

Permitting decisions

Bespoke permit

We have decided to grant the permit for Port Clarence Biomass Processing Plant operated by Stobart Biomass Products Limited (Applicant).

The permit number is EPR/KP3031YD.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document provides a record of the decision making process. It:

- 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. The introductory note summarises what the permit covers.

Key issues of the decision

Introduction

The primary activity authorised by the permit falls under Section 5.4 Part A (1)(a)(iii) disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day within the category of pre-treatment of waste for incineration or co-incineration. The permit contains directly associated activities including storage of wood waste, discharge of surface water and package treatment plant effluent, and a waste operation for the transfer and temporary storage of processed wood chip imported via ship.

The permit allows the treatment and storage of waste wood on an impermeable surface with sealed drainage. Unprocessed waste wood will be stored externally in piles prior to being subject to treatment activities including slow speed shredding and screening. Storage of processed waste wood will then take place on the external concrete apron. Processed wood is destined for disposal at the Port Clarence Biomass Processing Site and other local biomass sites. The annual throughput of the biomass processing facility will be less than 350,000 tonnes which includes acceptance of waste for treatment onsite and the importation and storage of processed wood chip. The total storage capacity at the site is 30,000 tonnes at any one time.

The site will be operational 24 hours a day with shredding taking place no earlier than 08:00 and no later than 19:00 (14:00 at weekends). The principal releases from the site are dust and noise. There are two point source emissions to the River Tees including a discharge of surface water and any process water runoff via an interceptor, and a discharge of effluent from welfare facilities via a package wastewater treatment plant.

As the site is applying to store combustible waste there is a fire risk. A fire at the site could have a severe impact on the environment and the local communities, including sensitive receptors within 1km of the site. The Applicant was required to identify and introduce all appropriate measures to prevent a fire occurring and if a fire does occur to minimise its spread and pollution. The Applicant has done this through developing a Fire Prevention Plan (FPP) which we have technically assessed as meeting the objectives of the Environment Agency FPP Guidance. The FPP forms part of the permit and as such the Applicant is required to comply with it.

Site Location

The site is located at Port Clarence, Stockton-On-Tees, Middlesbrough. Immediately southwest of the site is the River Tees and to the northeast a railway, the A1046, residential properties, a primary school and various commercial and industrial premises. 675m to the northeast of the site are Tees and Hartlepool Foreshore and Wetlands SSSI and Teemouth and Cleveland Coast Ramsar and SPA, 400m to the west of the site is Teessaurus Park, Local Wildlife Site.

The key decisions in determining this permit are detailed below.

Fire Prevention Plan Assessment

In technically assessing an FPP we seek a proportionate approach that reflects the risks posed by the waste activity that is to be conducted. We take into account the location, and proximity to sensitive receptors.

The measures set out in the Fire Prevention Plans: Environmental Permits Guidance (November 2016) (the Guidance) have been designed to meet the following three objectives:

- minimise the likelihood of a fire happening;
- aim for a fire to be extinguished within 4 hours; and
- minimise the spread of fire within the site and to neighbouring sites.

Where a site has sensitive receptors within 1km (as this site does) we expect an operator to make adequate provision for any fire to be extinguished as quickly as possible and within 4 hours. The reason that this objective of aiming to extinguish a fire within 4 hours is so critical, is that in the majority of cases, it will

enable sheltering to be effective and therefore, the public to be protected from exposure to smoke, at levels that could have life-changing effects.

If an operator were to adopt the measures set out in the Guidance then it is reasonable to conclude that we would approve their FPP.

Alternative Measures

The Guidance makes provision for an operator to propose alternative measures rather than using those measures set out in the Guidance. The Guidance takes into account a number of interdependent factors which work together to meet the three Objectives. Therefore, if an operator wishes to deviate from the Guidance they must demonstrate that any increased risk is offset by an equivalent, or a greater decrease in risk, from some or all of the other remaining factors.

