MEC Environmental Ltd – Blackburn Technology Management Centre -
Challenge Way - Greenbank Technology Park – Blackburn – BB1 5QB

MEC ENVIRONMENTAL LTD

Gas Membrane Installation Validation Report

Whiteoak Developments

(THREALS FARM)

Threals Lane

West Chilting

West Sussex

RH20 2RF

V3 22/08/24

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1. INTRODUCTION

1.1 Purpose

MB Membranes are installing a gas protection membrane to the aforementioned site. MEC Environmental Ltd (MEC) has been appointed MB Membranes to carry out independent validation of the installation of the membrane on the site as per our terms of engagement. The frequency of independent inspections has been determined by the client, comprehensive CQA should be forwarded by the installer to cover any data gaps for areas that have not been subjected to independent inspections.

The **SOLE** purpose of the works undertaken by MEC Environmental is to provide independent inspections and a factual report as and when requested to assist the client in gaining regulatory approval with regards to the gas membrane installation. This is as per the scope of work section within our term's engagement.

1.2 Limitations

This report is limited to providing lines of evidence to the regulatory authority for the areas components inspected by MEC only in support of the discharging of the relevant planning conditions only and cannot be used or relied upon for any other purpose. No professional liability shall be extended to any other parties by MEC, the report should explicitly not be relied on by any future vendor or tenant as proof that the gas protection measures are sufficient for the site and functioning at the time of purchase or start of any tenancy. Gas protection systems are not solely reliant on the gas membrane as points are scored under BS8485 for the floor slab, membrane and venting, these components work collaboratively to provide a gas protection system. This is as per the conditions within our term's engagement.

The report has been provided on the assumption that no damage or works that may have compromised the components and integrity of the gas membrane have been made after our inspections, failure to report any such occurrences will invalidate any liability and render the report and contents invalid. This is as per the conditions within our term's engagement.

This report has been prepared in accordance with the best available practice and the relevant guidance documents listed below of which the author of the report was a contributor and member of the steering committees:

Mallett H, Wilson S, Corban M (2014) "Good practice on the testing and verification of protection systems for buildings against hazardous ground gases". CIRIA Report C735

1.3 Compliance with Regulation 7 of Building Regulations

Regulation 7 of the building regulations requires that building work shall be carried out in a workmanlike manner. Approved document 7 suggests installation can comply with the regulation if workmanship is such that, where relevant, materials are adequately mixed or prepared and applied, used or fixed so as to perform adequately the functions for which they are intended.

A reasonable standard may be demonstrated by:

Compliance with a standard and independent certification - The relevant standard for gas protection measures is BS8485:2015 +A1:2019, Table 7 of the standard requires that gas membranes are verified as per CIRIA C735.

Past experience – The installers qualifications are checked by MEC Environmental to ensure that the installation supervisor holds the NVQ Level 2 in gas membrane installations.

Integrity Testing methods. – are carried out as prescribed in CIRIA C735, unless stated elsewhere Frequency of Visits – MEC have not been employed to prepare a validation plan for this project, the frequency of visits is as per the instructions of the client, in essence MEC inspected the available membrane that could be inspected each time an inspection visit was requested. The area inspected on each visit is noted on the survey sheets in appendix 1. This report should be read in conjunction with the installers CQA report.

1.4 Method of Inspection (Per Visit)

All seams and non-seam areas of the available gas membrane were inspected/tested by the Validation Surveyor for identification of defects, protruding and penetrating objects, lack of subgrade support, overheating, holes, blisters, undispersed raw materials, scratches and gouges, and any sign of contamination by foreign matter.

Any portion of the gas membrane exhibiting a flaw or failing a visual inspection/testing was repaired. Several procedures exist for the repair of these areas. The final decision as to the appropriate repair procedure was agreed upon between the Validation Consultant and the Installer at the time of the repair and is noted in the survey sheets.

Major repairs are visually inspected/tested, repairs passing the inspection/testing were considered acceptable. In some cases minor repairs maybe carried out under contractor CQA and photographic evidence supplied to the verifier for inclusion in the report.

