

# Draft permitting decisions

## Variation

---

### Consultation on our Decision Document recording our decision making process

The Permit Number is:	EPR/PP3099FM.
The Variation Number is:	EPR/PP3099FM/V005.
The Installation is located at:	Sims Avonmouth, St Andrews Road, Avonmouth, Bristol, BS11 9BT.
Consultation commences on:	02/08/2019
Consultation ends on:	30/08/2019

#### 1. What this document is about

This is a draft decision document, which accompanies a draft Variation Notice.

It explains how we have considered the Applicant's application, and why we have included the specific conditions in the draft Variation Notice we are proposing to issue. 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 Applicant'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 our thought process 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 Notice, or to reject the Application altogether, we will issue the Variation Notice 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.

## 2. Preliminary information and use of terms

We allocated this application the reference number EPR/PP3099FM/V005. We refer to the application as “the **Application**” in this document in order to be consistent.

The number we have given to the permit is EPR/PP3099FM. We refer to the proposed permit as “the **Permit**” in this document.

The Applicant is Sims Group UK Limited. We refer to Sims Group UK Limited as ‘the **Applicant**’ in this document. When we are talking about what would happen after the Permit is granted (if that is our final decision), we call Sims Group UK Limited ‘the **Operator**’.

The site is located at Sims Avonmouth, St Andrews Road, Avonmouth, Bristol, BS11 9BT. We refer to this as ‘the **Installation**’ in this document.

## 3. How this document is structured

- our proposed decision
- how we reached our decision
- highlights key issues in the determination
- summarises the decision making process in the decision checklist to show how all relevant factors have been taken into account
- shows how we have considered the consultation responses

Unless the decision document specifies otherwise we have accepted the Applicant’s proposals.

Read the permitting decisions in conjunction with the environmental permit and the variation notice. The introductory note summarises what the variation covers.

## 4. Our proposed decision

We are minded to grant the Variation Notice to the Applicant. This will allow the Applicant to operate the Installation, subject to conditions in the Variation Notice.

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

## 5. How we reached our draft decision

### 5.1 Receipt of Application

The Application was duly made on 19 November 2018. 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.

## 5.2 Consultation on the Application

We carried out consultation on the Application in accordance with the Environmental Permitting Regulations (England and Wales) 2016 ('EPR'), our statutory Public Participation Statement ('PPS') and our own internal Regulatory Guidance Note 6 ('RGN 6') 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 Industrial Emissions Directive ('IED'), which applies to the Installation and the Application. 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 requirements of the 2009 Act.

We advertised the Application by a notice placed on our website, which contained all the information required by the IED, including informing people where and when they could see a copy of the Application. We also placed an advertisement in the Bristol Evening Post on the 28 December 2018.

We made a copy of the Application and all other documents relevant to our determination (see below) available to view on our Public Register and at the Avonmouth Library and Community Centre situated at 257 Avonmouth Road, Avonmouth, Bristol BS11 9EN. 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":

- Environmental Health - Bristol City Council
- Local Planning Authority – Bristol City Council
- Public Health Bristol City Council.
- Public Health England
- Health and Safety Executive
- Port Authority – The Bristol Port Company.

These are bodies whose expertise, democratic accountability and/or local knowledge make it appropriate for us to seek their views directly. Please 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.

In addition to our advertising the Application, we undertook a programme of extended public consultation. Written comments were accepted by the Environment Agency well beyond the formal consultation period. Further details along with a summary of consultation comments and our response to the representations we received can be found in Annex 4. We have taken all relevant representations into consideration in reaching our draft determination.

### 5.3 Requests for Further Information

Although we were able to consider the Application duly made, we required further information in order to determine the Application, and we subsequently issued Request for Information Notices on:

21 February 2019  
8 April 2019  
And  
9 May 2019.

A copy of each of these notices was placed on our Public Register.

Having carefully considered the Application and all other relevant information, we are releasing our draft decision to the public and other interested parties in the form of a draft Permit, together with this explanatory document. As a result of this stage in the process, the public has been provided with all the information that is relevant to our determination, including the original Application and additional information obtained subsequently, and we have given the public two separate opportunities, including our draft decision document, to comment on the Application and its determination. We will once again consider all relevant representations we receive in response to this final consultation and will amend this explanatory document as appropriate and provide an explanation as to how we have done this when we publish our final decision.

Finally we have consulted on our draft decision from xx/yy/zz to xx/yy/zz. A summary of the consultation responses and how we have taken into account all relevant representations is shown in Section 8.

## 6. Key issues of the decision

### 6.1 Description of Variation Changes

Sims Group UK Limited operate an installation that receives, processes and recovers ferrous and non-ferrous metals from scrap and acts primarily as a source of ferrous feedstock for the steel manufacturing industry.

The Applicant has made the business decision to significantly invest in the Sims Avonmouth site with the aim of improving the site and their operational processes with a view to making them more efficient and cost effective. The improvements includes modernising the equipment and technology, and reconfiguring the on-site facilities and traffic management system.

