

VISUAL INSPECTION & VERIFICATION OF GAS PROTECTION MEASURES

Site Name: <i>ASH ROAD WORTHAM</i>	Gas characteristic situation: <i>Soil gas beneath building</i>
Job number: <i>0905</i>	Type of Development and building / block checked: (residential/commercial/other) <i>INDUSTRIAL UNIT</i>
Date: <i>09-12-2021</i>	Building description: <i>UNIT 1 & 2 main floor areas</i>
Inspected by: <i>R. EVANS</i>	Foundation type: (suspended floor/raft/other) <i>PAD FOUNDATIONS / SUSPENDED R.C. SLAB</i>
Weather at time of inspection: <i>Dry - Roof covering over beam</i>	Gas protection type: passive/active <i>PASSIVE</i>

No.	Item	Comments (see notes)
1 Gas Membrane		
1.1	Condition of sub-grade and underside of gas membrane	<i>Even compacted clean stone with dust blinding</i>
1.2	Gas membrane type	<i>Alderprose GRA gas barrier, blue, 50x2m rolls fixed inside over roof cover clean condition</i>
1.3	Gas membrane condition	<i>All areas in good order, vehicles excluded from areas - light foot traffic to install mesh</i>
1.4	Jointing tape product	<i>Alderprose gas fix tape 100mm wide x approx 2mm thick - 15m by rolls - double sided.</i>
1.5	Lapping design	<i>200mm overlaps with 100mm taped joints</i>
1.6	Laps, welds, and joint seals	<i>as above welds factory clean in good order.</i>
1.7	Service entries seals	<i>Star Skencher clacks, four pipe rollers gas fix taped</i>
2 Passive venting		
2.1	Sub-floor void	<i>N/A</i>
2.2	External wall airbricks	<i>N/A</i>
2.3	Internal sleeper walls	<i>N/A</i>
2.4	External trenches / ducts	<i>External Alderprose vent units supplied 50x160x500mm deep connected to ground</i>
3 Active Venting		
3.1	System details	<i>N/A</i>

Additional notes: *INSPECTION OF FULL MEMBRANE OVER 2 UNITS 22.10.21 & 09.12.2021 WITH FINAL INSPECTION BEFORE MESH CONCRETE & CONCRETE POURED - DATA SHEET ATTACHED*

Notes: Inspection checklist

1.1	Underside gas membrane	Check that the sub grade does not contain rough uneven surfaces, is appropriately clean and that there are no hard / sharp objects. That protective sand blinding or geotextile if specified is present and meets design criteria?
1.2	Gas membrane type	Manufacturer and product specification, guage, colour, brand /name, material batch/roll numbers, storage arrangements (protected from dirt / damage)
1.3	Gas membrane condition	Open punctures, tears, rips, stretching? Excessive footprints, / evidence of traffic? Presence of debris? Repairs? Signs of weakness such as raised or sunken indentations? Protection plan in place to restrict access to lain gas membranes?
1.4	Jointing tape product	Product type, brand, thickness, material, width, colour? Use of double sided tape?
1.5	Lapping design	Joints lapped and sealed in accordance with manufacturers requirements / specification? Minimum overlap insured?
1.6	Laps and joints sealed	Welds complete? Appropriate joining / double sided tape used?
1.7	Service entries sealed	Top hats seal arrangements fixed around service entries?
2.1	Sub-floor void	Is a check possible? Void former? Gravel (type / specification)? Height of void space? Is is clear?
2.2	External wall airbricks	Numbers, size, positions and design drawing?
2.3	Internal sleeper walls	Ventillation holes (honeycomb brickwork/pipe crossings)? Size, spacing, location in accordnace with design?
2.4	External vent trenches / ducts	Located and constructed in accordance with design drawings? If open-topped gravel - gravel type / presence of fines? If pipe or other vent, check position and construction for functionality and absnece of blockages. Ability to void formwer to withstand bearing of the superstructure?
3.1	Active venting	Type of air supply: mechanical, natural, combined? Location/condition/number of fans and vents? Location and size of inlets? Provision of air-cleaning devices and air heaters? Supply and exhaust ductwork? Alarm provision/installation? Gas monitoring system under-floor void?

