



VENTILATION POLICY

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1. SCOPE/PURPOSE

This policy details how Adra (Tai) Cyf implements and manages ventilation systems within properties.

The purpose of adequate and suitable ventilation is to improve the quality of living conditions for our tenants which in turn can have benefits for the building fabric as well as occupants' health.

Section 3 details various ventilation systems that you may find in Adra properties. A combination of these systems will be installed in our homes to provide adequate ventilation solutions.

2. POLICY DETAIL

Adra recognises that ventilation solutions play a crucial role in supporting our tenants and their families to live safely, improving their health and wellbeing together with maintaining the condition of the property in which they live in.

Our approach will endeavour to involve tenants and professional officers to understand what matters to them and is carried out in accordance with Adra's Customer Care Service Standard, and Welsh Government's Housing Quality Standards.

3. VENTILATION SYSTEMS

3.1. BATHROOM EXTRACT FANS

Given the nature of the space and what it's used for, bathrooms are by default damp and humid. It is therefore very important to ensure that all bathrooms in the home are well ventilated. The reason for ventilating will have far reaching health benefits together with maintaining the condition of the property.

A bathroom extractor fan is the easiest way to ensure that your bathroom meets air ventilation requirements, however, they also have benefits beyond that. The main benefits of installing an extractor fan are:

- **To reduce condensation.** Everyone can attest to the amount of steam a shower produces. An extractor fan minimises this.
- **To prevent mould.** The condensation your shower creates can lead to a worse problem: mould. Proper ventilation can help stop it from forming.
- **To extend the life of your bathroom.** Condensation and mould are both destructive forces in your bathroom. They can damage your bathroom fittings such as shower screens and curtains, mirrors, vanity units, and tiles. An extractor fan is a great line of defence against this.
- **To keep odours away.** Finally, all that damp, stale air can lead to unpleasant smells in your bathroom. A fan helps keep your air nice and fresh!

Below is a summary of recommendations and statutory requirements relating to bathroom ventilation:

- A UK bathroom must be ventilated by either a window or an extractor fan

- If your bathroom has a toilet only, you are fine to use a window alone as your source of ventilation
- In new-build bathrooms with a bath and shower, mechanical ventilation is required in the form of an extractor fan. This is because new builds are built to be more airtight, so natural ventilation is much lower
- The ventilation requirements for a bathroom are 15 litres per second/ 54m³ per hour

The 15l/s, or 54m³/hr, refers to the measurement of how much old air is replaced by new air. It is common practice for bathroom extract fans to meet these requirements.

Energy consumption will vary dependant on actual make and model of the fan selected or installed, typically these fans will have a power consumption of between 6 and 40 Watts an hour. However, owing to their infrequent and sporadic operation – it would be reasonable to quote a nominal figure of 25 Watts per day, or 9.125 kW per year. In order to calculate your annual running costs, you will need to multiply the price that you pay for every kilowatt hour of electricity (found on your bill) with 9.125. As an example, if you are paying 30p per kWh for electricity, your annual cost would be; 0.3 * 9.125 = £2.73 per annum.

In relation to maintenance regimes, the table below gives an illustrative outline of how Adra manage and maintain Bathroom fan installations.

Task	Frequency	Responsibility
Ensure that the grille/louvre/fan fins are free of dust and debris and operating as designed	As required - recommend weekly visual	Tenant
Report any operating issues or defective fans	As soon as possible once known	Tenant
Respond to reports of defective fans	In line with given job card priority allocation	Adra
Periodic check on the electrical connection to bathroom extractor fans	5-yearly and when property becomes Void	Adra
Capital replacement of Bathroom extractor fans	In line with lifecycles decided upon within asset management database	Adra

3.2. KITCHEN EXTRACT FANS

Kitchen fans are an essential part of every kitchen, vital for collecting the smells and moisture in the air created from the cooking process. Also it acts to help prevent cooking unpleasant odours and smells from spreading to the rest of the house.

