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

MEC ENVIRONMENTAL LTD

Gas Membrane Installation
Validation Report
Alcema
Alexandra Park School
Bidwells Gardens
London
N11 2AZ

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1. INTRODUCTION

1.1 Purpose

UK Membranes are installing a gas protection membrane to the aforementioned site. MEC Environmental Ltd (MEC) has been appointed by UK 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 Conclusion

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  Date: 18/08/2025

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

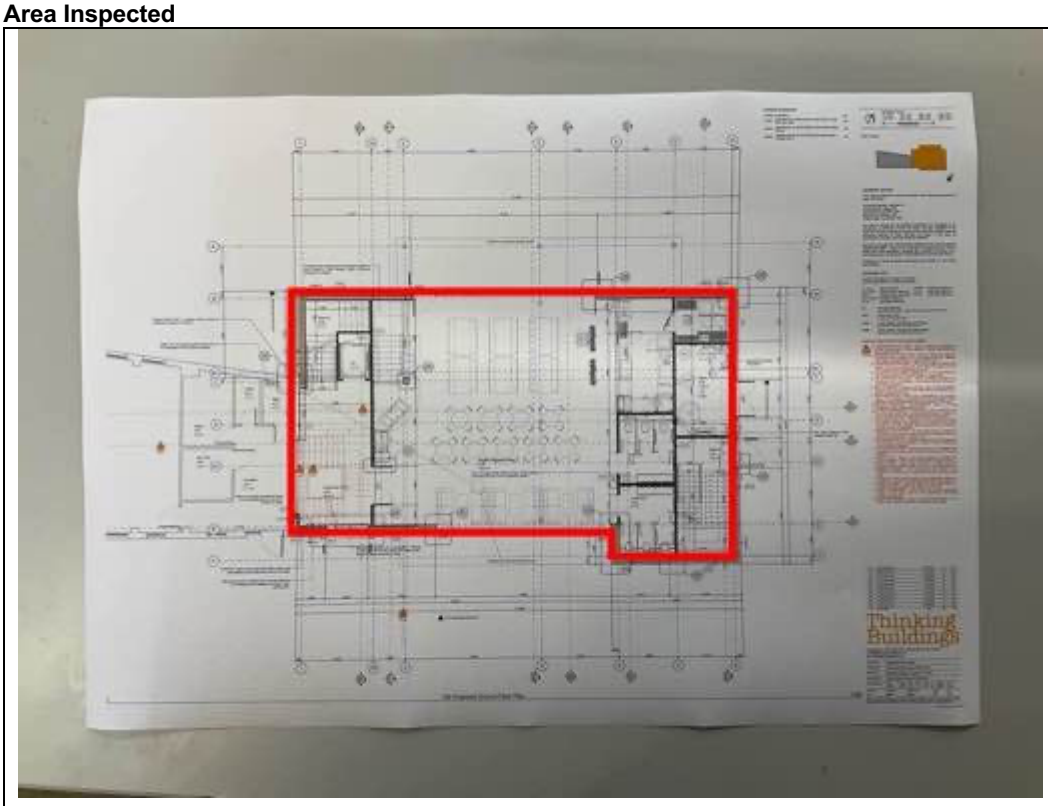
Appendix 1 – Site Survey Sheets

Main Contractor Name: Alcema		**Date: 18/08/2025**
Site Name: Alexandra Park School, Bidwells Gardens, London.		**Temp:** 22 **°C**
		Installer: UK Membranes
Postcode: N11 2AZ	**Surveyor:** James Hall (TGPV)	
Building Reference/Unit No:	New Sixth Form Block	
Area Inspected:	Infill Installation - See Marked Up Plan	
Description of Works:	MEC Environmental carried out a thorough inspection of the gas membrane. The installers have completed the infill works to the New sixth form block using Juta GP1 Gas Barrier. All lap joints between adjacent sheets of membrane were hand welded with rolled pressure applied. The gas barrier was tucked beneath the existing perimeter installation and again hand welded. All pipe penetrations and steel stanchions were detailed using Juta GPSAM with adequate heat applied. A retrofit termination detailing has been applied to the plaster board internal partition walls using Juta GPSAM with adequate heat and rolled pressure applied.	
Sub-Grade Preparation:	The subgrade had already been covered prior to our inspection and therefore has not been inspected by MEC Environmental	
Result of Inspection:	N/A	
(Section 1, Materials and Method of Seal)		
Gas Membrane Name: Juta GP1 Gas Barrier		
Other Products Used: Juta GPSAM		
Perimeter Seal Method: The membrane been welded to the perimeter membrane that was installed previously across the cavity wall		
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		
Stanchion Seal Method: The stanchions have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735		
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: Retrofit termination detailing to stair core base and internal plaster board partition walls		
(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	

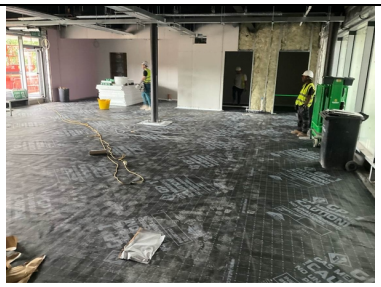
	membrane, this includes but is not limited to pipes/ducts, stanchions, wind posts, braces, field seams, masonry abutments, tanking, door thresholds and the like

