Determination of a Variation Application for an Environmental Permit under the Environmental Permitting (England & Wales) Regulations 2016

Consultation on our decision document recording our decision-making process

The Variation Number is:	EPR/LP3937VP/V003
The Permit Number is:	EPR/LP3937VP
The Applicant / Operator is:	Sapa Profiles UK Limited
The Installation is located at:	Unit 1, Sawpit Lane, Mansfield Road, Tibshelf, Alfreton, Derbyshire, DE55 5NH
Consultation commences on:	23/02/2017
Consultation ends on:	23/03/2017

What this document is about

This is a draft decision document, which accompanies a draft variation.

It explains how we have considered the Applicant's Application, and why we have included the specific conditions in the draft variation we are proposing to issue to the Operator. It is our record of our decision-making process, to show how we have taken into account all relevant factors in reaching our position. Unless the document explains otherwise, we have accepted the Operator's proposals.

The document is in draft at this stage, because we have yet to make a final decision. Before we make this decision we want to explain our thinking to the public and other interested parties, to give them a chance to understand that thinking and, if they wish, to make relevant representations to us. We will make our final decision only after carefully taking into account any relevant matter raised in the responses we receive. Our mind remains open at this stage: although we believe we have covered all the relevant issues and reached a reasonable conclusion, our ultimate decision could yet be affected by any information that is relevant to the issues we have to consider. However, unless we receive information that leads us to alter the conditions in the draft variation, or to reject the application altogether, we will issue the variation in its current form.

In this document we frequently say "we have decided". That gives the impression that our mind is already made up; but as we have explained above, we have not yet done so. The language we use enables this

document to become the final decision document in due course with no more re-drafting than is absolutely necessary.

We try to explain our decision as accurately, comprehensively and plainly as possible. Achieving all three objectives is not always easy, and we would welcome any feedback as to how we might improve our decision documents in future.

Preliminary information and use of terms

The Operator is Sapa Profiles UK Limited. We refer to Sapa Profiles UK Limited as "the **Operator**" in this document.

Sapa Profiles UK Limited's proposed facility is located at Unit 1, Sawpit Lane, Mansfield Lane, Tibshelf, Alfreton, Derbyshire, DE55 5NH. We refer to this as "the **Installation**" in this document.

The Operator currently undertakes activities at the site under a bespoke environmental permit, reference number EPR/LP3937VP. We refer to this permit as "the **Permit**" in this document.

The Operator has applied to vary the Permit to add a new activity on the site. We gave their application the reference number EPR/LP3937VP/V003. We refer to the application as "the **Application**" in this document.

The Application was duly made on 3rd June 2015.

How this document is structured

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1 Our proposed decision

We are minded to grant the Application and issue a varied Permit to the Operator. This will allow it to operate the Installation, subject to the conditions in the varied Permit.

We consider that, in reaching that decision, we have taken into account all relevant considerations and legal requirements and that the Permit will ensure that a high level of protection is provided for the environment and human health.

This Application is to operate an installation which is subject principally to the Industrial Emissions Directive (IED) and the Waste Framework Directive (WFD).

The draft varied Permit contains many conditions taken from our standard environmental permit template including the relevant Annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of the Environmental Permitting Regulations (EPR) and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the varied Permit, we have considered the Application and accepted the details are sufficient and satisfactory to make the standard condition appropriate.

2 How we reached our draft decision

2.1 Receipt of Application

The Application was duly made on 3rd June 2015. This means we considered it was in the correct form and contained sufficient information for us to begin our determination but not that it necessarily contained all the information we would need to complete that determination: see below.

The Applicant made no claim for commercial confidentiality. We have not received any information in relation to the Application that appears to be confidential in relation to any party.

2.2 Consultation on the Application

We carried out consultation on the Application in accordance with the EPR, our statutory Public Participation Statement and our own internal guidance Regulatory Guidance Series Note 6 (RGN6) for Determinations involving Sites of High Public Interest. We consider that this process satisfies, and frequently goes beyond the requirements of the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, which are directly incorporated into the IED. We have also taken into account our obligations under the Local Democracy, Economic

Development and Construction Act 2009 (particularly Section 23). This requires us, where we consider it appropriate, to take such steps as we consider appropriate to secure the involvement of representatives of interested persons in the exercise of our functions, by providing them with information, consulting them or involving them in any other way. In this case, our consultation already satisfies the Act's requirements.

We advertised the Application by a notice placed on our website, which contained all the information required by the IED, including telling people where and when they could see a copy of the Application.

We made a copy of the Application and all other documents relevant to our determination available to view on our Public Register at our Leeds office, at Lateral, 8 City Walk, Leeds, LS11 9AT. Anyone wishing to see these documents could do so and arrange for copies to be made.

We sent copies of the Application to the following bodies, which includes those with whom we have "Working Together Agreements":

- Bolsover District Council, Environmental Health department
- Health and Safety Executive

These are bodies whose expertise, democratic accountability and/or local knowledge make it appropriate for us to seek their views directly. Note under our Working Together Agreement with Natural England, we only inform Natural England of the results of our assessment of the impact of the installation on designated Habitats sites.

Further details along with a summary of consultation comments and our response to the representations we received can be found in Annex 2. We have taken all relevant representations into consideration in reaching our draft determination.

Having carefully considered the Application and all other relevant information, we are now putting our draft decision before the public and other interested parties in the form of a draft varied Permit, together with this explanatory document. As a result of this stage in the process we have given the public two separate opportunities (including this one) to comment on the Application and its determination. Once again, we will consider all relevant representations we receive in response to this final consultation and will amend this explanatory document as appropriate to explain how we have done this, when we publish our final decision.

2.3 Requests for Further Information

Although we were able to consider the Application duly made, we did in fact need more information in order to determine it. We received additional information during the determination from the Operator as follows:

- on 16th Nov 2016, an updated Noise Management Plan and a Vibration Management Plan; and

- on 25th November 2016, details of how the Operator has sought to address the vibration issues associated with the new shredder, including the results of further vibration monitoring following on-site mitigation.

3 The legal framework

The varied Permit will be issued, if appropriate, under Regulation 20 of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- an *installation* as described by the IED;
- an *operation* covered by the WFD; and
- subject to aspects of other relevant legislation which also have to be addressed.

We address some of the major legal requirements directly where relevant in the body of this document. Other requirements are covered in a section towards the end of this document.

We consider that, if we issue the varied Permit, it will ensure that the operation of the Installation complies with all relevant legal requirements and that a high level of protection will be delivered for the environment and human health.

We explain how we have addressed specific statutory requirements more fully in the rest of this document.

4 The Installation

4.1 Description of the Installation

4.1.1 The existing Installation

The main purpose of the activities at the Installation is the manufacture of a variety of extruded aluminium products. The Installation comprises the aluminium remelt facility and the extrusion plant, containing two aluminium extrusion presses. Aluminium scrap is recycled on site into billets for use in the extrusion presses. Approximately 50% of the feed stock for this operation consists of process scrap from the extrusion presses, along with primary ingot. The remainder is made up of post-consumer scrap aluminium purchased from scrap metal merchants.