Without good ventilation in the kitchen common problems that can occur are:

- **Stale Air** - Can be caused by cooking smells, a general lack of ventilation around the house as well as a damp atmosphere. All these problems cause an avoidable level of discomfort.
- **Condensation** - Problems occur when steam from the kitchen finds cooler surfaces around the house on which to condense. Attempts to conserve heat by sealing windows - and therefore reducing natural ventilation - makes this problem even worse. Condensation can cause considerable problems from peeling wallpaper and mould growth to severe structural damage such as wood rot and damp.

Energy consumption will vary dependant on actual make and model of the fan selected or installed, however typically these fans will have a power consumption of up to 60 Watts an hour – but the length of time that they run will vary from property to property. For the purposes of providing an example, if you run your kitchen fan for an average of 2 hours a day – it equates to 120 Watts per day, or 43.8kW per annum. To calculate your annual running costs, you will need to multiply the price that you pay for every kilowatt hour of electricity (found on your bill) with 43.8kW. As an example, if you are paying 30p per kWh for electricity, your annual cost would be $0.3 * 43.8 = £13.14$ per annum.

When the residential kitchen is a new build or an extension etc that is subject to the building regulations then the ventilation rate is specified in Document F. The ventilation rate specified in Document F of the building regulations is for continuous ventilation is 13 litres per second (l/s) and for intermittent ventilation is 30 l/s adjacent to the cooker or 60 l/s anywhere else in the kitchen.

In relation to maintenance regimes, the table below gives an illustrative outline of how Adra manage and maintain kitchen fan installations.

Task	Frequency	Responsibility
Ensure that the grille/louvre/fan fins are free of dust and debris and operating as designed	As required - recommend weekly visual	Tenant
Report any operating issues or defective fans	As soon as possible once known	Tenant



Respond to reports of defective fans	In line with given job card priority allocation	Adra
Periodic check on the electrical connection to kitchen extractor fans	5-yearly and when property becomes Void	Adra
Capital replacement of kitchen extractor fans	In line with lifecycles decided upon within asset management database	Adra

3.3. UTILITY ROOM FANS

Without good ventilation in the utility room common problems that can occur are:

- **Stale Air** - Can be caused by cooking smells, a general lack of ventilation around the house as well as a damp atmosphere. All these problems cause an avoidable level of discomfort.
- **Condensation** - Problems occur when steam from the utility finds cooler surfaces around the house on which to condense. Attempts to conserve heat by sealing windows - and therefore reducing natural ventilation - makes this problem even worse. Condensation can cause considerable problems from peeling wallpaper and mould growth to severe structural damage such as wood rot and damp.

When the property is a new build or an extension etc that is subject to building regulations then the ventilation rate is specified in Document F. The ventilation rate specified in Document F of the building regulations is for continuous ventilation is 9 litres per second (l/s) and for intermittent ventilation is 30 l/s.

Energy consumption will vary dependant on actual make and model of the fan selected or installed, however typically these fans will have a power consumption of up to 60 Watts an hour – but the length of time that they run will vary from property to property. For the purposes of providing an example, if you run your utility fan for an average of 2 hours a day – it equates to 120 Watts per day, or 43.8kW per annum. To calculate your annual running costs, you will need to multiply the price that you pay for every kilowatt hour of electricity (found on your bill) with 43.8kW. As an example, if you are paying 30p per kWh for electricity, your annual cost would be $0.3 * 43.8 = £13.14$ per annum.

In relation to maintenance regimes, the table below gives an illustrative outline of how Adra manage and maintain utility fan installations.

Task	Frequency	Responsibility
Ensure that the grille/louvre/fan fins are free of dust and debris and operating as designed	As required - recommend weekly visual	Tenant
Report any operating issues or defective fans	As soon as possible once known	Tenant
Respond to reports of defective fans	In line with given job card priority allocation	Adra
Periodic check on the electrical connection to utility fans	5-yearly and when property becomes Void	Adra
Capital replacement of utility extractor fans	In line with lifecycles decided upon within asset management database	Adra

3.4. SEPARATE WC FANS

In such rooms where there is only a WC and basin present and the room has an openable window, this would be deemed an acceptable means of ventilation for such rooms owing to the decreased levels of humidity and condensation.

