FREETHS

Daneshill Landfill Site

APPEAL PURSUANT TO REGULATION 31 OF THE ENVIRONMENTAL PERMITTING (ENGLAND AND WALES) REGULATIONS 2016

REGARDING DANESHILL SOIL TREATMENT FACILITY
AT DANESHILL LANDFILL SITE

STATEMENT OF CASE

ON BEHALF OF FCC RECYCLING (UK) LIMITED

1. INTRODUCTION

1.1. Freeths LLP is instructed to act on behalf of FCC Recycling (UK) Limited ("the Appellant"), in relation to an appeal pursuant to Regulation 31 of The Environmental Permitting (England and Wales) Regulations 2016 ("the Regulations").

1.2. The Appellant is appealing the Environment Agency's ("the EA") refusal of an application to vary environment permit reference EPR/NP3538MF ("the EP") to allow for the treatment of asbestos contaminated soils at Daneshill Landfill Site ("the Site").

1.3. This Statement of Case ("SoC") should be read alongside and in conjunction with the Appellant's Grounds of Appeal ("GoA"). Where relevant, the same abbreviations used in the GoA will be adopted in the SoC.

2. THE APPEAL SITE

2.1. The Site is an existing non-hazardous waste landfill which is undergoing restoration. The landfill operates pursuant to a ROMP[1], which will expire in 2048. The Appellant's restoration scheme for the landfill anticipates that restoration of the landfill void will be complete within 10 years (subject to sufficient waste arisings, including hazardous waste to be pre-treated at the Site prior to use in the restoration of the landfill).

2.2. Details of potentially sensitive receptors near to the Site (within 500m) are included within the Amenity and Accidents Risk Assessment[2] and include a nearby Travellers' site, residential properties off Daneshill Road and recreational sailing club.

[1] Review of Old Minerals Permission
[2] See Table 1, page 2 of the Amenity and Accidents Risk Assessment, dated January 2021, submitted in support of the Application.

2.3. Full details of the Site and its surroundings will be provided in the Appellant's expert evidence and the Statement of Common Ground ("SoCG").

3. PROCEDURAL BACKGROUND

3.1. An overview of the relevant procedural background to the Appeal is set out in the GoA and will not be repeated in the SoC.

3.2. In so far as is required, the procedural background to the Appeal will be addressed in the SoCG and/or the Appellant's expert evidence.

4. BACKGROUND AND DETAILS OF THE PROPOSED ACTIVITY

4.1. An overview of the Proposed Activity is set out in the GoA (see paragraphs 4.8 – 4.12 of the GoA).

4.2. It should be noted that an amendment is required to paragraph 6.20.2 of the GoA in that any reference to the HEPA filter/covering of the mechanical screener should be deleted. This issue will be addressed in more detail in the Appellant's evidence. However, it should be noted that the proposal to partially enclose the screener and utilise a HEPA filter arose during the determination of the Application, as a result of the Appellant trying to meet the EA's concerns, rather than considering it a requirement of BAT. Since then, further investigation and practical testing has confirmed that it is not possible to enclose the mechanical screener and the Appellant does not propose that the mechanical screener will be enclosed and/or fitted with a HEPA filter.

4.3. A detailed description of the Proposed Activity will be set out in the Appellant's expert evidence. This will include references to the documents submitted in support of the Application, relevant plans and schematics which will illustrate the stages of the Proposed Activity alongside the operational management controls which will be deployed to prevent and/or minimise any emissions of asbestos fibres.

4.4. The Appellant's evidence will, where relevant, make reference to and draw upon similar activities at other sites which are operated by FCC/Provectus (as referenced at paragraph 6.39 of the GoA). In particular, the Appellant intends to

refer to activities and monitoring data from its site at Maw Green and Edwin Richards Quarry. Where other sites are referred to in the Appellant's evidence, detail will be provided regarding the nature of the activities undertaken at those other sites in order to ensure accurate information is available to the Inspector regarding the comparability of technical data arising from those sites.

5. REASONS FOR REFUSAL

5.1. The Environment Agency's Reasons for Refusal are set out in full in the GoA and will not be repeated here.

6. STATEMENT OF CASE

6.1. This SoC sets out the full particulars of the Appellant's case and the details of any documents which it proposes to submit in support of the Appeal.

6.2. A detailed exposition of the Appellant's case is already provided in the GoA. The SoC therefore seeks to add to the GoA, rather than repeat the submissions already made in full.

6.3. The GoA and SoC should be read in conjunction with each other.

6.4. The Appellant will maintain its case in respect of all three Grounds as set out in the GoA.

6.5. Expert evidence will be adduced by the Appellant which will address:

6.5.1. The correct interpretation, requirements and application of BAT, including the relevance of the WFD and Article 11 of the IED;

6.5.2. A detailed assessment of the Proposed Activity and the proposed operational controls which will be deployed and their compliance with BAT;

6.5.3. The need for the Proposed Activity and the wider environmental context in support of the Appeal including the need to protect hazardous waste landfill capacity;

6.5.4. Whether the Proposed Activity will be likely to give rise to significant pollution. The Appellant will demonstrate that the Proposed Activity will not give rise to significant pollution and any risks arising from the Proposed Activity will be negligible. Expert evidence will be called to assess and quantify the risk arising from the treatment of asbestos contaminated soils as a result of the Proposed Activity and will include:

6.5.4.1. A detailed review of the evidence base regarding the risks arising from the treatment of asbestos contaminated soils, in particular relating to soils contaminated with bound asbestos;

6.5.4.2. Best practice when treating asbestos contaminated soils and their application/relevance to the Proposed Activity;

6.5.4.3. Detailed analysis of the critical factors which determine the risks of asbestos fibres from the treatment of asbestos contaminated soils and how these relate to the Proposed Activity;

6.5.4.4. Assessment of the results of extensive asbestos fibre monitoring data from comparable sites and background asbestos levels;

6.5.4.5. Detailed analysis of the emissions which are likely to arise from the Proposed Activity, the risk of any such emissions to relevant sensitive receptors, demonstrating that the risks are negligible, even when sensitivity tests are applied so as to result in a conservative 'worst case' assessment.

