

Gas Membrane Installation  
Validation Report  
East Horton Business Park  
Knowle Lane  
Fair Oak  
SO50 7DZ  
V2 15/03/24

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## 1. INTRODUCTION

### 1.1 Purpose

Parsons Construction Ltd are installing a gas protection membrane to the aforementioned site. MEC Environmental Ltd (MEC) has been appointed by Parsons Construction Ltd 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 where 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: 21/02/2024

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

## Appendix 1 – Site Survey Sheets

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                       |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Site name: East Horton Business Park, Knowle Lane, Fair oak. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Units/ plots checked: : New Industrial units, Block A, full line out ( see marked plan below). |                                                                                       |
| Postcode: SO50 7DZ.                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                       |
| Installers Name: UK Membranes.                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                       |
| Date: 14/09/2023                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                       |
| Inspection by: Adam Mcdermott                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Weather: 14°C Dry                                                                              |                                                                                       |
| Item                                                         | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                |                                                                                       |
| Sub-floor void                                               | Concrete and sand blinded substrate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                |                                                                                       |
| Ventilation Inlets and Outlets                               | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                |                                                                                       |
| Number Of Vents                                              | N/A.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                |                                                                                       |
| Materials used:                                              | Membrane – Juta GPH 0.6 gas membrane.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                |                                                                                       |
|                                                              | Self-Adhesive Membrane <input checked="" type="checkbox"/> Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Preformed Top hats <input type="checkbox"/> Yes                                                |                                                                                       |
|                                                              | Double Sided Butyl Tape <input type="checkbox"/> Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Preformed Corners <input type="checkbox"/> Yes                                                 |                                                                                       |
|                                                              | Others Please List: Protection fleece.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                |                                                                                       |
| Installation Notes                                           | <p><b><u>(brief description of area/plots and list of defects/repairs identified to the main membrane sheet, excluding detailing and joints)</u></b></p> <p>MEC Environmental carried out a thorough visual inspection of the membrane, protection fleece has been lined over the whole footprint of block A, the Juta GPH 0.6 gas membrane had then been installed on top of the protection fleece and up the timber shuttering, sealing all corners and pipe penetrations using SAGM. Protected fleece was then installed on top of the membrane.</p> |                                                                                                |                                                                                       |
| Type of Joint                                                | Tape Joint <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Auto Weld <input type="checkbox"/>                                                             | Hand Weld <input checked="" type="checkbox"/> Extrusion Weld <input type="checkbox"/> |
| Jointing/Detailing Testing                                   | <input type="checkbox"/> Air Lance (ASTM D4437)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                | <input checked="" type="checkbox"/> Probe Test (ASTM D4437)                           |
| Laps, welds and detailing<br>Ventilation Inlets & Outlets    | Have all joints passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input checked="" type="checkbox"/> Yes                                                        | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |
|                                                              | Have all pipes passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <input checked="" type="checkbox"/> Yes                                                        | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |
|                                                              | Have all stanchions/wind braces/columns passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <input type="checkbox"/> Yes                                                                   | <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A                   |
|                                                              | Have all piles and pile caps passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/> Yes                                                                   | <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A                   |
|                                                              | Has all other detailing work passed inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input checked="" type="checkbox"/> Yes                                                        | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b><u>(List any defects to detailing work and joints):</u></b></p> <p>During our inspection the following defects and repairs were carried out: N/A.</p> <p>Have any defects identified above been satisfactorily rectified <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p> <p>The Area has passed inspection <input checked="" type="checkbox"/></p> <p>The Area has failed inspection and a corrective action sheet has been left with the contractor <input type="checkbox"/></p> <p>The Area is incomplete as detailed above <input type="checkbox"/></p> <p>Signed: <b>Adam Mcdermott</b> Date: <b>14/09/2023</b></p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Area Inspected



Photo 14/09/2023



Overview of installed membrane to industrial unit block A.



Sealed corner detail using SAGM.



Pick testing all SAGM detailing.



Sealed double pipe penetration using SAGM.



Pick testing all hand welded membrane laps.



Typical corner seal using SAGM.



Typical hand welded membrane lap.



Protection fleece installed under the installed membrane.



Protection fleece installed on top of the membrane.