However as not all properties will have windows, and may have a shower installed – it may be deemed necessary to install an extractor fan.

Energy consumption will vary dependant on actual make and model of the fan selected or installed, typically these fans will have a power consumption of between 6 and 40 Watts an hour. However, owing to their infrequent and sporadic operation – it would be reasonable to quote a nominal figure of 25 Watts per day, or 9.125 kW per year. To calculate your annual running costs, you will need to multiply the price that you pay for every kilowatt hour of electricity (found on your bill) with 9.125. As an example, if you are paying 30p per kWh for electricity, your annual cost would be $0.3 * 9.125 = £2.73$ per annum.

In relation to maintenance regimes, the table below gives an illustrative outline of how Adra manage and maintain separate WC fan installations.

Task	Frequency	Responsibility
Ensure that the grille/louvre/fan fins are free of dust and debris and operating as designed	As required - recommend weekly visual	Tenant

Report any operating issues or defective fans	As soon as possible once known	Tenant
Respond to reports of defective fans	In line with given job card priority allocation	Adra
Periodic check on the electrical connection to WC extractor fans	5-yearly and when property becomes Void	Adra
Capital replacement of WC extractor fans	In line with lifecycles decided upon within asset management database	Adra

3.5. WHOLE HOUSE PIV SYSTEMS

A Positive Input Ventilation (PIV) system is an appliance that can improve the quality of air within the property and reduces levels of contaminants around the home. The technology works by circulating fresh air throughout the home, it can also ensure that there is no build-up of damp or contamination that can cause harm to the building and those that live in it. In summary therefore such systems can bring benefits for both the fabric of the property as well as the health of the occupants.

The measures we take to improve energy efficiency and decarbonise our homes such as installing double glazing, cavity wall, external wall, and loft insulation, can all contribute to reducing or preventing natural ventilation, meaning that airflow needs a helping hand. A positive input ventilation (PIV) system provides this in the form of a motorised unit, installed in the loft space of your home – with air grilles strategically located at ceiling level. This will draw air from the loft, filter it of impurities and pollutants, and use positive pressure to circulate the air throughout the home.

Warm air within the home gathers at ceiling level, this air can be up to 7°C higher than the air at floor level. The PIV unit helps to move this air around the home. Also, by installing a Positive Input Ventilation (PIV) system and providing fresh filtered air into the home, humid air is displaced without opening windows.

The PIV systems that Adra install operate an ultra-low watt motor continuously with a power consumption of 4 watts (when running on fan speed 1 or 2 – or “trickle” / “medium” and heater disabled). This equates to a daily consumption of 96 watts, or a yearly consumption of 35kW.

To calculate your annual running costs, you will need to multiply the price that you pay for every kilowatt hour of electricity (found on your bill) with 35. For example, if you are paying 30p per kWh for electricity, your annual cost would be $0.3 * 35 = \text{£}10.50$ per year.



A number of these units have a built-in heating element which warms the air supplied into the property should the air intake fall below 10°C. A heating element is typically rated at 500Watt (dependant on specific model installed), and therefore in this example for every two hours the heating element runs - it will use 1kW of electricity. Owing to several variable factors the exact running time of the heating element cannot be provided as an exact figure. The heating element will only operate when conditions dictate and does not continuously run.

In relation to maintenance, the table below gives an illustrative outline of how Adra manage and maintain PIV installations.

Task	Frequency	Responsibility
Ensure that the ceiling outlets are free of dust and debris and operating as designed	As required - recommend weekly visual	Tenant
Report any operating issues or defective systems (which may include a sudden increase in noise over a prolonged period of time etc)	As soon as possible once known	Tenant
Respond to reports of defective PIV systems	In line with given job card priority allocation	Adra
Periodic check on the electrical connection to PIV systems together with a filter clean/replacement	5-yearly and/or when property becomes Void	Adra
Capital replacement of PIV systems	In line with lifecycles decided upon within asset management database which may be influenced by condition at expiry of given lifecycle. Other factors which may influence, include new technologies becoming available.	Adra

Should any tenants wish for their PIV unit to be assessed to ensure that it is still the correct solution for their property, a request for a Property Surveyor to attend to assess the current arrangement can be made on an individual basis. **Such requests can be made via the Adra Customer Services team who can allocate an appointment in-line with Adra’s inspection timescale.** Please see “APPENDIX - PROCESS MAPS” section at end of policy for further guidance on this process.

