

## ***'Decision Statements on the Internet'***

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### **Application numbers:**

- 1) NPS/WR/028088 (Bristol Water)
- 2) NPS/WR/028090 (Bristol Water)
- 3) NPS/WR/028089 (Bristol Water)
  
- 4) NPS/WR/028211 (Wessex Water)
- 5) NPS/WR/028213 (Wessex Water)

### **Licence numbers:**

- 1) 17/53/006/G/006 - Tetbury
- 2) 17/53/006/G/007 - Shipton Moyne
- 3) 17/53/006/G/008 - Long Newnton
- 4) 17/53/001/G/410 – Malmesbury Groundwater
- 5) 17/53/001/G/203 - Milbourne

### **EA Region:**

Wessex

### **Date of Applications:**

- 1), 2) and 3) - 26 February 2018  
4) and 5) – 7 March 2018

### **Applicant details:**

- 1), 2) and 3) – Bristol Water Plc.,  
Bridgwater Road,  
Bristol. BA13 7AT
- 4) and 5) - Wessex Water Services Ltd.,  
Wessex Water Operation Centre,  
Claverton Down Road,  
Claverton Down  
Bath. BA2 7WW

**Summary of the proposal:**

The five above applications together formed the proposal from Bristol Water and Wessex Water to vary five licences with the aim of alleviating the impact that public water supply (PWS) abstraction has on the flow regime of the River Avon in the Malmesbury Avon catchment. This is a RSA project initiated in 1995.

The two Wessex Water licences have been varied to reduce quantities authorised to be abstracted from the Great Oolite for public water supply and to increase daily and annual quantities from the Inferior Oolite from three of the authorised abstraction sites at Luckington, Stanbridge and Tetbury, for the purpose of augmentation.

The applied-for individual increases at the three sites were downwardly revised following discussions between the Environment Agency and Wessex in respect of the annual quantity that might be reasonably required in an extreme dry weather situation. The overall annual aggregate quantity remains the same as the application.

The annual and daily quantities authorised for public water supply from Inferior and Great Oolite under the three Bristol Water licences have been reduced through aggregating daily and annual quantities, with quantities being further constrained by Inferior Oolite water levels as measured by the Environment Agency. The reduction in BWC Inferior Oolite licensed abstraction exceeds the increase in WW Inferior Oolite licensed abstraction and as a result the combined effect is to reduce the annual licensed abstraction from the Inferior Oolite Aquifer.

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**Source of Supply:**

Inferior Oolite boreholes at Long Newnton ST 91 91  
Inferior Oolite boreholes at Tetbury ST 88 95  
Limestone boreholes at Shipton Moyne ST 89 88  
Charlton ST 97 89  
Park Road ST 93 87  
Rodbourne ST 93 84  
Cowbridge ST 94 86  
Luckington ST 83 83  
Stanbridge ST 84 86  
Tetbury ST 89 92  
Hullavington ST 88 82  
Lower Stanton St. Quintin ST 92 81  
Milbourne ST 94 97

**'Decision Statements on the Internet'**

**Points of abstraction and quantities:**

**Table 1. Bristol Water - Quantities**

| <b>Bristol Water – Public Water Supply (mega-litres)</b> |               |                   |                |                    |                |  |                 |                    |
|--|---------------|-------------------|----------------|--------------------|----------------|--|-----------------|--------------------|
| Location   | Present daily |                   | Present annual |                    | Proposed daily |  | Proposed annual |                    |
| Tetbury  | 4.1           |                   | 1,200          |                    | 4.1            | 12.1 <sup>1</sup> (Levels >UCC)<br>9.79 <sup>2</sup> (Levels >LCC & <UCC)<br>8.29 <sup>2</sup> (Levels <LCC) | 1,200           | 3,753 <sup>1</sup> |
| Long Newnton   | 18.1          | 18.1 <sup>1</sup> | 6,630          | 6,630 <sup>1</sup> | 12.1           |  | 3,753           |                    |
| Shipton Moyne  | 18.1          |                   | 6,630          |                    | 12.1           |  | 3,753           |                    |
| <b>TOTAL</b>   | 22.2          |                   | 7,830          |                    | 12.1 (Max)     |  | 3,753           |                    |

