Changes to various permitted development rights

## CIEH response to DLUHC’s Changes to various permitted development rights

9th April 2024

### About the Chartered Institute of Environmental Health (CIEH)

CIEH is the professional voice for environmental health representing over 7,000 members working in the public, private and third sectors, in 52 countries around the world. It ensures the highest standards of professional competence in its members, in the belief that through environmental health action people's health can be improved.

Environmental health has an important and unique contribution to make to improving public health and reducing health inequalities. CIEH campaigns to ensure that government policy addresses the needs of communities and business in achieving and maintaining improvements to health and health protection.

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## Key points:

* CIEH liaised with the IOA upon on consultation response and share many of their viewpoints.
* CIEH believe that a fixed setback distance is a reasonable but ultimately an overly simplistic proxy for controlling noise impacts. A performance-based approach utilising appropriate noise criterion aligns better with standard noise control practices.
* CIEH agrees that removing the existing 0.6 cubic meter volume restraint would be beneficial for enabling air source heat pump manufacturers to explore a wider range of product designs that could incorporate improved noise control measures. The elimination of this volume limitation should be accompanied by a revision to the noise assessment calculations to implement more appropriate modelling techniques for larger units.
* CIEH agrees that detached dwelling houses should be permitted to install a maximum of two air source heat pumps, provided that the existing MCS noise limit for a single air source heat pump should be applied to the combined noise emissions of both units serving the dwelling house to avoid a cumulative impact being caused.
* CIEH has strong concerns about allowing unrestricted installations of multiple air source heat pump units in flats through permitted development rights. CIEH believes for situations where there is a high risk of cumulative noise impacts, including flats, such installations should be covered by a full planning application.
* **CIEH believe that the proposed amendments to the permitted development rights for air source heat pumps could have significant impacts on businesses, local planning authorities, and communities. While there are potential benefits in terms of facilitating heat pump deployment, it's vital that any changes are accompanied by effective mechanisms to assess and control noise impacts.**

### 44. Do you agree that the limitation that an air source heat pump must be at least 1 metre from the property boundary should be removed? Please provide your reasons.

* **Yes**
* **No**
* **Don't know**

CIEH believe that removing the blanket 1 metre limitation could be reasonable. In addition, the Microgeneration Certification Scheme (MCS) noise limit and associated noise assessment procedure (i.e. the noise propagation model, with allowances for barriers and distance) for heat pumps should be based on scientific evidence and research.

In principle, having a fixed setback distance is an overly simplistic proxy for controlling noise impacts. A performance-based approach allowing heat pumps to be situated closer to boundaries, as long as they comply with an appropriate noise criterion at nearby receptors, aligns better with standard noise control practices.

### 45. Do you agree that the current volume limit of 0.6 cubic metres for an air source heat pump should be increased? Please provide your reasons. If you have answered yes, please provide examples of a suitable size threshold, for example, in cubic meters or a height limit, including any supporting evidence.

* **Yes**
* **No**
* **Don't know**

**CIEH believe that removing the existing 0.6 cubic meter volume restraint would be beneficial for enabling air source heat pump manufacturers to explore a wider range of product designs that could incorporate improved noise control measures.**

**Larger casing volumes provide more internal space for techniques like better vibration isolation, enhanced exhaust silencing, increased fan/compressor encapsulation and other acoustic louvring. It would also allow noisier units to be acoustically enclosed to enable use in more challenging locations, such as terraces, tenements, and flats.**

**46. Are there any other matters that should be considered if the size threshold is increased? Please provide your reasons.**

* **Yes**
* **No**
* **Don't know**

Although this is difficult to quantify if unit sizes increase significantly beyond the current limit, CIEH wish to highlight that the basic noise propagation assumptions underlying the MCS 020 Planning Standard's assessment methodology become increasingly invalid.

The MCS 020 procedure treats all air source heat pumps as quasi point sources for calculating noise levels at receiver locations. While a reasonable simplification for very compact units, this assumption breaks down as installations become larger distributed sources.

