

# **INQUIRY UNDER THE WATER RESOURCES ACT 1991**

## **INTO THE PROPOSED ABSTRACTION LICENCES AFFECTING THE RIVERS TEST, ITCHEN AND CANDOVER STREAM**

**PLANNING INSPECTORATE REFERENCE: RSA/WR/00016/18**

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### **POSITION STATEMENT ON BEHALF OF FISH LEGAL**

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#### **INTRODUCTION**

1. This is a Position Statement on behalf of Fish Legal who are a Rule 6 party to the Inquiry. It has been prepared without sight of the Heads of Terms apparently agreed or being agreed between the main parties but is intended to assist the Inspector in identifying potentially outstanding areas of dispute and Fish Legal's proposals for the conduct of the Inquiry.
2. Fish Legal is a national membership association representing angling clubs and riparian owners, and has been representing its member organisation Little River Management Ltd ('LRM') in relation to the increase in abstraction at Testwood proposed by Southern Water ('SWS') for a number of years. Our members, LRM, have separately provided their own statement of case explaining, amongst other things, the potential impacts on their angling business represented by SWS's continuing proposals.

#### **SUMMARY**

3. Fish Legal broadly supported the Environment Agency's ('EA's') proposals to modify the abstraction licences on the Test at Testwood, from the River Itchen at Twyford and Otterbourne and to renew (subject to variations) the licence on the Candover Stream at Preston Candover.

4. Fish Legal's involvement in this inquiry stems from a desire to ensure protection for both the Itchen and the Test – two of the most valued of a highly valued subset of British rivers, and their unique, spring-fed chalkstreams, from over-abstraction. Fish Legal's primary concern is that Southern Water's ('SWS's') proposals will have come at the expense of ensuring acceptable flows for the River Test.
5. It appears that the EA and Fish Legal's objections to SWS's proposals for the licences have now, belatedly, been accepted to have been reasonable by SWS who have withdrawn their appeals. This is a welcome acknowledgement of the weakness of SWS's case.
6. Prior to SWS withdrawing its objections to the EA's proposed licences, Fish Legal's evidence (as set out in its Statement of Case, the proof and rebuttal proof of John Lawson and in the proofs/statements of case of Little River Management) consisted of four main elements: firstly, modelling and the frequency of drought-related 'trigger levels', secondly the impact on salmon migration, thirdly the impact of SWS's S.20 proposals for monitoring on Little River Management's land and fourthly prioritisation in drought and near-drought conditions of the various water sources and restrictions.
7. The majority of Fish Legal's evidence focussed on the first three elements referred to above. However, the issue of the prioritisation or sequencing of abstraction from the various water sources and restrictions was an important element of Fish Legal's case which does not appear to have been incorporated into the licences and accompanying agreements between the EA and SWS which are proposed to be made by way of a settlement pursuant to S.20 WRA 1991. Fish Legal's contribution to this Inquiry is now significantly reduced and will focus solely on this discrete but important issue in relation to the proposed licences for the Test and

Itchen but it is necessary briefly to consider Fish Legal's position in respect of the other issues on which it has given evidence to the Inquiry.

### **Issue One – modelling and the frequency of drought-related 'trigger levels'**

8. Firstly, Fish Legal challenged the choice of particular data sources for the groundwater modelling used to estimate historical river flows, which were then input into the water resources (Aquator) modelling system. In short, Fish Legal showed that SWS's groundwater modelling consistently *under-estimated* river flows which had the effect of *over-estimating* the frequency of occurrence of drought conditions, and accordingly the frequency of the measures said to be needed in preparation for droughts. In particular, Fish Legal's modelling evidence showed that SWS's justification for requiring a reduced HOF for the River Test – that the 355 Ml/d level would require impracticably frequent Drought Order applications and accompanying demand restrictions – did not stand up to scrutiny as, given the correctly assessed frequency of low flows and Drought Order applications, the 355 Ml/d HOF would be breached very infrequently and the Drought Order regime, including the applications required in advance, appeared to offer a practicable means of dealing with those rare situations when a breach of the 355 Ml/d HOF was likely to occur.

