

GAS MEMBRANE VALIDATION

Site: Boothroyden Road, Middleton

Date: 27-09-2021

Project Number: 13-500

Company Name: Elan Holmes

Date of Validation: 24-09-2021

Project Manager: N. Sellars

E3P Engineer: J. James

PM Qualifications: Msci (Hons) FGS

Engineer Qualifications: Verification of Gas Protection Systems July 18

Ground Gas Risk Assessment: **Amber 2**

Overview:

The membrane comprised the Visqueen Ultimate HC Blok resistant to radon, carbon dioxide and low levels of methane. 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 **Plots 22-25** have been installed with gas protection measures in accordance with Amber 2 to an acceptable level of workmanship.



Plot – 22

General Condition of Membrane-Good Condition



Verification of Joints and Seals-Good Condition



Verification of Service Penetrations-Good Condition



Verification of Ventilation-Good Condition



Plot - 23

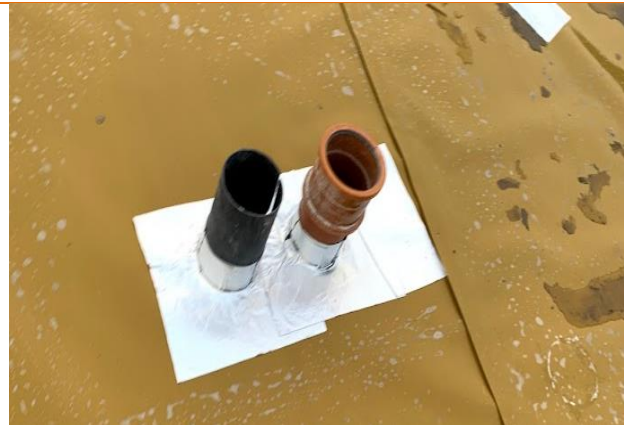
General Condition of Membrane-Good Condition



Verification of Joints and Seals-Good Condition



Verification of Service Penetrations-Good Condition



Verification of Ventilation-Good Condition



Plot - 24

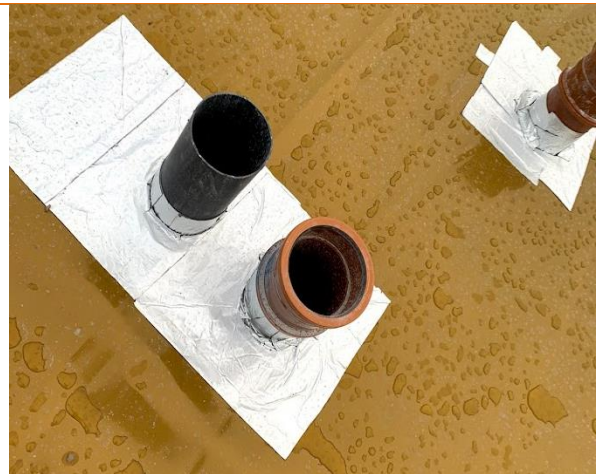
General Condition of Membrane-Good Condition



Verification of Joints and Seals-Good Condition



Verification of Service Penetrations-Good Condition



Verification of Ventilation-Good Condition



Plot - 25

General Condition of Membrane-Good Condition



Verification of Joints and Seals-Good Condition



Verification of Service Penetrations-Good Condition



Verification of Ventilation-Good Condition





Gas Protection Validation Site Record

Inspection date/time:	24/9/21	Inspected by:	J JAMES	Photographed:	✓/x ✓
Type of development:	Housing	Plot number:	22	Developer:	Edon

Notes/recommendations	Comments
Membrane Type	HC Black Visqueen
Extent of Coverage	Full ✓
Underside of Membrane	✓
Slab / membrane condition (is membrane clear of debris or insulation)	✓
Type of joints	☒ Tape Joint ☒ Welded Joint ☐ Other (please state)
Service entries - Jubilee clips, Top hats installed correctly	✓
External Wall Air bricks Present?	✓
Corners inspected?	✓
Membrane joints inspected has Double-sided butyl tape been used?	✓
Folds in membrane inspected?	✓
Has the membrane been installed as per the design detail drawing?	✓

This Plot has PASSED/FAILED* inspection. (Any proposed remedial works will be noted in the "Remarks" column on this form). An additional inspection visit IS/IS NOT* required for this Plot.
Inspection by: Siddha Sami Signed: [Signature]

Inspection date/time:	24/9/21	Inspected by:	J JAMES	Photographed:	✓/x ✓
Type of development:	Housing	Plot number:	23	Developer:	Edon

Notes/recommendations	Comments
Membrane Type	HC Blk Visqueen
Extent of Coverage	Full
Underside of Membrane	✓
Slab / membrane condition (is membrane clear of debris or insulation)	✓
Type of joints	☒ Tape Joint ☒ Welded Joint ☐ Other (please state)
Service entries – Jubilee clips, Top hats installed correctly	✓
External Wall Air bricks Present?	✓
Corners inspected?	✓
Membrane joints inspected has Double –sided butyl tape been used?	✓
Folds in membrane inspected?	✓
Has the membrane been installed as per the design detail drawing?	✓

This Plot has **PASSED/FAILED*** inspection. (Any proposed remedial works will be noted in the "Remarks" column on this form). An additional inspection visit **NOT** required for this Plot.

Inspection by: J JAMES Signed: [Signature]

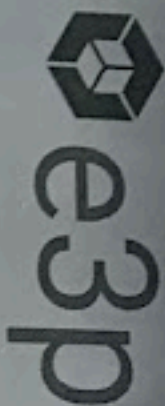


Gas Protection Validation Site Record

Inspection date/time:	24/9/21	Inspected by:	J JAMES	Photographed:	✓/x ✓
Type of development:	Housing	Plot number:	24	Developer:	Edon

Notes/recommendations	Comments
Membrane Type	HC Black Visqueen
Extent of Coverage	✓ Full
Underside of Membrane	✓
Slab / membrane condition (is membrane clear of debris or insulation)	✓
Type of joints	☒ Tape Joint ☒ Welded Joint ☐ Other (please state)
Service entries – Jubilee clips, Top hats installed correctly	✓
External Wall Air bricks Present?	✓
Corners inspected?	✓
Membrane joints inspected has Double –sided butyl tape been used?	✓
Folds in membrane inspected?	✓
Has the membrane been installed as per the design detail drawing?	✓

This Plot has PASSED/FAILED* inspection. (Any proposed remedial works will be noted in the "Remarks" column on this form). An additional inspection visit IS/IS NOT required for this Plot.
Inspected by: J JAMES Signed: [Signature]



Gas Protection Validation Site Record

Inspection date/time:	24/9/21	Inspected by:	J JAMES	Photographed:	✓/x ✓
Type of development:	Housing	Plot number:	25	Developer:	Eden

Notes/recommendations	Comments
Membrane Type	HC Brick Vapour
Extent of Coverage	Full
Underside of Membrane	✓
Slab / membrane condition (is membrane clear of debris or insulation)	✓
Type of joints	☒ Tape Joint ☒ Welded Joint ☐ Other (please state)
Service entries – Jubilee clips, Top hats installed correctly	✓
External Wall Air bricks Present?	✓
Corners inspected?	✓
Membrane joints inspected has Double – sided butyl tape been used?	✓
Folds in membrane inspected?	✓
Has the membrane been installed as per the design detail drawing?	✓

This Plot has PASSED/FAILED* inspection. (Any proposed remedial works will be noted in the "Remarks" column on this form). An additional inspection NOT* required for this Plot.

Inspection by: J JAMES Signed: [Signature]