

Noise Note

Planning Application Reference: P2026/0420

Address: 121 Heol Cae Gurwen, Gwaun Cae Gurwen, SA18 1PD

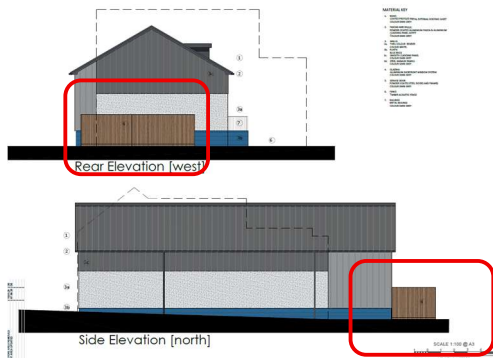
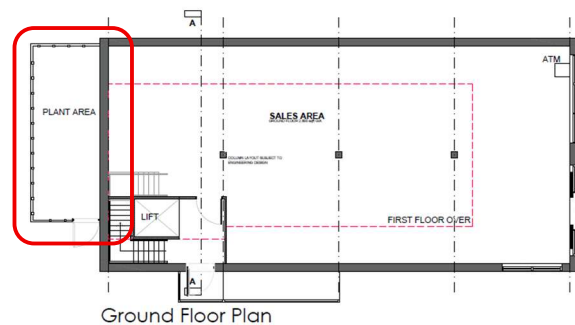
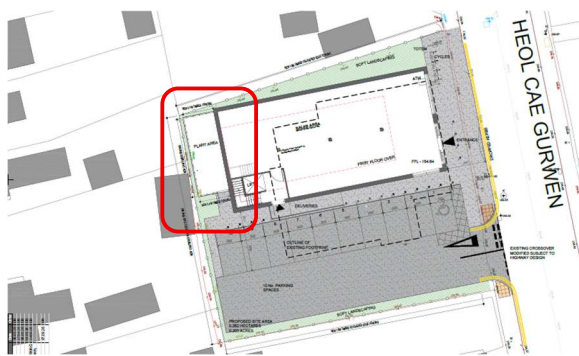
Proposed development: Proposed Demolition of Former Club and Development of a Retail Convenience Store

Development Proposals

This noise assessment has been prepared in support of the proposed retail store in place of a former events venue at 121 Heol Cae Gurwen.

New refrigeration and air conditioning (AC) plant (standard equipment associated with such a proposal / store) will be installed externally in a plant area / yard at the rear of the store.

The plant area is depicted on the proposed site layout, ground floor, and elevation plans submitted with the application – see following extracts:



The proposed plant area will be surrounded and enclosed by a proposed 2.4m high acoustic timber fence, and will be located to the immediate rear of the store (and its western elevation). It will be sited in the furthest corner of the curtilages to all surrounding properties, and will be bordered by an existing outbuilding within the curtilage of a property to the west, and by mature vegetation (including an evergreen hedgeline):