3.6. WINDOW TRICKLE VENTS

Installed as part of the window frame, trickle ventilators can provide your home with constant, unobtrusive and secure background ventilation when used in conjunction with other forms of ventilation.

Effective background ventilation is necessary to provide a healthy and comfortable internal environment for the occupants of a home and this is why trickle vents are now installed as part of window frames.

A trickle vent is situated at the top of the window frame, it allows a small stream of fresh air to flow through from the outside into the room and can be easily adjusted

The benefits of installing trickle ventilators:

- **Cleaner air for your home** - Providing effective background ventilation in your home may help to manage background air levels of pollutants together with reducing humidity and condensation levels.
- **Window Security** - Trickle ventilators allow constant ventilation while a window is closed and/or locked, the opening for the trickle vent is very small typically less than 20mm wide which prevents human intrusion into your home.
- **Trickle vents operate 24-hours a day** - Even at night and while you are away on holiday. If a trickle vent is left open it will provide background ventilation to your home. While your windows are closed and locked.
- **Using Trickle vent to reduce noise** - Trickle ventilators provide ventilation to the room without the need to open the main window, consequently reducing noise levels.
- **Condensation reduction** - Some homes may have an existing problem with condensation, especially in colder weather. Replacing older windows with modern double-glazed units which include a trickle vent may improve the condensation problem, and could potentially reduce consequent mould growth and internal surface damage.
- **Cost effective** - Trickle ventilators are a passive home ventilation system. With the lowest cost route for the provision of background ventilation as trickle vents are passive there are no ongoing electricity costs and they allow you to have more control over the room ventilation.

Trickle vents on new build properties are covered by Part F of the Building Regulations, and the following provides a guide on where you would expect to find them installed.

- Windows and doors in newly built homes
- Windows and doors in newly built extensions

- Replacement windows and doors that currently have them

In relation to maintenance regimes, the table below gives an illustrative outline of how Adra manage and maintain window trickle vent.

Task	Frequency	Responsibility
Ensure that the vents are unobstructed and clear	As required - recommend weekly visual	Tenant
Report any operating issues of trickle vents	As soon as possible once known	Tenant
Respond to reports of defective trickle vents	In line with given job card priority allocation	Adra
Capital replacement of window trickle vents	In line with lifecycles decided upon within asset management database	Adra

3.7. ROOF SPACE VENTILATION

While it is easy to see the visible effects of condensation in our bathroom or kitchen when warm moisture hits the cold surfaces of windows and radiators and forms drops of water, it's harder to keep track of the final destination of all other vapour we so regularly release.

In some cases during the winter months, moisture can build-up in unventilated lofts and may have devastating consequences, from causing damp, mould and ice damming, to potentially rotting the timber that holds the roof together.

All cold roofs should have some form of roof ventilation in place to prevent warm air condensing in the loft. The most popular roof ventilation solution is to have soffit vents providing cool, fresh air into the loft from a low level, and a tile vent or ridge vent at a high level for the warm stale air to exit the building. This two-way ventilation removes the damp air and creates gentle movement of air in the loft, helping to prevent damage to possessions and mould forming on the ceiling and timbers from rotting.

While today's building regulations normally ensure all new builds come fitted with sufficient ventilation and insulation from the outset, with older homes that were built around the regulations of the day, creating this healthy climate is not as straightforward and can be addressed on a case by case basis in retrofit situations.

Adra have extensively invested to improve insulation in our homes through filling wall cavities, installing cavity wall insulation and upgrading to double glazed windows. Modifying homes in this manner means that there are less gaps in the home for the air to escape from.

Older homes that have not had additional insulation fitted will generally not require ventilation if showing no signs of condensation- although this kind of home will naturally be a lot colder for it.

