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Economic Development  
Regeneration and Tourism  
Service (EDRTS), North  
Yorkshire Council

Desktop Noise Assessment  
T9117 Scarborough West Pier  
Regeneration

16th February 2024



# SCARBOROUGH WEST PIER REGENERATION

**temple**

## Prepared for:

Economic Development Regeneration and Tourism  
Service (EDRTS), North Yorkshire Council

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# 1 Executive Summary

- 1.1.1 Temple Group (Tem ple) has prepared this report on behalf of EDRTS, North Yorkshire Council (The Applicant). The report presents a desktop noise assessment for equipment and activities proposed as a part of the regeneration of Scarborough Pier West.
- 1.1.2 The application scheme includes the regeneration of the pier adding a new café, improving the public open space, and reorientating new retail kiosks. It also seeks to regenerate public conveniences, artist studios, and fisheries' storage and processing facilities through the demolition of two existing buildings and the regeneration of heritage assets.
- 1.1.3 The proposed scheme includes installation of three new Air Source Heat Pumps (ASHP) units and a partial change of use including a new restaurant. The scheme also includes a reduction in car parking spaces on the pier and the continued use of the car park area for local events such as markets and annual community fete days and weekends.
- 1.1.4 This report presents the criteria for plant noise emissions based upon anticipated background noise levels in the area. The report presents calculated levels from the plant and activity at the most relevant noise sensitive receptors. The results have informed the assessment of the impact of the proposed new plant and activities on the nearest noise sensitive receptors.
- 1.1.5 North Yorkshire Council policy documents express their requirement that the external rating level emitted from the building services plant and music noise to be 10 dB below the representative background level at the nearest noise sensitive receptors.
- 1.1.6 Based on the manufacturer data and prospective activity noise, it is predicted that noise emissions are likely to meet the Council's required policy in terms of amenity impact on near-by receptors.

Commented [NB1]: Is it one or more manufacturers?

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## 2 Introduction

- 2.1.1 The proposed redevelopment includes the conversion of a public toilet and gallery space to a restaurant use. As part of the scheme, three ASHP units are proposed to be installed on three of the buildings. Temple has been appointed to undertake a desktop noise assessment for the new building services plant and, where applicable, activity noise. In addition, Temple is to outline the likely noise emission criteria and advise on the likelihood of compliance subject to relevant conditions.
- 2.1.2 The purpose of the noise assessment is to assess the impact on nearby noise sensitive receptors and, where required, to provide outline mitigation measures for further noise attenuation. The assessment has been carried out in line with the North Yorkshire Council policy and relevant national standards.
- 2.1.3 The regeneration scheme will include a demolition and construction phase. At this stage detailed demolition and construction methodologies are not yet known, therefore an assessment of this is not possible within the scope of this report. However, with a project of this scale it is anticipated that noise and vibration from demolition and construction can be readily controlled through standard conditions, mitigations, and delegated authority controls which are available to the Local Authority.
- 2.1.4 The following sections of the report describe criteria for plant noise emissions, assessment methodology and external noise measurement methodology along with results of the assessment of the proposed plant.
- 2.1.5 The acoustic terminology used in this report is explained in **Appendix A**

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## 3 Policy Standards and Guidance

### 3.1 Standards and Guidance

#### British Standard 7445 – Description and Measurement of Environmental Noise

- 3.1.1 British Standard 7445 Part 1 (BS 7445-1:2003)<sup>1</sup> defines the basic quantities to be used for the description of noise in community environments and describes basic procedures for the determination of these quantities.
- 3.1.2 The methods and procedures described in this British Standard are intended to be applicable to sounds from all sources, individually and in combination, which contribute to the total noise at a site.
- 3.1.3 British Standard 7445 Part 2 (BS 7445-2:1991)<sup>2</sup> describes methods for the acquisition of data which provide descriptors that enable:
- a) a description of the environmental noise in a specified area of land to be made in a uniform way;
  - b) the compatibility of any land use activity or projected activity to be assessed with respect to existing or predicted noise; and
  - c) Using the data as a basis, authorities may establish a system for selecting the appropriate land use, as far as levels of noise are concerned, for a specified area, or the sources of noise - existing or planned - which are acceptable with respect to land use, existing or planned.

#### British Standard 4142:2014+A1:2019 – Methods for rating and assessing industrial and commercial sound

- 3.1.4 British Standard 4142 (BS 2014+A1:2019)<sup>3</sup> describes methods to use outdoor sound levels to assess the likely effects of sound of an industrial and/or commercial nature on people who might be inside or outside a dwelling or premises used for residential purposes upon which the sound is incident.
- 3.1.5 The standard requires determination of the following:

Rating level -  $L_{Aeq,T}$  sound level produced by the specific sound source at the assessment location with any adjustment added to the specific sound level

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<sup>1</sup> British Standards Institute (BSI), (2003): 'BS 7445 – Description and Measurement of Environmental Noise. Part 1: Guide to Quantities and Procedures'. BSI, London.

<sup>2</sup> British Standards Institute (BSI), (1991): 'BS 7445 – Description and Measurement of Environmental Noise. Part 2: Guide to the Acquisition of Data Pertinent to Land Use'. BSI, London.

