

GAS MEMBRANE VALIDATION – BOOTHROYDEN

Project Name: Boothroyden Road, Middleton

Project Number: 13-500

Client: Elan Homes

Date: 14-02-2023

Project Manager & Qualifications: N. Sellars – MSci (Hons), FGS, MEnvSc

E3P Engineer & Qualifications: R. Webster – Ground Gas Protection Oct 2018

Ground Gas Risk Assessment: Amber 2

Plot Number: 16

OVERVIEW

The membrane comprised the Visqueen Ultimate HC Blok in gold resistant to radon, carbon dioxide, methane and VOCs. E3P can confirm there were no holes or rips at the time of inspection.

All external joints were inspected and E3P can confirm that the membrane was welded, with the membrane spanning the floor and cavity.

Each unit has a service duct located to the front and outer edge of the property. E3P inspected each one and can confirm that the top-hats have been adequately sealed against the membrane.

Based on the information provided within this report, the site inspections and validation checklists, E3P can confirm that Plot 16 has been installed with gas protection measures in accordance with Amber 2 to an acceptable level of workmanship.

The gas membrane validation photographs are enclosed within this letter.



Geo-Environmental



Acoustics



Remediation and
Enabling Earthworks
Design



Arboriculture



Compliance
& Due Diligence



Ecology



Industrial Permitting



Geotechnical

GAS MEMBRANE VALIDATION

Complete

Site Name	Boothroyden
Location	26 Cotton Lane Manchester England M24 4QH United Kingdom (53.543010756136056, - 2.225318103350391)
Project Manager	Nicola Sellars
Project number	13500
Developer	Elan Homes
Site representative Signature	Carl 14 Feb 2023 9:14 AM GMT
Conducted on	14 Feb 2023 8:53 AM GMT
Prepared by	Richard Webster

Inspection Gas Membrane

Plot Inspection

Plot Inspection 1

Plot Number 16

Type of Development: Other add note House

Foundation Type: Other add note Suspended Floor

Gas Membrane Type: Manufacturer, gauge, and colour. Gold Visqueen HC Blok

Gas Membrane Condition: Open punctures, tears, rips, stretching, Presence of debris, Repairs, Signs of weakness such as raised or sunken indentations, Protection plan in place to restrict access to lain gas membrane? IF FAIL DESCRIPTION IN ACTIONS AND PHOTOS REQUIRED

Pass

Laps, welds, and joints seals: Joints lapped and sealed in accordance with manufacturer's requirements/ specification? Minimum overlap insured? Sections taped twice? Are welds complete? Appropriate joining/double-sided tape used, Folds running in line with joints? (no joints cutting across folds)

Pass



Photo 1



Photo 2

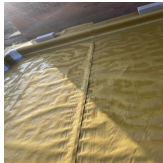


Photo 3



Photo 4



Photo 5

Service entries seals: Top hats seal arrangements fixed around service entries? Use of Jubilee clips?

Yes



Photo 6



Photo 7



Photo 8

Type of joints/ Lapping Welded

Corners / Internal joints: Check all corners are correctly formed or contractor has used performed corners.

Pass



Photo 9



Photo 10



Photo 11



Photo 12

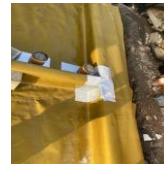


Photo 13



Photo 14



Photo 15



Photo 16



Photo 17

Extent of Coverage: Is the membrane covering the entire plot? Does membrane span over outside walls?

Yes



Photo 18

Photo 19

Photo 20

Condition of sub-grade and underside of gas membrane: Check that the subgrade 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 the design criteria.

Pass

Slab / membrane condition (is membrane clear of debris or insulation): Can membrane be fully seen and photographed – ask contractor to remove an debris so membrane can be fully seen an inspected – this is a requirement of NHBC and local authorities.

Pass

External Wall Air bricks: Numbers, size. positions as design drawing? (Minimum of 3 walls)

Pass



Photo 21

Photo 22

Passive Venting

Sub-floor Void: Is a check possible on future plots (insert Plot number or NO in text box)

No

Appendix



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13



Photo 14



Photo 15



Photo 16



Photo 17



Photo 18

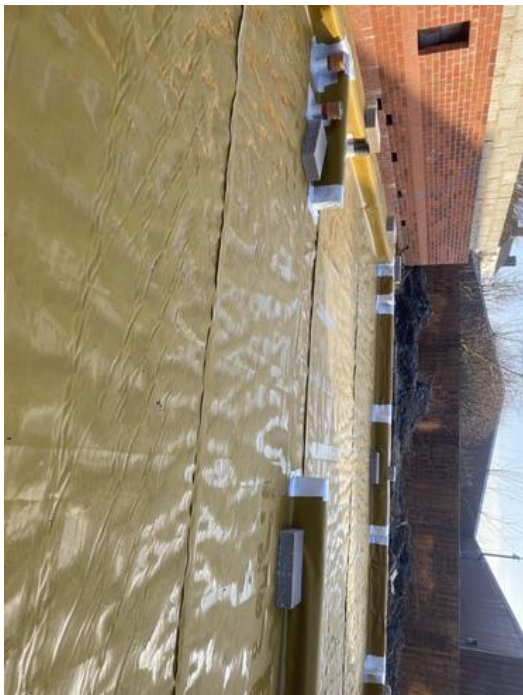


Photo 19

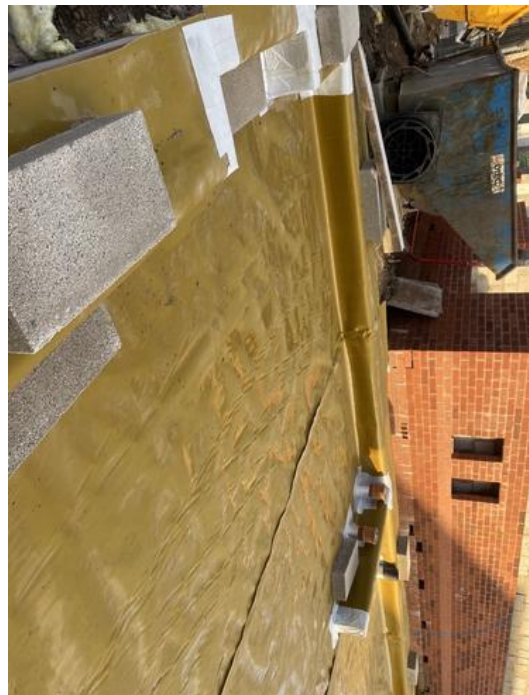


Photo 20



Photo 21



Photo 22