

# Derwent Valley (Ashop and Noe) Up Front Permitting

## (UFP) - Summary

To vary licence number 3/28/38/18 Derwent Valley

The UFP proposal for the NEP is to change the compensation requirements from the River Ashop, River Noe and Jaggars Clough.

The changes are within Schedule A Section 9 Further Conditions and in Additional Information at the end of the licence document.

The proposals are:

### River Ashop

To increase the compensation release from 5 MI/d to 8.5 MI/d as a mean monthly minimum. With the daily mean flow no less than 5.5 M/d

### River Noe/Jaggars Clough

To vary the allocation of the current 20 MI/d (10 MI/d Noe plus 10 MI/d J Clough) in two stages

1. Increase the Noe to 12 MI/d and reduce J Clough to 8 MI/d
2. Increase the Noe to 14 MI/d and reduce J Clough to 6 MI/d

Variations will be needed to Sections 9.3, 9.4. and 9.5 as well as to the Additional Information section regarding low upstream flows

The details of the proposals are in the two recent Stantec/APEM reports

- Low Flow Distribution Assessment
- Adaptive Management Plan

In addition

- A new time limit will be agreed
- A Section 20 Agreement will be required to manage the Adaptive Management plan to include details of monitoring, reporting and assessing
- An emergency condition may be considered whereby water from the Ashop Diversion can be transferred to support Jaggars Clough.
- It is recommended that Schedules C and D which refer to the HEP conditions (Schedule B) are removed and put in a separate MoU.
- The Additional information section which relates to flows in the Noe and Ashop needs to follow Schedule A and not at the end of the licence where it can be missed

## 1. Background

### River Ashop

The River Ashop lies within the Peak District National Park. From the confluence of Lady Clough and Ashop Clough the river flows for 7.5 km towards south east into Ladybower Reservoir. Since 1930, an impoundment has been diverting some of the river flow to the Derwent reservoir via transfer tunnels.

Severn Trent Water has been investigating the effect of the diversion and compensation release on the local ecology since 2010. Work included a desk study and a programme of flow, water quality and ecological monitoring. An Impact Assessment was completed in 2013, followed by further investigation including an operational flow trial in 2015. The findings of the investigation programme were summarised in a Compensation Review in 2017, and Options Appraisal was completed in 2018.

Compensation has been above the required minimum for much of the investigation period, with resultant flows found to support Good Ecological Status. The flow trial found evidence that reducing compensation to the licensed requirement of 5 Ml/d would result in substantial reduction in habitat downstream of the impoundment. Flow variability was also found to be limited downstream of the impoundment, with a lack of intermediate flows.

Severn Trent Water is looking to deliver a solution in AMP7 comprising a revised compensation requirement (minimum monthly average of 8.5 Ml/d). The solution will be implemented through an Adaptive Management approach, as set out in the 2019 Adaptive Management Plan

### River Noe

The River Noe flows towards the south East from the headwater tributaries, north of Barber Booth and Edale, to its confluence with the River Derwent, 1 km south of Bamford. The catchment is dominated by pastoral grazing agriculture, with open moorland at higher elevations, and farmland in the valley bottom together with several small villages. An impoundment at Netherbooth diverts a proportion of the flow to the transfer system associated with the Derwent Valley Reservoirs

'Natural' flow on Jagger's Clough also enters the transfer system and a regulated compensation flow is then released back to Jagger's Clough which flows south for approximately 500 m to Edale End, where it joins the River Noe.

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The flow regime on both the River Noe and Jaggars Clough is substantially altered from natural. Although hydrological metrics indicate that the flow regime downstream of the impoundment on the River Noe does not support Good Status, biological data suggests that Good status is being achieved. It is likely that the current flow regime on Jaggars Clough provides considerable artificial support to fish during the summer months as the compensation release results in regulated flows far in excess of natural low flows

Severn Trent Water is looking to deliver a solution in AMP7 comprising a revised compensation scheme, with the phased reallocation of the required compensation from Jaggars Clough to the River Noe. This would be implemented via an Adaptive Management approach to ensure that changes do not result in any deterioration to the ecology of either watercourse.