<sup>3</sup> British Standards Institute (BSI), (2014+A1:2019): 'BS 4142 – Methods for rating and assessing industrial and commercial sound. BSI, London.

if a tone, impulse or other acoustic characteristic occurs, or is expected to be present.

Background sound level,  $L_{A90,T}$  – A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, T.

$T_r$  is the reference time interval over which the specific sound level is determined. This is 1-hour for daytime (07:00-23:00 h) and 15-minutes for night-time (23:00-07:00 h).

- 3.1.6 An estimate of the impact of the specific sound generated can be obtained by subtracting the measured background sound level from the rating level, and the following is considered:
- Typically, the greater this difference, the greater the magnitude of the impact.
  - A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.
  - A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.
  - The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.
- 3.1.7 The assessment methodology considers the Specific Sound Level, as measured or calculated at a potential noise sensitive receptor, due to the sound under investigation. A correction factor is added to this level to account for the acoustic character of the sound as follows:
- Tonality – A correction of up to 6dB depending on the prominence of tones;
  - Impulsivity – A correction of up to 9dB depending on the prominence of impulsivity;
  - Other sound characteristics – A 3dB correction may be applied where a distinctive acoustic character is present that is neither tonal nor impulsive;
  - Intermittency – A 3dB correction may be applied where the specific sound has identifiable on-off conditions.
- 3.1.8 All pertinent factors should be taken into consideration when assessing the impact, including the following:
- Where background sound levels and rating levels are low, absolute levels might be as, or more, relevant than the margin by which the rating level exceeds the background. This is especially true at night.

The character and level of the residual sound compared to the character and level of the specific sound.

The sensitivity of the receptor.

## 3.2 North Yorkshire Council – Planning Policy

### Scarborough Borough Local Plan 2017

3.2.1 The Local Plan within Section 5 page 48 outlines that; *“Proposals should ensure that existing and future occupants of land and buildings are provided with a good standard of amenity. Proposals for development should not give rise to unacceptable impacts by means of...*

*...c. disturbance arising from such things as noise, light pollution and other activities.”*

## 3.3 Consultation

3.3.1 On 12<sup>th</sup> May 2023, Nigel Burton, a Director at Temple contacted North Yorkshire Council (jonathan.bramley@northyorks.gov.uk) via email. The correspondence outlined that Temple will be producing a desktop noise assessment and requested information on the likely criteria for this type of development.

3.3.2 The Council’s Environmental Health service representative replied on the 16<sup>th</sup> May 2023 with proposed conditions which are generally applied to this type of development. The correspondence and proposed conditions are presented within **Appendix B** of this report.



## 4 The Site and its Surrounding

- 4.1.1 The Scarborough West Pier is located adjacent to the intersection of Sandside and Foreshore Road and forms part of Scarborough Harbour. The location is generally a bustling seafront area mainly with a mix of tourism, commercial and entertainment uses.
- 4.1.2 The location of the site is indicated in **Appendix C**.
- 4.1.3 There appears to be some residential dwellings from first floor level on Foreshore Road. Some of these residential receptors appear to be guest homes and bed and breakfast properties. There are more standard residential properties on the streets which are set back from the seafront such as Eastborough and West Sandgate.
- 4.1.4 The most relevant noise sensitive receptor appears to be above the Lord Nelson Public House which is 112m from the approximate centre of the application site, and 15m from the nearest edge of the application site boundary. First floor façades along Sandside and Foreshore Road, some of which might be residential, are approximately 70 to 140m from the proposed ASHP units.

Commented [NB4]: Can 112m be approximate?

Commented [PM5R4]: It's because I have approximated the centre of the site so I think it can.

### 4.2 Proposed Plant

- 4.2.1 The client has proposed to install the following external plant:

#### Building 1

Plant item 1 is a Daikin ASHP model number REYQ18U which is located on the first-floor plant area roof of Building 1 on the south-eastern facing elevation. The unit will be housed within an enclosure with weather louvres. The hours of use are likely to be limited to standard restaurant hours likely to be between 07:00 to 23:00. However, to cover the worst-case situation 24-hour operation has been assumed.

#### Building 2

Plant item 2 is a Daikin ASHP model number REYQ8U which is located on the ground-floor adjacent to Building 2 on the north-western facing elevation. The unit will be housed within an enclosure with weather louvres. Hours of operation are not yet known so 24 hours operation has been assumed.

#### Building 3

Plant item 3 is a Daikin ASHP model number REY12U which is located on the ground-floor adjacent to Building 3 on the south-eastern facing elevation. The unit will be housed within an enclosure with weather louvres. Hours of operation are not yet known so 24 hours operation has been assumed.

Commented [NB6]: I'd be inclined to keep this all in one subsection.

4.2.2 The plan view within **Appendix D** shows the layout of the Proposed Plant at Buildings 1, 2 and 3. Plant Specification sheet data can be found in **Appendix E**, the data from which has been summarised below in **Table 1**.