1.5 MEC Staff Competency

All site inspections have been carried out by suitably qualified staff as defined in CIRIA C735, the qualification held by all MEC inspection surveyors is either the NVQ Level 4 in gas protection verification or the NVQ Level 2 in gas membrane installation

The author of this report is also a CL:AIRE accredited Specialist in Gas Protection Verification (SGPV) and holds both the NVQ Level 2 in gas membrane installation and the NVQ Level 4 in gas protection verification.

1.6 Results

Plot No	Perimeter	Infill	Current Status
1	19/10/22	03/08/23	Passed and completed
2	19/10/22	03/08/23	Passed and completed
3	29/08/23	02/02/24	Passed and completed
4	31/05/23	17/10/23	Passed and completed
5	17/10/23	24/05/24	Passed and completed

During our inspections to the areas denoted in Appendix 1 (Site Surveys Sheets) we witnessed the installer carrying out the installation in a workmanlike manner, the materials were adequately prepared and applied, used and fixed so as to perform adequately the functions for which they are intended as per Regulation 7 of the building regulations. In instances were 100% of the installation has not been independently inspected/tested then this report should be read in conjunction with the gas membrane installers CQA records.

The installers all hold the NVQ Level 2 “Gas membrane Installations” qualification and as such are classed as a qualified and experienced installer. MEC Environmental have checked the CSCS Trade Cards of the installers, which confirms the holder has attained the qualification.

Signed [redacted] Date: 24/05/2023

Michael Corban S.G.P.V.
Director
MEC Environmental Ltd

Appendix 1 – Site Survey Sheets

Housebuilder Name: Whiteoak Developments (THREALS FARM)			**Date: 19/10/2022**
Site Name: Threals Lane, West Chilting, West Sussex.			**Weather: 17°C Fine**
			Installer: MB Membranes
Postcode: RH20 2RF	**Surveyor: James Hall (NVQ 2)**		
Plot Number	**Building Type**	**Extent of Inspection**	**Result**
1 & 2	Semi Detached	Perimeter and Internal Masonry walls	Pass

(Section 1, Materials and Method of Seal)
Gas Membrane Name: Juta GP1 Gas Barrier.
Corner Seal Method: Corners have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735
Service Entry Seal Method: The external of the pipe/ducts have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735
Annulus to Water Pipe Duct: The alkathene water pipe has either not been sealed or is not in place at the time of our inspection, this will require sealing to an approved method, this is outside the remit of the result of todays inspection
Door Threshold Seal Method: Door Thresholds have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735
Cavity Vent Seal Method: The cavity vents sit below the membrane that seals the cavity and do not require a specialist seal
Material Jointing Method: The membrane has been overlapped sufficiently to achieve a sound joint, the joint is clean and dry and has been joined by means of hand welding with a hot air gun and neoprene roller, the width of the welded joint is a minimum of 30mm.
Others Please List: All timber frame fixing straps within the perimeter installation were successfully sealed using SAGM and Double Sided Butyl Tape to a good standard.

(Section 2, Testing and Inspection Method)	
Leak/Hole Detection	MEC Environmental Ltd carried out a thorough Visual Inspection to the available area at the time of our inspection
Joint Testing	The surveyor carried out Probe testing as per the method prescribed in ASTM D4437 to all detailing work, detailing work is defined as any part of the installation that includes a joint in the membrane, this includes but is not limited to pipes/ducts, stanchions, wind posts, braces, field seams, masonry abutments, tanking, door thresholds and the like

Plot Number	(Section 3, Defects List)	Action Required
1 & 2	No Defects recorded at the time of our inspection.	N/A

Signed: **James Hall (NVQ 2)** Date: **19/10/2022**

Plot Overview Photographs



Plot 1. Overview of Juta GP1 Gas Barrier perimeter & internals installation.



Plot 2. Overview of Juta GP1 Gas Barrier perimeter & internals installation.

Detailing Sample Photographs



Plot 1. Hand welded membrane lap joint.



Plot 1. Sealed pipe penetration's using SAGM.



Plot 1. All internal & external corner details were sealed using SAGM.



