

ADD Waterproofing History & Installers

ADD Waterproofing was developed by a property preservation specialist with over 40 years' experience in dealing with dampness in buildings. Having also been involved in the field of radon gas for 20 years, and with increasing numbers of people recognising the need to take account of radon in basements, the idea of designing a combined solution to both these issues for use in basements was born.

The concept was patented and packaged as ADD Waterproofing in 2008 (Patent No: 2464401).

A nationwide network of highly-trained waterproofing specialists have been granted licenses to install the ADD Waterproofing system. These specialists have a

reputation for offering premium quality workmanship and have demonstrated their skills over the years.

Surveyors and designers from these specialist firms have also completed rigorous training and completed an examination prior to becoming ADD Waterproofing Licensed Installers.

The ADD Waterproofing system is only available from official Licensed Installers, who each hold a certificate indicating their status.



Licensed Distributors:

Wykamol Group
Unit 3
Boran Court
Network 65 Business Park
Burnley
Lancs
BB11 5TH

Contact Us

If you would like further information on the ADD Waterproofing system, have a technical enquiry or would like to be put in touch with a local Licensed Installer, please contact us on

Tel: 0845 400 6666

Email: info@addwaterproofing.co.uk

Or visit www.addwaterproofing.co.uk



The Combined System for Waterproofing and Radon Management in Basements & Cellars

Basement rooms can provide valuable extra living or working space, however there are two important environmental factors that must be considered when going below-ground: water and radon gas.

Water held within the ground is likely to penetrate into a basement's walls and floor slab, and so a comprehensive waterproofing system must be used to protect the interior space from dampness and decorative spoiling.

Secondly, it is recognised that basements are at increased risk of containing elevated levels of radon, the naturally occurring radioactive gas, so special measures should be implemented to ensure it is not allowed to accumulate within the property.

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What is the ADD Waterproofing system?

ADD Waterproofing has been developed to provide a combined solution of effectively managing both of these environmental challenges.

By using a combination of physical barriers and air control, the unique system is able to create a dry and healthy living space.

A system which relies solely on a physical barrier is vulnerable to defects which may allow radon gas to permeate into the accommodation, or cause gas migration to other parts of the property. The ADD Waterproofing system's air management components control where the gas can collect and actively vent it to a safe location away from the interior of the property.

A welcome side-effect of these air management components is their ability to control the humidity within the basement, therefore minimising the risk of condensation, lowering the cost of heating (drier air requires less energy to heat) and helping to ensure the air being breathed is clean, fresh and healthy.



What is radon gas?

Radon is a naturally occurring radioactive gas emitted from the ground. It is a decay product of uranium, of which minute deposits are found in the rocks and soil beneath the Earth's surface.

As a gas, radon travels through pathways in the soil and rocks and is drawn to areas of low pressure by a process called advection. The air pressure inside buildings is usually slightly lower than the pressure in the soil or the air outside, so the gas is actively drawn inside buildings.

Radon can be found anywhere in the country, however it is known to be more prevalent in certain geographic locations. The Health Protection Agency has advised that all properties with basements are at increased risk of radon intrusion*, regardless of location. This is due to the basement having multiple surface areas in contact with the ground through which radon can permeate. In addition, a basement usually represents a large area of low pressure to which radon gas will be attracted.

Long term exposure to radon gas has been linked with lung cancer, and it is estimated that over 2000 people in the UK die each year from lung cancer attributed to radon exposure.

It is likely that many of these victims were not aware of the risks of radon and as such had not taken precautions to protect their homes or workplaces from its intrusion.

When control measures are introduced, a property can be protected effectively from radon entry, so there is no

reason to be fearful of it; rather like waterproofing, if you know that it may present a problem the sensible approach is to ask a specialist to deal with it rather than ignoring it or attempting to overcome it using DIY techniques.

Radon levels inside a building can be tested using a special passive detector. The detector is a small plastic disk which contains a lens. As air enters the detector, any radon present will make tiny indentations on this lens which can be analysed under a microscope in a laboratory to assess the level of radon present.

