

Date: 21 March 2025
Reference: 14-768-V3

GAS MEMBRANE VALIDATION – HAWKS VIEW, CASTLETON

Project Name:	Hawks View, Castleton (formerly known as Castleton Sidings)
Project Number:	14-768
Client:	Kellen Homes
Date:	21 March 2025
Project Manager & Qualifications:	J Sheridan (MeSci, FGS)
E3P Engineer:	S Juhasz
Gas Membrane Installers Name & Qualifications:	Westbourne Civil Engineers Ltd & Keytec Installation Services
Ground Gas Protection Design Report:	E3P Gas Protection Design Report (14-768-R8, March 2025)
Plots:	Membrane – Plots 9-12, 125-129

The gas mitigation measures validation site inspection record and associated photographs are enclosed within this letter as a Controlled Quality Assurance (CQA) site data capture record.

FINAL QUALITY ASSURANCE

E3P SITE VALIDATION CQA	QUALIFICATIONS	POSITION
Jessica Sheridan	MeSci, FGS, MEnvSci	Senior Consultant
PREPARED BY	QUALIFICATIONS	POSITION
Jessica Sheridan	MeSci, FGS, MEnvSci	Senior Consultant
AUTHORISED BY	QUALIFICATIONS	POSITION
Martin Dyer	BSc (Hons), FGS, FEnvSci, CEnv	Director

Table 1 Validation Letter References

PLOT NUMBER	DATE	REPORT REFERENCE
Subfloor 9-15, 18-21, 127-129	14/03/2025	V1
Membrane – Plots 18-21	19/03/2025	V2
Membrane – Plots 9-12, 125-129	21/03/2025	V3





GROUND GAS MITIGATION DESIGN

The Ground Gas Risk Assessment for the site determined that site should be classified as Characteristic Situation 2 with incorporation of low-level VOC resistant membrane in accordance with BS8485 2015 (+A1 2019).

A Gas Protection Design Report (GPDR) was prepared by E3P (14-768-R8, March 2025). Since the issue of the report, minor revisions have been made to the subfloor design, which are presented within this verification letter for clarity.

The GPDR has been prepared, reviewed, and authorised by a suitably qualified person who holds the relevant technical and professional qualifications.

OVERVIEW OF GROUND GAS MITIGATION DESIGN & CONSTRUCTION REQUIREMENTS

Characteristic Situation 2 – Design Mitigation Requirements.

- Passive sub-floor dispersal layer of very good performance which meets all criteria out in Paragraph B.6 of BS8485:2015 (minimum 150 mm clear void space and with correct frequency of side ventilation).
- Lapped and taped / sealed gas and low-level VOC resistant membrane in the floor slab construction which meets all the criteria as set out in Table 7 of BS8485:2015 (+A1 2019) and Verification in Section 3.2.2 of CIRIA 735³³

Banners Gate prepared the site-specific engineering drawings on behalf of Kellen Homes as Foundation Detail Ref: 23147 500 F.

The sub-structure design forms a key component of the validation procedure to ensure the constructed mitigation requirements meet the specified design criteria.