Photographs

No.	Description
1	Storage container buried with gas burner to office area
2	main floor areas

The gas protection measures inspected: A	A: Are acceptable and comply with the specification
	B: Are accpetable but attention is drawing to issues related to item no:
	C: Are not acceptable due to the issues related to item no:

Name: REWARDS

Signature: 

Date: 09.12.21

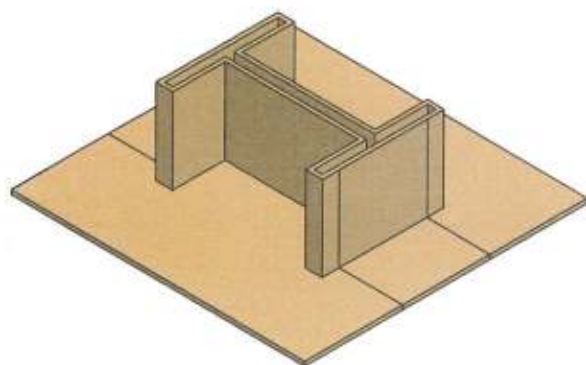
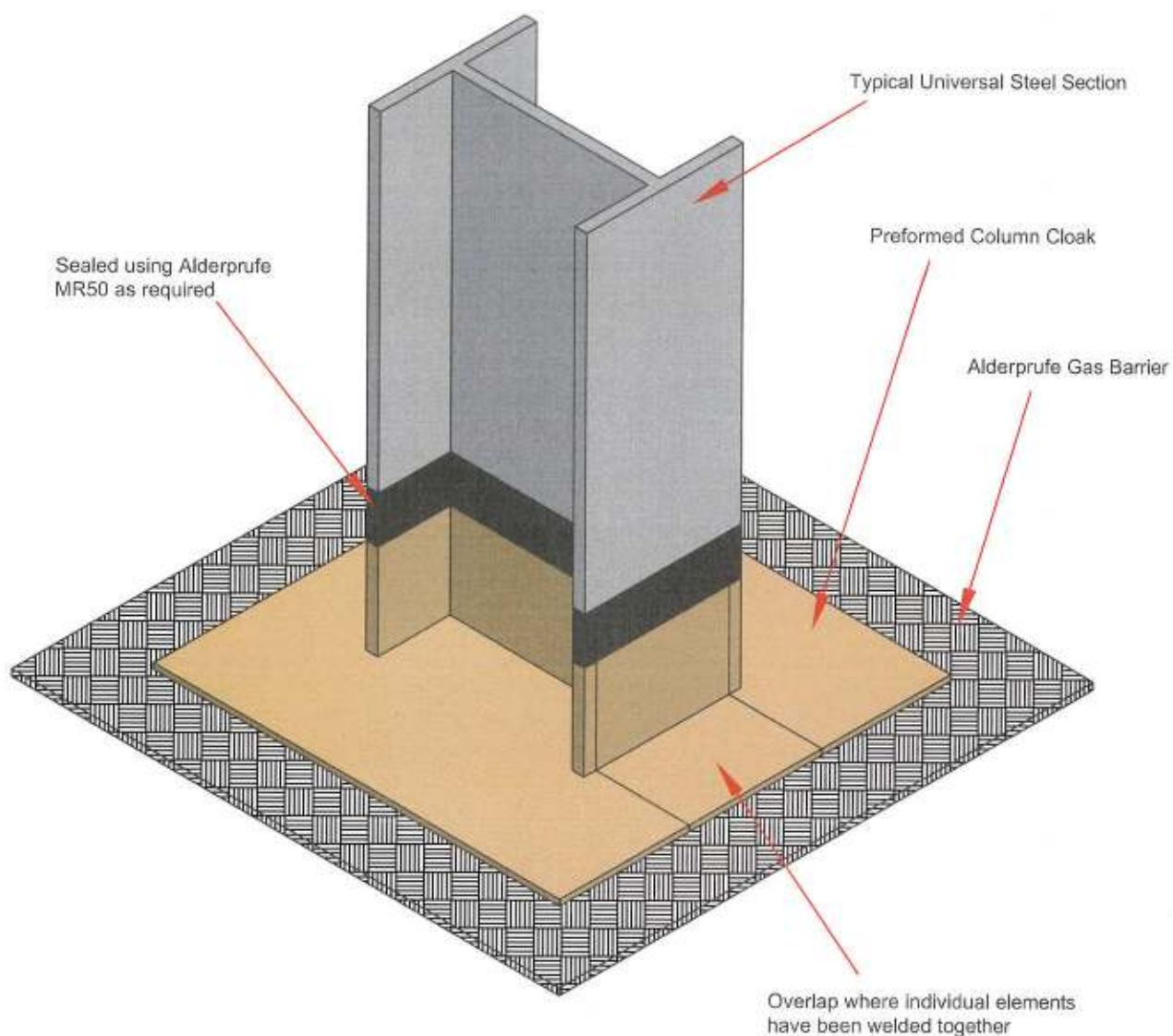








