

AIR SOURCE HEAT PUMP GUIDANCE DOCUMENT



INTRODUCTION

Air Source Heat Pumps (ASHPs) are currently the BDW standard specification for low-rise housing where an electric heating solution is necessary.

This guide is to provide essential information to support Divisions in understanding the entire process of installing ASHPs, from initial planning stages through to customer aftercare.

VERSION CONTROL

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GLOSSARY

Abbreviation	Meaning	Description
ASHP	Air Source Heat Pump	A heating system that absorbs warmth from the air, even in cold temperatures and uses it to heat water for use in the home.
HWC	Hot Water Cylinder	A cylinder to store hot water within a house that delivers hot water and heating.
kVA	kilo Volt Amperes	A total amount of electricity that is being used by a system.
KW	Kilowatt	A measure of how much electricity an appliance needs to run.
HTV	House Type Variation	A form that Divisions submit to GDT for approval if there are variations to a Group Standard house type and/or bespoke housetype introduction.
JIT	Just-In-Time	Receiving of goods close to when they are required.
PCDB	Product Characteristics Database	A database that provides information on products and their energy ratings within SAP.
SAP	Standard Assessment Procedure	A calculation tool used to assess energy performance compliance.
BPEC/ MCS/ LCL	British Plumbers Engineering Council/ Microgeneration Certification Scheme/ Logic Certification	Nationally recognised qualifications for installation of ASHP.
BAU	Business as Usual	Ordinary working operations.
NHBC	National House Building Council	Warranty/Building control provider that sets and enforces standards for new home construction.
PV	Photovoltaic	Photovoltaic systems that convert sunlight directly into electric power.
R290	Refrigerant 290	Refrigerant used by ASHP manufacturers. It is a form of Propane Gas.
LDLG	Land Development Leadership Group	Ensure the viability of a site before purchasing.
NDSS	Nationally Described Space Standards	A local planning requirement to increase the size of the house based on room size and occupants.
IP65	Ingress Protection/ International Protection 65	Protection against accidental contact and ingress of dust as well as protection against water jets from any direction.

ASHP

What is an ASHP?

An ASHP is a device that provides heating and hot water for a home by absorbing heat from the outside air, similar to how a refrigerator extracts heat from its interior. This heat can be used for radiators and underfloor heating systems.

- The ASHP absorbs heat from the outside air into a fluid refrigerant (R290), even at low temperatures.
- The refrigerant is then compressed, which increases its temperature.
- The now-hot refrigerant transfers its heat to the heating system of the house, such as radiators or hot water systems.
- The refrigerant cools down and is cycled back to the outside ASHP to absorb more heat, repeating the process.

ASHPs are typically installed externally, on the ground to the rear elevation. They need to be placed in a location that allows for good airflow and is away from obstructions to ensure optimal efficiency.

ASHPs are a low-carbon technology, helping to reduce greenhouse gas emissions, by moving towards this new technology, BDW can align with global goals to combat climate change and achieve net-zero carbon emissions.

VIABILITY AND DESIGN

Site Layout

Responsible: Technical Teams.

The following ASHP information is required by the Divisional Land Teams to ensure it is included in the viability at LDLG stage.

Divisional Technical Teams are required to provide a schedule of plots, including ASHP and HWC requirements, to the Commercial Team for the estimating of ASHP sizes, HWC volumes and supporting components. To produce this, they should refer to the site Feasibility Layout and Plot Schedule.

Table 1 – shows provisional figures from Manufacturers to allocate ASHP and HWC sizing for each housetype using the number of bedrooms and bathrooms.

Note that ASHP and HWC sizing varies between manufacturers, therefore these estimates may differ depending on the manufacturer.

Table 1 – Provisional Manufacturer Details for ASHP and HWC

Number of Bedrooms	Number of Bathrooms	HWC volume required	ASHP size required	kVA*
1-2	2	150 - 170 litres	3.5 – 5kw	4.6
3-4	2	180 - 250 litres	4 – 6kw	4.6
5+	2+	300 litres	6 - 8.5kw	5.6

*kVAs must be reviewed again once the specific manufacturer for the site has been agreed. The figure presented in the table is based on the highest kVA per house size of all the manufacturers combined.

Infrastructure Requirements

Responsible: Technical Teams

To calculate the kVA requirements for ASHPs, refer to Table 1 and the schedule of plots to determine the total kVA needed. The Divisional Technical Teams must update the Utilities/ Services Enquiry Form, by including the total kVA in the site energy requirements.

If any assistance is needed, please contact the Group Design and Technical Team.

Mixed Gas and Electric Heating Developments

When a development has a mixed gas and electric heating site, it is essential to indicate which plots will be fully electric with ASHPs to ensure that the utility provider provides an accurate design and quote to ensure that there are no cost variations later.

Group Approved Suppliers

Responsible: Commercial and Technical Teams

Group supply chain agreements are established with Daikin, and Vaillant. Divisional Technical Teams must notify Group Procurement/ Group Design and Technical of the site's requirement for electric heating using the [ASHP Notification Form \(Group Memo 6971\)](#).

