

Introduction

Noise impact Assessment (NIA) commissioned by TWMA (317692 TWMA Environmental Permit Noise Impact Assessment (2.0, 18 Dec 25)) concluded a noise reduction of up to 11dB at the closest receptors achieved. The BS 4142 assessment indicates significant noise impact upon closest sensitive receptors is still felt.

The NIA states the “large bank of cooling fans located to the west of the repurposed building are the dominant noise source” and “bin washing activities are to be re-sited to the western side of the site, which would allow the existing tank farm to act as a barrier and therefore the level of impact upon the receptors to the north may reduce. In addition, there are plans to replace the slops reception box which may provide further attenuation.”

TWMA have reviewed the NIA and its recommendations and assigned a Design Engineer to undertake a site reconnaissance and propose an action plan.

Noise contour plot from the NIA (317692 TWMA Environmental Permit Noise Impact Assessment (2.0, 18 Dec 25)) demonstrates attenuation properties of existing site infrastructure and areas for improvement.

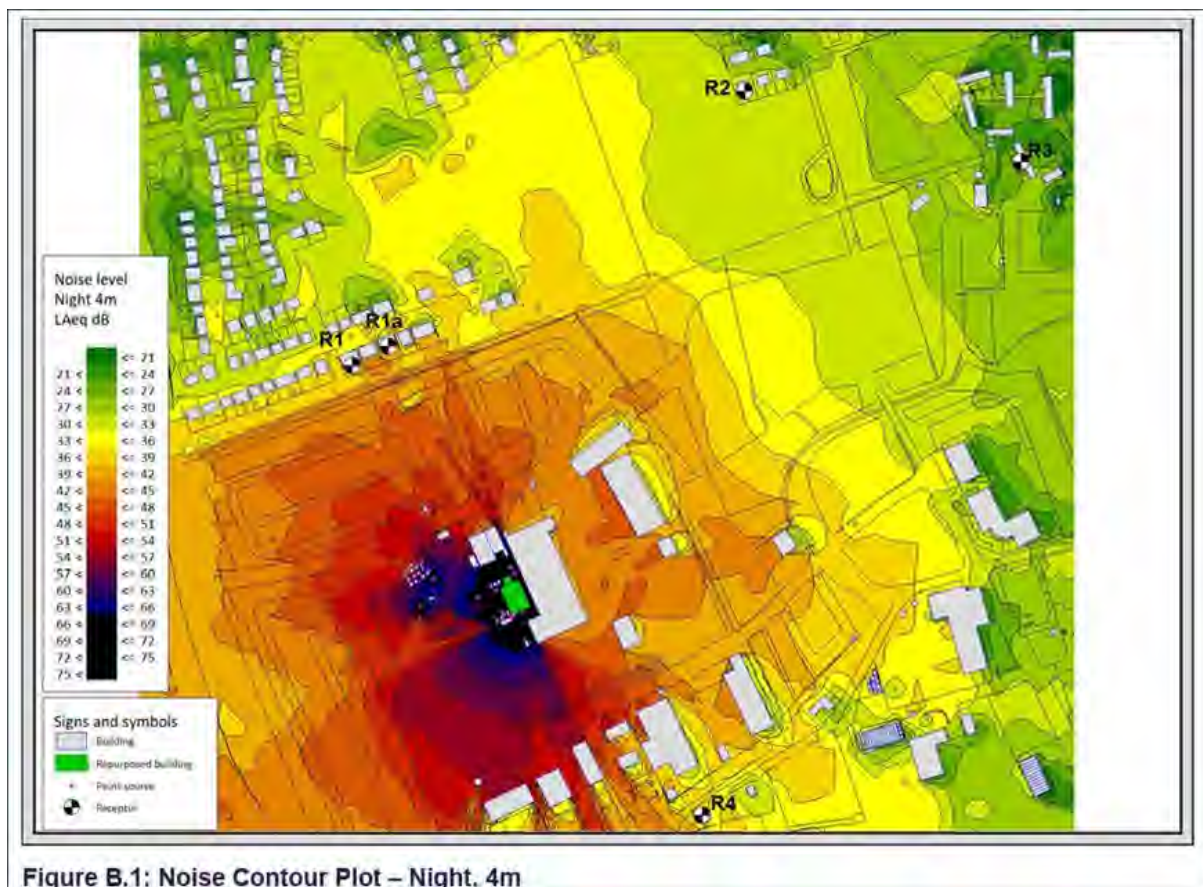
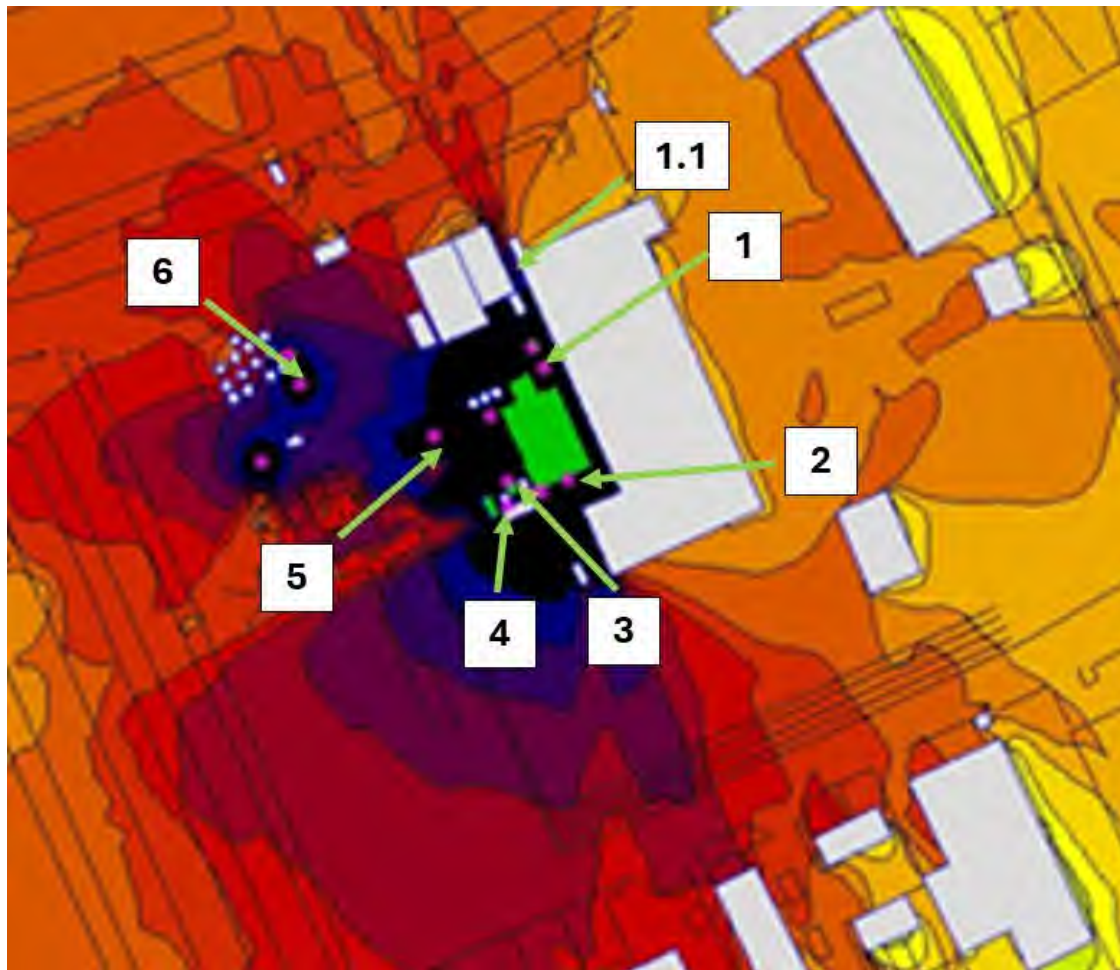


