Development Management – Delegated Officer Report

Application Number: AWDM/0500/25 **Recommendation: – Approve**

Site: **20 Hillside Avenue Worthing West Sussex BN14 9QS**

Proposal: **Installation of air source heat pump for swimming pool heating and retention of acoustic fencing of 2.2m high**

Date of Site Visit: 17.06.2025

Neighbours Checked: Y

Additional Neighbours Notified: N

Proposal, Site and Surroundings

The application site relates to a two storey detached house located on the south side of Hillside Avenue. A swimming pool and garden building have been added within the rear garden. Tree Preservation Order No. 40 of 1995 applies to trees within the front and rear garden of the site.

This is a predominantly residential area with a mix of dwelling types and designs. No. 18 is a detached chalet style bungalow to the west of the site which is set back from the frontage of No.18. No .22 to the east is a detached two storey dwelling with a similar setback to the street frontage as No.20. There are bungalows to the rear.

Permission is sought for the installation of an air source heat pump (ASHP) to heat the existing swimming pool. A previous application sought to regularise the installation of an air source heat pump but was later withdrawn and the air source heat pump has been removed (AWDM/1069/23). The proposed ASHP would be installed in the south west corner of the rear garden approximately 1 metre from the boundary with No.18 to the west. It would measure approximately 1.3 metres in height mounted on 100mm rubber feet, 1.1 metres in width and 0.4 metres in depth. A 2.2 metre high acoustic enclosure has been installed.

A supporting Noise Impact Assessment has been prepared by the applicant.

Relevant Planning History:

01/00234/FULL - Two storey side extension
STATUS: Application Refused 17th April 2001.

04/00318/FULL - First floor extension to west elevation with balcony area to rear
STATUS: 15th April 2004.

04/00501/FULL - Erection of two storey rear extension, formation of balcony at rear and re-construction of rear conservatory
STATUS: Conditional Consent 14th June 2004.

AWDM/1069/23 - Retrospective application for Installation of a heat pump for swimming pool heating and acoustic fencing of 2.2m high
STATUS: Application Withdrawn 21st August 2024.

Consultations

The Council's **Environmental Health** officer has commented as follows:

Let me start by covering some of the points raised by the applicant and the neighbour.

MSC020

MSC020 was updated on the 20th March 2025 with a simplified assessment method, it also increased the size limit of the Air Source Heat Pump (ASHP) for dwelling houses up to 1.5m3 and removed the 1m boundary rule, enabling heat pumps to be installed within 1m of the property boundary. The simplified calculation sets a noise limit of 37dBL(A)eq 5 mins at the assessment positions ignoring the effect of the façade.

The proposed unit for this application is larger than 1.5m3 so MCS020 does not apply in this case, which is acknowledged by the applicant. I have attached the new guidance for your information.

Maximum Noise Level of 35dB(A)

Environmental health set a façade noise level of 35dB(A) based on IOA/CIEH briefing note. (Attached to this e-mail). My understanding is that this figure was meant as a design criterion for the noise enclosure. This is reported in the RBA Acoustic report dated the 4th March 2024, which I have attached for easy reference. RBA Acoustics used 35dB(A) as the nighttime objective at the nearest bedroom façade.

Noise Enclosure

RBA Acoustics carried out a BS4142 assessment for the ASHP installed at the time and produced a Rating level of 41dB(A) at the rear façade of the neighbouring property. They calculated that with their acoustic enclosure in place the rating level would be reduced to 27dB(A), which matched the lowest nighttime background level taken during the survey. This suggests to me that they expected the noise enclosure to provide around 14dB(A) of sound reduction.

The subsequent acoustic assessment carried out by Evolved Acoustics, report dated 22nd May 2024, (Attached) measured the specific sound from the ASHP at 39dB(A), but this measurement was taken at a nearer façade and not at the first floor bedroom façade the original acoustic assessment was assessed at. Furthermore, the noise the ASHP was making at the time of this measurement was most likely different to the manufacturers figures RBA Acoustics used in the initial assessment. I say this because the Council's own noise measurements changed over time from the first and second recordings. The latter recordings detected a low frequency hum at 50Hz that was not present when we first made noise recordings. There are too many variables for me to accurately assess the effectiveness of the enclosure from the existing

information, i.e I cannot say with any certainty whether the acoustic enclosure met the initial design brief.

Noise Impact Report

The Noise Impact Report for this application has been carried out by the applicant. In his report and BS4142 calculations he is suggesting the enclosure will provide 20dB(A) sound reduction in noise levels, way above what the RBA Acoustic report suggested. I believe this is because the applicant has used the sound reduction index for the materials used in the enclosure to assess the barriers effectiveness. This is wrong.