For example, if the proposal is to store waste in piles other than set out in the Guidance additional risk control factors will need to be adopted. An understanding of the interdependent factors controlling the prevention of self-combustion will need to be demonstrated and accounted for. These factors include pile dimension and volume (most critically pile height), material type, particle size, storage duration, temperature, hotspots (warm/hot material introduced into the pile) and contaminants. Each of these different factors will, depending on the circumstances, contribute to some extent to the overall risk of self-combustion.

In addition, if the waste is being stored in waste piles other than set out in the Guidance there will be further knock-on effects to the risk controls for managing the spread of fire and aiming to have a fire extinguished in four hours. These risks will need to be accounted for.

An operator will need to clearly evidence that through the use of alternative measures all three objectives of the Guidance can be met.

How we took our decision

The Applicant, in their FPP, has identified the potential risk of fire from the treatment and storage of combustible non-hazardous wastes on site. In this case, waste wood.

The FPP includes storing waste wood in piles at a maximum length and volume that will be in excess of that set out in the Guidance at 65m long, and a volume of 1,690m³.

Our assessment of the FPP is that the Applicant has proposed appropriate alternative measures and we consider that they meet the three objectives of the Guidance. The main factors, which are all interdependent, which we considered in coming to this decision for each of the Objectives are detailed below.

The Applicant intends to apply to increase the pile height to 5m once appropriate testing has been undertaken to determine measures are in place to satisfy the objectives of the Guidance. This testing should include representative isothermal calorimetry and particle size testing to determine the critical ignition temperature and estimated time to ignition. This will then inform changes that may be needed to the other interdependent factors if the objectives of the Guidance are to be continued to be met. A pile height of 5m has not been accepted as part of this permit determination. An application will need to be submitted to us and written agreement provided to change the operating techniques and/or to vary the permit. We will assess any application to vary the permit taking into account all relevant considerations and legal requirements at that time.

Objective 1 - Minimise the likelihood of a fire happening

The FPP details a number of measures that will be in place to minimise the likelihood of a fire happening.

Manage common causes of fire

The FPP shows that there are a combination of control measures in place that will reduce the risk of the common causes of fire listed in section 7 of the Guidance. To reduce the risk of arson the site has secure perimeter fencing and push walls, 24/7 security and CCTV. On site ignition sources are managed by having a member of staff conducting a fire watch for 30 minutes after machinery is used or until sufficiently cooled. No other ignition sources will be within 6m of combustible waste. All mobile plant will be fitted with fire extinguishers and stored at least 10m away from any combustible waste. All machinery and electrics will be subject to a regular maintenance schedule.

Mobile plant and processing equipment will be cleaned twice per day to clear debris and dust. The site storage and processing areas will be swept once per day to prevent the build-up of dust and loose waste. Incoming waste will be checked in accordance with the Applicant's inbound material inspection procedure for hotspots. Any contamination which represents a fire risk will be sorted, quarantined and rejected.

Pile dimension and volume

Pile dimension and volume are two of the interdependent factors that determines the risk of a fire occurring through mass self-heating leading to self-combustion; increasing the height of a pile can increase the risk of a fire occurring. This is because the larger the pile, and most critically the height of the pile, the slower the rate at which heat is lost to the surrounding environment. Therefore the risk of the waste pile self-heating leading to self-combustion (with reference to the other interdependent factors) is increased. The maximum height of all the waste wood piles on site will be 4 metres, which is in accordance with the Guidance. The other main interdependent factors which we have considered in our decision are discussed below.

Particle size distribution

Particle size is another interdependent factor which determines the risk of a fire occurring through mass self-heating. The smaller the particle size the greater the risk of self-heating and combustion. The Guidance addresses this through requiring all waste to be stored in its largest form.

The Applicant has a clear distinction of what constitutes unprocessed wood, and categorises processed wood into semi-processed, processed and fines by its particle size as detailed in their FPP.

Waste wood that arrives unprocessed will be stored on site unprocessed for as long as possible before being processed. Unprocessed wood will have a particle size of 100-3000mm. It will be stored in piles that are a maximum of 4m high, by 10m by 65m.

Waste wood will be processed using low speed shredders which produce minimal fines.