6.6. Further particularisation of the Appellant's case is provided below.

7. ASBESTOS EMISSIONS FROM THE TREATMENT OF ASBESTOS CONTAMINATED SOILS

7.1. Expert evidence will be adduced to assess and fully contextualise the likelihood of asbestos fibre emissions from the Proposed Activity.

7.2. An overview of the types of asbestos fibres, and the varying degrees of risk they pose will be provided with reference to the type of asbestos which will be treated by the Proposed Activity.

Asbestos fibre emissions from material processing

7.3. The Proposed Activity is for the acceptance of soils contaminated with bonded or bound asbestos containing materials (ACMs). The proposed activity excludes the acceptance of soils with concentrations of fibrous asbestos above a threshold of 0.1% for chrysotile and 0.01% for amphiboles. The materials accepted for treatment at the facility therefore ~~therefore~~ are expected to contain low quantities of free asbestos fibres upon receipt. The assessment of the risks of release of asbestos fibres to air is primarily associated with the potential for the increase in concentrations of free fibres in the soil such as from abrasion of the ACMs during the transfer of the soils and ACMs in bulk and via conveyors and as a result of the mechanical screening process.

7.4. The Appellant's expert evidence will consider and address the potential of the disturbance of asbestos[3]-containing soils to release asbestos fibres into the air. This is a well-established issue that has been addressed by UK and international guidance (both from a regulatory and an industry perspective). There are a number of factors that have been shown to influence the emission of asbestos fibres from soil, and the actual release of asbestos fibres from soil at a site-specific level is a complex function of these factors.

7.5. Critical factors in asbestos fibre release include the soil moisture content, the degree of soil disturbance/agitation, physical soil characteristics (such as particle size distribution), the type and form of the asbestos, and the concentration of the asbestos in the soil.

7.6. Whilst the hazard of potential asbestos fibre emission to air is associated with the presence of asbestos in soil, the Appellant's evidence will demonstrate that the risk of airborne fibre emission can vary greatly dependent on the site-specific conditions. Published approaches for the estimation of airborne fibre release from soil and calculation of the associated health risk from human exposure to airborne

[3] The term 'asbestos' refers to all types and forms of asbestos that are identifiable either by visual on-site inspection and/or by laboratory analysis. This can include fragments of ACMs, loose fibrous debris, fibre bundles and free fibres. The term 'asbestos fibres' refers to free fibres only.

asbestos fibres in non-occupational scenarios are summarised in the Society of Brownfield Risk Assessment (SoBRA)'s Asbestos in Soil Human Health Risk Assessment Toolbox (SoBRA, 2021a). These will be referred to and considered in the Appellant's expert evidence.

7.7. An initial screening of potential fibre emissions associated soil movement and treatment activities can be made using the US EPA AP-42 guidance (US EPA, 2006). The air pollutant emission factors developed in this guidance are generic but are modified by a number of site-specific activity parameters. The relevant activities envisaged at the STF are: (1) haulage of waste soil to the STF by 20 tonne tipper trucks, (2) stockpile management of pre- and post-processed soil by 360 excavator, bulldozer, and 25 tonne dumper truck, (3) mechanical screening of soil, (4) transfer to picker belt and hand picking of soil, (5) haulage of processed soil material away from STF. Use of the AP-42 emission calculations indicate that the greatest emission activities are likely to be vehicle movement on the concrete slab, and mechanical screening. Accordingly, other emission activities are likely to be insignificant by comparison.

7.8. In terms of the overall emissions, it is noted that the screener operation is likely to be relatively continuous throughout a working day. Vehicle movements will be more sporadic and of comparatively short duration. The relative contribution from wind erosion is not expected to be significant.

7.9. There are inherent uncertainties in the indirect estimation of airborne asbestos fibre emissions from soil disturbance activities, and activity-based sampling ("ABS") can provide valuable direct evidence of asbestos fibre release. Provectus has undertaken daily air monitoring of its asbestos containing soil processing activities at two similar soil treatment facilities, at FCC's landfill site at Maw Green in Crewe, and at FCC's Edwin Richards Quarry landfill site at Rowley Regis near Wolverhampton. The activities and soil acceptance criteria for these two sites are similar to those proposed for Daneshill.

7.10. In addition to permit-compliance air monitoring using 'standard' HSG248 air monitoring methods, Provectus has also undertaken air monitoring to a lower limit of quantification and that is capable of fibre discrimination. The additional ABS was designed to monitor source emissions during the soil processing operation, and the data indicates that quantifiable fibre emissions are infrequent and fall

significantly below the environmental permit requirements for airborne asbestos concentrations measurable at the site boundary.

7.11. The ABS data for the Maw Green Soil Treatment Facility (STF) comprises 342 single point daily air samples taken across the period 15 August 2022 to 09 June 2023 that have been taken close (i.e. within 5m) to the mechanical screener used to segregate the as received soil into three size fractions prior to further treatment. No dust emission controls are fitted to this screener. All soil processing is undertaken outdoors at Maw Green.

7.12. The air monitoring data for Edwin Richards Quarry (ERQ) STF comprises 745 daily samples taken across the period 14 January 2022 and 30 June 2023, predominantly within the processing building during processing activities, and also on occasion within the storage pad. Of note, the processing activities are undertaken indoors at ERQ, and the processing activities have varied over the monitoring period, with the screener either uncovered, partially covered and with a HEPA filter[4], or not in operation.

7.13. The Appellant's evidence will provide a detailed assessment of the monitoring data obtained at Maw Green and ERQ and will demonstrate that:

7.13.1. Sampling was undertaken during periods of work when no dust suppression was in operation, therefore the data is indicative of reasonable worst case in this respect.

7.13.2. Quantifiable levels of airborne asbestos fibres (i.e. equal to or greater than 0.0005f/ml) were detected at Maw Green on 7 occasions (2.4% of ABS samples). Asbestos fibres were not detected at all in 84% of ABS samples, therefore fibres were detected, but below the limit of quantification, in 13.6% of ABS samples. The maximum reported airborne asbestos fibre concentration was 0.0015f/ml.