### **Issue Two – fish impact**

9. Secondly, Fish Legal challenged SWS's claims that salmon migration up the River Test is not significantly influenced by baseflow (or thus by abstraction) and that a HOF of 355 Ml/d offered no measurable benefits over and above a HOF of 265 Ml/d. In fact, Fish Legal's evidence showed that the existing, present-day abstraction from the River Test is adversely affecting salmon migration at all lower flows. Therefore, far from the extra abstraction now proposed by SWS, there is a need to

improve existing low flows by provision of new supplies to allow less abstraction, particularly at critical times for salmon migration. Adherence to the 355 ML/d HOF would assist in (though not be sufficient for) protecting flows for migration.

### **Issue Three – impact of SWS’s S.20 plans for trials and monitoring**

10. Thirdly, the evidence from the owners of Little River Management Limited (LRM) demonstrated that SWS’s suggestion that the EA should enter into an agreement under S.20 WRA 1991 that will enable SWS to compulsorily access land leased to LRM to conduct monitoring was highly problematic. Fish Legal agreed with the EA’s view that this inquiry does not have power to make the EA enter into such an agreement. LRM also showed that allowing SWS to receive a grant under S.20 WRA 1991 to conduct any of the possible monitoring projects which appear to have been proposed would have had significant adverse impacts on LRM’s existing, careful management of the fishery and a substantial commercial impact on the recreational angling such that the entire existence of this small, local business would be put at risk.

### **Issue Four – sequencing/prioritisation of abstraction**

11. Fish Legal are pleased that the withdrawal of SWS’s appeal and of the proposed S.20 agreement between the EA and the SWS in respect of access to LRM’s land, combined with SWS’s stated intention to have new supply sources available in the next 10 to 15 years, appears to have resolved the above points to Fish Legal’s satisfaction. However there remains an important outstanding issue, namely the question of conditions in the licences relating to the sequencing/prioritisation of abstraction from the various water sources and demand restrictions. In addition there remains a question about the appropriate hourly abstraction rate at Testwood.

12. In summary, Fish Legal will invite the Inspector to include provision within the licences (and/or the accompanying S.20 agreements) for the prioritisation or sequencing of use of water sources to ensure that the most ecologically appropriate sources for abstraction are prioritised in the event of low flows arising. Fish Legal will suggest that the preferred sequencing, based on the most ecologically favourable outcome in low flow conditions, should be specified and included in the Test and the Itchen licences.
13. SWS's case on prioritisation is unclear. It appears that SWS propose to have no constraints on their ability to utilise abstractions from the Test save for the accepted 80 Ml/d daily limit and the newly agreed HOF of 355 Ml/d (and with the latter to be overridden under any Drought Order). This would entitle SWS to abstract considerably more from the Test than recent actual abstraction levels (around 55 Ml/d). In addition, in those circumstances where SWS are granted a Drought Order overriding the HOF they could achieve abstraction levels (a continuous 80 Ml/d under severe drought) that may be historically unprecedented.
14. It also appears that SWS intend to engage the 15 Ml/d bulk transfer from Portsmouth Water on the Itchen at Gaters Mill (to offset reduced abstraction from the Itchen at Otterbourne) only when demand restrictions reach Drought Trigger Level 1 ('DTL1'). Fish Legal's assessment is that the frequency of triggering DTL1 (using trigger flow levels as provided in the Statement of Common Ground) must be much less than indicated in SWS's Aquator modelling, which means that in fact bulk transfers from Gaters Mill will occur much less frequently than is shown by the modelling. Not only will the transfers occur much less frequently than SWS suggest, but they appear to be entirely at its discretion, so that unless the relevant licence specifies otherwise, SWS will have the ability to rely on abstraction from the River Test and from

Candover *before* resorting to bulk transfer from Portsmouth Water at Gaters Mill - if indeed that is engaged at all. This is despite the fact that, as the Gaters Mill source is abstracted from the Itchen about 10 km downstream of Otterbourne, abstraction from Gaters Mill rather than the equivalent amount at Otterbourne during low flows would always improve flows (and hence improve ecology) by 15 Ml/d throughout the 10 km reach of the Itchen between Otterbourne and Gaters Mill.

