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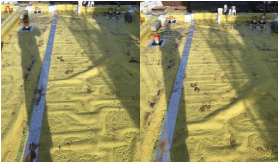
GAS MEMBRANE VALIDATION

Site Name: Belle Vue	Project Number: 12-123
Company Name: Countryside Properties	Date: 25-10-2022
Project Manager: S. Ellis	E3P Engineer: J. James
PM Qualifications: BSc (Hons), FGS, Cenv	Engineer Qualifications: Verification of Gas Protection Systems July 18
Ground Gas Risk Assessment: Amber 1	
<p>Overview:</p> <p>The membrane comprised a Visqueen low permeability gas membrane (Yellow) resistant to radon, carbon dioxide and low levels of methane. E3P can confirm there were no holes or rips at the time of inspection. Upon being laid the membrane is to be covered with a Celotex (closed Cell) floor insulation material which is considered to provide a high degree of protection.</p> <p>All external joints were inspected and E3P can confirm that the membrane was overlapped and double taped to external and internal gas resistant DPM. The membrane was taped to the gas resistant DPM using a double-sided jointing tape. All the overlaps were then additionally taped using foil backed girth tape.</p> <p>Each unit has a service duct located to the front and outer edge of the property. E3P inspected each one and can confirm that the top-hats have been adequately sealed against the membrane.</p> <p>Based on the information provided within this report, the site inspections and validation checklists, E3P can confirm that Plots 186-187 & 200-203 have been installed with gas protection measures in accordance with Amber 1 to an acceptable level of workmanship.</p>	

GAS MEMBRANE VALIDATION

Complete

Score	100%
Site Name	Belle Vue
Location	251 Stanley Grove Manchester England M18 7DP United Kingdom (53.46032090900433, - 2.1855348487256023)
Project Manager	R. Webster
Project number	12-123
Developer	Countryside
Site representative Signature	25 Oct 2022 10:56 AM BST
Conducted on	25 Oct 2022 10:22 AM BST
Prepared by	Richard Webster

Inspection Gas Membrane - 100%		100%
Plot Inspection - 100%		100%
Plot Inspection 1 - 100%		100%
Plot Number		200
Type of Development: Other add note	House	
Gas Characteristic Situation	CS2	
<div>   </div> <div> <div>Photo 1</div> <div>Photo 2</div> </div>		
Foundation Type: Other add note	Other	
Beam and block		
<div>  </div> <div> <div>Photo 3</div> </div>		
Gas Membrane Type: Manufacturer, gauge, and colour.	Visqueen yellow	
<div>   </div> <div> <div>Photo 4</div> <div>Photo 5</div> </div>		
Gas Membrane Condition: Open punctures, tears, rips, stretching, Presence of debris, Repairs, Signs of weakness such as raised or sunken indentations, Protection plan in place to restrict access to lain gas membrane? IF FAIL DESCRIPTION IN ACTIONS AND PHOTOS REQUIRED	Pass	
Laps, welds, and joints seals: Joints lapped and sealed in accordance with manufacturer's requirements/ specification? Minimum overlap insured? Sections taped twice? Are welds complete? Appropriate joining/double-sided tape used, Folds running in line with joints? (no joints cutting across folds)	Pass	

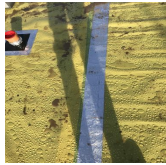


Photo 6

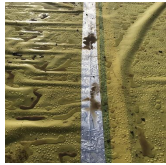


Photo 7

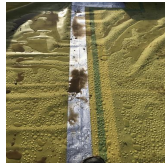


Photo 8



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13

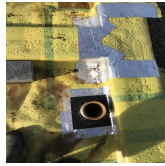


Photo 14

Service entries seals: Top hats seal arrangements fixed around service entries? Use of Jubilee clips?

Yes



Photo 15



Photo 16



Photo 17

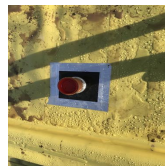


Photo 18

Type of joints/ Lapping

Taped

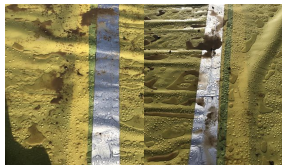


Photo 19

Photo 20

Corners / Internal joints: Check all corners are correctly formed or contractor has used performed corners.

Pass

Extent of Coverage: Is the membrane covering the entire plot? Does membrane span over outside walls?

Yes



Photo 21

Photo 22

Condition of sub-grade and underside of gas membrane: Check that the subgrade does not contain rough/uneven surfaces, is appropriately clean and that there are no hard/sharp objects. That protective sand blinding or geotextile (if specified) is present and meets the design criteria.

Pass

Slab / membrane condition (is membrane clear of debris or insulation): Can membrane be fully seen and photographed – ask contractor to remove an debris so membrane can be fully seen an inspected – this is a requirement of NHBC and local authorities.

