, in exceptional circumstances, be required to provide additional water resources. These are at the Hanch Tunnel near Lichfield, on the River Blithe and Trent at Nethertown, and at Hampton Loade on the River Severn.

The Hanch Tunnel permit would allow abstraction from the Sherwood Sandstone aquifer near Lichfield (as this is not currently licensed). The permit on the Blithe/Trent would allow abstraction to continue to top up Blithfield for longer than is currently allowed under the existing abstraction licence. The Hampton Loade permit would allow abstraction from the River Severn above the existing licence conditions.

The supply options are summarised in table 2 below, along with their respective triggers.

7. Environmental Assessment and Drought Monitoring

The Company has undertaken an environmental assessment of each of the 3 potential drought permits listed above. These are described in more detail in the full Drought Plan, and copies of the assessments are available from South Staffs Water. By undertaking assessments of potential impact in advance of a drought the risks to the environment can be identified and mitigation options

identified prior to any application.

Water Companies are also required to monitor the effects of a drought and of the measures taken under the drought plan. The Drought Plan outlines the baseline hydrometric monitoring undertaken by the Company and by the Environment Agency, and the drought specific monitoring that the Company will undertake to examine the impact on the environment of sensitive existing abstractions, and potential drought permits.

Table 1 Summary of Drought Management Options – Demand Side

BLITHFIELD TRIGGER	RIVER SEVERN TRIGGER	OPTION	ESTIMATED DEMAND SAVING (MI/d)	DESCRIPTION/COMMENTS
1	1	Extra promotion of water efficiency and increased publicity campaign	c. 3 MI/d	Appeals for water conservation via press releases and via the Company website . Communications messages will escalate, and could include newspaper and radio messages. Industrial customers may be targeted for water audits and domestic customers may be offered / sent cistern devices.
1	1	Increased leakage detection and repair	c. 1.5 MI/d	Additional finding and fixing of leaks. This action could be initiated within 2-4 weeks, following a review of available leakage management resources. However the logistics of procuring staff and delivering further leakage reductions means that it is likely to take at least 5 months to deliver this additional benefit, and there is some considerable uncertainty over the estimated savings.
3	3	Hosepipe and sprinkler bans	c. 10-20MI/d	This would be a Company wide ban, and would precede implementation of any drought permits.
3	3	Enhanced pressure management	c. 1.5 MI/d	Reducing mains pressure to reduce leakage. Regulatory Level of Service (DG2) pressure standards are likely to be breached. There is an estimated 2 months to deliver any additional benefit.
3	3	Consider bans on non-essential use	unknown	This will require a drought order application and a minimum lead time after application of 4 weeks

Table 2 Summary of Drought Management Options – Supply Side

BLITHFIELD TRIGGER	RIVER SEVERN TRIGGER	OPTION	ESTIMATED DEPLOYABLE OUTPUT (MI/d)	DESCRIPTION/COMMENTS
1	1	Ensure existing sources are fully operational	Maximised available Deployable Output	Increase output from available sources. Postpone planned outages.
1	1	Increase abstraction from Hampton Loade and reduce abstraction from Seedy Mill	Maximised available Deployable Output	The reservoir control rules will be used as a guide to reducing the output from Seedy Mill, and the substitution of replacement resource (implemented in stages over the period of the drought)
1	1	Introduce Nethertown pump back, supported by the Trent abstraction where required	Maximised available Deployable Output	For the purposes of this plan it has been assumed that the Trent/Nethertown abstractions are only available when flow on the Trent at North Muskham is > 2650 MI/d (however this has yet to be agreed w/EA - see section 7.3)
1	1	Introduce nitrate treatment plants	Maximised available Deployable Output	Little Hay and Shenstone sources have nitrate treatment plants, and Sandhills is blended with Pipe Hill
2	2	Review the potential for bulk supplies between Severn Trent and South Staffs.	Up to 5 MI/d	This option is only viable if there is no River Severn drought and Severn Trent have available water resources. Deployable output gain is a peak week figure
2	2	Apply for drought permits	See permits below	See permits below (all permits assumed to take at least 1 month to implement from date of application)
3	3	Implement drought permit on the River Blithe/Trent.	1 - 4 MI/d (annual average)	This will allow abstraction from the River Trent when flows at North Muskham are below 2,650 MI/d.
3	3	Implement drought permit at Hanch Tunnel	3 MI/d (peak week)	Pumping 3 MI/d of groundwater out of the Hanch Tunnel into Seedy Mill treatment works.
3	3	Implement drought permit at Hampton Loade	10-40 MI/d (peak Week)	Allows a relaxation of the licence restrictions on the River Severn. Two drought permit options are available.

8. Drought Management

South Staffordshire Water recognise that communication is an essential part of drought management, both internally within the Company, and externally, with our customers, our other stakeholders, and the media. The Company has identified a drought management team, who will review the Company's water resources position at regular intervals in a drought, and who will recommend appropriate action as required. The drought management team will initiate regular communication with customers, regulators and other stakeholders. A detailed communication plan is included in the full Drought Plan

9. Drought Plan review and development

The Company will review the plan annually and make any necessary amendments. An updated plan will be submitted to the Secretary of State if revisions of materiality are made. Regardless of any annual amendments a complete review will be undertaken every 3 years.