

## **EPR CP3731LZ V005 Permit Variation: Non-Technical Summary**

Plymouth City Council (PCC) are applying to make changes to the permit that regulates operation of the Leachate Treatment Plant (LTP) at Chelson Meadow Waste Facility. The LTP accumulates liquid that has passed through the old landfill where it accumulates a range of potential environmental contaminants. This liquid is treated by bacteria in an automated biological system. The effectiveness of treatment by the LTP is assessed by measuring three variables present in the outgoing liquid and results are reported regularly to the Environment Agency.

Currently, the LTP is allowed to discharge a total of 650,000m<sup>3</sup> of treated liquid to the River Plym every year. Discharge from the LTP normally occurs just after high tide when most of the flow in the river is seaward. The amount of liquid produced by the old landfill (and therefore entering the LTP for treatment) depends on rainfall, with more leachate being produced during periods of high rainfall. Records for at least ten years suggest that the outgoing liquid is treated just as effectively when large volumes enter the LTP and contaminants are very dilute.

Over the last 10 years, on four occasions the amount of treated liquid leaving the LTP has exceeded the annual limit because of high rainfall in that year. The total amount of rainfall for Plymouth recorded annually by the Meteorological Office shows a steady increase over this period, and this trend can be expected to continue in response to climate change. The proposed change will set the annual limit of the discharge at 850,000m<sup>3</sup> to allow for increased leachate production by the landfill in the future.

The LTP can operate in different modes. Under normal conditions the discharge is during the high tide window but when the amount of liquid entering the LTP is very high it is necessary to allow the treated liquid to leave the LTP faster so that increased throughput can be maintained, and this may require discharge outside the high tide window. This is called operation in Emergency mode and the procedure was agreed with the Environment Agency in 2011. However, there is no official documentation of the agreement and one of the changes being requested is to formalise this mode of operation in the permit.

The original consent to discharge liquid to the River Plym was issued in 1983. This consent has been operating alongside the permit (originally issued in 2007) and has been paid for annually by PCC. The conditions set by the two consents are different, but the old consent is no longer appropriate to current environmental standards. This application requests the removal of the old consent and the associated administration fee.

The effect on fish of contaminants in the treated liquid leaving the LTP is assessed periodically by exposing animals to controlled amounts of the liquid and observing the biological response. Over the years, no adverse impacts have been reported from this assessment but the use of fish for this test is no longer considered ethical. The application seeks to remove the need for this direct toxicity assessment.

The current LTP permit requires periodic monitoring of soil and groundwater quality inside the operational area. The LTP was built on the old landfill (which is full of mixed wastes) and most of its surface is either infrastructure or engineered surfaces. This requirement is not appropriate and should be removed as part of the changes requested.