Task	Frequency	Responsibility
As advised on a case by case basis	As advised on a case by case basis	As advised on a case by case basis

3.8. VENTILATION RELATING TO HEATING APPLIANCES

Providing the correct ventilation for combustion appliances is essential to ensure more efficient operation and safe combustion. A combustion appliance is usually a gas, oil or solid fuel burning appliance such as a boiler, open fire, stove, or warm air heater.

These appliances not only burn fuel but also use oxygen in air combustion. If sufficient fresh air is not provided, then the unit will use the available oxygen from the air in the room. If the supply to the appliance is inadequate, the flue will fail to clear all the combustion products, and some may spill into the room itself – leading to potential serious health and safety risks. Ventilating rooms containing combustion appliances is essential and often additional ventilation is required to ensure an adequate level.

A flue is the space within a specially designed pipe, duct or chimney that connects a heating appliance to outside air and enables combustion gases to escape safely. There are two main types of flues that convey combustion gases away from an appliance: ‘balanced flues’ or ‘open flues’/‘non-balanced flues’.

Most liquid fuel-fired appliances have balanced flues, which offer great versatility in terms of siting the termination. These can be low or high level through a wall, or vertical through the roof. Balanced flues also have the advantage of carrying fresh air for combustion from outside, back to the appliance. This means that for most installations there is no need for additional air vents to be provided for the appliance.

Some liquid fuel-fired appliances, and all solid fuel appliances, have open or non-balanced flues. An open flue typically consists of a pipe to carry combustion gases from the appliance, whilst fresh air enters the appliance via the casing. This means that, for safe operation, additional air vents are required in the room where the appliance is installed to re-supply fresh air. Liquid fuel-fired appliances that are installed outside are usually fitted with flues built into the side casing, as well as additional vents for fresh air. If the room contains a fuel burning device with a non-balanced flue, it is essential that there is enough replacement air to prevent fumes being drawn down the

flue and into the room. This will be assessed and evaluated at first installation at subsequently at annual frequencies when the appliance is serviced.

Every type of flue and chimney should comply with European and national legislation regarding materials, design, and flue termination point. Flues should terminate where the combustion gases will disperse quickly and will not re-enter the property or cause a nuisance to neighbours. Termination where flue gases might stagnate should also be avoided. Extra care is needed when selecting a suitable position for a condensing appliance flue termination. When operating at their most efficient, condensing appliances can emit a 'plume' of water vapour from the flue terminal, which should be considered when siting the appliance

Both liquid fuel and solid fuel-fired appliances should be serviced annually so that they operate safely and correctly. This work should include the checking of flue and ventilation openings, where applicable, to ensure that they are in good condition and not obstructed.

Open flue appliances, both liquid fuel and solid fuel-fired, should have their flues or chimneys swept regularly - twice a year for solid fuel appliances and as advised by your service engineer or manufacturer for liquid fuel-fired appliances.

Task	Frequency	Responsibility
Ensure that heating appliances and associated ventilation is unobstructed and untampered	As required - recommend weekly visual	Tenant
Report any operating issues or defects	As soon as possible once known	Tenant
Respond to reports of defects	In line with given job card priority allocation	Adra
Servicing and safety checks	As dictated by regulations and manufacturers instructions	Adra
Capital replacement	In line with lifecycles decided upon within asset management database	Adra

3.9. REDUNDANT CHIMNEY VENTILATION

Chimneys need to breathe, even if they won't be used anymore. Most problems with chimneys are related to moisture, and that's the issue as regards ventilation. If there is no air flow in the chimney, moisture gets trapped, and deterioration of the chimney structure will be accelerated. In addition, the home's interior could be affected by moisture damage.

Adra will endeavour in most circumstances to remove the external chimney and demolish down beneath the roof covering into the roof space. There will then be a requirement to install a vent when work to close up the fireplace is carried out to ensure air flow is maintained. In circumstances where the removal of the external chimney is delayed or not done for whatever reason – then a suitable weatherproof ventilating cap should be installed on the chimney pot to encourage air flow whilst ensuring that the chimney is protected from rain and snow.