15. Fish Legal suggest that protection for the ecology of the Rivers Test and Itchen requires provision for the prioritisation of the engagement of water sources and demand restrictions which, at least in principle, the EA appears to agree with [see para 72 EA's Itchen SoC]. Thus it appears that the environmentally-beneficial bulk transfer supply from Gaters Mill should be required to take place ahead of any increased abstraction at Testwood to supply the proposed transfer into the Southampton East WRZ. In severe drought conditions requiring a Drought Order and with the Gaters Mill bulk supply and demand restrictions already engaged, the 'pain' of flows lowered below their respective HOFs should then be shared equitably between the Test and the Itchen rather than protecting one (the Itchen) by harming the other (the Test) as a result of the proposed transfer. The detail of exactly what sources of abstraction should be prioritised ahead of other sources and what flow triggers should be in place should be something considered in the light of all the evidence including the ecological evidence.
16. Fish Legal have also presented evidence [para 54-58 proof of evidence of John Lawson] that protection for the ecology of the rivers should involve, as occurs with other licences, not just a daily and hourly abstraction limit but a requirement for actual abstraction to be at a uniform rate throughout the day, rather than diurnally varying.

#### **SEQUENCING/PRIORITISATION OF ABSTRACTION**

### **The background – frequency of shortfalls and drought trigger levels being hit**

17. The evidence from Mr Lawson, an eminent and experienced water resources engineer instructed by Fish Legal demonstrated categorically that the ‘naturalised’ flows used in SWS’s Aquator modelling (based on PENSE Potential Evaporation and three rain gauge data) grossly underestimated flows in moderately dry years when compared with what actually happened (i.e. gauged flows). Mr Lawson also showed that other Aquator modelling, provided since submission of Evidence and the Modelling SoCG and using inflows based on MOSES PE, also substantially underestimated dry year flow levels.
  
18. As to the frequency of drought restrictions, the Aquator modelling relied upon by SWS suggested for example that Level 2 demand restrictions would occur every 1.4 - 1.6 years [**Ben Piper PoE para 8.15**]. This is in part because the modelled river flows were too low and thus appeared to breach given trigger levels too frequently, as explained by Mr Lawson. However, Mr Lawson also made clear that SWS’s Aquator model outputs cannot be reliably used for estimating the frequency of triggering reductions in the Otterbourne abstraction, use of the Candover scheme or the need for increased abstraction at Testwood because the drought trigger levels have been set too high and show a marked and unjustified divergence from SWS’s operations under their existing licences, where SWS have been able to meet their required levels of service without recourse to frequent demand restrictions or drought orders.

### **The ecological rationale for including sequencing/prioritisation of abstraction**

19. SWS’s case was that the EA’s proposed HOF of 355 Ml/d on the River Test offered no measurable benefits to salmon over SWS’s proposed HOF of 265 Ml/d.

20. SWS have now, apparently, accepted the EA's proposed HOF of 355 Ml/d. This concession is welcomed by Fish Legal as Mr Lawson (through his work as a member of the Test Salmon Working Group), showed that the existing abstraction regime causes migration to the end of July to be reduced by about 10% in normal years and up to 25% in drought years and any reduced HOF would worsen this.
21. This evidence that salmon migration and river flows are linked is a primary reason for Fish Legal's suggestion that a condition of the licences should be that abstractions from the various available sources in time of low flows or drought should take place pursuant to a pre-determined sequence rather than being entirely at SWS's discretion. Fish Legal will suggest (as corroborated in the Aquator modelling results provided by SWS) that as abstraction from the Test would be entirely unconstrained (save for the requirement to abstract no more than 80 Ml/d and not below a HOF of 355 Ml/d under the proposed licence), this may involve SWS abstracting significantly more from the Test in time of low flows or drought to supply the Southampton East WRZ than has been abstracted in recent actual abstractions, which have been largely between 50-60Ml/d [**Annex 16 to EA's Testwood SoC**]... Allowing SWS to operate the proposed transfer as it sees fit would thus mean that there could be a significant increase compared to current abstraction rates from the Test despite the evidence showing that abstraction has a negative impact on salmon migration even at recent actual rates.
22. Fish Legal note that the EA has confirmed that the current stock classification for salmon in the Test is '*Probably at Risk*' [**Longley PoE, para 4.42**] and that for salmon and other aquatic life in the Test '*positive action is required to conserve them*' [**Longley PoE, para 2.1**]. Mr Longley goes on to say that '*in order to reduce the risk of deterioration in the Test (lower) water body, we must actively reduce the effects of extant*