**Table 1 Plant type noise data (Sound Power Level)**

Plant item/Model	Octave Band Sound Power Level Hz (dBZ)							
	63	125	250	500	1000	2000	4000	8000
Building 1 Item 1 - REYQ18U	92	84	82	84	76	74	74	64
Building 2 Item 2 - REYQ8U	88	81	79	77	71	68	64	59
Building 3 Item 3 - REYQ12U	90	85	83	81	76	75	76	68

Commented [NB7]: I'd suggest making the titles bold (but it won't let me for some reason).

### 4.3 Breakout noise from Restaurant

- 4.3.1 The scheme includes a new restaurant in Building 1 which Temple understands is proposed to have background music. It is assumed that the speakers will be contained within the restaurant's internal dining areas and not on the external first floor terrace area.
- 4.3.2 From a review of the plan drawings, there does not appear to be any large openings in the restaurant area such as by-folding doors or open façade areas. The calculations of noise break-out have been based upon glazing making up 60% of the front façade which is the most relevant façade closest to the receptor.
- 4.3.3 The restaurant is proposed to operate during standard daytime hours likely to be between 07:00 – 23:00.
- 4.3.4 The following reference data for a quiet and busy restaurants and bars and nightclubs are shown in **Table 2** below, and has been taken from "*The Little Red book of Acoustics – A Practical Guide (Second Edition)* by R. Watson and O Downey".
- 4.3.5 To allow for the presence of background music, as well as the sound from a busy restaurant, the levels for a "busy pub/bar" have been assumed. It is also noted that these stated levels do contain more energy at lower frequencies which would be consistent with a restaurant with background music.

**Table 2 Reference noise data for restaurants , bars and nightclubs**

Activity	Internal Octave Band Sound L <sub>eq</sub> Level Hz (dBZ)								dBA
	63	125	250	500	1000	2000	4000	8000	
Quiet Restaurant	60	60	60	65	65	55	50	50*	67
Busy Restaurant	60	70	75	75	75	75	70	70*	80
Busy Pub/Bar	80	85	85	85	85	80	70	70*	88
Nightclub	110	110	100	100	95	90	85	85*	101
Notes on Table * Estimated values based upon 4000Hz Values									

## 5 Baseline Conditions

### 5.1 Anticipated Background Level

- 5.1.1 An environmental noise survey has not been carried out at this stage. A review has been made of near-by, previous planning applications over the last five years on the Council's planning portal. There were four applications on the seafront area which may have triggered the need for an acoustic report and survey. However, the records did not contain any acoustic report and / or survey data.
- 5.1.2 A review was also made of the Government Noise mapping data for the area, but the nearest predicted road traffic data was determined not to be sufficiently informative for the application site. The background levels have been assumed based upon the context of the location, our professional judgement and experience of other similar locations.
- 5.1.3 Given the nature of busy and vibrant location, the daytime background levels are likely to be relatively high and potentially as high as 60 – 65 dBA ( $L_{A90\ 1hr}$ ) during peak times, with perhaps some quieter periods of the day being circa 50 – 60 dBA. During the night the levels are expected to drop further to a range of 40 – 45 dBA ( $L_{A90\ 15minutes}$ ). For complete assurance of the background level a baseline survey is recommended.
- 5.1.4 We have assumed worst case (lowest) of these levels for the day and night-time periods of 50 dBA and 40 dBA day and night respectively. When assessing noise in relation to a relative value, it is also important to consider how the proposed sound fits into the existing context and character of the location. For instance, does an introduced sound and / or activity clash with the existing acoustic environment or does it complement it.

Commented [NBS]: Not sure if you've stated it later but is it worth stating that a noise survey will be required / is recommended at a later date?

## 6 Assessment

6.1.1 An assessment of the noise propagation from the plant and activities has been calculated using standard acoustic geometric spreading principles. As well as the distances from source to receiver the assessment also accounts for screening of buildings and barriers where applicable.

### 6.2 Plant Noise Assessment

6.2.1 The total noise level from all plant items operating simultaneously at worst case noise levels (during heating for condensers and fans operating at full speed) was calculated at 1m from the façades of the most relevant noise sensitive receptor. The results are summarised in **Table 3**.

6.2.2 Calculations for the ASHP units have been based on the manufacturer s'measured octave band sound power level data presented in **Table 1**.

**Table 3 BS 4142 assessment of receptors at the Lord Nelson 1<sup>st</sup> floor windows based on anticipated representative background noise levels**

Results		dB (day)	dB (night)	
<b>Anticipated Background Sound Level</b>	L <sub>A90,15mins</sub>	50 dB	40 dB	A-weighted sound pressure level that exceeded by the residual sound at the assessment location for 90% of a given time interval, 15 minutes.
Assessment made for seven consecutive days; reference time interval is 15mins. The plant is proposed operating 24/7 as described in Section 4.0.				
<b>Distance Attenuation</b>	N/A	Item 1 -60 Item 2 -56 Item 3 -66	Item 1 -60 Item 2 -56 Item 3 -66	Includes reduction due to screening. Plant item 1 = 70m Full building screening -15dB Plant item 2 = 80m Full building screening -10dB Plant item 3 = 140m Full building screening -15dB
<b>On Time Correction</b>	N/A			No correction applicable
<b>Cumulative Specific Sound Level</b>	L <sub>Aeq,T</sub>	27 dB	27 dB	Cumulative specific sound level at worst affected receptor calculated at the 1 <sup>st</sup> floor façade of the Lord Nelson PH.
<b>Acoustic feature correction</b>	Tonality	0	0	1/3 <sup>rd</sup> Octave band data does not appear to indicate any tonal element
	Intermittency	0	0	Normal use of the plant means that on constantly. As such, it is assumed that correction is not required.
	Impulsivity	0	0	Temple was not provided with information that the proposed plan will have impulsive sound features, the experience of similar equipment indicates that this is unlikely to be the case.