Task	Frequency	Responsibility
Ensure that the vents are unobstructed and clear	As required	Tenant
Report any operating issues of vents	As soon as possible once known	Tenant
Respond to reports of defective vents	In line with given job card priority allocation	Adra

3.10. TENANTS OWN EQUIPMENT VENTILATION

Tenants may wish to install their own equipment that may require a means of ventilation – examples of such equipment may be tumble dryers. Requests to install such equipment must be made via Adra’s tenant alterations policy, to which officers can advise tenants on their obligations in relation to installing and maintaining such equipment.

Task	Frequency	Responsibility
As advised on a case by case basis in line with the tenants alteration policy procedure (evidence in the form of documentation may be deemed necessary)	As required – unique on a case by case basis	Tenant
As advised on a case by case basis in line with the equipment manufacturers literature	As required – unique on a case by case basis	Tenant

3.11. SUSPENDED FLOOR VENTILATION

To prevent an excessive build-up of moist air in the underfloor space in a suspended timber floor, underfloor ventilation is necessary.

An even distribution of vents will ensure the elimination of stagnant air pockets where moisture might accumulate.



Adra will identify and implement solutions in any circumstances where this ventilation strategy is required and advise our tenants accordingly on their responsibilities in relation to such installations on a case by case basis.

Task	Frequency	Responsibility
Ensure that the vents are unobstructed and clear	As required	Tenant
As advised on a case by case basis	As advised on a case by case basis	As advised on a case by case basis

4. POLICY RESPONSIBILITY AND REVISION ARRANGEMENTS

It will be the responsibility of the Assistant Director of Assets to ensure this policy is applied effectively and that staff are trained appropriately in the procedures associated with this policy.

It is the responsibility of the relevant officers that commission maintenance and/or capital investment works to use this policy consistently and fairly.

This policy will be reviewed every 3 years, or in response to changes in legislation, regulatory guidance, good practice or changes in other relevant Adra (Tai) Cyfyngedig Policy

5. ASSOCIATED DOCUMENTS

- Approved Document F (Ventilation) Building Regulations

6. RECORD OF REVISIONS TO THIS POLICY

Issue	Brief Description of Reason for Change	Document Owner	Date Issued

7. COMPLAINTS

Adra recognises your right to bring forward a complaint in relation to the exercise of this policy. Any such complaint will be dealt with under the CCpol01 – Complaints and Concerns Policy. Adra



will ensure that any decisions relevant to this policy are reasonable and comply with relevant policy and legislation

8. REVIEW OF DECISION

Adra recognises the right to request a review of any decision relating to this policy. Any such review will be dealt with following our CCp04- Review of Decision process. Adra will ensure that any decisions relevant to this policy are reasonable and comply with relevant policy and legislation.

9. EQUALITY & DIVERSITY

Adra recognises the needs of a diverse population and always acts within the scope of its own *Equality and Diversity Policy*