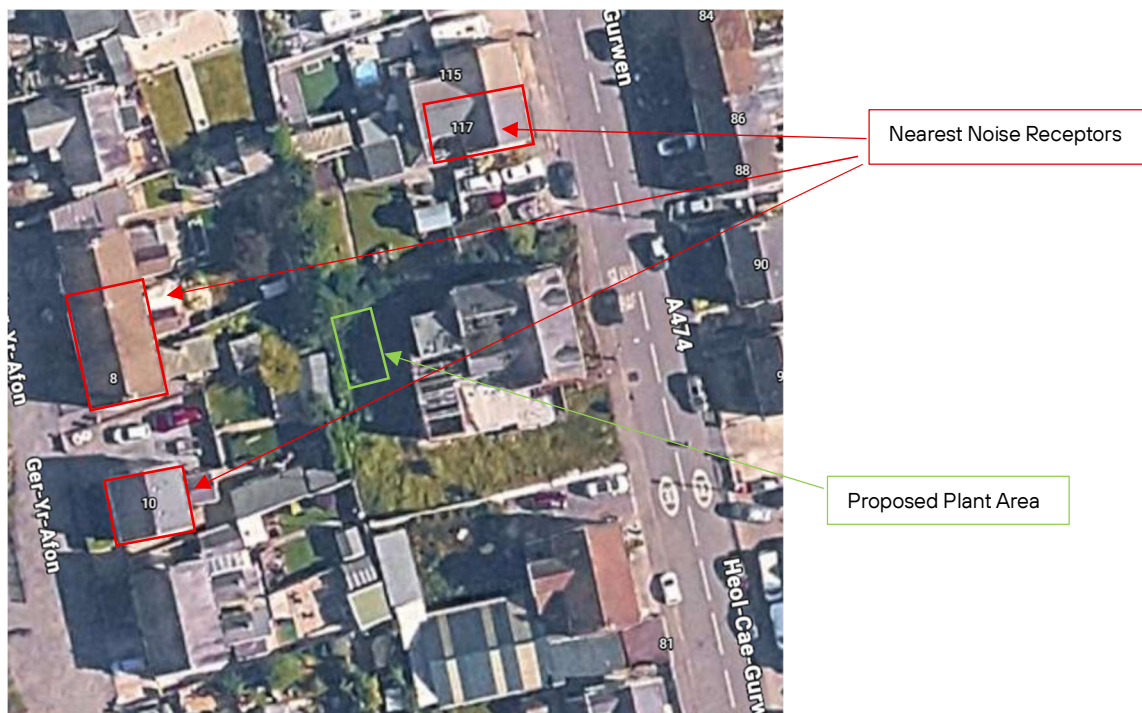
In terms of the plant proposed to be installed, the AC unit will operate only when the store is open; the refrigeration plant will operate 24 hours but generally at a reduced duty at night when cooling demands are lower.

Site Context

The nearest noise-sensitive receptors are the residential dwellings located to the west and north of the site.

The residential properties on Ger-Yr-Afon to the west and closest to the proposed plant area are house No.'s 6 & 8 (shown on the map below). These are both situated approximately 20.50-21.50 m respectively from the proposed plant area. House No. 10 on Ger-Yr-Afon (also shown on the map below) is also located approximately 23.90 m from the proposed plant area.

No. 117 Heol Cae Gurwen, located to the north of the development site, benefits from a "double width" curtilage, and is also some 21.10 meters from the proposed plant area.



Case Study Comparable Assessment

To assess the potential noise impact of the proposed development on surrounding residential properties, data from a comparable scheme has been reviewed.

This approach is possible and apt given the standard plant and equipment proposed to be installed, and which is common to all Tesco convenience stores.

