

Units 12, 8, 10 Harnham Trading Estate, Salisbury

Plant noise impact assessment report

Callen-Lenz Associates Limited

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Revision ref	Issue date	Purpose of issue / description of revision
P01	26 June 2026	First issue
P02	09 July 2026	Incorporating nominal ASHP plant
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Document validation (latest issue)

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Executive summary

This report documents measured noise levels representative of the nearest affected residential façades adjacent to Units 12, 8, 10 at Harnham Trading Estate, Salisbury.

Maximum noise rating levels for proposed plant have been set in line with Local Authority guidance. These relate to the maximum noise levels from all items of fixed services plant, plus any corrections for acoustic characteristics, when assessed at the nearest noise sensitive premises.

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1.0

Introduction

1.0 Introduction

Cundall has been commissioned to prepare a plant noise impact assessment report for Callen-Lenz Associates Limited, with respect to the proposed use of Units 12, 8, 10 at Harnham Trading Estate, Salisbury. The application is for the change of use of part of the existing facility from Use Class E (g)(iii) / B8 to Use Class B2.

Proposals include the installation of new items of mechanical services plant externally. Existing noise levels have therefore been measured at positions indicative of the nearest affected residential façades adjacent to the site, and maximum plant noise rating levels identified.

A desktop 3D noise modelling assessment has been undertaken for proposed process plant based on manufacturer's sound power level data. The assessment of noise impacts is undertaken in accordance with 'BS 4142: 2014+A1: 2019 – Methods for rating and assessing industrial and commercial sound' (BS 4142).

2.0

Assessment criteria

2.0 Assessment criteria

This section sets out the acoustics criteria that have been adopted for the project.

2.1 Local Authority policy

It has been advised that Wiltshire Council have a series of Guidance Notes¹, aimed to advise Wiltshire Council Environmental Control and Protection Officers when reviewing planning applications. Under Section 6 (Specific Guidance for Proposed Developments), criteria for 'Introduction of a new industrial or commercial noise source' is considered.

This notes that:

"The development should be designed so as to achieve a rating level of 5dB (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location.

Where this criterion cannot be achieved, the various noise control measures considered as part of the assessment should be fully explained (i.e. relocation of noise sources, use of quieter equipment, enclosures, screening, restriction of the hours of operation) and the achievable noise level should be identified. This information will allow a judgement to be made concerning the application and its likely impact on the surrounding area. In addition to the above, maximum noise levels should also be adequately controlled."

The criterion of achieving 5 dB below the typical background level has been adopted in this assessment. Where proposed plant cannot achieve this factor alone, additional noise mitigation measures will be identified.

2.2 BS 4142: 2014 Methods for rating and assessing industrial and commercial sound

The noise rating level is identified in BS 4142: 2014, which provides a method for rating and assessing sound of an industrial and/or commercial nature, including fixed building services plant.

The rating level must include any corrections for tonality or intermittency, in accordance with BS 4142: 2014.

¹ Ref: <https://www.wiltshire.gov.uk/article/8699/6-Specific-Guidance-for-Proposed-Developments>

3.0

Site details

3.0 Site details

Harnham Trading Estate is located approximately 2 kilometres south-west of Salisbury city centre. Proposals are for the currently unoccupied Units 12, 8 and 10 to be brought back in to use.

The nearest affected residential properties are located immediately to the east and west of the Trading Estate, off Halfpenny Road and Magnolia Close respectively.

The figure below indicates the indicative locations of the proposed external plant (blue) within the approximate redline site boundary, and the affected façades of nearest dwellings (yellow highlight).



Figure 3-1: Site and immediate environs

For context, the Industrial Estate already contains a number of businesses that would be expected to contribute to the general noise environment and characteristic of the area, including vehicle workshops and gym premises. Site observations have confirmed that a number of units operate with their roller shutter doors left open.

In addition to the existing use of units on the Estate, it was also noted from site visits that vehicles travelling along the associated Harnham Trading Estate access road (to the eastern site boundary) regularly caused impulsive noise events associated with passing over speed bumps, particularly next to the proposed site.