	Other Sound Characteristics	0	0	No other sound characteristics are known at this stage of the assessment
<b>Rating Level</b>		27 dB	27 dB	Rating level including acoustic feature corrections
<b>Excess of rating level over background sound level</b>		-23 dB	-13 dB	The rating level is 27dB for both day and night-time periods and this is 23dB below the day and 13 dB night-time background sound levels respectively. The assessment indicates that the specific sound source is likely to have no impact in line with Local authority noise limits during the day and night.
It should be noted that the above assessment assumes no correction for tonality, impulsivity, or distinctive acoustic character, or intermittency. Consequently, all sources should be controlled so issues are not present at noise sensitive locations or else corrections will need to be applied.				

6.2.3 The screening effects assumed above are conservative and likely to be greater than 10 - 15 dB reduction. Based upon path difference calculations the effect of building screening is possibly as high as 20 dB reduction at 500Hz.

### 6.3 Activity Noise Assessment

6.3.1 The Council have notified Temple that any music breakout noise should be 10 dB below background noise at octave bands 31.5, 63 and 125 Hz. The reference noise levels shown in **Table 2** does not include 31.5 Hz but this has been assumed to be the same as 63 Hz value of 80 dBZ.

6.3.2 The breakout calculations have been based upon the glazing making up 60 % of the main front façade. Standard single glazing with an SRI performance of -23 dB at 500Hz has been assumed and a brick wall of SRI performance of -40 dB at 500Hz has been assumed. This is based upon a 110mm standard single brick wall construction without plaster on either side.

6.3.3 The distance between the main front façade and the receptor position has been taken from a central position of the overall façade to the receptor position which is 58m.

6.3.4 The broadband received level has been calculated to be 28 dBA at the receptor position. The calculated octave bands 31.5, 63 and 125 Hz have been found to be 32 dB @31.5 Hz<sup>4</sup>, 29 dB @63 Hz and 29 dB @125 Hz. It is anticipated that these levels will be at least 10 dB below daytime background levels if not much lower for these octave bands.

Commented [NB9]: For the uninitiated, what type of construction is that based on?

<sup>4</sup> 31.5Hz has been estimated based upon a 3 dB reduction of attenuation performance of the wall and glazing at this octave band.

6.3.5 **Table 4** shows the calculated levels at each octave band and anticipated resultant noise level at the receptor position.

**Table 4 Assessment of restaurant activity breakout noise**

	Internal Octave Band Sound $L_{eq}$ Level Hz (dBZ)								dBA
	63	125	250	500	1000	2000	4000	8000	
Restaurant Internal Sound Pressure Level	80	85	85	85	85	80	70	70	88
Sound Reduction Index Composite Average Reduction	21	26	26	25	35	41	37	37	
Distance Attenuation (Based upon radiation of sound from plane areas)	25	25	25	25	25	25	25	25	
Noise internal to external -6 dB	6	6	6	6	6	6	6	6	
SPL at Receptor	29	29	28	29	19	8	2	2	28

6.3.6 The cumulative noise level of the external plant and the restaurant breakout noise is likely to be 31 dBA at the nearest noise sensitive receptor. The restaurant breakout noise is only applicable during daytime hours and therefore the cumulative level is predicted to be 19 dB below the daytime background and therefore likely to be compliant with the Council's requirements.

## 6.4 Mitigation

6.4.1 It is not expected that any additional mitigation is required to further reduce the noise from external plant or breakout noise activities.

## 6.5 Noise from other activities and ancillary operations

### 6.5.1 Parking

6.5.2 The number of parking spaces, as part of this scheme are being reduced from 109 to 81. With this in mind, there is a positive reduction in potential noise from

vehicles and associated activities. Therefore, the parking noise will have no additional impact on local receptors.

6.5.3 **Events, Markets and Fares**

6.5.4 Temple understands that a number of community events are already held on the pier. It is our understanding that these types of events will continue to occur as part of this redevelopment scheme.

6.5.5 As the character of the use of this area and type of event is not proposed to change from existing, it is not anticipated to result in any additional impact on the closest noise sensitive receptors.

6.5.6 The existing events are also already controlled through the licensing regime as Temporary Event notices.

6.5.7 **Fishery Activities**

6.5.8 Although the fishery processing buildings are being updated as part of this scheme, the activities associated with the fishery businesses are not expected to change from the existing situation. Therefore, it is not anticipated to result in any additional impact on the closest noise sensitive receptors.

