

Biglis licence variation application

Justification of need and licence purpose

Background

This technical note is to accompany our licence variation application for Biglis Wells (21/58/11/0002). The variation requests the following changes to the licence:

- To change the abstraction purpose from Public Water Supply to Industrial Water Supply; and,
- To extend the time duration of Condition 7 which allows a higher annual abstraction quantity.

We submitted a pre-application on 26th April 2018, and received a response letter on 21st June 2018 (PPN-00220). The response letter stated that the following information would be required as part of the licence application:

1. Justification of need
2. Further information on the licence purpose
3. Hydrogeological Impact Assessment

This technical note provides the justification of need and further information on the licence purpose. A Hydrogeological Impact Assessment is included in a separate report.

Purpose and justification of need

Water Use

The water abstracted from Biglis Wells is used to supply two industrial customers as per a supply agreement between the customers and ourselves.

Hexion is a producer of thermoset resins and uses the borehole water in its manufacturing processes, boiling and cooling processes, and for washing down and cleaning.

Dow Chemical produces silicone products and uses the borehole water in its combined heat and power plant, for cooling, and in its manufacturing process.

Quantity

There is no maximum daily or annual supply limit in our supply agreement, therefore we are committed to supplying the amount needed by the customers. Through discussions with the customers, we understand that that no significant changes in usage are expected.

We have reviewed past Biglis Wells annual abstraction volumes to predict likely future use. Figure 1 shows the annual supply to the two customers from 2005 to 2017. All years have been within the Biglis licence limits at the time, however the lower annual licence limit that will come into effect on 1st April 2019 would not have been sufficient to cover the customers' usage in the licence years beginning 1st April 2006 and 1st April 2016. Therefore it is foreseeable that the customers' demand could exceed the lower annual licence limit of 1,818,000 m³/annum in future.

It is acknowledged that the time limited annual licence amount of 2,500,000 m³/annum is higher than any historic usage, however the future usage by our customers cannot be accurately known, therefore some headroom is needed.

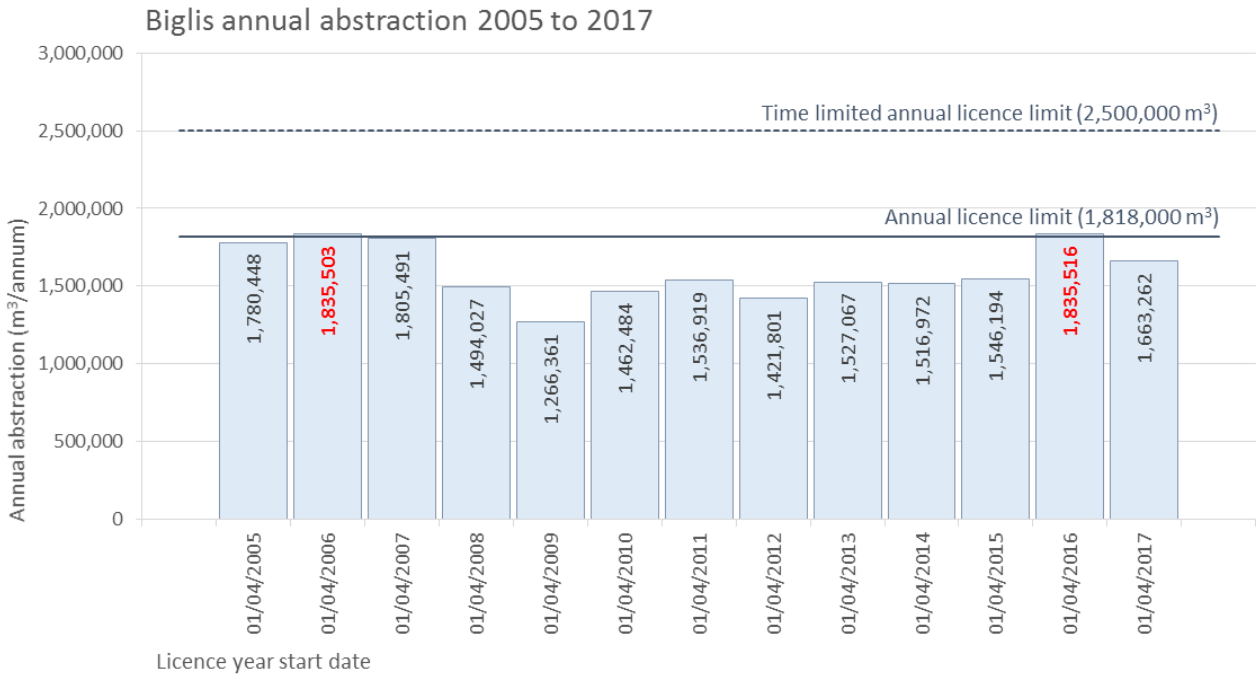


Figure 1 - Biglis Wells annual licence usage (2005 to 2017)

Water Efficiency

We regularly monitor for leakage along the short length of raw water main between Biglis Wells and the customers. We have abstraction meters at the top of the main at Biglis Wells and at the bottom of the main at the customers' property, so we are able to compare the meters to identify leakage. If/when leakage is detected, we fix the leak.

Both customers monitor their water usage and investigate any unexpected increases that may be indicative of leakage.

Summary

We are applying for a licence variation to the Biglis Wells abstraction licence (21/58/11/0002) for two reasons; (1) to update the licence purpose from public water supply to industrial use, and (2) to maintain the time limited annual abstraction volume at the higher rate of 2,500,000 m³/d.

The borehole water is used by two industrial customers for manufacturing processes, heating and cooling. The quantity of water used is expected to be similar to historic use although there is no limit stated on the supply agreement between the customers and ourselves.