**Table 2. Wessex Water - Public Water Supply Quantities**

| <b>Wessex Water – Public Water Supply (mega-litres)</b> |                        |                     |                   |                     |
|---|------------------------|---------------------|-------------------|---------------------|
| Location  | Present daily          | Present annual      | Proposed daily    | Proposed annual     |
| Rodbourne   | 14.4/13.0 <sup>1</sup> | 5,200               | 13.0              | 4,745               |
| Charlton  | 16.1/13.6 <sup>1</sup> | 5,800               | 13.6              | 4,900               |
| Park Road   | 1.3/0.0 <sup>1</sup>   | 400                 | 0.0               | 0.0                 |
| Cowbridge   | 10.0/7.5 <sup>1</sup>  | 3,600               | 7.5               | 2,737               |
| Milborne  | 5.7                    | 2,080               | 5.7               | 2,080               |
| <b>TOTAL</b>  | 47.5/39.1 <sup>1</sup> | 14,540 <sup>2</sup> | 39.1 <sup>2</sup> | 12,775 <sup>2</sup> |

**Table 3. Wessex Water. Augmentation Quantities**

| <b>Wessex Water – Augmentation (mega-litres)</b> |                 |                    |                   |                   |                 |                    |
|--|-----------------|--------------------|-------------------|-------------------|-----------------|--------------------|
| Location   | Present daily   | Present annual     | Proposed daily    |                   | Proposed annual |                    |
| Tetbury  | 2.5             | 900                | 7.0               |                   | 1,255           |                    |
| Stanbridge                                       | 2.5             | 900                | 10.0              | 18.0 <sup>1</sup> | 1,750           | 3,000 <sup>1</sup> |
| Luckington                                       | 2.5             | 900                | 10.0              |                   | 1,750           |                    |
| Hullavington                                     | 2.5             | 900                | 2.5               |                   | 400             |                    |
| Lower Stanton St Quintin                         | 2.5             | 900                | 2.5               |                   | 900             |                    |
| Charlton   | 2.5             | 900                | 2.5               |                   | 900             |                    |
| Park Road  | 10.0            | 3,600              | 0.0               |                   | 0.0             |                    |
| Cowbridge  | 2.5             | 900                | 0.0               |                   | 0.0             |                    |
| <b>TOTAL</b>                                     | 26 <sup>1</sup> | 9,490 <sup>1</sup> | 32.5 <sup>1</sup> |                   | 6,000           |                    |

**Means of abstraction:**

Pumps

**Purpose of abstraction:**

Public water supply.  
Augmentation of the Malmesbury Avon and tributaries.

**Abstraction period:**

All year

**Case history:**

During the dry summers of the early 1990's, the Sherston Avon dried in Malmesbury and the Tetbury Avon was reduced to a trickle. This drying was due to groundwater abstraction for public water supply which showed that licensed mitigation measures then in place (augmentation) were inadequate. The solution to improve flows was to reduce public water supply abstraction and instead use this resource to increase augmentation. Wessex Water's plan for increased augmentation from three of the Inferior Oolite sources at Luckington, Stanbridge and Tetbury was also agreed in a subsequent Statement of Intent document. The Malmesbury Avon is an Environment Agency Restoring Sustainable Abstraction (RSA) scheme.

**Impact assessment of proposal:**

A programme of augmentation pumping from the Inferior Oolite, measurement of flows in By Brook and observation of Inferior Oolite levels in both catchments commenced in 2003. The observation boreholes registered a substantial lowering in Malmesbury Inferior Oolite water levels in the 2003 and 2004 pumping trials including some Inferior Oolite boreholes in the upper By Brook catchment. However, not all the By Brook boreholes responded. As a result, the potential for impact on By Brook flows was assessed. The results showed that when the By Brook flow at Goulters Mill and Borehole Inferior Oolite water levels are compared, no evidence of flow impact can be detected. The opportunities for Inferior Oolite discharge in the lower catchment south of Ford were also assessed and no evidence of impacts determined. The Agency have found no evidence that flows in the By Brook have been impacted and will be further impacted through the licence variations proposed.

## **'Decision Statements on the Internet'**

### **Statutory Consultation:**

No concerns were raised by Natural England when consulted.

### **External Representations:**

Concerns expressed through representation. These are summarised below. Each of the concerns were considered and are addressed in thereport to be found on Citizen Space.