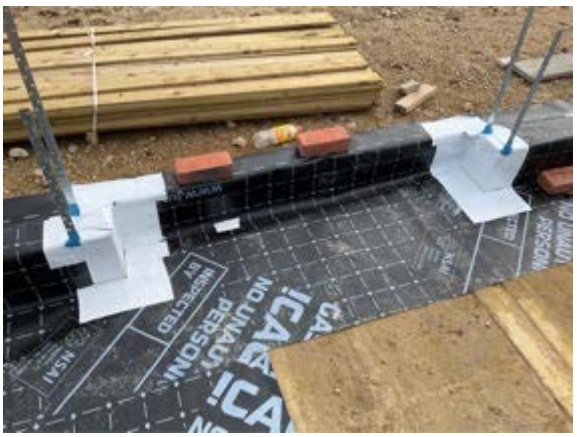
Plot 1. All internal walls lose laid & welded prior to block work.



Plot 1. Successfully sealed steel stanchion using SAGM.



Plot 2. Pick test conducted upon a sealed steel stanchion.



Plot 2. Sealed threshold detail using SAGM.



Plot 2. Pick test upon a sealed pipe penetration.



Plot 2. Pick test conducted upon a hand welded membrane lap joint.



Plot 1/2. All timber frame straps were sealed across both plots using SAGM & Butyl Tape.

Housebuilder Name: Whiteoak Developments - Threals Farm.			**Date: 31/05/2023**
Site Name: Threals Lane, West Chilting, West Sussex.			**Weather: 17°C Dry**
			Installer: MB Membranes
Postcode: RH20 2RF.	**Surveyor: Adam McDermott (TGPV)**		

Plot Number	Building Type	Extent of Inspection	Result
4.	Detached.	Perimeter and Internal Masonry walls	Pass

(Section 1, Materials and Method of Seal)

Gas Membrane Name: Juta GP1 Gas Membrane.

Corner Seal Method: Corners have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Service Entry Seal Method: The external of the pipe/ducts have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Annulus to Water Pipe Duct: The alkathene water pipe has either not been sealed or is not in place at the time of our inspection, this will require sealing to an approved method, this is outside the remit of the result of todays inspection

Door Threshold Seal Method: Door Thresholds have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Cavity Vent Seal Method: The cavity vents sit below the membrane that seals the cavity and do not require a specialist seal

Material Jointing Method: The membrane has been overlapped sufficiently to achieve a sound joint, the joint is clean and dry and has been joined by means of hand welding with a hot air gun and neoprene roller, the width of the welded joint is a minimum of 30mm.

Others Please List: The Timber frame fixing straps have been sealed using SAGM and double sided tape.

(Section 2, Testing and Inspection Method)

Leak/Hole Detection	MEC Environmental Ltd carried out a thorough Visual Inspection to the available area at the time of our inspection
Joint Testing	The surveyor carried out Probe testing as per the method prescribed in ASTM D4437 to all detailing work, detailing work is defined as any part of the installation that includes a joint in the membrane, this includes but is not limited to pipes/ducts, stanchions, wind posts, braces, field seams, masonry abutments, tanking, door thresholds and the like

Plot Number	(Section 3, Defects List)	Action Required

4.	No Defects recorded at the time of our inspection.	N/A

Signed: **Adam McDermott (TGPV)** Date: **31/05/2023**

Plot Overview Photographs

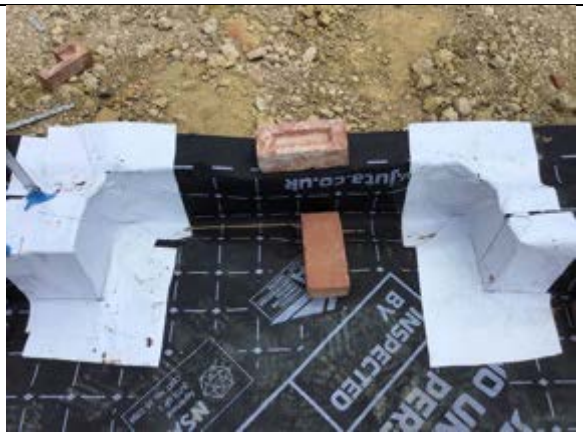


Overview of the installed membrane to the perimeter and internal masonry walls to plot 4.

Detailing Sample Photographs



Sealed double pipe penetration using SAGM.



Typical door threshold seal using SAGM.



Typical pipe penetration seal using SAGM.