The incoming scrap metal is inspected and sorted on site to remove any residual contaminants. Typically, metals such as copper, iron, copper and zinc, as well as other contaminants such as rubber, plastic, glass and wood, are removed. Inspection and sorting is undertaken manually by spreading the scrap material on the yard and removing any obvious contamination. The operator states that the effectiveness of this can be limited because it is a visual inspection only. After inspection the good material is pushed into a concrete lined scrap bay, from where it is loaded into bins using a wheeled loader. The bin contents are then fed into the remelt furnace. Manual sorting improves scrap quality by ensuring the correct specification for the furnace as well as improving melt loss and decreasing dross production.

Prior to this Application the Installation consisted of the following activity listed in Part 1 of Schedule 1 to the EPR:

- Section 2.2 Part A(1)(b)(i) and (ii) - Melting, including making alloys, of non-ferrous metals including recovered products and the operation of non-ferrous metal foundries where:

  (i) the plant has a melting capacity of more than 4 tonnes per day for lead or cadmium or 20 tonnes per day for all other metals; and

  (ii) any furnace (other than a vacuum furnace), bath or other holding vessel used in the plant for the melting has a design holding capacity of 5 or more tonnes.

In this document we may refer to the above activities as *'listed'* activities.

An installation may also comprise "directly associated activities" (DAAs) which at the Installation includes:

- The receipt, handling and storage of raw materials consisting of aluminium scrap and all process substances;
- Operation of the extrusion plant, where billets are extruded into aluminium profiles, annealed and cut to the required form;
- Discharge of process water to foul sewer;
- Discharge of site drainage and specific process water to surface water sewer; and
- The handling, storage and removal of all wastes from site.

Together, the listed activities and DAAs comprise the Installation.

4.1.2 Changes to the Installation

The Application relates to the addition of a new aluminium scrap sorting line at the front end of the manufacturing process in order to improve the quality of the material being passed forward to the melting furnace.

The scrap sorting line will remove unwanted metals and other contaminants from the incoming scrap aluminium for recycling, and will consist of:

- an overhead grab for loading the shredder with scrap material;
- a shredder to break the material into around 150mm pieces, also loosening contaminants in the process
- a magnetic drum to remove iron and steel
- a trommel to screen out anything below 30mm diameter as it is not suitable for the melting furnace
- an eddy current machine to remove inert contaminants, such as paint, rubber, wood, etc, and
- an x-ray machine to remove zinc, copper and brass.

The shredder incorporates an air extraction system and bag filter plant to reduce the concentration of particulates (dust), which will be emitted through the dedicated 13 metre high exhaust stack.

As a result of the Application the following activity in Part 1 of Schedule 1 to the EPR has been added to the draft varied Permit:

- Section 5.4 A(1)(b)(iv) - Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day, involving:

  (iv) treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.

The following DAA has also been added to the draft varied Permit:

- Materials separation line, where recyclable materials not suitable for the melting furnace would be removed using a magnetic drum, trommel screen, eddy current machine and an x-ray machine.

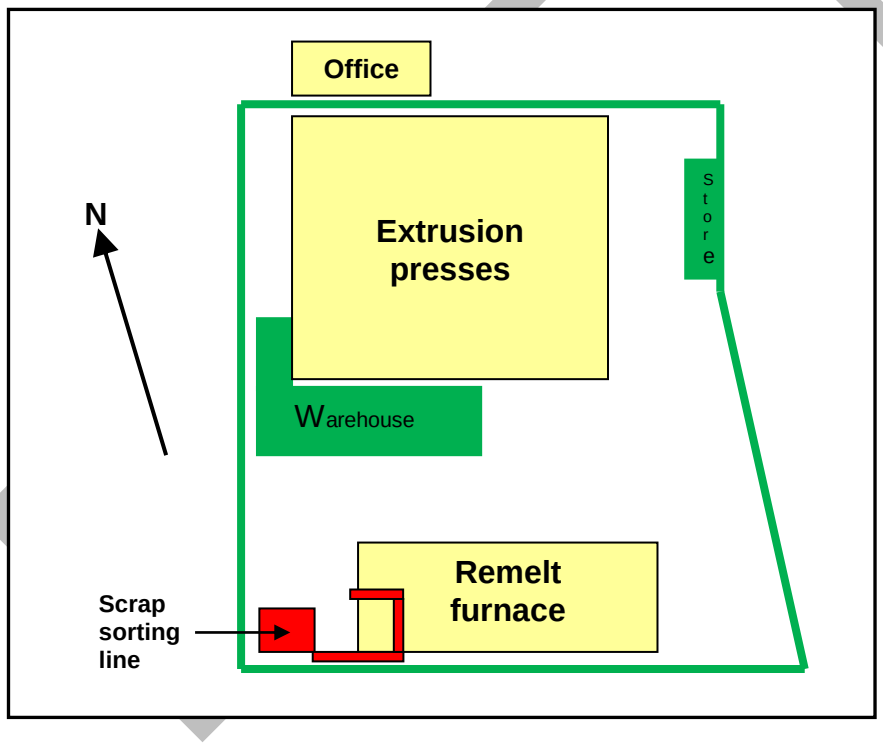
4.1.3 The Site of the Installation

The Installation is sited on the eastern half of Saw Pit Industrial Estate, located to the south of Mansfield Road (B6014) and to the north-east of the village of Tibshelf in Derbyshire. The M1 motorway is located 500m to the west of the industrial estate, with farmland in all other directions. The nearest residential property is at Willow Court Farm, located 150m south of the installation. Further residential properties are situated on Mansfield Road / Wild Hill, approximately 275m north-east of the installation.

There are no proposed changes to the size of Installation as a consequence of this Variation Application. The Applicant submitted a plan which we consider is satisfactory, showing the site of the Installation and its extent. A plan is included in Schedule 7 to the Permit, and the Operator is required to carry on the permitted activities within the site boundary.

The new scrap sorting line has already been installed at the site, in the southwest corner of the installation close to the remelt facility, as shown in red on Figure 1 below. The boundary of the Installation is highlighted in green.

The scrap sorting line has been allowed to operate on a trial basis, for restricted hours, under agreement with the Environment Agency. We have allowed the trial to proceed in order that the best pollution prevention techniques could be investigated and applied, and to enable the Operator to undertake monitoring studies to gather operational emissions data to inform their impact assessment work.



4.2 Key Issues in the determination

The key issues arising during this determination were:

- emissions to air of particulates (dust)
- emissions of noise and vibration.

We describe how we determined these issues in the relevant sections of this document.

5. Minimising the impact of new plant at the installation

Regulated activities can present different types of risk to the environment, including noise and vibration; odour, accidents, point source and fugitive emissions to air and water; and the generation of waste. Typically for an installation of this type the principal emissions are those to air, and in this particular case, noise and vibration.

Article 3(2) of the IED defines pollution as “the direct or indirect introduction, as a result of human activity, of substances, vibrations, heat or noise into air, water or land which may be harmful to human health or the quality of the environment, result in damage to material property, or impair or interfere with amenities and other legitimate uses of the environment.”

Article 11(b) of the IED and paragraph 5(e), Schedule 7A of the EPR require that we ensure that installations are operated in accordance with the principle of applying Best Available Techniques (BAT). BAT means the available techniques which are the best for preventing or, where that is not practicable, reducing emissions and impacts on the environment as a whole. ‘Techniques’ within the meaning of BAT include both the technology used and the way an installation is designed, built, maintained, operated and decommissioned. The concept of BAT and how it should be applied is set out in the IED and applies specifically to the ‘listed’ activities and DAAs set out in section 4.1.1 and 4.1.2.