6.5.9 **Restaurant Kitchen Extraction**

6.5.10 At present the proposed scheme has not included the specific means by which the restaurant kitchen cooking range will be ventilated. Temple understands that if an external kitchen extraction fan is required then this is likely to be positioned on the plant roof on the south-eastern part of building 1, although this is not confirmed.

6.5.11 Any future tenant that requires this type of installation will need to comply with planning policy therefore, it is suggested that any future external plant will need to be assessed for compliance and this could be secured by way of pre and/or post commissioning planning condition(s). Such a condition would require an additional acoustic report to assess the plant if and when it is proposed by future tenants. Therefore, until such time, it is likely that an assessment of noise would be required as part of either a separate application or an appropriate discharge of condition. Therefore, the kitchen extraction is outside of the scope of this assessment.

6.5.12 **Assessment Summary**

6.5.13 The assessment of plant and activity noise has been predicted to be more than 10 dB below the anticipated background noise levels and this is in line with the Council's requirements. The scheme does not introduce any changes to the context of the location in terms of an introduction of new noise sources or activities which are not already part of the context and character of the location.



6.5.14 With the above in mind, the cumulative noise assessment indicates that the proposed scheme will likely have no adverse impact.

## 7 Conclusion

- 7.1.1 Temple has been appointed by North Yorkshire Council to undertake a preliminary plant noise assessment for equipment proposed as a part of the Scarborough Pier West.
- 7.1.2 Temple has undertaken a desktop assessment of likely background levels and calculations of the rating noise level of the proposed mechanical plant and activities, which has been used to assess the effects of the predicted noise levels on the nearest noise sensitive receptors. This has been assessed in line with North Yorkshire Council's guidance, policy and relevant national standards.
- 7.1.3 The assessment indicates that the predicted rating noise level of the mechanical plant will be 23 dB and 13 dB below the anticipated background sound level (day and night respectively) at the nearest noise sensitive receptor.
- 7.1.4 The breakout noise from the restaurant is predicted to be 22 dB below the anticipated daytime background level at the nearest noise sensitive receptor.
- 7.1.5 The cumulative daytime noise level of all plant and machinery combined with the restaurant breakout noise is predicted to be 19 dB below anticipated background levels. It is likely that this complies with North Yorkshire Council's criteria.
- 7.1.6 Temple has reviewed the context of the location and reviewed other possible sources of noise, such as external parking, fishery operations and community events. The cumulative noise assessment indicates that the proposed scheme will likely have no adverse impact.

## Appendix A Acoustic Glossary

### Noise/Sound

Noise and sound need to be carefully distinguished. Sound is a term used to describe wave-like variations in air pressure that occur at frequencies that can stimulate receptors in the inner ear and, if sufficiently powerful, be appreciated at a conscious level. Noise implies the presence of sound but also implies a response to sound: noise is often defined as unwanted sound.

### Decibel, dB

The unit used to describe the magnitude of sound is the decibel (dB) and the quantity measured is the sound pressure level. The decibel scale is logarithmic, and it ascribes equal values to proportional changes in sound pressure, which is a characteristic of the ear. Use of a logarithmic scale has the added advantage that it compresses the very wide range of sound pressures to which the ear may typically be exposed to a more manageable range of numbers. The threshold of hearing occurs at approximately 0dB (which corresponds to a reference sound pressure of 20  $\mu$ Pa) and the threshold of pain is around 120dB.

### Frequency, Hz

Frequency is the number of occurrences of a repeating event per unit second or Hertz (Hz). The human ear is sensitive to sound in the range 20 Hz to 20,000 Hz (20 kHz). For acoustic engineering purposes, the frequency range is usually divided up into octave bands, in which the upper limiting frequency for any band is twice the lower limiting frequency. The bands are described by their centre frequency value. In environmental acoustics the ranges typically used are from 63 Hz to 8 kHz.

### A-weighting

The sensitivity of the ear is frequency dependent. Sound level meters are fitted with a weighting network which approximates to this response and allows sound levels to be expressed as an overall single figure value, in dB(A).

### Ambient sound

Totally encompassing sound in a given situation at a given time, usually composed of sound from many sources near and far.

### Ambient sound level ( $L_{Aeq,T}$ )

Equivalent continuous A-weighted sound pressure level of the totally encompassing sound in a given situation at a given time, usually from many sources near and far, at the assessment location over a given time interval, T.

Background sound level ( $L_{A90,T}$ )

A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90 % of a given time interval, T, measured using time weighting F and quoted to the nearest whole number of decibels.

Rating level

Specific sound level plus any adjustment for the characteristic features of the sound.

Reference time interval

Specified interval over which the specific sound level is determined. This is 1 h during the day from 07:00 h to 23:00 h and a shorter period of 15 min at night from 23:00 h to 07:00 h.

Residual sound

Ambient sound remaining at the assessment location when the specific sound source is suppressed to such a degree that it does not contribute to the ambient sound.

Residual sound level ( $L_{Aeq,T}$ )

Equivalent continuous A-weighted sound pressure level of the residual sound at the assessment location over a given time interval, T.

Specific sound level

Equivalent continuous A-weighted sound pressure level produced by the specific sound source at the assessment location over a given reference time interval.

Specific sound source

Sound source being assessed.

