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Application for a transitional water resources licence, Borehole C

Introduction

Borehole C was sunk by the previous owners of the Facility, Dairy Crest, circa 1985. The facility was originally a dairy and had been closed for a period when Sensient purchased the site. Borehole C is located on land owned by Sensient.

The borehole has been in continuous use during the qualifying period Jan 11 to Dec 17 and supplies water to the Sensient owned water treatment plant for use as both process water and water for wash-down. In addition, water from the borehole is used extensively in the scrubbing systems to reduce air emissions.

A mains water supply is available to the industrial estate; however, the volume available from the mains supply represents about 20% of the total estate consumption. There are two main plants on the Estate one owned by Sensient and one owned by Volac. The mains water volume available to the Estate is not secure during the summer months and at times of high domestic consumption, the available volume from the mains supply may be time restricted, reduced or the supply ceased in its entirety.

The water supply from Borehole C, at the abstraction levels applied for, is existential to the Sensient business at Felinfach.

The volume of water abstracted from Borehole C is measured via a meter, this meter is calibrated regularly. The meter readings are then transferred to an Excel spreadsheet which calculates abstraction quantities. The full abstraction record for the qualifying period has been provided to support this application.

Evidence.

The example evidence provided is a spread of available evidence throughout the qualifying period and demonstrates usage over the period.

Primary evidence

This data is used to demonstrate that water has been abstracted during the qualifying period and the quantity of water abstracted during the qualifying period. Example calibration records for the water meter are also included to further evidence usage and to verify the accuracy of the usage data.

Examples of meter readings:

Each year's record is over 150 pages, as such random examples of the actual meter reading signoff sheet have been provided to evidence (see item 31, 10th row down on the sheet)

Excel spread sheet of quantities abstracted:

This is the complete record for the qualifying period and is based on the meter readings taken throughout the year.

Water meter calibration certificates:

Examples of the water meter calibration certificates are provided to verify the accuracy of the water meter used to determine the abstraction quantities.

Supporting Evidence

The following evidence is supplied to support the application.

Witness statement re usage:

Andrew Morgan, Engineering Manager since Jan 2006 has provided a witness statement to the effect that Borehole C has been in more or less continuous use for the qualifying period as supporting evidence that abstraction has taken place during the qualifying period.

Water quality analysis 2015, 2016, 2017

The water quality analysis records are provided for three successive years during the qualifying period as supporting evidence that abstraction has occurred during the qualifying period. Such an analysis would not be required if the borehole was not in use.

Other documentation

Site Plan Borehole C:

The area edged in blue is Sensient owned property. Borehole C is marked and is situated on the eastern edge of the land owned by Sensient. Cross hatched areas on the plan are not in Sensient ownership.

Borehole C P & ID

This document is a schematic of the pump, variable speed drive and the flow meter.

Sensient do not have "as constructed" drawings of the borehole. Due to the closure of the Dairy ahead of the purchase of the facility by Sensient, not all documentation was made available. The depth diameter and water levels have subsequently been measured however the depth of the screened section of the borehole remains unknown.

Summary

Sensient are applying for a maximum daily abstraction volume of 900 m³ and an annual abstraction volume of 222,000 m³ from borehole C. The abstraction records for 2016 support these volumes.

Tim Pink, EHS Manager

July 2019