Figure 1 Structural Engineers Substructure Design – External Wall

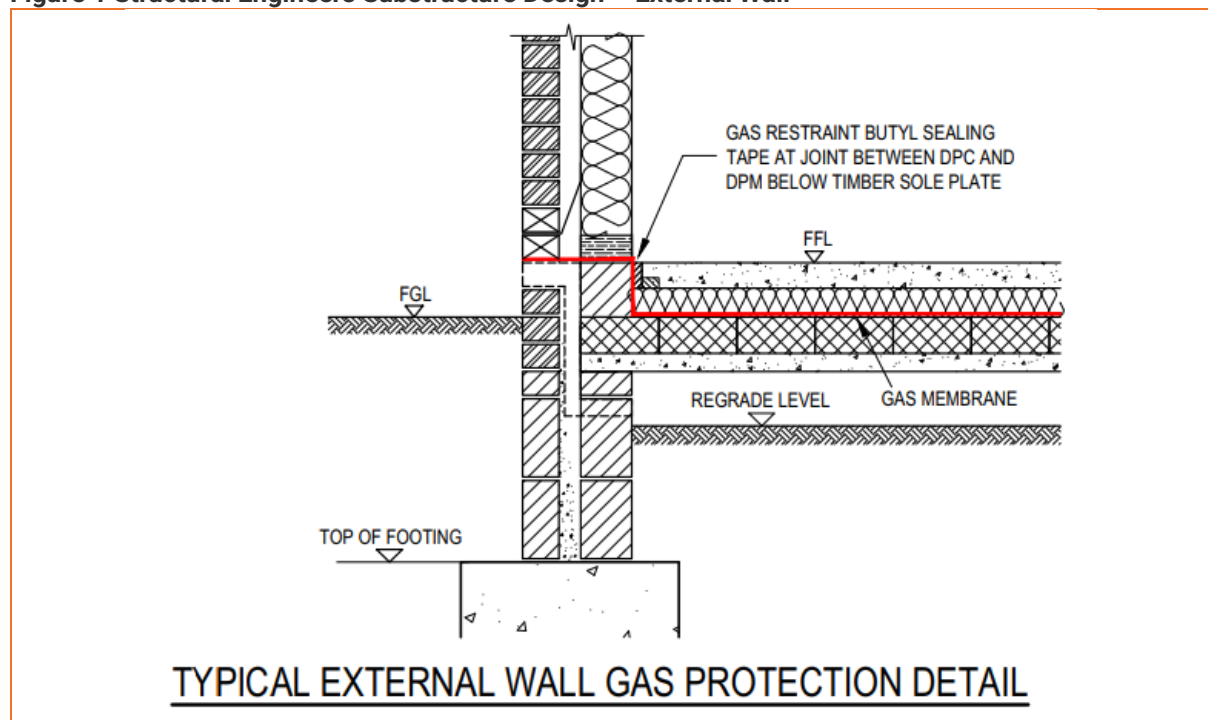




Figure 2 Structural Engineers Substructure Design – Party Wall

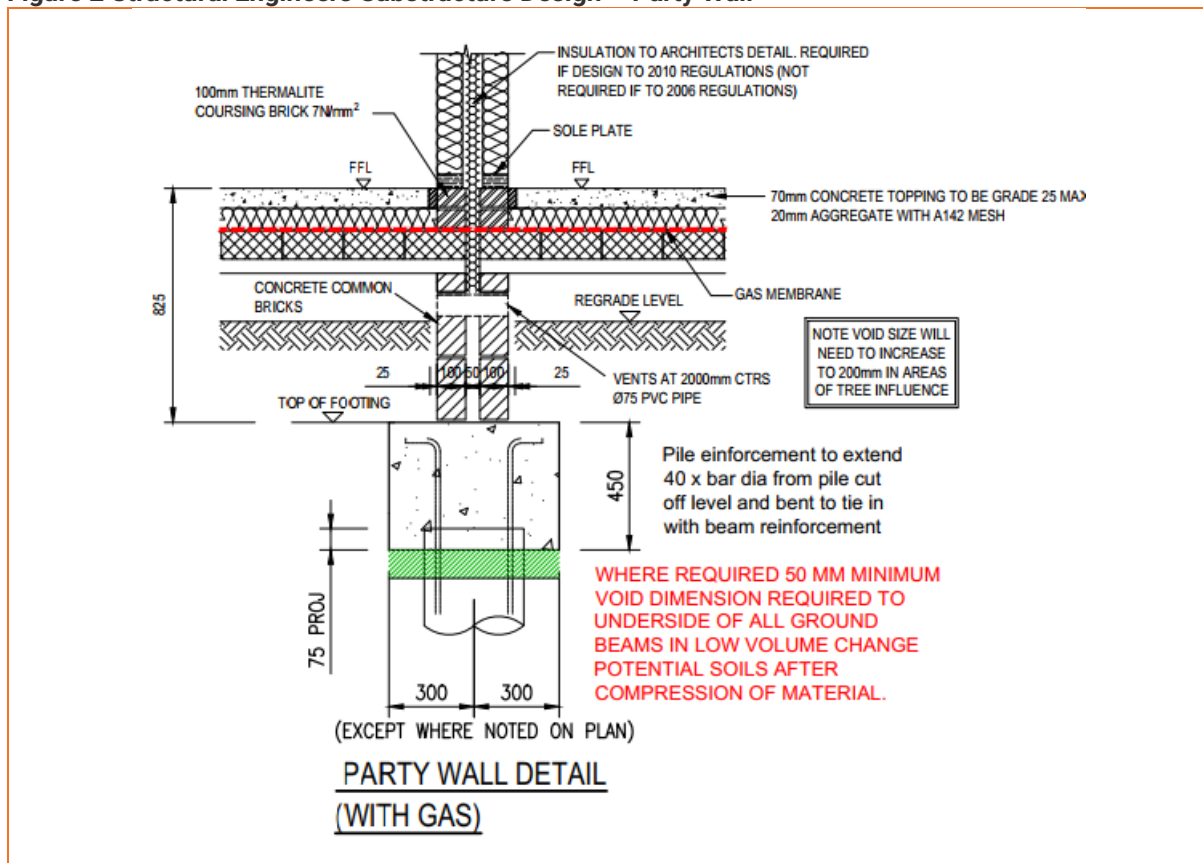
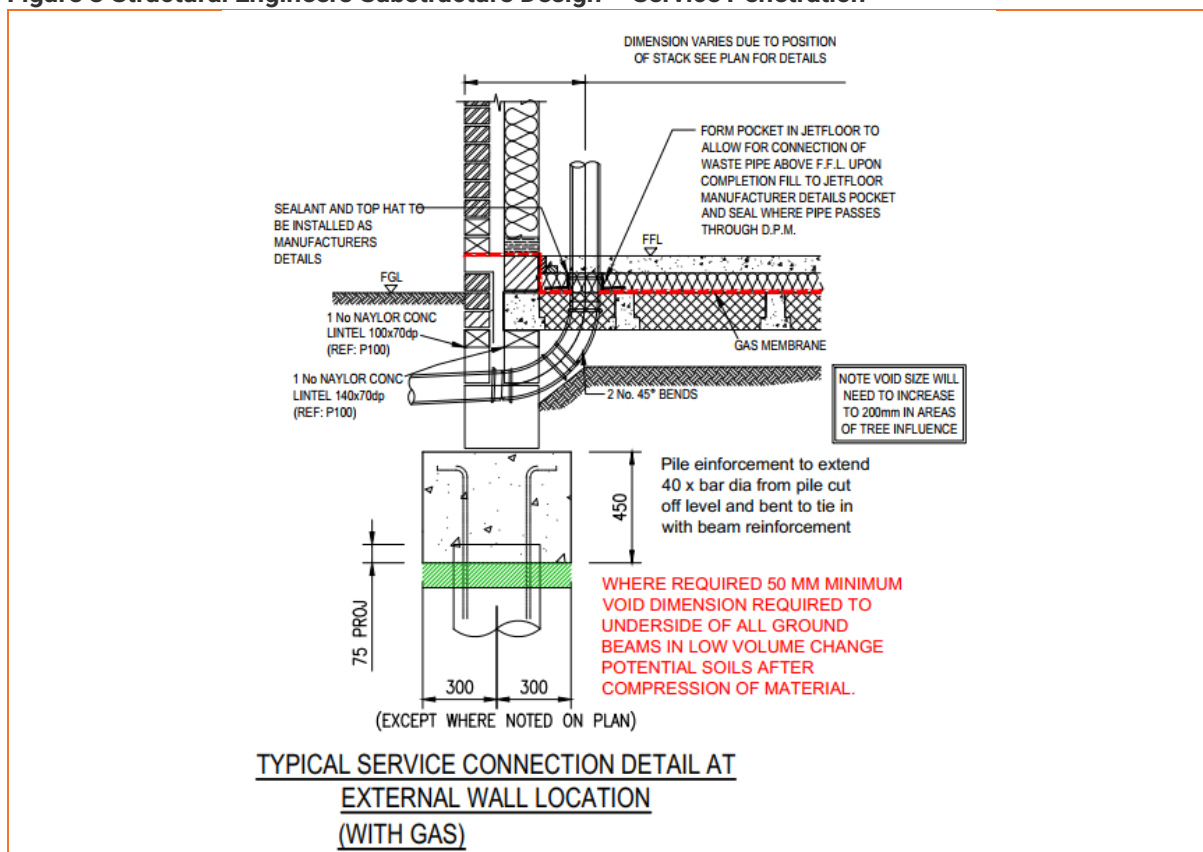


Figure 3 Structural Engineers Substructure Design – Service Penetration





SUMMARY OF VALIDATION INSPECTION & APPROVAL

SUB-FLOOR VOID

The sub-floor void for plots 9-15, 18-21, 127-129 was inspected on 14th and 17th March 2025.