The semi-processed wood will have a particle size of 100-800mm, with <5% fines. The processed wood will have a particle size of 12-100mm, with <4% fines. The semi-processed and processed wood will be stored in piles that a maximum of 4m high, by 10m by 65m.

The wood fines (with a particle size of 0-12mm) will be stored in stockpiles with additional controls, including reduced stockpile lengths and widths. In the FPP these are categorised as short, medium and longer rotation fines. The short rotation fines will be stored for less than 3 weeks, with a maximum stockpile size of 4m high, by 10m by 12.5m. The medium rotation fines which may be stored for up to 3-6 weeks will be stored in stockpiles with a reduced length/width, of 4m high, by 6.25m by 10m. The longer rotation fines which will be stored for 6-8 weeks will be in further reduced length and width stockpiles of 4m height by 6m by 6m.

Storage Duration

Storage duration is a factor which needs consideration as the longer the waste is stored the more time it has to self-heat. The Guidance states that combustible waste must not be stored for longer than 6 months, however for particle sizes and height combinations which give rise to anything other than a low risk a corresponding reduction in storage duration must be taken account for (this is an example of interdependency).

The Applicant details that the requirement for wood to fuel biomass is fairly consistent month on month as the primary usage is for power generation and not large scale heating schemes.

The unprocessed wood will be stored for up to 3 months, and if any unprocessed wood is to be stored over 3 months (due to seasonal variations in material availability) it will be subject to a formal internal approval procedure and an increased monitoring regime.

Once the waste has been processed through the shredders/screeners, and changes particle size/category, a new target time is applied. The Applicant advises that this process releases any residual heat.

The Applicant aims to have the processed wood exported from the site within two weeks from processing, with a 6 week maximum storage duration factored into the FPP in case of power outages at the receiving biomass plant(s).

The maximum storage durations and stockpile dimensions by category are:

- unprocessed waste (stockpiles 4x10x65m/height x width x length); for 3 months.
- semi-processed and processed waste (4x10x65m/height x width x length); 6 weeks
- short rotation fines (4x10x12.5m/height x width x length); 3 weeks
- medium rotation fines (4x10x6.25m/height x width x length); 3-6 weeks
- longer rotation fines (4x6x6m/height x width x length); 6-8 weeks

No waste wood, from receipt on site to export off site, will exceed a 6 month storage time.

All wastes stockpiles will be individually identified, signposted/labelled and inventoried to allow material to be tracked through the site daily using the first-in first-out principle. This is managed through an interactive stock flow plan to ensure these storage times are not exceeded.

The storage at upstream sites, and for potential for self-heating to have commenced, has also been taken into account - see below.

Temperature

As described in this document, there are a number of interdependent factors which determine the critical temperature of a waste pile and the time to ignition. Temperature monitoring is an important factor to ensure action is taken before a waste pile reaches the critical temperature at which it self-combusts. This critical temperature will have an associated time to ignition (an interdependent factor). To effectively monitor, and take action before a waste pile self-combusts, a trigger temperature needs to be established based on the critical ignition temperature for the waste taking into account particle size and associated pile dimensions.

The Applicant has determined a generic trigger temperature at which action would be taken of 49°C. This temperature is based on the results of the testing results for the BRE Global peer review report (September 2016) for a pile size of 4x10x20m of 59°C for wood chip piles with a typical particle size of 0 - 20mm. This test identified the time to ignition for wood chip of this particle size to be 88 days in controlled conditions. To provide a safeguard, and allow for action to be taken before thermal runaway occurs, the trigger temperature to be used by the Applicant when monitoring the wood piles is based upon assigning a temperature 10°C lower than the expected critical temperature.

As the wood categorised as semi-processed and processed consists of particle sizes >12mm (as described above) the time to ignition can be expected to be longer than 88 days. As the Applicant is proposing to store wastes at no higher than 4m, and for no longer than 3 months (with additional controls put in place if waste is to be stored from 3 months up to 6 months) we have accepted this generic trigger temperature without site specific testing.