Pass

Plot Inspection 2 - 100%

100%

Plot Number

201

Type of Development: Other add note

House

Gas Characteristic Situation

CS2

Foundation Type: Other add note

Other

Beam and block

Gas Membrane Type: Manufacturer, gauge, and colour.

Visqueen yellow

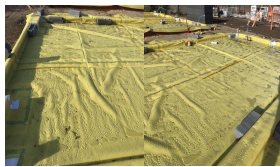


Photo 23

Photo 24

Gas Membrane Condition: Open punctures, tears, rips, stretching, Presence of debris, Repairs, Signs of weakness such as raised or sunken indentations, Protection plan in place to restrict access to lain gas membrane? IF FAIL DESCRIPTION IN ACTIONS AND PHOTOS REQUIRED

Pass

Laps, welds, and joints seals: Joints lapped and sealed in accordance with manufacturer's requirements/ specification? Minimum overlap insured? Sections taped twice? Are welds complete? Appropriate joining/double-sided tape used, Folds running in line with joints? (no joints cutting across folds)

Pass



Photo 25



Photo 26



Photo 27



Photo 28

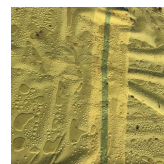


Photo 29

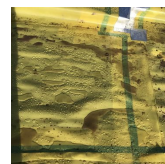


Photo 30



Photo 31

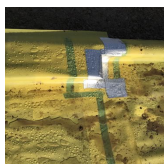


Photo 32



Photo 33



Photo 34

Service entries seals: Top hats seal arrangements fixed around service entries? Use of Jubilee clips?

Yes

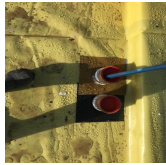


Photo 35



Photo 36

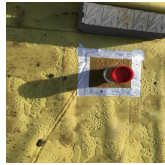


Photo 37

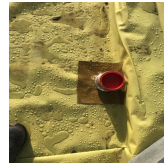


Photo 38

Type of joints/ Lapping



Photo 39

Photo 40

Taped

Corners / Internal joints: Check all corners are correctly formed or contractor has used performed corners.



Photo 41

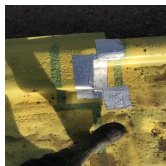


Photo 42



Photo 43

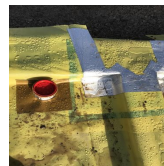


Photo 44



Photo 45



Photo 46

Pass



Photo 47



Photo 48

Extent of Coverage: Is the membrane covering the entire plot? Does membrane span over outside walls?



Photo 49

Photo 50

Yes

Condition of sub-grade and underside of gas membrane: Check that the subgrade does not contain rough/uneven surfaces, is appropriately clean and that there are no hard/sharp objects. That protective sand blinding or geotextile (if specified) is present and meets the design criteria.

Pass

Slab / membrane condition (is membrane clear of debris or insulation): Can membrane be fully seen and photographed –

Pass

ask contractor to remove an debris so membrane can be fully seen an inspected – this is a requirement of NHBC and local authorities.



Plot Inspection 3 - 100%

100%

Plot Number

202

Type of Development: Other add note

House

Gas Characteristic Situation

CS2

Foundation Type: Other add note

Other

Beam and block

Gas Membrane Type: Manufacturer, gauge, and colour.

Visqueen yellow

Gas Membrane Condition: Open punctures, tears, rips, stretching, Presence of debris, Repairs, Signs of weakness such as raised or sunken indentations, Protection plan in place to restrict access to lain gas membrane? IF FAIL DESCRIPTION IN ACTIONS AND PHOTOS REQUIRED

Pass

Laps, welds, and joints seals: Joints lapped and sealed in accordance with manufacturer's requirements/ specification? Minimum overlap insured? Sections taped twice? Are welds complete? Appropriate joining/double-sided tape used, Folds running in line with joints? (no joints cutting across folds)

Pass



Photo 51

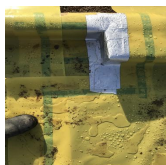


Photo 52



Photo 53

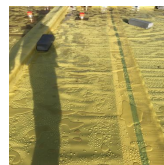


Photo 54



Photo 55

Service entries seals: Top hats seal arrangements fixed around service entries? Use of Jubilee clips?

Yes

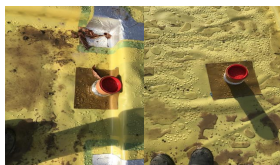


Photo 56

Photo 57

Type of joints/ Lapping

Taped

Corners / Internal joints: Check all corners are correctly formed or contractor has used performed corners.

Pass



Photo 58

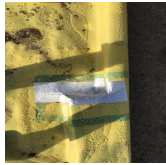


Photo 59



Photo 60



Photo 61



Photo 62

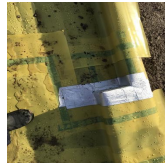


Photo 63



Photo 64



Photo 65

Extent of Coverage: Is the membrane covering the entire plot? Does membrane span over outside walls?