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                       |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Site name: East Horton Business Park, Knowle Lane, Fair oak. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Units/ plots checked: : New Industrial units, Block E, full line out ( see marked plan below). |                                                                                       |
| Postcode: SO50 7DZ.                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                       |
| Installers Name: UK Membranes.                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                       |
| Date: 11/10/2023                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                       |
| Inspection by: Adam Mcdermott                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Weather: 17°C Dry                                                                              |                                                                                       |
| Item                                                         | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                |                                                                                       |
| Sub-floor void                                               | Concrete and sand blinded substrate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                |                                                                                       |
| Ventilation Inlets and Outlets                               | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                |                                                                                       |
| Number Of Vents                                              | N/A.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                |                                                                                       |
| Materials used:                                              | Membrane – Juta GPH 0.6 gas membrane.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                |                                                                                       |
|                                                              | Self-Adhesive Membrane <input checked="" type="checkbox"/> Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Preformed Top hats <input type="checkbox"/> Yes                                                |                                                                                       |
|                                                              | Double Sided Butyl Tape <input type="checkbox"/> Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Preformed Corners <input type="checkbox"/> Yes                                                 |                                                                                       |
|                                                              | Others Please List: Protection fleece.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                |                                                                                       |
| Installation Notes                                           | <p><b><u>(brief description of area/plots and list of defects/repairs identified to the main membrane sheet, excluding detailing and joints)</u></b></p> <p>MEC Environmental carried out a thorough visual inspection of the membrane, protection fleece has been lined over the whole footprint of block E, the Juta GPH 0.6 gas membrane had then been installed on top of the protection fleece and up the timber shuttering, sealing all corners and pipe penetrations using SAGM. Protected fleece was then installed on top of the membrane.</p> |                                                                                                |                                                                                       |
| Type of Joint                                                | Tape Joint <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Auto Weld <input type="checkbox"/>                                                             | Hand Weld <input checked="" type="checkbox"/> Extrusion Weld <input type="checkbox"/> |
| Jointing/Detailing Testing                                   | <input type="checkbox"/> Air Lance (ASTM D4437)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                | <input checked="" type="checkbox"/> Probe Test (ASTM D4437)                           |
| Laps, welds and detailing<br>Ventilation Inlets & Outlets    | Have all joints passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input checked="" type="checkbox"/> Yes                                                        | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |
|                                                              | Have all pipes passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <input checked="" type="checkbox"/> Yes                                                        | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |
|                                                              | Have all stanchions/wind braces/columns passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <input type="checkbox"/> Yes                                                                   | <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A                   |
|                                                              | Have all piles and pile caps passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/> Yes                                                                   | <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A                   |
|                                                              | Has all other detailing work passed inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input checked="" type="checkbox"/> Yes                                                        | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p><b>(List any defects to detailing work and joints):</b></p> <p>During our inspection the following defects and repairs were carried out: N/A.</p> <p>Have any defects identified above been satisfactorily rectified <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p> <p>The Area has passed inspection <input checked="" type="checkbox"/></p> <p>The Area has failed inspection and a corrective action sheet has been left with the contractor <input type="checkbox"/></p> <p>The Area is incomplete as detailed above <input type="checkbox"/></p> <p>Signed: <b>Adam Mcdermott</b> Date: <b>11/10/2023</b></p> |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