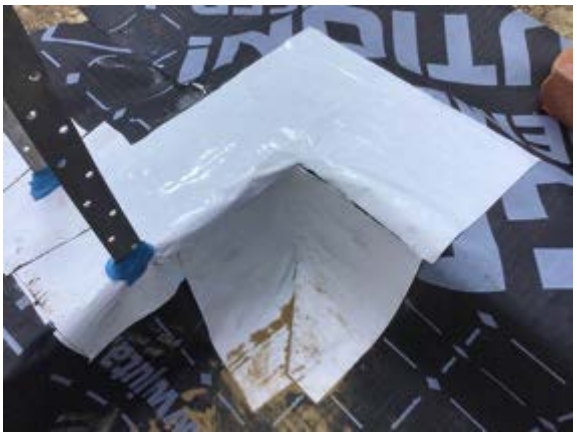
Sealed timber frame fixing straps using SAGM and double sided tape.



Pick testing all SAGM detailing.



Typical stanchion seal using SAGM.



Sealed corner detail using SAGM.



Air brick in place, under the perimeter membrane at the time of our inspection.

Housebuilder Name: Whiteoak Developments - Threals Farm.			**Date: 03/08/2023**
Site Name: Threals Lane, West Chilting, West Sussex.			**Weather: 15 °C Dry**
			Installer: MB Membranes
Postcode: RH20 2RF.	**Surveyor: Adam McDermott (TGPV)**		
Plot Number	**Building Type**	**Extent of Inspection**	**Result**
1 & 2.	Semi Detached.	Infill	Pass

(Section 1, Materials and Method of Seal)

Gas Membrane Name: Juta GP1 Gas Membrane.

Corner Seal Method: Corners have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Service Entry Seal Method: The external of the pipe/ducts have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Annulus to Water Pipe Duct: The alkathene water pipe has either not been sealed or is not in place at the time of our inspection, this will require sealing to an approved method, this is outside the remit of the result of todays inspection

Door Threshold Seal Method: Door Thresholds have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Cavity Vent Seal Method: The cavity vents sit below the membrane that seals the cavity and do not require a specialist seal

Material Jointing Method: The membrane has been overlapped sufficiently to achieve a sound joint, the joint is clean and dry and has been joined by means of hand welding with a hot air gun and neoprene roller, the width of the welded joint is a minimum of 30mm.

Others Please List: N/A.

(Section 2, Testing and Inspection Method)

Leak/Hole Detection	MEC Environmental Ltd carried out a thorough Visual Inspection to the available area at the time of our inspection
Joint Testing	The surveyor carried out Probe testing as per the method prescribed in ASTM D4437 to all detailing work, detailing work is defined as any part of the installation that includes a joint in the membrane, this includes but is not limited to pipes/ducts, stanchions, wind posts, braces, field seams, masonry abutments, tanking, door thresholds and the like

Plot Number	**(Section 3, Defects List)**	**Action Required**
1 & 2.	No Defects recorded at the time of our inspection.	N/A

Signed: **Adam McDermott (TGPV)** Date: **03/08/2023**

Plot Overview Photographs

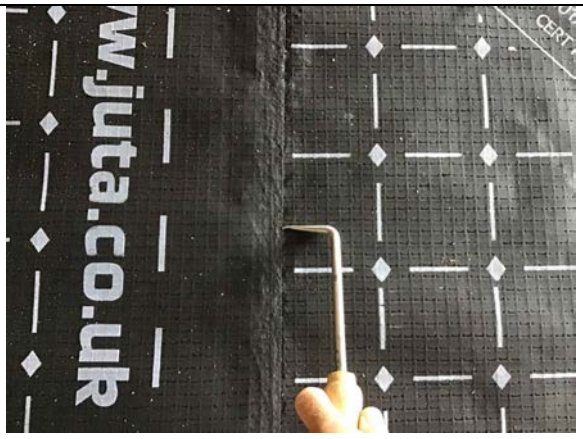


Overview of plots 1 & 2.

Detailing Sample Photographs



Overview of installed Juta GP1 gas membrane to plot 1.



Pick testing all hand welded membrane laps to plot 1.



Hand welded membrane lap to plot 1.



