NOISE MANAGEMENT PLAN
&
DEFLAGRATION MANAGEMENT PLAN

Installation and Waste Operation Metal Recycling

At

Harrimans Lane Dunkirk Nottingham NG7 2SD

NOISE MANAGEMENT PLAN & DEFLAGRATION MANAGEMENT PLAN

Donald Ward Limited, Harrimans Lane, Dunkirk, Nottingham, NG7 2SD

Who is the plan for?

The Noise Management Plan (NMP) and Deflagration Management Plan is provided to regulators if specifically required for permitting, or as required via any alleged nuisance investigations – including the Environment Agency and Nottingham City Council.

All site operatives and contractors so far as it relates to their work on site, will be made aware of the NMP. Please see training section for more detail.

The first section of this document refers specifically to general noise management. At the end of the report is the specific deflagration management plan.

Maintenance and Review of plan

Site Management team have overall responsibility for the maintenance and review of the plan and advice shall be sought from Senior Management and the Environment and Sustainability Team. The NMP and Deflagration Management Plan shall be reviewed if there are significant changes to operational practices. Changes to the plan are communicated to site operatives and contractors, the Environment Agency and Nottingham City Council as required.

Operations

The site is a metal shredder site. It undertakes a range of waste management activities including;

- Storage and treatment of ferrous and non-ferrous metals;
- Storage and treatment of general mixed scrap metal;
- Storage and treatment of Waste Electrical and Electronic Equipment (WEEE);
- Storage and Treatment of End of Life Vehicles.

Treatment activities include depollution of ELVs, sorting, dismantling, grading, shearing, baling, separation , crushing and cutting. These activities are carried out with the aid of mechanical plant such as shear, baler, ELV depollution rig, smaller hand operated equipment, oxy-propane cutting equipment and mobile plant. The site also pre-treats WEEE. The site also has a pre-shredder and shredder.

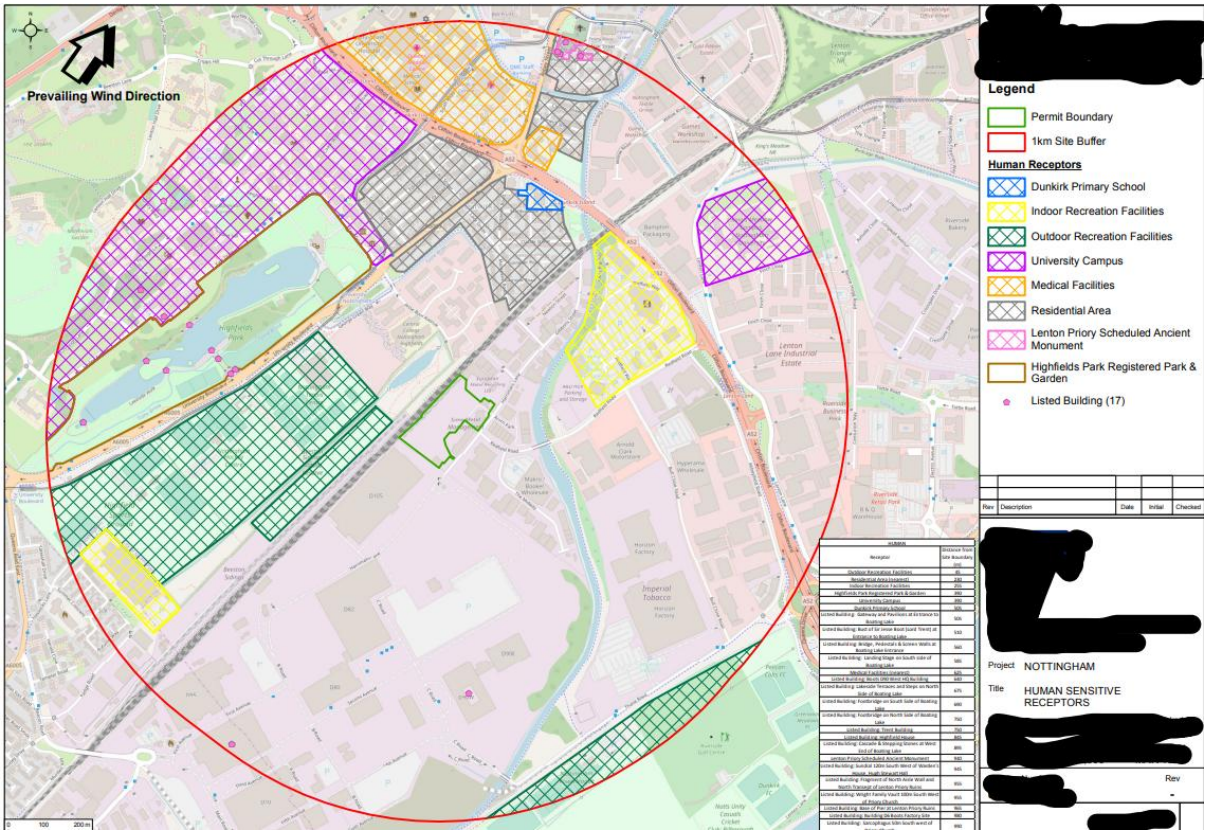
Noise generating activities [below details give examples of what to include]