A temperature monitoring programme is required which is capable of detecting early signs of self-heating, including from hot spots which will not be uniform through the pile. The FPP details that there will be a regular monitoring regime in place.

Unprocessed stockpiles, which are unlikely to self-heat due to a large particle size, will be subject to a visual inspection every 2 hours. The critical temperature for unprocessed wood piles is difficult to determine but is likely to be above 100°C, with a significant time to ignition, so we consider visual checks to be adequate.

The piles of fines, piles of processed and semi-processed wood piles, will be subject to daily temperature monitoring using a 2m manual probe at 5m intervals along the pile.

As a pile of waste self-heats the mass of the pile will heat from the core. As the maximum width of the piles is 10m, and heat will radiate from the core, we acknowledge that self-heating, should be detected through monitoring the temperature being logged by the probe at a 2m depth. In addition, the Applicant will investigate any temperature readings that are 10°C higher than the adjacent temperature reading of that pile which may indicate a hotspot.

Hotspots

There are other mechanisms which can give rise to self-combustion, which are caused through the creation of hotspots in the waste. If a 'hotspot' or warm/hot material is introduced into the waste pile this can reduce the time to ignition to days or even hours depending on the temperature.

The action of processing wood will have a heating effect due to friction, and as a result, the waste material which has been processed can become warm. The Applicant will manage this risk through standing the waste for about 1 day following shredding, and prior to re-shredding. In addition, between each stage the material is conveyed on an open belt and this will allow heat to dissipate.

The upstream storage and transport of the waste prior to arrival on site may also introduce heat into the waste. The Applicant details that wood waste will arrive by HGV and ship. If it arrives by ship it will only be in the hold for 1-2 days. This waste will have been fully rotated twice via the loading and unloading process which will dissipate heat.

Contaminants

The presence of contaminants in a waste pile can increase the risk of self-combustion. The Applicant will manage the risk of contaminants in the inbound waste through an inbound material inspection procedures. Any non-confirming material will be sent to the quarantine area and removed from the site.

Objective conclusion

We have concluded that the Applicant has demonstrated that they have alternative measures that can meet the objective to minimise the likelihood of a fire happening.

Objective 2 - Aim for a fire to be extinguished within 4 hours

The FPP details a number of measures that will be in place to aim for a fire to be extinguished within 4 hours.

Detection

To meet the objective of aiming for a fire to be extinguished within four hours it is important that the fire is detected quickly. On detection, immediate steps must be taken in the first hour of the incident to ensure the waste volume is brought down to a quantity that can be readily extinguished in 4 hours with the resources available.

The measures in place to monitor and detect fire, and the immediate steps the Applicant will take are as described in this document.

Pile volumes and dimensions

The maximum length and volume of the largest wood piles referenced in the FPP are larger than those in the Guidance. In the event of a fire larger stockpiles will be more challenging to manage and extinguish. The Applicant will manage the additional risk posed by piles of up to 1,690m³ and 65m long through isolating the area on fire to form a pile of 250m³. See section below for more detail.

Incident response

A rapid incident response is essential to meet the objective of aiming for a fire to be extinguished within four hours.

The FPP details that on detection of the fire, in order to isolate the area on fire to the manageable pile size, there will be sufficient and appropriate plant and personnel readily available to quickly decant unburnt wastes into the quarantine area.

The FPP details that there will be four trained staff on site at all times (including out of hours) to operate the fire tender and at least two shovel loaders fitted with 11.5m³ buckets. It will take around 2 minutes to get crew to the fire tender, 2 minutes to get to the scene of the fire and begin to apply the extinguishing media and 20 minutes to cut a fire break through a pile (at least 6m wide) with the material removed to the quarantine area(s).

The Applicant has conducted an exercise to determine that a single loading shovel can remove over 150m³ of material within 20minutes, and therefore with the two shovel loaders they could move 50% of the largest pile in an hour.

The FPP details that additional on-call staff will be on site within 45 minutes. These proposals demonstrate that our recommended 1 hour lead time before a fire has fully developed can be met.