| Theme No. | Theme Heading  |
|-----------|--|
| 1         | Concern over the impacts of abstraction from the By Brook catchment.   |
| 2         | EA should be cautious over any change and should investigate the risks.  |
| 3         | Concern that the solution was a short-term unsustainable fix.  |
| 4         | Concern over the 'quadrupling' of the abstraction from Luckington & Stanbridge.  |
| 5         | Licence variation is being led by development pressure associated with the need for new housing.   |
| 6         | Referred to the flashiness of the By Brook and climate change.   |
| 7         | Challenged the assertion that the Fuller's Earth is a reliable barrier to flow.  |
| 8         | Questioned reference to the limited degree of flow between the Inferior and Great Oolite aquifers.   |
| 9         | Water efficiency and water company leakage   |
| 10        | Concerns over the fact that there is little data available to assess impacts on the By Brook from the period before augmentation started in the Malmesbury catchment.  |
| 11        | No empirical data available to assess the proposed change to the pumping regime at Malmesbury.   |
| 12        | Perceived persistent loss of water over the past 25 years  |
| 13        | Queried the report's assessment of the impact of the augmentation trials in 2003 and 2004 on the Piggeries borehole and Tormarton. It was questioned whether the assessment of no clear impact was justified. Challenged the assumption in the report that two 'hydraulically discrete compartments' to the inferior Oolite aquifer exist.   |
| 14        | Threat to water levels particularly around the Colerne area of the Lid Brook, a tributary of the By Brook  |
| 15        | Concerns relating to the Lursecombe brook which they felt would be impacted by stream augmentation around Malmesbury.  |
| 16        | Consistently stated by the applicant, that the perennial springs at Goulters Mill, a key part of the upper springs of the By Brook, will continue to flow, irrespective of augmentation. Too many reports elsewhere of springs that were never known to fail, drying up, and were concerned that this might happen to Goulters Mill, and to the number of springs below Goulters Mill. |
| 17        | During prolonged use of augmentation, water from the Great Oolite, the source of the upper springs of the By Brook, flows to the Inferior Oolite, the level from which augmentation is pumped and therefore the augmentation could affect flows in the by brook.   |
| 18        | Data in figure 41 of the 'Malmesbury Groundwater Scheme: restoring Sustainable Abstraction' report relating to the Tormarton and summer Lane boreholes was incomplete. it was therefore suggested that assumptions made in the report in respect to the 2003 test pumping could be challenged  |
| 19        | Sustainability of augmentation as an option was questioned.  |
| 20        | Reference to the government's 'Water White Paper' and questioned whether this variation was in line with that document.  |
| 21        | Proposed reform to water abstraction   |
| 22        | By Brook had experienced a decline in biodiversity - associated with changes to pumping patterns in Malmesbury.  |
| 23        | Relevance of the Park Road augmentation.   |
| 24        | Supporting documentation was overly complex and that this was an attempt to avoid any challenges.  |
| 25        | Impact of the proposed variation on water quality in the By Brook.   |
| 26        | Status of the water meadows on the By Brook and the possible impact of the Malmesbury regime on their inundation.  |
| 27        | Question the need for additional water supply.   |
| 28        | The age of the water in the Luckington Borehole used for augmentation and whether this operation was leading to groundwater 'mining'.  |

**Protected Rights:**

An assessment of licensed, de-regulated and unlicensed sources was made. Measures to safeguard them through water level monitoring, aggregate and rolling average aggregates conditioning and the large annual reduction in licenced quantities was conditioned in the licences. Protected rights are very unlikely to be impacted through abstraction authorised under the varied licences.

Mindful that unlicensed protected rights about which the Environment Agency had no knowledge might exist, the Wessex Water licences were both retain existing mitigation measures to be undertaken by Wessex water should any protected rights be impacted.

**Conservation Issues:**

The proposed changes will result in flows in the River Avon and tributaries being supported during dry periods to a greater extent than previously licensed. The proposed regime has operated in practice since 1998 through a Section 32(3) Consent and therefore there will be no observed change in the flow regime experienced over the last 20 years. No designated site is expected to be impacted.

**Conclusion and recommendation:**

The proposed application reflects the changes in licensed stream augmentation practice which have been trialled successfully since 1998.

The original application to increase the annual quantities for augmentation water from three of the Inferior Oolite sources operated by Wessex Water were found to be much larger than had been used over the long trial period of record when operating under proposed licensed regime authorised through s32(3) Water Resources Act 1991 consent and deemed unrealistic of future requirement. It was agreed with Wessex Water to significantly reduce these quantities whilst retaining some additional capacity to allow for extreme weather events.

All other aspects of the proposal represented by the five applications were deemed reasonable and justified and of benefit to the environment and added amenity value. Full and due consideration was given to the representations made, and due regard has been taken of existing lawful uses and ensuring protected rights will not be derogated.

The conditions incorporated in the licences are considered to be necessary and reasonable in the light of the available and presented evidence. The conditions are also considered to be clear enough to be enforced by us and understood by the Licence Holders

**Contact the Environment Agency team responsible for this decision:**

AEPWessex@environment-agency.gov.uk