- Pre Shredder: The site has a pre-shredder, Lindemann pre-shredder ETARIP, 250KW electric operated, continuous operation, 110 tonnes per hr (1540 tonnes per day based on 14 hr operation) capacity.
- Shredder: Consists of one dry process (with water injection) hammer mill fragmentiser, Texas 98/104 NG 4000HP electric operated, continuous operation, 125 tonnes per hr (3000 tonnes per day based on 24 hr operation) capacity.
- Movement of metals using mobile plant including Loading Shovels, 360 Material Scrap Handlers, Telehandlers, ForkLift Trucks and Bob Cats.
- ELV treatment
- Container tilter

Noise Sensitive Receptors

The nearest 'noise sensitive receptors' (NSRs) to the facility are shown in the plan below which highlights different receptor types within 1km radius of the site:

- Outside Recreation Facilities located approximately 50 metres from the site. A main rail line is located between these facilities and the site.
- Residential area located approximately 150 metres from the site with the main rail line located between.



Minimising Noise Impact & Best Available Techniques (BAT)

Best Available Techniques (BAT) to minimise noise emissions from the Facility are employed through handling of materials and training.

General 'best practice' techniques are followed as summarised below.

General

No limitations are imposed upon the hours of operation by the planning consent. The Company in normal circumstances operates during normal working day hours. However, due to some operational requirements, in particular to ensure that the plant is working to its maximum capacity and efficiency, the site is manned and operated to accept and process waste, carry out maintenance and services as and when necessary.

Management Procedures

- Ward contact details are readily available to neighbouring residents. Neighbours are encouraged to contact site directly to discuss any concerns they may have. Nottingham City Council (the Local Authority) / the Environment Agency (EA) are authorised to advise any complainants of this fact and provide Ward contact details.
- The site office contact details (postal address and telephone number) are available on the site identification board at the site entrance, the Ward company website and business listing services, and internet search engines.
- Any complaints received direct to site or via the Environment Agency or Nottingham City Council are recorded as a complaint on the My Compliance Non-Conformance module, investigated and responded to in accordance with the complaint's procedure.
- Ward undertakes proactive and responsive communications with third party hauliers / site users, which includes information about restricted times for delivery and collections and asks for consideration of the neighbours when accessing and egressing site.
- Noise awareness signs are visible in the Material Scrap Handler (MSH) cabs.
- Control and monitoring of waste acceptance procedures ensures wastes likely to cause explosions are minimised through signage, inspection of paperwork and inspection of loads at numerous points during acceptance, storage handling and processing. Any wastes with explosion potential are removed to the quarantine area.
- Significant changes to operational practices are subject to discussions and to investigation to assess their potential impact on the noise environment. Operational changes are defined as a significant change to plant type, a change to storage / treatment location of waste or a significant change to waste handling procedure.

