
Non-Technical Summary – February 2021
Lane Side Quarry Landfill Site, Kirkheaton: Environmental Permit Variation Application

The Arley Consulting Company Limited has been commissioned by Thomas Crompton Quarries Limited (TCQ) to submit an environmental permit variation application for Lane Side Quarry Landfill Site, Kirkheaton.

Lane Side Quarry is located approximately 0.5 km to the east of the village of Kirkheaton, some 3.5 km to the east-north-east of Huddersfield, West Yorkshire. The site is located within an existing quarry set in a predominantly rural area. There is an historic landfill site within the quarry which is separate from the proposed development.

The site is regulated via environmental permit EPR/FP3603BU. The permit was issued in 2011 allowing a broad range of non-hazardous waste types for disposal. The landfill site has not yet been constructed and no waste has been deposited.

TCQ proposes to operate the landfill site for deposit of non-biodegradable waste only, rather than the existing permitted wide range of non-hazardous waste. This application is to vary the permitted waste types to include only those wastes which comply with the Landfill Tax Qualifying Order for low rate tax, ie soils, construction and demolition material and qualifying fines.

Due to the lower risks associated with landfilling non-biodegradable waste, particularly a massive reduction in generation of gas and leachate potential, the application proposes a change to a number of requirements including landfill construction and engineering specification, gas control and collection, leachate treatment and monitoring. The proposed changes are supported by risk assessments submitted with the application.

The capacity of the proposed landfill is approximately 613,634 m³. It is anticipated that the site will be filled over 6 years.

The engineered liner will meet the landfill directive requirements for non-hazardous landfill. The cap will consist of 0.5 m compacted soil. This is justified through modelling detailed in the Hydrogeological Risk Assessment and detailed in the Construction Proposals.

Risk Assessments that have been revised to assess the proposed changes include the hydrogeological risk assessment, landfill gas risk assessment and environmental risk assessment.

The application also includes the addition of a waste treatment activity to the permit to enable recycling of suitable incoming waste. This is to treat construction and demolition waste to separate soil from hardcore. The hardcore eg. bricks and concrete will be separated by screening and then crushed. Addition of the treatment plant achieves two aims:

- compliance with the Landfill Directive, which states that waste must be treated before disposal in landfill,

- to move waste up the waste hierarchy so that disposal in landfill is the option of last resort after recycling and recovery of waste.

Waste soil which is separated from the hardcore will be transferred to the landfill site but the recovered hardcore will be processed into aggregate products. These products will be sold at market value for use off site. On many sites, delivery wagons dropping off waste for treatment/disposal take a back load of aggregate product away and this will be promoted for this site to minimise haulage costs and vehicle movements.

The treatment area will initially be situated in the quarry void but will be relocated to another area (yet to be determined) once landfilling progresses to this part of the quarry. The plant used is mobile and is easily moved around site. The proposed location has been chosen to provide maximum screening from noise and dust and this is considered in the environmental risk assessment. The new location will likewise be chosen to present minimal risks to amenity and the environmental risk assessment will be updated and submitted to the EA for approval before the plant is relocated.

The table overleaf details the specific permit conditions which will be affected by the changes and signposts where each proposal is justified and discussed within the supporting documents. This also includes information on conditions regarding pre-operational measures and improvement requirements.