Yes



Photo 66

Photo 67

Photo 68

Condition of sub-grade and underside of gas membrane: Check that the subgrade does not contain rough/uneven surfaces, is appropriately clean and that there are no hard/sharp objects. That protective sand blinding or geotextile (if specified) is present and meets the design criteria.

Pass

Slab / membrane condition (is membrane clear of debris or insulation): Can membrane be fully seen and photographed – ask contractor to remove an debris so membrane can be fully seen an inspected – this is a requirement of NHBC and local authorities.

Pass

Plot Inspection 4 - 100%

100%

Plot Number

203

Type of Development: Other add note

House

Gas Characteristic Situation

CS2

Foundation Type: Other add note

Other

Beam and block

Gas Membrane Type: Manufacturer, gauge, and colour.

Visqueen yellow

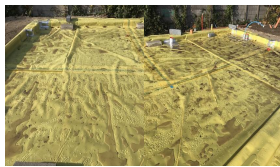


Photo 69

Photo 70

Gas Membrane Condition: Open punctures, tears, rips, stretching, Presence of debris, Repairs, Signs of weakness such as raised or sunken indentations, Protection plan in place to restrict access to lain gas membrane? IF FAIL DESCRIPTION IN ACTIONS AND PHOTOS REQUIRED

Pass

Laps, welds, and joints seals: Joints lapped and sealed in accordance with manufacturer's requirements/ specification? Minimum overlap insured? Sections taped twice? Are welds complete? Appropriate joining/double-sided tape used, Folds running in line with joints? (no joints cutting across folds)

Pass



Photo 71

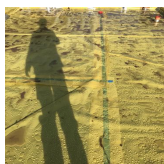


Photo 72



Photo 73

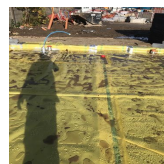


Photo 74

Service entries seals: Top hats seal arrangements fixed around service entries? Use of Jubilee clips?

Yes



Photo 75

Photo 76

Photo 77

Type of joints/ Lapping

Taped

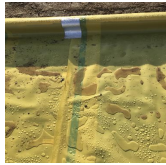


Photo 78

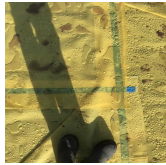


Photo 79

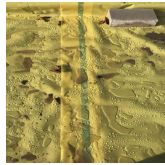


Photo 80

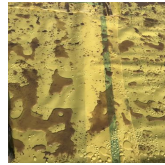


Photo 81

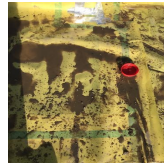


Photo 82

Corners / Internal joints: Check all corners are correctly formed or contractor has used performed corners.

Pass



Photo 83



Photo 84

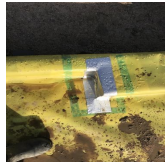


Photo 85



Photo 86



Photo 87



Photo 88



Photo 89



Photo 90

Extent of Coverage: Is the membrane covering the entire plot? Does membrane span over outside walls?

Yes



Photo 91

Photo 92

Photo 93

Condition of sub-grade and underside of gas membrane:
Check that the subgrade does not contain rough/uneven surfaces, is appropriately clean and that there are no hard/sharp objects. That protective sand blinding or geotextile (if specified) is present and meets the design criteria.

Pass

Slab / membrane condition (is membrane clear of debris or insulation): Can membrane be fully seen and photographed – ask contractor to remove an debris so membrane can be fully seen an inspected – this is a requirement of NHBC and local authorities.

Pass

Plot Inspection 5 - 100%

100%

Plot Number

186

Type of Development: Other add note

House

Gas Characteristic Situation

CS2

Foundation Type: Other add note

Other

Block and beam

Gas Membrane Type: Manufacturer, gauge, and colour.

Visqueen yellow

Gas Membrane Condition: Open punctures, tears, rips, stretching, Presence of debris, Repairs, Signs of weakness such as raised or sunken indentations, Protection plan in place to restrict access to lain gas membrane? IF FAIL DESCRIPTION IN ACTIONS AND PHOTOS REQUIRED

Pass

Laps, welds, and joints seals: Joints lapped and sealed in accordance with manufacturer's requirements/ specification? Minimum overlap insured? Sections taped twice? Are welds complete? Appropriate joining/double-sided tape used, Folds running in line with joints? (no joints cutting across folds)

Pass

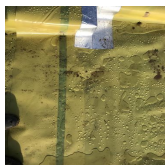


Photo 94



Photo 95



Photo 96



Photo 97



Photo 98



Photo 99

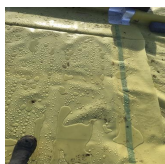


Photo 100

Service entries seals: Top hats seal arrangements fixed around service entries? Use of Jubilee clips?

