

Bristol Water Drought Plan 2018 Appendix



Document Control Sheet

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Appendix A

Supply side options removed from the drought plan

In response to our review and update of the drought plan, a number of supply side options have been removed from the drought plan that were presented in our October 2012 drought plan. The table below identifies the options that have been removed and the reason for their removal.

Option name and description	Reason for removal from drought plan
Gurney Slade (2MI/d) – installation of temporary membrane plant required to overcome poor water quality issues. At least 6 months lead in time	Removed from drought plan as licence has been revoked
Shipton Moyne (1MI/d) – modification to treatment works and operating rules to allow additional abstraction	Removed from drought plan as licence variation under negotiation in line with Wessex Water NEP requirements
Cold Bath Spring (3MI/d) – winter only source due to water quality reasons	Removed from drought plan as licence revoked due to high risk water quality issues

Appendix B

Drought Options Summary Forms

	Option Name	Appeals for restraint
Option Implementation Assessment	Trigger(s) (or preceding actions) i.e. conditions before the drought actions is implemented	Developing drought - Entering drought management zone 3.
	Demand saving (%) or deployable output of option (Ml/d)	Approximately 1% of household water demand.
	Location	Whole supply area.
	Implementation timetable Preparation time, time of year effective, duration	Preparation time 1 week. Most effective during hot weather (late spring and summer).
	Permissions required and constraints Including details of liaison carried out with bodies responsible for giving permits or approvals	None required – at water company discretion.
	Risks associated with option	Uncertainty over customer response and demand savings that will be realised. Careful messaging required (see Communications Plan).
	Environmental Assessment	Risk to the environment (high/medium/low or unknown) and how this has been assessed
Summary of likely environmental effects (including details of features of moderate and major sensitivity and minor sensitivity features from designated sites) Assess the likely impact of WFD ecological and chemical status		None.
Summary of additional monitoring requirements before application		N/A
Mitigation and compensation measures		N/A
Effects on other activities e.g. fisheries or industry		None.

	Option Name	Temporary Use Bans
Option Implementation Assessment	Trigger(s) (or preceding actions) i.e. conditions before the drought actions is implemented	Drought – Entering drought management zone 4.
	Demand saving (%) or deployable output of option (MI/d)	Up to 9.5% of peak summer household demand.
	Location	Whole supply area.
	Implementation timetable Preparation time, time of year effective, duration	2 week public consultation on the TUBs restriction proposals. Up to 3 weeks from decision to impose a TUB and being able to implement it.
	Permissions required and constraints Including details of liaison carried out with bodies responsible for giving permits or approvals	None required but liaison with Environment Agency, CCW and Defra will be carried out.
	Risks associated with option	Effectiveness of the TUBs restriction. The resources required to effectively monitor and enforce the restriction. Public relations as a result of imposing a restriction on customers.
Environmental Assessment	Risk to the environment (high/medium/low or unknown) and how this has been assessed	None.
	Summary of likely environmental effects (including details of features of moderate and major sensitivity and minor sensitivity features from designated sites)	None.
	Assess the likely impact of WFD ecological and chemical status	
	Summary of additional monitoring requirements before application	N/A
	Mitigation and compensation measures	N/A
	Effects on other activities e.g. fisheries or industry	None.

	Option Name	Drought Order - Non-Essential Use Ban (NEUB)
Option Implementation Assessment	Trigger(s) (or preceding actions) i.e. conditions before the drought actions is implemented	Drought – Entering drought management zone 5.
	Demand saving (%) or deployable output of option (Ml/d)	Up to 2% of non-household demand across the year.
	Location	Whole supply area.
	Implementation timetable Preparation time, time of year effective, duration	2 to 3 months – time for drought order application and determination, communication with public, time to place adverts in newspapers and send prohibition notices. Maximum duration 6 months before extension required.
	Permissions required and constraints Including details of liaison carried out with bodies responsible for giving permits or approvals	Drought order from Defra. Public Hearing may be required.
	Risks associated with option	Negative impact on affected businesses. Uncertainty around effectiveness of drought order. Defra may not issue the drought order. Public relations as a result of imposing the restrictions.
	Environmental Assessment	Risk to the environment (high/medium/low or unknown) and how this has been assessed
Summary of likely environmental effects (including details of features of moderate and major sensitivity and minor sensitivity features from designated sites) Assess the likely impact of WFD ecological and chemical status		None.
Summary of additional monitoring requirements before application		N/A
Mitigation and compensation measures		N/A
Effects on other activities e.g. fisheries or industry		Negative impact on affected industry/business.