Quarantine area

The quarantine area is an important provision to enable a fire to be actively fought and to be extinguished within four hours. The Guidance details that the quarantine area should be capable of taking at least 50% of the largest pile, and to be within the permitted boundary of the site. It needs to be kept free and available at all times, and it needs to be readily accessible from all parts of the site so that waste can be decanted to it quickly as soon as a fire is detected.

The site has two identified quarantine areas located within the site boundary. One 8m x 20m (160m²) and the other is 10m x 42m (420m²). Therefore, these are of sufficient size to contain 50% of the largest pile (calculated from the largest stockpile $10 \times 65m / 2 = 325m^2$).

The FPP details that depending on operational requirements the location of the sites quarantine areas may change, however the Applicant will ensure suitable quarantine areas will be available at all times for the quick delivery of material from the waste piles should a fire be detected. Therefore, we are satisfied that in the event of a worst case scenario, where the largest pile is burning, there will be sufficient quarantine area(s) for the rapid deposit of waste and to aim for the fire to be out in four hours.

Water supply availability for active firefighting

In order to successfully extinguish a fire within four hours, water at a rate of 2,000 litres per minute must be available for a worst case scenario. As per the Guidance the worst case scenario is the largest waste pile catching fire. There must be sufficient containment for the run-off from fire water and to prevent pollution.

The largest waste pile is 1,690m³. A pile this size would need a water supply of 11,264 litres per minute or 2,027,520 litres over 3 hours. The site has access to a water supply of 1,000 litres per minute from each of five fire hydrants which are strategically located around the site (5,000 litres per minute in total). Based on the Guidance this is not enough water to extinguish a worst case scenario being the 1,690m³ pile.

Part of the Applicants fire strategy involves isolating the burning section of the pile to a volume of 250m³ using mobile plant, as described above. This reduces the volume of water required. Based on the calculation in section 16 of the Guidance, for a 250m³ burning waste pile, 300,000 litres of water will be needed to extinguish a pile of this size. These five fire hydrants could be utilised by the Fire and Rescue Service to supply this rate of water.

There is also a potential supply of water available to the fire service from the River Tees. The Applicant will also have firefighting provisions through the use of an on-site fire tender which can supply 12,000 litres of water, and 2,000 litres of Aqueous Fire Fighting Foam (AFFF). Trained staff will be able to apply a water/foam mixture from the fire tender to cool and smother the fire.

We are informed that AFFF is suitable for woodchip fires. To date we have not been provided with any evidence as to the efficacy of using foam, neither on a surface fire (where smothering may be possible) or a deep-seated smouldering one in a pile of 250m³ of waste wood. However, we consider there to be sufficient resources and water supply, in addition to the foam, to fight a fire and aim for it to be extinguished within 4 hours.

In the event of a fire, the FPP details that the site has capacity to contain 1,127,000 litres of firewater on site.

Objective conclusion

We have concluded that the Applicant has demonstrated that they have alternative measures that can meet the objective of aiming for a fire to be extinguished within 4 hours.

Objective 3 - Minimise the spread of fire within the site and to neighbouring sites

The FPP details a number of measures that will be in place to minimise the spread of fire within the site and to neighbouring sites.

Quarantine area

The rapid and effective use of a quarantine area is essential to the aim for extinguishing a fire within 4 hours and to prevent fire spreading on the site or to neighbouring sites. The Applicant has advised that they can decant sufficient material to the quarantine area at the start of any incident as detailed in this document.

Separation distances

Separation distances provide a physical barrier to minimise fire spread. A separation distance of 6m is set out in the Guidance which has been determined as being the appropriate distance to prevent fire spread for waste stored in accordance with the measures set out in the Guidance. As the waste is being stored on site at a height, and width, in accordance with the Guidance the 6m separation distances are considered appropriate when used in conjunction with the quarantine area.

The separation distances are also to facilitate access, and to enable active firefighting to take place from all sides of the pile, or row. It is designed to provide a small window of time (likely to be less than one hour) at the start of an incident, before the fire has fully developed, during which unburnt or burning waste can be quickly and effectively moved into the quarantine area. As detailed above, on detection of a fire, the Applicant will have trained staff and equipment available to install firebreaks in the pile, and remove unburnt material to the designated quarantine areas to allow for isolation of burning wastes to prevent fire spread.