It is understood that there are existing site restrictions in place for the industrial estate, namely:

- Monday to Friday: 07:00 to 21:00 hours;
- Saturday: 07:00 to 13:00 hours;
- Sunday and Bank Holidays: No use permitted.

Proposals are for Callen-Lenz Associates Limited operational hours to be 08:00 to 17:00, Monday to Friday and 08:00 to 13:00 Saturday.

4.0

Environmental noise survey

4.0 Environmental noise survey

This Section summarises the noise surveys carried out at the site.

During attended site visits, it was noted that the prevailing noise climate was dictated by general activity noise, vehicular movements on the adjacent road, children playing in gardens, and distant road and air traffic.

4.1 Survey equipment

Equipment used in surveys is shown in the following table:

Item	Make and model	Serial number	Date calibrated
Sound level meter 1	Rion NL-52	698205	01/04/2025
Sound level meter 2	Rion NL-52	698206	01/04/2025
Calibrator 1	Rion NC-75	34691633	02/04/2026
Calibrator 2	Casella-Cel 120/1	2651966	02/04/2026

Table 4-1: Survey equipment details

All noise measurements were made using precision sound level meters generally in accordance with BS 7445: 2003. The meters were field-calibrated before and after each set of measurements with no significant drift witnessed. Laboratory calibration certificates for all equipment are available upon request.

Measurements were made of various sound descriptors, but the key indices used in this assessment are as follows:

- $L_{Aeq,T}$, the average sound level over each measurement period; and
- $L_{A90,T}$, the sound level exceeded for 90% of the measurement period (commonly described as the background level).

4.2 Survey period

Measurements of prevailing noise conditions were taken between approximately 11:00 hours on 29th May and 09:00 hours on 1st June 2026.

4.3 Weather data

During attended survey periods no precipitation was recorded (ground was dry) and wind speeds were not considered to exceed 5 m/s. Weather data was recorded during the unattended survey periods using a Davis Vantage Vue weather station.

4.4 Survey locations

Measurements were taken at two locations, considered representative of prevailing conditions at the nearest affected residential properties, as follows:

Position 1

On the eastern site boundary, at an approximate height of 4 metres above ground level (considered representative of first floor windows);

Position 2

Near the western site boundary, at an approximate height of 4 metres above local ground level (considered representative of noise levels at adjacent dwellings, which are elevated approximately 3 metres above the site datum).

Approximate measurement locations are indicated in Figure 3-1 above.

4.5 Survey results

Noise levels recorded at the two measurement positions are indicated in the figures below, and a summary detailed in the following table.