Therefore, the Applicant submitted a permit variation with a view to implementing the following proposals:

- The introduction of a new pre-shredder to process all automotive baled materials before they are processed by the shredder.
- The introduction of acoustic enclosures around the downstream plant and the existing shredder.
- Changes to site logistics including the reconfiguration of the HGV loading and unloading and an improved traffic management system.
- The replacement of the 'downstream plant' including the introduction of a new conveyor and stacker at the dockside.
- The introduction of covered storage bays for storing outgoing materials.
- Increase of the site boundary to accommodate the reconfigured process.
- The inclusion of emission point A6 (discharge to air from the non-ferrous treatment building exhaust system) and the relocation of emission point A1 (discharge to air from the ferrous treatment building treatment system).
- The inclusion of emission point A5 (discharge of process water and site surface water drainage to sewer from the site drainage system.)
- The introduction of boundary fencing with a height of 2.8m.

Within this decision document we discuss the above proposals in the context of this variation applied for by the applicant.

### 6.2 Assessment of Emissions to Air

#### 6.2.1 Description of point source emissions to air from the installation

As a result of this application the proposed changes in operations will introduce emissions to air from two stacks on site.

- Stack A1 – This is a relocation of the existing emission point from the ferrous downstream plant following abatement to remove particulates. (Process)
- Stack A2 – This is a new emission point to air to be located within the proposed non-ferrous downstream plant following abatement to remove particulates. (Process)

Particulate Matter will require assessment from the two air stacks situated on site.

#### 6.2.2 Methodology for risk assessment of emissions to air

A methodology for risk assessment of point source emissions to air is set out in our web guidance *Air emissions risk assessment for your environmental permit* and consists of 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.

We use this methodology to assess the impacts on air quality in the determination of applications.

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 first stage of this methodology – screening, provides a simple method for 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.

At the first screening stage, PCs are considered insignificant if:

- the long-term process contribution is less than 1% of the relevant Environmental Standards (ES); and
- the short-term process contribution is less than 10% of the relevant Environmental Standards (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;  
And
- 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; and
- 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 risk of emissions to air associated with the Applicant's proposals is insignificant. However, where an emission cannot be screened out as insignificant based on the PC, it does not mean it will necessarily be significant. For those pollutants whose PC does not screen out as insignificant at the first screening test, our methodology requires that a second stage of screening is undertaken. This second stage of screening is based on the Predicted Environmental Contribution ("PEC") which takes account of background pollutant concentrations. At this second stage, we consider the environmental risk not to be significant (and not to require further detailed assessment) where the following two criteria are both met:

- the short-term PC is less than 20% of the short-term ES minus twice the long-term background concentration;
- the long-term PEC is less than 70% of the long-term ES.

For those pollutants which do not meet these two screening criteria, we determine whether exceedances 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.

Mathematical air dispersion models can achieve a more accurate calculation of process contributions compared to the screening process based on emission factors. Air dispersion models 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 Process Contributions ("PC").

Air dispersion modelling enables the PC to be predicted at any environmental receptor that might be impacted by the emissions from a plant. Once short-term and long-term PCs have been calculated in this way, they are compared with Environmental Standards.

Where the modelled PC is greater than the insignificance thresholds set above for the first stage screening test, the assessment must continue to determine the impact by considering the Predicted Environmental Concentration ("PEC"). The PEC is the combination of the PC substance to air and the background concentration of the substance which is already present in the environment.

We would normally consider that the Applicant's proposals for the prevention and control of the emission to be acceptable if the detailed assessment has shown that both the following apply:

- proposed emissions comply with the Best Available Technique ("BAT") Associated Emission Levels ("BAT-AELs") or the equivalent requirements where there is no BAT-AEL;  
And
- the resulting PECs won't exceed 100% of the environmental standards.

### 6.2.3 Impact on human receptors from emissions of Particulate Matter

The Applicant carried out the screening tests for emissions of Particulate Matter from emission sources A1 and A6 according to the screening methodology described in section 6.2.2. The risk for these emissions did not screen out according to the significance criteria set in our methodology. For this reason, the Applicant has provided detailed atmospheric dispersion modelling which predicts the likely impacts of emissions of Particulate Matter (PM10) in the document titled "Particulate Dispersion Modelling", dated 31 October 2018.

The results of the Applicant's assessment are referred to in the following paragraphs.

The detailed dispersion model Atmospheric Dispersion Modelling System 5 ("ADMS version 5.2") was used to predict the changes in pollutant concentrations from the on-site activities. ADMS 5 is an appropriate computer model for assessing impact on local air quality. The model provided in the application assumes the 'worst-case' scenario assuming that the sources will emit continuously all year.

The approach taken in this assessment is to predict Pollutant Process Contributions ("PPCs") from each of the stacks using dispersion modelling, and then to calculate the PPCs and PECs as a percentage of each relevant Environmental Standards.