7.13.3. Quantifiable levels of airborne asbestos fibres were detected at ERQ on 19 occasions (3% of ABS samples). Asbestos fibres were not detected at all in 77% of ABS samples, therefore fibres were detected, but below

[4] It should be noted that this reference to a screener being covered and fitted with a HEPA filter is a reference to the Appellant's trial, carried out at its ERQ site, to operate a screener with partial enclosure. The trial was not successful. The Appellant has been unable to locate any screener which is available on the market which has 'covers' and/or is partially enclosed.

the limit of quantification, in 23% of ABS samples. The maximum reported airborne fibre concentration was 0.001f/ml.

7.13.4. Reported near-source air concentrations recorded at similar activities to those proposed, with similar types of controls and mitigation applied, are consistently very low. Very few airborne fibres are detected, and quantifiable concentrations are infrequent. On all the infrequent occasions when quantifiable concentrations of fibres were detected, the results were below the EA and HSE guidance threshold concentrations.

7.14. Reference will be made to the following guidance in order to quantify the materiality of the emissions as follows:

7.14.1. The Environment Agency permit requirement for the installation permit at ERQ is for air concentrations to remain below 0.01f/ml at the monitoring locations identified in the permit;

7.14.2. The Control Limit and Short-Term Exposure Level set by the Control of Asbestos Regulations (CAR) 2012 for airborne asbestos concentrations are 0.1f/ml and 0.6f/ml respectively;

7.14.3. The HSE advocates a monitoring LOQ of 0.002-0.005f/ml for perimeter monitoring (HSG248, 2013. Appendix 8, Table 5.2); and

7.14.4. Environment Agency guidance for monitoring at waste facilities (M17) (EA, 2013) advocates that asbestos should not be found above background levels.

7.15. Further analysis will be undertaken to indicate the degree of correlation between reported asbestos soil concentrations, process activity, and weather conditions at the time of monitoring. The Appellant will provide the results of this further analysis and rely upon the same as part of the evidence it adduces in support of the Appeal.

7.16. In its interpretation of soil investigation results for assessing the risk specifically to workers, the HSE states in its latest guidance (HSG248, 2022) that airborne fibre concentrations are unlikely to exceed 0.01f/ml where the asbestos in soil is mostly bound/bonded and at concentrations <0.1% wt/wt (section 7.21). It goes on to state in section 7.22 that more energetic processes (including power screening of soils) may give rise to elevated fibre levels, especially if the material is dry, however, when the soil is damp or wet, it states that airborne emissions of asbestos

will be suppressed and wind dilution and dispersion of emissions will reduce worker and bystander exposures.

7.17. The monitoring at Maw Green and ERQ supports the HSE's guidance which states that airborne fibre concentrations are unlikely to exceed 0.01f/ml, and indicating that in practice airborne concentrations are likely to be substantially lower than 0.01f/ml even when more energetic processes such as power screening are in operation. The Appellant will therefore demonstrate that the risk of any material level of emissions arising from the Proposed Activity is low.

Presence of loose asbestos fibres in processed soil and associated hazard potential

7.18. The Appellant's evidence will consider and evaluate the available validation soil sample data for the material processed at the Maw Green and ERQ STFs between 19 September 2019 and 05 May 2023. Data from 76 soil samples is available from Maw Green and 278 samples from ERQ, and represents treated soil that originated from 431 different sites/projects across the UK. The data provides a reasonable indication of the type of material being generated at remediation sites in the UK and being accepted and treated by FCC/Provectus.

7.19. The soil data is either from the finer separated soil fraction post screening or from the finer fraction of unscreened, picked material dependent on the processing operations in use at the time of sampling. Post-processing, this material is less likely to contain fragments of ACM (certainly not fragments that are visible with the naked eye as opposed to under a microscope) and is most likely to contain the loose fibre bundles and loose fibres that were present in the originally received material. All laboratory test results are UKAS accredited.

7.20. The data demonstrates that the majority of processed soil has an asbestos concentration that is below the analytical limit of quantification. Where higher concentrations are reported, other samples for the processed material from the same site of origin report lower concentrations. The Appellant will reference this data to demonstrate that there are not continuously elevated soil concentrations in processed material following soil screening. Accordingly, the Appellant will rely upon this data as further evidence to support its case that the risk of any material level of emissions arising from the Proposed Activity is low.

Potential for material processing to increase loose, free fibre concentrations in the soil

7.21. The Appellant's evidence will address the limitations of available soil data in determining whether processing increases the respirable fibre concentration of the material. The majority of the reported post-treatment soil validation concentrations are less than the limit of quantification for current commercially available UKAS-accredited test methods and therefore any attempt to distinguish between pre- and post- processed data would be subject to significant sampling and analytical error.

7.22. The Appellant will refer to and rely upon the activity-based sampling published by the Dutch Institute of Public Health and the Environment (RIVM, 2003) which indicates that disturbance of soil containing less than 1%wt/wt 'bound' asbestos (e.g. asbestos cement) did not create detectable concentrations of asbestos fibres in air (in this case the detection limit was 0.001f/ml (1000 f/m^3) by transmission electron microscope). This conclusion was based on a reported dataset of over 1000 measurements. The authors of the same Dutch guidance also concluded that the respirable fibre concentration in soil containing fragments of bound asbestos is 'nil' (less than 0.1% of the total asbestos soil concentration). This conclusion was based on 10 years of soil test data.

7.23. The Institute of Occupational Medicine ("the IOM") conducted an assessment of fibre release from farm tracks in South Cambridgeshire made with asbestos cement waste (IOM, 2007). The calculated average weekly airborne fibre concentrations resulting from pedestrian and vehicular use of these farm tracks were <0.00001 – 0.0007 f/ml. Vehicular traffic was described by the authors to be one to two vehicles per hour.

7.24. Overall, the Appellant will contend that respirable fibre release from weathered/damaged bound asbestos (ACMs) will be very low compared to the potential release from unbound, more friable asbestos containing materials that will not be accepted and treated at the Daneshill site. The very low release from bound asbestos is reflected in the air monitoring data and the post-processed soil data that has been reviewed from Maw Green and ERQ. The Appellant will therefore demonstrate that the risk of any material level of emissions arising from the Proposed Activity is low.

