Kirkby Environmental Permit Variation Application

Non-Technical Summary_v2

Date: May 2025

TABLE OF CONTENTS

1 NON-TECHNICAL SUMMARY

1.1 OPERATIONS

Process Description	The FIS Kirkby site is used as a waste management centre. The current main process on the site is the treatment of (aqueous) waste streams through the site's pH adjustment plant to produce a hazardous filter cake which is transferred on to landfill; and a non-hazardous aqueous effluent which is discharged to foul sewer in accordance with the site's discharge consent and environmental permit. The site also incorporates a packaged waste transfer station and blending / storage facilities for waste solvents, waste oils and aqueous effluent. The proposed changes by Future Industrial Services Ltd (FIS) to which this application is subject are detailed in turn below: ▪ Addition of an Air Pollution Control Residues (APCR) pelletisation activity for Hazardous and Non Hazardous waste to produce an aggregate substitute product; and ▪ Extension of the permit boundary to cover the whole pad area rather than just a proportion of it as it currently stands within the environmental permit.

1.2 BAT BENCHMARKS

BAT Benchmarks	This report has been structured in accordance with the relevant technical guidance for the proposed activities, namely: ▪ Environment Agency (EA) web guidance Chemical waste: appropriate measures for permitted facilities https://www.gov.uk/guidance/chemical-waste-appropriate-measures-for-permitted-facilities; and ▪ COMMISSION IMPLEMENTING DECISION (EU) 2018/1147 of 10 August 2018 establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council

1.3 MANAGING YOUR ACTIVITIES

Accident Management	The site has in place an emergency management plan which covers a wide range of accident scenario . These will be updated to take into account the changes from this variation. The raw materials used as part of this variation are predominantly cement and sand.
Environmental Management Systems	An Environmental Management System (EMS) is in place for the site and will be amended to take into account the changes proposed with this variation.
Energy Efficiency	The site reports annual energy usage which is reviewed for anomalous results and potential for improvements. The site is a part of FIS review for Energy Savings Opportunities Scheme (ESOS) commitments
Efficient Use of Raw Materials and Water	The overall raw materials used within the process per annum based on 20,000 tonnes of APCR throughput for the pelletisation activity would be:

	▪ Sand 11,000 tonnes ▪ Cement 4,400 tonnes
Avoidance, Recovery and Disposal of Wastes	This variation will not significantly alter the wastes generated by the site with the exception of sundries used in the maintenance of the mixing and pelletisation plant. The following waste types will be accepted into the pelletisation process • 19 02 05 • 19 02 06* • 19 12 09

1.4 ENVIRONMENTAL IMPACTS AND MONITORING

Emissions to Air	There will be no additional point source emissions to air associated with this variation.
Fugitive Emissions to Air	The APCR and cement are stored in silos which are fitted with filters on their vents to prevent any dust release during filling operations. As the material is used it would draw air in to fill the void and would not generate dust during those circumstances which would be captured by the filter. The cement feed from the silo to the mixer is enclosed. Sand/washed APCR feed is undertaken by open hopper. The pan mixer is not enclosed as the process needs to be visible to allow tracking of pellet formation. The rotary pelletiser is also not enclosed due to the nature of the process being rotating tubes on a continuous basis. The APCR is moist having previously been washed up to 5x the quantity of water to APCR prior to being dewatered and therefore would not generate dust. The moist nature of the APCR would help it to bind with the cement and sand to produce the final aggregate pellet. Existing plant such as the reactor vessels are abated. New plant - cement silo vents via dust filter. The rest of the plant, no process emissions are expected as the material is treated moist and would not generate dust. Therefore, it is considered that the pelletisation process would not generate dust likely to cause an impact for the following reasons: ▪ The majority of the equipment is in a sealed system; ▪ The APCR will be received in a tanker and transferred via hose in a sealed system for storage in a silo prior to washing which means it is then moist/wet which would minimise any subsequent potential dust generation; ▪ The pit area is below ground level and prevents any wind whip; ▪ The receptors downwind from site are over 1km away and is a local farm which would generate dust emissions of its own with its farming activities so would not be considered particularly sensitive; ▪ TGN M17 states that dust over 10 µm, as would be the case from the treatment activity, falls out between a couple of hundred metres and 1km. Therefore, in the unlikely event of dust being generated it would not reach any of the nearby receptors to cause nuisance.
Emissions to Water	There is no discharge to water or sewer from the pelletisation process.
Fugitive Emissions to Water	There are no fugitive discharges to water at the site and therefore no monitoring is required.
Groundwater Impacts	No deliberate discharges will be made direct to groundwater as part of this variation application.
	The APCR is not considered odorous and as the site has not had complaints with regards to odour it is not considered to be a risk from the proposed activity.