(Section 3, Defects List)	Action Required
MEC advises that the installers and/or the site contractor checks with the designer that the installation method and retrofit termination detailing to the internal plaster boarded partition walls is acceptable. Once approved, written confirmation should be supplied to MEC to include in the report. MEC are unable to check the gasket detail to the steels along the curtain wall that have been bolted through the gas barrier. MEC advises that site and/or the installers take photographic evidence of this detail. Site does not have specific gas barrier detail drawings., therefore our inspection relates to general workmanship only in line with manufacturers installation recommendations MEC were unable to gather photographic evidence of the materials packaging used (Juta GPSAM) during today's inspection.	N/A

Area Inspected



Gas Membrane Overview



General overview of the infill installation using Juta GP1 Gas Barrier.

Overview of the infill installation.

Overview of the infill installation to core area.

Overview of the infill installation to electrical room.

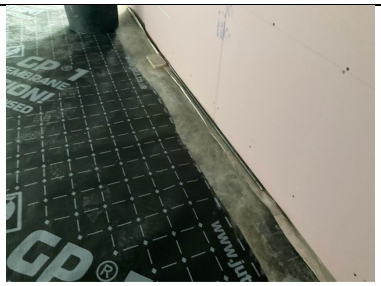
Overview of the infill installation to stair core area.

Subgrade Photos

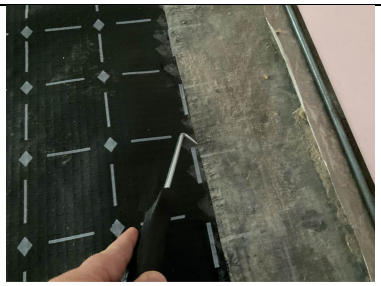
Materials Used

Evidence of Juta GP1 Gas Barrier installed on the project.

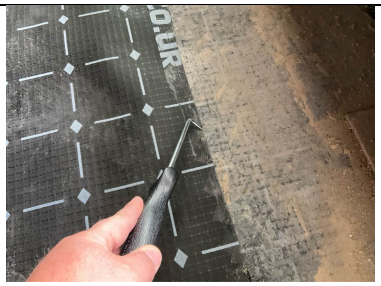
Perimeter Detail



Overview of the infill gas barrier



Probe testing to hand welded lap



Probe testing to hand welded laps along perimeter edge.

hand welded to the existing perimeter installation barrier.

joints along existing perimeter edge membrane.

Probe testing to hand welded laps along perimeter edge.

Pipe and Duct Seals

Probe testing to pipe penetration details.

Probe testing to pipe penetration details.

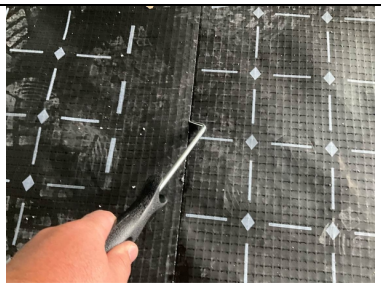
Probe testing to pipe penetrations.

Stanchions and Columns Seals

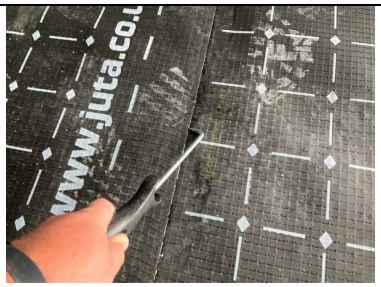
Steel stanchion detailed using Juta GPSAM.

Probe testing to steel stanchion details.

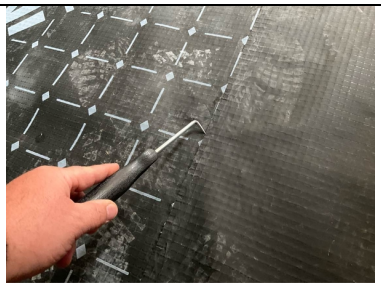
Testing of Joints



Probe testing along hand welded membrane lap joints.



Probe testing along hand welded membrane lap joints.



Probe testing to hand welded lap joints.

Additional Photos

MEC are unable to check the gasket detail to the curtain wall steel bolts.

MEC are unable to check the gasket detail to the curtain wall steel bolts.

Overview of the retrofit termination detailing to internal wall partition walls using Juta GPSAM.

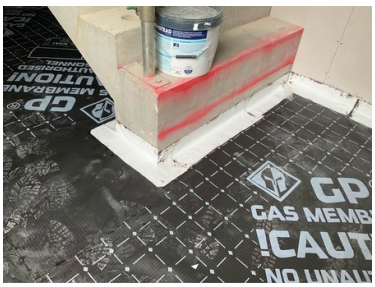
Overview of the retrofit termination detailing to internal wall partition walls.

Probe testing along retrofit termination detailing to internal wall partition walls.

Probe testing to retrofit termination detailing along internal wall partition walls.

Probe testing to retrofit termination detailing along internal wall partition walls.

Probe testing to installers own CQA patch repair using Juta GPSAM.



Retrofit termination detailing to stair core base using Juta GPSAM.

Probe testing along retrofit termination detailing to stair core base.