Commented [NB10]: Keep with text below.

## Appendix B Environmental Health Consultation

### **Noise from façade breakout:**

*Façade noise breakout associated with music operation at retail or public houses within the development shall be controlled such that the level measured or calculated at 1-metre from the façade of the nearest existing noise sensitive premises, shall not exceed a level 10 dB below the existing LA90 background noise level in the 31.5 Hz, 63 Hz and 125 Hz octave bands.*

*Reason: To safeguard the amenities of the occupiers of neighbouring properties and to comply with policy DEC 4 of the Scarborough Local Plan.*

### **Noise from plant and machinery:**

*Noise associated with plant and machinery incorporated within the development shall be controlled such that the Rating Level measured or calculated at 1-metre from the façade of the nearest existing noise sensitive premises, shall not exceed a level 10 dB below the existing LA90 background noise level. The Rating Level and existing background noise levels are to be determined as per the guidance provided in BS 4142:2014.*

*Reason: To safeguard the amenities of the occupiers of neighbouring properties and to comply with policy DEC 4 of the Scarborough Local Plan.*

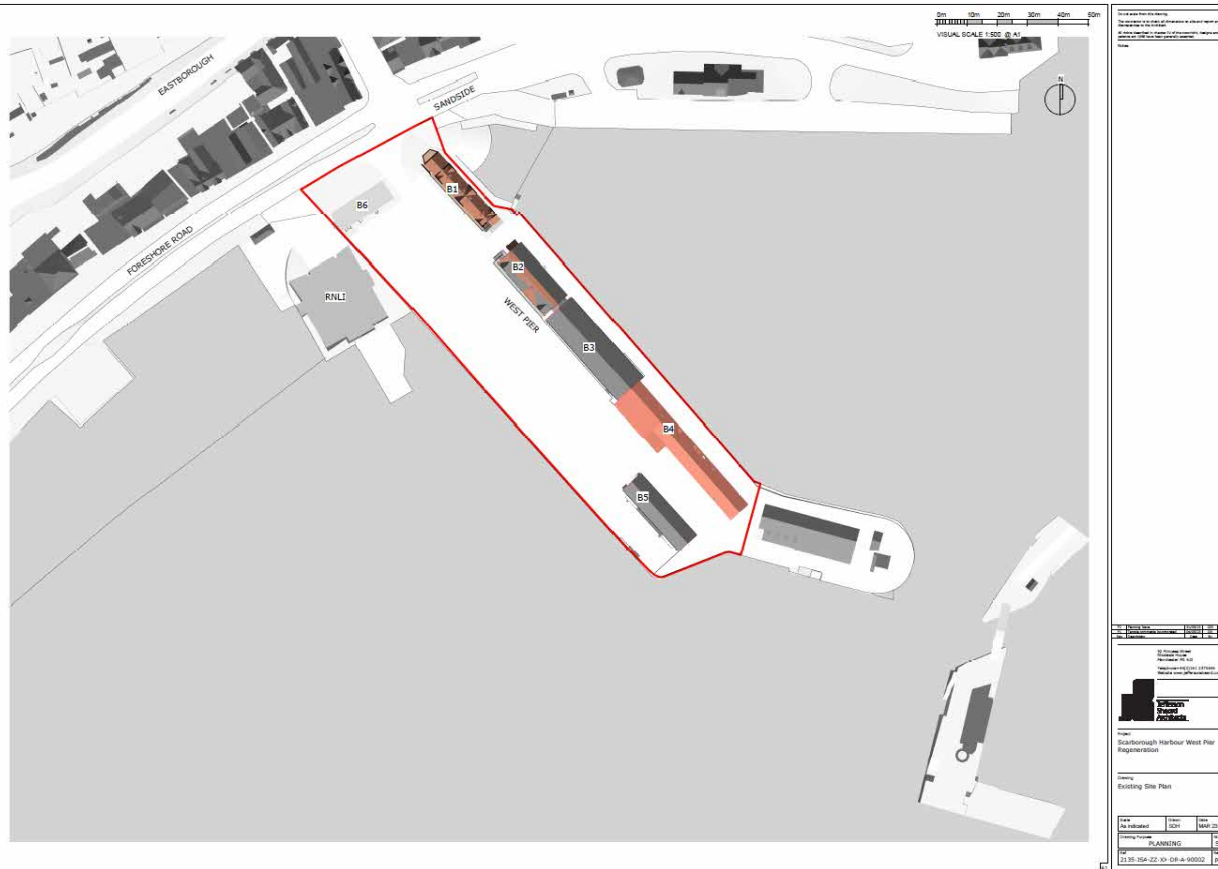
### **Pre commencement condition for plant/equipment:**

*Before the development hereby approved is brought into use, a manned measured noise survey must be carried out and a report of the findings submitted to and approved in writing by the Local Planning Authority. The noise survey must include reference to measured background noise level at monitoring locations agreed by the Local Planning Authority. The noise emitted must be measured at 1.0m from the facade of the nearest residential premises to demonstrate that the noise emitted by the combined operation of all external building services plant hereby permitted does not exceed 10db below background noise level at any time when the plant is operating. Measurement parameters must include the LA90, LAeq, LA Max and frequency analysis.*