	Option Name	Emergency Drought Order
Option Implementation Assessment	Trigger(s) (or preceding actions) i.e. conditions before the drought actions is implemented	Severe drought – Entering drought management zone 6.
	Demand saving (%) or deployable output of option (Ml/d)	Unknown – possibly up to an additional 8% of peak summer household demand (on top of TUBs).
	Location	Whole supply area.
	Implementation timetable Preparation time, time of year effective, duration	12 weeks (3 months): 10 weeks preparation time, public consultation, possible public hearing and determination by Secretary of State. 2 weeks implementation time on the ground.
	Permissions required and constraints Including details of liaison carried out with bodies responsible for giving permits or approvals	Emergency drought order issued by the Secretary of State. Public Hearing may be required.
	Risks associated with option	Uncertainty around effectiveness of emergency drought order. Secretary of State may not issue the emergency drought order. Public relations as a result of imposing the restrictions.
Environmental Assessment	Risk to the environment (high/medium/low or unknown) and how this has been assessed	None.
	Summary of likely environmental effects (including details of features of moderate and major sensitivity and minor sensitivity features from designated sites) Assess the likely impact of WFD ecological and chemical status	None.
	Summary of additional monitoring requirements before application	N/A
	Mitigation and compensation measures	N/A
	Effects on other activities e.g. fisheries or industry	None.

	Option Name	Honeyhurst & Rodney Stoke (Well head)
Option Implementation Assessment	Trigger(s) (or preceding actions) i.e. conditions before the drought actions is implemented	Drought – Entering drought management zone 4.
	Demand saving (%) or deployable output of option (Ml/d)	2.4Ml/d dry year annual average yield.
	Location	Water to be pumped (via new pumping station) 4.2km into Cheddar Reservoir and treated at the water treatment works for supply.
	Implementation timetable Preparation time, time of year effective, duration	Up to 6 months. Some pre-planning feasibility work already carried out.
	Permissions required and constraints Including details of liaison carried out with bodies responsible for giving permits or approvals	The source is licenced for 4.11 Ml/d annual average, but has not been used for c. 20 years and we will have to give regard to the ‘no deterioration’ principle set out in the Water Framework Directive when considering changes to the operation of the sources.
	Risks associated with option	Water quality issues. Timing of getting the source into supply in response to a drought situation.
Environmental Assessment	Risk to the environment (high/medium/low or unknown) and how this has been assessed	Low.
	Summary of likely environmental effects (including details of features of moderate and major sensitivity and minor sensitivity features from designated sites) Assess the likely impact of WFD ecological and chemical status	Honeyhurst well is not within any biodiversity designations. There are a number of designated sites nearby including Rodney Stoke NNR/SSSI (~1km to the east), Draycott Sleights SSSI (~1km to the North East), Mendip Woodlands SAC (~1km to the east) and North Somerset and Mendip Bats SAC ~2km to north of route. Cheddar reservoir is a SSSI (wildfowl). Potential for negative effects on Cheddar reservoir and interest features of international sites. The HRA identifies potential for impacts on interest features (horseshoe bats) from construction of the pipeline. Construction could result in short term, localised effects on water quality in a number of rhynes that the pipeline would have to cross, which cannot be avoided but could be mitigated. Construction will neither