Figure B.1: Noise Contour Plot – Night, 4m

The plan has been developed to address 6 areas on site as shown in the following snip of Figure B.1:Noise Contour Plot below:



Position 1.1 was noted during the Design Engineer's site reconnaissance to consist of noises traceable to the thermal oxidiser air intake fan, carbon abatement fan and recovered powder blower.

Table 1 lists the proposed actions and timescales. Table 2 demonstrates the proposed actions consider Best Available Techniques conclusions.

Table 1 - Noise Mitigation Action Plan

Area	Action	Timescale
1.a	Scope feasibility of fitting baffle to thermal oxidiser fresh air intake pipe. Must ensure adequate retention of air flow Scoping complete, potential 6dB reduction at source (i.e. less than 6dB reduction potential at receptors). Fitting of attenuating box subject to budgetary approval & consideration of spatial requirements	30/03/26 Complete
1.b	Scope sound reduction potential for evaporator tank Scope and implementation complete. This was not a measured source in NIA, but site reconnaissance by Design Engineer identified an opportunity for improvement in the bracing of the Evaporator Tank to minimise all noise potential in this area which could contribute to the effect labelled 1.1 in the snip of Noise Contour Plot Figure B.1 (above). Noise measurements taken using in-house noise meter pre and post action implementation to verify effectiveness of this action	30/03/26 Complete 2dB reduction at 1m and 1dB at 10m
1.c	Fit additional bracing to carbon abatement outlet. Outlet ducting panels quiver with the outgoing air, additional bracing will minimise quivering and mitigate the noise source	30/03/26 Complete 4dB reduction at 1 and 10m
2.a	Evaluate options to dampen recovered powder blower This was not a major source in NIA, but site reconnaissance by Design Engineer identified this as a relatively straightforward fix and a potential contributor to the effect labelled 1.1 in the snip of Noise Contour Plot Figure B.1 (above). Noise measurements taken using in-house noise meter pre and post installation of muffler to verify	30/03/26 Complete 17dB reduction at 1m and 12 dB reduction at 10m
3.a	<u>Relocate feed skid fan, utilising existing infrastructure to dampen noise</u>	30/03/26 Planned for next RC4 shutdown end of March
4.a	<u>Position container to the residential side of the RotoMill cooling fan</u>	30/03/26 Complete 6dB reduction at 1 and 10m
4.b	Evaluate quotes to install sound absorbing material onto the container face	30/05/26 Requested quotes from vendor

PPC/A/1000175 TWMA Peterhead Noise Mitigation Plan V3 2026

5.a	<u>Relocate bin washing to the western site boundary, utilising the large tank farm's attenuation properties</u>	30/05/26 Logistically, this action requires 6c to be completed first
6.a	Evaluate feasibility of replacing slops reception box, to attenuate bin tipping This action is linked to 6b. Assessment includes additional piping & wiring requirements to accommodate reconfiguration of the mission pump / reception box arrangement. In-house noise meter will be utilised to indicate effectiveness of this action and repeat 3 rd party NIA H2 2025 for effectiveness of entire plan	30/05/26 Initial assessment complete – requires operational “gap” to install
6.b	Evaluate feasibility of relocating mission pump to utilise tank farm assets as attenuation See comments for 6a above	30/05/26 As 6a
6.c	<u>Remove current slops generator at the side of the process shed and replace with the current yard generator. This will reduce the number of generators on site by 1, reducing noise, air emissions and fuel usage. Power for the yard will be provided by new cabling from the single generator.</u>	30/05/26 Initial scoping complete. At Electrical review stage

Table 2 – BAT considerations

BAT 18	Technique	Description	Actions & existing measures
a	Appropriate location of equipment and buildings	Noise levels can be reduced by increasing the distance between the emitter and the receiver, by using buildings as noise screens and by relocating building exits or entrances	3.a Relocate feed skid fan, utilising existing infrastructure to dampen noise 4.a Position container to the residential side of the RotoMill cooling fan 5.a Relocate bin washing to the western site boundary, utilising the large tank farm's attenuation properties 6.b Relocate mission pump to western side of reception box, utilising tank farm as attenuation 6.c Remove current slops generator at the side of the process shed and replace with the current yard generator
b	Operational measures	This includes techniques such as: i. inspection and maintenance of equipment; ii. closing of doors and windows of enclosed areas, if possible; iii. equipment operation by experienced staff; iv. avoidance of noisy activities at night, if possible; v. provisions for noise control during maintenance,	5.a bin washing conducted in daytime hours only 6.a bin tipping conducted in daytime hours only

PPC/A/1000175 TWMA Peterhead Noise Mitigation Plan V3 2026

		traffic, handling and treatment activities	
c	Low-noise equipment	This may include direct drive motors, compressors, pumps and flares	Mission pump fitted with electric drive motor
d	Noise and vibration control equipment	This includes techniques such as: i. noise reducers; ii. acoustic and vibrational insulation of equipment; iii. enclosure of noisy equipment; iv. soundproofing of buildings	1.a Scope feasibility of fitting baffle to thermal oxidiser fresh air intake pipe. Must ensure adequate retention of air flow. 1.b Scope attenuation potential for evaporator tank 1.c Fit additional bracing to carbon abatement outlet 2.a Evaluate options to dampen recovered powder blower
e	Noise attenuation	Noise propagation can be reduced by inserting obstacles between emitters and receivers (e.g. protection walls, embankments and buildings).	4.b Evaluate quotes to install sound absorbing material onto the container face 6.a Replace slops reception box, to attenuate bin tipping

References:

[COMMISSION IMPLEMENTING DECISION \(EU\) 2018/ 1147 - of 10 August 2018 - establishing best available techniques \(BAT\) conclusions for waste treatment, under Directive 2010/ 75/ EU of the European Parliament and of the Council - \(notified under document C\(2018\) 5070\)](#)

Action 3.a Feed Skid Fan

Red cross **X** in the image below denotes the current position of the feed skid fan. The green cross **X** represents the new location. Repositioning this noise source utilises the feed skid unit as a barrier between source and receptor.