Area Inspected

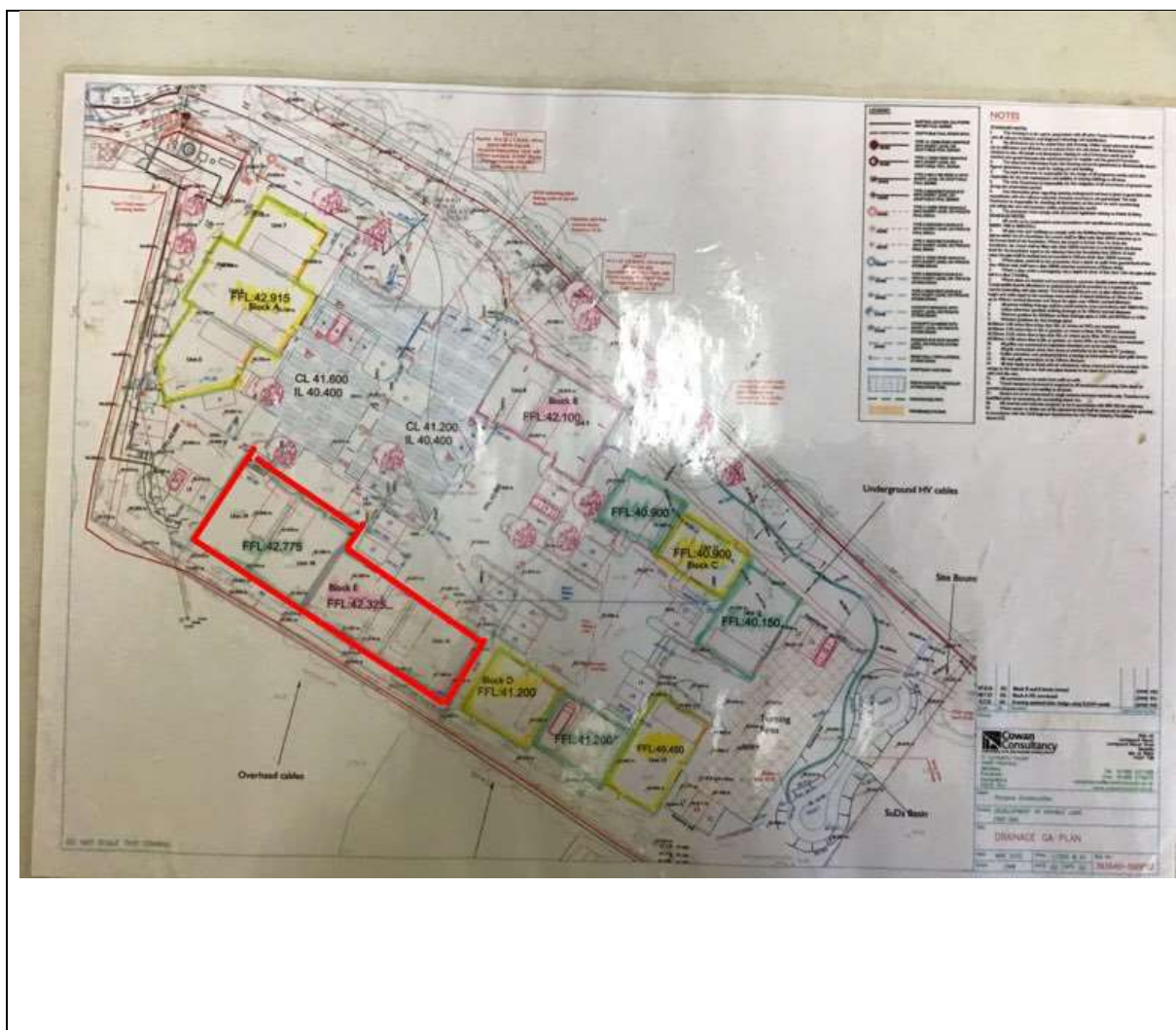


Photo 11/10/2023



Overview of installed membrane to block E.



Pick testing all hand welded membrane laps.



Sealed corner detail using SAGM.



Typical hand welded membrane lap.



Sealed pipe penetration using SAGM.



Protection fleece being installed on top of the membrane.