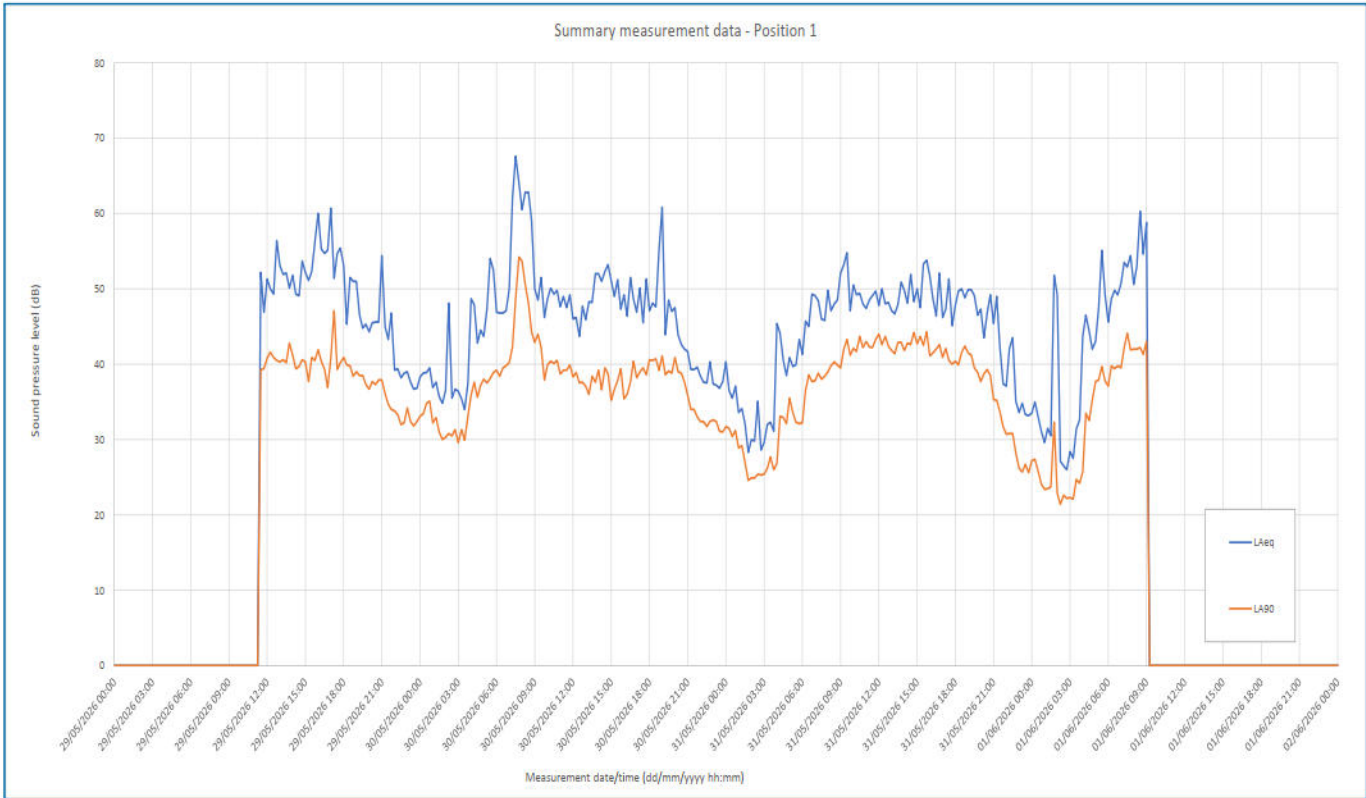


Figure 4-1: Survey data – Noise Position 1

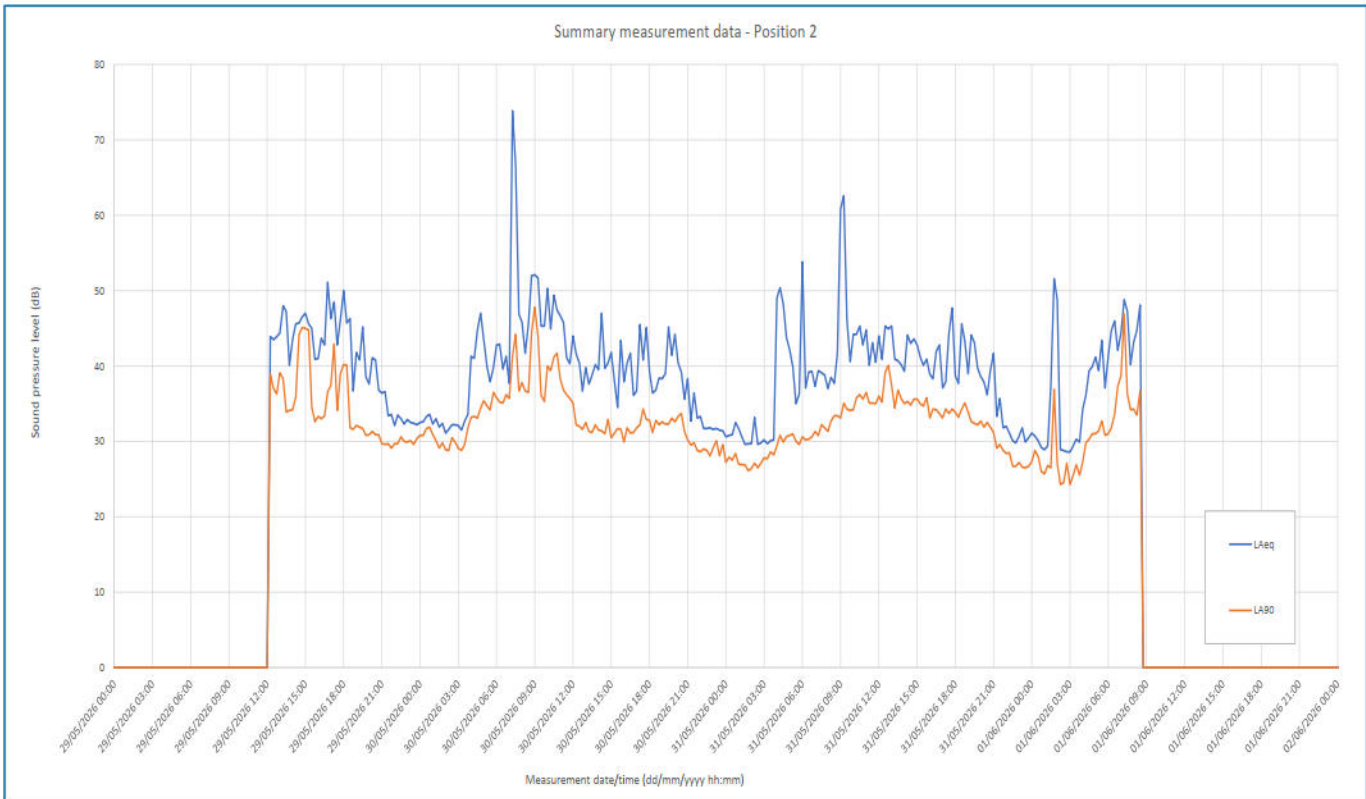


Figure 4-2: Survey data – Noise Position 2

Location	Day	Period	Average $L_{Aeq,T}$ dB	Typical $L_{A90,T}$ dB
Position 1	Weekday	Daytime	56	41
		Night-time	45	31
	Saturday	Daytime	55	39
		Night-time	41	32
	Sunday	Daytime	49	42
		Night-time	46	26
Position 2	Weekday	Daytime	46	30
		Night-time	39	30
	Saturday	Daytime	57	32
		Night-time	43	27
	Sunday	Daytime	48	34
		Night-time	41	27

Table 4-2: Summary of noise levels measured

The values shown are the logarithmically averaged L_{Aeq} and the typical background L_{A90} noise levels measured. All figures are in dB have been rounded to the nearest integer value. The time period, T , above was set to 15 minutes.

4.6 Weather data

The figures below summarise measured weather conditions on site.

