



E3P
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GAS MEMBRANE VALIDATION

Site: Boothroyden Road, Middleton	
Date: 20-06-2022	Project Number: 13-500
Project Manager: N. Sellars	E3P Engineer: J. James
PM Qualifications: MSci (Hons), FGS	Engineer Qualifications: Verification of Gas Protection Systems Dec 17
Ground Gas Risk Assessment: Amber 2	
Overview: The membrane comprised a 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 17-21 have been installed with gas protection measures in accordance with Amber 2 to an acceptable level of workmanship.	

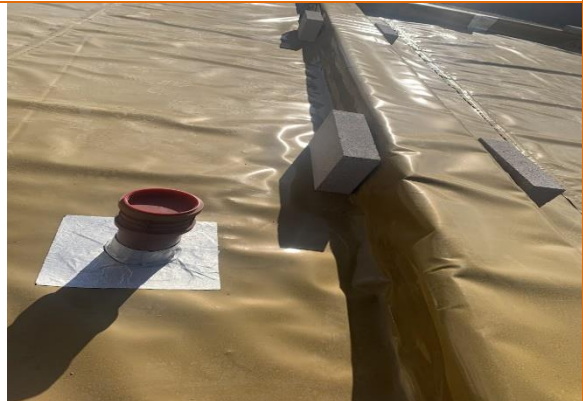


Plot – 17

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 - 18

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 - 19

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 - 20

General Condition of Membrane-Good Condition



Verification of Joints and Seals-Good Condition



Verification of Service Penetrations-Good Condition



Verification of Ventilation-Good Condition

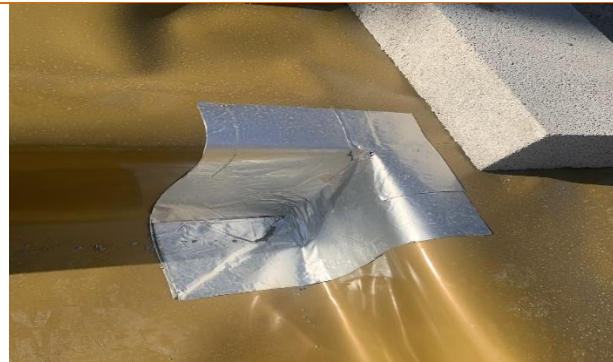


Plot - 21

General Condition of Membrane-Good Condition



Verification of Joints and Seals-Good Condition



Verification of Service Penetrations-Good Condition



Verification of Ventilation-Good Condition





Protection Validation Site Record Gas Protection Validation Site Record

Inspection date/time:	20/6/22	Inspected by:	S. M. E. S.	Photographed:	✓
Type of development:	110/14	Plot number:	17	Developer:	Elan
Notes/recommendations	Comments				
Membrane Type	Cold Liquid Applied Hydrocarbon				
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: J. S. M. Signed: J. S. M.



Inspection date/time:		Inspected by:		Photographed:	
26/6/22		S. SAMES		vix ✓	
Type of development:		Plot number:		Developer:	
110/519		18		Elinor	
Notes/recommendations		Comments			
Membrane Type		Extent of Coverage			
		Cold Water Hydration			
Underside of Membrane		✓			
Slab / membrane condition (is membrane clear of debris or insulation)		✓			
Type of joints		✓			
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?		✓			
Holes in membrane inspected?		✓			
Has the membrane been installed as per the design detail drawing?		✓			
IS 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 required for this Plot. Inspected by: <u>S. SAMES</u> Signed: <u>[Signature]</u>					





Gas Protection Validation Site Record

Gas Protection Validation Site Record

Gas Protection Validation Site Record

Inspection date/time:	24/6/22	Inspected by:	SAMER	Photographed:	1/2 ✓
Type of development:	117/1a	Plot number:	19	Developer:	Elan
Notes/recommendations					
Membrane Type	Comments				
Extent of Coverage	Cold Virgin Hydrocarbon				
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: SAMER Signed: [Signature]



Inspection date/time:	26/6/22	Inspected by:	J. S. M. E. S.	Photographed:	1/1 x 1/1
Type of development:	110/1/1	Plot number:	20	Developer:	Elan
Notes/recommendations	Comments				
Membrane Type	Cold Vynil Hydrocarbon				
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: J. S. M. E. S. Signed: [Signature]					

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Inspection date/time:		Inspected by:		Photographed:	
24/6/22		J. SAMUELS		1/1 x ✓	
Type of development:		Plot number:		Developer:	
(114/14)		21		Elna	
Notes/recommendations					
Membrane Type		Comments			
Extent of Coverage		Cold liquid Hydrocarbon			
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 FAILED PASSED * 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. Samuels		Signed: [Signature]			

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