		<p>exacerbate nor reduce the risk of flooding.</p> <p>The operation of the pumping station and transfer pipeline is not expected to have any effects on sites that are important for biodiversity. The site is already licensed for abstraction and resumption of abstraction is not expected to impact on any downstream designated habitats (Severn Estuary). The abstraction is from the Wells groundwater body which, in the context of the WFD is of good quantitative and chemical status. The abstraction will not directly affect the flow or water quality of the River Axe and surrounding tributaries, therefore there is little evidence to suggest the measures will result in an ecological impact. It is considered that there is a low risk that the reinstated abstraction might have an impact on the River Axe and its WFD ecological status, this will need to be further assessed and confirmed through monitoring to demonstrate 'no deterioration' under the WFD as a result of bringing this source back into supply. The HRA concluded no operational impacts on the interest features of the European designated sites.</p>
	<p>Information used to understand conditions before drought or any drought actions are implemented</p>	<p>Available baseline data and information to support this option has been set out in the accompanying SEA and HRA reports. The source is already licensed and this option is proposing operation within the existing licence conditions. Due to our obligations under the WFD, and the fact that this source has not been operated for 20 years, it is likely that some further baseline data may be required. If this is the case, it will be scoped and agreed in liaison with the Environment Agency and Natural England.</p>
	<p>Summary of additional monitoring requirements before application</p>	<p>Monitoring programme will be required to demonstrate 'no deterioration' under the WFD as a result of bringing this source back into supply.</p>
	<p>Mitigation and compensation measures</p>	<p>Specific construction related mitigation measures with respect to Mendip Woodlands SAC, North Somerset and Mendip Bats SAC and Somerset Levels and Moors SPA. These will include, but not be restricted to protected species surveys and Great Crested newt surveys.</p> <p>Mitigation actions to prevent localised effects on water quality in rhynes that the pipeline would have to cross.</p>
	<p>Effects on other activities e.g. fisheries or industry</p>	<p>None identified.</p>

Option Implementation Assessment	Option Name	Reduction of Blagdon Reservoir compensation release
	Trigger(s) (or preceding actions) i.e. conditions before the drought actions is implemented	Drought – Entering drought management zone 5.
	Demand saving (%) or deployable output of option (Ml/d)	4.038Ml/d (15 th May to 30 th November) Based on a reduction in compensation flow, from 8.638 Ml/d to a daily flow of 4.6Ml/d between May and November.
	Location	Blagdon Reservoir and the Congresbury Yeo.
	Implementation timetable Preparation time, time of year effective, duration	<p>Drought permit application preparation will be commenced when combined reservoir storage enters zone 4 (i.e. when TUBs are introduced).</p> <p>If supporting up-to-date environmental assessment reports are available we anticipate that the application will be ready for submission and advertising within 2 weeks.</p> <p>We will provide 7 days written notice to organisations likely to be affected by the permit, advising that any objections should be made to the Environment Agency within 7 days of the notice being served. We will advertise the drought permit application in at least one local newspaper and the London Gazette.</p> <p>We assume EA will determine the drought permit application within 12 calendar days of the date of our last advertisement, if no objections are received, or 7 calendar days of the receipt of a hearing report if a hearing takes place.</p> <p>Once the drought permit is received we will advertise the successful application in the London Gazette and the same local newspaper where the application was advertised.</p> <p>The practical implementation of the option could be effective within 7 days.</p> <p>This drought options reduces the compensation release between 15th May and 30th November to</p>

		<p>conserve reservoir storage during a drought and improve the subsequent reservoir winter refill.</p> <p>Drought permits are valid for up to 6 months and can be extended for a further 6 months. We will contact the EA at least 28 days before the existing permit expires if an extension is required.</p>
	<p>Permissions required and constraints Including details of liaison carried out with bodies responsible for giving permits or approvals</p>	<p>Drought Permit from the Environment Agency</p> <p>In order to carry out the mitigation measures set out below, the Environment Agency has advised that we will need to apply for the following permits/approvals:</p> <ul style="list-style-type: none"> • Environment Agency Section 27 authorisation under the Salmon and Freshwater Fisheries Act 1975. • Application to the Environment Agency for a Site Permit under the Keeping and Introduction of Fish Regulations 2015. <p>The list of required permits/ approvals is indicative based on the anticipated mitigation measures, and not exhaustive. It will be reviewed in close liaison with EA, Natural England, the Local Authorities, landowners and relevant environmental groups (i.e. Wildlife Trusts) in the context of the specific circumstances as a drought progresses.</p>
	<p>Risks associated with option</p>	<p>Drought permit not being issued by the EA.</p>
<p>Environmental Assessment</p>	<p>Risk to the environment (high/medium/low or unknown) and how this has been assessed</p>	<p>Low.</p>
	<p>Summary of likely environmental effects (including details of features of moderate and major sensitivity and minor sensitivity features from designated sites)</p> <p>Assess the likely impact of WFD ecological and chemical status</p>	<p>An Environmental Monitoring Plan (EMP) was prepared for this drought permit in November 2007. The EMP does not constitute an Environmental Assessment Report (EAR) which would describe the potential impacts of drought permit implementation on sensitive features. However, the EMP does present a hydrological assessment which lists the likely impacts of drought permit implementation on the flow/level regime in the impacted waterbodies. In addition, baseline monitoring of the Congresbury Yeo was carried out in September and October 2010 (reported</p>

