

Test Surface Water Drought Permit

2.1_Environmental Statement

19 July 2022

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1 Introduction

This is Southern Water's environmental statement in respect of the company's application for a drought permit to make temporary amendments to its River Test abstraction licence for abstraction of water from the River Test, Hampshire. The permit is required to secure public water supplies in the immediate and neighbouring water supply areas for a period of six months.

The proposed drought permit (Test Surface Water Drought Permit) is to reduce the river flow condition of the new abstraction licence from 355 Ml/d to 265 Ml/d and so allow abstraction to continue down to the lowered flow condition as necessary. The permit is sought for six months, from the date of issue. The normal conditions of the permanent abstraction licence will be automatically re-instated when the permit ceases.

No construction works are required for the drought permit. Therefore, the environmental statement is focussed on the potential impacts of the abstraction within the drought permit, together with potential benefits and impacts of mitigation measures that are included in the application, including potential deployment of aeration and potential implementation of temporary (or could be permanent) fish passage improvements.

1.1 Legislation Summary

The drought permit application is made with recognition of assessment of potential abstraction impact under the drought required relative to:

- The SSSI status of the River Test.
- Habitats Regulations Assessment (HRA) of the potential effects on European Designated sites.
- General concerns related to the abstraction being permitted beyond the conditions allowed by the permanent abstraction licence.

The application is also made in the context of the Water Resources Act Section 20 Operating Agreement (s20) between the Environment Agency and Southern Water which recognises the special context of this drought permit application and sets some specific elements of protocol and commitment in relation to it.

- The s.20 Agreement is included with the application as document ref: 1.1_App_2_Section 20 agreement as an annex to 1.1 Description of the proposal.
- There is also a brief summary of the S20 agreement in document ref: 1.4 Evidence the Company followed Drought Plan, including in respect of the protocol it provides for the application for and operation to drought permits and drought orders.
- Progress of implementation of the s20 commitments is summarised with the application document ref: 2.3 Section 20 Monitoring and Mitigation Progress, especially in respect of the commitments to baseline environmental monitoring, permanent mitigation measures and habitats regulations compensation.

The s20 and the drought permit are also represented in Southern Water's drought plan – currently as published in 2019 but soon to be updated as a 2022 publication.

Environmental Assessment Reports (EAR) are made and included with the Drought Plan in respect of each drought permit or drought order included in the plan. A Plan level Habitats Regulations Assessment is also made. These drought plan assessments provide a basis for the equivalent project level (drought permit or drought order) assessments in support of actual permit or order applications. Monitoring and Mitigation Plans are also developed from the drought plan representation of these to the specific monitoring mitigation plan provided with an application.

The environmental status of the site or sites potentially impacted by the abstraction under the drought permit or drought order is taken into account, with the assessments supporting the drought plan and those supporting the application for the permit or order.

Application is provided in draft and discussed with the EA (Environment Agency) and NE during "pre-application", before final submission. The applicant can also engage wider stakeholders during pre-application.

An application must be advertised for a period of seven days – the formal consultation period -within which objections may be raised. The EA may call a Public Hearing if there are outstanding objections that should be heard and considered in that way.

The primary supporting documents representing the environmental assessment of this application are:

- Section 20 Agreement – Document ref: 1.1_App_2_Section 20 agreement as an annex to 1.1 Description of the proposal.
- Monitoring and Mitigation Plan – Document ref: 2.2 Monitoring and mitigation plan
- Section 20 Agreement – River Test Monitoring Work Package document ref: 2.2 Monitoring and mitigation
- Section 20 Agreement - River Test Mitigation Work Package document ref: 2.2 Monitoring and mitigation
- Section 20 Implementation Progress Summary document ref: 2.3 Section 20 Monitoring and Mitigation Progress
- Habitats Regulations Assessment Report – Document ref: 2.4 HRA - Test Surface Water Drought Permit Stage 2
- Environmental Assessment Report Appendix B – Document ref: 2.5 EAR Appendix B of Drought Plan
- Environmental Assessment Report Appendix D – Document ref: 2.6 EAR Appendix D of Drought Plan
- Section 20 Agreement Summary document ref: 2.7 Summary of the Section 20 Agreement

1.2 Consultation

Consultation with Natural England and the Environment Agency was undertaken at an early stage of the preparation of this permit application. The final application is further to a review of a draft application by the EA and NE. Furthermore, this application is made following previous preparation and application sequences:

- A mock permit exercise between September and December 2018.
- An actual application process in 2019, concluding with a granted drought permit but, without operational implementation of that permit.
- An initial draft application reviewed by EA and NE in 2020.

2 Hydrological context

An overview of the River Test catchment and hydrology of the River Test is provided in the application document 1.1 - Doc ref: **1.1 Description of the proposal**.