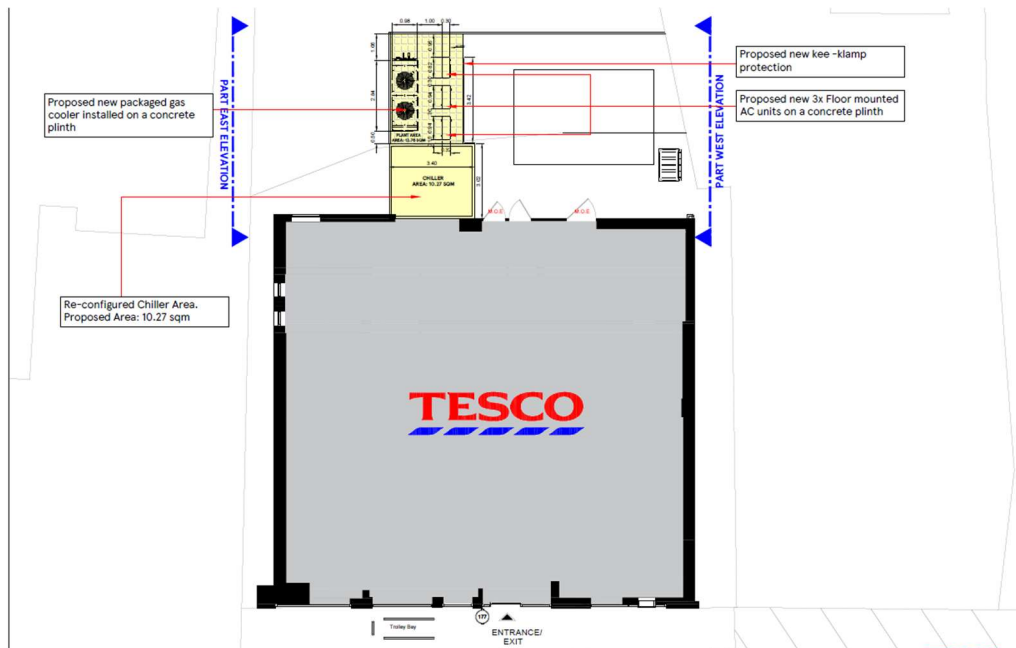
A plant area serving a Tesco Express store of a similar scale (321.50 sqm) to that proposed (372 sqm) was assessed as part of a planning application submitted to East Hampshire District Council (Application Reference 31258/009).

For ease of reference, the key details from the application and Noise Impact Assessment have been extracted below (full details provided in Appendix C):

Plant	Unit/Model	No. of units	Description	Level (dBA)
Gas cooler	Typical Tesco plant	1	Sound pressure level at 10m	42 day
				32 night
AC1, AC2	Typical Tesco plant	2	Sound pressure level at 1m	51
AC3	Typical Tesco plant	1	Sound pressure level at 1m	47

Manufacturers Noise Data

Noise Impact Assessment (app ref. 31258/009)



Proposed Plant Area (app ref. 31258/009)

"The nearest noise sensitive receptors will be the residential dwellings in Dairy Court behind the store. House 8 (Reference R1) is approximately 5 metres north of the proposed plant, House 9 (Reference R2) is approximately 9 metres south west of the proposed plant and House 11 (Reference R3) is approximately 13 metres south of the proposed plant."

"Plant noise levels at the most affected noise sensitive receptors have been predicted based on the manufactures noise data for the proposed equipment"

"It should be noted that the proposed plant is not anticipated to exhibit any tonal or impulsive characteristics provided it is well maintained. All plant will be inverter driven and, therefore, will gently ramp up and down depending on the demands on the various systems. To provide a robust assessment, a 3dB acoustic feature correction as described in BS 4142:2014+A1:2019 for the possible presence of "... characteristics that are neither tonal nor impulsive, though otherwise are readily distinctive against the residual acoustic environment..."

"Plant rating levels have been predicted at the nearest noise sensitive receptors. The assessment has taken account of the distance between the plant and the nearest receptors, orientations, screening, reflections and other propagation effects."

"The predictions are inclusive of a screen around the plant area to reduce the sound of the gas cooler to the receptors identified in paragraph 3.2 by a minimum 16dB and the AC units by 5dB."

"Table 5 summarises the results of the assessment outside the nearest noise-sensitive dwellings. All other nearby receptors benefit from increased distance/screening to the plant such that resulting noise levels will be lower than at the receptors considered"

Receptor	Period	Predicted plant rating level at receptor, L_{Aeq} (dB)	Proposed design criterion (dB)	Difference (dB)
R1 (Residential)	Daytime (07.00 – 23.00 hours)	39	39	0
	Night-time (23.00 – 07.00 hours)	25	30	-5
R2 (Residential)	Daytime (07.00 – 23.00 hours)	37	39	-2
	Night-time (23.00 – 07.00 hours)	22	30	-8
R3 (Residential)	Daytime (07.00 – 23.00 hours)	31	39	-8
	Night-time (23.00 – 07.00 hours)	16	30	-14

Summary

“The cumulative sound rating levels for the proposed plant, including proposed mitigation measures, have been predicted at the most affect noise sensitive receptor locations and assessed taking into consideration the typical requirements of East Hampshire District Council. Therefore, noise from the plant proposals should not be a reason for refusal of planning permission.”