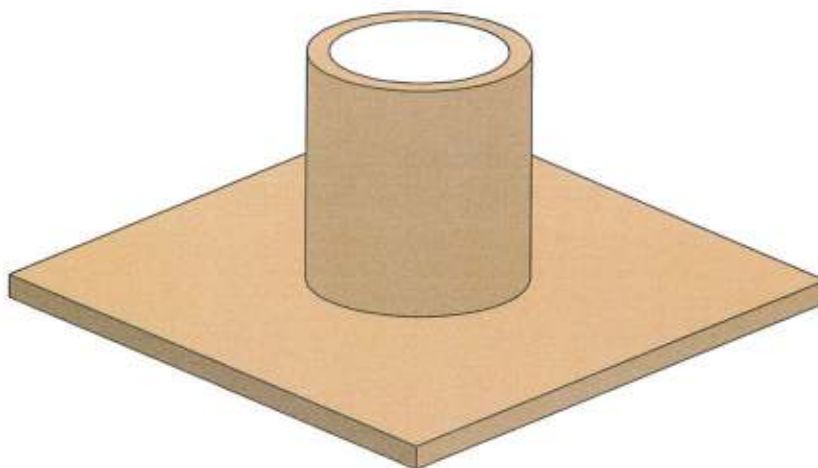
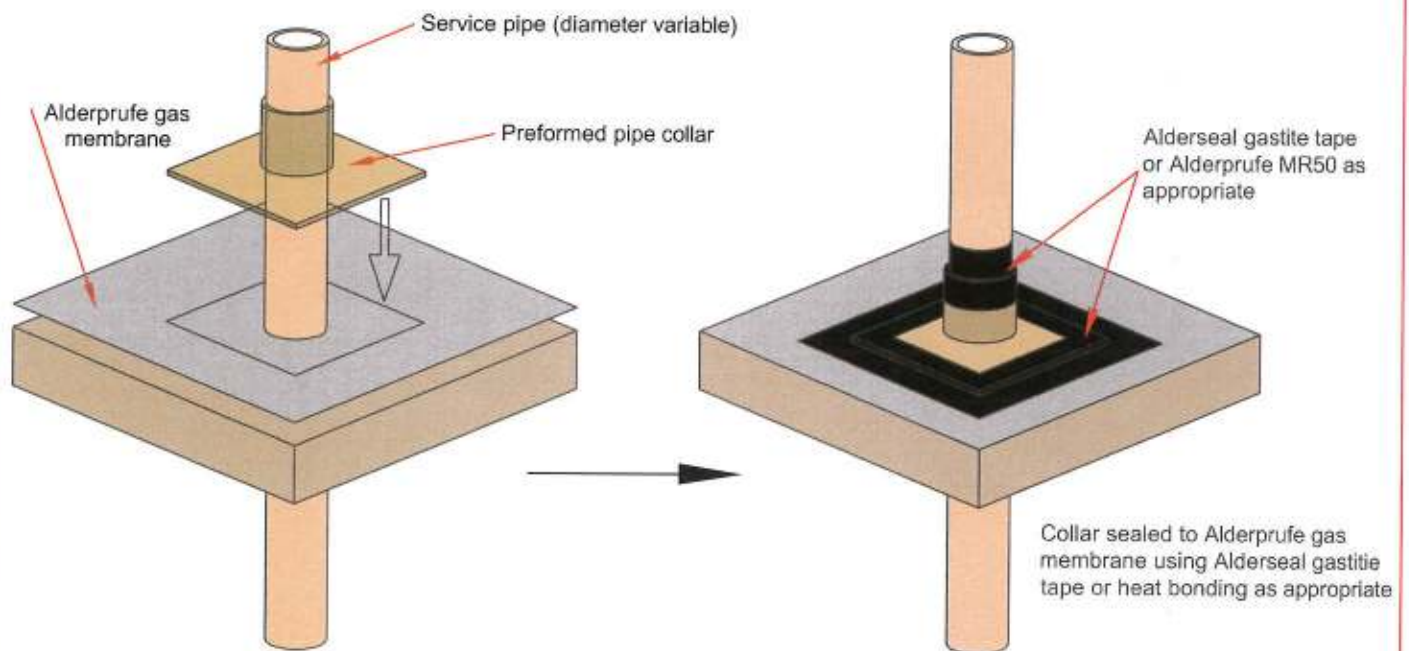




Available in sizes to suit requirements of order.

ALDERBURGH

**COLUMN
CLOAK**



Available in sizes to suit requirements of order.

ALDERBURGH

**SERVICE PIPE
CLOAK**

ALDERVENT Vent Units

Ground level vents provide an unobtrusive method of venting around the perimeter of a building or as part of a larger network of site venting (such as the virtual curtain). They are installed at design determined centres to connect vent ducts to the surface for atmospheric venting.

Aldervent ground level vent units are manufactured from UV stable, inert polypropylene compound. They are completely modular and provide a 96% voided outlet allowing for a variety of free air/gas spaced flow rates dependent on the construction, design and gas flow requirements. Connections are generally made to the side of the unit, where the pipe/modular duct can be simply butted up to the geotextile sides.