The Applicant's modelling has predicted PPCs and PECs from the stacks at a number of human receptor locations. The human receptor that has the highest predicted impact has been expanded on below.

We have conducted our own audit of the air dispersion model submitted by the Applicant.

As part of our audit, we have reviewed the following aspects, assumptions and settings of the Applicant's air dispersion model:

- Consistency of emission data inputs
- Location of emission sources
- Settings of the Adequateness of the Meteorological Station used for met data, whether terrain has been modelled, and an appropriate grid spacing ("ADM")
- Use of background data
- Selection of sensitive receptors
- Model uncertainties

As a result of our audit, we agree with the Applicant's conclusions that are reported and discussed in the following paragraphs:

The highest short term PC predicted at a residential receptor is King Street ( $1.1 \mu\text{g}/\text{m}^3$ , 90.41<sup>st</sup> percentile of 24-hours averages); this PC is 2.2% of the short term ES ( $50 \mu\text{g}/\text{m}^3$  – 24 hours) and therefore <10% significance threshold.

The highest long term PC predicted at a residential receptor is also at King Street ( $0.3 \mu\text{g}/\text{m}^3$ ); this PC is 0.75% of the long term ES ( $40 \mu\text{g}/\text{m}^3$  – annual average), below the 1% significance threshold.

The Predicted Environmental Concentrations ("PEC") for both short and long term cases are less than 100% of the associated environmental standards (73% and 45% respectively), when taking into account background concentration of PM10 of  $35.6 \mu\text{g}/\text{m}^3$  (short term) and  $17.8 \mu\text{g}/\text{m}^3$  (long-term), which are consistent with measured monitoring data available from the Automatic Urban and Rural Network ("AURN") for Bristol City Council and the estimates mapped by the Department for Environment, Food and Rural Affairs ("DEFRA") with a resolution grid of 1 km.

From the review of predicted long-term and short-term PCs and PECs at the sensitive human health receptors we have concluded that emissions of particulate matter from emission points A1 and A6 of the installation are unlikely to be significant contributors to PM10 in the air or cause an exceedance of an ES for this pollutant.

Emission Limit Values for Total Suspended Particulates have been set for emission points A1 and A6 have been set in the Environmental Permit.

### **6.3 Assessment of Dust Management Plan and Ambient Air Monitoring Strategy**

Historically, the site has been the subject of dust complaints from local residents, and businesses in the local area. The Applicant has undertaken a risk assessment of fugitive emissions to air associated with the operation of the site following the proposed changes introduced by this application. They have considered the potential for dust to be released at the following sequential steps of the operation:

- Vehicle movement, track out and resuspension.
- Transfer of scrap metal by handling grab to the pre-shredder.
- Pre-shredder activities.
- Transfer of feedstock from pre-shredder to shredder.
- Downstream plant – Ferrous material plant activities.
- Downstream plant - Non-ferrous material plant activities.
- Transfer of non-ferrous material to covered bays.
- Transfer of ferrous material from downstream plant to dockside storage by conveyor and radial stacker - Q Berth.

- Q Berth stockpiling, loading and unloading of ships.

The following control measures are proposed to minimise the fugitive release of dust from the main processing area. These are split into preventative measures which are those that are designed to prevent dust emissions and reactive measures which are only implemented when dust emissions are identified. These measures are taken from the dust management plan (Revision 4) provided in support of this application in the document dated 20 May 2019.

### 6.3.1 Preventative measures

- Enclosure of the open-topped shredder;  
Enclosure of the replacement open-topped downstream ferrous and the fully enclosed non-ferrous plant;  
Enclosure of all conveyors that transfer material to and from downstream plant; and enclosure on three sides and covering the shredder.
- The shredders plant will have an air cleaning system designed to extract and collect dust from the air within the shredding process building.
- Water suppression with mist sprays
  - Shredder: Mist sprays will be fitted to the shredder. This will be targeted to parts of the shredder treatment process that can give rise to dust. These will be used whenever the shredder is operational.
  - Shredder residue bays: Mist sprays will be fitted to the shredder residue bays and operated whenever the downstream plant is running, or when material is being loaded out of the bays.
- The shredder has a water injection system with an adjustable variable flow. This will be used whenever the shredder is operational and will be adjusted depending on environmental conditions at the time.
- The site operates a speed limit of 5mph, no idling policy at all times and constantly minimises vehicle movements by design.
- Minimised drop heights.
- Good housekeeping.
- All vehicles containing shredder residue and dust from the air cleaning system will be sheeted.

### 6.3.2 Reactive measures

- Portable dust buster (water spray) implemented in locations identified during site visual inspection.
- Additional housekeeping including the use of dust sweepers and bowsers.
- Ceasing operations.

The Applicant has confirmed in paragraph 5.4 of the Dust Management Plan, to cease operations should dust emissions be identified during visual inspections that are undertaken a suitable time follow the introduction of dust abatement measures on site. In this instance the site manager will instruct all operations to cease until the issue can be

resolved through additional abatement measures, and/or discussions with consultants and the regulator.