Materials Handling (General best practices)

- Drop heights, the distance between the grab and the stockpile 'the drop' (deliveries and products) are kept to the practical minimum in line with company best practice (i.e. grab will lower materials onto stockpiles and into containers). Casting is prohibited and piles stacked securely to prevent falling loose material. See Plant / Equipment / Vehicles section for more information on scrap handling associated with specific items of plant.
- When moving grab loads of material around site, operators ensure that the grab only collects enough material that can be easily contained within the grab as material is transported around the site. FLT operators ensure the load is stable before moving. This reduces the likelihood that material is dropped.
- If the ground needs to be swept, a forklift with brush attachment is used. The MSH magnet attachment can be used to clear up ferrous scrap debris. A ball of wire may be used to sweep. Ward will avoid scraping as a method of housekeeping.

Scrap is tipped close to storage and or treatment areas so that double handling of scrap is avoided wherever possible. It is considered best practice to minimise the number of times scrap has to be handled to minimise noise from the handling and use of plant for the handling, but also from a resource and process efficiency perspective.

Plant / Equipment / Vehicles

- All plant within the control of Ward and subcontractors is to 'industrial standard' as used in the material handling sectors and is inspected and maintained to manufacturers' specification.
- Ward arctic lorries are fitted with Broadband (white noise) reversing alarms to eliminate any noise associated with conventional safety alert systems. Third party lorries accessing the site may use tonal reversing alarms. The site has no control over these and, as such, this is not considered an issue that BAT can address.

- Revving of engines is kept to an operational minimum and idling plant will be switched off when not in use where practicable.

General Maintenance of plant / equipment / vehicles

- Faulty or poorly maintained equipment could give rise to excessive noise e.g., poorly lubricated hydraulic ram could screech. All items of plant and equipment are subject to a strict maintenance routine, in accordance with the manufacturers' guidelines, to ensure that they are free from mechanical and/or electrical faults, which could give rise to excessive noise levels.
- All items of plant and equipment are subject to routine inspection to ensure that:
    - they are in a good state of repair; and
    - that all maintenance and repairs are being undertaken by a suitably trained or appropriately qualified person.
- All inspection and testing is recorded.
- When equipment needs to be replaced, considerations are made to actively choose more efficient and quieter equipment, i.e. with preference for electrical equipment rather than diesel powered, where reasonably practicable.

Specific controls by item of plant

Fixed Plant

A pre-shredder has been installed. This machine processes baled materials and depolluted ELVs before they enter the shredder, greatly reducing the possibility of sudden noise events from deflagrations.

A sight barrier / acoustic wall is located along the northern side behind the fragmentation plant. Whilst primarily designed to mask the operation from the rail boundary, this barrier also has some noise limiting effect.

Plans to enclose the shredder plant in an acoustic enclosure are being considered. Plans for installation TBC.

ELV Depollution Equipment

This plant is used to depollute ELV's and involves the manual removal (assisted by mechanical tools) of specified components / fluids from the ELV prior to shredding and subsequent removal from site. The manual removal of fluids / components takes place in a building in the southern part of the site. The open front of the building faces into the yard and is not oriented towards the NSR's. The noise associated with ELV depollution is principally associated with the movement of the ELV's to the ELV rig and subsequently to storage / for baling following depollution.

OTHER PLANT

Container Tilter

- This plant is used to invert containers, so they can be loaded with scrap using a Material Scrap Handler (MSH). The container is loaded onto the tilter frame by the articulated vehicle. The tilter is powered by an engine which raises the frame, inverting the container by up to 90 degrees. The container is loaded in this position and then lowered. The noise associated with the engine is restricted to the few minutes it takes to invert at the start of the process and lower at the end. However, if the container is overloaded, an alarm will sound which may cause noise and disturbance.

- The container tilter is located in the middle part of the site.
- When moving grab loads of scrap to the tilter, the MSH operators ensure that the grab only collects enough material that can be easily contained within the grab. This reduces the likelihood that material is dropped.
- The MSH operator lowers the scrap metal and places it carefully in the container. This minimises noise and is required also to prevent damage to the container.
- The container tilter is typically used to load containers with steel scrap.