The next sections explain how we have approached the issue of assessing the likely impact of emissions to air, and of noise and vibration, from the proposed new plant at the Installation on human health and the environment and what measures we are requiring to ensure a high level of protection.

5.1 Emissions to air

5.1.1 Point source emissions to air

Application of Environment Agency H1 Guidance

A methodology for the risk assessment of point source emissions to air, which we use to assess the risk of applications we receive for permits, is set out in our guidance 'Air emissions risk assessment for your environmental permit’. The methodology has the following steps:

- Describe emissions and receptors
- Calculate process contributions
- Screen out insignificant emissions that do not warrant further investigation
- Decide if detailed air modelling is needed
- Assess emissions against relevant standards
- Summarise the effects of emissions

The methodology uses a concept of “process contribution (PC)”, which is the estimated concentration of emitted substances after dispersion into the receiving environmental media at the point where the magnitude of the concentration is greatest. The guidance provides a simple method of calculating PC primarily for screening purposes and for estimating process contributions where environmental consequences are relatively low. It is based on using dispersion factors. These factors assume worst case dispersion conditions with no allowance made for thermal or momentum plume rise and so the process contributions calculated are likely to be an overestimate of the actual maximum concentrations. More accurate calculation of process contributions can be achieved by mathematical dispersion models, which take into account relevant parameters of the release and surrounding conditions, including local meteorology – these techniques are expensive but normally lead to a lower prediction of PC.

Once short-term and long-term PCs have been calculated they are compared with Environmental Standards (ES). Where an Ambient Air Directive (AAD) Limit Value exists, the relevant environmental standard is the AAD Limit Value. Where an AAD Limit Value does not exist, AAD target values, UK Air Quality Strategy (AQS) Objectives or Environmental Assessment Levels (EALs) are used. Our web guide sets out EALs which have been derived to provide a similar level of protection to Human Health and the Environment as the AAD limit values, AAD target and AQS objectives. In a very small number of cases, e.g. for emissions of lead, the AQS objective is more stringent that the AAD value. In such cases, we use the AQS objective for our assessment.

AAD target values, AQS objectives and EALs do not have the same legal status as AAD limit values, and there is no explicit requirement to impose stricter conditions than BAT in order to comply with them. However, they are a standard for harm and any significant contribution to a breach is likely to be unacceptable.

PCs are considered **Insignificant** if:

- the **long-term** process contribution is less than **1%** of the relevant ES; and
- the **short-term** process contribution is less than **10%** of the relevant ES.

The **long term** 1% process contribution insignificance threshold is based on the judgements that:

- It is unlikely that an emission at this level will make a significant contribution to air quality;
- The threshold provides a substantial safety margin to protect health and the environment.

The **short term** 10% process contribution insignificance threshold is based on the judgements that:

- spatial and temporal conditions mean that short term process contributions are transient and limited in comparison with long term process contributions;
- the threshold provides a substantial safety margin to protect health and the environment.

Where an emission is screened out in this way, we would normally consider that the Applicant's proposals for the prevention and control of the emission to be BAT. That is because if the impact of the emission is already insignificant, it follows that any further reduction in this emission will also be insignificant.

However, where an emission cannot be screened out as insignificant, it does not mean it will necessarily be significant.

For those pollutants which do not screen out as insignificant, we determine whether exceedences of the relevant ES are likely. This is done through detailed audit and review of the Applicant's air dispersion modelling taking background concentrations and modelling uncertainties into account. Where an exceedence of an AAD limit value is identified, we may require the Applicant to go beyond what would normally be considered BAT for the installation or we may refuse the application if the applicant is unable to provide suitable proposals. Whether or not exceedences are considered likely, the application is subject to the requirement to operate in accordance with BAT.

This is not the end of the risk assessment, because we also take into account local factors, for example, particularly sensitive receptors nearby such as Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs) or Special Protected Areas (SPAs). These additional factors may also lead us to include more stringent conditions than BAT.

If, as a result of reviewing of the risk assessment and taking account of any additional techniques that could be applied to limit emissions, we consider that emissions **would cause significant pollution**, we would refuse the Application.

Assessment of impact on air quality

The Operator has carried out an impact assessment in accordance with our risk assessment guidance on emissions to air. They have assessed the Installation's potential emissions to air against the relevant air quality standards, and the potential impact on human health. Their assessment comprises a screening assessment of emissions to air of particulates from the operation of the scrap sorting line, in particular the stack emissions from the shredder. Particulate monitoring data obtained during trial running of the shredder under full working load has been used to assess the likely environmental significance of emissions.

The impact on air quality from particulate emissions has been assessed against the ES for PM_{10} (particles of 10 microns and smaller). Given the

nature of the shredding process we consider that this represents a worst case assessment in that it assumes all particulates emitted are below 10 microns, when some are expected to be larger. The Operator's assessment compares the Installation's potential emissions to air against the relevant air quality standards. PM_{10} has a long term annual average ES of 40 $\mu g/m^3$ and a short term daily average ES of 50 $\mu g/m^3$. The Applicant has used the Environment Agency H1 screening tool.

In carrying out a screening assessment of emissions of air as part of their impact assessment and comparing the process contribution against relevant air quality standards, the Operator has effectively made a health risk assessment for emissions of particulates from the metal shredding process. These air quality standards have been developed primarily in order to protect human health.

The results of the Operator's H1 screening assessment are summarised in Table 1. The assessment assumes that **all** particulate emissions are present as PM_{10}. The figures shown indicate the predicted peak ground level exposure to pollutants in ambient air.

Pollutant	Environmental Standard (ES) µg/m³	Process Contribution (PC) µg/m³	PC as % of ES	PC insignificant? (Yes/No)
PM_{10} (Long term)	40	0.176	0.438	Yes
PM_{10} (Short term)	50	4.50	8.99	Yes

Table 1 – Screening results for point source emission to air

The results show that the predicted process contribution for emissions of PM_{10} is below 1% of the long term ES and below 10% of the short term ES and so can be screened out as insignificant. Therefore we consider the Operator's proposals for preventing and minimising the emissions of particulates to be BAT for the Installation.

Potentially contaminated air will be extracted through the bag filter plant and emitted to atmosphere via a new stack, which has been given the emission point reference A12 in Table S3.1 (Point source emissions to air - emission limits and monitoring requirements) of the draft varied Permit. An emission limit value of $5mg/m^3$ will apply to emission point A12, as specified in our non-ferrous metals sector guidance, where extractive sampling is required. Bag (or fabric) filters typically provide reliable abatement of particulate matter to below $5mg/m^3$ and are considered BAT for most installations. We are satisfied in this case that the Operator will be applying BAT to control point source dust emissions from the scrap sorting line.

Having audited the Operator's assessment we are satisfied that the point source emission of particulates from the metal shredding process will not cause pollution outside the site.

Impact on Habitats sites, Sites of Special Scientific Interest, and Non-statutory conservation sites

(a) Habitats sites

Under Regulation 9 of The Conservation of Habitats and Species Regulations 2010 (the Habitats Regulations) the Environment Agency has a general duty such that we "in exercising any of [our] functions, must have regard to the requirements of the Habitats Directive so far as they may be affected by the exercise of those functions." Regulation 61 is a specific duty requiring the Environment Agency to "make an appropriate assessment…" wherever granting a permit is "…likely to have a significant effect on a European site… (either alone or in combination with other plans or projects)".