Group Procurement will assign an ASHP manufacturer and notify the Division within 10 working days.

Once the manufacturer has been designated, the Divisional Commercial Team must update the estimator template to include costing for ASHPs, HWCs and components. All components required are listed on pages 12-15 of this guide. Approved supplier costs for ASHP and HWCs are available from Group Procurement. Component costs can be found in COINs Pricing Workbench.

Manufacturer Specification documents will be required as you work through this user guide. Manufacturer specific documents are located within the ASHP section of the Group Design and Technical Resource Centre on OurPlace [here](#).

DESIGN

Considerations for ASHP Plotting

Responsible: Design and Technical Teams

There are several items to consider when locating an external ASHP on Planning Layouts. Refer to the Group Plotting Handbook for further details, in general:

- ASHPs should be located as close to the house as possible to limit excessive pipework lengths, as shown in the manufacturer specific guidance.
- The unit should be positioned on the rear elevation where possible.
- Account for any level constraints or uneven ground that could impact the installation process.
- Consider the alignment of any footpaths and drains around the home to avoid obstructions and to ensure safe passage of the customer.
- Ensure ASHPs do not block access and that gate positions are altered to accommodate the ASHP position (gates to swing away from the ASHPs to reduce the risk of damage/clash).
- Check ASHPs do not clash with rear elevation windows, full height glazing or doors.
- Minimum clearances around ASHPs are required for servicing and maintenance, which differ depending on the manufacturer. These must be checked and allowed for. The diagram in Appendix B, page 30 shows indicative ASHP clearance zones.

Follow the manufacturer's specifications and DB-SD09-260_ASHP Foundation Support (GDTST-GDT-XX-XX-DR-AR-001734) on Asite for fixing the ASHP on the ground.

Guidance for Standard Housetypes

Solutions for Group standard housetypes are being created to include ASHP and HWCs. If a standard housetype drawing for your site is not available, please contact Group Design and Technical for guidance.

ASHP Dimensions and Exclusions Zones

ASHPs come in various sizes depending on power output and the manufacturer. It is crucial to be familiar with both the dimensions of the unit to be used and the required exclusion zones as detailed within the manufacturer specification documents on page 6. Appendix B, page 30, represents the largest space required for all approved ASHPs and must only be used as a guide.

Clearance zones are required for the following reasons:

- Service and maintenance zones for the ASHP.
- Ventilation requirements.
- ASHP manufacturers use R290 refrigerant, which is a propane gas and flammable, so adherence to the guidance zones specified above is a requirement for location of ASHP.

Pictures below highlight examples of correct ASHP locations



Location of Hot Water Cylinders (HWC)

Responsible: Technical Teams

All ASHP heating designs will require a HWC that is appropriately sized for the housetype and heating system being installed. It's important to consider any

expansion vessels associated with the HWC, as these will vary depending on the manufacturer and system size. The placement of the cylinders will require a design review and may require layout adjustments.

Please contact Group Design and Technical for guidance.

Guidance for Non-Standard House Types

Responsible: Technical Teams

In cases where a Group standard house type is not available, the non-standard housetype process must be followed ([Group Memo 6959](#)). Appendix B, page 30 contains worst-case scenarios for ASHP clearance zones, while Appendix C, page 31 outlines HWC space requirements, covering houses with 1-5+ bedrooms and 1-2+ bathrooms. For precise sizing requirements, please refer to the manufacturer-specific details provided within the GDT Resource centre [here](#).

Please consider the following actions:

- ☐ Non-standard housetypes are marked up with ASHP and HWC locations.
- ☐ Ensure that the measurements are specific to the ASHP manufacturer.
- ☐ If the house requires NDSS as part of local planning, please ensure that spacing requirements are still met when positioning the HWC.
- ☐ External elevations will need to be updated for planning permission based on changes required as part of the ASHP location.
- ☐ Consideration for cavity size changes in masonry housetypes.

Third Party Designs

Responsible: Technical Teams

Plumbing and Heating Designs

Exact ASHP/HWC requirements will be provided at this stage. Details of the manufacturer/model requirement should be added into the Plumbing Contractor's component list.

External Plumbing and Heating Designers will provide indicative ASHP locations if not dictated within the provided information. When the ASHP locations are finalised on the working drawings, the unit location must be updated in the third-party Plumbing and Heating Designs.

Groundwork Designs

Each manufacturer has specific sizing requirements for the ASHP base/ feet placement. The ASHP model will be provided as per the Plumbing and Heating Designs. It is essential to follow DB-SD09-260_ASHP Foundation Support (GDTST-GDT-XX-XX-DR-AR-001734) on Asite to ensure a firm and level platform. To allow

proper drainage of the ASHP condensate, the ground around the slabs, as specified in the detail, must be excavated to a minimum depth of 300mm and backfilled with clean stone.