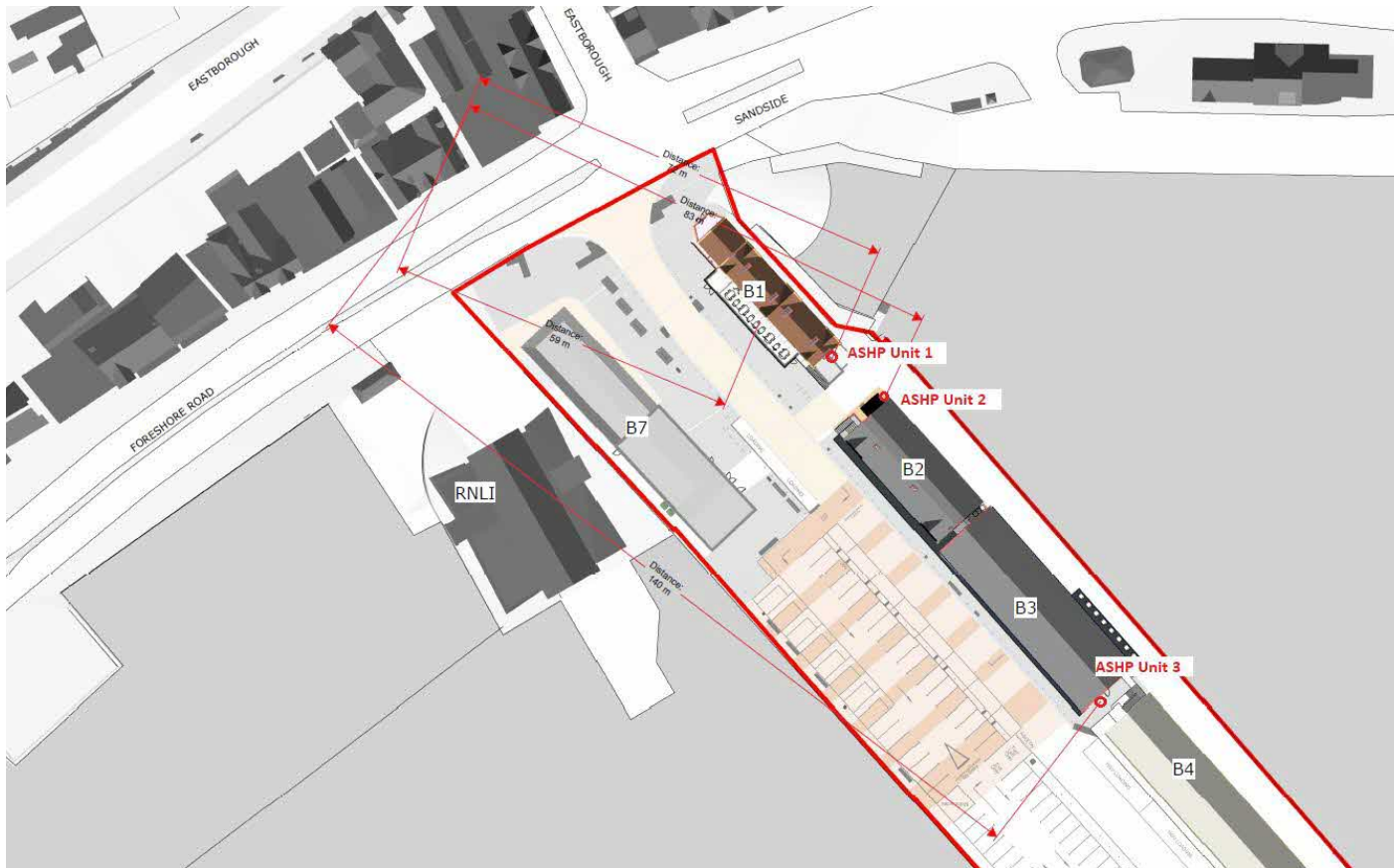
*Should the plant fail to comply with this condition at any time, it shall be switched off and not used again until it is able to comply. The use of the equipment must not commence or recommence until a fully detailed noise survey and report has been submitted to and approved in writing by the Local Planning Authority and approved mitigation measures such as acoustic screening or silencers have been implemented. The plant shall be serviced regularly in accordance with manufacturer's instructions and as necessary to ensure that the requirements of the condition are maintained at all times. Should the plant and equipment fail to comply with this condition at any time, it shall be switched off and not used again until it is able to comply.*