Influence of soil moisture on asbestos fibre release from soil

7.25. The Appellant's expert evidence will provide a full overview of the relevance of soil moisture to the risk of fibre release from oils treated by the Proposed Activity. Soil moisture content is a key factor in asbestos fibre release from soil. Excavated soil received at the STF will be highly unlikely to have zero moisture content, and it will be stockpiled under sheeting before being processed, thus reducing the potential for stored soil to dry out prior to being processed. Laboratory moisture testing of post-processed soil at Maw Green and ERQ confirms this, with reported soil sample moisture contents typically above 10%. The testing dataset comprises 68 soil samples from Maw Green and 278 soil samples from ERQ. This data set will be relied upon as part of the Appellant's evidence.

7.26. Scientific studies published in the UK and in The Netherlands have established the significance of soil moisture on asbestos fibre release from soil. The laboratory studies reported by IOM (1988) indicate that a soil moisture content of 10% reduced measured airborne fibres by a factor of 10. Similar studies by TNO and reported by RIVM (2003) indicated that a soil moisture content of 5-10% reduced the re-suspension of asbestos fibres in air by a factor of 100.

7.27. The principal assumption made by the authors in the study of farm tracks in South Cambridgeshire (IOM, 2007) on the effects of weather on fibre release was that the airborne fibre concentration on wet days would be 'small, probably negligible' compared to that on dry days.

7.28. In HSG248 (Appendix 8) it is stated (A8.4) that if the soil surface is damp, almost no release of asbestos fibres to air will occur.

7.29. The Appellant will refer to and rely upon the evidence relating to soil moisture levels to demonstrate that the risk of asbestos fibre release is low and will further support its case with the results of monitoring data. Reference will also be made to the operational controls which will be available as part of the Proposed Activity to ensure that soils retain moisture levels and minimise the risk of asbestos fibre release.

Airborne fibre dispersion off-site

7.30. The Appellant's evidence will address and assess the risks of airborne asbestos fibre dispersion occurring off-site with respect to the relevant sensitive receptors at the Site.

7.31. Both primary and secondary emissions will be considered to ensure a robust approach is taken to the assessment processes.

7.32. AERMOD air dispersion modelling undertaken by Isopleth Ltd for a dust emission source located at the Daneshill STF indicates that air dispersion will likely reduce off-site 'at receptor' air concentrations by at least two orders of magnitude compared to near-source concentrations on-site. This is based on conservative modelling of dust with no wet deposition (i.e. assuming that the dust behaves as a gas), and without considering the mitigating effect of the mature trees that surround the majority of the Daneshill STF site.

7.33. Off-site receptor sensitivity is a function of land-use and associated human exposure patterns, distance to the STF, and location orientation relative to the STF. The frequency and duration of exposure at the receptor location dictates the cumulative exposure when coupled to the expected air concentration. The distance and orientation to the STF dictates the receptor air concentration at any point in time as fugitive fibre emissions from the STF will only reach the receptor if the wind is blowing in the right direction, and the distance, coupled to the wind speed and other climatic conditions such as rainfall, will dictate the attenuation (reduction) in airborne fibre concentration from the emission source.

7.34. The AERMOD modelling, using the previous 6 years of meteorological data suggests that the most sensitive (relative) off-site receptor is the Travellers' Site located to the south of the Daneshill STF. This meteorological data indicates that the wind direction is predominantly away from the Traveller's Site as opposed to towards it.

7.35. Northerly winds are not commonly associated with hot dry summer weather in the UK. Prolonged periods of hot, dry weather in the summer are more commonly associated with southerly or easterly continental winds, as has been the case in the summers of 2022 and 2023. There are no off-site receptors within 400m of the STF to the east or north east (i.e. in the direction of prevailing southwest to westerly winds) or the north or west (i.e. in the direction of hot, dry summer winds). The closest receptors are Loundfield Farm to the east of the STF, and Daneshill Cottages to the west southwest of the STF. Both receptors are greater than 500m distance from the location within the STF where the asbestos soil processing is planned to be located.

Risk Estimation

7.36. The SoBRA AiSHHRA Toolbox provides a structured way of assessing the potential health risk from exposure to fugitive airborne asbestos fibres resulting from the disturbance of asbestos in soil. The estimation of health risk can be calculated using the SoBRA Excel-based spreadsheet that was developed to support SoBRA's discussion paper on guidelines for airborne concentrations of asbestos in ambient air (SoBRA, 2021b). This calculation tool requires the exposure point air concentration, and the exposure frequency and duration for 5-year time periods. The health risk from asbestos exposure is related to the cumulative exposure dose (air concentration x duration) and the age of first exposure.

7.37. The Appellant will utilise these tools to model exposure utilising a precautionary approach and taking into account the planned operational timescale for the STF of 10 years.

7.38. The near source activity-based sampling at Maw Green and ERQ has shown that the majority of reported airborne asbestos fibre concentration are less than the method LOQ (0.0005f/ml). Reported concentrations above the LOQ are infrequent and average concentrations are <0.0005f/ml. It is not reasonable to assume that off-site concentrations will be at the LOQ (i.e. 0.0005f/ml). It is therefore reasonable to assume on a precautionary basis that exposure concentrations at the Travellers' Site should not exceed 0.000005f/ml (5f/m^3), i.e. at least 100 times lower than the on-site monitoring LOQ, taking into account the balance of evidence on likely air dispersion. It is expected that actual off-site receptor concentrations will be much lower than this.

7.39. The Appellant will demonstrate that the estimated lifetime risk of mesothelioma and lung cancer from the above exposure scenario is insignificant.

7.40. The Appellant will therefore demonstrate that significant pollution will not arise from the Proposed Activity.

8. BAT

8.1. The Appellant's evidence will address in detail the interpretation, application and requirements of BAT demonstrating that the Proposed Activity is fully compliant with the same. In particular, the Appellant's expert evidence will address the following areas:

Legislative Framework

8.2. The legislative framework for environmental permitting is provided by European Union Directive 2010/75/EU on industrial emissions ("the **IED**"") and the Environmental Permitting Regulations 2016 ("the **EPR**") (not EPR 2010 as the EA reference in the Decision Notice (the **DN**)).

8.3. Article 11 of the IED requires that all appropriate preventive measures are taken against pollution, best available techniques are applied and that no significant pollution is caused. If the installation complies with the IED then Article 5 requires the competent authority to grant a permit.