SAP Calculations

Where we are specifying ASHPs on Approved Document Part L 2021/2022 and Section 6 2024 house types, Group standard PV quantities are to be specified as per the gas heating design to reduce the operating cost of the ASHP to the customer. Group guidance on installing the PV must be followed.

Joist Designs

Divisions must check with the joist manufacturer that the floor designs have sufficient capacity to support the increased weight of the HWC as detailed within the housetype heating design. Manufacturers will be able to provide details of the empty and full HWC weights.

Electrical Designs

Divisions must ensure that the working drawings for HTV's are updated to include wiring for ASHP's and HWC. The wiring schematics for the systems can be obtained from the manufacturer.

The external isolator switch must be placed in the permitted zones. The diagram in Appendix B (page 30) shows Indicative ASHP Isolator switch zones.

Site Security

Responsible: Construction and Commercial Teams

To reduce the risk of ASHP theft, Divisions are to implement the following risk mitigation measures based on the site's risk level.

The site risk level must be assessed using SHE Form 05, section 9.

Site Risk Level	Risk Mitigation
Low – Medium Risk Site	• Installation late as possible at second fix • Just-In-Time (JIT) delivery and same day installation • Anti-tamper fixings to be used to slab and feet. • Temporary Padlocks to gates during build
Additional security for High risk sites:	• CCTV • On site security • Additional ASHP security measures are available from GDT.

Component list for ASHP and HWC Installation

Responsible: Commercial Teams

A component list tailored to each trade must be provided to the relevant external contractor through the tender process. The successful contractor will be responsible for procuring the goods through their nominated merchant, certain items will need to be procured directly by the Divisions. The component list can be found on page 14.

Key contact details for procuring of goods are provided on page 27.

Upon receiving invoices from Plumbing Contractors for all supplied and installed goods, Divisions should check for any available rebates. This involves comparing the Group Approved Supplier costs with the plumber's charges for the ASHP kit from the designated manufacturer. This verification should be conducted monthly. For further guidance, please consult Group Procurement.

Plumbing Contractor Component List

Unless stated in the component list below, all other items required are BAU.

Item	Supplier	Description	Image
Corrosion Treatment for ASHP	Blygold	Sites within 0.5 kilometres (km) of the coast will require the external ASHP unit to be treated to withstand the effects of salt. The Divisional Technical Team will check with the ASHP manufacturer and update the tender component list if this is a requirement for the site.	
Anti-Freeze Valves	Part of the standard kit.	The Plumbing Contractor must order when they are ordering the ASHP as per the heating design.	

External Insulation	Nominated Merchant	All external pipework insulation must be black PVC coated class O weatherproof and UV stable including insulation of antifreeze valves.	 
Heat Pump Mover	Heat Pump Mover	A heat pump mover to allow the safe handling of the ASHP over building sites. This should be a one-off requirement.	

The Plumbing Contractor will need to order the manufacturer-specific components to the site.

	ASHP Model	Cylinder	Controls
Daikin			
	Altherma R32 Monobloc Available sizes - 4/6/8kW	Pre-plumbed R32 Cylinder	Altherma 3M
Vaillant			
	Arotherm+ Available Sizes - 3.5/5/7kW	UniStor	SensoComfort

Electrical Contractor Component List

Unless stated in the component list below, all other items required are BAU.

Electrical Contractors are to purchase the below components. All other electrical items required for ASHPs will be included with the supplier kit of parts and should be ordered by the Plumbing Contractor.

External Isolator Switch	Nominated Merchant	The Electrical Contractor must order an External Isolator switch for the ASHP. The switch must be IP65 and EN60947 compliant.	
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Divisional Commercial Component List

Divisional Commercial to order all components listed below via normal BAU procurement process.

Item	Supplier	Description	Image
Anti-tamper fixings	F P Hertings	Anti-tamper fixings are a requirement for securing the ASHP to the anti-vibration feet and, the feet to the slab.	
		The fixings for the anti-vibration feet into the slab must be a sleeve bolt with a removable security nut. Specialist socket driver bits are available through F P Hertings.	
		The fixings for the ASHP to the anti-vibration foot must be a security torx pin head bolt and not a standard head. All the fixings will be delivered to site as a pack for each manufacturer.	

Padlocks	F P Hertings	Spire CP60 60mm Close Shackle Combination Padlocks are optional on some sites, and Mandatory on Medium and High-risk sites.	
ASHP Cover	Heat Pump Covers Ltd	All heat pumps must be covered after installation to limit dirt and damage to the ASHP. The ASHP cover can be left on for any testing of the ASHP. The cover must be removed before handover to the customer.	
Security of ASHP	TBC	Additional measures to secure an ASHP on high-risk sites.	Guidance for securing of ASHPs for a High risk site is still being developed. An updated user guide with this information will be available in Q3 FY25.

