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Ein cyf / Our ref: AP3739KS
Eich cyf / Your ref:

Dyddiad/Date: 30 June 2016

Dear Mr Mitchell

Brookhill Landfill Site – Draft Closure Report

Thank you for sending me a copy of the draft closure report for Brookhill Landfill Site. I have reviewed the report and have the following comments.

The report as submitted is lacking in several key areas. I would expect it to comprise a description of the current situation of the site, details of how it will be brought into a stable condition and details of how that will be maintained going forward. Key to this will be ensuring that Flintshire County Council has effective management processes in place.

There should be written management procedures in place for the ongoing maintenance and monitoring of the site, detailing the appropriate frequency for each action and who will be responsible for it. Any work that will be carried out by external contractors should be listed within the management system. The monitoring programme needs to list the frequencies for each point; the training needs for the sampler, and to identify where external contractors are needed for monitoring the flare, gas engine or surface emissions.

Section 4.3 of the report proposes reducing the frequency of landfill gas monitoring in the perimeter wells. At present we are reluctant to agree to this as the gas field has not been stable for long enough and we believe there is still a risk of migration towards the nearby industrial properties. Perimeter wells should continue to be monitored weekly and the gas field balanced fortnightly until stability of extraction is proven, and for a further 12 months afterwards. The maintenance programme should include monthly checking of knock-out pots and the gas field infrastructure.

The Landfill Gas Action Plan needs to be accessible to anyone who may need it. It needs to contain the NRW contact numbers and how to contact the relevant

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engineers. Every effort should be made to restore gas extraction as soon as possible, so it is not acceptable to allow up to 48 hours to bring in alternative equipment. This statement should be amended to require discussion with NRW about the likely duration of the outage and the need for alternative equipment.

If there is a failure of the gas extraction system or a trigger level is exceeded a Schedule 5 Part A notification must be sent to NRW.

All monitoring results need to be reviewed to look at trends and to identify potential problems before they occur.

In **section 4.5** there is no mention of the revised groundwater trigger levels for downgradient monitoring boreholes proposed by NRW in June 2015. Although the proposed levels of 12mg/l for GW2A and 11mg/l for GW4 ammonia and 150mg/l Chloride have not been met consistently over the last 12 months, these are the levels that NRW would consider acceptable to minimise the potential impact on downgradient receptors. The aim in the medium term should be to comply with these triggers in GW2A and GW4, and to bring GW3A into compliance.

The monitoring of groundwater boreholes should remain at the current frequency until 12 months of stable, compliant results have been obtained. There may be scope for reducing the range and / or frequency of monitoring for other parameters in the groundwater.

The timescales for taking action proposed in the Groundwater Quality Action Plan are not acceptable. A repeat sample should be taken as soon as possible if an unexpectedly high result is obtained. Results should be plotted to identify increasing trends and trigger exceedances should be notified to NRW on a Schedule 5, Part A form. Investigation work should be discussed with NRW and carried out as appropriate.

The proposals in **Section 4.8** to reduce the surface water monitoring are acceptable. If a compliance limit is breached NRW must be notified and appropriate investigations undertaken. Again, the timescales given in the Action Plan are not acceptable.

Section 4.10 describes the proposals for managing the leachate extraction infrastructure. It is important that the leachate well pumps are included in the routine infrastructure checks at a frequency appropriate to the recharge rate of the wells.

The management of leachate levels needs to be a priority going forward, particularly in Cell 1 where the surrounding groundwater AoD can be below the leachate AoD. It has been demonstrated that the leachate head in all wells can be kept below 2m, apart from R5, so this will be the target limit going forward. Further work is needed to establish whether the level being reported in R5 is affected by foam or silt in the well.

It is important that trends in leachate head levels are monitored to ensure that action is taken before the limit is breached. The action plan should be put into place when a rising trend is observed not after the trigger is breached. A Part A notification must

be sent to NRW if a trigger is breached and remedial action taken as soon as possible.

Section 5 covers maintaining and submitting records. This needs to include maintenance records and also details of any changes to the infrastructure.

Many of the points above are linked to the observations made during the audit earlier this year, particularly relating to the management of the site. Given the forthcoming changes in management it is essential that systems are put in place to ensure that Brookhill Landfill Site is managed safely through the aftercare phase to minimise the risk to neighbouring properties and the environment. NRW will need to see evidence that these points have been addressed before a permit variation application can be considered for the next phase of the site.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Alison Soper', with a stylized flourish at the end.

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