The sub-floor void was observed and inspected to be a minimum of 150 mm with no visible inclusions that would limit the performance of this ventilation mechanism. Sleeper wall ventilation bricks were also observed to be present

Photographs of the sub-floor voids are included in validation letter V1.

AIR BRICKS & TELESCOPIC VENTILATION

As per NHBC guidance and the structural engineers design as part of the mitigation a telescopic vent and vent brick is required at 2 m intervals in the brick course. E3P can confirm these have also been fitted accurately on all elevations of the plot to allow the sufficient function of the passive sub-floor ventilation system.

GAS RESISTANT MEMBRANE

The membrane utilised on-site comprises: JUTA GP5 resistant to radon, carbon dioxide, methane and low-level Volatile Organic Compounds .

It has been confirmed as part of the validation that the membrane utilised in the plots discussed herein matches the membrane described.

The E3P Technician has inspected the installation of this membrane in line with the structural engineer's specifications in terms of placement and position (Figure 1-3), and the manufacturer's detail in terms of the workmanship.

E3P can confirm that there were no holes or rips at the inspection time.

Where any rips or tears have been noted patches have been applied in line with the manufacturer's detail with sufficient overlap to ensure long-term performance of the membrane.

E3P inspected all joints including corner details and can confirm that the membrane was overlapped in accordance with the manufacturer's specification and heat welded.

Where any penetration or service duct is present within the floor area E3P inspected each one in turn and can confirm that rigid black polyethylene top hat units have been adequately sealed against the membrane with double-sided jointing tape at both the base and the protruding pipe.

In accordance with the design, gas resistant butyl sealing tape is required beneath the membrane on the inner wall beneath the timber frame sole plate. E3P can confirm the butyl sealing tape has been installed accordingly.

Upon confirmation of suitable installation, the membrane is to be covered with a floor insulation material which is considered to provide a high degree of protection before the application of the cast in-situ concrete monolithic floor slab.

Based on the information provided within this report, the site inspection and validation checklists, E3P can confirm that Plot 18-21 has been installed with gas protection measures in accordance with the detailed structural design and the requirements of BS8485 Characteristic Situation 2 (including low-level VOC resistant membrane) to an acceptable level of workmanship.



E3P ENGINEER'S SITE CHECK SHEET

The engineer check sheet completed whilst on-site during the validation on a plot-by-plot basis is attached, and a complete set of images is presented as evidence. Larger images are presented at the rear of this letter.

All information provided within this validation letter report was accurate at the time of construction. E3P operates under the assumption that all data provided by installers is reliable.



WELDED GAS MEMBRANE VALIDATION

Complete

Score	109 / 109 (100%)	Flagged items	0	Actions	0
Site Name	Castleton Sidings				
Location	136 Fairway Rochdale England OL11 3BZ United Kingdom (53.58899335396948, - 2.1820468102035973)				
Project Manager	Jessica Sheridan				
Project number	14-768				
Developer	Kellen Homes Ltd				
Site representative Signature	 Stephen Holland 21 Mar 2025 9:55 AM GMT				
Conducted on	21 Mar 2025 8:55 AM GMT				
Prepared by	Sam Juhasz				
Have you got the correct Gas Membrane detail (attached to the job in synergist)?	Yes				



<u>Gas Membrane Inspection</u>	108 / 108 (100%)
<u>Plot Inspection</u>	108 / 108 (100%)
Plot Inspection 1	12 / 12 (100%)
Plot Number	9
Type of Development: if other add Note	House
Floor Slab Type	Block and beam suspended
Are telescopic vents present?	Yes
Gas Membrane Type: Manufacturer, gauge, and colour. (Take photos where possible showing Label)	Juta GP5
Installer's name, company and qualification	Keytec
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 laid gas membrane? IF FAIL DESCRIPTION IN ACTIONS AND PHOTOS REQUIRED	Pass
Are welds complete?	Yes
 Photo 1  Photo 2	
Are Joints lapped and sealed in accordance with manufacturer's requirements/ specification?	Yes
Service entries seals: Top hats seal arrangements fixed around service entries? Use of Jubilee clips or Bitumastic Sealant	Pass
 Photo 3  Photo 4  Photo 5  Photo 6  Photo 7	
Corners / Internal joints: Check all corners are correctly formed or contractor has used preformed corners.	Pass



