

Author:

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Application number:

NPS/WR/021737

Licence number:

SO/042/0031/026/R01

EA Region:

Solent and South Downs

Date of Serving Notice:

27/10/2016

Applicant details:

Environment Agency

Summary of the proposal:

This application was to renew the Environment Agency's Candover Scheme augmentation licence, which was expiring. The Scheme at Preston Candover, Hampshire uses groundwater from six boreholes to provide the Candover Stream with water for environmental support at times of very low flow (effectively, drought conditions.) The groundwater in the chalk aquifer of the upper Candover catchment provides much of the baseflow to the Candover Stream. Use of the Scheme lowers groundwater levels, which then impacts the flow in the Candover Stream, and its associated species and habitats, in the short to medium term after the Scheme is turned off.

To reduce/mitigate such impact, the renewal application proposed to; significantly reduce the annual and daily quantities (by nearly 80%); to limit the frequency the Scheme can be used to, at most, once in every six years; to add an additional ecological monitoring point; and, to short time-limit the licence so that it expired on 31 December 2022.

Key Points:

- The Candover Stream is a chalk stream tributary of the River Itchen, flowing over the River Itchen chalk aquifer;
- Parts of the River Itchen and the lower Candover Stream are designated a Special Areas of Conservation (SAC) and Sites of Special Scientific Interest (SSSI) and have high conservation value;
- The headwaters of the Candover Stream are ephemeral, the springhead moves up and downstream seasonally, influenced by rainfall and the water table of the underlying chalk aquifer;
- The Candover Scheme was created to augment flows with groundwater abstracted from the underlying chalk aquifer to support the downstream Public Water Supply (PWS) abstraction in the middle reaches of the River Itchen;
- Since its completion it has been used rarely because PWS abstraction did not increase as much as expected and because improved water quality in the River Itchen meant that the scheme was not needed to support water quality at times of low flow;
- In more recent times, assessment of the impact of the augmentation water upon the ecology of the stream has indicated that discharging the existing daily maximum augmentation flow from the boreholes is likely to have an overall negative impact on the river ecology as a result of high water velocity and changes in water chemistry and temperature;
- Our investigations, supported by Natural England (NE), have concluded that better protection of the ecology of the Candover Stream (and in turn the SAC and SSSI) would be provided by significantly lower augmentation flows that are more in line with natural low flow conditions, and infrequent use;

- These lower augmentation rates will lessen the ability of the Scheme to support the Otterbourne PWS abstraction downstream, however we believe this reduction is the appropriate way forward to contribute towards a sustainable level of groundwater abstraction from the aquifer, whilst still affording protection to the Candover Stream in terms of WFD flow status, WFD ecological status and the features of the SAC and SSSI;
- The reduction in this licence will complement our overall approach to move surface and groundwater abstraction in the catchment towards more sustainable levels. Our analysis suggests that other abstractions may be having an impact on flows in the Candover Stream. The recent revocation of the abstraction licence and discharge consent at Fobdown watercress beds has changed the hydrology of the river and impacts of abstraction now need to be re-assessed. We have been working with the local Water Company towards this through the Restoring Sustainable Abstraction (RSA) programme and the National Environment Programme (NEP);
- We wish to retain the Candover Scheme licence, on these reduced terms, to allow us to provide continued protection to the lower Candover Stream during any future period of low flow in the next 6 years whilst other abstraction sustainability measures are implemented in the catchment and the effects of the revocation of the Fobdown Cressbeds are understood.

Source of Supply:

Underground strata comprising of Chalk at Preston Candover, Hampshire.

Points of abstraction and quantities:**Points of abstraction:**

Point A – (Axford)
Point B – (Axford)
Point C – (Bradley)
Point D – (Bradley)
Point E – (Wield)
Point F – (Wield)

For the purpose of: 1. Transfer for the purpose of augmenting flow within the Candover Stream.

A reduction in abstraction to;

5,000 cubic metres per day (from 27,000.)
750,000 cubic metres per year (from 3,750,000.)
At a maximum instantaneous rate of 60 litres per second (from 350.)

For the purpose of: 2. Transfer for the purpose maintenance and testing.

A reduction in abstraction to;

5,000 cubic metres per day (from 27,000.)
25,000 cubic metres per year (from 100,000.)
At a maximum instantaneous rate of 60 litres per second (from 350.)

The maximum aggregate quantity of water to be abstracted.

A reduction in abstraction to;

5,000 cubic metres per day (from 27,000.)
750,000 cubic metres per year (from 3,750,000.)
At a maximum instantaneous rate of 60 litres per second (from 350.)