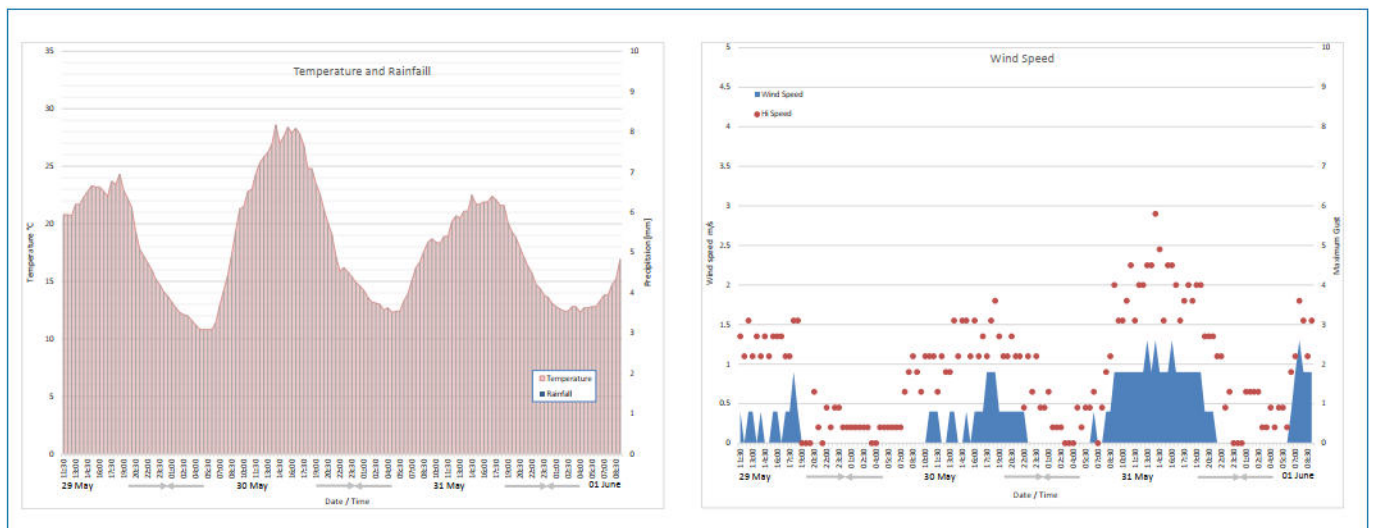


Figure 4-3: Survey data – Weather

5.0

Limiting noise levels for new plant

5.0 Limiting noise levels for new plant

Based on the measured noise levels, as set out in Table 4-2, and the proposed limits on noise emissions, the maximum permissible noise level from the new plant can be determined.

As noted in Section 2.2, it is proposed that the rating level (dB $L_{A,T,r}$) of any plant and equipment associated with the proposed development be set such that at the facade of nearby noise-sensitive properties it does not exceed 5 dB below the typical background noise level (dB $L_{A90,T}$) during operational hours.

The rating level must include any corrections for tonality or intermittency, in accordance with BS 4142: 2014.

5.1 Noise limits

Based on the site survey data, the figure below summarises the typical background noise level (dB $L_{A90,T}$) during the proposed operational hours of the site (i.e. 08:00 to 17:00 Monday to Friday).

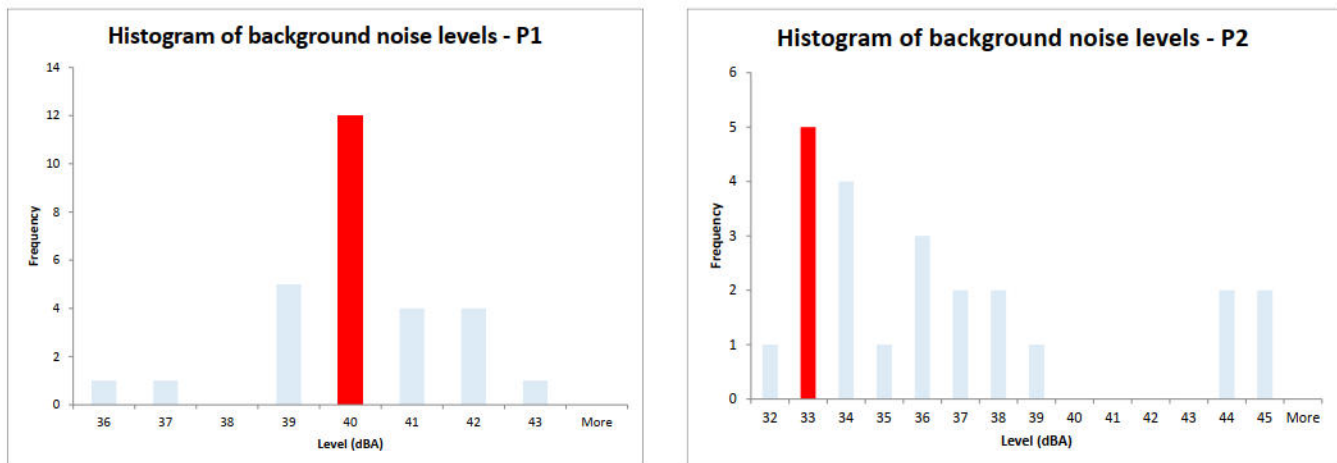


Figure 4: Typical background noise levels

Limiting plant noise levels during the proposed operational hours would therefore be as indicated in the table below.

Location	Typical background noise level $L_{A90,T}$ dB	Maximum noise rating level $L_{A,T,r}$ dB
Residential façade – East (P1)	40	35
Residential façade – West (P2)	33	28

Table 5-1: Limiting noise levels for proposed external plant when assessed at the nearest affected façades

The above limiting rating noise levels (including any adjustments for acoustic character as set out in BS 4142) must not be exceeded by all new items of process and services plant, running at maximum design duty, when assessed at 1 metre from the nearest affected noise sensitive façades.