The EU Habitats Directive (92/43/EEC) established a network of designated conservation sites of European importance, known as 'Natura 2000' sites, made up of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). SACs support rare, endangered or vulnerable natural habitats, plant and animal species. SPAs support significant numbers of wild birds, for example wintering wildfowl, and their habitats. SPAs were established by the EU Birds Directive (79/409/EEC).

There are no Habitats sites (i.e. SACs and SPAs) sites within 10km of the Installation and therefore no further assessment is required.

Ramsar sites are wetlands of international importance designated under the Ramsar Convention. Although there are no legal protections for Ramsar sites, it is the Government's policy that such sites be accorded the same protection as European sites.

There are no Ramsar sites within 10km of the Installation and therefore no further assessment is required.

(b) Sites of Special Scientific Interest

Under section 28G of the Wildlife and Countryside Act 1981 the Environment Agency has a duty to take reasonable steps to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which a site is of special scientific interest. Under section 28I the Environment Agency has a duty to consult Natural England in relation to any permit that is likely to damage a Site of Special Scientific Interest (SSSI).

There are no Sites of Special Scientific Interest within 2km of the Installation and therefore no further assessment is required.

(c) Non-statutory conservation sites

Conservation sites are protected in law by legislation. The Habitats Directive provides the highest level of protection for SACs and SPAs, while domestic legislation provides a lower but important level of protection for SSSIs. Finally

the Environment Act 1995 and Natural Environment and Rural Communities Act 2006 provide more generalised protection for flora and fauna rather than for specifically named conservation designations. It is under these Acts that we assess other sites (such as local wildlife sites).

There are 28 non-statutory local wildlife sites located within 2km of the Installation, the closest of which is Newton Wood Marsh, located approximately 700m due southeast of the Installation. These sites are listed in Table 2.

Site name			
Ridlocks Wood	Longside Farm Grassland	Tibshelf Ponds	Spring Farm Meadows, Huthwaite
Silverhill Lane	Strawberry Bank Meadow	Blackwell Road Grassland	Whiteborough Farm Pasture
Huthwaite Meadow	Silverhill Colliery	Spring Farm Pasture, Huthwaite	Huthwaite Grassland
Stanley Grange Grassland	Stanley Farm Grasslands	Skegby Junction Grassland	Chesterfield Road Pastures, Huthwaite
Dovedale Wood Grassland	Newton Disused Railway	Herod's Hill Grassland	Station House Grassland
County Dumble	Littlemoor Disused Railway	Newton Wood Marsh	Sunnyside Farm Meadows
Border Marsh, Huthwaite	Whiteborough Railway	Stanley Grasslands	Chesterfield Road Grassland, Whiteborough

Table 2 – Non-statutory conservation sites within 2km of the Installation

For SACs SPAs, Ramsars and SSSIs we consider the process contribution and the background levels in making an assessment of impact. In assessing these other sites under the Environment Act and Natural Environment and Rural Communities Act we look at the impact from the Installation alone in order to determine whether it would cause significant pollution. This is a proportionate approach, in line with the levels of protection offered by the conservation legislation to protect these other sites (which are generally more numerous than Natura 2000 or SSSIs) whilst ensuring that we do not restrict development.

Critical Levels and Critical Loads are set to protect the most vulnerable habitat types. These are environmental standards that have been established in order to protect the habitats and species that are found within nature conservation sites. The Critical Level is the gaseous concentration of a pollutant in the atmosphere above which direct adverse effects on receptors, including plants

and ecosystems, may occur, according to current knowledge. The Critical Load relates to the quantity of pollutant deposited from air to the ground. It is a quantitative estimate of exposure to one or more pollutants below which significant harmful effects on sensitive elements of the environment are not expected to occur, according to current knowledge.

Thresholds change in accordance with the levels of protection afforded by the legislation. Consequently the thresholds for SAC, SPA, Ramsar and SSSI features are more stringent than those for other nature conservation sites. Therefore we would generally conclude that an installation is not causing significant pollution at these other sites if the PC is less than the relevant Critical Level or Critical Load, provided that the operator is using BAT to control emissions.

There are no published Critical Levels or Critical Loads for the protection of vegetation and ecosystems applicable to the emission of particulates. We are satisfied that the emission to air from the scrap sorting line will not cause significant pollution of these sites. Furthermore we consider that the use of a bag filter plant as proposed by the Operator represents BAT for the control of such emissions.

5.1.2 Fugitive emissions to air

We consider that the operation of the new scrap sorting line has the potential for the fugitive release of dust into air. The Operator has undertaken a risk assessment of fugitive emissions to air associated with the operation of the scrap sorting line. They identify the industrial estate to the south and west as the area most likely to be impacted by fugitive emissions. They have considered the potential for dust to be released at the following sequential steps of the operation:

- Tipping of scrap from lorries in the scrap storage area
- Loading of scrap into the shredder
- Operation of the shredder
- Conveyors and vibrating tables between the shredder and the drum magnet
- Operation of the drum magnet
- Conveyor between the drum magnet and the trommel
- Operation of the trommel
- Conveyor between the trommel and the eddy current machine
- Operation of the eddy current and X-ray machine
- Discharge of sorted aluminium scrap into scrap bins.

The following control measures are proposed to minimise the fugitive release of dust from the scrap sorting line:

- Fully shielded shredder with air extraction to a bag filter plant which captures dust for subsequent disposal
- All conveyors entirely covered with framed tarpaulin style covers

- Drum magnet and trommel entirely covered with an enclosure designed to reduce noise emissions but which also serves to prevent wind from picking up dust
- Eddy current and X-ray machine located inside the factory building
- Clear plastic shielding around the scrap bin filling point where clean metal (with a low dust potential) is deposited into furnace charging bins.

In addition to the above direct control measures the Operator suggests that the following existing infrastructure will help to prevent dust from migrating off-site onto the surrounding industrial estate:

- 3 metre high concrete walls which form the sides of the incoming scrap bunkers, from where the scrap is taken by overhead grab for loading into the shredder; and
- 7 metre high acoustic barrier along the southern boundary of the installation.

Based upon the information in the application we are satisfied that the Operator will be applying BAT to control fugitive dust emissions from the scrap sorting line. In addition, the Operator proposes to undertake a review of their control measures at least annually, or upon any significant change to the operation, to ensure that they continue to use BAT.

5.2 Other emissions to the environment

5.2.1 Noise and vibration

Historically the Installation has been the subject of noise complaints from local residents, indicating that the local community are sensitive to noise arising on the site. Since the installation of the new scrap sorting line complaints have also been made to the Environment Agency concerning vibration experienced in nearby commercial premises on the industrial estate. The Application contained the following documents:

a) New Scrap Sorting Line - Comparison Noise Survey, Ref. WRS/6707/C. This comprised of a noise monitoring survey, which compared the measured noise levels on-site during periods when the scrap sorting line was both operational and non-operational, and an assessment of the effectiveness of the acoustic barrier.

b) BS4142:2014 Noise Assessment - Aluminium Sorting Line, Ref. 15GAC066_3. This comprised of an assessment in accordance with BS4142:2014, indicating the potential impact of noise at local residential receptors due to the operation of the scrap sorting line.

c) Acoustic and Vibration Study report - Aluminium Shredder Control, Ref. 15GAC066. This comprised of a monitoring study, which measured levels of low frequency noise and vibration in and around the metal shredder component of the scrap sorting line, and also within adjacent

commercial premises. It also included recommendations to the Operator to potentially reduce levels of vibration off-site.

d) Vibration Study Report - Vibration Exposure Assessment, Ref. 15GAC066_rev1. This follow-up to report (c) comprised of a vibration monitoring study to evaluate the exposure to vibration of staff within a nearby commercial premises, due to operation of the new scrap sorting line.