Means of abstraction:

Six boreholes each not exceeding 120 metres in depth and 560mm in diameter each with a pump.

Purpose of abstraction:

1. Transfer for the purpose of augmenting flow within the Candover Stream.
2. Transfer for the purpose maintenance and testing.

Abstraction period:

All year

Case history:

The Candover Scheme was developed by the incumbent Water Authority (Southern Water) to allow continued public water supply (PWS) abstraction and to support water quality in the lower River Itchen at times of low flow. It was licensed in 1980, following extensive test pumping in 1976. The Candover Scheme was transferred to the National Rivers Authority (NRA) in 1989 as its main purpose was defined as 'environmental support,' and it was more appropriate for the NRA to hold the licence and operate it at a time when the Water Authorities were being privatised. The Scheme subsequently passed to the Environment Agency in 1995. The Environment Agency have operated the Scheme several times over the years during drought events, or for maintenance and testing duties (it has been used less than 10 times in total.)

Three pairs of boreholes at Axford, Bradley and Wield, respectively, near Preston Candover, Hampshire are connected to an underground pipe (approx. 13km long) that can transfer the water to the Candover Stream just upstream of The Grange Lake, near Swarraton.

The current licence expires on 31/12/2016*, and this application is to renew the licence, on different – more restrictive - terms. (* As the application was referred to the Secretary of State, the current licence remains 'valid' until the Secretary of State makes a recommendation, as implemented.)

When the Scheme is used, the immediate impact is to increase flows in the Candover Stream and to cause drawdown in the groundwater of the upper Candover valley, where the boreholes are located.

When the Scheme is turned off, lowered groundwater levels caused by its use results in a reduction in flow in both the Candover Stream and some of the surrounding watercourses. Depending on how much the Scheme has been used and how rapid the natural refilling of the groundwater aquifer has been, small scale impacts can persist during the Spring and Summer following use of the Scheme and in exceptional conditions, very small impacts can persist for longer than a year.

Natural England and the Environment Agency now broadly agree that augmentation of the Candover Stream is unsustainable in the long term because the currently licensed abstraction rates can actually provide far more water than is immediately necessary to benefit the ecology. Augmenting at such rates prolongs the period where groundwater levels are reduced and flow to the Candover Stream, and its ecology, is impacted. Though the current version of the Candover Scheme abstraction licence was issued in 2015 and included new conditions that constrained when and how the Scheme could be used, further restrictions on quantity and re-use are now thought necessary and are incorporated in the renewal application. The scheme will only be retained in the short term as a means of offsetting abstraction impacts on the Candover Stream whilst a long term sustainable solution is investigated and implemented.

The original 1980 licence authorised 36,000m³/day and 5,000,000m³/year. In 2015 the licence was reduced under the Restoring Sustainable Abstraction (RSA) programme to 27,000m³/day and 3,750,000m³/year, and included a Hands-off Flow, flow ramp-up and ramp-down conditions, maximum augmented flow rate at Borough Bridge Gauging Station, annual downstream macro invertebrate and macrophyte monitoring and reporting, and a pre-use crayfish monitoring survey and mitigation action plan. This renewal proposed a further reduction to 5,000m³/day and 750,000m³/year and adds to the other obligations from 2015 an upstream ecological monitoring point, the inclusion of a re-use condition meaning that use of the Scheme could only happen once in every six years maximum and a short time limit to 2022 to enable any licence changes necessary from the production of new, specific flows targets for the River Itchen SSSI and SAC, which are due in 2021.

Southern Water has stated in their Water Resources Management Plan (WRMP) 2014 that acquisition of the Candover Scheme licence was a 'preferred option' to, in part, meet their supply demand balance deficit in the Hampshire South zone. The proposed reduction in quantities in the licence means that it will no longer be able to support low flows in the River Itchen from which public water supply abstraction would be able to continue. (These PWS licences have no Hands-off Flows or Levels below which abstraction must stop, so augmentation can provide additional water for PWS abstraction during prolonged dry periods.) This means they will have to investigate other alternatives to meet their supply demand balance deficit. Southern Water were aware of our proposed changes to the Candover Scheme licence, and wrote to us on 21/11/16 objecting to them, which is detailed in External Representations below.