PRE-SITE START

External Contractor Tender Process

Responsible: Commercial Teams

The Group trade specifications for contractors have been updated to include the installation of ASHP and HWC. It is the responsibility of the Commercial Teams, as part of pre-site set-up, to ensure that Plumbing and Electrical Contractors employ qualified installers and provide the necessary evidence of their competency. The competency requirements are outlined below.

Plumbing and Heating Contractor Competency Requirements

Divisional Commercial Teams must ensure that all Plumbing Contractors have successfully completed the Level 3 (BPEC/MCS/LCL) award in the installation and maintenance of ASHP (non-refrigerant circuits). Additionally, each installer must have obtained the relevant manufacturer's specific installation certification, by attending the manufacturer's specific training to the brand of ASHP being installed on site.

Electrical Contractor Competency Requirements

Divisional Commercial teams must ensure that all Electrical Contractors must have obtained the relevant manufacturer's specific installation certification, by attending the manufacturer's specific training to the brand of ASHP being installed on site.

Site Manufacturer Training

ASHP Training for Site Teams

Responsible: Site Management Teams

In addition to the ASHP training provided by manufacturers for external contractors, it is essential for our Site Teams to understand ASHP functionality and requirements. This ensures that external contractors install ASHP and HWC units correctly and that we deliver the best service to our customers.

Divisions will have access to training through Group approved ASHP manufacturers, who offer virtual and in-person sessions. A Divisional lead should coordinate and book training directly with the relevant manufacturer for each site; details for arranging this can be found in the key contact section on page 27 of this guide.

It is recommended that these training sessions be held during pre-start meetings and include Site Management, Sales Managers and Electrical and Plumbing Contractors to ensure a comprehensive understanding and effective installation.

PLOT FIRST FIX

At the first fix stage, the Plumbing and Electrical Contractors must ensure that all internal pipework and electrical wiring are completed specifically as per the plot specific heating design in preparation for the ASHP and HWC installation during the second fix stage.

Call-Off

Responsible: Plumbing Contractors

Materials needed for the ASHP and HWC first fix, which will be completed before the delivery of the first units, must be communicated to the nominated merchant.

First Fix Components specifically for installation of HWC and ASHP:

- Domestic hot water sensor cable (available via nominated merchant)

Plumbing Contractors should order all other BAU materials required for the first fix stage from their nominated merchants, including ASHP pipework, insulation, pipe clips and reflective insulation tape.

Responsible: Electrical Contractors

Electrical Contractors should order electrical components required for the first fix stage according to the housetype design and wiring schematics provided by the ASHP manufacturer.

Internal Installation

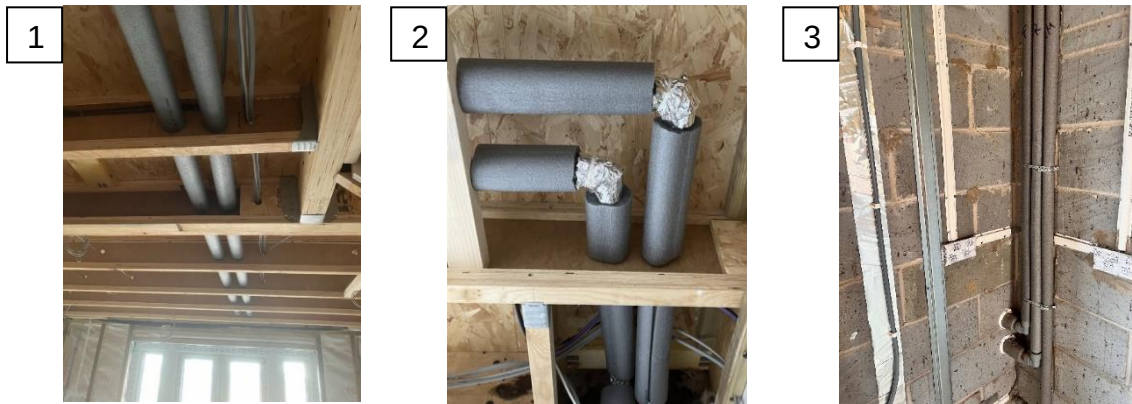
Plumbing Installation

Responsible: Plumbing Contractors

The Plumbing Contractor must follow plot specific heating designs. 15mm pipework to be located to the centre of the radiators, Manthorpe back boxes must be used as per the image below.



All internal primary pipework from the ASHP to the HWC must be insulated with 25mm Climaflex, including pipe clips. Elbows must be insulated with reflective foil pipe wrap as a minimum. This is to limit heat loss.



Picture (1) – showing installation within the floor void. Picture (2) – insulation around elbows and Picture (3) – vertical pipework in the corner of a room, prior to a boxing constructed.

Any pipework running vertically on external walls must be enclosed in a boxing to accommodate the insulation for the flow and return pipes.

Electrical Installation

Responsible: Electrical Contractors

Electrical contractors must follow housetype specific electrical layout.

The Electrical Contractor must work closely with the Plumbing Contractor to ensure that all electrical installations including sockets and controls are in accessible locations.

