

Environment Agency
Permitting and Support Centre
Quadrant 2
99 Parkway Avenue
Parkway Business Park
Sheffield
S9 4WF

7268/Var01/DAW230-19

21 August 2019

For the attention of Miranda Wycherley

Dear Miranda,

Application number: EA/EPR/DP3734DC/V002 (Walleys Quarry Landfill)

On behalf of Red Industries Limited and in response to your Schedule 5 Notice, (No. 2) dated 24th July 2019, relating to the above application, requesting more information. We respond as follows;

1. Provide an assessment of the revised peak gas generation rate against the installed capacity of the existing flare and gas engines.

Rather than include in the Revised LFG Management Plan (LFGMP) we provide commentary below;

As stated in Section 2.3 of the Revised LFGMP the current gas utilisation plant at the site comprises three modern spark ignition engines - A1, A2 and A4 (1067kW_e Jenbacher (JGS320 GS-L.L) engines), an enclosed high calorific gas flare A3 (2000m³/h flare) and a 200m³/h mobile flare.

Each gas engine consumes up to 745m³/h of gas when run at full capacity. This makes the total cumulative capacity of the gas plant (A1-A4) at the site 4,235m³/h, excluding the mobile flare. According to the LFG Conceptual Model in the Revised LFGMP the peak landfill gas generation would reach 2,700-2,900m³/h (50-95th %ile) at the time of the likely completion of waste disposal activity in 2024.

The above clearly demonstrates that the current installed capacity of the gas plant at the site exceeds even the maximum predicted peak gas generation rate.

The landfill gas collection system comprises a series of gas extraction wells installed within the waste mass. This system is monitored and balanced on a weekly basis, as a minimum, to ensure that optimal gas flows to the gas plant are achieved. As shown in the Revised LFGMP collection efficiencies in the last three years were high and above the target capture efficiency quoted in the EA guidance (2004) which states; "the annual collection efficiency for methane should be compared against a value of 85%".

Therefore, it can be demonstrated that there is a high level of confidence that the current landfill gas management approach at the site will result in low to insignificant risk of landfill gas migration off site.

CLP Envirogas Ltd operates the landfill gas collection system and the gas plant at the site. The Company is one of the most reputable gas management companies in the UK where they have operated for more than 20 years. On all their sites CLP only use the predicted capacity from modelling as a guide and would undertake a minimum 6-month extraction trial to obtain the actual gas flows. From this it is possible to determine a more accurate likely capacity before deciding what changes are necessary to the gas plant capacity.

All gas plants comprise modular units with varying engine capacities between 200kw and 1MW. Larger sites use multiple engines rather than bigger single units allowing the operator to tailor capacity to maximise efficiency of the units to match flow thereby not having a large engine operating at 50% capacity for instance. Similarly, a range of flares is available that match varying site capacities. The Company has five gas units available of capacity ranging from 1000m³/hr to 3500m³/hr and can mobilise this capacity to the site when necessary. This approach allows the company to easily adapt to the site's changing gas flow and capacity.

CLP were asked to provide a commentary in relation to the query raised in Schedule 5 (No. 2), which can be generally summarised as follows;

As we move towards the point (if we reach it) that the gas flow from site is approaching a rate higher than our present full installed flaring capacity (this point being seen as if all engines are off we must still be able to control all gas flow) we will install a second large flare swapping out the smaller mobile unit. The flare supplied will have its own booster built in so we will still have a standby booster if two flares are in service. This will provide adequate spare booster capacity as well as full flaring capacity. The size of the flare installed at that time will be determined by the gas flows we see and predict from data on site. At present we estimate the changeover of flares if current filling rates continue to be late in 2019 early 2020, but this will be confirmed at the time by actual gas data.

If prices for added output become favourable, we would possibly look to expand the current grid connection and add a fourth 1MW engine (so then running three with one spare) but that is not seen as likely at present and obviously current need is to have adequate flaring capacity on site. In any case it may be that a new air dispersion model is required around that point; our flares are all compliant with best practice on emissions.

2. Correct the typo errors in the Revised Landfill Gas Management Plan and Revised Landfill Gas Risk Assessment.

Both the Revised Landfill Gas Management Plan and Revised Landfill Gas Risk Assessment have been updated to remove the typos, see attached.

3. The Odour Management Plan Section 3.1 indicates intermediate cover will be applied to areas where landfilling activities are suspended for "a period of three months or more". Consideration should be given to reducing this time to less than 3 months.

We have given due consideration to your original request regarding this matter (Schedule 5 request dated 5th June reference 2c) and believe the proposed timescales accord with the latest EA guidance. If this is not the case, please advise otherwise and provide relevant guidance.

4. Provide an updated noise management plan.

This request was superseded by RFI Noise Letter (29th July 2019) requesting a revised Noise Impact Assessment & Noise Management Plan and following correspondence between David Wolstencroft and Miranda Wycherley (EA) a revised submission date of the 31st October 2019 was proposed by the EA in their letter of the 7th August 2019 for these documents.

Egniol Environmental Limited, Suite E West Barns, Rouge Farm, Bentley's Farm Lane, Higher Whitley, Cheshire, WA4 4QW
Tel: 01248 355996 Email: info@egniol.com



All updated documents are submitted with this letter and we look forward to hearing from you in due course.

Yours sincerely,



David Wolstencroft
Managing Director
Egniol Environmental Ltd.