Noise Impact – 121 Heol Cae Gurwen

Plant	Unit/Model	No. of units	Description	Level (dBA)
Gas cooler	Typical Tesco plant	1	Sound pressure level at 10m	42 day
				32 night
AC1, AC2	Typical Tesco plant	2	Sound pressure level at 1m	51
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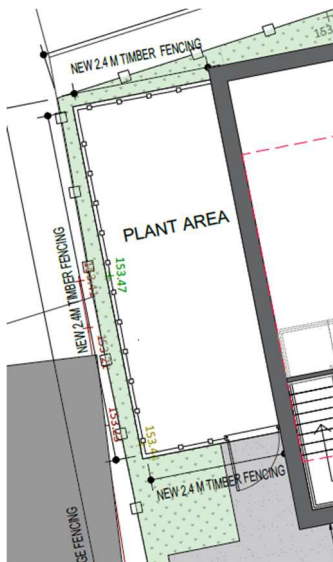
Manufacturers Noise Data

The proposed plant at 121 Heol Cae Gurwen is to be of a similar scale and nature to that considered under Application Ref. 31258/009. In that case, plant noise levels were assessed at the nearest noise-sensitive receptors using the manufacturers’ noise data, with consideration given to distance, orientation, and screening. The assessment concluded that the plant would not result in unacceptable impacts upon the surrounding residential properties.

It is, of course, the case that the circumstances at 121 Heol Cae Gurwen are more favourable in terms of the separation distances between the proposed plant and the nearest residential receptors. The nearest noise-sensitive dwelling is located approximately 21 metres from the proposed plant area. This compares favourably with the receptors considered under Application Ref. 31258/009, where the nearest dwelling was approximately 5 metres from the proposed plant, with other receptors at approximately 9 metres and 13 metres respectively.

In addition, the proposed development incorporates a 2.4m high acoustic timber boundary fence and areas of soft landscaping between the plant equipment and the neighbouring residential properties. These features will provide physical and acoustic screening, and will assist in suppressing the potential transmission of plant noise towards the adjoining dwellings (over and above the evident separation distances).

Over and above the design and configuration of the plant area itself the proposals provide for additional planting and screening to the outside of the enclosed area, and between it and the outer boundaries of the site (boundaries with adjoining properties). This is depicted and confirmed by the following extract from the proposed site plan:



The proposed refrigeration and air-conditioning equipment will also comprise modern plant with relatively low operational noise. The air-conditioning equipment will operate only during the store's opening hours, while the refrigeration plant will operate continuously but generally at reduced duty during the night when cooling demand is lower. Accordingly, the potential for disturbance during the most sensitive night-time period is expected to be limited.

Having regard to:

- the nature and specification of the proposed refrigeration and air-conditioning plant;
- the manufacturers' noise data available for comparable equipment;
- the substantially greater separation distance between the proposed plant and the nearest residential properties when compared with the previously assessed comparable scheme;
- the proposed timber boundary fencing and intervening soft landscaping, which will provide acoustic screening and suppression;
- the low operational noise characteristics of modern refrigeration and air-conditioning plant; and
- the findings of the comparable noise assessment undertaken in support of Application Ref. 31258/009.

It is considered that the proposed plant would not give rise to significant adverse noise effects or an unacceptable impact upon the living conditions of neighbouring residential occupiers.

The proposal is therefore considered acceptable in respect of noise and residential amenity.

Notwithstanding the above, and in the interests of ensuring that the development does not give rise to unacceptable noise impacts, it is considered that a suitably worded condition can be imposed requiring details of all plant and machinery to be submitted to, and approved in writing by, the Local Planning Authority prior to the commencement of operation.