All the wiring schematics must be followed at the first fix stage to ensure successful installation of the ASHP and HWC at the second fix stage.

External Preparation

ASHP Foundation

Responsible: Groundwork Contractors

- The Groundworks Contractor must cast concrete foundations as shown on DB-SD09-260_ASHP Foundation Support (GDTST-GDT-XX-XX-DR-AR-001734) on Asite. Slabs must be fully cured prior to the ASHP delivery.
- Concrete foundations must be low enough in the ground to be covered over by decorative gravel when the ASHP is installed.
- The ground around the foundations must be excavated to a minimum of 300mm deep and backfilled with loose material to allow the condensate to drain effectively.



Picture: showing a plot ready for an ASHP installation.

Plot Fencing

Responsible: Fencing Contractor

- Full plot boundary garden fencing must be completed in the rear garden, including gates, before the delivery of the ASHP. This is to provide additional security of ASHPs whilst on site.
- The gate must have a bolt catch and a combination padlock as a means of locking and securing the garden. The bolt must be positioned suitably to restrict unauthorised access (see picture).
- Combination codes on padlocks must be changed regularly.
- Padlocks are temporary security measures and must be removed prior to the customer handover.



Picture: showing correct bolt placement.

PLOT SECOND FIX

Call-Off

Responsible: Plumbing Contractors

ASHP, HWC, controls and ancillaries must be purchased as a complete kit from the same ASHP manufacturer specified during the site set-up. **Third-party components are NOT allowed.** This ensures compatibility and avoids disputes over faulty parts. The Plumbing Contractor should arrange JIT delivery for the ASHP and components, scheduling installation as late as possible in the second fix stage, typically within six weeks of completion. Site Teams must coordinate the delivery schedule with the Plumbing Contractor and ensure ASHPs are called-off and delivered on the installation day according to the supply route.

Manufacturer	Supply route	Delivery
Daikin	Plumbing contractor to contact nominated merchant	Can split deliveries for ASHP or cylinder (only if required) must remain with same manufacturer
Vaillant	Plumbing contractor to contact nominated merchant	Can split deliveries for ASHP or cylinder only if required

Delivery and Handling of ASHP



To ensure the security and integrity of ASHPs and HWCs, please schedule deliveries with sufficient time to ensure the ASHP can be installed on the same day.

This approach helps prevent theft and damage. If a delivery arrives too late for secure installation, kindly refuse the delivery.



ASHP should not be moved by hand. Instead, they must be manoeuvred into position via a suitable Heat Pump Mover.

Ensure that the ground is firm and level when using the Heat Pump Mover, especially over unfinished paths or garden areas.

For plots with limited or no rear access, develop a safe system of work before moving and installing the ASHP.

External Installation

ASHP Installation

Responsible: Plumbing Contractors

- Centre ASHPs on anti-vibration feet, ensuring manufacturer-specified clearances.
- Connect pipework to the ASHP in accordance with manufacturer's details.
- Secure ASHPs with anti-tamper fixings to concrete foundations. See DB-SD09-260_ASHP Foundation Support (GDTST-GDT-XX-XX-DR-AR-001734) on Asite for instructions.



Picture: Anti-tamper fixings.

The Plumbing Contractor must cover the ASHP with an ASHP cover after installation. This precaution helps protect the unit from cosmetic damage.

Picture: showing ASHPs covered.



Responsible: Electrical Contractors

- All wiring must adhere to the electrical standards for outdoor equipment. It must be fixed black PVC coated Class O weatherproof and UV stable external insulation.
- The external isolator switch must be placed as per the ASHP clearance zones located in Appendix B page 30.



Picture: showing a ASHP connected to mains electric.

Internal Installation

HWC Cupboards

Responsible: Joinery Contractors

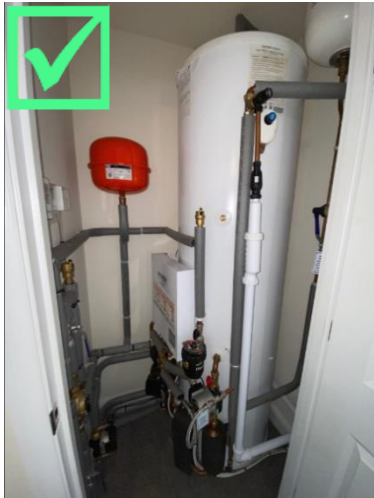
Please note: It is advisable to wait until the HWC is installed before fixing of door/s and architrave.

HWC Installation

Responsible: Plumbing Contractors

The Plumbing Contractor must install the HWC according to the manufacturer's guidance, trade specification and housetype specific heating design. They should coordinate with the Electrical Contractor to ensure that any necessary electrical components for the HWC installation are properly arranged.

All primary and secondary pipework within the HWC cupboard must be insulated, routed neatly and efficiently. **Important** - controls should be positioned in an accessible location to facilitate future maintenance.



Pictures: showing the correct installation of the HWC and controls.