Photo 8



Photo 9



Photo 10

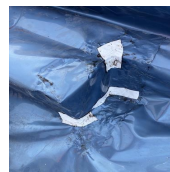


Photo 11



Photo 12



Photo 13

Are folds running in line with joints? (no joints cutting across folds)

Pass

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

Yes



Photo 14



Photo 15



Photo 16



Photo 17



Photo 18

Sealant to the underside of the membrane at the sole plate position (Check with PM if not noted on schedule)

Yes



Photo 19



Photo 20



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. (Lift back the membrane and photo the subfloor)

Pass



Photo 23

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

Pass

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

Pass



Photo 24



Photo 25



Photo 26



Photo 27



Photo 28



Photo 29



Photo 30



Photo 31

Plot Inspection 2

12 / 12 (100%)

Plot Number

10

Type of Development: if other add Note

House

Floor Slab Type

Block and beam suspended

Are telescopic vents present?

Yes

**Gas Membrane Type: Manufacturer, gauge, and colour.
(Take photos where possible showing Label)**

Juta GP5

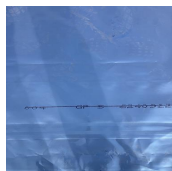


Photo 32

Installer's name, company and qualification

Keytec

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 laid gas membrane? IF FAIL DESCRIPTION IN ACTIONS AND PHOTOS REQUIRED

Pass

Are welds complete?

Yes



Photo 33



Photo 34

Are Joints lapped and sealed in accordance with manufacturer's requirements/ specification?

Yes



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

Pass



Photo 35



Photo 36



Photo 37



Photo 38



Photo 39

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

Pass



Photo 40



Photo 41



Photo 42



Photo 43



Photo 44



Photo 45

Are folds running in line with joints? (no joints cutting across folds)

Pass

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

Yes



Photo 46



Photo 47



Photo 48



Photo 49



Photo 50



Photo 51

Sealant to the underside of the membrane at the sole plate position (Check with PM if not noted on schedule)

Yes



Photo 52



Photo 53



Photo 54

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. (Lift back the membrane and photo the subfloor)

Pass



Photo 55

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

Pass

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

Pass



Photo 56



Photo 57



Photo 58



Photo 59



Photo 60



Photo 61



Photo 62



Photo 63

Plot Inspection 3

12 / 12 (100%)

Plot Number

11

Type of Development: if other add Note

House

Floor Slab Type

Block and beam suspended

Are telescopic vents present?

Yes

Gas Membrane Type: Manufacturer, gauge, and colour. (Take photos where possible showing Label)

Juta GP5



Photo 64

Installer's name, company and qualification

Keytec



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

Are welds complete?

Yes



Photo 65



Photo 66

Are Joints lapped and sealed in accordance with manufacturer's requirements/ specification?

Yes

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

Pass



Photo 67



Photo 68



Photo 69



Photo 70



Photo 71

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

Pass



Photo 72



Photo 73



Photo 74



Photo 75



Photo 76



Photo 77

Are folds running in line with joints? (no joints cutting across folds)

Pass

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

Yes



Photo 78



Photo 79



Photo 80



Photo 81



Photo 82

Sealant to the underside of the membrane at the sole plate position (Check with PM if not noted on schedule)

Yes



Photo 83



Photo 84



Photo 85

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. (Lift back the membrane and photo the subfloor)

Pass



Photo 86

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

Pass

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

Pass



Photo 87



Photo 88

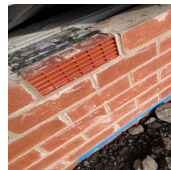


Photo 89



Photo 90



Photo 91



Photo 92



Photo 93



Photo 94



Photo 95

Plot Inspection 4

12 / 12 (100%)

Plot Number

12

Type of Development: if other add Note

House

Floor Slab Type

Block and beam suspended

Are telescopic vents present?