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Permit Condition	Brief Description of Condition	Proposal	Document Reference
1.2	Financial provision	FP is yet to be agreed. Proposals are included for a 10 year provision	FP profile – EA template spreadsheet
Table S1.1	Activities	Remove A2 - biological treatment for leachate will no longer be required. Non-biodegradable waste will not generate high COD/ammonia leachate, any present in the cells will be 'dirty water' for discharge to sewer after settlement	Report 19877/1 ESID and Report No 19877/3 HRA
		Remove A3 and A4 - landfill gas utilisation and landfill gas flaring. There will not be sufficient gas to sustain a flare or engine	Report 19877/3 GRA
		Remove A7 – storage of bulk liquids such as oil and antifreeze. Not required, only small scale storage of oils and antifreeze in containers up to 25 L. Stored in locked cabinet in site compound	Report 19877/5 EMS and Report No 19877/2 Risk Assessment
Table S1.2	Operating techniques	All documents listed superseded by new application	See Application Document List
Table S1.3 Improvement Programme	1 – Following installation of new gas monitoring boreholes submit report of background monitoring and control and compliance levels	Boreholes installed in 2015, monitored for 2 years. Report submitted proposing new trigger levels included with this application	Report 99120/40 LFG trigger levels (already approved, not included with this submission)
Table S1.4A pre-op measures	1 –Submit design proposals for new monitoring boreholes for gas and groundwater	Proposals for the installation of the groundwater monitoring boreholes were submitted to the (EA) in July 2013 (TACCL Report No 99120/30) in accordance with the requirements of the environmental permit. Following a period of discussion and negotiation with the EA and the submission of some additional information (letter dated 24 September 2013) the EA confirmed formal acceptance of the proposals in an email, dated 31 October 2013. Boreholes were installed in 2015	Report 99120/30 Construction Proposals and Report 99120/35 CQA validation – already submitted, not included with the variation application

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Permit Condition	Brief Description of Condition	Proposal	Document Reference
	2 – Groundwater monitoring requirements and new control/compliance levels	Monitoring and compliance levels set in HRA.	Report 19877/3 HRA
	3 – Stabilisation works	Stabilisation work ongoing, waiting for approval by J P Camus of EA. Changes required: to allow the stabilisation works to be done in stages with tipping rather than all up front. Works to be addressed as part of construction proposals for each new phase.	REFA Geological Validation Works, March 2016 (not included with this submission, being dealt with by Area team)
	5 – Litter/dust/soil blocking Cockley Hill Beck	Risks assessed and mitigation provided through sites EMS as detailed in the environmental risk assessment	Report 19877/2 Risk Assessment and SWMP
	6 – Revision of odour management plan	No longer relevant, remove condition	Report 19877/2 Risk Assessment
	7 – Particulate Management Plan	Included with application	Report No 19877/6 Dust Management Plan
Table 1.4B	Pre-op measures for future development conditions 1-4	Remove entire table – no longer applicable as concerning gas plant and leachate treatment	Report 19877/3 HRA Report 19877/4 GRA
Table S1.5	Annual input limits	Currently 300,000 tn for combined restoration and disposal. Propose 200,000 tn disposal and 100,000 tn restoration. The 200,000 tn figure has been used in the LFGRA.	Report 19877/4 GRA
Table S2.1	Permitted waste types	Revised list consisting of non-biodegradable waste only which also conforms with the Landfill Tax Qualifying Materials Order	Report 19877/2 Risk Assessment
Table S2.2	Waste for restoration		
Table S3.1	Leachate level limits	No longer required as confirmed through pre-app discussions	Report No 19877/3 HRA

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Permit Condition	Brief Description of Condition	Proposal	Document Reference
Table S3.2	Point source emissions to air from gas engine and flare	Remove entire table - no longer applicable	Report 19877/4 GRA
Table S3.4	Groundwater Trigger levels	Proposed in HRA	Report 19877/3 HRA
Table S 3.5	External gas monitoring	Update borehole references with new perimeter boreholes	Drawing No 19877/21 EMMP
Table S3.6	Gas from capped surfaces	Remove entire table	
Table S3.7	Other landfill gas	In waste gas - update drawing references	
		Remove gas collection system monitoring	
		Remove gas compound monitoring	
		Remove trace gas monitoring	
Table S3.7	Other landfill gas	Remove flare monitoring	
Table S3.8	Leachate monitoring	Monitoring will be from the sidewall riser, L1 on EMMP	Drawing No 19877/21 EMMP
Table S3.9	Surface water monitoring	Monitoring points SW1, SW2 and SW outfall	Drawing No 19877/21 EMMP
Table S3.10	Groundwater monitoring	Update BH references	Drawing No 19877/21 EMMP
Table S3.11	Dust monitoring	Refer to Dust Management Plan	Report No 19877/6
Schedule 4	Reporting	To be updated following agreement of above	n/a