### 6.3.3 Ambient Air Monitoring

The Applicant has proposed a Particulate Matter Monitoring Strategy to provide resolution to Improvement Condition 7 of the existing permit (EPR/PP3099FM/V004). This strategy outlines a proposal to undertake an assessment of the ambient air monitoring to collect representative data on ground-level concentrations of particulates at locations likely to be impacted by emissions from the site.

Following a review of the Applicant's proposals we have identified some areas of the proposed monitoring strategy where we are not fully satisfied with and that we think require further work by the Applicant in consultation with the Environment Agency to achieve satisfactory completion of Improvement Condition 7. The open items include:

- Duration of monitoring
- Monitoring Equipment
- Sampling Location

Therefore we have not accepted the Applicant's proposal for ambient air monitoring as a resolution towards the requirements of Improvement Condition 7 and we have revalidated this condition as an on-going requirement to be resolved as part of the regulatory compliance assurance process.

### 6.3.4 Dust Management Plan Conclusion

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

## 6.4 **Assessment of Noise Impact and Noise Management Plan**

The site has been the subject of noise complaints from the local residents, which indicates that the local community are sensitive to noise arising on the site. The application contained a noise impact assessment which identified local noise sensitive receptors, potential sources of noise at the site and the noise attenuation measures introduced by this variation.

The sites emissions of noise has been a major cause of complaints over the sites history of the sites operation. The Applicant has brought this application forward with the intention of improving the impact of the site activities on receptors in their vicinity. The proposals the Applicant has brought forward includes:

- The installation of a new pre-shredder to process all automotive baled scrap which will reduce the risk of explosions that currently occurs when flammable material enters the main shredder. The pre- shredder uses a low torque slicing action to cut open baled material without generating a source of ignition;
- Bespoke acoustic enclosures, designed by a specialist contractor and made of the commercially-available sound-proofing material, will be fitted to pre-shredder, shredder and, downstream processing lines;

- Changes to site logistics including the reconfiguration of the HGV loading and unloading and an improved traffic management system to reduce, with the aim of reducing noise caused by unnecessary vehicle movements and shunting.

The Applicant's assessment of the potential noise impact during operation of the installation was based on the acoustic prediction software package SoundPLAN v7.4. The assessment used SoundPLAN, which incorporates ISO 9613-2 methodology for the calculation of sound propagation, to estimate the sound pressure levels at local receptors. The site operates between 07:00 to 21:00 on weekdays and 07:00-17:00 on Saturdays, with no operation on Sundays. Shipping operations including the loading and unloading of vessels is a 24 hour operation that occurs on Q Berth only. These operational hours are incorporated into the Applicant's Noise Management Plan, which is enforceable via the environmental permit.

The Applicant's assessment considers the potential noise impact at the sensitive receptors shown in Table 1.

<b>Receptor reference</b>	<b>Receptor type / general area</b>	<b>Distance / Direction from Installation</b>
Jutland Road	Residential properties	350m due south east
Richmond Villas	Residential properties	350m due south east
King Street	Residential properties	350m due south

Table 1 Local sensitive receptors

The potential impact due to the operation of the installation has been determined in accordance with the methodology in British Standard BS4142:2014, 'Methods for rating and assessing industrial and commercial sound.' 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, i.e. the acoustic penalty 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.

The BS4142 methodology 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.

The Applicant's Noise Impact Assessment was undertaken for 2 options, Option A and Option B respectively. The options are identical apart from:

- **Option A:** boundary fencing (solid construction) 2.8m in height.
- **Option B:** boundary fencing (solid construction) 2.8m in height except for a section of fencing to the south east boundary of the site, with an increased height of 5.5m.

#### 6.4.1 Assessment of the existing noise impact

In the Applicant's Noise Impact Assessment they start by investigating the current impact of noise from operations at the site. Existing sound level measurements were taken at a location on King Street (taken to be representative of all sensitive receptors). The results of their assessment are shown in table 2.

Receptor <b>Representative location for all 3 streets</b>	Existing measured Sound Level – dBA ( $L_{Aeq,T}$ )	Existing Rating Level (including +3dBA acoustic penalty) - dBA	Background sound level - dBA	Existing level of impact - (Rating minus background) - dBA
King Street	55	58	46 to 53	+5 to +12

Table 2 – Results of existing noise impact assessment

The Applicant's calculations confirm that the existing site operations have the potential to cause noise impact at the local residential receptors. They have included a +3 dB acoustic penalty for 'other sound characteristics' and have calculated the significance of the existing impact at between +5 to +12 dB, which equates to a significant adverse impact (as a worse case) in terms of the BS4142 methodology. We are satisfied that this result is indicative of the actual situation based on the complaints made to the Environment Agency. It is against this context of existing noise impact that the Applicant has assessed, and compared the potential impact due to their proposed development, as discussed below.