Typical pipe penetration seal using SAGM to plot 1.



Hand welded membrane lap to plot 2.



Air brick in place at the time of our inspection to plot 2.



Overview of installed membrane to plot 2.



Typical pipe penetration seal using SAGM to plot 2.

Housebuilder Name: Whiteoak Developments - Threals Farm.			**Date: 29/08/2023**
Site Name: Threals Lane, West Chilting, West Sussex.			**Weather: 16 °C Dry**
			Installer: MB Membranes
Postcode: RH20 2RF.	**Surveyor: Adam McDermott (TGPV)**		
Plot Number	**Building Type**	**Extent of Inspection**	**Result**
3.	Detached.	Perimeter and Internal Masonry walls	Pass

(Section 1, Materials and Method of Seal)

Gas Membrane Name: Juta GP1 Gas Membrane.

Corner Seal Method: Corners have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Service Entry Seal Method: The external of the pipe/ducts have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Annulus to Water Pipe Duct: The alkathene water pipe has either not been sealed or is not in place at the time of our inspection, this will require sealing to an approved method, this is outside the remit of the result of todays inspection

Door Threshold Seal Method: Door Thresholds have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Cavity Vent Seal Method: The cavity vents sit below the membrane that seals the cavity and do not require a specialist seal

Material Jointing Method: The membrane has been overlapped sufficiently to achieve a sound joint, the joint is clean and dry and has been joined by means of hand welding with a hot air gun and neoprene roller, the width of the welded joint is a minimum of 30mm.

Others Please List: N/A.

(Section 2, Testing and Inspection Method)

Leak/Hole Detection	MEC Environmental Ltd carried out a thorough Visual Inspection to the available area at the time of our inspection
Joint Testing	The surveyor carried out Probe testing as per the method prescribed in ASTM D4437 to all detailing work, detailing work is defined as any part of the installation that includes a joint in the membrane, this includes but is not limited to pipes/ducts, stanchions, wind posts, braces, field seams, masonry abutments, tanking, door thresholds and the like

Plot Number	**(Section 3, Defects List)**	**Action Required**

3.	No Defects recorded at the time of our inspection.	N/A

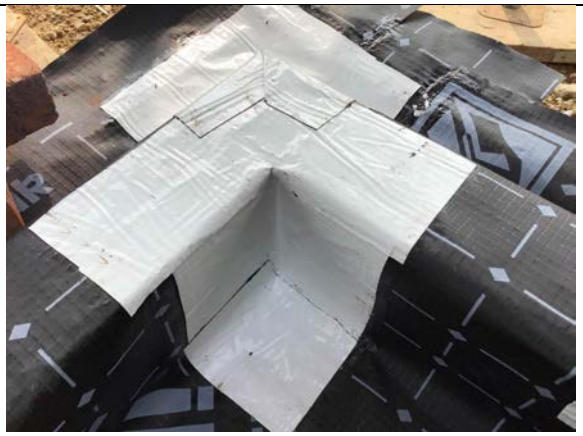
Signed: **Adam McDermott (TGPV)** Date: **29/08/2023**

Plot Overview Photographs



Overview of installed membrane to the perimeter and internal walls to plot 3.

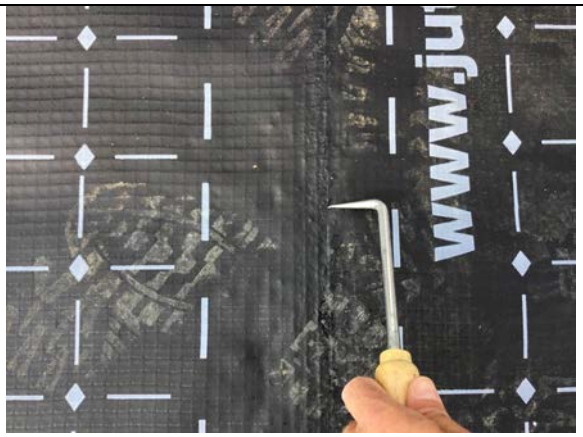
Detailing Sample Photographs



Typical corner seal using SAGM.