For larger sized units, factors like casing radiation, exhaust characteristics, and internal configurations make simplistic point source modelling inadequate for accurate noise predictions. At these scales, more complex calculations incorporating source directivity and dimensions are required.

As directivity information is not currently available from manufacturers, as it does not form part of the standardised test procedure, it is not practical to mandate all these changes in one step. A practical first step would be to systematically investigate and update the noise propagation model. This would not require a change to the laboratory sound power test procedures, which is something that will require international agreement and therefore take time.

Without updating the noise modelling approach, there is a risk that the current MCS 020 methodology could increasingly under-predict actual noise levels for larger air source heat pumps installed near property boundaries if the volume limit is removed.

CIEH recommend that if the volume limit is raised to accommodate advanced noise control designs, it should be accompanied by a revision to the noise assessment calculations to implement more appropriate modelling techniques for larger units.

Expanded noise measurements and modelling of diverse large air source heat pump configurations would be needed to develop and validate these improved propagation calculation procedures.

Provided the noise assessment methods are refined accordingly, CIEH support eliminating the volume limitation to unlock further product noise reductions through innovative design approaches by manufacturers.

**47.** **Do you agree that detached dwellinghouses should be permitted to install a maximum of two air source heat pumps? Please provide your reasons.**

* **Yes**
* **No**
* **Don't know**

CIEH agrees that detached dwelling houses should be permitted to install a maximum of two air source heat pumps, provided that safeguards are put in place to control noise emissions. Specifically, we recommend that the existing MCS noise limit for a single air source heat pump should be applied to the combined noise emissions of both units serving the dwelling house to avoid a cumulative impact being caused.

The current MCS Planning Standard, which installations under permitted development must comply with, sets a clear noise limit to protect neighbouring properties from excessive noise impact. However, permitting two heat pumps on a single dwelling introduces the potential for higher cumulative noise levels that could exceed this threshold when combined.

To mitigate this risk, CIEH proposes that where two air source heat pumps are installed on a detached house, the noise assessment and compliance requirements should consider the aggregate maximum noise emissions from both units operating simultaneously. In practice, this would mean that the combined noise level from the two heat pumps must not exceed the adopted MCS noise permitted level. The methodology for combining the noise level from two heat pumps and the nearest sensitive receptors would need to take into account if the two heat pumps were installed as a cascade system or separately on different areas of the dwelling.

This approach strikes an appropriate balance between permitting greater flexibility for homeowners to install low-carbon heating systems and managing the potential noise impact consequences on neighbours. It will not deal with the noise impact on the homeowner benefiting from the unit, which remains a gap in the process.

**48.** **Do you agree that stand-alone blocks of flats should be permitted to install more than one air source heat pump? Please provide your reasons.**

* **Yes**
* **No**
* **Don't know**

**The CIEH has strong concerns about allowing unrestricted installations of multiple air source heat pump units on blocks of flats through permitted development rights alone.**

**Installing multiple separate air source heat pumps requires a mechanism to assess the cumulative noise impact on surrounding receptor locations. The current MCS noise limit applies to each individual heat pump but does not explicitly address or limit the compounded effect when numerous units are operating simultaneously.**

**Without provisions for assessing this cumulative noise level from all heat pumps at each receptor point, there is a risk of unintended noise nuisance and disturbance situations arising for nearby residents as system deployments scale up unconstrained within a block of flats.**

**Ideally, for multi-tenant developments like flat blocks, the CIEH recommends that:**

* **A single centralised heating and/or domestic hot water system design be used to comply with noise limits at all receptors, rather than allowing ad-hoc individual installations from each flat,**
* **such installations are covered by a full planning application.**

**A planning application will be more involved than granting permitted development right but, until such time as there are robust measures in place to protect residents from cumulative noise impacts, this is proportionate to the level of risk arising from unacceptable levels of noise.**