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                       |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Site name: East Horton Business Park, Knowle Lane, Fair oak. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Units/ plots checked: : New Industrial units, Block B, full line out ( see marked plan below). |                                                                                       |
| Postcode: SO50 7DZ.                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                       |
| Installers Name: UK Membranes.                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                       |
| Date: 01/11/2023                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                |                                                                                       |
| Inspection by: Adam Mcdermott                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Weather: 14°C Dry                                                                              |                                                                                       |
| Item                                                         | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                |                                                                                       |
| Sub-floor void                                               | Concrete and sand blinded substrate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                |                                                                                       |
| Ventilation Inlets and Outlets                               | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                |                                                                                       |
| Number Of Vents                                              | N/A.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                |                                                                                       |
| Materials used:                                              | Membrane – Juta GPH 0.6 gas membrane.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                |                                                                                       |
|                                                              | Self-Adhesive Membrane <input checked="" type="checkbox"/> Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Preformed Top hats <input type="checkbox"/> Yes                                                |                                                                                       |
|                                                              | Double Sided Butyl Tape <input type="checkbox"/> Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Preformed Corners <input type="checkbox"/> Yes                                                 |                                                                                       |
|                                                              | Others Please List: Protection fleece.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                |                                                                                       |
| Installation Notes                                           | <p><b><u>(brief description of area/plots and list of defects/repairs identified to the main membrane sheet, excluding detailing and joints)</u></b></p> <p>MEC Environmental carried out a thorough visual inspection of the membrane, protection fleece has been lined over the whole footprint of block B, the Juta GPH 0.6 gas membrane had then been installed on top of the protection fleece and up the timber shuttering, sealing all corners and pipe penetrations using SAGM. Protected fleece was then installed on top of the membrane.</p> |                                                                                                |                                                                                       |
| Type of Joint                                                | Tape Joint <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Auto Weld <input type="checkbox"/>                                                             | Hand Weld <input checked="" type="checkbox"/> Extrusion Weld <input type="checkbox"/> |
| Jointing/Detailing Testing                                   | <input type="checkbox"/> Air Lance (ASTM D4437)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                | <input checked="" type="checkbox"/> Probe Test (ASTM D4437)                           |
| Laps, welds and detailing<br>Ventilation Inlets & Outlets    | Have all joints passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input checked="" type="checkbox"/> Yes                                                        | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |
|                                                              | Have all pipes passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <input checked="" type="checkbox"/> Yes                                                        | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |
|                                                              | Have all stanchions/wind braces/columns passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <input type="checkbox"/> Yes                                                                   | <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A                   |
|                                                              | Have all piles and pile caps passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/> Yes                                                                   | <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A                   |
|                                                              | Has all other detailing work passed inspection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input checked="" type="checkbox"/> Yes                                                        | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p><b><u>(List any defects to detailing work and joints):</u></b></p> <p>During our inspection the following defects and repairs were carried out: N/A.</p> <p>Have any defects identified above been satisfactorily rectified <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p> <p>The Area has passed inspection <input checked="" type="checkbox"/></p> <p>The Area has failed inspection and a corrective action sheet has been left with the contractor <input type="checkbox"/></p> <p>The Area is incomplete as detailed above <input type="checkbox"/></p> <p>Signed: <b>Adam Mcdermott</b> Date: <b>01/11/2023</b></p> |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