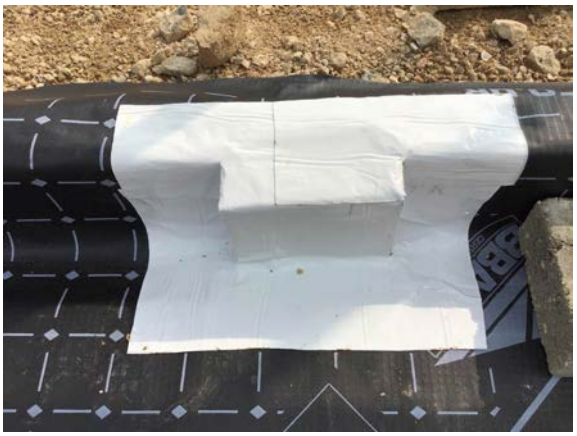
Sealed stanchion using SAGM.



Pick testing all hand welded membrane laps.



Pick testing all SAGM detailing.



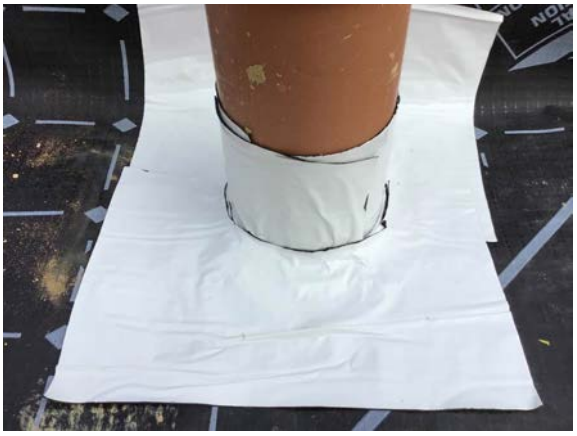
Sealed internal telescopic vent box using SAGM.



Typical door threshold seal using SAGM.



Sealed perimeter timber frame straps using double sided tape and SAGM.



Sealed pipe penetration using SAGM.

Housebuilder Name: Whiteoak Developments - Threals Farm.			**Date: 17/10/2023**
Site Name: Threals Lane, West Chilting, West Sussex.			**Weather: 8 °C Dry**
			Installer: MB Membranes
Postcode: RH20 2RF.	**Surveyor: Adam McDermott (TGPV)**		
Plot Number	**Building Type**	**Extent of Inspection**	**Result**
4.	Detached.	Infill	Pass
5.	Detached.	Perimeter and Internal Masonry walls	Pass

(Section 1, Materials and Method of Seal)
Gas Membrane Name: Juta GP1 Gas Membrane.
Corner Seal Method: Corners have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735
Service Entry Seal Method: The external of the pipe/ducts have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735
Annulus to Water Pipe Duct: The alkathene water pipe has either not been sealed or is not in place at the time of our inspection, this will require sealing to an approved method, this is outside the remit of the result of todays inspection
Door Threshold Seal Method: Door Thresholds have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735
Cavity Vent Seal Method: The cavity vents sit below the membrane that seals the cavity and do not require a specialist seal
Material Jointing Method: The membrane has been overlapped sufficiently to achieve a sound joint, the joint is clean and dry and has been joined by means of hand welding with a hot air gun and neoprene roller, the width of the welded joint is a minimum of 30mm.
Others Please List: N/A.

(Section 2, Testing and Inspection Method)	
Leak/Hole Detection	MEC Environmental Ltd carried out a thorough Visual Inspection to the available area at the time of our inspection
Joint Testing	The surveyor carried out Probe testing as per the method prescribed in ASTM D4437 to all detailing work, detailing work is defined as any part of the installation that includes a joint in the membrane, this includes but is not limited to pipes/ducts, stanchions, wind posts, braces, field seams, masonry abutments, tanking, door thresholds and the like

Plot Number	**(Section 3, Defects List)**	**Action Required**
4 & 5.	No Defects recorded at the time of our inspection.	N/A

Signed: **Adam McDermott (TGPV)** Date: **17/10/2023**

Plot Overview Photographs



Overview of plot 4.