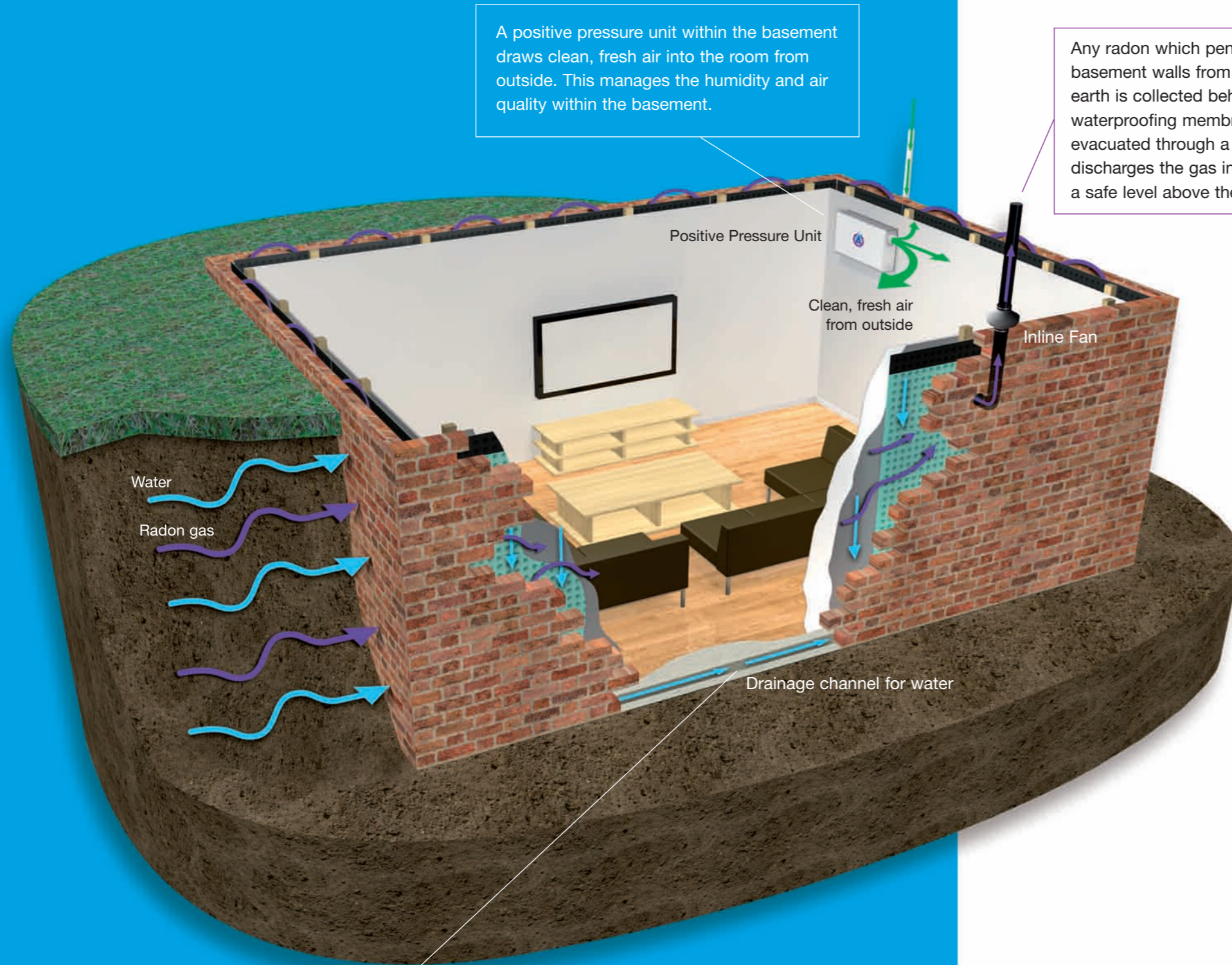
When an existing cellar is being converted into a useable basement, it is not appropriate to carry out radon tests prior to the conversion as these will not be representative of the radon levels after conversion. Altering the heating, ventilation and wall linings will all affect how much radon is drawn into and trapped within a basement, so even if low levels of radon are present in a draughty, unused cellar, once converted the levels may increase significantly.

For this reason, it is recommended that radon be taken into account in all basement conversion or creation schemes.

Every ADD Waterproofing installation will include radon testing on completion to ensure that the level of gas within both the basement and ground floor rooms is acceptably low. A certificate will be issued to the client confirming the radon levels.

* HPA Advice on the Limitation of Human Exposure to Radon, July 2010.

The process of managing water and radon away from the basement



A positive pressure unit within the basement draws clean, fresh air into the room from outside. This manages the humidity and air quality within the basement.

Any radon which penetrates the basement walls from the surrounding earth is collected behind the waterproofing membrane and evacuated through a pipe which discharges the gas into the open air at a safe level above the building.

Any water entering the basement will trickle down behind the waterproofing membrane into a drainage channel buried in the floor. The water is guided into a sump chamber and pumped away.



Positive Pressure Unit

The positive pressure unit installed within the basement is a vital part of the system. It provides a 'pressure buffer' against the waterproofing membrane to ensure that radon gas cannot be drawn through minute holes that may be present and also manages humidity to reduce the risk of condensation.



Inline Fan

The inline fan is installed within the exhaust pipe to ensure that any radon that collects behind the membrane walls is efficiently removed and discharged away from the property. The fan is usually located on the outside of the building, however there are a variety of options for where it can be positioned depending on the individual property.