On the basis of the proposed operating hours (Monday to Friday 08:00 to 17:00 hours and 08:00 to 13:00 hours Saturday), then the applicable plant noise limit would be 35 dB $L_{A,T,r}$ to the East and 28 dB $L_{A,T,r}$ to the West at residential façades.

6.0

Plant noise impact assessment

6.0 Plant noise impact assessment

6.1 Process plant proposals

The primary items of process plant servicing the development are extract fans which service various operational elements within the building. The extract fans within casings and exhausts from these fans are located in an external plant courtyard to the east side of the building. An extract of drawing no. DC24 1219 10 3013 Rev 01 is provided below.

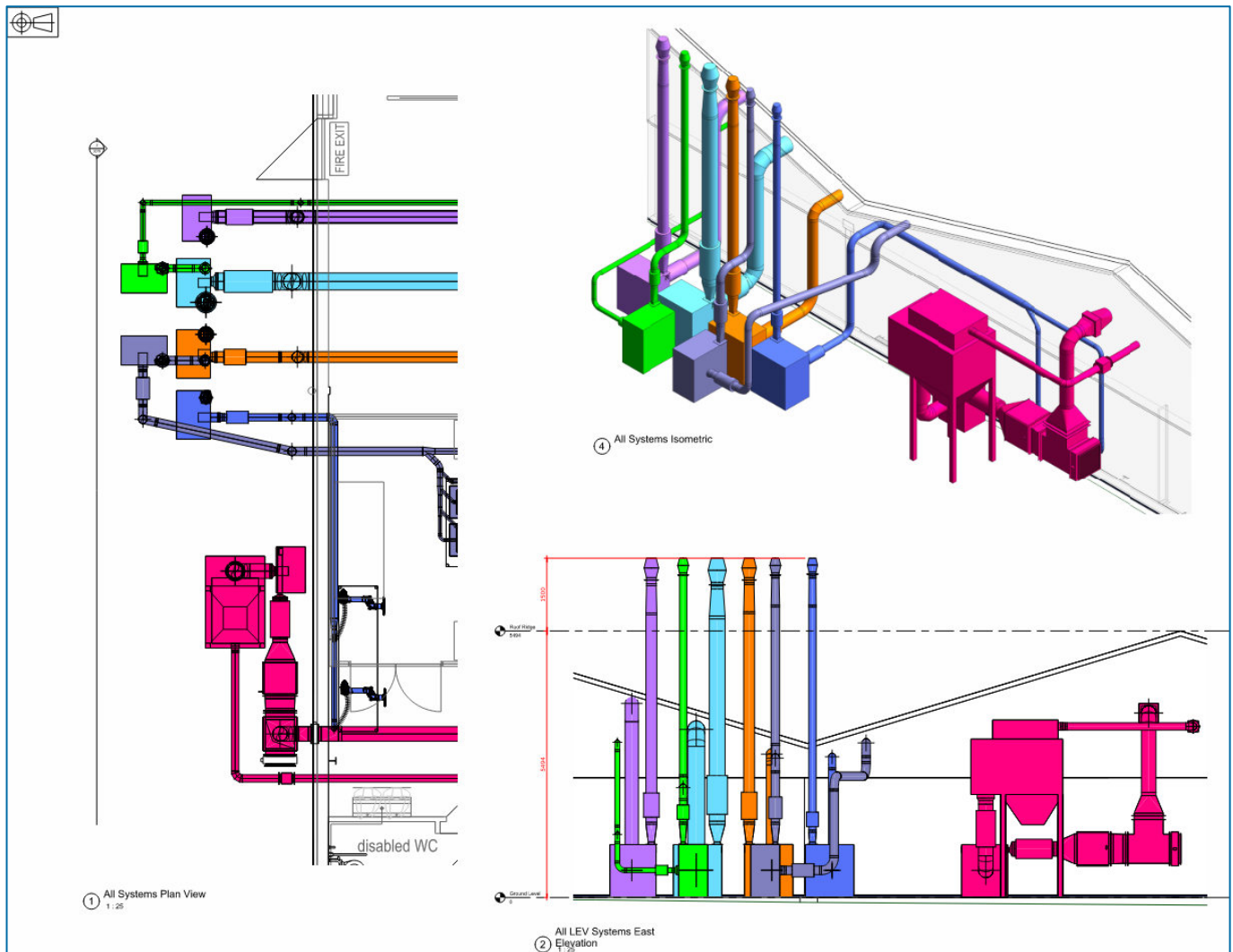