8.4. The EPR defines pollution as any emission resulting from human activity which may be harmful to human health or the quality of the environment, cause offence to a human sense, result in damage to material property, or impair or interfere with amenities or other legitimate uses of the environment. The EPR require the regulator to exercise its functions to achieve a high level of protection of the environment taken as a whole by, in particular, preventing, or where that is not practicable, reducing emissions into the air, water and land. The regulator must exercise its functions so as to encourage the application of emerging best available techniques (BAT) as defined in Article 3 of the IED.

8.5. In addition to the application of BAT, Article 11 of the IED states that:

'Member States shall take the necessary measures to provide that installations are operated in accordance with the following principles:
(a) all the appropriate preventive measures are taken against pollution;
(b) the best available techniques are applied;
(c) no significant pollution is caused;
(d) the generation of waste is prevented in accordance with Directive 2008/98/EC [the Waste Framework Directive];

(e) where waste is generated, it is, in order of priority and in accordance with Directive 2008/98/EC, prepared for re-use, recycled, recovered or, where that is technically and economically impossible, it is disposed of while avoiding or reducing any impact on the environment;
(f) energy is used efficiently;
(g) the necessary measures are taken to prevent accidents and limit their consequences;
(h) the necessary measures are taken upon definitive cessation of activities to avoid any risk of pollution and return the site of operation to the satisfactory state defined in accordance with Article 22'.

8.6. The proposed activity complies with each of these aspects of the IED which is implemented in England through the EPR.

8.7. The Waste (England and Wales) Regulations 2011 implements the Waste Framework Directive in England. Regulation 12 requires the implementation of the waste hierarchy and states that:

'12. (1) An establishment or undertaking which imports, produces, collects, transports, recovers or disposes of waste, or which as a dealer or broker has control of waste must, on the transfer of waste, take all such measures available to it as are reasonable in the circumstances to apply the following waste hierarchy as a priority order—
(a)prevention;
(b)preparing for re-use;
(c)recycling;
(d)other recovery (for example energy recovery);
(e)disposal.

(2) But an establishment or undertaking may depart from the priority order in paragraph (1) so as to achieve the best overall environmental outcome where this is justified by life-cycle thinking on the overall impacts of the generation and management of the waste.

(3) When considering the overall impacts mentioned in paragraph (2), the following considerations must be taken into account—
(a)the general environmental protection principles of precaution and sustainability;

(b)technical feasibility and economic viability;

(c)protection of resources;

(d)the overall environmental, human health, economic and social impacts.'

8.8. The proposed activity complies with the waste hierarchy in that the treatment process achieves the recovery and reuse of soils contaminated with asbestos which otherwise would remain a hazardous waste for which the only management option is disposal to landfill. In addition, the oversized materials removed by the screening process comprising large stones, bricks and lumps of concrete are husbanded and used on site as hardcore to form the surface of haul roads and other infrastructure. It will be confirmed by the monitoring data presented in the Appellant's evidence that given the proposed control techniques and emissions monitoring which will be implemented as part of the proposed activity that there will be no overall adverse environmental or health impacts as a result of the proposed activity therefore the activity should be consented in order to achieve the benefits in accordance with the waste hierarchy.

8.9. The Hazardous Waste (England and Wales) Regulations 2005 includes a duty for the separation of hazardous wastes. Regulation 20 states that:

'20. (1) This regulation applies to the holder where—

(a)the hazardous waste has been mixed other than under and in accordance with a waste permit or a registered exemption, whether by the holder or a previous holder; and

(b)separation is both—

(i)technically and economically feasible; and

(ii)necessary in order to comply with the Waste Directive conditions.

(2) The holder must make arrangements for separation of the waste to be carried out in accordance with a waste permit or registered exemption as soon as reasonably practicable.

(3) In this Regulation "separation" means separation of a waste from any other waste, substance or material with which it has been mixed.'

8.10. The waste which would be received for treatment by the proposed activity typically comprises mixed construction and demolition waste which includes soils mixed

with Asbestos Containing Materials (ACMs). Even if some segregation activity has been implemented at the site of arising of the waste, unseparated ACMs remain mixed with the soils meaning that the whole of the waste load is classified as hazardous waste unless and until the ACMs are removed and any residual free fibres in the soil remain below the hazardous waste threshold (<0.1% by weight of asbestos fibres in soil). The Proposed Activity achieves the separation of the mixed wastes in a manner which is demonstrably technically and economically feasible.

Description of the Proposed Activity

8.11. A schematic summary of the component parts of the Proposed Activity will be provided in the Appellant's evidence. The summary will include each stage of the process including the pre-acceptance and acceptance checks, the screening and hand picking stages of the treatment process and the validation sampling and analysis of the treated outputs as well as the comprehensive, extensive monitoring of the emissions close to the proposed activities as well as at the site boundary. The Proposed Activity is for the separation of solid, bound asbestos containing materials from soils. Research and monitoring demonstrates that the potential for the release of asbestos fibres from soils and from bound materials is lower in quantitative terms and presents a lower risk to health for chrysotile asbestos compared with other types of asbestos fibres. The Proposed Activity is not designed to remove free fibres from soils and therefore there is a limit set on the concentrations of unbound asbestos fibres in the soils accepted at the facility. The limit for soils accepted at the facility is <0.1% of free chrysotile fibres and <0.01% of free amphibole fibres.

8.12. It is known that non- bound asbestos containing materials, such as insulation and lagging products have a greater potential to release asbestos fibres. Accordingly, only soils containing bound ACMs will be accepted for treatment at the proposed facility and no soils containing insulation or lagging materials or any other forms of ACM which are not bound will be accepted for treatment in the Proposed Activity. The pre-acceptance and acceptance criteria for wastes to be received for treatment at the Proposed Activity will be set out in the pre-acceptance and acceptance criteria for the treatment facility. All of these acceptance criteria will minimise the potential for emissions of fibres from the treatment process.

8.13. As will be explained in the Appellant's evidence, incoming wastes which comply with the pre-acceptance and acceptance criteria will be received, inspected and sampled and then stored externally in covered (sheeted) stockpiles awaiting receipt of the results of confirmatory analytical checks. The reception and storage areas and all waste treatment areas will be located on an impermeable surface with an integrated drainage collection and retention system. Based on the comments of the EA in the DN there is no indication that these acceptance, reception and storage stages of the Proposed Activity give rise to any concerns from the EA.