HWC Control Panel and Thermostat

Responsible: Electrical Contractors

The Electrical Contractor must work in conjunction with the Plumbing and Heating Contractor to ensure the wiring locations are appropriate and all necessary connections are completed. All items supplied and installed by the Plumbing and Heating Contractor requiring connection to either mains power or to data points, including the heating programmer, heating control units, HWCs, and ASHPs.

The Electrical Contractor must install the Control Panel and Thermostat according to the manufacturer's guidance and trade specifications.

Commissioning of the ASHP and HWC

Responsible: Plumbing Contractors and Site Management

ASHP manufacturers will provide mandatory onsite commissioning support for Plumbing Contractors and Site Management Teams for the first three plots, and then one in every ten plots until the site is deemed compliant.

The Site Management Team must ensure the Plumbing Contractor schedules and attends these visits, as this has a major impact on the performance of the ASHP and our customers' bills.

The Plumbing Contractor must then complete in full the Manufacturer's Benchmark Commissioning Certificate. This must be handed to the Site Manager who should then

complete the below checklist and ensure the commissioning certificate has been presented to the NHBC.

Site Manager's Pre-Completion Checklist

- | | |
|---|---|
| <ul style="list-style-type: none">☐ Check the ASHP clearance and condensate requirements. Do they comply?☐ Have I completed the second fix installation and insulation survey.☐ Have I checked the domestic hot water safety measures (G3 unvented regulation)?☐ Have I balanced the system?☐ Has the correct flow rate been applied on non-automatic systems?☐ Does the ASHP have the correct external insulation fitted? | <ul style="list-style-type: none">☐ Have I completed an initial setting for the ASHP controller settings?☐ Have the Anti-freeze valves been installed and insulated?☐ Have I registered the ASHP with the manufacturer?☐ Have I presented the commissioning certificate to the NHBC?☐ Have I stored the certificate within the customers plot file?☐ Have I provided a copy of the certificate to Customer care? |
|---|---|

SALES TEAMS AND SHOWHOMES

Sales Team Training

Responsible: Sales Teams

A Sales Manager should coordinate and book training directly with the relevant Manufacturer for each site. See key contact section, page 27, within this guide to arrange training with the appropriate manufacturer.

Any new team members joining after the training is delivered will need to attend either a virtual session offered via the manufacturer or provided by a trained and competent Site Manager.

It is the responsibility of the Sales Managers to ensure Sales Advisers are competent in the ASHP site process. If further training is required see above.

The Sales Team should have a clear understanding of which plots are using an ASHP during any transitional arrangements. All ASHP plots will be marked on site specific designs. If Sales Teams are unsure, they should check with Divisional Technical Teams.

Sales Arenas

The Sales Adviser should ensure that any prospective customer is informed of their type of heating (i.e. traditional gas boiler or ASHP) during a visit to the Sales Arena/Show homes.

Upon reservation, any previous communications about ASHP's should be reiterated and location of the unit confirmed via the reservation checklist.

If the show homes on site do not have ASHP installed, the Sales Advisor must offer the customer a chance to view one installed in an unoccupied plot on site, or a nearby site.

Towel radiators **must not** be offered as customer extras on ASHP plots. This is due to towel radiator heat outputs being significantly lower than a standard radiator as they typically do not meet the required outputs.

Customers should be provided with details about the ASHPs, including the manufacturer's information, and given access to the "Introduction to Heat Pump" videos along with other relevant customer videos. Manufacturer links are available in Appendix D page 32. This will all be included within the completion checklist.

The Sales Adviser should inform the customer of the process regarding care and maintenance of the ASHP which is detailed in the Manufacturer's user guides. This includes to not stack items against or on top of the ASHP such as garden furniture or bikes, and ensuring the surrounding area is kept free of clutter and debris.

CUSTOMER HANDOVER

Customer Support

Responsible: Sales Teams

ASHP manufacturers offer customer guidance sessions. The Sales Team should arrange with the manufacturer the frequency of the sessions.

Home demonstrations by the Site Manager and Sales Advisors should show the customer the basics of their ASHP system and how to operate heating and hot water system.

Customers must be informed about the location of the isolator switch next to the ASHP. The switch must always be on. In case of no heating, ensure the switch is checked to confirm it is still turned on.

Home User Guides

ASHP manufacturers provide a Home User Guide for customers which must be included in handover packs. These include further information on their ASHP, typical FAQs, QR codes that link to videos and technical helpline contact numbers in the event of an issue. Plumbing Contractors must leave the installation/user guides in the plot after installation. Sales Advisers must ensure the guide is available to provide to customers on legal completion.

Warranties, Services and Aftercare

Standard warranty for ASHPs is two years from the date of legal completion.

An annual service is required to inspect the outdoor ASHP and indoor cylinder which is referenced in the Home User Guides. Customers can arrange this themselves by using a suitably qualified engineer or via the manufacturer directly.

Customer Care Teams send an automatic reminder email at 11 months post legal completion reminding customers of their servicing requirements.