Yes



Photo 101



Photo 102



Photo 103

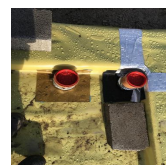


Photo 104

Type of joints/ Lapping

Taped

Corners / Internal joints: Check all corners are correctly formed or contractor has used performed corners.

Pass

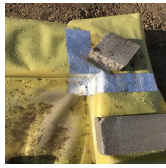


Photo 105



Photo 106



Photo 107



Photo 108



Photo 109

Extent of Coverage: Is the membrane covering the entire plot? Does membrane span over outside walls?

Yes



Photo 110



Photo 111



Photo 112

Condition of sub-grade and underside of gas membrane: Check that the subgrade does not contain rough/uneven surfaces, is appropriately clean and that there are no hard/sharp objects. That protective sand blinding or geotextile (if specified) is present and meets the design criteria.

Pass

Slab / membrane condition (is membrane clear of debris or insulation): Can membrane be fully seen and photographed – ask contractor to remove an debris so membrane can be fully seen an inspected – this is a requirement of NHBC and local authorities.

Pass

Plot Inspection 6 - 100%

100%

Plot Number

187

Type of Development: Other add note

House

Gas Characteristic Situation

CS2

Foundation Type: Other add note

Other

Beam and block

Gas Membrane Type: Manufacturer, gauge, and colour.

Visqueen yellow

Gas Membrane Condition: Open punctures, tears, rips, stretching, Presence of debris, Repairs, Signs of weakness such as raised or sunken indentations, Protection plan in place to restrict access to lain gas membrane? IF FAIL DESCRIPTION IN ACTIONS AND PHOTOS REQUIRED

Pass

Laps, welds, and joints seals: Joints lapped and sealed in accordance with manufacturer's requirements/ specification? Minimum overlap insured? Sections taped twice? Are welds complete? Appropriate joining/double-sided tape used, Folds running in line with joints? (no joints cutting across folds)

Pass

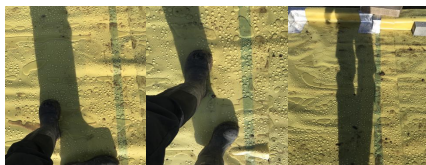


Photo 113

Photo 114

Photo 115

Service entries seals: Top hats seal arrangements fixed around service entries? Use of Jubilee clips?

Yes

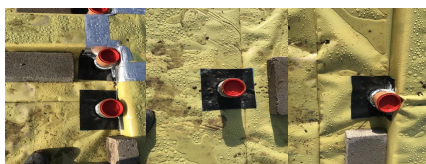


Photo 116

Photo 117

Photo 118

Type of joints/ Lapping

Taped

Corners / Internal joints: Check all corners are correctly formed or contractor has used performed corners.

Pass



Photo 119



Photo 120



Photo 121

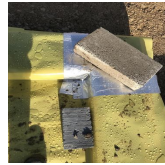


Photo 122

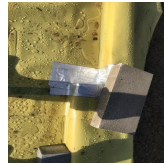


Photo 123



Photo 124

Extent of Coverage: Is the membrane covering the entire plot? Does membrane span over outside walls?

Yes



Photo 125

Photo 126

Condition of sub-grade and underside of gas membrane: Check that the subgrade does not contain rough/uneven surfaces, is appropriately clean and that there are no hard/sharp objects. That protective sand blinding or geotextile (if specified) is present and meets the design criteria.

Pass

Slab / membrane condition (is membrane clear of debris or insulation): Can membrane be fully seen and photographed – ask contractor to remove an debris so membrane can be fully seen an inspected – this is a requirement of NHBC and local authorities.

Pass

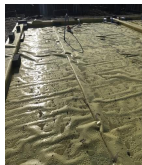


Photo 127

Passive Venting

Sub-floor Void: Is a check possible on future plots (insert Plot number or NO in text box)

No

External Wall Air bricks: Numbers, size. positions as design drawing? (Minimum of 3 walls)

