



# Contaminated Land Verification of Remedial Gas Membrane in relation to proposed residential development at 767 Market Street, Whitworth, Rochdale, OL12 8LS.

---

Prepared for

James Campbell Associates Ltd,  
173 Rochdale Road,  
Firgrove,  
Rochdale,  
OL16 3BN

December 2023



## **Contents**

Introduction.....	3
Gas Membrane .....	3
Conclusion .....	4
Figure 1 – Aerial Photograph.....	5
Figure 2 – Gas Membrane Details .....	6
Appendix 1 – Site Inspection photographs.....	7



## **Introduction**

In October 2022 Martin Environmental Solutions undertook a Phase Contained Land desk study, Ref: 2374-1. This report identified a slim but potential risk of ground gas affected the proposed residential conversion at 767 Market Street, Whitworth, Rochdale, OL12 8LS, from nearby historic filled ground, all of which had at the time been repurposed.

As such the report recommended the inclusion of basic gas protection measures in the form of a gas membrane to be fitted across the development.

This report provides a verification of the gas membrane installation works.

## **Gas Membrane**

The existing floor within the former stable building has been replaced along with a new floor to the extension. Both are concrete with a suitable dpc and installation. Above this an Alderprufe GRA gas barrier membrane has been laid with a concrete screen above.

The Alderprufe GRA is a proprietary gas barrier compliant with BS8485:2015, Ciria 665 and is suitable for Amber 1 & 2 gas risk sites, see Figure 2 for label details, taken on site.

The membrane was laid with joints sealed with double sided tape and a 150mm overlap. Service penetrations were appropriately sealed with top hat systems and taped. The membrane extended over the edge of the new extension cavity and was into the wall of the existing building.

A site visit was made to the site prior to the final concrete layer being poured to check the workmanship of the membrane installation. Joints were checked between sheets and around service penetrations and were found to be sound with no tares or gaps. Adequate overlap to the edges of the new extension was provided.



## **Conclusion**

The gas membrane was been installed to a satisfactory state and if ground gas is present will prevent the ingress of any ground gas into the building. Thus, breaking any pollutant – pathway-receptor pollutant linkage.

As such the development is considered safe and suitable for the intended use.



**Figure 1 - Aerial Photograph**





Figure 2 – Gas Membrane Details

*Alderprufe GRA Gas Barrier is a multilayer, low-density polyethylene membrane with an aluminium foil (BBA 16/5368) for use above or below a concrete ground floor to prevent gas penetration from the ground.*

---

### General Description

**Alderprufe GRA** is a proprietary gas barrier that is compliant with **BS8485:2015**, **Ciria 565** and is suitable for **Amber 1 & 2** applications. It provides an effective barrier to methane, carbon dioxide, radon, and hydrocarbon vapours; as **Ciria C748** notes, aluminium simply does not allow any permeation of almost any common organic pollutant.

It can be installed above or below a slab, above or below insulation or beneath a screed. The methods of jointing provide an effective barrier to the passage of gases, hydrocarbon vapours, liquid water and water vapour from the ground.

**Alderprufe GRA** is suitable for use in accordance with the relevant clauses of CP102:1973 Code of Practice for protection of buildings against water from the ground (as amended), in concrete floors not subject to a hydrostatic pressure, and will meet Requirement of Building Regulations Approved Document C (England and Wales), in that sheet thickness is at least 1000 gauge.

---

### Application

Unless the base is smooth, a surface blinding of soft sand or **Geotex 300PP** protection should be used to avoid puncturing the membrane during installation or when the concrete or screed is being placed.

Before joining sheets must be clean and free from dirt and grease. Adjacent sheets should be overlapped by at least 100mm width and bonded with 100mm wide adhesive tape.

Continued with details of installation, including a note: "Where necessary, link the two sheets together with adhesive tape." and a note: "Flashing details should be as shown on page 10 of the Alderprufe GRA technical data sheet."

## Appendix 1 – Site Inspection photographs