**I**n new build developments, the option of ‘community ground source heat pumps’ could also be considered as they provide enhanced reliability through consistent ground temperatures, with examples in Cornwall ([Heat the Streets Project](https://heatthestreets.co.uk)) and [Enfield Council](https://www.local.gov.uk/case-studies/enfield-council-council-housing-heat-pumps). However, these are major civil engineering schemes requiring deep drilling and vibration during construction with care needed to isolate pumps in operation. **Ultimately, this reinforces the need for local authorities through their planning system and on advice from Environmental Health Practitioners to satisfy themselves that existing sewage treatment works have the capacity to treat additional discharges from new developments, particularly housing developments and that this includes avoiding within reason, the diverting of effluent during heavy rainfall.**

**49. Do you agree that the permitted development right should be amended so that, where the development would result in more than one air source heat pump on or within the curtilage of a block flats, it is subject to a prior approval with regard to siting? Please provide your reasons.**

* **Yes**
* **No**
* **Don't know**

Allowing multiple air source heat pumps in close proximity to residential dwellings introduces the potential for adverse noise impacts, especially in the context of a higher-density development like a block of flats. The cumulative noise emissions from several heat pumps could create an unacceptable acoustic environment for residents if not properly assessed and controlled.

A full planning application will provide a reasonable level of protection from unacceptable noise levels to mitigate the risk of cumulative noise impacts. In particular, it would allow the local authority to require a noise assessment and consider the specific context of the proposed development, including the number and positioning of heat pumps, proximity to noise-sensitive receptors like bedroom windows, and the overall noise levels likely to be experienced by residents.

**50. Are there any safeguards or specific matters that should be considered if the installation of more than one air source heat pump on or within the curtilage of a block of flats was supported through permitted development rights? Please provide your reasons.**

* **Yes**
* **No**
* **Don't know**

For the reasons explained above the CIEH considers that permitted development rights should not be granted for situations where there is a high risk of cumulative noise impacts. This will include, but not be limited to blocks of flats.

The department has not properly assessed the impacts arising from high density situations or proposed adequate protection measures where there is a high risk of cumulative noise impacts. It is for this reason that the only appropriate mechanism will be for such installations to be the subject of a full planning application.

**51. Do you have any views on the other existing limitations which apply to this permitted development right that could be amended to further support the deployment of air source heat pumps? Please provide your reasons.**

* **Yes**
* **No**
* **Don't know**

The proposal to remove the limitation on using air source heat pumps only for heating should be considered carefully. From a noise perspective, the cooling mode of an external heat exchanger generally is understood to have a lower sound power level than the heating mode; however, allowing cooling modes will lead to air source heat pumps being potentially used at different times of the day, particularly at times of the year when the weather is warmer and people will be using their gardens for relaxation.

The current MCS noise limit applies 1m from the centre point of the window or door of a neighbours nearest habitable room (which may well be open in the summer months). This implies that the noise limit is mainly to protect the amenity of people indoors. It may be appropriate to consider a different noise limit if air source heat pumps are likely to be used for cooling. In the UK, BS 4142 is used to assess the noise impact of items of heating, ventilation and air conditioning plant used for commercial purposes on residential receptors outdoors. In most areas of the country, a neighbour’s air source heat pump would be unlikely to result in a positive outcome if assessed using this standard.

CIEH recommends that appropriate noise limits and assessment methodologies be researched prior to removing the limitation on air source heat pumps installed using permitted development rights that they must only be used for heating.

**52. Do you think that any of the proposed changes in relation to the Class G of Part 14 permitted development right could impact on: a) businesses b) local planning authorities c) communities? Please provide your reasons.**

* **Yes**
* **No**
* **Don't know**

**CEIH agrees that the proposed changes to the Class G of Part 14 permitted development right, which governs the installation of air source heat pumps on domestic premises, could have impacts on businesses, local planning authorities, and communities.**

**a) Businesses:**

**The proposed changes to the permitted development right, particularly the removal of size restrictions on air source heat pumps, could have significant positive impacts for businesses in the sector.**