8.14. Following the confirmatory checks, the mixed soil and ACM waste will be transported to a 3-way mechanical screening facility. The screener will separate the waste into three outputs:

● Oversize comprising large pieces of stone, concrete and bricks approximately >50mm. There is a limited potential for any ACMs to be included in the oversize fraction but all outputs will be subject to visual checks in order to identify and remove by hand any large ACMs such as pieces of cement pipe. Once confirmed as not containing ACMs, the oversize materials will then be reused as general fill and a base for haul roads and other infrastructure on site.

● Soil fraction approximately <15mm. There is a limited potential for any ACMs to be included in the small size fraction but all outputs will be subject to visual checks in order to identify and remove by hand any small pieces of ACMs in this separated fraction. The soils will be subject to testing for asbestos fibre content to confirm the suitability of the material prior to reuse in the landfill restoration.

● Mid-size fraction which will be transferred to the picking station where ACMs are removed by hand picking. The ACMs which are removed will be deposited directly into robust bags for sealing and storage in an enclosed container prior to removal for landfill disposal. The soils which have been subject to inspection and hand picking will be subject to testing for asbestos fibre content to confirm the suitability of the material prior to reuse in the landfill restoration.

8.15. The techniques implemented to minimise the potential for the emissions of fibres and particulates together with the associated monitoring and data review and response procedures will be explained in in the Appellant's evidence. Based on

the comments in the DN there is no indication that these stages of the proposed activity give rise to any concerns from the EA other than the use of a mechanical screening process to separate the size fractions. The EA consider that the use of a mechanical screening process has the potential to create additional free fibres as a result of the mechanical agitation inherent in the process. It will be explained in the Appellant's expert evidence that there is no evidence of the use of a mechanical screening process such as that proposed resulting in the generation and release of additional asbestos fibres in any material quantities. The use of the screening stage improves the efficiency of the separation process by allowing the hand picking stage to be focussed on the fraction of the waste which contains the ACMs and significantly reduces the treatment time and energy use for the treatment method.

8.16. The application of the segregation process will allow the reuse of the oversize fraction for use as hardcore on site and the use of the soils in the restoration of the site as part of a consented recovery activity. The quality of the soils which are reused for landfill restoration will be tested to confirm that they comply with quality criteria set out in a restoration specification which will be agreed with the Environment Agency. The restoration specification has not yet been agreed for the restoration of Daneshill Landfill Site, but an approved risk assessment methodology and soil specifications have been agreed with the EA for the restoration of other landfill sites with recovered waste, including limits for asbestos fibres, and the same approach will be implemented here. Based on the comments in the DN there is no indication that the proposals for the reuse of the treated soils in the restoration of the landfill site give rise to any concerns from the EA, subject to the agreement of a restoration specification. The varied Environmental Permit issued on 9 December 2022 includes as activity AR1 (Schedule 1, Table S1.1) activity R5 comprising 'the recycling or reclamation of inorganic material' for use in landfill restoration.

Relevant techniques under BAT

8.17. As summarised above, the IED establishes a general framework for the control of the main industrial activities which have the potential to generate pollution. The IED recognises (Recital (3)) that different approaches to controlling emissions into air, water or soil separately may encourage the shifting of pollution from one environmental medium to another rather than protecting the environment as a whole. It therefore seeks to provide an integrated approach to the prevention and

control of emissions into air, water and soil, to waste management, to energy efficiency and to accident prevention.

8.18. The industrial activities to which the IED applies which are relevant to this Appeal are set out in the Scope in Article 10 which refers in turn to the Activities set out in Annex I to the IED and which, in England and Wales, are reproduced in Schedule 1 to the EPR2016. Schedule 1, Part 2, Chapter 5 of the EPR 2016 relates to waste management activities and section 5.3 relates to the disposal or recovery of hazardous waste at a facility with a capacity of more than 10 tonnes per day, which includes the proposed soil and asbestos segregation activity.

8.19. Best Available Techniques reference documents (BREFs) are a series of reference documents covering, as far as is practicable, the industrial activities listed in Annex I to the IED. They provide descriptions of a range of industrial processes and for example, their respective operating conditions and emission rates. European Member States are required to take these documents into account when determining best available techniques which should apply to operations which are regulated under the IED.

8.20. In accordance with Article 13 of the IED BREFs are developed and regularly reviewed and updated through a formalised process which is overseen by the European IPPC Bureau. The development and review of BREFs is carried out by a forum composed of representatives of Member States, the industries concerned and non-governmental organisations promoting environmental protection. The BREFs set out the 'Best Available' techniques and standards in the industry across Europe as summarised in Regulation 13(2) of the IED:

'2. The exchange of information shall, in particular, address the following:

(a) the performance of installations and techniques in terms of emissions, expressed as short- and long-term averages, where appropriate, and the associated reference conditions, consumption and nature of raw materials, water consumption, use of energy and generation of waste;
(b) the techniques used, associated monitoring, cross-media effects, economic and technical viability and developments therein;
(c) best available techniques and emerging techniques identified after considering the issues mentioned in points (a) and (b)'.

8.21. The BAT Conclusions (BATc) that are derived through this process must be implemented in all IED industrial facilities throughout Europe covered by each relevant BREF within a specified timescale. In this way the IED and BREF process seeks to achieve a 'level playing field' in terms of the operating techniques and emissions providing consistent environmental protection standards within industries carrying out the activities covered by the IED throughout Europe. The current Waste Treatment BREF (WT BREF) and BATc (WT BATc) documents were published in 2018.

8.22. The current BREF and BATc documents as well as the IED comprise European legislation and guidance. Following the departure of the UK from the EU, the UK Government has started working on the development of a future regime for the development of BAT within the UK and a consultation took place on these proposals in 2021[5]. A new UK BAT regime is beginning to be implemented with four industry sectors identified as the first to undergo this review process. These sectors do not include the waste management sector. For all other industry sectors, including the waste management sector, existing EU BATc continue to have effect in the UK through the EU Withdrawal Act 2018[6].