2.1 Site Layout and Noise Sources

The layout of the TWMA site is provided in Figure 2.



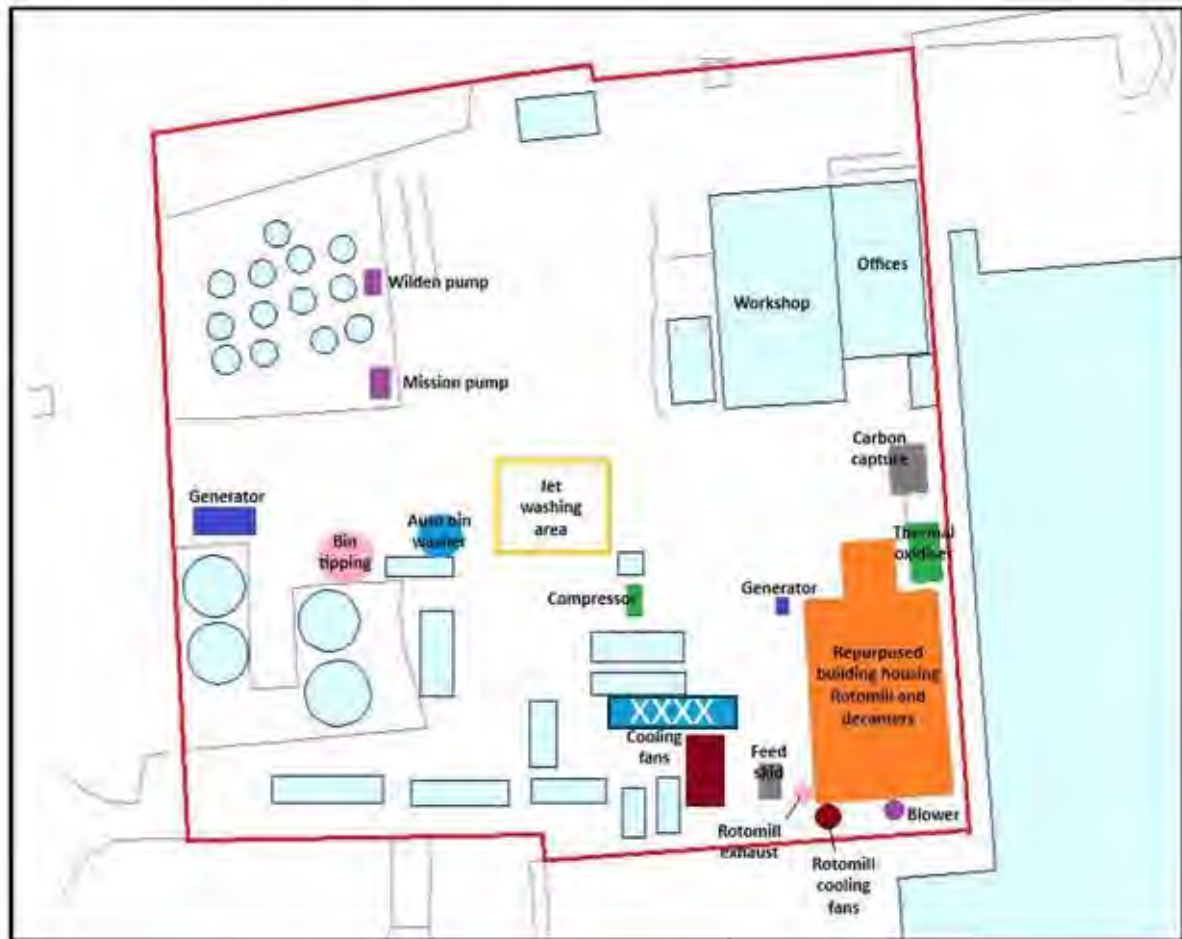
[Back to Table 1](#)

Action 4.a RotoMill Cooling Fan

The image below shows the planned location of the storage container (denoted by **XXXX**), repositioning existing site infrastructure to create barrier between the cooling fans and the receptors.