Pass



Photo 128

Photo 129

Photo 130

Appendix

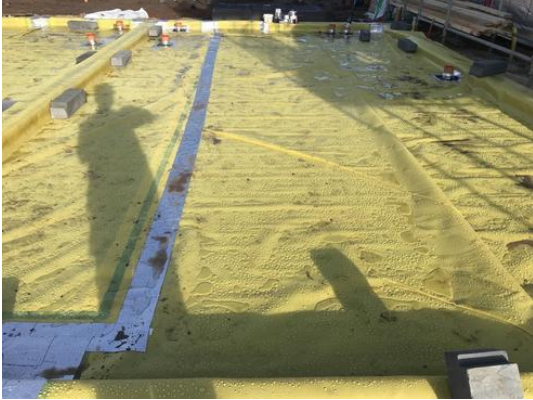


Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13



Photo 14



Photo 15



Photo 16



Photo 17



Photo 18

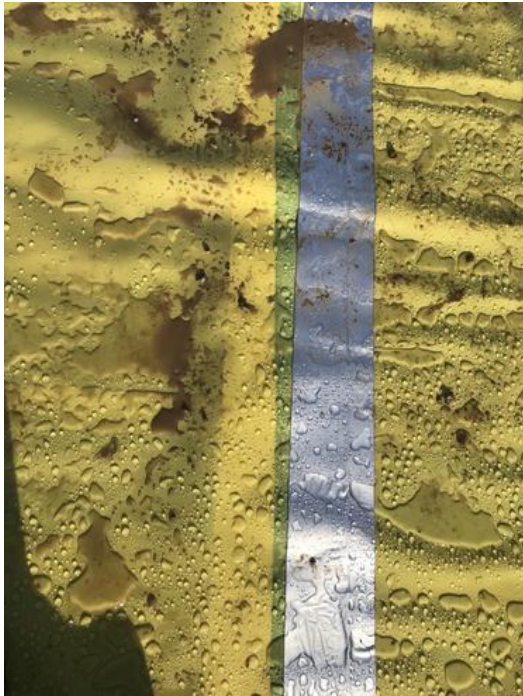


Photo 19



Photo 20



Photo 21

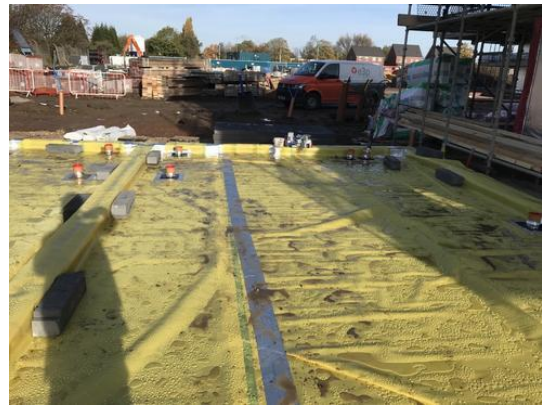


Photo 22

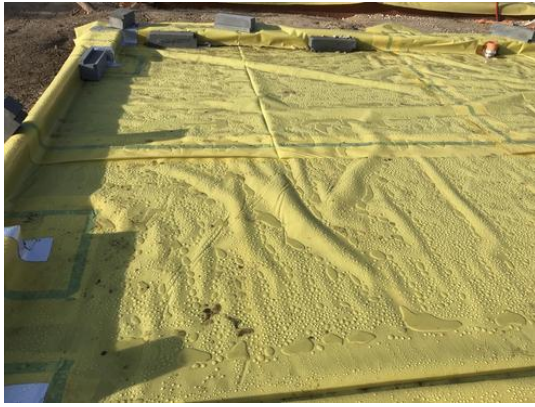


Photo 23

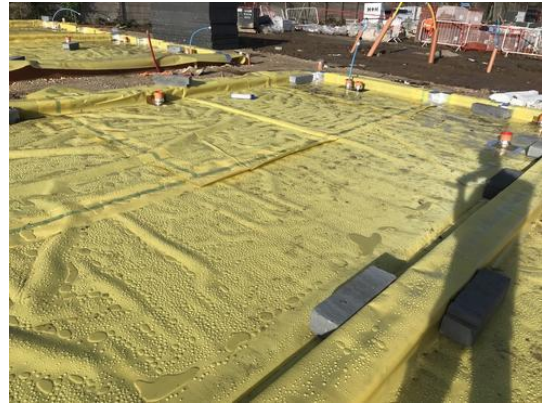


Photo 24



Photo 25



Photo 26



Photo 27



Photo 28



Photo 29

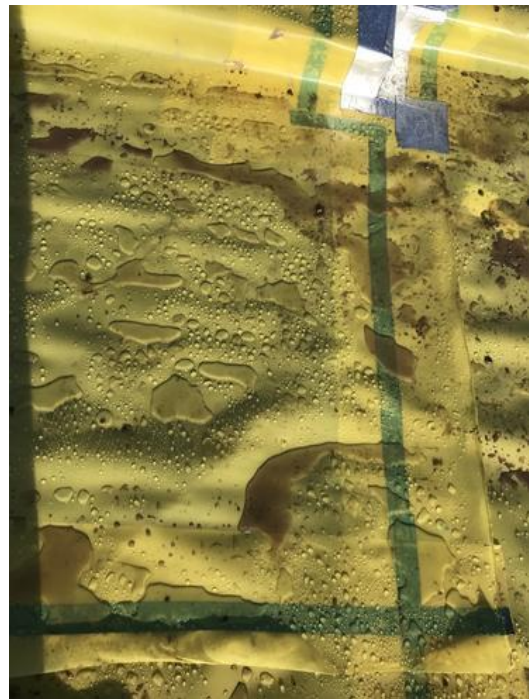


Photo 30