Reporting Defects

Any defects following legal completion should be reported by the customer directly to the Customer Care Team so that these can be logged on the CRM system and deployed to the appropriate contractor for inspection/rectification. Customer Care should ensure that the ASHP is selected as the defect category so that we can report on these defects and monitor trends accordingly.

It is the responsibility of the Plumbing Contractor/Electrical Contractor to assess the issue and either rectify themselves or contact the ASHP manufacturer to rectify whilst under the warranty period.

If the customer has an emergency, such as no heating or hot water they should follow the usual procedure found in the Customer's Caring for Your New Home Guide.

KEY CONTACTS

DEPARTMENT	CONTACT	EMAIL
Group Design and Technical	Group Design and Technical	GDT-ASHP@barrattplc.co.uk
Group Procurement	Ian Hardy	Ian.Hardy@barrattplc.co.uk
Group Commercial	Craig Attenborough	Craig.Attenborough@barrattplc.co.uk
Group Construction	Mark Titley	Mark.Titley@barrattplc.co.uk
Group SHE	Rhodri Stephens	Rhodri.Stephens@barrattplc.co.uk
Group Sales and Marketing	Stephanie Morgan	Stephanie.Morgan@barratthomes.co.uk
Group Customer Care	Emma Farley	Emma.Farley@barrattplc.co.uk

ASHP Manufacturer Key Contacts

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ASHP Accessories Key Contacts

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Web Link: www.heatpumpcovers.uk

IRONMONGERY

F P Hertings

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Email: ironmongery@hertings.co.uk

HEAT PUMP MOVER

Mike Wyeth

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APPENDICES

Appendix A - ASHP Notification Form – Page 29

Appendix B – ASHP Clearance Zones – Page 30

Appendix C – HWC Cupboard Measurements – Page 31

Appendix D – QR Codes for Manufacturers – Page 32

Appendix A – ASHP Notification Form

BARRATT DEVELOPMENTS – ASHP (ENGLAND AND WALES) SITE START NOTIFICATION FORM

SITE INFORMATION:

Division:	
Site Name/Phase:	
Site Code:	
Site Address:	
Site Postcode:	

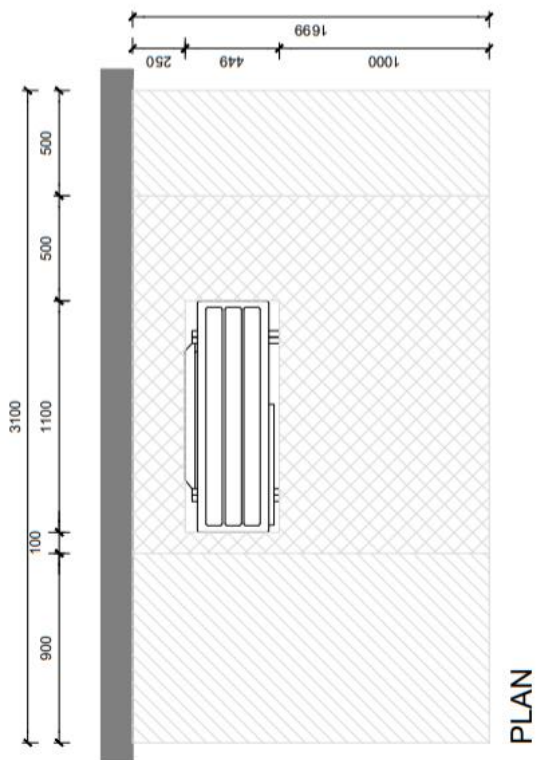
SITE SUMMARY:

Building Regulations:	Select		
Reason for ASHPs: please state the reason for specifying ASHPs.			
Planning Status (Reserved Matters / Full):	Select	If awaited, anticipated date of Planning Approval:	
Included in LDLG viability:			
Is the full site ASHP?		If partial site, please state the split:	
Brand:			
Build Method:			
Number of units:	House numbers:	Apartment block numbers:	
Group check completed on cylinder/ASHP locations in non-standard house types:			
Site security risk level:			
Commencement Dates:	Site Status	Foundation Start	Expected first ASHP Installation date (ASHP installed at second fix):
Expected number of ASHP installations (Calendar Year):	2024	2025	2026