Ground Level Vent Unit

A preformed ventilation unit with geotextile cover and stainless steel lid. Lid is provided with venting slots as standard and is attached to the vent unit through a steel peg which permanently connects the lid to the box unit. Once installed the peg is inaccessible, protecting the lid from vandalism or theft.

Ground Level Thin Vent Unit

A preformed slim unit with geotextile cover and stainless steel lid and integral steel peg for lid connection. Specifically designed to be unobtrusive in positions where regular access is required to outside perimeter by pedestrian or vehicular traffic

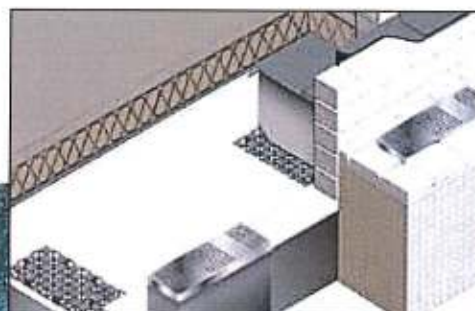
Special Requests

Available upon request for either ground level or thin vents;

- perforated steel lid
- protection mesh for prevention of solid ingress
- any length in multiples of 480mm
- any depth in multiples of 260mm

Dimensions:

Ground Level Vent (standard)	500mm x 160mm x 500mm deep
Thin Vent (standard)	500mm x 58mm x 500mm deep
In Plane Flow	Open void space
Crush Strength	1400 kN /m ²
Lid	Stainless Steel



Aldervent
Ground Level
Vent Unit

Aldervent
Thin Vent
Unit

Special
Request
Unit



Perforated steel lids and steel protection mesh can both be specified for the normal vent and thin vent unit.



Alderprufe GRA Gas Barrier is a multilayer, low-density polyethylene membrane, reinforced with a polypropylene reinforcing grid with an integral aluminium foil (BBA 16/5368) for use above or below a concrete ground floors that are not subject to hydrostatic pressure, to protect buildings against gas penetration from the ground.

General Description

Alderprufe GRA is a proprietary gas barrier that is compliant with **BS8485:2015**, **Ciria 665** 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.

Alderprufe GRA has a high resistance to puncture. On smooth or blinded surfaces it will not be damaged by normal on-site foot traffic but care should be taken to avoid damage during installation, particularly when handling building materials and equipment over the surface and when placing concrete or screed since it can be punctured by sharp objects.

Alderprufe GRA may be installed under all conditions normal to the construction of ground floor slabs.

The membranes remain flexible and do not soften at the extreme temperatures likely to occur in practice. When used in accordance with the manufacturer's instructions there will be no adverse effect on the membranes from underfloor heating under normal conditions of use, **Alderprufe GRA** will provide an effective barrier to the transmission of gases, liquid water and water vapour for the life of the concrete slab in which it is installed.



ALDERPRUFE GRA GAS BARRIER

Characteristic	Test Method	Unit	Alderprufe GRA
Physical Properties			
Thickness	EN 1849-2	mm	0.60
Width	EN 1849-2	m	2
Length	EN 1849-2	m	50 / 25
Weight	EN 1849-2	g/m ²	350
Gas Permeability			
Methane	EN ISO 15105 - 1	ml/m ² /day/atm	0.09
Carbon Dioxide	EN ISO 15105 - 1	ml/m ² /day/atm	0.09
Radon	K124/02/95	m ² /s	8.00
Water Vapour Transmission	EN 1931	g/m ² /day	0.10
Complies with: BS8485:2015, CIRIA C664, CIRIA C748, NHBC (Green Amber 1, Amber 2, Red),			

Installation

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 jointing, sheets must be clean and free from dirt and grease. Adjacent sheets should be overlapped by at least 100mm wide and bonded with 100mm wide double-sided **Gastite Tape**.

Perforation or puncture of the sheets should be patched with sheets of identical thickness lapped at least 150mm beyond the limit of the puncture and sealed with 100mm wide **Gastite Tape**.

Continuity with DPC: **Alderprufe GRA** membrane must be continuous with damp-proof course in the surrounding walls; lapped and bonded to **Aldercourse GRA** gas dpc for continuation through load-bearing walls. Where necessary **Alderprufe MR50** should be used as a vertical course to link the two (refer to typical details and separate data sheets.)

Placing Concrete or Screed: **Alderprufe GRA** must be covered by a screed or other protective layer as soon as possible after installation. Care should be taken to ensure that the membrane is not stretched or displaced when placing the concrete or screed.

Best practice is to use pre-formed collars and cloaks at penetrations to the gas barrier, for example at columns, pipes or piles. If gas ventilation is needed, refer to **Aldervent Gas Ventilation** brochure.

Use with: Aldercourse GRA gas dpc * Gastite Tape * Preformed pipe collars, column cloaks, pile collars * Geotex 300PP or Backerboard HD protection * Membrane Holdfast * Alderprufe MR50