

# Charnwood Reservoirs Up Front Permitting (UFP) - Summary

To vary licence numbers 3/28/57/63 (Cropston/Swithland) and 3/28/57/062 (Blackbrook/Nanpantan)

The proposals are:

1. Water Level Management Plans
2. Compensation releases from Cropston and Swithland Reservoirs

The changes proposed to the licences are

## Blackbrook/Nanpantan (3/28/57/62)

It is proposed to keep the current quantities of 14.55 MI/d and 2,950 MI/a (daily average 7.92 MI/d) with a five year quantity of 12,000 MI (daily average 6.56 MI/d)

It is proposed that a WLMP will be included for Blackbrook Reservoir and this should be included in a Section 20 Agreement.

It is also suggested that the compensation of 0.136 MI/d is formalised in the licence with a reference to the 1900 conveyance. This compensation has been provided as part of the ongoing operation of the reservoir for many years.

## Cropston/Swithland (3/28/57/63)

It is proposed to keep the current quantities of 39 MI/d and 11,700 MI/a (daily average 31.96 MI/d)

Remove the hourly rate

It is proposed to keep Further Provision 10.1 which states that not more than 28 MI/d or 6,420 MI/a shall be from Swithland Reservoir

It is proposed that a WLMP will be included for Cropston and Swithland Reservoirs and this should

It is proposed that a new compensation requirement should be included for Cropston Reservoir of 1 MI/d and for Swithland Reservoir of 2 MI/d with the provision to increase these to 2 MI/d and 4 MI/d respectively. These should be included in the Section 20 Agreement along with an Adaptive Management Plan. This will specify agreed monitoring, reporting and assessment criteria.

It is proposed that the compensation will be linked to the WLMP for both reservoirs and will include the provision that compensation may be reduced to achieve the agreed WLMP.

It is proposed that Further Provision 10.2 referring to the transfer of water from the Rothley Brook is revised and incorporated within the new Section 20 Agreement

## 1. Background

Severn Trent Water's Charnwood Reservoir group comprises five reservoirs. Two of these (Cropston and Swithland) lie within the catchment of the Quorn Brook which is the focus of this investigation.

The Quorn Brook (known as the River Lin upstream of Cropston) rises in Charnwood Forest and flows south east into Cropston Reservoir. There is intermittent overflow from this reservoir into the Quorn Brook which then flows into Swithland Reservoir. Overflows from this reservoir then feed the lower reaches of the stream which flow to join the River Soar

The upper parts of the catchment lie within Charnwood Forest including Bradgate Park SSSI. This reach supports an invertebrate community of regional importance, including a population of native crayfish. The reservoirs are also classified as SSSIs due to the marginal plant communities. Natural England considers that the SSSIs are at 'unfavourable' status because of the way water levels in the reservoir are managed and high nutrient levels.

Severn Trent Water has been investigating the effect of the impoundments on the local ecology since 2010. Work included a desk study and a programme of flow, water quality and ecological monitoring. Initially this focussed on the effect of the operation of the reservoirs on the SSSI status. Since 2015 the focus has been on the impact on Quorn Brook due to an absence of compensation releases (apart from spills). An Impact Assessment and Compensation Review was completed in 2017 and Options Appraisal in 2018.

Flows in the Quorn Brook downstream of the reservoirs are significantly reduced and this is likely to be affecting the aquatic ecology. Other pressures including diffuse pollution, fine sediment deposition and channel modification exert a bigger influence on ecology downstream of Swithland Reservoir, but flow is considered to be the primary pressure downstream of Cropston Reservoir.

Severn Trent Water is looking to deliver a solution in AMP7 comprising an initial introduction of a compensation flow of 1 Ml/d and 2 Ml/d from Cropston and Swithland reservoirs respectively. The compensation flows would be implemented via an Adaptive Management approach.

## 2. Abstraction Licences

### 2.1 Current Licences

#### 2.1.1 Blackbrook/Nanpantan (3/28/57/62)

The original licence was issued on 3<sup>rd</sup> January 1965 by the Trent River Authority to the North West Leicestershire Water Board.