BS8102:2009 – The British Standard for Below-Ground Waterproofing

The British Standard for below ground waterproofing, BS8102, was revised in 2009 to ensure that it provides the most up-to-date standards and requirements for designers and specifiers to follow. For the first time references to radon gas were made throughout the document.

The Code of Practice document now advises that radon should be taken into account when designing any below-ground waterproofing system and that the use of techniques over and above those which provide standard waterproofing should be considered.

Basement Conversions for Existing Properties

Many older properties are fortunate to include a cellar, pavement vaults or other below-ground areas with potential for use.

In their damp, cold and draughty state these are often used for extra storage, however they have the potential to be transformed into valuable additional living space in your property. Children's playrooms, home cinemas, wetrooms, kitchens, studies, home gyms and guest bedrooms are just a handful of the extra rooms which clients have achieved using the ADD Waterproofing system.

If the form of the structure is not changed, planning permission is not necessary but there are a number of building regulations that need to be adhered to. If additional bedrooms are being created, external stairwells or window egress will have to be installed, in which case planning permission will be required.

Traditional methods of waterproofing, such as cement based renders and adhesive membranes, are being replaced with Type C systems in increasing numbers where failing has occurred due to rising water tables and greater hydrostatic pressure being brought to bear on properties.

The new but increasingly used solution is to apply a polyethylene sheet material described as Cavity Drain Membrane which, provided the substrate is suitable, can be directly applied with little preparation to the walls. Cavity membrane is impervious to water and vapour and provides additional insulation value.

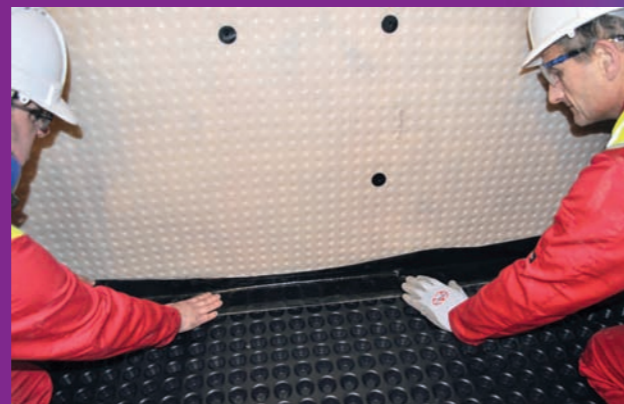
Before the membrane is fitted, a drainage provision is installed to ensure quick and efficient evacuation of any water ingress which stays behind the membrane. Insulation and internal finishes of plasterboard or plaster and render products are applied in front of the membrane to provide a dry and well insulated living area.

Correctly installed by specialist contractors and with ongoing routine maintenance of drainage channels and pumps, these systems can last the lifetime of the property.

In addition to the cavity drain membrane, the ADD Waterproofing system incorporates two air management units.

A unit which draws clean, fresh air into the interior of the basement is installed internally. The ADD Positive Pressure unit ensures that the air pressure within the habitable space is slightly higher than behind the membrane, so that radon is not drawn through any defects in the membrane which may occur.

An exhaust pipe containing an inline fan is installed on the outside of the property to draw air from behind the cavity drain membrane. Any radon which has entered the gap will be extracted and vented away from the building.



Retro Fit Basements

The ground beneath your feet is becoming increasingly valuable, particularly in major cities where property prices are high and space for new buildings is limited.

Retrofit basements involve excavation beneath an existing property to allow construction of single or multi-level basements. The size of the additional space is usually determined only by the size of the project budget.

Multi-floor level basements below the footprint of properties are commonplace in high value areas of major cities. Three and four floor levels are achievable and two levels are frequently constructed. A retro fitted basement can be also be extended out beneath a garden.

Some retro fit basements involve greater challenges such as soil conditions, potential contaminants, high water tables and structural loads. The need for a geotechnical report, Party Wall agreement, planning permission, structural and waterproofing designs necessitate the services of Architects, Surveyors, Structural Engineers and specialist Basement Contractors.

An ADD Waterproofing specialist contractor can advise how the system can be used as part of a retro fit basement scheme to ensure that your new basement is kept dry and healthy.



New Build Basements

Architects and developers are more commonly designing new buildings to include basements as a means of maximising the useable accommodation on a given plot of land.

Cavity drainage membranes are now the waterproofing system of choice for many, who consider that this approach offers the lowest risk.

Risk is the main keyword that a qualified waterproofing Surveyor, Designer or other Consultant will take into account when designing a waterproofing system, and with newbuild construction, considerations include soil types, actual and potential perched table levels and the nature of the structure, with all such factors and the proposed client usage impacting on the eventual design.

As the risk of radon gas in all basements has been highlighted by the Health Protection Agency, the ADD Waterproofing system offers an ideal solution to the risk-averse designer.

Typical ADD Waterproofing Detail for Existing Basements