#### 6.4.2 Assessment of noise impact from proposed operations.

The Applicant's noise impact assessment considers each of the proposed mitigation options outlined above. They determined the predicted noise impact at receptors from the proposed site operations in accordance with BS4142.

In undertaking their assessment the Applicant considered whether any acoustic penalties needed to be applied to the specific sound levels. In regards to the characteristics of the specific sound they have determined that it is not intermittent or tonal and is unlikely to be impulsive. In regards to intermittency and tonality the Applicant has not applied an acoustic penalty in their assessment.

Prior to this variation application the operation of the metal shredder often resulted in small explosive events due to non-conforming waste entering the shredder and subsequently being ignited. Specifically this related to the crushing of baled end of life vehicles, with the explosive (or deflagration) events being due to unseen material / substances bound up within (and unable to be separated from) the metal bales. As part of the Applicant's variation proposals they are introducing a pre-shredder to pre-treat these high risks wastes to minimise the occurrence of these small explosive events.

In regards to impulsivity the Applicant suggests that as the small explosive events will be minimised through the operation of the pre-shredder the specific sound should not be characterised by these potentially impulsive moments. However to ensure that their assessment is conservative (and consistent with their assessment of the existing noise impact) they have added a +3 dB acoustic penalty to their predicted sound levels to recognise that the specific sound may be distinguishable in the residual acoustic environment.

The results of the Applicant's BS4142 assessment for both proposals are outlined below in Tables 3 and 4.

<b>Receptor</b>	<b>Predicted Specific Sound Level, <math>L_{Aeq,T}</math>, dBA</b>	<b>Rating Level (with +3dB penalty), dBA</b>	<b>Background <math>L_{A90,1h}</math>, dBA</b>	<b>Predicted noise impact level - (Rating minus background) - dBA</b>
Jutland Road	51	54	46 to 53	+1 to +8
King Street	49	52	46 to 53	-1 to +6
Richmond Villas	48	51	46 to 53	-2 to +5

Table 3 – Results of BS4142 Assessment: Predicted Noise Impact for Option A

<b>Receptor</b>	<b>Predicted Specific Sound Level, <math>L_{Aeq,T}</math>, dBA</b>	<b>Predicted Rating Level (with +3dB penalty), dBA</b>	<b>Background <math>L_{A90,1h}</math>, dBA</b>	<b>Predicted noise impact level - (Rating minus background) - dBA</b>
Jutland Road	48	51	46 to 53	-2 to +5
King Street	49	52	46 to 53	-1 to +6
Richmond Villas	47	50	46 to 53	-3 to +4

Table 4 – Results of BS4142 Assessment: Predicted Noise Impact for Option B

From the results above, when comparing the predicted Rating Level against the background noise levels (46dB to 53 dB) the predicted impact for Option A is shown to range from -2 to +8 dB, and for Option B the predicted impact ranges from -3 to +6 dB.

The BS4142 methodology would categorise the worst case noise level for either Option A or B (+8 dB or + 6 dB respectively) as representative of an adverse impact.

#### 6.4.3 Comparison between existing situation and proposed development

The Applicant's noise impact assessment then compares their results as outlined above and concludes that both options A and B would deliver a reduction in noise impact at the receptors from the operational area around the shredder and downstream plant.

Receptor	Existing Noise Impact Level – dBA	Option A Predicted Noise Impact Level – dBA	Option B Predicted Noise Impact Level – dBA
Jutland Road	+5 to +12	+1 to +8	-2 to +5
King Street	+5 to +12	-1 to +6	-1 to +6
Richmond Villas	+5 to +12	-2 to +5	-3 to +4

Table 5 – Comparison between existing and proposed noise levels

Based on the above results the Environment Agency is satisfied with the Applicant's conclusions. We agree that either option would provide a reduction in the current noise emissions experienced at the specified receptors. The Applicant predicts that option A will result in sound levels that are 4 to 7 dBA lower than the existing situation, while option B would result in a 6 to 8 dBA reduction. We find that the difference between option A and option B will be up to 3 dBA, depending on receptor, and in our view would only just be noticeable depending on prevailing conditions. We are therefore satisfied that either option could be considered appropriate as they both offer a similar reduction in potential noise impact experienced at the receptors. The Applicant has confirmed they will proceed based on Option A.

#### 6.4.4 Permit Conditions

We have included our standard permit condition for noise and vibration on the 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 Applicant 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 Applicant'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 Applicant'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 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."*

Further to this, we have incorporated an Improvement Condition (see Table S1.5, Variation notice, ref. IC11) into the permit. This improvement condition requires the Applicant to undertake a follow-up noise impact assessment (in accordance with BS4142:2014) once the proposed changes on-site have been implemented. The assessment shall include the identification and assessment of the impact of noise emissions upon surrounding sensitive receptors arising from the operation of the installation in order to validate the results of the predictive noise modelling submitted with the variation application. In the event that the follow-up assessment is indicative of impacts which exceed those predicted in the Noise Assessment for Sims Avonmouth Improvement Programme, dated April 2019, Reference: JAE9270-REPT-03-R), the Improvement Condition requires the Applicant to provide proposals for the further attenuation and/or management of noise and a timescale, to be agreed with the Environment Agency, for the implementation of such proposed measures.