We have considered the separation distances for 4m high piles and are satisfied that the measures in place will reduce the spread of fire in combination with other alternative measures for minimising the spread of fire as detailed in this document.

Objective conclusion

We have concluded that the Applicant has demonstrated that they have alternative measures that can meet the objective of preventing the spread of fire.

Overall conclusion on the Fire Prevention Plan

For the reasons set out above we are satisfied that the objectives of the Guidance can be met.

Dust Management

The Applicant has identified the potential risk of dust emissions from the installation due to the nature of the treatment activities on site. To manage the risk of impact on nearby receptors, the Applicant has proposed the following measures through their Dust and Particulate Emission Management Plan (version 2):

- Road deliveries of waste wood will be delivered to the site using lorries fitted with bulk walking floor transporters avoiding high level tipping.
- The offloading of processed waste wood from ship deliveries will be managed by a contractor with an additional dust management plan with the primary abatement measure being water cannons.
- The site is fully concreted throughout making the site easier to clean. There will be no unmade ground (rocky or permeable surfaces). This should reduce the amount of dust and particulates generated at ground level.
- Daily site sweeping (in dry conditions) using sweepers equipped with water sprays.
- On site vehicle speeds on the haul roads are restricted to 5 mph.
- Dust suppression will comprise of; 3 mobile mast spraying systems, a mobile bowser with movable splash plate, integral dust suppression misting nozzles on the slow-speed shredder hopper (for incoming wood) and sprays in the shredder chamber as the shredded material exits the plant, 4 powerful water cannons will also be located at the quayside and the processing area.

- Screens/conveyors will be fitted with covers/chutes to remove the possibility of wind catching the dust from the screens/conveyors. Particulates will be collected in a container.
- The Applicant has committed to supplying any additional dust suppression within 24 hours should the existing equipment on site not be sufficient in controlling dust. In addition, operations will cease until the appropriate level of dust suppression is in place on site.
- The overarching contingency measures to control dust on site should the above control measures not be effective as significant emissions of dust are detected beyond the boundary of the site is to cease operations until the process can be brought back under control.
- An on-site weather station will enable the pre-emptive mobilisation of suppression kit to prevent dust migrating from the site boundary.
- Visual monitoring of dust will be carried out daily, taking account of the higher risk processes. The trigger for implementing targeted control measures or contingency measures will be the observation of visible dust plumes with the potential for migration beyond the site boundary.

The Applicant has defined each possible source of dust and has identified specific trigger levels which cause the Applicant to perform one or several of the control measures specified above.

We have assessed the Applicant's proposals for managing the risk of dust emissions in line with the requirements of our guidance and are satisfied that the measures represent Best Available Techniques.

Suspended particulate matter emissions (PM₁₀ and total suspended particulates (TSP)) monitoring

Due to the sensitive nature of the site we have set out requirements for the Applicant to monitor concentrations of particulate matter suspended in the air (PM₁₀ and TSP emissions) in order to ensure that unacceptable emissions are not emitted beyond the site boundary. The Environment Agency and the Applicant do not agree on the level of potential particulate emissions which can be emitted from this process. Therefore, we have required that the Applicant undertake continuous monitoring of PM₁₀ and TSP to ascertain representative results of emissions. As we cannot fundamentally prove at this stage the extent of dust emissions, continuous dust monitoring is an important approach in accurately recording intermittent dust sources. This is in line with the requirements of the Environment Agency's guidance, *M17. Monitoring Ambient Air around Waste Facilities* and *M8. Monitoring Ambient Air*.

The improvement condition (IP3) requires the Applicant within 1 month of commencing operation to produce and implement a monitoring strategy which shall take place over a temporary period of 12 months. This period is necessary in demonstrating that abatement techniques have been effective at minimising the concentration of suspended particulate matter escaping the site boundary.