2.1 Site Layout and Noise Sources

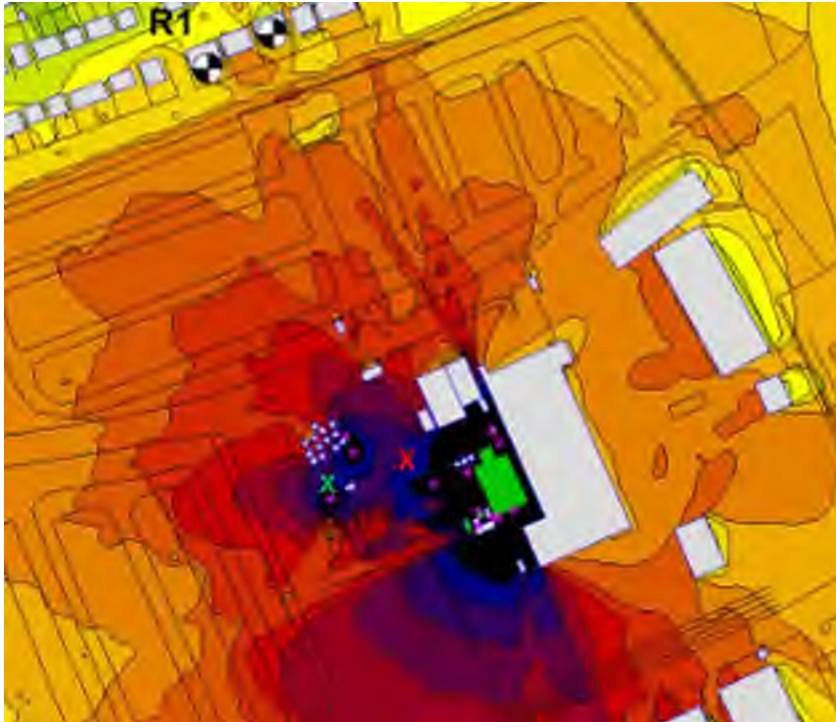
The layout of the TWMA site is provided in Figure 2.



[Back to Table 1](#)

5.a Relocate bin washing to the western site boundary, utilising the large tank farm's attenuation properties

Red cross **X** in the image below denotes the current position of bin washing activities. The green cross **X** represents the new location. Repositioning this noise source takes advantage of the attenuation properties of the tank farm, placing a barrier between source and receptor.



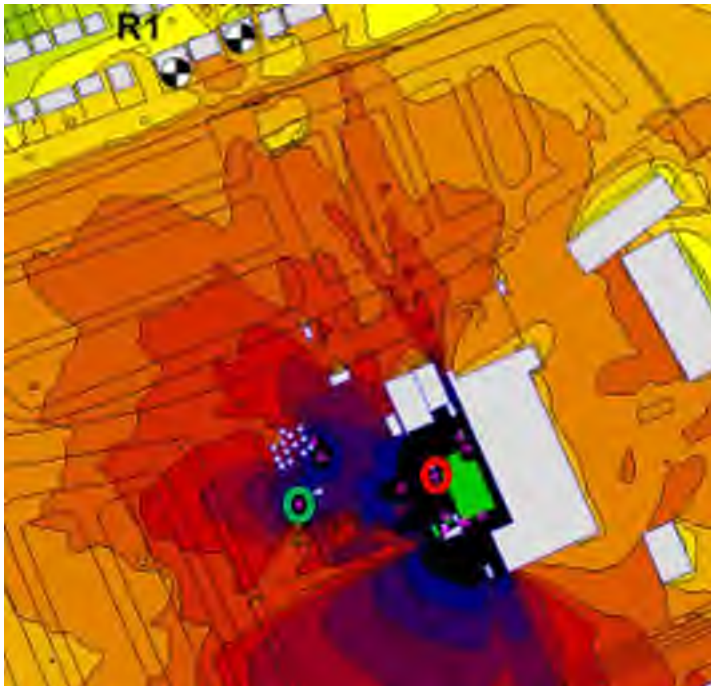
[Back to Table 1](#)

6.c Site generators

The generator highlighted in red circle  in the image below will be removed from site. The generator highlighted in green circle below  will be moved to the location of the red circle.

New cabling is required to supply power to the yard currently supplied by the generator highlighted in green.

This will reduce the number of generators on site by 1, reducing noise, air emissions and fuel usage.



[Back to Table 1](#)