The original quantities were 3.2 mgalls/d (14.55 MI/d) and 748 mgalls/a (3,400.41 MI with an average of 9.29 MI/d)

The licence in its current form was issued on 19<sup>th</sup> July 2001 and permits abstraction from Blackbrook Reservoir at SK 4571 1778 and Nanpantan Reservoir at SK 5080 1715 for Public Water Supply

Annual = 2,920 MI = 7.92 MI/d
-------------------------------

Daily = 14.55 MI/d
--------------------

Further Provision 10.1 refers to a five year licence of 12,000 ml (equivalent to 6.56 MI/d)

This is a licence of right with no time limit

Although not included in the licence or in the Acts included in Further Provisions 10.2 the original licence includes a note stating that in a Conveyance dated 26<sup>th</sup> February 1900 there is a requirement to release 30,000 galls/d (0.13638 MI/d) as compensation

#### 2.1.2 Cropston/Swithland (3/28/57/63)

The original licence was issued on 31<sup>st</sup> January 1966. A copy of this could not be found

The current licence was issued on 29<sup>th</sup> August 1996 and permits abstraction from Cropston reservoir at SK 5503 1105 and Swithland Reservoir at SK 5575 1485

Annual = 11,700 ml = 31.96 MI/d
---------------------------------

Daily = 39 MI/d
-----------------

Hourly = 1.625 cubic metres
-----------------------------

There are two Further Provisions Section 10.

1. Not more than 28 MI/d or 6,420 MI/a shall be from Swithland Reservoir
2. A Section 158 Agreement had to be signed by 30<sup>th</sup> November 1996

The S158 Agreement referred to the transfer of water from the Rothley Brook, which was a drought scheme licensed on 29<sup>th</sup> August 1996. The S158 Agreement was signed on 28<sup>th</sup> November 1996

This is a licence of right with no time limit

## 2.2 Proposed Licences

There are two parts to this UFP application

- Water Level Management Plan

It is proposed to introduce new drawdown curves at Blackbrook, Cropston and Swithland as an agreed solution to managing the sites as SSSIs. Discussions have been ongoing for some time and the agreed curves will be incorporated into a Section 20 Agreement

- Compensation releases from Cropston and Swithland Reservoirs into the Quorn Brook.

It is proposed to initially release 1 MI/d from Cropston and 2 MI/d from Swithland, which could rise to 2 MI/d and 4 MI/d under an Adaptive Management Plan. This would mean monitoring, reporting and assessing on an annual basis and would be managed under a Section 20 Agreement. In addition there will be a link to the WLMP for each reservoir whereby compensation may be reduced to achieve the require drawdown curves

The changes proposed to the licences are

### 2.2.1 Blackbrook/Nanpantan (3/28/57/62)

It is proposed to keep the current quantities of 14.55 MI/d and 2,950 MI/a (daily average 7.92 MI/d) with a five year quantity of 12,000 MI (daily average 6.56 MI/d)

It is proposed that a WLMP will be included for Blackbrook Reservoir and this should be included in a Section 20 Agreement.

It is also suggested that the compensation of 0.136 MI/d is formalised in the licence with a reference to the 1900 conveyance. This compensation has been provided as part of the ongoing operation of the reservoir for many years.

### 2.2.2 Cropston/Swithland (3/28/57/63)

It is proposed to keep the current quantities of 39 MI/d and 11,700 MI/a (daily average 31.96 MI/d)

Remove the hourly rate

It is proposed to keep Further Provision 10.1 which states that not more than 28 MI/d or 6,420 MI/a shall be from Swithland Reservoir

It is proposed that a WLMP will be included for Cropston and Swithland Reservoirs and this should be included in a Section 20 Agreement.

It is proposed that a new compensation requirement should be included for Cropston Reservoir of 1 MI/d and for Swithland Reservoir of 2 MI/d with the provision to increase these to 2 MI/d and 4 MI/d respectively. These should be included in the Section 20 Agreement along with an Adaptive Management Plan. This will specify agreed monitoring, reporting and assessment criteria.

It is proposed that the compensation will be linked to the WLMP for both reservoirs and will include the provision that compensation may be reduced to achieve the agreed WLMP.

It is proposed that Further Provision 10.2 referring to the transfer of water from the Rothley Brook is revised and incorporated within the new Section 20 Agreement