Photo 31

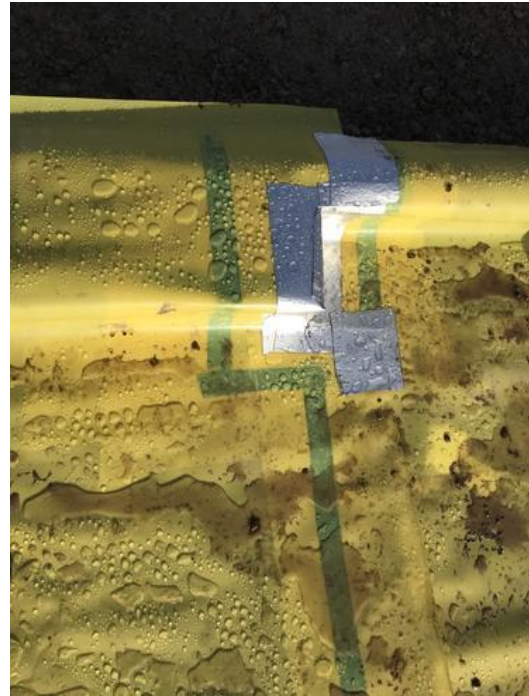


Photo 32



Photo 33



Photo 34



Photo 35



Photo 36



Photo 37



Photo 38



Photo 39



Photo 40

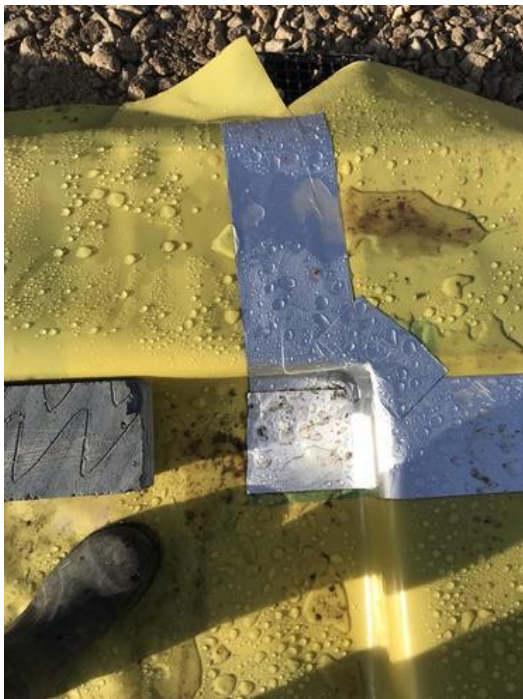


Photo 41



Photo 42



Photo 43

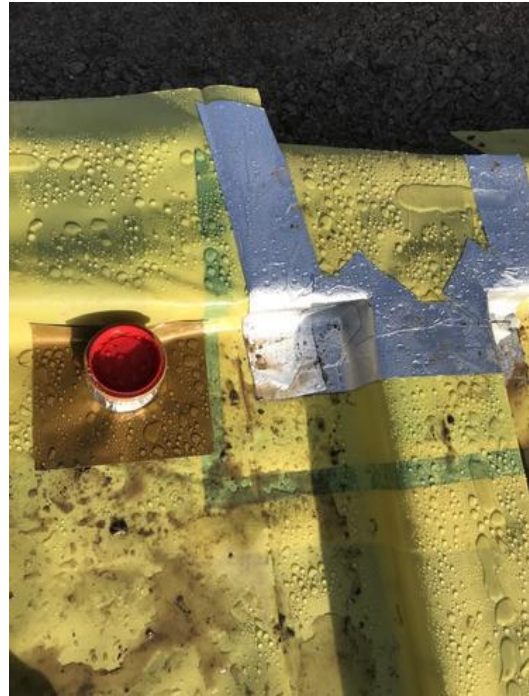


Photo 44



Photo 45



Photo 46



Photo 47



Photo 48



Photo 49



Photo 50



Photo 51



Photo 52



Photo 53



Photo 54

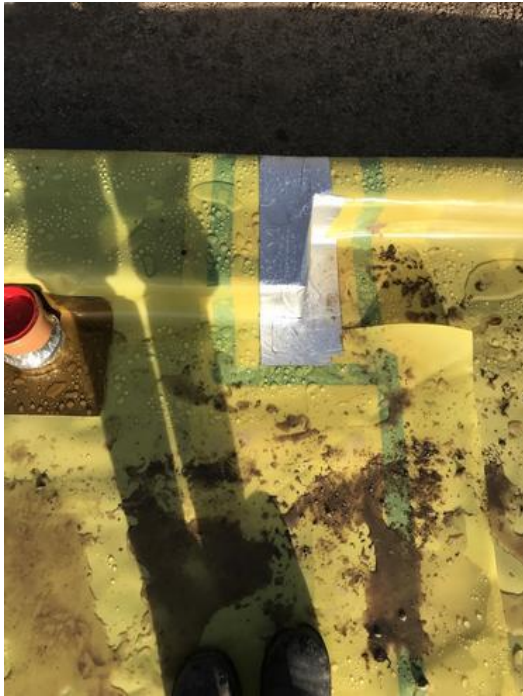


Photo 55



Photo 56



Photo 57



Photo 58



Photo 59



Photo 60



Photo 61



Photo 62



Photo 63