Noise impact assessment

The Operator's assessment of the potential noise impact during operation of the new scrap sorting line has been determined in accordance with the methodology in British Standard BS4142:2014, 'Methods for rating and assessing industrial and commercial sound.' This methodology, which is applicable for assessing sound levels at proposed new dwellings or premises used for residential purposes, compares the difference in sound levels between when the source under investigation is operational and when it is not, at a particular location.

The Operator has described the noise from the operation of the scrap sorting line as being impulsive in nature due to the placing of the scrap aluminium into the hopper of the shredder using a mechanical grab, and the movement of the shredded material on the conveyors.

The installation is subject to night-time noise planning restrictions. Night time hours are 20:00 to 07:00 on week days and 20:00 to 09:00 on weekends and bank holidays. These restrictions, which stem from a historical agreement with the local authority, are incorporated into the Operator's Noise Management Plan, which is enforceable via the environmental permit. During the night the movement of loose scrap in the yard is not allowed and as such the Operator has confirmed that they will not operate the new scrap sorting line during the night time period. We have therefore considered potential impacts from the new scrap sorting line during the daytime only.

The Operator's assessment considers the potential noise impact at the sensitive residential receptors shown in Table 3.

Receptor reference	Receptor type / location	Distance / Direction from the sorting line
1	Properties on Mansfield Road / Wild Hill	275m northeast
2	Property at Willow Court Farm	150m south

Table 3 – Local noise sensitive residential receptors

The significance of industrial/commercial sound depends on the difference between the Rating level (which is the predicted sound output of the industrial/commercial premises, corrected to account for tonality, impulsivity, intermittency or other applicable sound characteristics) and the background sound level. Typically, the greater the difference, the greater the magnitude of the impact.

A difference of around +10dB or more is likely to be an indication of a significant adverse impact, while a difference of around +5dB is likely to be an indication of an adverse impact. The lower the rating is, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. If the rating level does not exceed the background sound level, this is an indication of a low impact.

BS4142:2014 requires that the assessment of potential impact takes into account the 'context' in which the sound occurs. This entails having a sufficient understanding of the situation to be rated and assessed, and placing the sound being assessed in context when making conclusions.

Results

Sound level measurements were taken on the 7th and 8th May 2015. The results of the Operator's daytime assessment are shown in Table 4. In determining the Rating levels the Operator has applied the procedures contained within BS4142:2014 to determine whether any acoustic corrections for tonality, impulsivity, or intermittency should be added to the specific sound level. They have demonstrated that no acoustic corrections were necessary.

Receptor Reference	Receptor	Background noise level (dB)	Predicted rating level (dB)	Rating minus background (dB)
1	Mansfield Road / Wild Hill	43	47	+4
2	Willow Court Farm	44	37	-7

Table 4 – Results of noise assessment

The results show that the background level would be exceeded at Receptor 1, with the predicted Rating level being 4dB above background, which is just below the level which would indicate an adverse impact in accordance with BS4142:2014. For Receptor 2 the predicted Rating level was 7dB below background, indicating a low impact.

The Operator considered the predicted Rating levels in the context of the existing site operations, some of which are inherently noisy, for example, the delivery of waste aluminium scrap. This activity, which is subject to control via the Operator's Noise Management Plan, involves the tipping of scrap onto the ground for storage in bays along the western boundary of the site. The location of this activity is therefore considerably closer to Receptor 1 than the new scrap sorting line. The Operator has stated that they consider the noise from the new sorting line to be subjectively less intrusive than the delivery of scrap metal. No modifications for 'context' were applied to the predicted rating levels.

In determining the Application the Environment Agency has visited the Installation to observe and listen to the new scrap sorting line in operation, in the context of other site activities, including the delivery of aluminium scrap.

Having reviewed the Operator's noise impact assessment our view is that the methodology followed is acceptable. We are satisfied that noise arising from the operation of the new scrap sorting line will not have an adverse impact at the residential receptors identified above.

Vibration impact assessment

Vibration due to industrial workings is a potential source of pollution as defined under IED.

The Operator commissioned an acoustics consultant to undertake an 'acoustic and vibration study.' Complaints had been made by the owners of an adjacent commercial premises with respect to vibrations experienced within their premises, vibrations which they felt were due to the operation of the new scrap sorting line. The study was made with reference to British Standard BS7385-2:1983, *Evaluation for vibration in buildings – Part 2: guide to damage levels from groundborne vibration.* This standard gives guidance on the levels of vibration above which structural damage could occur.

The aforementioned commercial premises ("the Receptor"), consists of a 5 metre high rectangular warehouse, constructed around a metal framework, with the lower half in brickwork and the upper half in light metal sheet panelling. The roof consists of both metal and fibre panels. The building is currently used as a coach maintenance workshop and includes two roller shutter doors for the coaches to enter/exit, and an internal first floor office elevated on metal beams, with a wooden floor and plaster walls and ceiling. This building is located approximately 1 metre from the southern boundary of the Operator's site and is therefore within approximately 5 metres of the new shredder.

Vibration is typically reported in terms of the Peak Particle Velocity (PPV) in millimetres per second (mm/s) or the peak component particle velocity (in mm/s). The PPV is the instantaneous maximum velocity reached by a vibrating element as it oscillates about its rest position, consisting of 3 orthogonal components measured simultaneously.

Table 5 gives guide values from BS7385-2 above which cosmetic damage to buildings could occur due to vibration. The values predominantly apply to transient (non-continuous) vibration, and to low rise buildings. For continuous vibration, the standard advises that in certain circumstances, these transient values may need to be reduced by up to 50%. Furthermore, the guide values apply at the base of the building. This is because in order to correctly define the vibration input to the building under investigation, measurements need to be taken at the base of the building on the side facing the source of vibration.

Type of building	Measured vibration (mm/s)	
Unreinforced or light framed structures. Residential or light commercial type buildings	*4 Hz to 15 Hz*	*15 Hz and above*
	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Table 5 – Guide values for cosmetic damage to buildings

Vibration can be transmitted from source to a receptor via both airborne and groundborne pathways. An associated problem is that vibration at a receptor can lead to structure-borne noise which can be an additional irritant to occupants of buildings. In additional, loose fittings which are prone to rattle and movement can exhibit noise.

In order to investigate this issue, the consultant took vibration measurements at a number of locations, including on the metal shredder, on the concrete slab upon which the shredder is situated, on the concrete slab at the base of the adjacent commercial premises, and at various other points within those premises. At each location, background measurements were taken with the shredder 'off', with the level typically being around 0.01mm/s. Measurements were also taken with the shredder 'on' (while aluminium was being shredded), and when it was not (referred to as 'free-running').

The consultant determined through analysis of the monitoring results that the predominant vibration frequencies associated with operation of the metal shredder were in the 11Hz and 16Hz range, and the results for these frequencies were presented in their report. They also determined that the predominant cause of vibration at the receptor was via groundborne transmission.