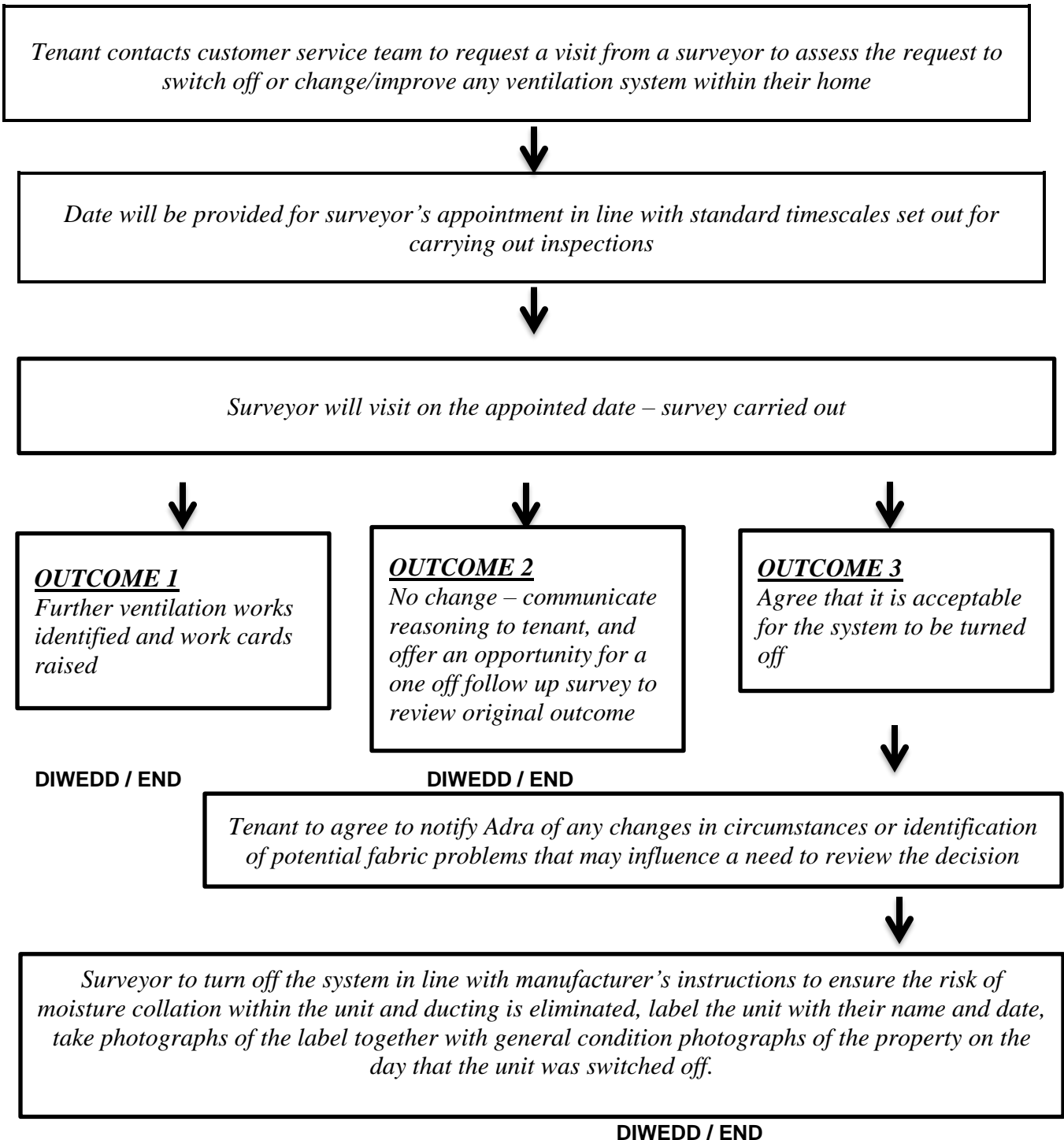
Adra will ensure that the individual needs of applicants in accordance with this policy, regardless of age, gender, race, class, culture, sexuality, or disability are considered when assessing applications for accommodation.

10. DATA PROTECTION

As part of its development, this document and its impact on data privacy has been assessed via a Data Protection Screening, and actions will be implemented as required. Any data gathered for the use of this policy shall be treated with the utmost confidentiality.

We are committed to abide by the terms of data sharing agreements as well as any relevant legislation including GDPR.

Appendix A – Ventilation System Survey Process Map



Appendix B – PIV System Service Process Map

A letter is prepared and sent to the tenant detailing appointment details for the electrical testing of the property together with a service of the PIV and other fixed equipment if installed.



Date provided for surveyor appointment in line with availability and standard timescales set out for carrying out inspections



Operative to carry out the service utilising the following steps;

- *Isolate supply to PIV unit*
- *Undo the filter and take off*
- *Unclip all for corners on top of the unit with screwdriver, leave top display connected*
- *Check all parts are clean and not obstructed, wipe and clean if necessary*
- *Reclip all corners back of the outer casing (shell) and top display unit*
- *Supply and install a new filter around PIV making sure the Velcro is sealed all the way around the unit*
- *Restore the power to the PIV*
- *Set the PIV unit to the previous setting*