In respect of assessing the environmental impact of abstraction, it is important to recognise that the Lower River Test's environment and flows are influenced by channels diversions and flow routings, structures including water level and flow controls and, downstream tidal influence. Figure 1 provides an overview of the routing downstream of Romsey. It shows the location on the abstraction of the Great Test reach, between Nursling Fish Farm and the confluence of the River Blackwater tributary. The primary impacts of the abstraction are therefore on the Great Test below the abstraction, upstream of the River Blackwater and on the Greater and River Test further downstream of that. There may be some, but limited impact on the Wirehouse stream and, more remotely, across in the Little Test downstream of the Wirehouse stream because of the connectivity between the Great Test and Little Test by the Wirehouse stream.

Great and Little Test split

This is the main split between the River Test into the Great Test and Little Test. The flow division is regulated by the agreement introduced in 1831, known as the Coleridge Award, to fairly manage the flow between the different river users and riparian owners. The agreement states that one third of the flow should pass down the Little Test and two thirds down the Great Test. Normally the control is now operated by the Little River Management Fishery River Keepers. They also control the penstock controlling flow from the Great Test into the Wirehouse stream. The Little Test re-joins the Great Test just above the Test estuary.

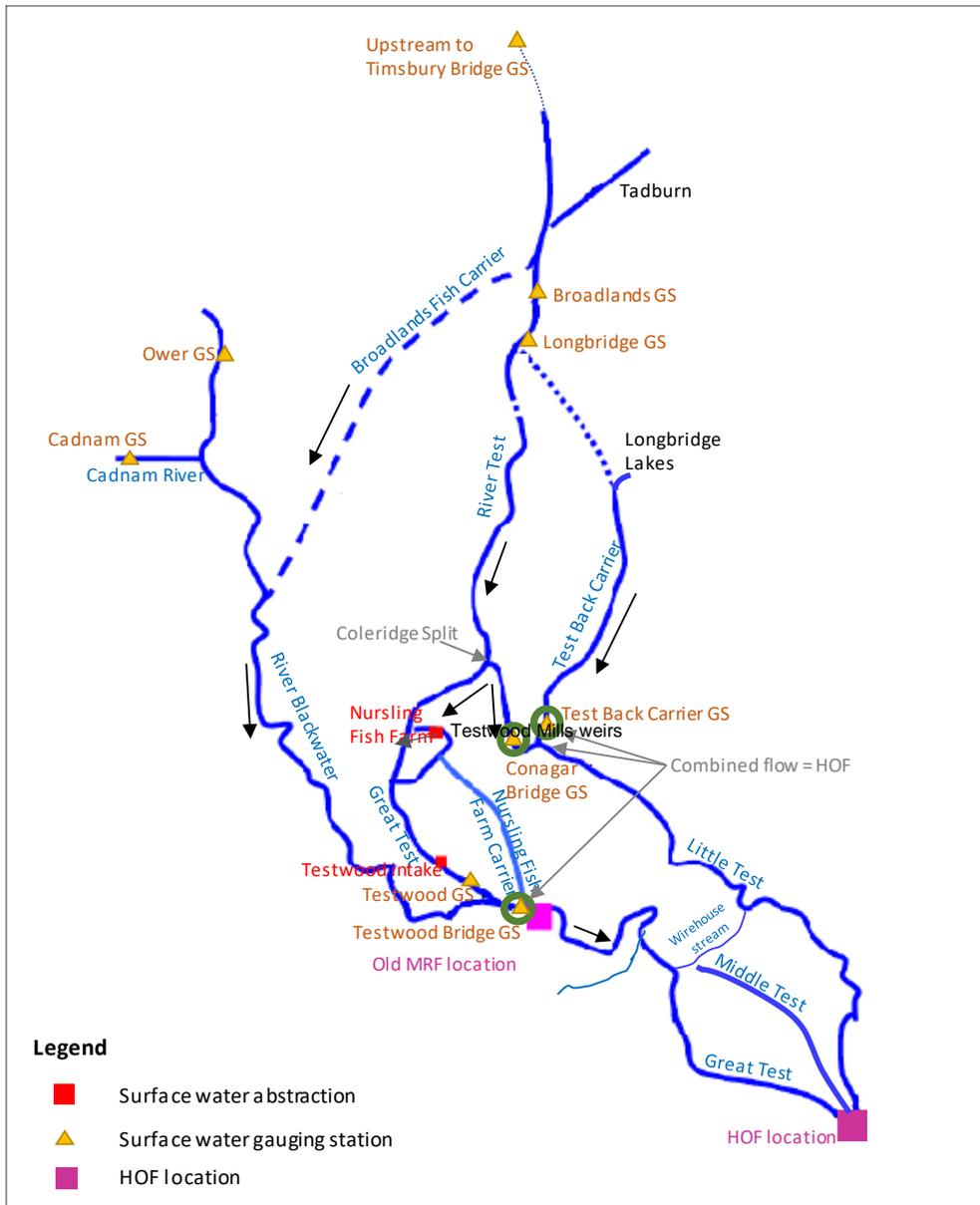
Tidal Influence

The tidal limit is marked on Ordnance Survey maps near Testwood Mill / Testwood Pool. During particularly high tides there can be extensive inundation of the Lower Test Valley SSSI and the lower reaches of the River Test more generally. There is some evidence of tidal backwater influence extending to Testwood Bridge and the EA gauging station upstream of the Blackwater confluence but, primarily upstream propagation of tidal influence is curtailed by the weirs at Testwood Mill.

The precise location of the “natural” hydraulic limit of the tide on the Great Test is uncertain due to the presence of river control structures, most notably those at Testwood Mill, but also the EA’s flow gauging station immediately downstream of the abstraction. However, the fact that tidal signals are occasionally seen in the records from the gauging station suggests that in a more natural un-impounded context the hydraulic limit would extend further upstream of the Testwood abstraction.

There is limited evidence for a regular saline incursion to the Great Test, although salt water can push up into Testwood Pool, sea levels are generally below river levels upstream of the structures on the Great Test. Any reduction in freshwater input will be greatest in the upper Test Estuary, with marginal (negligible) effects within the main transitional water body of Southampton Water. However, there is the potential for the abstraction to impact on the upstream and downstream migration of salmonids, eel, and sea lamprey, including passage through the tidal reach downstream of Testwood Mill. Changes to the freshwater flow inputs to the estuary may also have effect on estuarine features and species in the upper Test estuary. The wider Solent Maritime environment and designated sites and features are also considered within the environmental impact assessment for the drought permit.

Figure 1 Hydrology schematic of the Test downstream of Romsey