#### 6.4.5 Application of Best Available Techniques for noise control

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 Applicant has stated that they will implement the following measures to control noise and vibration from the site:

- The installation of a new pre-shredder to process all automotive baled scrap which will reduce the risk of explosions that currently occurs when flammable material enters the main shredder. The pre-shredder uses a low torque slicing action to cut open baled material without generating a source of ignition;
- A programme of routine plant inspection and maintenance as per manufacturers recommendations;
- Plant, equipment or vehicles will be fitted with and operated at all times with silencing measures to a standard not less than the manufacturers' UK standard specification for that equipment;
- 360° material degree handlers and front end loading shovels will be fitted with broadband white noise reversing alarms to eliminate noise associated with traditional alarms;
- Replacement of existing conveyor belts with fully covered conveyor belts in downstream process plants, and a fully covered rubber conveyor belt to transfer shredder output from the shredder to downstream processing lines;

- Bespoke acoustic enclosures, designed by a specialist contractor and made of the commercially-available sound-proofing material, will be fitted to pre-shredder, shredder and, downstream processing lines;
- Construction of a 2.8m height boundary fencing around the boundary of the site (as per Option A proposal);
- Operation during daytime hours only, i.e. 7am-9pm weekdays, and 7am-5pm Saturdays. No operations to occur on Sundays, or public and bank holidays. Although ship loading and unloading activities are 24 hour operations the company commits to certain materials not being loaded between 22:00-06:00.

We consider that in regards to the activities impacted by this variation application that the above measures represent BAT and as far as is practicable, broadly follow the noise hierarchy outlined in our H3, Part 2 guidance.

#### 6.4.6 Assessment of Noise Impact and Noise Management Plan Conclusion

The Environment Agency recognises that the Applicant's assessment predicts that noise impacts from the site remain at a level that according to the BS4142 methodology could have an adverse impact at sensitive receptors. While this is not an ideal situation the proposals must nevertheless be viewed against the context of the already unfavourable situation, and as such we recognise the Applicant's proposals to be a positive step forward and an improvement over the existing situation. Furthermore we are satisfied that the Applicant will be applying BAT to control noise.

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

## 7 Decision checklist

Aspect considered	Decision
<b>Receipt of application</b>	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.
<b>Consultation/Engagement</b>	
Consultation and Engagement	<p>The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.</p> <p>The application was publicised on the GOV.UK website.</p> <p>We consider this application to be of high public interest and so in addition to publicising the application of the GOV.UK website we also undertook the following engagement activities:</p> <p>The following Public Briefing Notes were sent to interested parties and members of the public. These included:</p> <ul style="list-style-type: none"> <li>• A briefing note on the 3 January 2019 explaining the consultation period for the permit variation application made by Sims Group UK Limited was now open. This confirmed the deadline for responses as the 8 February 2019.</li> <li>• A briefing note on the 6 March 2019 explaining that the consultation period and how we would continue to assess the application.</li> </ul> <p>The application was advertised in the Bristol Evening Post on the 28 December 2018.</p> <p>We consulted the following organisations:</p> <ul style="list-style-type: none"> <li>• Local Authority Planning</li> <li>• Local Authority Environmental Health</li> <li>• Health and Safety Executive</li> <li>• Harbour and Port Authorities</li> <li>• Public Health England / Director of Public Health.</li> </ul> <p>The comments and our responses are summarised in the <a href="#">consultation section</a>.</p>

Aspect considered	Decision
<b>The facility</b>	
The regulated facility	<p>We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN 2 'Defining the scope of the installation', Appendix 1 of RGN 2 'Interpretation of Schedule 1'</p> <p>The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.</p>
<b>The site</b>	
Extent of the site of the facility	The Applicant has provided a plan which we consider is satisfactory, showing the extent of the site of the facility. The plan is included in the permit.
Site condition report	<p>The Applicant has provided a description outlining the condition of the proposed area of land to be included within the site boundary. Which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive.</p> <p>Due to the age of the permitted site the operator was not required to provide a site condition report as part of their original application. Therefore, there is no recorded baseline condition for the existing site. As part of this application the Operator suggested that the results of an investigation from 2009 could be used as the 'initial condition' of the existing site for comparison at permit surrender. We did not accept this proposal as the current use of the site for metal recycling pre-dates this investigation.</p> <p>Instead, in relation to the existing site boundary we will determine any requirements for remediation upon permit surrender. This will be undertaken in line with our guidance on site condition reports and baseline reporting.</p>
Biodiversity, heritage, landscape and nature conservation	<p>The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.</p> <p>We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or habitats identified in the nature conservation screening report as part of the permitting process.</p> <p>We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.</p>