Photo 64



Photo 65



Photo 66



Photo 67



Photo 68



Photo 69

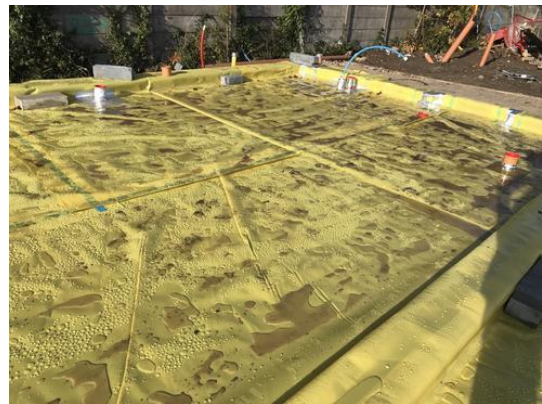


Photo 70



Photo 71



Photo 72



Photo 73



Photo 74



Photo 75



Photo 76



Photo 77

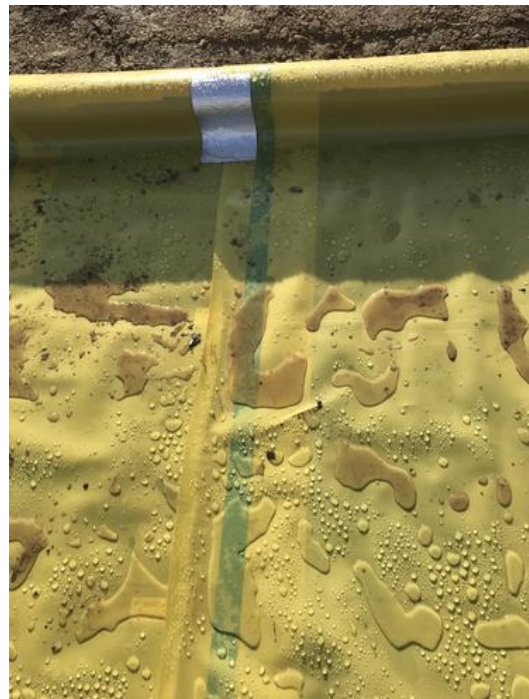


Photo 78

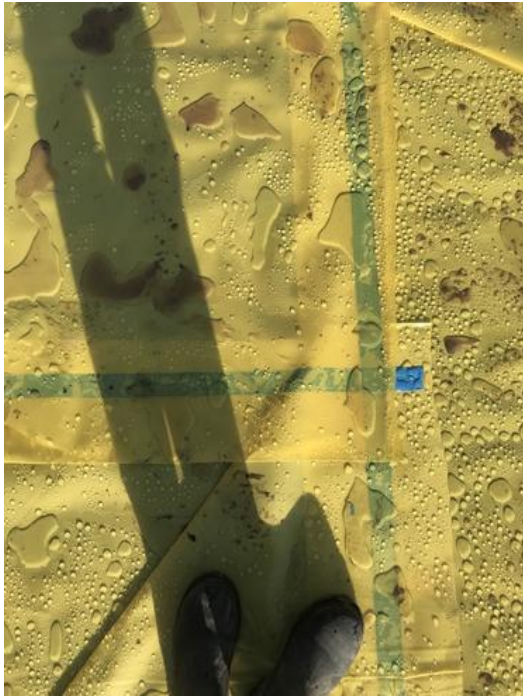


Photo 79

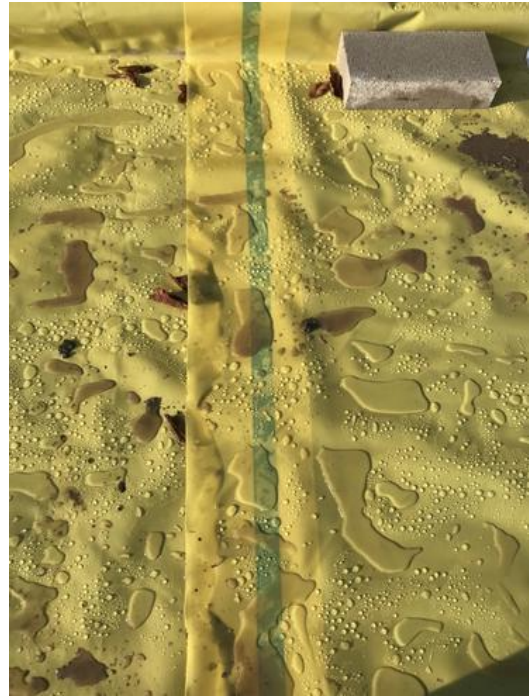


Photo 80



Photo 81

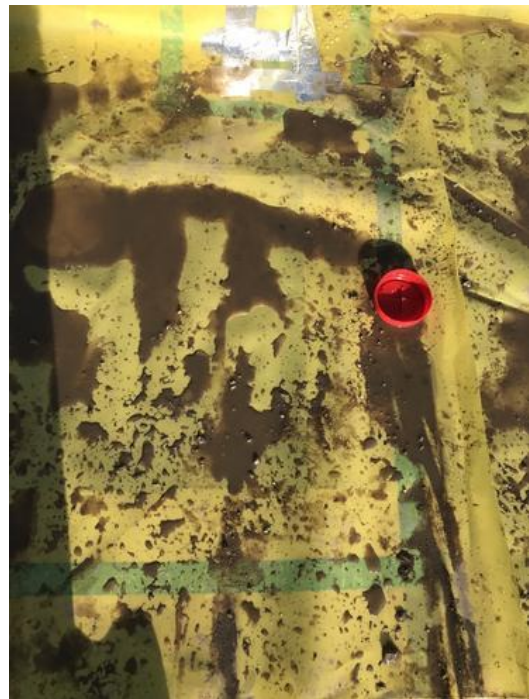


Photo 82



Photo 83



Photo 84



Photo 85



Photo 86



Photo 87



Photo 88



Photo 89



Photo 90



Photo 91



Photo 92