Area Inspected

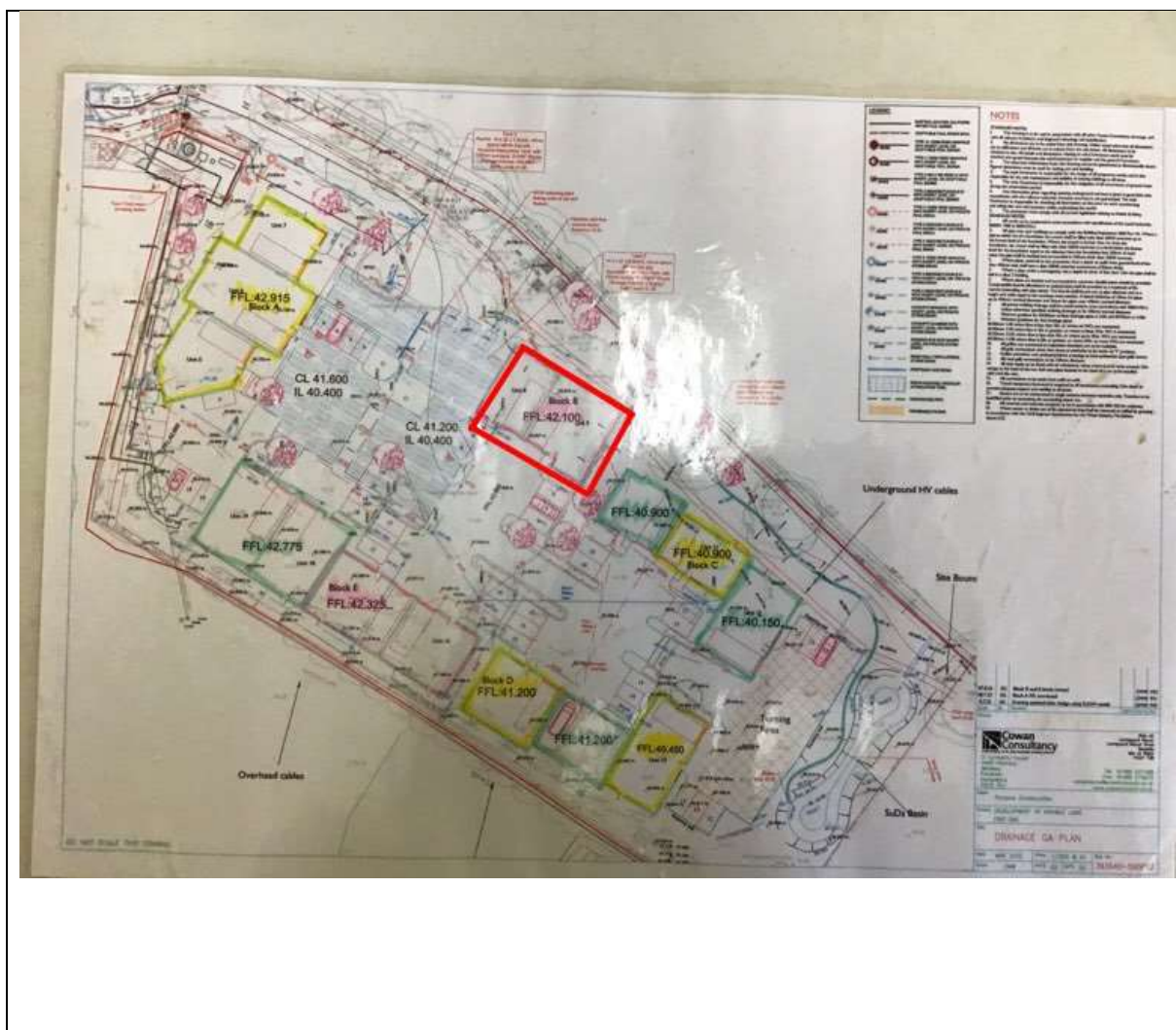


Photo 01/11/2023



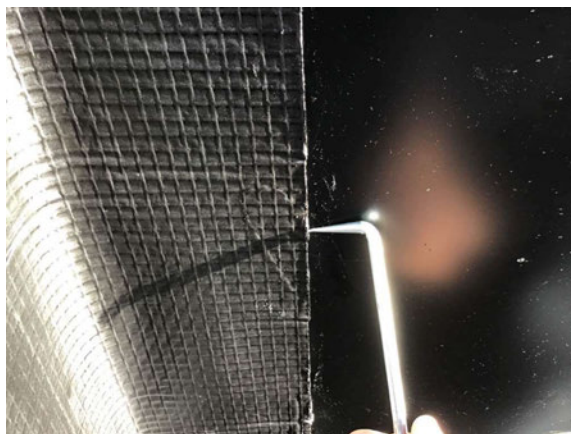
Overview of installed membrane in block B.



Typical pipe penetration seal using SAGM in block B.



Typical corner seal using SAGM in block B.



Pick testing all SAGM detailing.



Typical hand welded membrane lap.