		<p>in June 2011). This work included physical transects, water quality monitoring, and fish, macro-invertebrate and macrophyte surveys.</p> <p>In the absence of an EAR, professional judgement has been used based on the information available to determine the likely significance of the effects of flow/level regime changes on sensitive ecological receptors.</p> <p>The zone of hydrological influence of the drought permit implementation includes 6km of the Congresbury Yeo from Blagdon Reservoir outfall to Iwood gauging station, with a potential minor hydrological impact during low flow periods extending downstream to the confluence with the Severn Estuary.</p> <p>Hydrological impacts have been assessed as Moderate between Blagdon and Iwood gauging station during low flows, and Minor (velocity only) from Iwood gauging station to the Severn Estuary during low flows. During moderate to high flows hydrological effects are assessed as negligible. Based on the environmental information available, the Congresbury Yeo in the zone of influence is considered to be of minor environmental sensitivity.</p> <p>Blagdon Reservoir is a Site of Special Scientific Interest (SSSI), known as Blagdon Lake SSSI. However, the reservoir will not be adversely affected by the proposed drought permit. Biddle Street SSSI, which forms part of the Avon Levels and Moors, lies approximately 3km downstream of Iwood gauging station. It is unlikely this area will be affected as the river downstream of Iwood is level controlled. Bourne SSSI lies close to Rickford stream below Rickford, this will not be adversely affected by the proposed drought permit. The Severn Estuary is a SPA, SAC, Ramsar site and SSSI. The Congresbury Yeo discharges into the estuary approximately 12km downstream of Iwood gauging station. It is unlikely this area will be affected as hydrological effects downstream of Iwood are considered negligible or minor depending on prevailing</p>
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	<p>flow conditions.</p> <p>A reduction in flow and water quality has the potential to affect the ecological health of the Congresbury Yeo. The river is currently classed as 'Poor' ecological status due to the combined status of macrophytes and phytobenthos. Macroinvertebrates are currently classified as High status but samples taken directly downstream of the reservoir indicate a flow sediment impact. These impacts are likely to increase during the drought permit due to a reduced velocity. Fish (currently classed as High status) may also be affected due to the reduced wetted width. Overall the risk to the macroinvertebrate and fish elements of WFD ecological status is considered to be moderate, temporary and reversible.</p>
<p>Information used to understand conditions before drought or any drought actions are implemented</p>	<p>A programme of baseline monitoring of the Congresbury Yeo was carried out in September and October 2010. This addressed some of the data gaps identified in the EMP 2007. Current environmental baseline information has been reviewed as part of the SEA and HRA process for this option.</p>
<p>Summary of additional monitoring requirements before application</p>	<p>The EMP 2007 sets out the environmental issues that should be considered.</p> <p>An initial programme of baseline monitoring was carried out in September and October 2010. A programme of monitoring to assess the effects of the drought permit and the recovery of the environment after the drought will be required.</p>
<p>Mitigation and compensation measures</p>	<p>Mitigation measures will include deployment of aeration equipment as appropriate to raise dissolved oxygen concentrations, undertaking fish rescue, and re-stocking of fish if fish mortality occurs. Mitigation actions will be agreed with the Environment Agency and Natural England prior to the implementation of this option. The mitigation will be informed by our understanding gained from the baseline environmental monitoring data and information.</p>
<p>Effects on other activities e.g. fisheries or industry</p>	<p>Temporary effects on the landscape and visual amenity value of the site may occur due to the moderate reduction in wetted width and wetted depth between Blagdon reservoir release and Iwood. This</p>