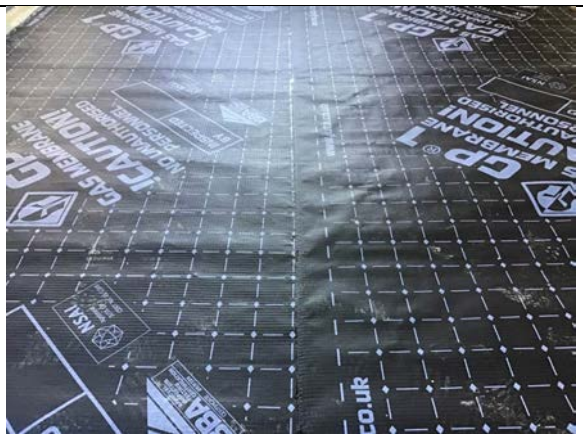


Overview of plot 5.

Detailing Sample Photographs



Overview of installed Juta GP1 as an infill in plot 4.



Typical hand welded membrane lap in plot 4.



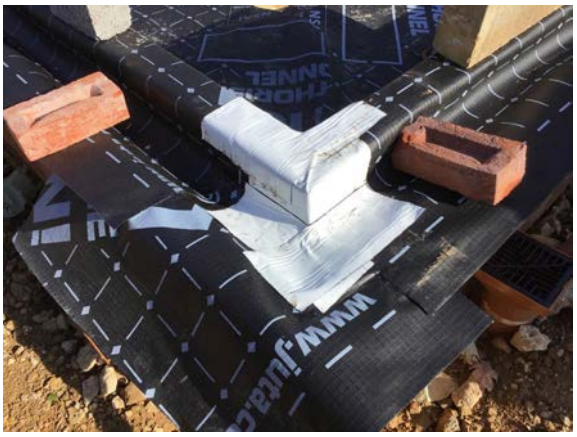
Overview of installed Juta GP1 Gas Membrane in plot 4.



Retro fit detail using SAGM, sealed to the damaged perimeter membrane in plot 4.



Sealed pipe penetration using SAGM in plot 4.



Typical corner seal using SAGM in plot 5.



Typical double pipe penetration seal using SAGM in plot 5.



Pick testing all SAGM detailing in plot 5.



Typical door threshold seal using SAGM in plot 5.



Typical pipe penetration seal using SAGM in plot 5.



Air brick in place under the membrane in plot 5 at the time of our inspection.

Housebuilder Name: WhiteOak Southern - (Grange Park)	**Date: 02/02/2024**
Site Name: Whiteoak Southern, West Chiltingham. THREALS FARM, THREALS LANE, WEST CHILTING, WEST SUSSEX.	**Weather: 8 °C Dry/Overcast**
	Installer: MB Membranes
Postcode: RH20 2RF	**Surveyor: James Hall (TGPV)**

Plot Number	Building Type	Extent of Inspection	Result
3	Detached	Infill	Pass

(Section 1, Materials and Method of Seal)

Gas Membrane Name: Juta GP1 Gas Barrier

Corner Seal Method: Corners have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Service Entry Seal Method: The external of the pipe/ducts have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Annulus to Water Pipe Duct: The alkathene water pipe has either not been sealed or is not in place at the time of our inspection, this will require sealing to an approved method, this is outside the remit of the result of todays inspection

Door Threshold Seal Method: Door Thresholds have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Cavity Vent Seal Method: The cavity vents sit below the membrane that seals the cavity and do not require a specialist seal

Material Jointing Method: The membrane has been overlapped sufficiently to achieve a sound joint, the joint is clean and dry and has been joined by means of hand welding with a hot air gun and neoprene roller, the width of the welded joint is a minimum of 30mm.

Others Please List: N/A

(Section 2, Testing and Inspection Method)

Leak/Hole Detection	MEC Environmental Ltd carried out a thorough Visual Inspection to the available area at the time of our inspection
Joint Testing	The surveyor carried out Probe testing as per the method prescribed in ASTM D4437 to all detailing work, detailing work is defined as any part of the installation that includes a joint in the membrane, this includes but is not limited to pipes/ducts, stanchions, wind posts, braces, field seams, masonry abutments, tanking, door thresholds and the like

Plot Number	(Section 3, Defects List)	Action Required

3	No Faults or Defects were recorded at the time of our inspection.	N/A

Signed: **James Hall (TGPV)** Date: **02/02/2024**

Plot Overview Photographs



Overview of Plot 3 where today's inspection took place.

