

**CONTRACTORS SHOULD INCLUDE A COPY OF THIS SPECIFICATION  
WITH THEIR QUOTATION TO THE CLIENT**

**GUIDE TO INSTALLING RADON BARRIERS & GENERAL CONDITIONS OF ISSUE**

### **New Builds**

For new builds **BR 211** (ISBN 1 86081 328 3), “**Radon, guidance on protective measures for new dwellings**”

**Annex A** contains maps defining whether **Basic radon protection** or **Full radon protection** is required for locations throughout England and Wales.

**Annex B** contains maps detailing where **geological assessments are required** and also those areas where no assessment and therefore no treatment, is necessary.

### **Building Regulations**

1. Requirement C2 Schedule 1 of the Building Regulations 1991 for England and Wales, states, “Precautions shall be taken to avoid danger to health and safety caused by substances found on or in the ground to be covered by the building”
2. Requirement C4 Schedule 1 of the Building Regulations 1991 for England and Wales requires protection from moisture from the ground.

**Sovereign Radon Barriercoat** will meet the above requirements for both damp proofing and radon protection in a continuous coating used to reduce radon levels for **Basic radon protection**. However, all penetrations such as service entries and exits must be made as gas tight as possible in order to form a continuous barrier and complete the integrity.

Where **Full radon protection** is required then **Sovereign Radon Barriercoat** can be upgraded by incorporating a radon sump or a ventilated subfloor void.

### **Existing structures**

In existing buildings where the concentrations are above acceptable levels a phased approach may be considered to reduce the levels. These can include:

1. Sealing floors and walls. This can be difficult to achieve and is likely to be used in conjunction with other methods.
2. Increasing indoor ventilation. This is possible by providing additional wall vents, or by installing window trickle vents. Increased background ventilation should only be installed at ground floor level as increasing the ventilation in upper floors may cause stack effect, which draws air up through the house.
3. Increasing under floor ventilation. The addition of sub floor vents or airbricks will increase the air flow and reduce the amount of radon entering the building. Plastic airbricks have a larger open surface than clay bricks of the same size (**Sovereign Passifier Vent**). Careful positioning of the airbricks is necessary to prevent dead spaces with no flow of air.
4. Using a loft fitted positive pressure fan. The **Sovereign ConCure 20/20** unit is a loft fitted positive pressure unit originally designed to reduce potential condensation problems that will work effectively and economically in reducing radon levels.
5. Fitting an underground radon sump under the floor slab linked by pipework to the outside that operates passively (passive sump,) or by incorporating an electric fan (active sump)..

Except where instructed by the client, the onus remains with the company carrying out the contract in deciding upon the suitability and extent to which the system will be used,

**Advice or assistance from Sovereign Salesman, for whatever reason, does not constitute “supervision”**

SPECIFICATION NO.-----AA101112-PP  
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CUSTOMERS ADDRESS-----12 THE DRIVE, BARROW IN FURNESS, CUMBRIA  
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CONTRACT ADDRESS-----33 THE ROAD BARROW IN FURNESS , CUMBRIA  
CONTRACT REQUIREMENTS----- TO APPLY SOVEREIGN RADON BARRIERCOAT  
SPECIFICATION DESPATCHED -----10-11-12

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### INSPECTION DETAILS

This specification is for applying Sovereign Radon Barriercoat at the above property.

The building concerned is a barn/outbuildings of brick, and brick and flint wall construction which is proposed to be converted into providing studio accommodation. However, walls of this building are subject to the potential of lateral damp penetration, rising damp and possibly rainwater ingress. Therefore, remedial tanking and damp proofing works are to be carried out using the K11 system – see separate specification.

Furthermore, there is a requirement is to provide **basic radon protection** as required, for areas with a significant radon potential. Areas with higher radon potential, as designated in BR211: Radon: Guidance on protective measures for new dwellings, will require **full radon protection** incorporating a radon sump, or a ventilated floor void, in addition to the membrane.

However, where the requirement is for basic radon protection then to upgrade the system to full radon protection could be prudent and financially viable at this time.

As the K11 system will have been used it must be allowed to dry and cure before applying the Radon Barriercoat.

A 1mm coating of Sovereign Radon Barriercoat is to be applied as a continuous flexible membrane across the floor slab and over all walls and up to the full wall height.

We would recommend treating the walls first and with a 150mm overlap onto the floor. To prevent trades damaging the system the remaining floor areas can be left until after their works have been completed.

On completion a test should then be carried out after a suitable drying out period to ensure the required standard has been achieved and no further measures are necessary.

### PREPARATION

The surface needs to be clean, sound and free of dust, loose material and surface water. The membrane should not be applied in wet conditions, or where these conditions are likely to occur before the membrane has dried. The membrane should not be applied when the temperature of the background, or the air temperature, is below 7°C.

The background surface should be smooth or have a light even texture.

## APPLICATION

Use a brush, roller or airless spray. **In our experience using a paint roller with a long pile provides a greater loading capacity and the roller speeds up the application rate.** Two coats should be applied at right angles to each other. Before applying the second coat, it is necessary to let the first coat become touch dry. It is preferable to apply the second coat within 24 hours of applying the first coat.

At wall/floor junctions Sovereign Flexi Tape must be incorporated. The Tape is 125mm wide and can be cut into lengths and overlapped if walls are out of true. Wet the Flexi Tape fabric and allow soaking in before laying into the first wet coat of Radon Barriercoat at the floor/wall juncture. Re-coat over this area when the first coat has dried to a tacky condition.

A minimum thickness of 1.0mm is required to provide a total radon barrier. i.e. 0.5mm dry film thickness per coat for two-coat application.

**Wear plastic overshoes or polythene bags when walking over treated areas and restrict access thereafter. This will vary depending on site conditions, but is typically one hour.**

For the final dried membrane thickness to be 1.0mm a coverage rate of 2.kg/m<sup>2</sup> is required. The material is available in 15kg containers.

After applying Sovereign Radon Barriercoat and allowing to fully dry, top coating(s) can then be applied in rapid succession so following trades are not walking over it.

Any following wet cementitious materials will bond well particularly if they contain polymers. When using polymer free materials such as screed, render or plaster, apply as soon as the *Sovereign Radon Barriercoat* is touch dry.

## OTHER POINTS

### PENETRATIONS AND SERVICE PIPES

1. Buildings in general tend to have a slightly lower indoor air pressure compared to that in the ground. This is sufficient to draw soil gas from the ground into the building. **Consequently any services should be sealed to prevent entry into the building.** When possible the pipes should enter at least 50mm from the perimeter of the floor to provide room to be worked around. This can be completed using ready made profiles, or by cutting the tape into strips. If this presents a problem then please contact the technical department. Sovereign Pro-Stick 2000 will adhere to most materials and can even be applied on damp surfaces to form a gas tight seal.
2. Positive pressurisation is one of the methods recommended to reduce the potential and the Sovereign ConCure wall mounted when fitted in a property, will achieve this and at the same time prevent condensation problems.

### MATERIALS REQUIRED

Walls = Approximately 105m<sup>2</sup>  
Floor = Approximately 40m<sup>2</sup>

Sovereign Radon Barriercoat - 20 x15kg  
Sovereign Flexi Tape - 7 x 5m

Should you require to discuss this further, please contact .....on mobile .....  
or our Technical Department on: 0845 603 0722.

**TECHNICAL MANAGER**

SPECIMEN