The monitoring strategy shall:

- Include 12 months of real time monitoring data to cover a range of climatic conditions and operating scenarios to be experienced during the monitoring period.
- It will enable the collection of a statistically representative set of data.
- It will allow the Applicant to review and improve abatement systems (if emissions are found) and to demonstrate whether or not the activities will have the potential to impact on adjacent and nearby receptors.
- We will be able to make a robust, evidence based decision on the potential impact of dust and particulate emissions and whether further dust suppression measures should be in place.

In order to produce a strategy in line with the above guidance documents (*M8* and *M17*), IP3 requires the Applicant to demonstrate how the monitoring techniques, personnel and equipment meet the Environment Agency's MECERTS standard, *Performance Standards for Indicative Ambient Particulate Monitors*. The strategy will also need to determine action levels for PM₁₀ and TSP concentrations so if the level is exceeded the Applicant can review activities to prevent the action level from being breached in future.

Noise assessment

The Applicant has identified the potential risk of noise emissions from the installation due to the physical nature of the treatment activities on site and carried out a noise impact assessment following BS 4142:2014 methodology. We have audited the Applicant's assessment and from our sensitivity modelling, we expect that, subject to the operational and mitigation measures outlined in the Applicant's report being achieved, the impact should be acceptable. To manage the risk of impact on nearby receptors, the Applicant has proposed the following measures:

- The shredding plant will typically be operated to the south of the site away from sensitive receptors.
- 6m push walls will be erected around the site perimeter to contribute to noise attenuation.
- Tipping of waste will be from low level bulk walking floor transporters. There will be no high level tipping.
- Given the industrial and commercial context, noise throughout the day should not be distinguishable for most of the day but may be more noticeable in the early morning and early evening. Therefore, the shredding equipment will not be used before 08:00 and where possible after 19:00.

On this basis, we have assessed the Applicant's proposals for managing the risk of noise emissions in line with the requirements of our guidance and are satisfied in principal that the measures represent Best Available Techniques.

In order to further determine that there will be no increase in noise levels, we have imposed an improvement programme (IP1) which requires the Applicant to reassess the new sources of noise from the site and to provide the Environment Agency with a report showing the findings of the assessment. Should the revised noise assessment show an adverse impact then the Applicant shall include in their revised noise assessment proposals for further mitigation, timescales for further implementation and evidence that further mitigation will reduce noise impacts to acceptable levels (IP2).

Emissions to water

All processing and storage areas within the boundary of the site are constructed of impermeable concrete hardstanding with a sealed drainage system. The drainage system comprises drainage channels which will direct run-off towards collection chambers and interceptors and controlled discharge to the River Tees at release point W1. No particulates, solid contaminants or trace hydrocarbon materials are permitted to be discharged.

Effluent arising from the onsite welfare facilities will be discharged at release point W2 following treatment at the onsite package wastewater treatment plant. This emission will be less than 5 cubic meters per day and is therefore covered by General Binding Rules for Small Sewer Discharges. No further assessment is required.

The site has the potential to drain firewater to a Northumbrian Water sewer. The Applicant has not yet gained permission to discharge site surface waters to the foul sewer. The Applicant will need this discharge consent before any discharges are made. Until this happens the site is designed to contain all surface water and in the event of a fire any unused firewater will be pumped away using vacuum tanker and disposed at a suitable facility.

We have assessed the Applicant's proposals for managing the risk from surface water in line with the requirements of our guidance and are satisfied in principal that the measures represent Best Available Techniques.

Decision checklist

Aspect considered	Decision
Receipt of application	
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.
Consultation	
Consultation	<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 consulted the following organisations:</p> <ul style="list-style-type: none"> • Public Health England and The Director of Public Health • Northumberland Water • The Health & Safety Executive • Stockton-on-Tees Borough Council • Cleveland Fire Brigade <p>The comments and our responses are summarised in the consultation section.</p>
Operator	
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.
The facility	
The regulated facility	<p>We considered the extent and nature of the facility at the site in accordance with RGN 2 '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', guidance on waste recovery plans and permits.</p> <p>We consider that the importation and storage of processed wood chip does not form part of the description of a listed activity, this could also be an independent activity. Therefore, we have included this in the permit as a waste activity.</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>
The site	
Extent of the site of the facility	The operator has provided a plan which we consider to be satisfactory, showing the extent of the site of the. The plan is included in the permit.