Detailing Sample Photographs



Overview of the infill installation of Juta GP1 Gas Barrier.



Overview of the infill installation of Juta GP1 Gas Barrier.



Overview of the infill installation of Juta GP1 Gas Barrier.



Overview along hand welded membrane lap joints.



Pick & Probe testing along all hand welded lap joints.



Previously sealed corner and pipe entry using SAGM.



Pick & Probe testing to previously sealed pipe penetration's.



Pick & Probe testing to SAGM patch repairs.



Previously sealed timber frame brackets using SAGM and butyl tape.



Pick testing to new and existing perimeter membrane.

Housebuilder Name: Whiteoak Southern - Grange Park.			**Date: 24/05/2024**
Site Name: Threals Farm, Threals Lane, West Chilting, West Sussex.			**Weather: 19 °C Dry**
			Installer: MB Membranes
Postcode: RH20 2RF.	**Surveyor: Adam McDermott (TGPV)**		
Plot Number	**Building Type**	**Extent of Inspection**	**Result**
5.	Detached.	Infill	Pass

(Section 1, Materials and Method of Seal)

Gas Membrane Name: Juta GP1 Gas Membrane.

Corner Seal Method: Corners have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Service Entry Seal Method: The external of the pipe/ducts have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Annulus to Water Pipe Duct: The alkathene water pipe has either not been sealed or is not in place at the time of our inspection, this will require sealing to an approved method, this is outside the remit of the result of todays inspection

Door Threshold Seal Method: Door Thresholds have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735

Cavity Vent Seal Method: The cavity vents sit below the membrane that seals the cavity and do not require a specialist seal

Material Jointing Method: The membrane has been overlapped sufficiently to achieve a sound joint, the joint is clean and dry and has been joined by means of hand welding with a hot air gun and neoprene roller, the width of the welded joint is a minimum of 30mm.

Others Please List: N/A.

(Section 2, Testing and Inspection Method)

Leak/Hole Detection	MEC Environmental Ltd carried out a thorough Visual Inspection to the available area at the time of our inspection
Joint Testing	The surveyor carried out Probe testing as per the method prescribed in ASTM D4437 to all detailing work, detailing work is defined as any part of the installation that includes a joint in the membrane, this includes but is not limited to pipes/ducts, stanchions, wind posts, braces, field seams, masonry abutments, tanking, door thresholds and the like

Plot Number	**(Section 3, Defects List)**	**Action Required**
5.	Due to excessive damage in plot 5 MB Membranes have picture framed using SAGM to the previously installed extended perimeter membrane.	N/A

Signed: **Adam McDermott (TGPV)** Date: **24/05/2024**

Plot Overview Photographs

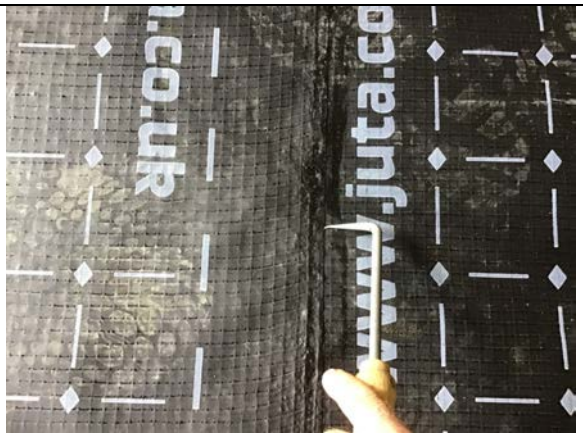


Overview of detached plot 5.

Detailing Sample Photographs



Retro fit detail using SAGM to the previously installed perimeter membrane due to excessive damage caused by follow on trades.



Probe testing all hand welded membrane laps.



All membrane laps have been hand welded using a hot air gun and rolled using a neoprene roller.



Sealed pipe penetration using SAGM.



Typical pipe penetration seal using SAGM.



Resealed door threshold using SAGM.



Overview of installed Juta GP1 gas membrane as an infill to the main living area in plot 5.



Probe testing all SAGM detailing.



Air brick in place at the time of our inspection.