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                 |                                                                                       |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Site name: East Horton Business Park, Knowle Lane, Fair Oak. |                                                                                                                                                                                                                                                                                                                                                                                                                                 | Units/ plots checked: : New industrial units, Block D, Full line out. ( see marked plan below). |                                                                                       |
| Postcode: SO50 7DZ.                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                 |                                                                                       |
| Installers Name: UK Membranes.                               |                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                 |                                                                                       |
| Date: 06/02/2024                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                 |                                                                                       |
| Inspection by: Adam Mcdermott                                |                                                                                                                                                                                                                                                                                                                                                                                                                                 | Weather: 10°C Dry.                                                                              |                                                                                       |
| Item                                                         | Comments                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                 |                                                                                       |
| Sub-floor void                                               | Concrete blinded substrate.                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                 |                                                                                       |
| Ventilation Inlets and Outlets                               | N/A                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                 |                                                                                       |
| Number Of Vents                                              | N/A.                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                 |                                                                                       |
| Materials used:                                              | Membrane – Juta GPH 0.6 gas membrane.                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                 |                                                                                       |
|                                                              | Self-Adhesive Membrane <input checked="" type="checkbox"/> Yes                                                                                                                                                                                                                                                                                                                                                                  | Preformed Top hats <input type="checkbox"/> Yes                                                 |                                                                                       |
|                                                              | Double Sided Butyl Tape <input type="checkbox"/> Yes                                                                                                                                                                                                                                                                                                                                                                            | Preformed Corners <input type="checkbox"/> Yes                                                  |                                                                                       |
|                                                              | Others Please List: Protection fleece.                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                 |                                                                                       |
| Installation Notes                                           | <p><b><u>(brief description of area/plots and list of defects/repairs identified to the main membrane sheet, excluding detailing and joints)</u></b></p> <p>MEC Environmental carried out a thorough visual inspection of the membrane, the Juta GPH gas membrane had been installed to a good standard on top of the protection fleece and up the timber shuttering. Sealing all corners and pipe penetrations using SAGM.</p> |                                                                                                 |                                                                                       |
| Type of Joint                                                | Tape Joint <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                             | Auto Weld <input type="checkbox"/>                                                              | Hand Weld <input checked="" type="checkbox"/> Extrusion Weld <input type="checkbox"/> |
| Jointing/Detailing Testing                                   | <input type="checkbox"/> Air Lance (ASTM D4437)                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                 | <input checked="" type="checkbox"/> Probe Test (ASTM D4437)                           |
| Laps, welds and detailing<br>Ventilation Inlets & Outlets    | Have all joints passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                  | <input checked="" type="checkbox"/> Yes                                                         | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |
|                                                              | Have all pipes passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                                   | <input checked="" type="checkbox"/> Yes                                                         | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |
|                                                              | Have all stanchions/wind braces/columns passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/> Yes                                                                    | <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A                   |
|                                                              | Have all piles and pile caps passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> Yes                                                                    | <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A                   |
|                                                              | Has all other detailing work passed inspection                                                                                                                                                                                                                                                                                                                                                                                  | <input checked="" type="checkbox"/> Yes                                                         | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |





Overview of installed Juta GPH 0.6 gas membrane across the full footprint of unit D.



Sealed corner detail using SAGM.



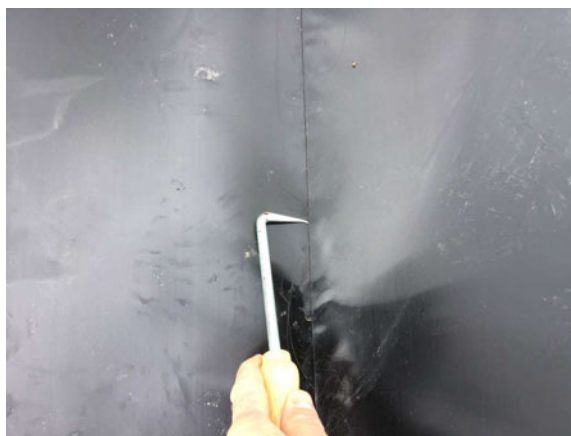
Auto welded membrane lap.



Typical double pipe penetration seal using SAGM.



Pick testing all SAGM detailing.



Pick testing all hand welded membrane laps.