Noise barriers are designed to interrupt the direct line of sight between a sound source (ASHP) and a receiver (The neighbouring house). When sound waves encounter an obstacle, like a noise barrier, they bend or diffract around the edges of the barrier. This diffraction is a key mechanism by which sound gets around the barrier and reaches the receiver.

By blocking the direct path, the barrier forces sound to travel further, either over the top or around the sides of the barrier, before reaching the receiver. This longer path length results in attenuation, a reduction of the sound. Regardless of how dense you make the barrier, the pathway will remain the same so there is a limit to how much sound reduction a barrier will provide regardless of how high the sound reduction index is. The Noise Impact Report provides no barrier calculations to justify using the 20dB(A) reduction.

Conclusion

Regrettably, we cannot rely on the applicant's calculations and for this reason I would request an acoustic report from a suitably qualified acoustician so that we can make an informed decision. Suitably qualified means someone who has met the education criteria to be a member of the Institute of Acoustics or a member of the Association of Noise Consultants.

The applicant has responded to the EHO comments with further clarification and has requested that rather than commissioning a full acoustic report before installation, because of the costs involved in an acoustic report, instead a BS4142-compliant post installation noise survey could be carried out by a suitably qualified acoustician to ensure than the 35dB level is achieved.

The **Environmental Health** Officer has commented further as follows:

Looking at the information provided by the applicant, dated the 26th May, in response to the neighbours representation it suggests that the existing enclosure may need to be adjusted to meet the necessary clearance.

- Has not yet been installed — installation will ensure appropriate siting and clearance in accordance with manufacturer guidance.

Having considered the applicant's subsequent response to my representation and the information provided, I accept that the proposed model is quieter than what it will

replace and if the tonal sound is not present then based on the information the applicant has provided there is no reason that the 35dB facade rating level, that environmental health set initially as noise objective at the nearest facade, cannot be achieved.

This objective is 2dB below the updated MCSO20 permitted development noise objective of 37dB(A) at the nearest facade. However, this lower level will help ensure that noise from the plant does not significantly impact the garden amenity which is nearer to the plant.

I would recommend that Planning condition any permission to require a noise mitigation scheme to achieve a 35dB(A) rating level objective at the nearest facade of 18 Hillside, which shall be tested on completion in accordance with BS4142 , by a suitably qualified acoustician to demonstrate this objective has been achieved. The condition will need to be caveated in case the subsequent noise assessment shows this objective is not met. I would recommend that the condition also include a requirement for the future maintenance of the ASHP and acoustic barrier.

Environmental Health can help assess noise from the unit after planning permission is finalised should there be any nuisance complaints.

Representations

Two representations have been received from the occupiers of No.18 to the west of the site objecting to the application on the grounds as summarised below.

- The applicant has been using an ASHP in this location to heat their swimming pool for 4 years.

- The ASHP installation in this application does not conform to MCS regulations, so the maximum noise level of 42db at our nearest noise receptor is not applicable. This is not an MCS approved unit, there are 5 sound reflecting surfaces where there should be no more than 3, and it has not been designed, installed or signed off/certified by an accredited MCS engineer.

- The calculations and noise assessment have been carried out by the applicant and cannot be taken as independent calculations.

- In the retrospective application (AWDM/1069/23) with the same acoustic fence as now proposed, a maximum noise level at our nearest noise receptor was stipulated by WBC as to be no greater than 35db so as not to cause us harm and the proposed ASHP would exceed this (41dB). The previous application was withdrawn because it was not possible to reduce the noise of the ASHP stated at producing 60db to the required level of 35db at our property. The current application is for an ASHP stated at producing 58db in the same location with the same noise reducing measures in place.

- The ASHP has not been installed with the manufacturers required clearances which will reduce efficiency meaning that the unit will have to run harder for longer.

- The calculations make the assumption that the acoustic fence performs as well as calculated. The sound measurements in the independent acoustician report carried out by Evolved Acoustics issued 22/05/2024 included in the previous retrospective application AWDM/1069/23 showed that the acoustic fencing did not perform as well as calculated. We didn't notice any significant reduction in noise at our property after it was installed.

- The original recommendation was for acoustic fencing of 2.2m from the ground to be installed. The fence that has been installed comprises of 1.8m panels that have been raised to a height of approximately 2m. this falls short of the original recommendations. Nevertheless the previous acoustic report concluded that it is highly unlikely that the existing fence can be modified to have a significant reduction on the noise levels at our property.

- As this ASHP is used to heat an outside swimming pool, as opposed to the heating a home it is in operation for 5 months of the year throughout the summer months. This is when we want to enjoy our garden and outside space but are prevented from doing so due to the constant intrusive noise. The noise limit of 35db at our doesn't take into account the noise that we have to endure in our garden.