MOBILE PLANT

Material Scrap Handlers (MSH) – Grab Attachment

- These MSH all have grab attachments that are used to pick up (grab) scrap metal.
- When loading vehicles (e.g. skips / bulkers), the MSH operatives use the grab to place scrap. The grab is lowered into skip / bulker as far as it can go before scrap released. This minimises drop height and the potential for reverberation in empty skip / bulker. This process is repeated until there is a full layer of scrap in the bulker / skip, known as bedding out the lorry. Process repeated until vehicle is loaded.
- Care is taken when handling heavy items (e.g. oversize for cutting) to lower and carefully release them to avoid causing a thud.
- MSH Operators are trained to operate with care so that the tips of the grab (the tines) don't clank together when the grab is closed.
- When the grab is not in use to move scrap, the tines do not typically come together. The tines are brought together when the grab is closed for placement on top of scrap to push it down into the bulker. This movement is controlled manually by operators who close the tines slowly to minimise risk generating an impulsive sound associated with abrupt closing of tines making contact with each other.
- We have investigated the potential for any mitigation measures that can be fitted to grab arms to prevent/minimise metal contact sound e.g. when the tines come together. The manufacturer advised it was not practicable as any rubber coatings put on the tines would have a very limited lifespan due to wear and tear, with estimated replacements required hourly. This is not practicable and therefore not considered to be BAT.
- When not in use, the grab is lowered carefully to the floor with the tines in the open position.

Material Scrap Handler (MSH) – Magnet Attachment

- This MSH has a magnet rather than a grab attachment for picking up scrap metal. The magnet itself is a flat plate on chains so has no moving parts that could clank together and does not generate impulsive noises.
- This plant is used infrequently for loading profile and discs. When in use, as with the grabs, the MSH operator lowers the magnet with scrap to the bed of the skip before the scrap is released.
- When loading discs and profile with the magnet, the skip is lowered to the ground and on the ground when loading, this reduces the noise generated from the bedding out process.

Fork Lift Trucks (FLTs) (including Telehandlers and Bob Cats) and Loading Shovels

- FLT's are used only on even surfaces and at low speed. This minimises potential for noise generated by driving over bumpy surfaces.
- Operators take care to ensure the load is secure / stable on the forks / in the clamp before proceeding. The forks are placed all the way through the bin and the bin fully supported on the forks and at rest against the mast. This minimises risk of noise being generated from bouncing of empty bins on the forks or up against the mast.

- Bob Cats are used for cleaning and maintenance around the site
- Loading Shovels, for moving heavier items and stockpile management.

Monitoring

- The day-to-day monitoring of the noise from activities on site is via the daily site inspections undertaken by the site manager or nominated representative. For example:
    - monitor hours of operation versus those specified in the plan,
    - monitor that mobile and static plant is inspected / monitored daily before use, throughout operation and routinely as required by manufacturer for wear and tear / things that may give rise to avoidable noise emissions and maintained as required.
    - monitor scrap handling techniques versus those specified in the NMP and verbal reminders of best practice provided at the time if operational procedures are not in accordance with best practice, undertake refresher TBT where necessary.
- Observations with regard the working environment will be recorded in the daily QHSE checks on My Compliance Audits module. Any noises identified to be abnormal are investigated without delay and the necessary plant and machinery maintenance undertaken to resolve the source of the noise.