Photo 93



Photo 94



Photo 95



Photo 96

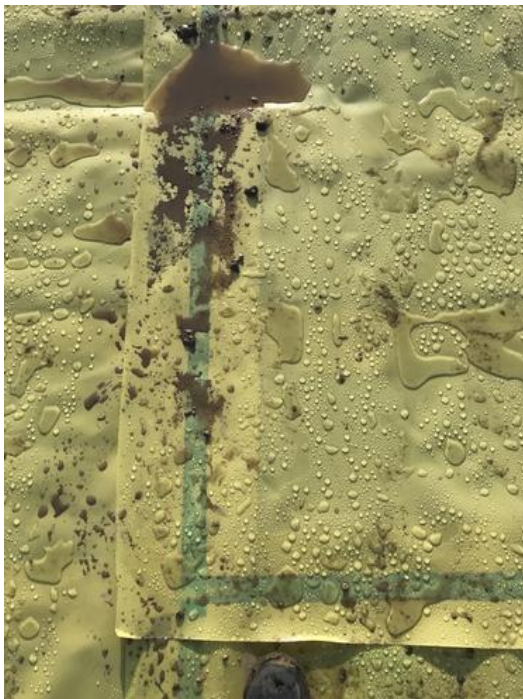


Photo 97



Photo 98



Photo 99



Photo 100

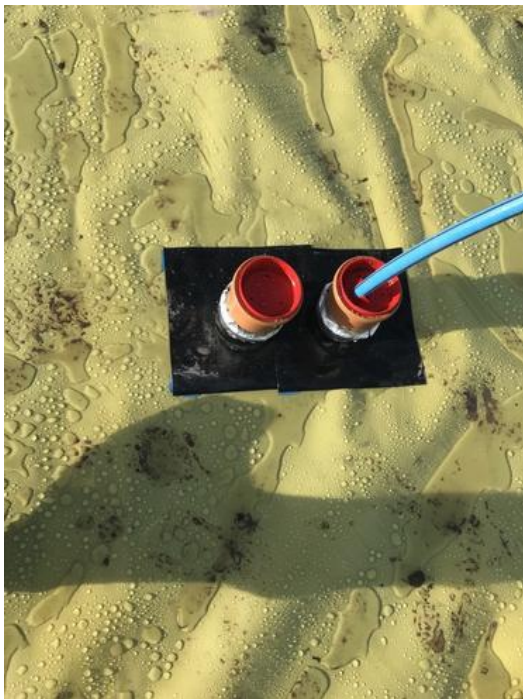


Photo 101



Photo 102



Photo 103



Photo 104



Photo 105



Photo 106



Photo 107



Photo 108



Photo 109



Photo 110



Photo 111



Photo 112



Photo 113



Photo 114



Photo 115



Photo 116



Photo 117



Photo 118



Photo 119



Photo 120



Photo 121



Photo 122



Photo 123



Photo 124



Photo 125



Photo 126



Photo 127



Photo 128



Photo 129



Photo 130