		<p>will be visible from public rights of way that run adjacent to the Congresbury Yeo.</p> <p>Reduction in wetted depth may influence the angling resource. However, water levels will be naturally low in times of drought and impacts will be temporary in nature.</p>
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Option Implementation Assessment	Option Name	Reduction of Chew Reservoir compensation release
	Trigger(s) (or preceding actions) i.e. conditions before the drought actions is implemented	Drought – Entering drought management zone 5.
	Demand saving (%) or deployable output of option (Ml/d)	<p>7.32Ml/d (1st May to 31st July) based on a reduction in compensation flow from 14.32Ml/d to 7 Ml/d between May and July.</p> <p>3.419 Ml/d (1st Dec to 30th April) based on a reduction in compensation flow from 6.819Ml/d to 3.4Ml/d between December and April.</p>
	Location	Chew Reservoir and River Chew.
	Implementation timetable Preparation time, time of year effective, duration	<p>Drought permit application preparation will be commenced when combined reservoir storage enters zone 4 (i.e. when TUBs are introduced).</p> <p>If supporting up-to-date environmental assessment reports are available we anticipate that the application will be ready for submission and advertising within 2 weeks.</p> <p>We will provide 7 days written notice to organisations likely to be affected by the permit, advising that any objections should be made to the Environment Agency within 7 days of the notice being served. We will advertise the drought permit application in at least one local newspaper and the London Gazette.</p> <p>We assume EA will determine the drought permit application within 12 calendar days of the date of our last advertisement, if no objections are received, or 7 calendar days of the receipt of a hearing report if a hearing takes place.</p> <p>Once the drought permit is received we will advertise the successful application in the London Gazette and the same local newspaper where the application was advertised.</p> <p>The practical implementation of the option could be</p>

		<p>effective within 7 days.</p> <p>This drought options reduces the compensation release between 1st May and 31st July, and again between 1st December and the 30th April, to conserve reservoir storage during a drought and improve the subsequent reservoir winter refill.</p> <p>Drought permits are valid for up to 6 months and can be extended for a further 6 months. We will contact the EA at least 28 days before the existing permit expires if an extension is required.</p>
	<p>Permissions required and constraints Including details of liaison carried out with bodies responsible for giving permits or approvals</p>	<p>Drought Permit from the Environment Agency</p> <p>In order to carry out the mitigation measures set out below, the Environment Agency has advised that we will need to apply for the following permits/approvals:</p> <ul style="list-style-type: none"> • Environment Agency Section 27 authorisation under the Salmon and Freshwater Fisheries Act 1975. • Application to the Environment Agency for a Site Permit under the Keeping and Introduction of Fish Regulations 2015. <p>The list of required permits/ approvals is indicative based on the anticipated mitigation measures, and not exhaustive. It will be reviewed in close liaison with EA, Natural England, the Local Authorities, landowners and relevant environmental groups (i.e. Wildlife Trusts) in the context of the specific circumstances as a drought progresses.</p>
	<p>Risks associated with option</p>	<p>Drought permit not being issued by the EA.</p>
<p>Environmental Assessment</p>	<p>Risk to the environment (high/medium/low or unknown) and how this has been assessed</p>	<p>Low.</p>
	<p>Summary of likely environmental effects (including details of features of moderate and major sensitivity and minor sensitivity features from</p>	<p>An Environmental Monitoring Plan (EMP) was prepared for this drought permit in 2007. The EMP does not constitute an Environmental Assessment Report (EAR) which would describe the potential impacts of drought permit implementation on sensitive features. However, the EMP does present a</p>