*Reason – to protect other residents in the area from the new development.*

## Appendix C Site Location Plan

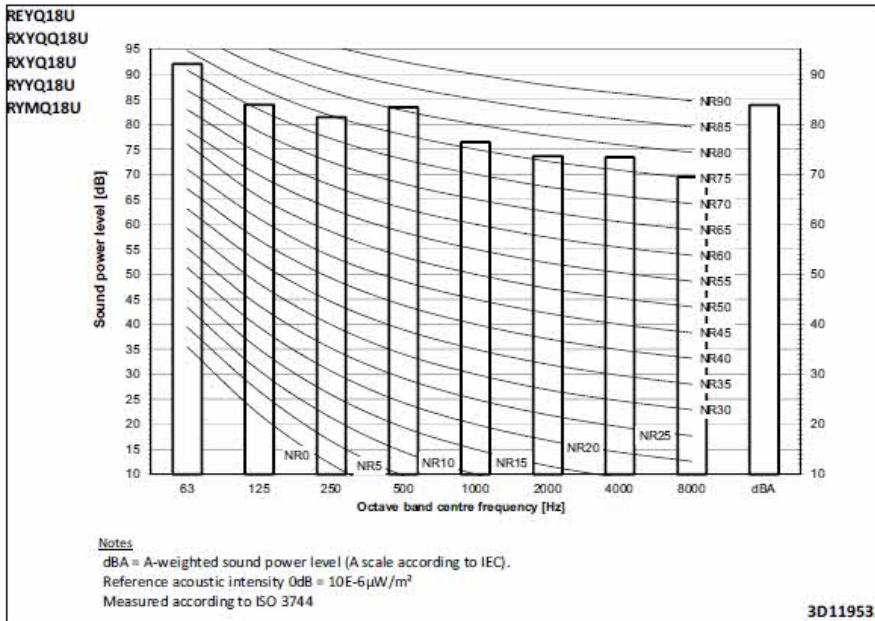


## Appendix D Plant Location Plan



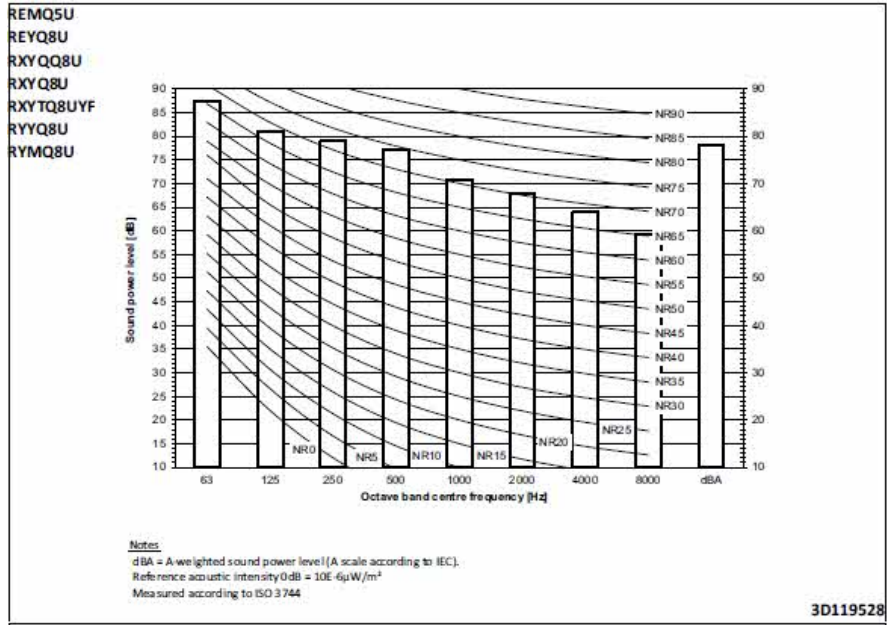
# Appendix E Plant Specification

## Building 1 – Plant Details

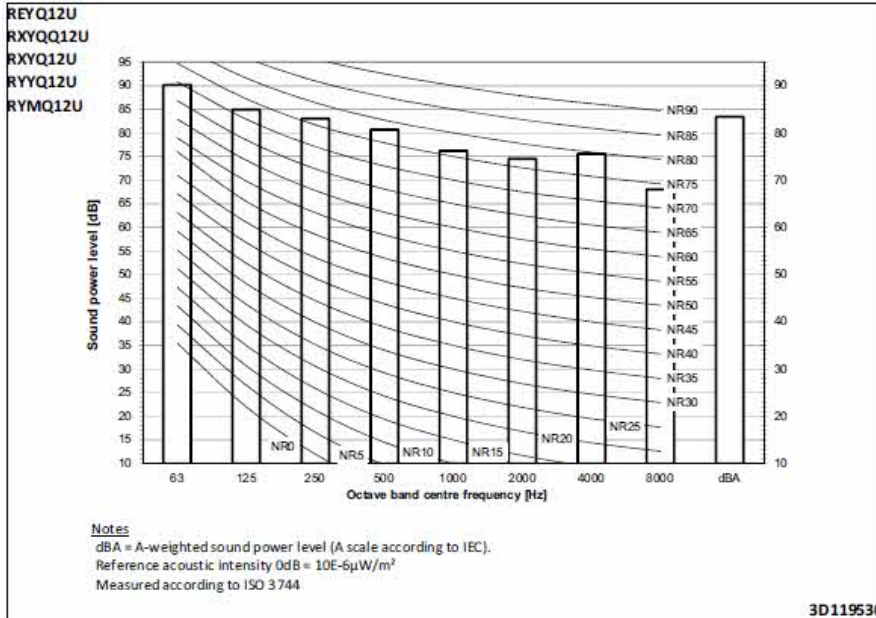




Building 2 – Plant Details




**Building 3 – Plant Details**



# temple

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