- The current application has not resolved the noise issues highlighted in the previous retrospective planning application AWDM/1069/23 – constant noise 5-7 hours per day, 5 months of the year causing stress, anxiety, headaches, loss of sleep due to the stress and anxiety. As we work from home we have to endure the noise 7 days a week. The previous ASHP could be heard and felt throughout our house, even with all the doors and windows shut. There is no escaping it. It affects our mental health and ability to concentrate on our work.

- Alternative options should be explored such as relocating and professionally installing the unit to address noise issues previously highlighted under the previous application.

The applicant has responded to the first representation with a further supporting statement.

The statement clarifies that MCS regulations do not apply to the proposals but calculations have been provided as a comparison and to assist the application. In summary it states that the proposed ASHP:

- *achieves at least a 29 dB(A) Rating Level at the nearest sensitive receptor — 6 dB below the Environmental Health threshold.*
- *operates with a sound power level of at least 9 dB lower than the previous ASHP, representing an 87% reduction in sound energy at the very least.*
- *is modelled using conservative, BS 4142-compliant assumptions with verified mitigation measures. Real life results are expected to be better.*
- *will be quieter than typical suburban daytime noise levels*

- *has not yet been installed — installation will ensure appropriate siting and clearance in accordance with manufacturer guidance.*

The occupier of No.18 has responded with a further representation with comments as summarised above and objection still stands.

Relevant Planning Policies:

Worthing Local Plan policies (WBC 2023): SP1, DM5, DM22
National Planning Policy Framework (MHCLG 2024)
National Planning Practice Guidance
SPG 'Extending or Altering Your Home' (WBC)

Planning Assessment:

There is no objection in principle to extensions and alterations to residential dwellings within the built-up area. The key considerations are the effects on the visual and residential amenities of the locality.

Residential Amenity

The main impact arising from the proposals would be to the occupiers of neighbouring dwellings to the west, east and south. No.18 to the west is the most closely sited dwelling to the proposed ASHP with its ground floor and first floor windows positioned between approximately 10-25 metres from the proposed unit and adjacent rear garden and so the application has been considered in this context, with other neighbouring dwellings having greater separation from the proposed ASHP.

The previous application AWDM/1069/23 sought to regularise the installation of an air source heat pump already installed at the property and post installation testing revealed that the unit exceeded acceptable noise levels. The unit was later removed.

The applicant's Design and Access Statement states that the proposed air source heat pump has been selected for its reduced power level, smaller size and quieter sound levels than the previous proposal as well as for energy efficiency.

It stipulates a Hydro-Pro Inverter Type Z24/32 would be installed which has a sound range of 42-58 dB and with a horizontal fan to help direct noise away from the closest affected neighbour at No.18. A Hales Noisestop Absorbent sound screen has also been installed to the north, west and south sides of the enclosure. The ASHP would be in operation during the daytime and summer months only.

The applicant proposes a post installation acoustic survey for the unit by a qualified acoustician. Following further clarification from the applicant, the Environmental Health Officer has agreed that on the basis of the information provided the unit proposed could achieve the 35dB façade rating level and that this recommended level would also help ensure that noise from the plant does not significantly impact the garden amenity which is nearer to the plant than the affected windows. The Environmental Health Officer has therefore recommended a condition requiring a noise mitigation scheme to achieve the 35dB(A) rating level objective at the nearest

facade of No. 18 Hillside to be tested on completion to demonstrate compliance and if necessary further mitigation to be agreed. The details provided also suggest that hours of use of the ASHP would be limited to daytime hours. A condition is therefore recommended to limit this to use between 8am and 6pm only. These measures would ensure that noise from the plant can be suitably controlled in the interests of protecting residential amenity. Subject to these controls, the impact of the proposed development on the amenity of neighbouring occupiers is considered acceptable.

Visual Amenity

The air source heat pump would be sited within the enclosure in the corner of the enclosed rear garden where it would not be readily visible or cause any significant harm to visual amenity given its size and positioning. The appearance of the timber enclosure would be in keeping with the garden setting. Design and impact on visual amenity is considered acceptable.

Recommendation:

APPROVE subject to condition(s):-

1. Drawing Numbers
2. Standard time limit
3. Noise mitigation scheme to achieve 35dB(A) rating level objective at the nearest façade of No.18 Hillside Avenue to be implemented and tested.
4. Hours of use limited to between 8am and 6pm.

Informative

The Local Planning Authority has acted positively and proactively in determining this application by assessing the proposal against all material considerations, including planning policies and any representations that may have been received and subsequently determining to grant planning permission in accordance with the presumption in favour of sustainable development, as set out within the National Planning Policy Framework.

Is recommendation contrary to letter(s) of representation? Y

Case Officer: Rebekah Hincke Date:16.03.2026

Authorised by: Louise Prew Date: 01/04/2026