<p>designated sites)</p> <p>Assess the likely impact of WFD ecological and chemical status</p>	<p>hydrological assessment which lists the likely impacts of drought permit implementation on the flow/level regime in the impacted waterbodies. In addition, baseline monitoring of the River Chew was carried out in September and October 2010 (reported in June 2011). This work included physical transects, water quality monitoring, and fish, macro-invertebrate and macrophyte surveys.</p> <p>In the absence of an EAR, professional judgement has been used based on the information available to determine the likely significance of the effects of flow/level regime changes on sensitive ecological receptors.</p> <p>During the early summer period (May to July) the zone of hydrological influence of the drought permit implementation will stretch from the Chew Reservoir release to the Compton Dando flow monitoring station and possibly to the confluence with the River Avon. During the winter/spring period (December – April) the zone of hydrological influence of the drought permit will stretch from the Chew Reservoir release to the Compton Dando flow monitoring station.</p> <p>Hydrological effects during the early summer period (May to July) have been assessed as Moderate during low to moderate flows and Minor during high flows. Hydrological effects during the winter/spring period (Dec to Apr) have been assessed as Moderate during low flows and Negligible during moderate to high flows. Based on the environmental information available, the River Chew in the zone of influence is considered to be of Minor Environmental Sensitivity.</p> <p>The Rive Chew corridor is designated as a Site of Local Importance for Nature Conservation (SLINC). Chew Reservoir is a SSSI, known as Chew Valley Lake SSSI. It is also a Special Protection Area (SPA). However, the reservoir will not be adversely affected by the proposed drought permit as the drought permit will protect the integrity of the site in drought conditions by retaining water in the reservoir.</p>
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		<p>A reduction in flow and water quality has the potential to affect the ecological status of the River Chew. The river is currently classed as High status for fish and macroinvertebrates under the WFD. The river is not assessed for the combined macrophyte and phytobenthos classification. The risk to macroinvertebrate and fish elements of WFD ecological status is considered to be moderate, temporary and reversible.</p>
	<p>Information used to understand conditions before drought or any drought actions are implemented</p>	<p>A programme of baseline monitoring of the River Chew was carried out in September and October 2010. This addressed some of the data gaps identified in the EMP 2007. Current environmental baseline information has been reviewed as part of the SEA and HRA process for this option.</p>
	<p>Summary of additional monitoring requirements before application</p>	<p>The EMP 2007 sets out the environmental issues that should be considered.</p> <p>An initial programme of baseline monitoring was carried out in September and October 2010. A programme of monitoring to assess the effects of the drought permit and the recovery of the environment after the drought will be required.</p>
	<p>Mitigation and compensation measures</p>	<p>Mitigation measures will include deployment of aeration equipment as appropriate to raise dissolved oxygen concentrations, undertaking fish rescue, and re-stocking of fish if fish mortality occurs.</p> <p>Mitigation actions will be agreed with the Environment Agency and Natural England prior to the implementation of this option. The mitigation will be informed by our understanding gained from the baseline environmental monitoring data and information.</p>
	<p>Effects on other activities e.g. fisheries or industry</p>	<p>Temporary effects on the landscape and visual amenity value of the site may occur due to the moderate reduction in wetted width and wetted depth between Chew reservoir release and Compton Dando flow monitoring station. This will be visible from public rights of way that run adjacent to the river Chew in this reach. Reduction in wetted depth may influence the angling resource. However, water levels will be naturally low in times of drought and impacts will be temporary in nature.</p>

Option Implementation Assessment	Option Name	Reduction of Cheddar Ponds compensation release to Cheddar Yeo.
	Trigger(s) (or preceding actions) i.e. conditions before the drought actions is implemented	Drought – Entering drought management zone 5.
	Demand saving (%) or deployable output of option (Ml/d)	3.4 Ml/d (1 st December to 14 th May) based on a reduction in compensation flow from 6.8Ml/d to 3.4Ml/d Dec to May.
	Location	Cheddar ponds and Cheddar Yeo.
	Implementation timetable Preparation time, time of year effective, duration	<p>Drought permit application preparation will be commenced when combined reservoir storage enters zone 4 (i.e. when TUBs are introduced).</p> <p>If supporting up-to-date environmental assessment reports are available we anticipate that the application will be ready for submission and advertising within 2 weeks.</p> <p>We will provide 7 days written notice to organisations likely to be affected by the permit, advising that any objections should be made to the Environment Agency within 7 days of the notice being served. We will advertise the drought permit application in at least one local newspaper and the London Gazette.</p> <p>We assume EA will determine the drought permit application within 12 calendar days of the date of our last advertisement, if no objections are received, or 7 calendar days of the receipt of a hearing report if a hearing takes place.</p> <p>Once the drought permit is received we will advertise the successful application in the London Gazette and the same local newspaper where the application was advertised.</p> <p>The practical implementation of the option could be effective within 7 days.</p> <p>This drought options reduces the compensation release between 1st December and 14th May, to</p>