Aspect considered	Decision
	We have not consulted Natural England or Natural Resources Wales on the application. The decision was taken in accordance with our guidance.
<b>Environmental risk assessment</b>	
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p> <p>In regards to the emissions to sewer the Applicant has proposed to introduce 2 new discharge points A5 and A7. This is a result in the increase of the site footprint. The operators' proposal does not result in a change in annual throughput, type of waste treated, or introduce a new type of discharge therefore the nature of the discharge remains the same.</p> <p>Based on these two points we consider the risk to the environment is not increasing as a result of this variation.</p> <p>However, we have revalidated improvement conditions IC5 and IC6 and increased their scope to incorporated A5 and A7 (the new discharges to sewer). On completion of these improvement conditions compliance limits will be reviewed.</p> <p>For a detailed explanation of our assessment in regards to Emissions to Air, Dust and Noise see the relevant headings in the <a href="#">key issues</a> section.</p>
<b>Operating techniques</b>	
General operating techniques	<p>We have reviewed the techniques used by the Applicant and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.</p> <p>The operating techniques that the Applicant must use are specified in table S1.2 in the environmental permit.</p>
Operating Techniques	<p>We have reviewed the operating techniques used by the Applicant and compared these with the relevant guidance notes:</p> <ul style="list-style-type: none"> <li>• IPPC S5.06 – Guidance for the Treatment of Hazardous and Non-Hazardous Waste;</li> <li>• BMRA BAT recommendation document;</li> <li>• H3 – Noise assessment and control;</li> </ul> <p>We are satisfied that the proposals made by this application are in line with the above guidance.</p>
Noise management	We have reviewed the noise management plan in accordance with our guidance on noise assessment and control. We consider that the noise management plan is satisfactory.

Aspect considered	Decision
	See key issues 'assessment of Noise Impact Assessment and Noise Management Plan'.
Fire prevention plan	<p>The Applicant submitted a Fire Prevention Plan alongside this application to vary the permit but we have not assessed or approved the document. Following our assessment of the application as a whole we determined that this variation does not trigger the requirement for the assessment of the Fire Prevention Plan as part of the assessment of an application to vary the permit. This is because the following aspects of the proposal demonstrate that the fire risk from the site is not increasing:</p> <ul style="list-style-type: none"> <li>• No changes to storage quantities, storage times or permitted waste types were proposed as part of the variation;</li> <li>• The installation of a pre-shredder to pre-treat all incoming baled cars which should reduce the potential for energy releases (small explosions) in the fragmentiser;</li> <li>• Increased permit boundary and altered site layout which will allow relevant incoming waste streams to be stored separately, for example fragmentiser in-feed material stored away from the baled cars;</li> <li>• Covered bays for downstream materials such as fragmentiser residue that can be combustible</li> </ul> <p>This decision has been taken in line with our guidance on Fire Prevention Plans.</p> <p>We do recognise that the site should have an approved Fire Prevention Plan and we will ensure through ongoing compliance actions that this is produced and assessed in line with our guidance on Fire Prevention Plans.</p>
<b>Permit conditions</b>	
Use of conditions other than those from the template	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.
Raw materials	There were no changes to the specified limits and controls on the use of raw materials and fuels as a result of this application.
Waste types	There were no changes to the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility as a result of this application.

Aspect considered	Decision
Pre-operational conditions	No pre-operational conditions were added to permit as a result of this application. However, pre-operational conditions (Pre-Opp 1 and Pre-Opp 2) have been carried over from the previous variation (EPR/PP3099FM/V004) and are shown in Table S1.6 of the permit.
Improvement programme	<p>An improvement condition (IC11) has been added as part of the determination. This is explained in more detail in the <i>Assessment of Noise Impact and Noise Management Plan</i> section in the key issues above.</p> <p>We have also retained improvement conditions IC4, IC5, IC6, IC7, IC8, IC10 introduced by variation EPR/PP3099FM/V004. These improvement conditions have not been satisfactorily addressed by the Applicant. We have however revalidated these improvement conditions and updated the deadline for a response.</p> <p>Due to this variation, improvement conditions IC5, IC6 and IC8 have also been amended to include reference to the new emission points brought in as a result of this variation. As these emission points (A5, A6 and A7) will need to be included in the scope of the Applicant's actions to complete the Improvement conditions.</p> <p>We have also taken the opportunity to mark a number of improvement conditions (IC1, IC2, IC3 and IC9) as completed where the Applicant has satisfied the requirements, either during this determination or whilst operational beforehand.</p>
Emission limits	<p>Emission limit values for emission to air from emission point A1 and A6 have been added or changed as a result of this variation for the following substance:</p> <ul style="list-style-type: none"> <li>• Total suspended particulates</li> </ul> <p>These limits have been set based on the air quality model provided alongside the application.</p> <p>Other limits may be agreed after improvement conditions brought in as part of EPR/PP3099FM/V004 are completed.</p>
Monitoring	<p>We have decided that monitoring for emissions to air at emission point A1 and A6 should be added or changed as a result of this variation for the following parameters, using the methods detailed and to the frequencies specified:</p> <ul style="list-style-type: none"> <li>• Total suspended particulates</li> </ul> <p>Other limits may be agreed after improvement conditions brought in as part of EPR/PP3099FM/V004 are completed.</p>
Reporting	Although we have not fundamentally changed the reporting requirements in the permit, we have expanded the scope of the