*pressures on these species and ecosystems on which they depend. Equally, through all our activities, it is essential that we avoid increasing the risk of additional pressures developing, either directly or indirectly, in combination with the broad range of factors affecting these species’ [Longley PoE para 5.3]. As such, Fish Legal’s proposal that the licences include a prioritisation/sequencing condition is a prime example of a means of avoiding additional pressures developing on the Test.*

23. The importance of including some form of prioritisation/sequencing of abstraction and drought trigger levels in the licences is also consistent with the case advanced by the Environment Agency itself [see para 72 of the EA’s Itchen SoC].

**Fish Legal’s objections to any licence which does not prioritise water supplies and restrictions during low flows**

24. The issue of the prioritisation of different sources of water to fulfill SWS’s demand requirements has been a long-standing concern of Fish Legal and Fish Legal’s objection to any licence without such a condition has been clear.
25. Firstly, in SWS’s note on the proposed Testwood-Otterbourne pipeline scheme of 6 October 2016 [Annex 6, Fish Legal SoC] SWS stated:

*‘6. Priority use of Bulk Supply from Portsmouth Water  
Southern Water will utilise the new Bulk Supply from Portsmouth Water to South Hampshire before using the proposed special condition allowing abstraction at Testwood to increase above 105 MI/d. The Bulk Supply will be used in general preference to use [of] the Testwood to Otterbourne transfer.’*

SWS went on to say:

*‘Southern Water’s WRMP proposes to also implement a Candover Scheme. This Scheme assumes an acquisition of the Environment Agency Candover groundwater abstraction licence and utilisation of that abstraction for discharge to the River Itchen to support abstraction at Otterbourne. The Scheme would be a drought-only*

*one, envisaged to be allowed if River Itchen flows fall to 240 Ml/d). It would also be operating only after the Portsmouth Water Bulk Supply and with drought management water use restrictions in place. It has been envisaged as to be used before the Testwood increased abstraction. However, if environmental preferences dictate, the Candover Scheme could be operated after this.'*

26. In the light of this and other issues surrounding the Testwood licence Fish Legal stated as follows in its objections to the proposed licence on 4 August 2017 [**Annex 2 to EA's SoC**]:

*[p7] This statement [from the EA's LCPR] appears to mean that the RA range of some 50-80 mld has not caused obvious problems, so it would be over-precautionary to restrict this range by reducing the maximum abstraction to the RA average of 60 mld. The problem we see with this, however, is that when existing abstraction into the 'Testwood catchment' is around the 60 mld average (as presumably it often or usually is), that leaves c.20 mld that could potentially be transmitted through the pipeline to serve the 'Otterbourne catchment'. This seems to mean that abstractions considerably higher than 60 mld could become much more frequent than previously. One way of preventing this problem might be for the EA to impose a licence condition, as we and WWF suggested in our 2016 representations, that no pipeline transfers can be made when the Itchen SR (198 mld) HoF has not been triggered (by the flow actually reaching 198 mld, not 240 mld, as discussed above). Given that this means that the transfer could only be made in very occasional extreme droughts, and that these as the LCPR says should not be catered for by licence conditions but only by 'emergency' drought orders (see below), it may in fact be better to place a complete prohibition against pipeline transfers using the 'headroom' afforded by the proposed 80 mld limit; or to reduce that limit.*