The application was referred to the Department for the Environment and Rural Affairs (Defra) on 22/12/2016. Defra 'called in' the application on 30/01/2017 for the Secretary of State to determine. The Secretary of State subsequently referred the matter to the Planning Inspectorate (PINS) to hear. A Public Inquiry was held in Winchester on 13/03/2018 and 27/03/2018, with a site visit on the 26/03/2018. The Planning Inspector published his Report, with recommendations, to the Secretary of State on 28/08/2018. Defra, on behalf of the Secretary of State, issued the Secretary of State's directions to the Agency on 25/02/2019.

Assessment and determination of the licence proposals:

The Agency's Determination Report (document SC2.2 in the Inquiry Documents List via the link in Conclusions and Recommendations below) provides all of the information to show how the Agency derived the proposed licence changes for this renewal application and had due regard to statutory obligations, legal requirements and the impact of the proposal on the environment and on any protected rights and lawful uses.

In the documents supporting the Public Inquiry, further details were also given in the Agency's statement of case and proofs of evidence.

External Representations:

The proposal was advertised in the Hampshire Chronicle on 24/11/2016. Statutory notification was served on Southern Water Services Limited and South East Water Limited on 24/11/2016.

In total, 19 responses were received, 9 from organisations and 10 from individuals, of which one of the latter was received just after the advertising period ended, but has been considered anyway. Responses received from 8 organisations and 10 individuals were broadly supportive of the Agency's proposals to modify the Candover abstraction licence at renewal. However, most additionally argued that the Water Company should find alternative, sustainable sources of supply other than chalk aquifers and rivers, such that the Agency could decommission the Candover Scheme as soon as possible and, preferably, now. Most of these responses highlighted the sensitivity of chalk aquifer and the Candover Stream along with concerns about the possibility of ecological damage and the risk of deterioration of ecological status under Water Framework Directive.

Only Southern Water objected outright to the proposed changes and in a detailed note, set out their interest in the Scheme, their potential adoption of the Scheme, the viability of the Scheme in their hands, and a review and comments on the Agency's application and its merits. The Agency responded to the common themes within Southern Water's objection in a letter dated 09/11/2016 and set out our statutory obligations and duties as owner/operator of the Candover Scheme and that our decisions regarding the proposed licence changes were evidence based. We gave Southern Water seven days to respond. Their response on 15/11/2016 restated their plans for the Candover Scheme, including on grounds of environmental impact and sustainability and that they would await the decision of the Secretary of State on our licence renewal as proposed.

Natural England were formally consulted on 09/09/2016 with assessments covering the reduced impact to the relevant SSSI's, SAC's and Habitat Directive sites and species. Their response said, 'Natural England supports the move towards a more sustainable abstraction regime on the River Itchen SSSI and SAC. We largely agree with the improvements to the licence suggested.' Adding, '...the new licence limits and conditions... will not permanently damage the features which are of special interest for the River Itchen SSS... [with] no adverse effect on the integrity of the River Itchen SAC... in the short-term, defined as 31st December 2022.'

The Agency referred the proposals, along with Southern Water's objections and the representations, to the Secretary of State on 10 August 2017.

The application was referred to the Department for the Environment and Rural Affairs (Defra) on 22/12/2016. Defra 'called in' the application on 30/01/2017 for the Secretary of State to determine. The Secretary of State subsequently referred the matter to the Planning Inspectorate (PINS) to hear at a Public Inquiry.

The inquiry:

The proposal to renew the licence, as modified, was considered at a Public Inquiry which took place on 13 and 27 March 2018 before the Planning Inspector, who was appointed by the Secretary of State. The Inquiry also considered proposed licence changes for Southern Water's River Test abstraction licence and three of their River Itchen abstraction licences, as well as the Agency's Candover Scheme licence.

The Inspector's Report, dated 28 August 2018, concluded that the Candover licence should be renewed with the modifications as proposed by the Agency. The Inspector's report and Defra's letter to the Agency have been published alongside this document.

The Inspectors Report specifically sets out his assessment of the Candover licence in section 9.13 – 9.29. The Inspector concludes the section relating to the Candover licence by stating: *'To conclude, I am satisfied that the proposed licence quantities and conditions are appropriate, and accord with the considerations set out in s42 of the WRA, and with Article 6(3) of the Habitats Directive, as transposed by Regulation 63(1).'*

Conclusion and recommendation:

Following the Inquiry in 2018 and subsequent publication of the Inspectors Report, the Agency has now been directed by the Secretary of State to issue the renewed Candover abstraction licence in line with the proposals originally made by the Agency in 2016.

Further information is available on the Inquiry website:

www.hwa.uk.com/projects/itchen-candover-and-testwood-water-abstraction-inquiry/