Results

The monitoring results obtained during free-running of the shredder and during the shredding of aluminium, are shown in Table 6 and Table 7 respectively. The measurement locations are listed in terms of their proximity to the source, i.e. the receptor roller shutter door is furthest from the source. We have calculated the percentage reduction figures and added them to the table to illustrate how much of the initial vibration remains with increasing distance from the shredder.

Vibration measurement location	Measured vibration (in mm/s)		% reduction from source (shedder base)	
	11Hz	16Hz	11Hz	16Hz
Shredder base (source)	6.16	1.06	**-**	**-**
Shredder engine base	1.28	0.5	79.2	52.8
Shredder concrete slab	1.02	0.05	83.4	95.2
Receptor outside concrete slab	0.09	0.01	**98.5**	**99.0**
Receptor (inside) concrete slab	0.10	0.01	98.4	99.0
Receptor metal beam	0.10	0.01	98.4	99.0
Receptor office wooden floor	0.22	0.15	96.4	85.8
Receptor roller shutter door beam	0.46	0.04	92.5	96.2
Receptor roller shutter door	0.99	0.21	83.9	80.2

Table 6 – results from vibration monitoring (free-running)

Vibration measurement location	Measured vibration (mm/s)		% reduction from source (shedder base)	
	11Hz	16Hz	11Hz	16Hz
Shredder base (source)	5.39	2.01	-	-
Shredder engine base	2.34	0.40	56.6	80.1
Shredder concrete slab	1.02	0.04	81.0	98.0
Receptor outside concrete slab	0.09	0.02	**98.3**	**99.0**
Receptor (inside) concrete slab	0.08	0.01	98.5	99.5
Receptor metal beam	0.15	0.08	97.2	96.0
Receptor office wooden floor	0.14	0.11	97.4	94.5
Receptor roller shutter door beam	0.33	0.04	93.9	98.0
Receptor roller shutter door	0.37	0.21	93.1	89.5

Table 7 – results from vibration monitoring (aluminium shredding)

Both sets of results show that vibration is significantly reduced, by up to 99% when measured on the ground outside the receptor building. The results also show that there is an increase (amplification) in vibration measured within the receptor building, as the outside vibration is transferred inside via the ground and along the metals beams which support the office, and along the roller shutter door beam and into the door itself.

In terms of assessing the potential for vibration to cause cosmetic damage to the building, the results during free-running and aluminium shredding are significantly less than that which could typically lead to damage.

While we considered that the measured vibration was very unlikely to damage the adjacent premises, our view was that the levels of residual vibration could

potentially give cause for complaint from persons within those premises. This was because while the level of residual vibration measured within the premises ranged from 0.01mm/s to 0.99mm/s during free-running, and from 0.01mms to 0.37mm/s during aluminium shredding, by comparison, the human threshold of perceptibility, i.e. the level at which humans can perceive vibration, typically ranges from 0.14mm/s to 0.3mm/s [1].

During our assessment of the application we concluded that the operation of the shredder presented a potential risk of pollution outside the installation boundary due to vibration. The Operator's monitoring results showed that the residual vibration within the adjacent premises was measurable and at a level perceptible to the occupants. Our view was that this situation could lead to complaint and therefore it was reasonable to expect the Operator to further investigate the cause of the problem, then consider and implement measures to satisfactorily address it.

Further investigation and mitigation

The strength of any vibration received at a receptor will depend on a number of factors, including:

- the strength of the source vibration
- the ability of the source to transmit vibration to the ground
- the nature of the ground, e.g. hard, soft
- the distance of the receptor from the source
- the continuity of the transmission route, e.g. breaks in the ground from foundations, pipes, trenches
- the ability of the receptor to receive vibrations, i.e. coupling to the ground or vibrating surface.

The basic design of the shredder incorporates anti-vibration mountings to reduce the transmission of vibration to the ground. The Operator has applied further practicable measures to reduce the transmission potential further, including uncoupling the main shredder parts through changing the acoustic panelling support frames, thus eliminating this specific transmission pathway.

In addition to looking at reducing the transmission of vibration the Operator also investigated the actual source of the vibration. They reported that the shredder's hammer mill drum, which is over 1m in diameter, weighs 19 tonnes, and rotates at 690rpm, was slightly out of true and that rebalancing it significantly reduced vibration on the shredder and virtually eliminated the vibration level in the shredder concrete slab. They state that in conjunction with the owners of the adjacent commercial premises, they have found that a vibration level (PPV) of 5mm/s measured on the shredder is not detectable within the neighbouring building, and that the owners report the situation to be very much improved.

[1] BS5228-2:2009, Code of practice for noise and vibration control on construction and open sites (BSI, 2009)

The Operator implemented a programme of ongoing weekly vibration monitoring. They used portable vibration monitors mounted near the rotating hammer mill bearings to measure vibration levels on the shredder. They have committed to using a vibration level of 5mm/s (measured at marked test points on the shredder) as the threshold above which they will reduce/stop the shredding activity. This threshold is written into their Vibration Management Plan. The Operator has submitted the results of this monitoring programme to date, which demonstrates that with the exception of two instances during summer 2016 (where elevated vibration levels of 4.4mm/s were measured due to a loose balance weight, which was subsequently repaired), vibration levels measured on the shredder are typically in the 1.5mm/s to 2.5mm/s range. The Operator has committed to a programme of ongoing monitoring to keep the vibration issue under review. Subsequent to the above actions we have not received any complaints with respect to vibration impact.

Noise and Vibration Management Plans

The Operator submitted an updated Noise Management Plan and a Vibration Management Plan for approval as part of our determination of the Application.

These management plans set out the measures that the Operator will use to prevent or, where that is not practicable, minimise off-site noise and vibration from the activities taking place on their site, including operation of the new scrap sorting line. They also detail the operator's procedure for dealing with any complaints, stating that,

"In the event of offsite complaints regarding vibration and/or noise levels, the site Manager and/or appointed deputy, will liaise with the complainant(s) and/or Interested parties within 24 hours or as soon as practicable. The complaint will be logged on the Sapa IMS system and an appropriate investigation carried out. Results and findings will be communicated to Sapa Management, Interested parties and complainant as deemed appropriate by the Site Manager."

The Environment Agency has reviewed and approved the Operator's noise and vibration management plans and consider that they comply with the requirements of our guidance.

Permit Conditions

We have included our standard permit condition for noise and vibration on the draft varied Permit, as follows:

> *"Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration."*

This condition will ensure the Operator's continued application of BAT to the minimisation of noise and vibration for the duration of the Installation's operating life.

In addition to the above condition, the Operator's noise and vibration management plans are referenced in the permit within Table S1.2 Operating Techniques, therefore they form an ongoing, enforceable aspect of the permit. Condition 2.3.1(a) of the draft varied permit requires the installation to be operated in accordance with these management plans, as follows:

> *"The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency."*

Application of Best Available Techniques

Our guidance H3: Part 2 Noise assessment and control sets out the following hierarchy for control of noise and vibration:

1. Prevent generation of noise at source by good design and maintenance
2. Minimise or contain noise at source by observing good operational techniques and management practice
3. Use physical barriers or enclosures to prevent transmission to other media
4. Increase the distance between the source and receiver
5. Sympathetic timing and control of unavoidably noisy operations.