*[p8] We need to have the EA's assurance that any such drought plans will not enable pipeline transfers, possibly well above the 80 mld limit, 'by the back door'. An up-to-date assessment of how the drought plan process is proposed to work is needed for consultees' early review.*

27. This objection to the proposed licence was confirmed in Fish Legal's Statement of Case in December 2017:

*[19] If, as the Technical Note above says, breaching the trigger*

level (which appears to be 205 mld) “triggers drought interventions which include ... eventually Non-Essential Use (NEU) Bans) and the activation of alternative resources (for example bulk supply from Portsmouth Water)”, it seems strange that the Aquator data as provided appear to show no ‘contribution’ from the proposed Portsmouth Water bulk supply (of 15 mld) being made at the 205 mld trigger point (or possibly at all, given that the “Gators Mill” abstraction contribution, which may or may not include the 15 mld Portsmouth Water ‘bulk supply’ to SW, is shown not to vary from a constant 30 mld at the date the 205 mld trigger point is reached or indeed thereafter in the relevant drought years).

28. Fish legal went on to say in its Statement of Case that the Gators Mill supply should [20] “be included as a high priority in the ‘sequence of actions’” and should be prior to any transfer out of the Test which would cause [26] “disastrously low flows, exacerbated by abstraction”.
29. Finally, the issue of sequencing and the lack of prioritization in the proposed licences was referred to by Mr Lawson at a number of points in his proof [**John Lawson PoE**]:

[52] *In my opinion, the abstraction licences – and indeed any drought order – should include details of how the various sources should be prioritised (sequenced) when choices are available. This should be aimed at minimising environmental impacts, plus an equitable sharing of impacts between the two rivers and various locations thereafter. For example, in taking water a given amount of water from the River Itchen, it would be preferable always to prioritise the 15 Ml/d Gators Mill bulk transfer ahead of the Otterbourne abstraction, thereby re-instating 15 Ml/d of flow in the 10 km of River Itchen between Otterbourne and Gators Mill.*

[53] *Prioritisation of sources will become even more important when Southern Water have developed the new source(s) that will be required as a consequence of the Environment Agency’s licence changes. In my opinion, the new licences should recognise this principle and prioritisation between the various sources and the two rivers should be on the basis of minimising environmental damage rather than saving money, particular[ly] through the avoidance of inter-company bulk supply costs.*

### **SWS and the EA’s case on prioritisation**

30. In SWS's Statement of Case at paragraph 10, SWS proposed a 'sequence of actions' summarising the measures to be taken in the event of a drought. This begins with '*transfers from Southampton West WRZ to Southampton East WRZ*'. It seems that this is the up-to-24 Ml/d transfers via the existing pipe network from the Testwood treatment works (ie. abstracted from the River Test) into the Southampton East WRZ thus utilising the entirety of the flow allowance up until the daily abstraction limit (of 80Ml/d) is reached.
31. Over the course of the Statement of Common Ground – Modelling discussions, however, it became clear that although Run INQ010 had been presented as representing SWS's 'preferred solution', it was in fact no more than illustrative or 'indicative' of SWS's actual operating intentions, both in terms of 'trigger' points and sequencing. Thus the Statement of Common Ground says [**SoCG-M, para 65**]:

*It is important to stress that Aquator is not an operational model – it responds to pre-defined rules that govern the conditions under which abstraction and other operations are predicted to occur. The rules are necessarily simplifications of the operating procedures that may be followed in practice. Each Aquator 'run' thus in effect provides the results of a particular operational 'scenario' with its own operating rules and assumptions, but does not necessarily constitute a plan or commitment by SWS as to how it will actually undertake its operations. SWS has the flexibility to operate provided it is within its abstraction licence conditions.*

