5. Production/Treatment Volumes

5.1 Introduction

This section summarises the volumes produced and treated (if applicable) at the site of landfill leachate, surface water and/or groundwater and landfill gas between January and December 2014.

5.2 Landfill Leachate

The effective management of leachate levels is a key element in the operation of Area 3 to ensure there are no adverse impacts on groundwater.

Monitoring data for Area 3 between January and December 2014 indicates that leachate levels were below the EP compliance level of 1.5 m above base (see Section 2.2). This suggests that the leachate extraction rates were effective and the on-site leachate storage capacity was sufficient to ensure leachate level compliance in Area 3. A total of 7,369.08 tonnes of leachate (1,560.8 tonnes in 2013) was extracted during 2014. Leachate was removed from both a sump in the base of each cell via an upslope riser. The leachate extracted was stored on-site in the leachate collection tank prior to removal off-site by tanker for disposal.

13491.60t. (See attached 2013 rept)

5.3 Surface Water/Groundwater

No dewatering has been carried out in association with landfill construction and operation. On this basis there is no groundwater disposal or treatment at the site.

A new surface water management system was installed at the site in September 2012 comprising new surface water drainage pipework and an interceptor connected to new attenuation lagoon discharging into the Afon Desach. Surface water collected from the Area 3 landfill drains both into the attenuation lagoon and an infiltration basin (soakaway located to the east of the site boundary).

5.4 Landfill Gas

The landfill gas collected from the capped Cells 1 to 4 is combusted within an enclosed high temperature flare. Site records indicate that the flare had minimal (1%) downtime during the year. Average flow rate at the flare during 2014 was 318.19 m3/hour. This equates to combustion of some 2,759,471 m3 of landfill gas during the year, based on 1% flare downtime. Note that the flare combusts landfill gas drawn from Area 3 as well as the older (and larger) Area 2 landfill.

Stability Risk Assessment

As a part of the detailed design phase undertaken for the capping to Cells 1 to 3, a review of the capping stability was undertaken based on the proposed final slope profiles. This review was submitted to the Environment Agency as part of the Design Report submitted in advance of capping works for each cell. These assessments conclude that the restored capping slopes will remain stable during construction and in the long term. A CQA verification report which details geosynthetics interface testing undertaken as part of cell 3 capping was provided to NRW.

Energy Consumption

The total energy consumed by the site between January and December 2013 was 116,970 kWh (2012 109 300 kWh) of electricity, which is a slight increase from 2012. These figures include operation of the in-vessel composting facility (IVC) regulated under a separate permit.

Production/ Treatment Volumes

A total of 13 791.6 tonnes of leachate was disposed off-site during 2013. Leachate was removed by tanker for treatment and disposal.

Surface runoff from the site continued to be discharged into surface water at the two consented discharge points. The Environmental Permit does not set a limit on discharge flow rate.

Average flow rate at the flare during 2013 was 250 m^3/hour. This equates to combustion of some 2 171,750 m^3 of landfill gas from Areas 2 and 3 during the year.

Remaining Landfill Capacity

The landfill site accepted 41 534.76 tonnes of waste in 2013. Filling was wholly within cell 4 and mainly cell 4B. The landfill closed to receipt of waste on 6 January 2014 and there is no residual capacity.