The Operator has stated that they will implement the following measures to control noise and vibration from the new scrap sorting line:

- anti-vibration mounts fitted to the shredder, drum magnet, the trommel, and the in-feeds to the eddy current and x-ray units
- silencer fitted to the shredder engine exhaust
- a programme of routine plant inspection and maintenance as per manufacturers recommendations
- vibration monitoring on the shredder to identify any issues that if not checked could lead to off-site pollution and complaints; in practice this means regular checks on the dynamic balance of the shredder hammer mill
- avoiding the need for the shredder to constantly work at full power through monitoring of feedstock and adjustment of feed rate
- charging of scrap to the shredder via an operative controlled mechanical grab to place, rather than drop, scrap into the hopper

- removal of the current noisy practice of filling the remelt charging bins using loading shovels, because incoming scrap is now processed via the shredder

- bespoke acoustic enclosures, designed by the plant manufacturer and made of the commercially-available sound-proofing material, fitted to the shredder, the drum magnet, and the trommel

- construction of a 7m high acoustic barrier along the southern boundary of the installation to attenuate noise impacts on the adjacent industrial estate

- locating the new scrap sorting line in the southwest corner of the site, furthest away from the sensitive residential receptors located due east of the installation, and thereby also benefitting from the position of the existing remelt building to assist in screening noise from those dwellings

- where practicable, locating machinery within a building, in particular the eddy current and x-ray units

- operation during daytime hours only, i.e. 7am-8pm weekdays, and 9am-8pm weekends and public holidays.

We consider that the above measures represent BAT and as far as is practicable, broadly follow the noise hierarchy outlined in our H3, Part 2 guidance.

Conclusion

Based upon the information in the application we are satisfied that the appropriate measures will be in place, including operational noise and vibration management plans, to prevent or where that is not practicable to minimise noise and vibration and to prevent pollution from noise and vibration outside the site.

6 Other legal requirements

In this section we explain how we have addressed other relevant legal requirements, to the extent that we have not addressed them elsewhere in this document.

6.1 The EPR and related Directives

The EPR delivers the requirements of a number of European and national laws.

6.1.1 Schedule 9 to the EPR 2016 – Waste Framework Directive

As the Installation involves the treatment of waste, it is carrying out a *waste operation* for the purposes of the EPR 2016, and the requirements of Schedule 9 therefore apply. This means that we must exercise our functions so as to ensure implementation of certain articles of the WFD.

We must exercise our relevant functions for the purposes of ensuring that the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste and that any waste generated is treated in accordance with Article 4 of the Waste Framework Directive.

The conditions of the permit ensure that waste generation from the facility is minimised. Where the production of waste cannot be prevented it will be recovered wherever possible or otherwise disposed of in a manner that minimises its impact on the environment. This is in accordance with Article 4.

We must also exercise our relevant functions for the purposes of implementing Article 13 of the Waste Framework Directive; ensuring that the requirements in the second paragraph of Article 23(1) of the Waste Framework Directive are met; and ensuring compliance with Articles 18(2)(b), 18(2)(c), 23(3), 23(4) and 35(1) of the Waste Framework Directive.

Article 13 relates to the protection of human health and the environment. These objectives are addressed elsewhere in this document.

Article 23(1) requires the permit to specify:

(a) the types and quantities of waste that may be treated;
(b) for each type of operation permitted, the technical and any other requirements relevant to the site concerned;
(c) the safety and precautionary measures to be taken;
(d) the method to be used for each type of operation;
(e) such monitoring and control operations as may be necessary;
(f) such closure and after-care provisions as may be necessary.

These are all covered by permit conditions.

The permit does not allow for the receipt of hazardous waste so Article 18(2) is not relevant.

We consider that the intended method of waste treatment is acceptable from the point of view of environmental protection so Article 23(3) does not apply.

We consider the conditions of the permit ensure that the recovery of energy take place with a high level of energy efficiency in accordance with Article 23(4).

Article 35(1) relates to record keeping and its requirements are delivered through permit conditions.

6.1.2 Schedule 22 to the EPR 2016 – Water Framework and Groundwater Directives

To the extent that it might lead to a discharge of pollutants to groundwater (a "groundwater activity" under the EPR 2016), the Permit is subject to the requirements of Schedule 22, which delivers the requirements of EU Directives relating to pollution of groundwater. The Permit will require the taking of all necessary measures to prevent the input of any hazardous substances to groundwater, and to limit the input of non-hazardous pollutants into groundwater so as to ensure such pollutants do not cause pollution, and satisfies the requirements of Schedule 22.

No releases to groundwater from the Installation are permitted. The Permit also requires material storage areas to be designed and maintained to a high standard to prevent accidental releases.

6.1.3 Directive 2003/35/EC – The Public Participation Directive

Regulation 60 of the EPR 2016 requires the Environment Agency to prepare and publish a statement of its policies for complying with its public participation duties. We have published our public participation statement.

This Application is being consulted upon in line with this statement, as well as with our guidance RGN6, which addresses specifically extended consultation arrangements for determinations where public interest is particularly high. This satisfies the requirements of the Public Participation Directive.

Our draft decision in this case has been reached following a programme of extended public consultation, both on the Application and later, separately, on the draft varied Permit and a draft decision document. The way in which this has been done is set out in Section 2.2. A summary of the responses received to our consultations and our consideration of them is set out in Annex 2.

6.2 National primary legislation

6.2.1 Environment Act 1995

(i) *Section 4 (Pursuit of Sustainable Development)*

We are required to contribute towards achieving sustainable development, as considered appropriate by Ministers and set out in guidance issued to us. The Secretary of State for Environment, Food and Rural Affairs has issued *The Environment Agency's Objectives and Contribution to Sustainable Development: Statutory Guidance (December 2002)*. This document:

> "*provides guidance to the Agency on such matters as the formulation of approaches that the Agency should take to its work, decisions about priorities*

for the Agency and the allocation of resources. It is not directly applicable to individual regulatory decisions of the Agency".

In respect of regulation of industrial pollution through the EPR, the Guidance refers in particular to the objective of setting permit conditions "*in a consistent and proportionate fashion based on Best Available Techniques and taking into account all relevant matters…*". The Environment Agency considers that it has pursued the objectives set out in the Government's guidance, where relevant, and that there are no additional conditions that should be included in the varied Permit to take account of the Section 4 duty.

(ii) *Section 7 (Pursuit of Conservation Objectives)*

This places a duty on us, when considering any proposal relating to our functions, to have regard amongst other things to any effect which the proposals would have on sites of archaeological, architectural, or historic interest; the economic and social well-being of local communities in rural areas; and to take into account any effect which the proposals would have on the beauty or amenity of any rural area. We considered whether we should impose any additional or different requirements in terms of our duty to have regard to the various conservation objectives set out in Section 7, but concluded that we should not.

(iii) *Section 39 (Costs and Benefits)*

We have a duty to take into account the likely costs and benefits of our decisions on the applications ('costs' being defined as including costs to the environment as well as any person). This duty, however, does not affect our obligation to discharge any duties imposed upon us in other legislative provisions. In so far as relevant we consider that the costs that the varied Permit may impose on the Operator are reasonable and proportionate in terms of the benefits it provides.

(iv) *Section 81 (National Air Quality Strategy)*

We have had regard to the National Air Quality Strategy and consider that our decision complies with the Strategy, and that no additional or different conditions are appropriate for the varied Permit.

6.2.2 Human Rights Act 1998

We have considered potential interference with rights addressed by the European Convention on Human Rights in reaching our decision and consider that our decision is compatible with our duties under the Human Rights Act 1998. In particular, we have considered the right to life (Article 2), the right to a fair trial (Article 6), the right to respect for private and family life (Article 8) and the right to protection of property (Article 1, First Protocol). We do not believe that Convention rights are engaged in relation to this determination.