32. This intended high degree of 'within-licence flexibility' appears to be corroborated in Technical Note DG16 (Appendix B to the SOCG(M)), which provides information on the Aquator operating rules. In its final version this document, which was amended during the SOCG(M) process, in section 1.3 apparently alters the "drought sequence" from the earlier version, so that the increased abstraction from the Test (and transfer to the Southampton East WRZ) is no longer subsequent to, but

now precedes, the bulk supply from Portsmouth Water at Gaters Mill. The lowering of the Gaters Mill supply priority in the sequence, or even its complete removal, is also apparently assumed in the evidence of Mr Piper [**Ben Piper's PoE section 9**]

33. SWS's evidence provided after the SoCG-M was agreed also confirms that the Aquator modelling is only meant to be "indicative" and does not represent how the sources would be operated in reality [**see references in John Lawson rebuttal proof, para 83**].
34. Despite the uncertainty in SWS's evidence on this point, it appears that SWS intends, within the 'flexibility' afforded by both the EA and the SWS proposed licences, to make it a matter of its own discretion when (and indeed whether) the Gaters Mill bulk supply will be drawn on and whether that will be in priority to the increased abstraction on the Test; whether the transfer of water from the Test in the Southampton West WRZ to Southampton East WRZ will in fact be its first priority in the sequence; and at what flow trigger level (at the Itchen Allbrook & Highbridge gauge) this transfer of water abstracted from the Test will be initiated. This discretion has profound implications because, as it stands, even under the EA licence which has apparently now been accepted, there is nothing preventing SWS from abstracting up to the proposed daily abstraction limit of 80 Ml/d (despite recent actual abstraction only being around 50—60 Ml/d).
35. In effect, without some form of sequencing/prioritisation condition being inserted into the licence, daily abstractions from the Test may be used as SWS's priority drought measure, ahead of (and perhaps replacing) any Gaters Mill supply and even any demand restrictions. Indeed, given the financial implications of purchasing bulk transfers from Portsmouth Water, this option may be exercised frequently.

36. The exact sequence in which different sources are prioritised in the event of low flows is not a matter which Fish Legal will make detailed submissions on at the Inquiry. Fish Legal submit that once it is accepted that sequencing/prioritisation for environmental protection is in principle appropriate, the exact sequence that should be put in place and the wording of any such sequence should be a matter to be determined in the light of all the evidence and Fish Legal are happy to comment on any proposed conditions put forward by either of the main parties. However, one obvious and straightforward prioritisation condition would be that as the Gaters Mill source is abstracted about 10 km downstream of Otterbourne, abstraction from Gaters Mill rather than Otterbourne during low flows would always improve flows (and hence improve ecology) by 15 Ml/d throughout the 10 km reach between Otterbourne and Gaters Mill.
37. This prioritisation should also be incorporated into any Memorandum of Understanding prepared between SWS and EA in respect of any applications for Drought Orders along with confirmation that the Itchen and Test should 'share the pain' if any abstraction needs to occur below their HOFs.

### **Hourly abstraction rates**

38. Fish Legal suggest that another condition which should be inserted into the licence (and which may not feature in the proposed agreement between SWS and the EA) is a requirement that daily abstraction occurs at a uniform rate throughout the day to prevent, as appears to be happening, significant abstraction occurring at night which can have an adverse impact on salmon migration.

### **Procedure**

39. Fish Legal are prepared to give evidence to the Inquiry on the principle of sequencing/prioritisation and hourly abstraction rates and/or to contribute to the roundtable on conditions that the Inspector has earmarked for Day 12 of the Inquiry.
  
40. Nevertheless, for the avoidance of doubt, Fish Legal's concern is that the objections which it has raised are incorporated into the new abstraction regime for the Test, Itchen and Candover in a robust and workable way. Fish Legal is neutral as to whether these issues are incorporated as conditions or as elements of a S.20 agreement between SWS and the EA or within operating manuals as occurred in recent changes in the operation of sources using the Rivers Wye and Usk [**see para 84 John Lawson Rebuttal PoE**].
  
41. Fish Legal should therefore be involved in the ongoing negotiations and drafting of the licence conditions and the S.20 agreement or agreements between SWS and the EA.

**NICHOLAS OSTROWSKI**

**Sis Pump Court Chambers**

**12 March 2018**