Aspect considered	Decision
	<p>requirements to cover the new emission points added as part of this variation. The changes are as follows:</p> <ul style="list-style-type: none"> <li>• A6 - Emissions to Air</li> <li>• A5 &amp; A7– Emissions to Sewer</li> </ul> <p>We made these decisions in accordance with the requirements for metal shredding facilities.</p>
<b>Operator competence</b>	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.
Technical competence	<p>Technical competence is required for activities permitted.</p> <p>We are satisfied that the operator is technically competent.</p>
Relevant convictions	<p>The Case Management System has been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found. The Applicant satisfies the criteria in our guidance on operator competence.</p>
<b>Growth Duty</b>	
Section 108 Deregulation Act 2015 – Growth duty	<p>We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”</p> <p>We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.</p> <p>We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst</p>

Aspect considered	Decision
	legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.

DRAFT

## 8 Consultation

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public, newspaper advertising, and the way in which we have considered these in the determination process.

### Responses from organisations listed in the consultation section

<b>Response received from</b>
The Bristol Port Company (Port Authority)
<b>Brief summary of issues raised</b>
No issues were raised. The Port Authority was fully supportive of the proposals.
<b>Summary of actions taken or show how this has been covered</b>
No issues raised and no actions required.

<b>Response received from</b>
Public Health England
<b>Brief summary of issues raised</b>
<p>Public Health England raised concerns regarding fugitive emissions to air. In particular, they commented that the local community have previously raised serious concerns in relation to particulates (dust) emitted from the sims site. Public Health England continue to note that the Environment Agency and the Local Authority carried out extensive monitoring of airborne particulates in response to these concerns, and the measured levels complied with the applicable air quality standards. They recommend that the public concern and site history should be fully considered when setting emission levels and monitoring requirements for the site.</p> <p>In addition, Public Health England also indicated in their recommendations that any scheme of assessment for ambient air should specify:</p> <ol style="list-style-type: none"> <li>a. reporting of results schedule to the regulator</li> <li>b. monitoring locations, the size of particles to be measured at each location</li> <li>c. assessment methodology to be used</li> <li>d. appropriate thresholds or limits for each particle size at the agreed monitoring locations.</li> </ol>
<b>Summary of actions taken or show how this has been covered</b>
<p>As discussed in the Dust Management Plan and Ambient Air Strategy sub-section in the <i>key issues</i> section above we have assessed the Applicant's Dust Management Plan and Ambient Air Strategy.</p> <p>We are not currently satisfied with the Applicant's Ambient Air Strategy, and have therefore retained the improvement condition (IC7) that instigated the Applicant's strategy.</p> <p>It is the intention of the Environment Agency to discuss in detail the assessment methodology, and sampling locations to ensure that ambient air monitoring undertaken is robust and will provide appropriate level of information for both the Applicant and regulator.</p> <p>For further details on how we have considered the fugitive emissions, and control of fugitive emissions from the site have been considered in the context of this variation refer to the key Issues section above.</p>

## Representations from individual members of the public.

<b>Brief summary of issues raised</b>
<p>A number of individual members of the public raised concerns regarding the noise from site operations during the day and night. In these responses there were also concerns about noise due to the proposal to extend operating hours. Individual members of the public did not raise any other concerns.</p> <p>There was also a response that did not raise any concerns but offered support for the proposals.</p>
<b>Summary of actions taken or show how this has been covered</b>
<p>Prior to duly making the application the Applicant decided to remove the request to extend the operating hours of the site. As a result we ensured that all permit documents were reflected to remove all reference to the proposed extended operating hours.</p> <p>We have included the standard noise permit condition (Condition 3.4.1) into the permit these require the Applicant to ensure that emissions from the site are free from noise and vibration levels likely to cause pollution. Further to this, we have retained another standard permit condition reserved for metal recycling sites with metal shredders (Condition 3.4.2). This condition requires the Applicant to ensure that emissions from the metal shredder shall be free from sudden noise or vibration at levels likely to cause pollution outside of the site.</p> <p>We have also reviewed and assessed the Applicants Noise Impact Assessment and Noise Management Plan. The Noise Impact Assessment, submitted as part of this application, assesses the reduction noise emissions following this variation and compares it to the existing situation on site. For further details on how we have considered the Noise Impact Assessment and Noise Management Plan in the context of this variation refer to the key Issues section above.</p>