Adapted from Environment Agency, 2011 \20151566 SWS MWH\20161205 SWS Drought Plan\7 WIP\8_Revisions\EARs\Hampshire maps.pptx

3 Ecological context and assessment

The lower section of the Great Test, which lies within the Solent and Southampton Water Special Protection Area (SPA) and Ramsar, is also within the hydrological zone of influence identified as being impacted by the Test Surface Water Drought Permit and, the upstream boundary of the Solent Maritime Special Area of Conservation (SAC), which is approximately 300m downstream from Testwood Mill. The River Itchen SAC and Solent and Dorset Coast SPA are in hydrological connectivity with the River Test estuary, and the upper River Test Estuary could provide offsite functional habitat for several of the qualifying features designated as part of these sites. Therefore, all five sites have been included for consideration in the Habitats Regulations Assessment undertaken for this drought permit. The respective qualifying features, conservation objectives, underlying Site of Special Scientific Interest (SSSI) condition assessment and relevant actions from the Site Improvement Plans, for each designated site have been considered.

Assessment of the potential impacts of the drought permit is reported in the Environmental Assessment Report (EARs) and the Habitats Regulations Assessment Report provided with the Drought Plan and included with the application (listed above) after due consideration of any latest information.

Risk of impact of the abstraction under the River Test drought permit and drought order have been considered within the s20 and, monitoring and mitigation of those risks have been agreed with the EA and NE, documented in the s20 monitoring and mitigation work packages (listed above). Additional to those permanent measures, the Monitoring and Mitigation Plan submitted for this drought permit application sets out further reactive monitoring and mitigation in respect of risk of environmental impacts.

4 Conclusion

The environmental assessments conclude that for the duration of the permit (six months) it is unlikely that the proposal could have an adverse effect on the conservation objectives and site integrity, alone and/or in combination with any other plans or projects, on the River Itchen SAC, Solent and Southampton SPA/Ramsar, Solent Maritime SAC and Solent and Dorset Coast SPA. This overall conclusion has not changed through the updates of the assessments since those reviewed at the March 2018 Public Inquiry and the s20 agreed as a result.

Monitoring and mitigation measures secured via the s20 agreement for the River Test SSSI, agreed with the EA and NE, will provide resilience and improvements to habitats and species passage, upstream of the normal tidal limit at Testwood Mill. Some of the committed mitigations have already been implemented. All the s20 River Test drought permit mitigations are due to be completed by April 2024, again as agreed with the EA and NE.

Nevertheless, Southern Water recognises there is risk, and stakeholders have concerns about, impact from abstraction under the drought permit. The Monitoring and Mitigation Plan - Doc ref: **2.2 Monitoring and mitigation plan** prepared for this drought permit and submitted with the application, provides further reactive address to the risks and concerns. Additional in-permit monitoring is set with further monitoring and mitigation measures to be invoked, especially if water quality thresholds are passed or evidence of ecological stress is found.