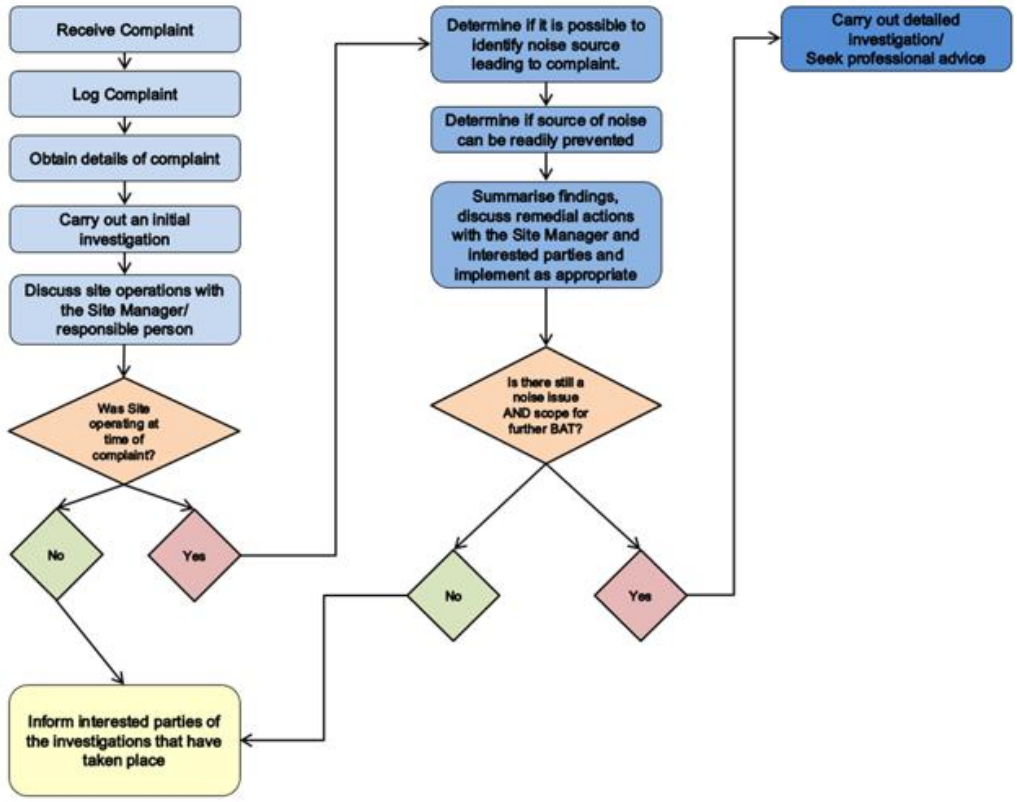
Training

- All relevant employees have been comprehensively trained in respect of the use of the plant and machinery associated with the loading, handling and treatment activities.
- The Plan is issued to site operatives and is available in the weighbridge to all Ward employees for reference.
- Toolbox Talks (TBT) are used to communicate the policies and plans and are a record of training.
- All contractors are aware of the details of the plan so far as it relates to their work. This will be discussed at contractor induction / when completing permits to work and reviewed by site management or nominated representative at intervals during the work.
- Operational feedback is communicated to site employees at regular morning meetings and quarterly QHSE meetings if earlier notice or discussion is not required. The site manager discusses the plan with operatives as required, daily at morning meetings.

Noise Complaints Investigation Procedure

In the event of noise complaint being received by, either by residents or regulators, the complaint will be logged on the My Compliance Non-Conformance database for investigation. This shall be undertaken without unreasonable delay, to confirm that noise from the Ward facility do not give rise to significant levels of noise at nearby residential NSRs.

The noise complaint investigation procedure (NCIP) to be followed is set out below.



The NCIP will be followed to ensure that appropriate action is taken to identify and resolve the cause of the complaint.

Where site staff are unable to complete investigations to an appropriate technical level, a competent person (i.e. qualified educationally in acoustics or one with an appropriate period of experience in acoustics in lieu of such qualification and who is a member of the IOA) shall investigate the cause of the complaint and recommend remedial action.

Following completion of NCIP the following actions shall be undertaken:

- where the NCIP identifies that the complaint is not attributable to site operations, Ward operators will liaise with regulators to discuss findings;
- where the NCIP identifies that the complaint is justified and applicable to Ward operations, and identifies further BAT to apply at the Ward facility, Ward will liaise with regulators to agree timescales for implementation; and
- where NCIP identifies that complaint is justified, but the Ward facility is operating according to BAT, Ward will liaise with regulators to discuss findings.

DEFLAGRATION MANAGEMENT

This part of the plan is used to prevent, or where not practicable to reduce the likelihood of deflagrations and thereby to reduce emissions associated with deflagration events.