Figure 6-1: External plant noise layout

This is also shown in the wider site plan below as taken from the architect's drawing Ref: 12318-RLA-GF-XX-DR-A Rev P02, where the proposed noise generating items of external plant can be seen to the left-hand side of the image.

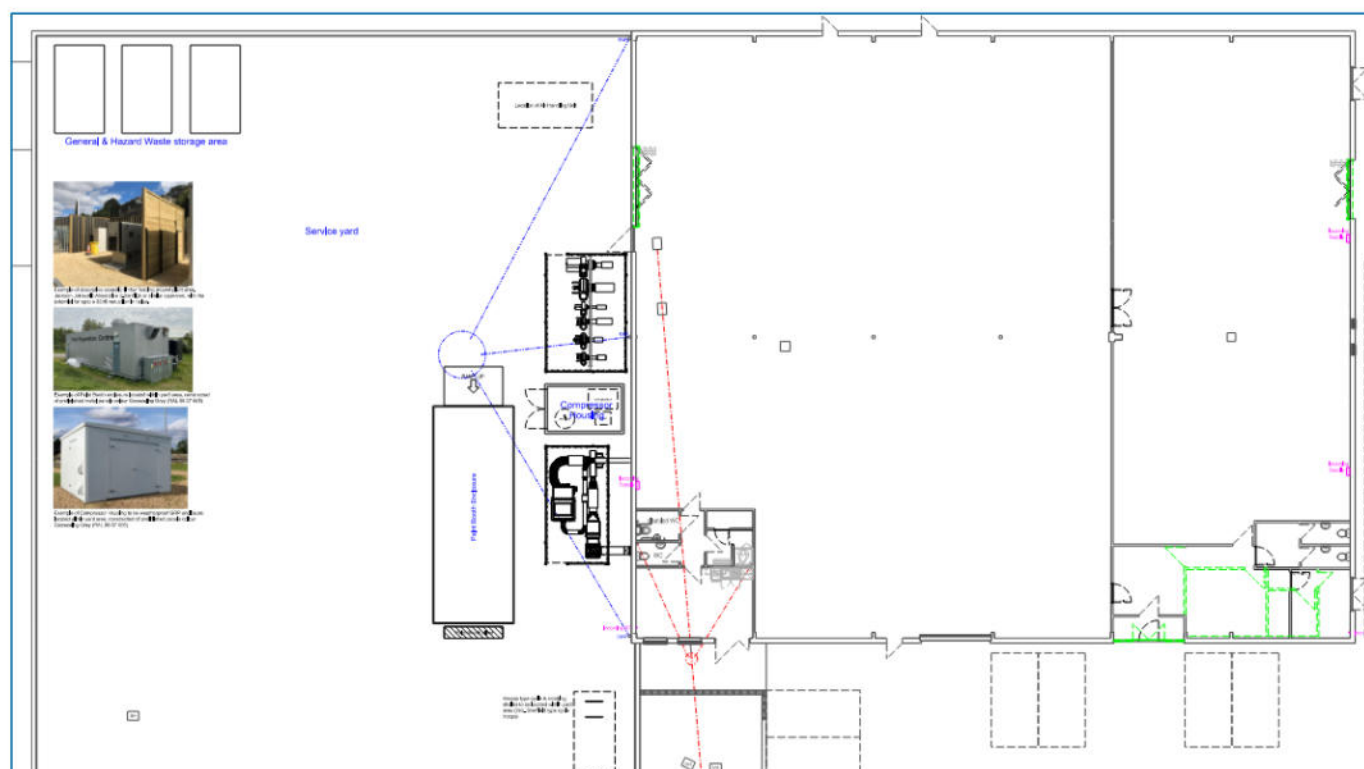


Figure 6-2: External plant location

6.2 Process plant noise mitigation measures

The general plant compounds are to be provided with solid screens as indicated on the architect's drawing Ref: 12318-RLA-GF-XX-DR-A Rev P02. Notes on this drawing state a minimum height of 2 metres has been approved. The acoustic barrier specification should be confirmed once plant noise emissions have been determined.

