

Mr A Zachary,
Natural Resources Wales,
Chester Road,
Buckley,
Flintshire.
CH7 3AJ

20th April 2015

Our ref: GNF/NRWL200415

Dear Aled,

Re: Permit No. BU0800IZ Llanddulas Landfill Site, Environmental Monitoring Reductions

With reductions in environmental monitoring at landfill sites having been approved at FCCs English sites following the publication of the Environment Agency document 'Regulatory Position Statement' entitled '*Landfill Monitoring and Reporting*' (monitoring of Landfill Leachate, Groundwater and Surface Water), we are now reviewing monitoring requirements at our Welsh sites. We understand that the position statement is not being adopted by NRW and so any monitoring changes will be processed via a 'minor technical variation' of the site Permit. We have reviewed the environmental monitoring schedule at Llanddulas and FCC would like to propose the following changes;

Leachate Level Monitoring

Table s4.1 of the current permit (BU0800IZ) requires leachate level monitoring to be carried out at a frequency of **weekly** at all leachate collection and monitoring points across the sites 4 phases. Table 6.9 of LFTGN02 recommends **monthly** leachate level monitoring for initial characterisation and for routine (indicators) of leachate levels. Since Llanddulas is mostly capped (either temporary or permanent) is well contained, has a high level of compliance and has had no discernable impact on the environment, we believe that a **monthly** frequency is appropriate for leachate level monitoring on all areas of the site as recommended by LFTGN02.

Therefore we propose that the frequency listed for leachate level monitoring in Table s4.1 be changed to **monthly**. However, should a limit exceedance occur, we would instigate remedial measures and monitor the well at an increased frequency as agreed with the Agency until compliance has once again been established and recorded.

Groundwater Monitoring

Tables s4.4 and s4.10 of the site Permit (BU0800IZ) require the sampling of groundwater and the measurement of groundwater levels to be carried out at a frequency of monthly.

- **Groundwater Levels**

It is proposed that the frequency for groundwater level monitoring be reduced from **monthly** to **quarterly**. This is in line with the typical frequency proposed in table 6.9 of LFTGN02 which advises that level readings be decreased to "*quarterly or six-monthly if normal seasonal fluctuations have been established*" and considered adequate to monitor ongoing trends and level information. Groundwater levels and flow direction at the site are well established with fluctuations relating purely to seasonal or weather conditions and such it is considered that a quarterly frequency is appropriate.

- Groundwater Sampling

The guidance in Table 6.9 of TGN02 recommends that once initial characterisation of groundwater quality is complete, the frequency should be as follows;

- Routine (indicators), quarterly but decrease to biannually or annually if stable conditions are proved or for low-risk sites.
- Routine (ongoing characterisation), biannually but decrease to annually if stable conditions are proved or for low risk sites.

For both of the above there is an option to increase frequencies if groundwater flow velocities are particularly high.

Since the composition of the surrounding groundwater has been well characterised at Llanddulas through monthly monitoring since the site opened, it is therefore proposed that **monthly** groundwater quality monitoring should cease and the **monthly** determinands be added to the **quarterly** suite going forward.

Perimeter Gas Monitoring

Perimeter gas monitoring is defined in table S4.5 of the site permit BU08001Z and the gas data is gathered on a weekly basis.

It is proposed that the monitoring frequency for perimeter gas monitoring be reduced from **weekly** to **monthly**. This is consistent with table 5.1 of LFTGN03 and considered adequate to establish ongoing trends and level information and in line with the frequency at most of FCCs other operational sites, eg Pen-Y-Bont.

Gas control has generally been well maintained at Llanddulas and a methane breach has not occurred in over twelve months.

FCC and NRW are aware that the boreholes along the Eastern edge of Phase 1 have previously been prone to gas migration, if significant downtime of the gas utilisation plant/flare occurs.

As a safeguard, if downtime of the engine and flare occurs beyond 4 hours duration, then the boreholes along the Eastern flank will be monitored as soon as practically possible. If methane is present in any of the boreholes, they will be monitored every 24 hours until gas control has been re-established and the gas concentrations have reduced.

We hope you will agree that these proposals are in line with recommendations within Agency guidance. As the Permit condition 3.6.1 allows variation via written agreement we would be grateful for your early approval in order to make these changes in time for the May 2015 monitoring visits.

If you have any queries regarding the above please do not hesitate to contact me on my mobile phone or by e-mail.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Geoff Forrest'.

Geoff Forrest

Environment Manager

Mobile: 07980 780937 | Email: Geoff.forrest@fccenvironment.co.uk