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                 |                                                                                       |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Site name: East Horton Business Park, Knowle Lane, Fair Oak. |                                                                                                                                                                                                                                                                                                                                                                                                                      | Units/ plots checked: : New industrial units, Block C, Full line out. ( see marked plan below). |                                                                                       |
| Postcode: SO50 7DZ.                                          |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                 |                                                                                       |
| Installers Name: UK Membranes.                               |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                 |                                                                                       |
| Date: 21/02/2024                                             |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                 |                                                                                       |
| Inspection by: Adam Mcdermott                                |                                                                                                                                                                                                                                                                                                                                                                                                                      | Weather: 8°C Heavy rain.                                                                        |                                                                                       |
| Item                                                         | Comments                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                 |                                                                                       |
| Sub-floor void                                               | Concrete blinded substrate.                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                 |                                                                                       |
| Ventilation Inlets and Outlets                               | N/A                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                 |                                                                                       |
| Number Of Vents                                              | N/A.                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                 |                                                                                       |
| Materials used:                                              | Membrane – Juta GPH 0.6 gas membrane.                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                 |                                                                                       |
|                                                              | Self-Adhesive Membrane <input checked="" type="checkbox"/> Yes                                                                                                                                                                                                                                                                                                                                                       | Preformed Top hats <input type="checkbox"/> Yes                                                 |                                                                                       |
|                                                              | Double Sided Butyl Tape <input type="checkbox"/> Yes                                                                                                                                                                                                                                                                                                                                                                 | Preformed Corners <input type="checkbox"/> Yes                                                  |                                                                                       |
|                                                              | Others Please List: Protection fleece.                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                 |                                                                                       |
| Installation Notes                                           | <b><u>(brief description of area/plots and list of defects/repairs identified to the main membrane sheet, excluding detailing and joints)</u></b><br>MEC Environmental carried out a thorough visual inspection of the membrane, the Juta GPH gas membrane had been installed to a good standard on top of the protection fleece and up the timber shuttering. Sealing all corners and pipe penetrations using SAGM. |                                                                                                 |                                                                                       |
| Type of Joint                                                | Tape Joint <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                  | Auto Weld <input type="checkbox"/>                                                              | Hand Weld <input checked="" type="checkbox"/> Extrusion Weld <input type="checkbox"/> |
| Jointing/Detailing Testing                                   | <input type="checkbox"/> Air Lance (ASTM D4437)                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                 | <input checked="" type="checkbox"/> Probe Test (ASTM D4437)                           |
| Laps, welds and detailing<br>Ventilation Inlets & Outlets    | Have all joints passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                       | <input checked="" type="checkbox"/> Yes                                                         | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |
|                                                              | Have all pipes passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                                        | <input checked="" type="checkbox"/> Yes                                                         | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |
|                                                              | Have all stanchions/wind braces/columns passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/> Yes                                                                    | <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A                   |
|                                                              | Have all piles and pile caps passed testing prior to surveyor leaving site?                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/> Yes                                                                    | <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A                   |
|                                                              | Has all other detailing work passed inspection                                                                                                                                                                                                                                                                                                                                                                       | <input checked="" type="checkbox"/> Yes                                                         | <input type="checkbox"/> No <input type="checkbox"/> N/A                              |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b><u>(List any defects to detailing work and joints):</u></b></p> <p>During our inspection the following defects and repairs were carried out: N/A.</p> <p>NOTE: the protection fleece under the membrane had been installed prior to our inspection and due to the wind the protection fleece that get's installed on top of the membrane during our inspection couldn't be lined, and will be getting installed at a later date.</p> <p>Have any defects identified above been satisfactorily rectified <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p> <p>The Area has passed inspection <input checked="" type="checkbox"/></p> <p>The Area has failed inspection and a corrective action sheet has been left with the contractor <input type="checkbox"/></p> <p>The Area is incomplete as detailed above <input type="checkbox"/></p> <p>Signed: <b>Adam Mcdermott</b> Date: <b>21/02/2024</b></p> |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Area Inspected