		<p>conserve reservoir storage during a drought and improve the reservoir winter refill.</p> <p>Drought permits are valid for up to 6 months and can be extended for a further 6 months. We will contact the EA at least 28 days before the existing permit expires if an extension is required.</p>
	<p>Permissions required and constraints Including details of liaison carried out with bodies responsible for giving permits or approvals</p>	<p>Drought Permit from the Environment Agency</p> <p>In order to carry out the mitigation measures set out below, the Environment Agency has advised that we will need to apply for the following permits/approvals:</p> <ul style="list-style-type: none"> • Environment Agency Section 27 authorisation under the Salmon and Freshwater Fisheries Act 1975. • Application to the Environment Agency for a Site Permit under the Keeping and Introduction of Fish Regulations 2015. <p>The list of required permits/ approvals is indicative based on the anticipated mitigation measures, and not exhaustive. It will be reviewed in close liaison with EA, Natural England, the Local Authorities, landowners and relevant environmental groups (i.e. Wildlife Trusts) in the context of the specific circumstances as a drought progresses.</p>
	<p>Risks associated with option</p>	<p>Drought permit not being issued by the EA.</p>
Environmental Assessment	<p>Risk to the environment (high/medium/low or unknown) and how this has been assessed</p>	<p>Low.</p>
	<p>Summary of likely environmental effects (including details of features of moderate and major sensitivity and minor sensitivity features from designated sites)</p> <p>Assess the likely impact of WFD ecological and chemical status</p>	<p>An Environmental Monitoring Plan (EMP) was prepared for this drought permit in 2007. The EMP does not constitute an Environmental Assessment Report (EAR) which would describe the potential impacts of drought permit implementation on sensitive features. However, the EMP does present a hydrological assessment which lists the likely impacts of drought permit implementation on the flow/level regime in the impacted water bodies. In addition, baseline monitoring of the Cheddar Yeo was carried out in September and October 2010 (reported in June</p>

		<p>2011). This work included physical transects, water quality monitoring, and fish, macro-invertebrate and macrophyte surveys.</p> <p>In the absence of an EAR, professional judgement has been used based on the information available to determine the likely significance of the effects of flow/level regime changes on sensitive ecological receptors.</p> <p>The zone of hydrological influence of the drought permit between December and May will stretch from Cheddar Ponds intake on the River Yeo to Hythe, from where the river is level-controlled. However, there may be potential for some effects (water velocity) to extend downstream to the confluence of the Cheddar Yeo and the River Axe.</p> <p>From December to May, hydrological effects during low flows have been assessed as Moderate between Cheddar Ponds intake and Hythe, and Minor from Hythe to the River Axe confluence. During high flows hydrological effects are assessed as Negligible. Based on the environmental information available the Cheddar Yeo in the zone of influence is considered to be of Minor Environmental Sensitivity.</p> <p>Cheddar Reservoir is a SSSI, however the reservoir will not be adversely affected by the proposed drought permit as the drought permit will protect the integrity of the site in drought conditions by retaining water in the reservoir. The 'Cheddar Yeo River' County Wildlife Site extends from Hythe upstream to the source in Cheddar town. The designation is for fast flowing river with species indicative of high ecological value.</p> <p>The WFD Macroinvertebrate component for the Cheddar Yeo is currently assessed as High status. The WFD Fish component is currently assessed as High status. Considering the drought permits impact on the hydrology and the risk of water quality deterioration in the reach, the risk to macroinvertebrate and fish elements of the WFD ecological status is considered to be moderate, temporary and reversible</p>
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	<p>Information used to understand conditions before drought or any drought actions are implemented</p>	<p>A programme of baseline monitoring of the Cheddar Yeo was carried out in September and October 2010. This addressed some of the data gaps identified in the EMP 2007. Current environmental baseline information has been reviewed as part of the SEA and HRA process for this option.</p>
	<p>Summary of additional monitoring requirements before application</p>	<p>The EMP 2007 sets out the environmental issues that should be considered.</p> <p>An initial programme of baseline monitoring was carried out in September and October 2010. A programme of monitoring to assess the effects of the drought permit and the recovery of the environment after the drought will be required.</p>
	<p>Mitigation and compensation measures</p>	<p>Mitigation measures will include deployment of aeration equipment as appropriate to raise dissolved oxygen concentrations, undertaking fish rescue, and re-stocking of fish if fish mortality occurs.</p> <p>Mitigation actions will be agreed with the Environment Agency and Natural England prior to the implementation of this option. The mitigation will be informed by our understanding gained from the baseline environmental monitoring data and information.</p>
	<p>Effects on other activities e.g. fisheries or industry</p>	<p>Temporary effects on the landscape and visual amenity value of the site may occur due to the moderate reduction in wetted width and wetted depth between Cheddar and Hythe. However, public access is somewhat limited in this area.</p>