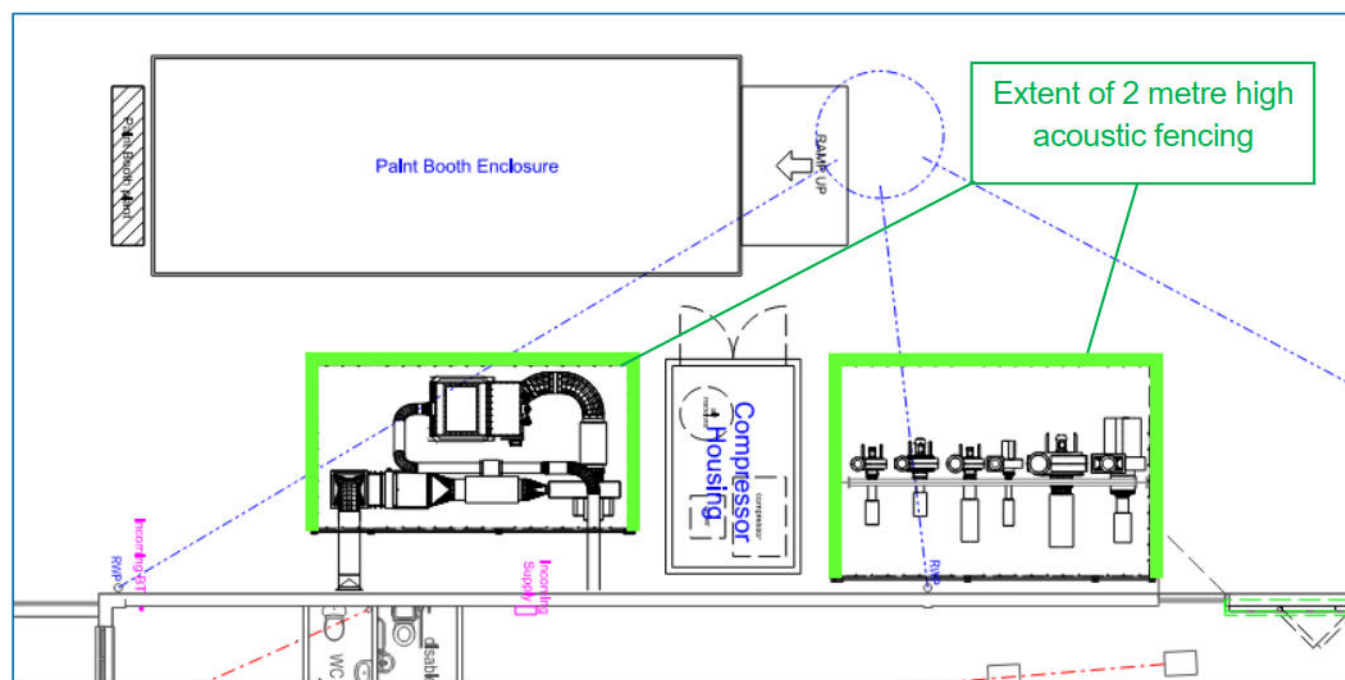


Figure 6-3: Extent of acoustic fencing modelled

Proposed plant will also incorporate appropriate attenuators (e.g. to air intake / exhaust as necessary), to see that the plant noise limits identified above can be achieved.

It is assumed that BS 4142 corrections should consider a + 3 dB correction for intermittency, as it is understood that exhaust items are related to specific localised activity within the workshop and will therefore operate with an on/off cycle throughout the course of a whole daytime as supposed to being 100% on during permitted operational hours.

Any new selections and/or mitigating measures should be further reviewed to confirm their suitability.

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