Aspect considered	Decision
Site condition report	The operator has provided a description of the condition of the site, 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.
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> <p>We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.</p>
Environmental risk assessment	
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>The assessment shows that, applying the conservative criteria in our guidance on environmental risk assessment, all emissions may be categorised as environmentally insignificant with the exception of dust and particulate emissions. Measures to control dust and particulate emissions and monitoring requirements are discussed within the key issues section.</p>
Operating techniques	
General operating techniques	<p>We have reviewed the techniques used by the operator 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>
Noise management	<p>We have reviewed the noise management plan and noise assessment in accordance with our guidance on noise assessment and control.</p> <p>We consider that the activities carried out at the site have the potential to cause noise and/or vibration that might cause pollution outside the site and consider it appropriate to impose specific measures. See key issues for more information.</p>
Fire prevention plan	The plan sets out alternative measures that we consider meet the objectives of the Fire Prevention Plan guidance. See key issues for more information.

Aspect considered	Decision
Permit conditions	
Waste types	<p>We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.</p> <p>We are satisfied that the operator can accept these wastes for the following reasons:</p> <ul style="list-style-type: none"> • they are suitable for the proposed activities • the proposed infrastructure is appropriate • the environmental risk assessment is acceptable.
Improvement programme	<p>Based on the information on the application, we consider that we need to impose an improvement programme.</p> <p>See key issues for more information.</p>
Emission limits	<p>We have decided that emission limits are not required in the permit.</p>
Monitoring	<p>We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.</p> <p>These monitoring requirements have been imposed in order to ensure the operator prevents unacceptable emissions of PM₁₀. It is comprised of a temporary 12 months monitoring trial with scope to implement a permanent agreed monitoring regime. See key issues for more information.</p> <p>The improvement condition requiring this monitoring regime will require that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate.</p>
Reporting	<p>We have specified reporting in the permit.</p> <p>The reporting period will be agreed with the Environment Agency upon completion of IP3.</p>
Operator competence	
Management system	<p>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.</p> <p>The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.</p>
Technical competence	<p>Technical competence is required for activities permitted.</p> <p>The operator is a member of an agreed scheme.</p> <p>We are satisfied that the operator is technically competent.</p>
Relevant convictions	<p>The Case Management System and National Enforcement Database have been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.</p>

Aspect considered	Decision
Financial competence	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.
Growth duty	
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 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.</p>

Consultation

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

Responses from organisations listed in the consultation section

Response received from
Cleveland Fire Brigade
Brief summary of issues raised
None
Summary of actions taken or show how this has been covered
No further action

Response received from
Northumbrian Water Limited
Brief summary of issues raised
The proposal to divert all firewater to sewer is not supported, the fire prevention plan should be amended to reflect this.
Summary of actions taken or show how this has been covered
Until consent can be obtained all firewater will be tankered away to a suitable facility. The fire prevention plan has been amended to reflect this.

Response received from
Public Health England
Brief summary of issues raised
The main emissions of potential concern are fugitive emissions of dust to air, emissions to surface water and noise. The Applicant proposes controls such that residual impacts should not be significant to public health. Based on the information contained in the application supplied to us, Public Health England has no significant concerns regarding the risk to the health of the local population from the installation.
Summary of actions taken or show how this has been covered
The permit includes standard amenity conditions for noise, fugitive emissions, odour and fire prevention. These conditions require the operator to not cause pollution outside of the permit boundary. The operating techniques include an approved dust and particulate emissions management plan and fire prevention plan.

Stockton-On-Tees Borough Council and the Health and Safety Executive were also consulted but no response was received.

Representations from individual members of the public

Brief summary of issues raised
No responses were submitted
Summary of actions taken or show how this has been covered
No responses were submitted