8.23. Neither the WT BREF nor the WT BATc refer specifically to the treatment of soils or other wastes contaminated with asbestos. Asbestos in the form of '*suspended particles, fibres'* is identified as a '*polluting substance'* in the list at Annex II of the IED.

8.24. Techniques for the treatment of excavated contaminated soil are discussed in Section 5.6 of the WT BREF. The treatment techniques discussed depend, of course, on the nature of the contaminants present in the soil and include thermal desorption, soil washing (which includes reference to the use of screening to remove debris), vapour extraction, solvent extraction and biodegradation. There is no discussion of the removal of asbestos from soil by the use of screening and/or hand picking. The treatment of waste asbestos is discussed in section 5.8.4 of the WT BREF but this is in reference to the shredding and mixing of material prior to thermal treatment. No specific emission control measures are referenced for these shredding and mixing processes.

[5] https://consult.defra.gov.uk/airquality/industrial_emissions_bat/

[6] https://www.gov.uk/government/publications/establishing-the-best-available-techniques-for-the-uk-uk-bat/establishing-the-best-available-techniques-for-the-uk-uk-bat

8.25. Similarly, there are no techniques described in the WT BATc for the removal of asbestos from soil by the use of screening and/or hand picking. The general BAT for the prevention or minimisation of emissions of polluting substances to air must therefore be reviewed to determine the techniques which comprise BAT for the proposed activity. In addition to the specific techniques for the controls of emissions to air which are discussed further below, there are a number of general BAT techniques which relate to management systems and procedures, staff competence and training, management plans for accidents, odour and noise, and a number of other overarching systems and procedures including surface water management and monitoring of discharges to water. The application of these wider BATc measures are identified in detail in the table on pages 20 to 39 of the Treatment Process Description and Indicative BAT review July 2021 (Appeal Document 10, pdf pages 285 to 304) which formed part of the permit application documentation. There have been no adverse comments or concerns raised with regard to the generic BAT techniques in the DN, and these techniques relate also to the other soil treatment activities which have been consented in the variation issued to the EP in December 2022. Therefore it is assumed that the EA accept that these aspects of BAT are appropriate and acceptable.

8.26. The BATc which relate to the controls on emissions of asbestos fibres to air are BAT 8 (monitoring channelled emissions to air), BAT 14 (reduce diffuse emissions to air), BAT 25 (mechanical treatment of waste) to reduce emissions to air of dust, BAT41 (physico-chemical treatment of solid and/or pasty waste) emissions to air. Each of these techniques will be implemented as part of the proposed activity . All of the techniques that will be implemented at the different stages of the Proposed Activity comprise BAT and their collective implementation will prevent or minimise the emissions of asbestos fibres and result in the generation of a treated soil and hardcore both of which can be recovered and reused rather than disposed of in a landfill site as hazardous waste. It will be demonstrated in the Appellant's expert evidence that the equipment proposed is the best available and that mechanical screening equipment with additional enclosure is not 'available'. The Proposed Activity will include a comprehensive regime of monitoring (which is in excess of the BAT requirements) in order to provide robust evidence that the management and control techniques being implemented are and continue to be effective.

8.27. The main EA guidance document for the operation of Installations is set out in '*Chemical waste: appropriate measures*'[7] which comprises EA guidance for regulated facilities with an environmental permit to treat or transfer chemical waste and includes activities for the treatment of contaminated soil. This guidance reflects the WT BATc requirements and therefore sets out similar control measures to those described in the WT BATc. As for the WT BREF and the WT BATc, there is no specific guidance for treatment processes comprising the segregation of ACMs from contaminated soil.

8.28. The EA do not refer to the appropriate measures guidance in the DN, but they make reference to guidance document S5.06. In the consultation on the appropriate measures guidance prior to its implementation it is stated that:

'Currently, relevant measures and standards for permitted facilities that take chemical waste for treatment or transfer are set out in published technical guidance note EPR 5.06 Guidance for the recovery and disposal of hazardous and non-hazardous waste (May 2013). The proposed guidance, which is being consulted on, will replace this guidance note and will be available as web guidance on the gov.uk website.'[8]

It is therefore understood that the appropriate measures guidance is that which is applicable to the proposed development.

8.29. The prevention or minimisation of the emissions of asbestos fibres also is a requirement of the Control of Asbestos Regulations 2012 (CAR 2012). Regulation 11 (1) of CAR 2012 states that:

'11. (1) Every employer must—

(a) prevent the exposure to asbestos of any employee employed by that employer so far as is reasonably practicable;
(b) where it is not reasonably practicable to prevent such exposure—
(i) take the measures necessary to reduce exposure to asbestos of any such employee to the lowest level reasonably practicable by measures other than the use of respiratory protective equipment, ….'

[7] https://www.gov.uk/guidance/chemical-waste-appropriate-measures-for-permitted-facilities

[8] *https://consult.environment-agency.gov.uk/environment-and-business/appropriate-measures-for-chemical-waste/*

8.30. Regulation 16 of CAR 2012 states that:

'16. Every employer must prevent or, where this is not reasonably practicable, reduce to the lowest level reasonably practicable the spread of asbestos from any place where work under the employer's control is carried out.'

8.31. The prevention and minimisation of emissions of asbestos fibres therefore are regulated both by the EA through the EPR and by the Health and Safety Executive (HSE) through CAR 2012. The HSE was a consultee during the application for the variation to the Environmental Permit.

The need for and the benefits of the recovery of soil

8.32. The objective of the Proposed Activity is to treat soil contaminated with ACMs in order that the soil can be recovered for use rather than disposal. If the ACMs present in the soil are not removed, the soil will remain classified as a hazardous waste and the only disposal route is in a hazardous waste landfill site. The soils which will be treated at the proposed facility generally will contain only a limited proportion of ACMs by weight and therefore the presence of the ACMs directly limits the potential for the use of the substantial majority of the overall weight of the waste (i.e. the soil component) unless the ACMs are removed. It is self-evident that there are considerable environmental benefits to achieving the removal of the ACMs and the reuse of the soil rather than its disposal which would utilise valuable hazardous waste landfill void. Data for the effectiveness of the ACM screening activities at the other FCC sites operated by Provectus show that the screening and hand picking results in the recovery of more than 99% of the soil which has been treated. Without the ACM removal process, all of the soil and the minimal quantities of ACMs contained within it would have to be disposed of to landfill as hazardous waste.