## 2. Abstraction Licences

### 2.1 Background to licences

As part of the Derwent Valley Reservoirs scheme additional water was transferred from the River Ashop (to Derwent Reservoir) and from the River Noe (to Ladybower Reservoir), as well as from the Bradwell Brook and Peakshole Water (known as the Limestone Scheme).

The original abstraction licence was issued on 6<sup>th</sup> December 1966 by the Trent River Authority to the Derwent Valley Water Board. It was subject to in the Derwent Valley Water Acts of 1899, 1901, 1920 and 1944 and the Derwent Valley Water Order of 1956.

The quantity set was 97,426 MI/, which was reduced to the current volume of 89,425 MI in 1981. The only compensation in the original licence referred to 17 MI/d from Jaggars Clough (which was set in the 1944 Act).

Compensation from Ladybower reservoir was set in a variation in 1987 which was

- If the mean daily flow at Derby is  $\leq 340$  MI the minimum compensation = 75 MI/d
- If the mean daily flow at Derby is  $> 340$  MI the minimum compensation = 57 MI/d

The licence in its current format was first set in August 2004 with the introduction of compensation from the Noe and Ashop transfers following investigations under the National Environment Programme. Severn Trent implemented changes at both sites during AMPs 3 and 4.

New compensation requirements were set accordingly and this arrangement was time limited until 31<sup>st</sup> March 2009.

I April 2005 the licence was varied to remove reference to the abandoned Bradwell Brook and Peakshole Water abstractions and in March 2010 the time limit was extended until 31<sup>st</sup> March 2021.

In November 2016 the licence was varied to include a new use of Power production: HEP Generation. This purpose does not impact the compensation and is not the subject of this UFP application

### 2.2 Current Licences

#### 2.2.1 Derwent Valley (3/28/38/18)

The latest form of the licence was issued on 24<sup>th</sup> August 2018. It included a time limited condition to add an abstraction from Ladybower Reservoir. This expires on 31<sup>st</sup> December 2019 and is not part of this UFP application

Abstraction is for the transfers is permitted from three locations

- A weir and intake on the River Ashop at SK 14 89
- A weir and intake on the River Noe at SK 14 85
- An intake on Jaggars Clough at SK 16 86

Section 9 concerns the Further Conditions which relate to the compensation requirements and these are time limited until 31<sup>st</sup> March 2021

Compensation from Ladybower Reservoir to the River Derwent

9.1 If the mean daily flow at Derby is  $\leq 340$  MI the minimum compensation = 72 MI/d

9.2 If the mean daily flow at Derby is  $> 340$  MI the minimum compensation = 54 MI/d

Compensation from Jagers Clough and discharge requirements of Rivers Noe and Ashop

9.3 Volume of water to Jagers Clough shall be no less than 10 MI/d and no more than 17 MI/d

9.4 Flow in River Noe downstream of the diversion shall not drop below 10 MI/d

9.5 Flow in the River Ashop downstream of the diversion shall not drop below 5 MI/d

Combined compensation at Yorkshire Bridge (from Ladybower) and immediately downstream of the Jagers Clough confluence with the River Noe

9.7 If the mean daily flow at Derby is  $\leq 340$  MI the combined flow shall not fall below 92 MI/d

9.8 If the mean daily flow at Derby is  $> 340$  MI the combined flow shall not fall below 74 MI/d

After 1<sup>st</sup> April 2021 compensation reverts to the conditions from the original licences and 1944 Act

Compensation from Ladybower reservoir to River Derwent

9.9 If the mean daily flow at Derby is  $\leq 340$  MI the minimum compensation = 75 MI/d

9.10 If the mean daily flow at Derby is  $> 340$  MI the minimum compensation = 57 MI/d

Compensation requirements to Jagers Clough

9.11 Not less than 17 MI/d

There is further relevant information in the Additional Information section at the end of the licence document

If the flow in the River Noe upstream of the diversion falls below 10 MI/d under natural circumstances then the flow will not need to be augmented to ensure 10 MI/d downstream of the Noe diversion

If the flow in the River Ashop upstream of the diversion falls below 5 MI/d under natural circumstances then the flow will not need to be augmented to ensure 5 MI/d downstream of the Ashop diversion

## 2.3 Proposed

### 2.2.1 Derwent Valley (3/28/38/18)

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3. Increase the Noe to 12 MI/d and reduce J Clough to 8 MI/d
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