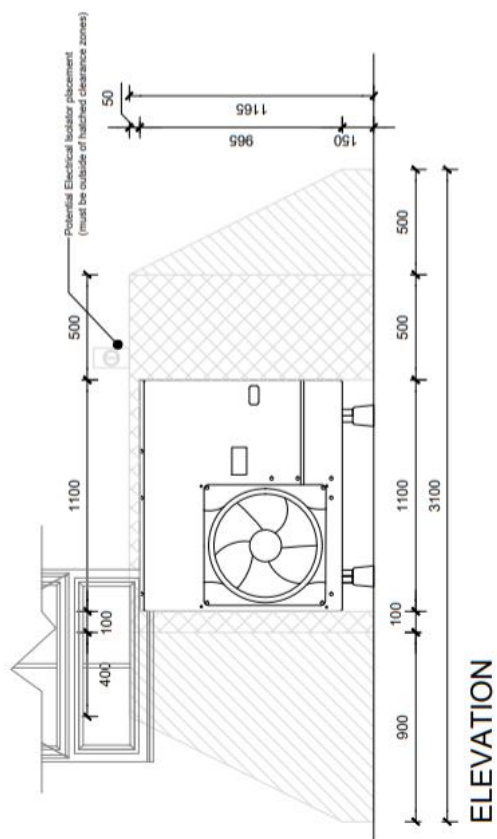
Please complete and return the following to GDT-ASHP@barrattplc.co.uk

Appendix B – Indicative ASHP Scenario Sizing

INDICATIVE ASHP SCENARIO SIZING



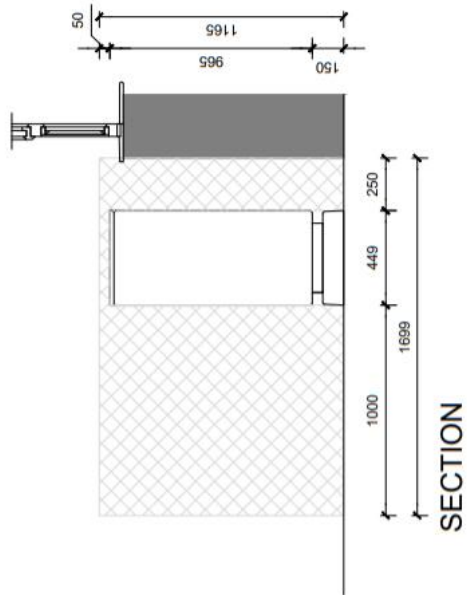
PLAN



ELEVATION

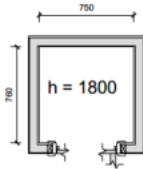
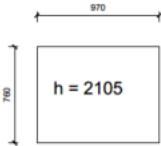
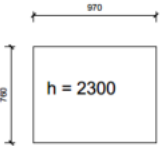
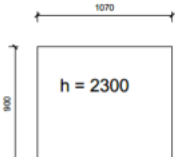
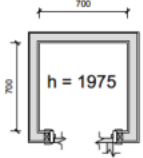
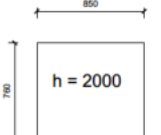
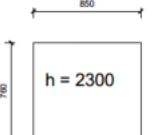
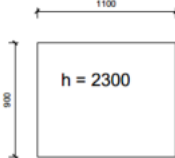
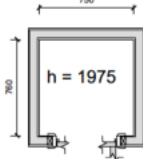
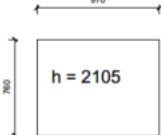
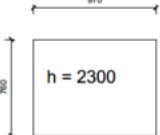
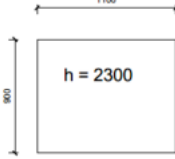
WORKING ASSUMPTIONS

- > Drawing based on Vaillant VWL 75/6 S2 as this is requires R290 ventilation space
- > Vaillant is not necessarily the largest ASHP unit but is once R290 requirements are accounted for
- > Vaillant model sizes have same width and depth with a small difference in height so worst case has been drawn
- > This information is based on this model only and requirements for every model should be checked with your manufacturer



Appendix C – HWC Space Requirements

ASHP CYLINDER REQUIREMENTS

	150L 1 and 2 Bedrooms	200L/210L 3 Bedrooms	250L 4 Bedrooms	300L 5 Bedrooms and over
DAIKIN				
VAILLANT				
WORST CASE				

KEY

h = Minimum height requirements of cylinder store

NOTE: All figures shown are minimum guidance and should be checked against manufacturer requirements

NOTES

- Sizes of cylinder are based on REDD Plumbing and Heating Designs assumptions for sizing of houses according to bedrooms
- For one bedroom, low heat loss units e.g FOG's and maisonettes, obtain heating designs prior to finalising cylinder cupboard sizing
- All pipework within the cylinder cupboard to be insulated
- Ensure door openings for cylinder cupboards are sized appropriately to allow the cylinder install

Appendix D – Manufacturer Links

Daikin

Please click on the following links for manufacturer documents/videos:

[What is a heat pump?](#)

[Control systems | Daikin](#)

[Daikin Help Videos for Homeowners](#)

Vaillant

Please click on the following links for manufacturer documents/videos:

[*Vaillant Product Manuals & Literature*](#)

[*aroTHERM plus Product Overview*](#)

[*sensoCOMFORT Product Overview*](#)

[*sensoCOMFORT YouTube 'How to' Video*](#)

[*How to set up the myVAILLANT connect with a Vaillant heat pump*](#)

[*What to expect during a heat pump service*](#)

[*Vaillant heat pumps and efficient operation*](#)

[VaillantUK Customer Videos](#)

[Homeowner Guide](#)