**Currently, the permitted development right limits the volume of an air source heat pump's outdoor compressor unit (including any housing) to no more than 0.6 cubic metres. This constraint has been identified as a barrier to the development of quieter heat pump models for the mass market. By removing or increasing this size limit, manufacturers would have greater flexibility to innovate in acoustic design.**

**For example, with the ability to increase the size of the heat pump's evaporator and fan, manufacturers could potentially develop units that operate at lower speeds while still maintaining performance. Slower fan speeds can significantly reduce noise emissions, making the units more acoustically acceptable in residential settings. Similarly, larger housings could accommodate improved acoustic insulation and attenuation measures.**

**Removing the size constraint would give manufacturers the design freedom they need to prioritise noise reduction alongside other performance characteristics. This could lead to the development of a new generation of quieter, more neighbour-friendly heat pump products.**

**Moreover, the proposed changes to the permitted development rights, such as potentially allowing multiple units on a single property and removing the 1 metre boundary distance requirement, could significantly increase the market demand for heat pumps. By making it easier for households to install these systems, the changes could drive up adoption rates.**

**This growing market presents a strong incentive for businesses to invest in heat pump technology, including in research and development aimed at improving acoustic performance. With a larger potential customer base, manufacturers may be more willing to commit resources to creating quieter, more efficient, and more cost-effective heat pump solutions.**

**The increased demand could also stimulate competition and innovation among suppliers and installers, leading to improved installation practices that prioritise noise control. This could include the development of better acoustic screening and vibration isolation solutions.**

**However, to fully realise these benefits, it's crucial that the amended permitted development rights include clear and robust noise control measures. By setting achievable noise limits and providing a level playing field for manufacturers, the regulations can drive innovation towards quieter products while still facilitating wider heat pump deployment.**

**In conclusion, removing size constraints on air source heat pumps through the permitted development right could unlock significant opportunities for businesses to develop quieter, more neighbour-friendly products. Combined with the potential for increased market demand, this could accelerate investment and innovation in the sector, leading to better acoustic design and installation practices. By creating a supportive regulatory framework, the Government can harness the ingenuity of industry to deliver heat pump solutions that are both sustainable and acoustically acceptable.**

**b) Local Planning Authorities:**

**The suggested amendments to the permitted development rights would have direct implications for local planning authorities. Removing the 1 metre boundary distance rule and potentially allowing multiple heat pumps on a property could lead to a higher number of installations overall. This may increase the workload for planning departments in terms of registering and monitoring these developments.**

**Moreover, if the proposed changes lead to a rise in noise complaints from poorly sited or cumulatively noisy heat pump installations, local authority environmental health officers may experience an increased burden in investigating and enforcing against statutory noise nuisances. It's vital that any amended permitted development right provides clear mechanisms for local authorities to assess and control noise impacts through tools like prior approval or standardised noise limits.**

**c) Communities:**

**The potential impacts on communities are primarily related to noise. While the proposed changes aim to facilitate the wider adoption of low-carbon heating, which could contribute to climate change mitigation and lower energy bills, it's essential that this doesn't come at the cost of acoustic amenity.**

**Removing the 1 metre boundary distance requirement could lead to heat pumps being sited closer to neighbouring properties, potentially increasing noise exposure. Similarly, allowing multiple heat pumps on a single property introduces the risk of cumulative noise impacts affecting nearby residents.**

**To mitigate these risks, it's crucial that any amended permitted development right includes robust noise control measures, such as applying the MCS noise limit to the combined impact of multiple units, requiring prior approval for noise-sensitive installations, or setting minimum separation distances. With appropriate safeguards in place, the proposed changes could strike a balance between supporting the transition to low-carbon heating and protecting communities from unacceptable noise disturbance.**

**In conclusion, CIEH believe that the proposed amendments to the permitted development rights for air source heat pumps could have significant impacts on businesses, local planning authorities, and communities. While there are potential benefits in terms of facilitating heat pump deployment, it's vital that any changes are accompanied by effective mechanisms to assess and control noise impacts. By embedding acoustic considerations into the permitted development framework, the government can support the wider rollout of this sustainable technology while still safeguarding the health and quality of life of communities.**