Odour Noise and Vibration	The site has had an environmental permit under Environmental Permitting Regulations (EPR) since 2007 and there have been no noise complaints during that time which demonstrates that the environmental receptors in the surrounding area are not particularly sensitive to noise generated by the site.

	The main noise generating equipment are the trommel, rotary and pan mixers as well as the pelletiser. The proposed treatment activity is to take place in a below ground pit area which has thick concrete surrounding walls backed by earth which would act as a complete acoustic shield. The site is in an industrial area with many different industrial processes operating that generate noise, and the industrial estate has busy internal roads and a very busy road (Perimeter Road) on the eastern edge of the industrial estate generating significant local noise through vehicle movements. Local residential receptors are over 1km from site in a downwind direction. Given the location and local factors the following factors would help to reduce the noise output from the site which are: ▪ Atmospheric absorption- 1.3 to 25 dB dependent on frequency ▪ Ground attenuation- 9 dB as over 1km to nearest residential receptor ▪ Acoustic barriers- full 20 dB is allocated due to lack of direct line of sight, reinforced concrete walls and earthen backing All of the above factors should give a significant degree of attenuation of the noise from the process. Noise is therefore not expected to be considered an issue for the mixing and pelletisation activity given the pit area for the above reason. Furthermore, the site is a batch process and will only operate during the site operational hours which precludes evening and nighttime operation further eliminating the risk of complaints.
Monitoring and Reporting of Emissions	Monitoring of emissions to air and water will be undertaken in accordance with the environmental permit when issued. All wastes removed from site are recorded. Key process variables are monitored to allow efficient operation of the process and associated activities.

1.5 RECORDS, REPORTING AND NOTIFICATION

Records, Reporting/Notification	A system is in place for record keeping with waste tracking software and keeps the records for 6 years. Reporting and notification procedures will be amended to address the requirements of the varied permit when issued.

1.6 SITE CONDITION REPORT

Site Condition Report	A site condition addendum report describing changes since the last site condition report is included with this application. The boundary is to be extended to include the whole of the pad area rather than just a proportion of it. The pad area is to be used for the APCR mixing and pelletisation process. There is a discharge point in one corner of the pad which had been previously bunded to prevent any waters being able to discharge to it and sealed. There is a tank installed on the pad area where the pad water is pumped to for treatment elsewhere rather than using this discharge point. It is stated in the 2014 Site Condition Report (SCR) the condition of Zone 3, the location of the mixing and pelletisation activity that "*a series of exploratory holes were completed in 2007. Chemical testing was completed on eight soil samples across the former reservoir area; no elevated concentrations of contaminants were recorded*".

	The pad area has undergone a significant refit with patchwork to damaged areas completed in 2024. In addition, damaged concrete has been dug out, new concrete laid and joints sealed. Area has also been cleaned of sludge by industrial services team. Groundwater monitoring is undertaken quarterly with a detailed annual report. These are managed through the site's compliance via the local site officer and are not presented here as they have already been assessed as compliant with permit conditions.

1.7 HABITAT REGULATION ASSESSMENT

Habitat regulation assessment	The Defra portal 'Magic' shows that there are no Special Protection Areas (SPA), Special Areas of Conservation (SAC) or Ramsar sites or proposed European sites within 2km of the FIS site. It is considered that as TGN M17 states that dust over 10 µm falls out between a couple of hundred metres and 1km that there would be no potential for the site to have an impact upon a European designated site and therefore a habitats regulation assessment is not required and this has not been considered further.