6.2.3 Wildlife and Countryside Act 1981

We discuss our assessment in section 5.1.1 of this decision document.

6.2.4 Natural Environment and Rural Communities Act 2006

Section 40 of this Act requires us to have regard, so far as is consistent with the proper exercise of our functions, to the purpose of conserving biodiversity. We have done so and consider that no different or additional conditions in the varied Permit are required.

6.3 National secondary legislation

6.3.1 The Conservation of Natural Habitats and Species Regulations 2010

We discuss our assessment in section 5.1.1 of this decision document.

6.4 Other relevant legal requirements

6.4.1 Duty to Involve

S23 of the Local Democracy, Economic Development and Construction Act 2009 require us where we consider it appropriate to take such steps as we consider appropriate to secure the involvement of interested persons in the exercise of our functions by providing them with information, consulting them or involving them in any other way. S24 requires us to have regard to any Secretary of State guidance as to how we should do that.

The way in which the Environment Agency has consulted with the public and other interested parties is set out in section 2.2 of this document. The way in which we have taken account of the representations we have received is set out in Annex 2. Our public consultation duties are also set out in the EPR, and our statutory Public Participation Statement, which implement the requirements of the Public Participation Directive. In addition to meeting our consultation responsibilities, we have also taken account of our RGN6 guidance and the Environment Agency's Building Trust with Communities toolkit.

7 Annexes

Annex 1: Improvement Conditions

Based on the information in the Application we consider that we do not need to set any new improvement conditions. Improvement condition IC1 is an ongoing condition which has been carried over from the existing permit. This condition is set out below.

Reference	Improvement measure	Completion date
IC1	In the event that the operator wishes to cease monitoring and reporting emissions from release point A11, the operator shall provide a written report containing at least two complete sets of monitoring results and a justification for ceasing monitoring based on a risk assessment. The Operator shall cease monitoring and reporting following receipt of written agreement from the Environment Agency.	Ongoing

Annex 2: Consultation Reponses

Advertising and Consultation on the Application

The Application has been advertised and consulted upon in accordance with the Environment Agency's Public Participation Statement. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our draft decision is summarised in this Annex. Copies of all consultation responses have been placed on the Environment Agency public register.

The Application was advertised on the Environment Agency website from 4th June 2015 to 2nd July 2015. The Application was made available to view at the Environment Public Register at our Leeds office, at Lateral, 8 City Walk, Leeds, LS11 9AT.

The following statutory and non-statutory bodies were consulted: -

- Bolsover District Council, Environmental Health Department
- Health and Safety Executive (HSE)

1) Consultation Responses from Statutory and Non-Statutory Bodies

Response Received from HSE	
Brief summary of issues raised:	**Summary of action taken / how this has been covered**
The HSE's response stated that they had no comments to make on the application	

We did not receive a consultation response from Bolsover District Council.

2) Consultation Responses from Members of the Public

The consultation responses raised questions which fall within the jurisdiction of the planning system, with regard to the grant of planning permission, and are therefore outside the Environment Agency's remit in reaching its permitting decisions. Guidance on the interaction between planning and pollution control is given in the National Planning Policy Framework. It says that the planning and pollution control systems are separate but complementary. We are only able to take into account those issues, which fall within the scope of the Environmental Permitting Regulations.

A total of 6 responses were received from members of the public, including one in the form of a petition which contained a general objection to the proposals but no specific issues. All of the other responses included concerns about noise and vibration, while concerns about particulate emissions were mentioned in some responses. The following table summarises the concerns raised:

Responses received from members of the public	
Brief summary of issues raised:	**Summary of action taken / how this has been covered**
Noise and vibration Concerns were raised regarding noise and vibration from the metal shredder.	We have audited the Operator's noise and vibration impact assessments as detailed in Chapter 5. We have inspected and approved the associated noise and vibration management plans. We are satisfied that there will be no adverse impact from noise and vibration due to operation of the new scrap sorting line.
Claim that noise testing has not been undertaken in its vicinity of the site, while noise testing in the application refers to that undertaken at residential properties much further away.	The Operator has undertaken noise measurements on-site, and off-site within the adjacent industrial estate, in addition to taking noise measurements further away for the purpose of their BS4142:2014 assessment. We are satisfied with the scope of the Operator's assessment. It should be noted that BS4142:2014 is applicable for assessing impacts at proposed new dwellings or premises used for residential purposes only.
Claim that the Operator has failed to complete all noise reduction works. Concern that should a licence be granted prior to completion of noise reduction measures, then these measures will not be completed.	The Operator has stated that the gaps in the acoustic barrier have been filled in. We confirmed during our last site visit that all noise control measures deemed to be appropriate have been implemented. The acoustic barrier and enclosures were seen to be in a good state of repair. Maintenance of the acoustic barrier and enclosures forms part of the Operator's Noise Management Plan (NMP). As stated in section 5.2.1 we have approved the NMP and will enforce against it as part of our routine ongoing permit compliance work.

Responses received from members of the public	
Brief summary of issues raised:	**Summary of action taken / how this has been covered**
Emissions of particulates (dust) Concern regarding potential risk to human health.	We have audited the Operator's air emissions impact assessments as detailed in Chapter 5. We are satisfied that point source emissions of particulates from the shredder screen out as insignificant and will not cause pollution outside the site, and that the Operator's control measures represent Best Available Techniques (BAT). Furthermore, we are satisfied that the measures proposed by the operator for controlling fugitive emissions of particulates arising from the shredder represents BAT. We do not consider that the release of particulates during the shredding process will be harmful to human health.
Concerns about sharp pieces of aluminium on the ground outside the site boundary causing car tyre punctures.	The Operator has been made aware of complaints regarding scrap aluminium on the road adjacent to the shredder. The Operator has been monitoring this and have reported that certain operations of the shredder can give rise to such problems, particularly if the shredder is run without a charge of scrap in the hopper unit. This issue has now been addressed as the operating procedures for the shredder have been further developed during trial running. We have not received any such complaints recently. We do not consider that the operation of the scrap sorting line will emit odour due to the nature of the materials being processed.

Responses received from members of the public	
Brief summary of issues raised:	**Summary of action taken / how this has been covered**
Emissions of odour Reference made to 10 years of ongoing complaints, some of which related to odour from the site.	We do not consider that the operation of the scrap sorting line will emit odour due to the nature of the materials being processed.
Location of new plant Query over whether the new plant should be located in a building to control noise, dust and contamination level.	The location of the proposed scrap sorting line on the installation including whether it should be housed within a building, is determined according to a number of site specific criteria. Typically the siting of new plant on an installation will involve, operational, environmental, spatial, financial and logistical considerations. While placing potentially polluting plant within a building to contain emissions will be considered BAT in certain circumstances, this may not always be the case depending on the site specific risks and whether there are sensitive receptors nearby. As discussed in Chapter 5 we are satisfied that the abatement and mitigation measures proposed by the Operator represent BAT for the site.
Operator compliance Claims of the Operator not working within their licences.	We acknowledge that there have been instances of permit non-compliance in the past, however we are satisfied that the Operator is currently compliant with their permit and our expectation is that they should be able to operate in accordance with their permit as varied (subject to completion of our determination).