Yes



Gas Membrane Type: Manufacturer, gauge, and colour.
(Take photos were possible showing Label)

Juta GP5

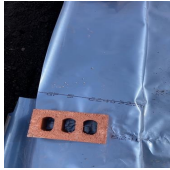


Photo 96

Installer's name, company and qualification

Keytec

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

Are welds complete?

Yes



Photo 97



Photo 98



Photo 99

Are Joints lapped and sealed in accordance with manufacturer's requirements/ specification?

Yes

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

Pass



Photo 100



Photo 101



Photo 102



Photo 103



Photo 104

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

Pass



Photo 105



Photo 106



Photo 107



Photo 108



Photo 109



Photo 110

Are folds running in line with joints? (no joints cutting across folds)

Pass



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

Yes



Photo 111



Photo 112



Photo 113



Photo 114



Photo 115



Photo 116

Sealant to the underside of the membrane at the sole plate position (Check with PM if not noted on schedule)

Yes



Photo 117



Photo 118

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. (Lift back the membrane and photo the subfloor)

Pass

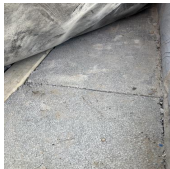


Photo 119

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

Pass

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

Pass

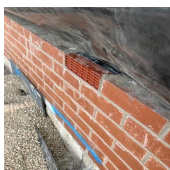


Photo 120



Photo 121



Photo 122



Photo 123



Photo 124



Photo 125



Photo 126



Photo 127



Photo 128



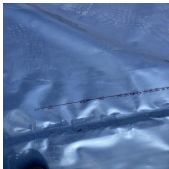
Plot Inspection 5		12 / 12 (100%)
Plot Number		125
Type of Development: if other add Note		House
Floor Slab Type		Block and beam suspended
Are telescopic vents present?		Yes
Gas Membrane Type: Manufacturer, gauge, and colour. (Take photos were possible showing Label)		Juta GP5
 Photo 129		
Installer's name, company and qualification		Keytec
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
Are welds complete?		Yes
  Photo 130 Photo 131		
Are Joints lapped and sealed in accordance with manufacturer's requirements/ specification?		Yes
Service entries seals: Top hats seal arrangements fixed around service entries? Use of Jubilee clips or Bitumastic Sealant		Pass
    Photo 132 Photo 133 Photo 134 Photo 135		
Corners / Internal joints: Check all corners are correctly formed or contractor has used preformed corners.		Pass



Photo 136



Photo 137



Photo 138



Photo 139



Photo 140



Photo 141

Are folds running in line with joints? (no joints cutting across folds)

Pass

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

Yes



Photo 142



Photo 143



Photo 144



Photo 145



Photo 146



Photo 147

Sealant to the underside of the membrane at the sole plate position (Check with PM if not noted on schedule)

Yes



Photo 148



Photo 149

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. (Lift back the membrane and photo the subfloor)

Pass



Photo 150

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

Pass

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

Pass



Photo 151

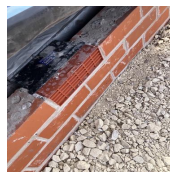


Photo 152

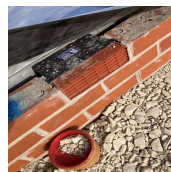


Photo 153



Photo 154



Photo 155



Photo 156

Plot Inspection 6

12 / 12 (100%)

Plot Number

126

Type of Development: if other add Note

House

Floor Slab Type

Block and beam suspended

Are telescopic vents present?

Yes

Gas Membrane Type: Manufacturer, gauge, and colour.
(Take photos where possible showing Label)

Juta GP5

Installer's name, company and qualification

Keytec

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 laid gas membrane? IF FAIL DESCRIPTION IN ACTIONS AND PHOTOS REQUIRED

Pass

Are welds complete?

Yes



Photo 157



Photo 158

Are Joints lapped and sealed in accordance with manufacturer's requirements/ specification?