The deflagration reduction plan designed to implement measures to prevent deflagrations. The key to this is the Waste Acceptance and Inspection Procedure and Bale Supplier Management and Bale Inspection Procedure which ensures wastes are appropriately sourced, described and inspected, and the pre-shredder.

Waste acceptance and inspection

Waste acceptance procedures are detailed in the operating techniques and the waste acceptance procedure. These explain the pre-acceptance measures to ensure wastes are appropriately sourced, waste acceptance measures to check wastes meet descriptions, and inspection procedures to verify and / or quarantine any non-conforming items.

Any dangerous items such as gas cylinders and undepolluted ELVs are removed to quarantine as detailed in waste acceptance procedure and there is a procedure to report back to commercial / supplier to prevent recurrence – see recording / reporting section below for more details.

Pre-shredder

The pre-shredder is located upstream of the main shredder and pre-treats material prior to shredding to minimize risk of deflagrations in the main shredder. The pre-shredder is a hydraulically driven, high torque, low speed machine which uses a slicing action to tear / cut open automotive baled material without generating sources of ignition.

All depolluted ELV, flattened / logged and baled ELV scrap, plus ELV depolluted on site will be fed into a pre-shredder machine to reduce the risk of deflagrations/ energy releases.

Responding to deflagration events

This part of the plan is used to respond to deflagration incidents:

Immediately following a deflagration, the shredder operator is contacted via radio / phone to check they are OK.

Simultaneously, the process starts to:
• check plant for signs of fire. This is completed from outside guarding as shredder will still be running; and
• stop infeed conveyor to prevent further material being fed into shredder whilst inspection is taking place.

If fires are detected, the response is to:
• Flood the mill and conveyors using the deluge system.
• Deploy firefighting resources if required and contact the emergency controller. Note shredder rotor would be stopped if fires require access. Stopping rotors allows access to area protected by interlock.

Subsequently and before recommencing shredding:
• visual inspection of shredder guarding / curtains, this may take place from outside the interlock guarding if the deflagration was low energy.
• if deflagration was a large release of energy, the shredder rotor will be stopped so the plant can be closely inspected for damage. Stopping rotors allows access to area protected by interlock.

If any issues are noted with guarding or if visually damaged, the shredder is shut down and thoroughly inspected and repaired before recommencing.

An investigation is carried out to identify the source of the waste being shredded to identify the supplier and communicate to them to prevent reoccurrence. See recording and reporting for details.

Recording and reporting deflagration events

This part of the plan is used to record the events in the MyCompliance, and report to the suppliers to prevent reoccurrence, and to report to the regulator.

Deflagrations are recorded real time by the fragmentiser operator on the system as a delay occurrence/ energy release. A further record is made rating the energy release 1 – 10, listing the type of waste that caused the deflagration and naming the supplier of the waste.

Deflagrations are recorded via MyCompliance. This records the event and its investigation, actions taken and remedies. It facilitates a review historical data.

Knowledge is shared with commercial and suppliers via the non-conforming waste reporting procedure as detailed in the waste acceptance procedure, where the supplier is contacted to inform that their waste caused an event and to obtain feedback regarding measures taken to prevent a recurrence. The non-conforming waste template is used for this purpose.

Reporting to the regulator

Site will inform the Environment Agency when there has been a deflagration / energy release on site via email to the Regulated Industry team - RegulatedIndustryDNL@environment-agency.gov.uk

Recording of deflagration prevention log

Finally, a record is made of any orphaned gas cylinders, LPG tanks or sealed cylinders that are identified and removed prior to fragmentising as a record of potential deflagrations prevented.

Where these are identified at the initial waste acceptance/ inspection stages, it is possible to identify the supplier, the waste is photographed and the supplier is named on the log and contacted to inform and prevent a recurrence, again using the non-conforming waste template.

Where these items are found but the supplier cannot be identified they are recorded as ‘supplier not identified’ and the waste inspection process is revisited with site operatives to ensure it is robust.

End of plan.