8.33. Furthermore, as explained above, there is an obligation to separate mixed hazardous wastes which would include mixed ACMs and soils in the Hazardous Waste (England and Wales) Regulations 2005 and an obligation to apply the waste hierarchy, which has disposal as the least preferred management method, in the Waste (England and Wales) Regulations 2011.

8.34. If the Proposed Activity is not consented, hazardous waste landfill void will be used for the disposal of the soil waste contaminated with a small amount of ACMs. This will not meet the obligation to separate hazardous wastes or the obligation to implement the waste hierarchy. There are very few other facilities which provide this treatment option for waste soils contaminated with ACMs.

8.35. The protection of soil resources is a fundamental aspect of a number of the Government environmental policies and strategies. The Environmental Improvement Plan 2023[9] ("EIP 2023") is the current review of the progress towards the achievement of the Government's 25 Year Environment Plan. The prevention of valuable soil resources from being sent to landfill is identified as an objective within Goal 6 of the EIP 2023 '*Using resources from nature sustainably'* in Section 4 which is '*Improving and protecting soil health'* and it is stated in the EIP 2023[10] that:

> *'In 2016, soil made up 58% of material sent to landfill in the UK. In construction projects, the careful re-use of soil can avoid soil being designated a waste material and to bring it back to beneficial use, helping create more green spaces and increasing biodiversity. We are working to:*
>
> *• In 2023, publish a revised Code of Practice for the sustainable use of soil on construction sites, which will help to reduce the amount of soil sent to landfill.*
>
> *• Begin development of a Soil Re-Use and Storage Depot scheme to help prevent soil that would otherwise be classified as waste going to landfill, and encourage remediation and re-use of soil. We will start piloting this by 2026.'*

8.36. The treatment of soil for its beneficial use rather than disposal to landfill is therefore a key part of the Environmental Improvement Plan and the proposed facility provides a direct contribution to that objective.

8.37. The importance of soils to the environment is emphasised in the DEFRA document 'Safeguarding our Soils. A Strategy for England'[11] ("the Soil Strategy") and is

[9] https://www.gov.uk/government/publications/environmental-improvement-plan
[10] page 181
[11] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69261/pb13297-soil-strategy-090910.pdf

reiterated in the 2023 update 'State of the Environment Soil Report'[12] . Chapter 7 of the Soil Strategy relates to 'Dealing with our legacy of contaminated land' and includes objectives for less reliance on 'dig and dump' techniques that involve disposing of large amounts of contaminated soils in landfill sites.

8.38. It is clear that in the above policies, objectives and strategies that treatment techniques (such as those proposed at Daneshill) for the removal of contaminants from soil in order to remediate the soil for recovery and reuse are fully supported and that the Proposed Activity will contribute directly to achieving an overall environmental benefit for the natural environment.

9. MAW GREEN PERMIT – EA DECISION MAKING

9.1. The Appellant will refer to the Permit Variation for the Maw Green site which the EA has granted in support of this Appeal (the MG Variation).

9.2. Full copies of the variation Letter, Permit and Decision Notice which relates to the MG Variation are appended at Appendix [ ] of this SoC.

9.3. The activities which are encompassed by the MG Variation are the same as the Proposed Activity in this Appeal. Should it be necessary, the Appellant's evidence will address the degree of similarity between the Proposed Activity and the activities which have been authorised pursuant to the MG Variation.

9.4. In granting the MG Variation the EA has accepted that consent should be granted for the Proposed Activity.

9.5. The Appellant will contend, in light of the MG Variation, that the EA's position in refusing the Application was wholly unreasonable and that the need for this Appeal could have been entirely avoided.

10. CONCLUSION

10.1. The Appellant's expert evidence will address:

12 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/805926/State_of_the_environment_soil_report.pdf

10.1.1. The correct interpretation, requirements and application of BAT, including the relevance of the WFD and Article 11 of the IED;

10.1.2. A detailed assessment of the Proposed Activity and the proposed operational controls which will be deployed and their compliance with BAT;

10.1.3. The need for the Proposed Activity and the wider environmental context in support of the Appeal including the need to protect hazardous waste landfill capacity;

10.1.4. Whether the Proposed Activity will be likely to give rise to significant pollution. The Appellant will demonstrate that the Proposed Activity will not give rise to significant pollution and any risks arising from the Proposed Activity will be negligible. Expert evidence will be called to assess and quantify the risk arising from the treatment of asbestos contaminated soils as a result of the Proposed Activity and will include:

10.1.4.1. A detailed review of the evidence base regarding the risks arising from the treatment of asbestos contaminated soils, in particular relating to soils contaminated with bound asbestos;

10.1.4.2. Best practice when treating asbestos contaminated soils and their application/relevance to the Proposed Activity;

10.1.4.3. Detailed analysis of the critical factors which determine the risks of asbestos fibres from the treatment of asbestos contaminated soils and how these relate to the Proposed Activity;

10.1.4.4. Assessment of the results of extensive asbestos fibre monitoring data from comparable sites and background asbestos levels;

10.1.4.5. Detailed analysis of the emissions which are likely to arise from the Proposed Activity, the risk of any such emissions to relevant sensitive receptors, demonstrating that the risks are negligible, even when sensitivity tests are applied so as to result in a conservative ‘worst case’ assessment.

10.2. The Appellant will, in reliance on all of the above, conclude that the Proposed Activity will be in full compliance with BAT and Article 11 of the IED.

10.3. The Appellant will refer to and rely upon the EA's position in respect of the MG Variation to support its Appeal and will contend that the EA has no reasonable basis to resist the Appeal.

10.4. Accordingly, the Appellant will respectfully request that the Inspector: i) allows its appeal; and ii) varies the EP so as to grant consent for the Proposed Activity (consistently with the EA's grant of the MG Variation) in order that it may proceed without further delay.

10.5. The Appellant reserves the right to call additional expert and/or other evidence (in addition to that particularised in the SoC and/or GoA) in support of its appeal by way of rebuttal to the EA's case, once the EA has particularised the same.

FREETHS LLP

27 July 2023