Yes

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

Pass



Photo 159



Photo 160



Photo 161



Photo 162

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

Pass



Photo 163



Photo 164



Photo 165



Photo 166



Photo 167



Photo 168

Are folds running in line with joints? (no joints cutting across folds)

Pass

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

Yes



Photo 169



Photo 170



Photo 171



Photo 172



Photo 173

Sealant to the underside of the membrane at the sole plate position (Check with PM if not noted on schedule)

Yes



Photo 174

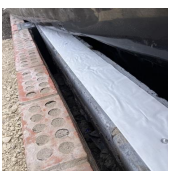


Photo 175

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. (Lift back the membrane and photo the subfloor)

Pass

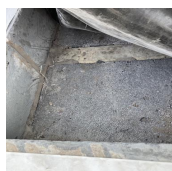


Photo 176

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

Pass

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

Pass



Photo 177



Photo 178



Photo 179



Photo 180



Photo 181



Photo 182



Photo 183

Plot Inspection 7

12 / 12 (100%)

Plot Number

127

Type of Development: if other add Note

House

Floor Slab Type

Block and beam suspended

Are telescopic vents present?

Yes

**Gas Membrane Type: Manufacturer, gauge, and colour.
(Take photos where possible showing Label)**

Juta GP5

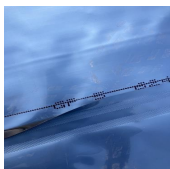


Photo 184

Installer's name, company and qualification

Keytec

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 laid gas membrane? IF FAIL DESCRIPTION IN ACTIONS AND PHOTOS REQUIRED

Pass

Are welds complete?

Yes

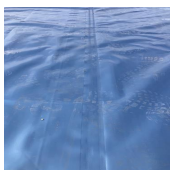


Photo 185



Photo 186

Are Joints lapped and sealed in accordance with manufacturer's requirements/ specification?

Yes



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

Pass



Photo 187



Photo 188



Photo 189



Photo 190



Photo 191

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

Pass



Photo 192



Photo 193



Photo 194



Photo 195



Photo 196



Photo 197

Are folds running in line with joints? (no joints cutting across folds)

Pass

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

Yes



Photo 198



Photo 199



Photo 200



Photo 201



Photo 202

Sealant to the underside of the membrane at the sole plate position (Check with PM if not noted on schedule)

Yes



Photo 203

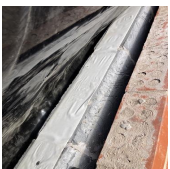


Photo 204

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. (Lift back the membrane and photo the subfloor)

Pass



Photo 205

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

Pass

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

Pass



Photo 206



Photo 207



Photo 208



Photo 209



Photo 210



Photo 211



Photo 212

Plot Inspection 8

12 / 12 (100%)

Plot Number

128

Type of Development: if other add Note

House

Floor Slab Type

Block and beam suspended

Are telescopic vents present?

Yes

Gas Membrane Type: Manufacturer, gauge, and colour. (Take photos where possible showing Label)

Juta GP5

Installer's name, company and qualification

Keytec

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 gas membrane? IF FAIL DESCRIPTION IN ACTIONS AND PHOTOS REQUIRED

Pass

Are welds complete?

Yes

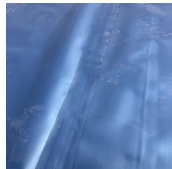


Photo 213



Photo 214

Are Joints lapped and sealed in accordance with manufacturer's requirements/ specification?

Yes

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

Pass



Photo 215



Photo 216



Photo 217



Photo 218

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

Pass



Photo 219



Photo 220



Photo 221



Photo 222



Photo 223



Photo 224

Are folds running in line with joints? (no joints cutting across folds)

Pass

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

Yes



Photo 225



Photo 226



Photo 227



Photo 228



Photo 229



Photo 230

Sealant to the underside of the membrane at the sole plate position (Check with PM if not noted on schedule)

Yes



Photo 231



Photo 232



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. (Lift back the membrane and photo the subfloor)

Pass



Photo 233

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

Pass

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

Pass



Photo 234



Photo 235



Photo 236



Photo 237



Photo 238



Photo 239



Photo 240

Plot Inspection 9

12 / 12 (100%)

Plot Number

129

Type of Development: if other add Note

House

Floor Slab Type

Block and beam suspended

Are telescopic vents present?

Yes

Gas Membrane Type: Manufacturer, gauge, and colour.
(Take photos where possible showing Label)

Juta GP5



Photo 241

Installer's name, company and qualification

Keytec

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

Are welds complete?

Yes



Photo 242



Photo 243

Are Joints lapped and sealed in accordance with manufacturer's requirements/ specification?