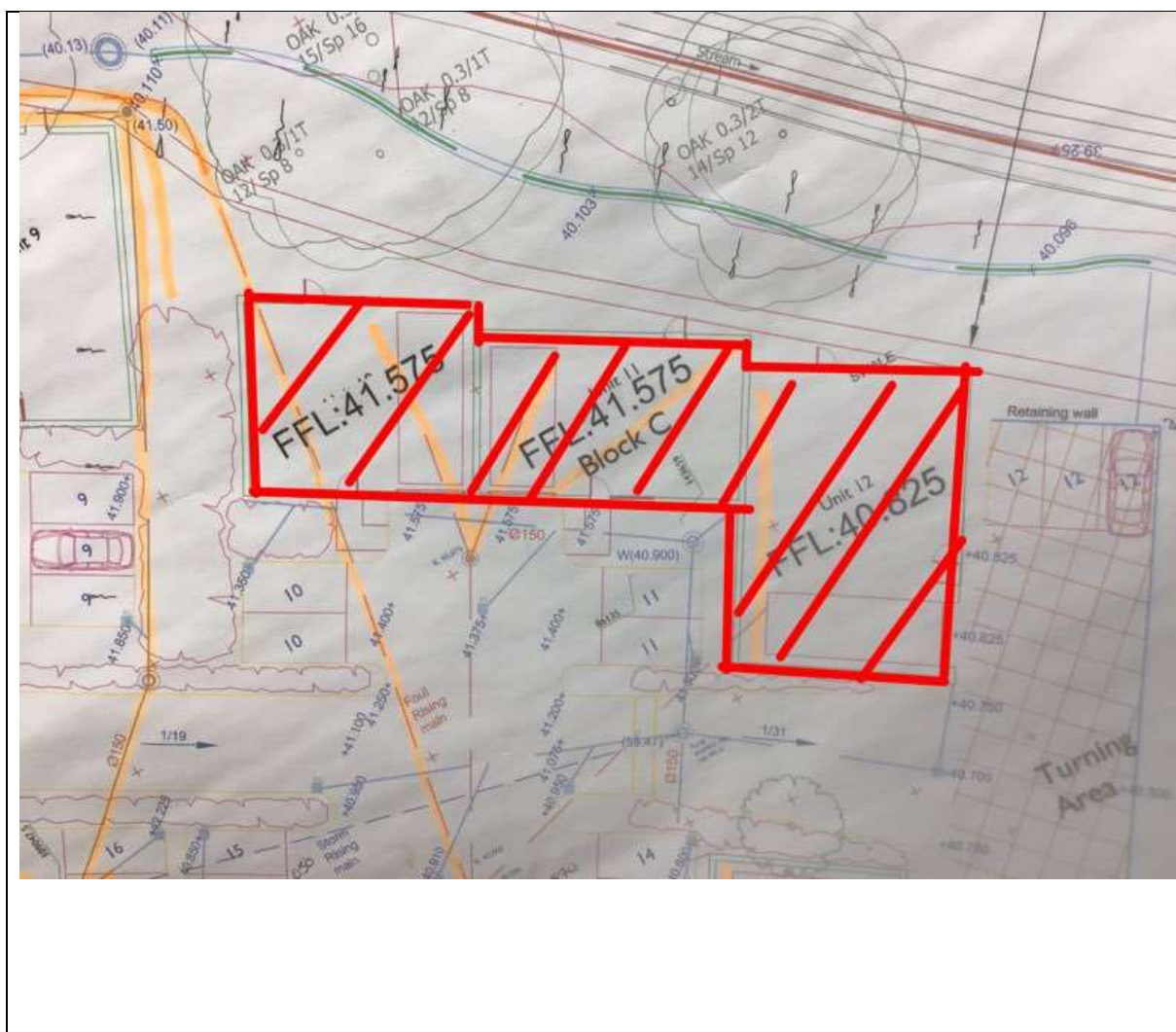


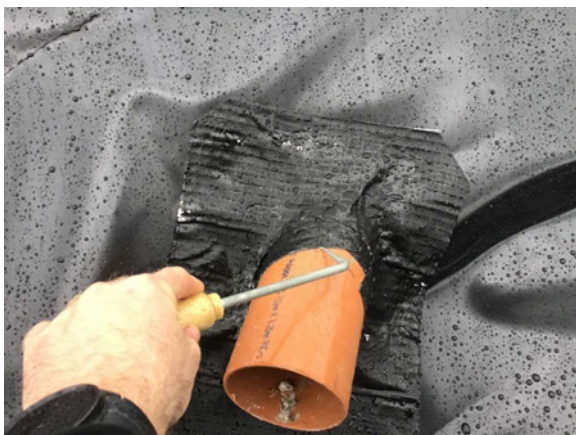
Photo 21/02/2024



Overview of installed Juta GPH 0.6 gas membrane across the full footprint of unit C.



Typical double pipe penetration seal using SAGM.



Pick testing all SAGM detailing.



Pick testing all hand welded membrane laps.



Sealed corner detail using SAGM.