Yes

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

Pass



Photo 244



Photo 245



Photo 246



Photo 247



Photo 248



Photo 249

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

Pass



Photo 250



Photo 251



Photo 252



Photo 253



Photo 254



Photo 255



Photo 256



Photo 257



Photo 258



Photo 259



Are folds running in line with joints? (no joints cutting across folds)

Pass

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

Yes



Photo 260



Photo 261



Photo 262



Photo 263



Photo 264



Photo 265

Sealant to the underside of the membrane at the sole plate position (Check with PM if not noted on schedule)

Yes



Photo 266



Photo 267



Photo 268

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. (Lift back the membrane and photo the subfloor)

Pass



Photo 269

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

Pass

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

Pass



Photo 270



Photo 271

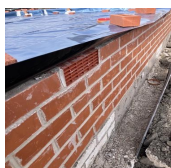


Photo 272



Photo 273

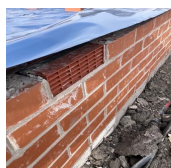


Photo 274



Photo 275



Photo 276



Photo 277



Photo 278



Photo 279



Photo 280



Photo 281



Photo 282



Photo 283



Photo 284

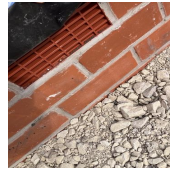


Photo 285



Photo 286

Passive Venting

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

Yes 130 and 131



Media summary



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

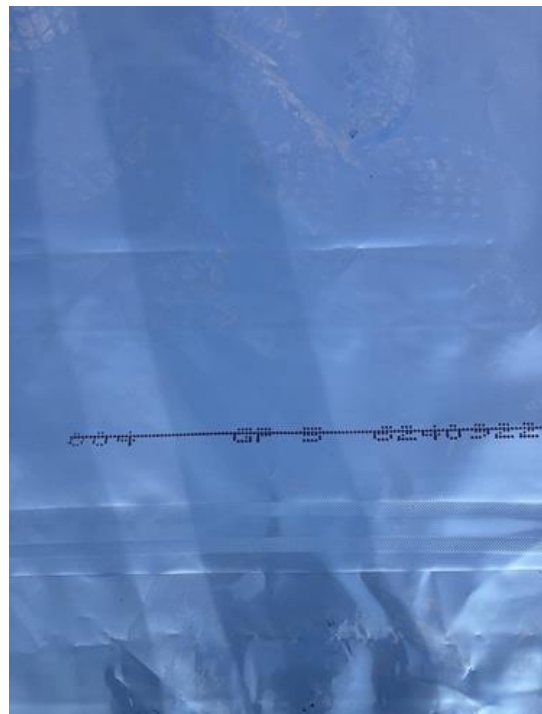


Photo 32



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

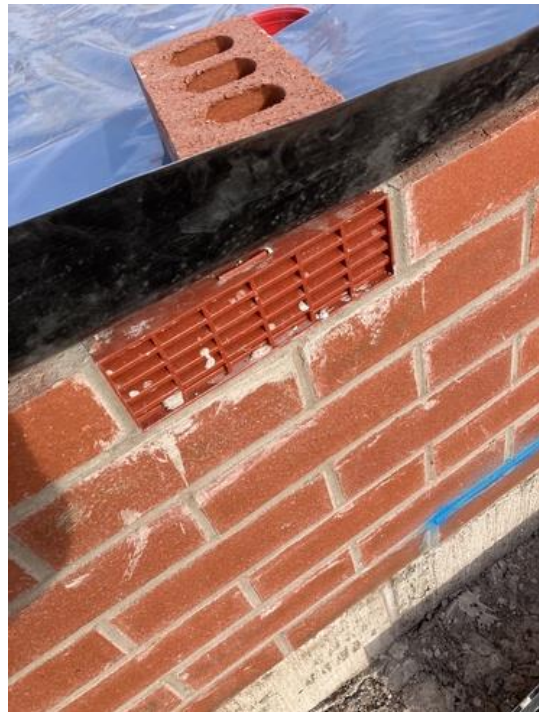


Photo 88



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



Photo 131



Photo 132



Photo 133



Photo 134



Photo 135



Photo 136



Photo 137



Photo 138



Photo 139



Photo 140



Photo 141



Photo 142



Photo 143



Photo 144



Photo 145



Photo 146



Photo 147



Photo 148



Photo 149



Photo 150



Photo 151



Photo 152



Photo 153

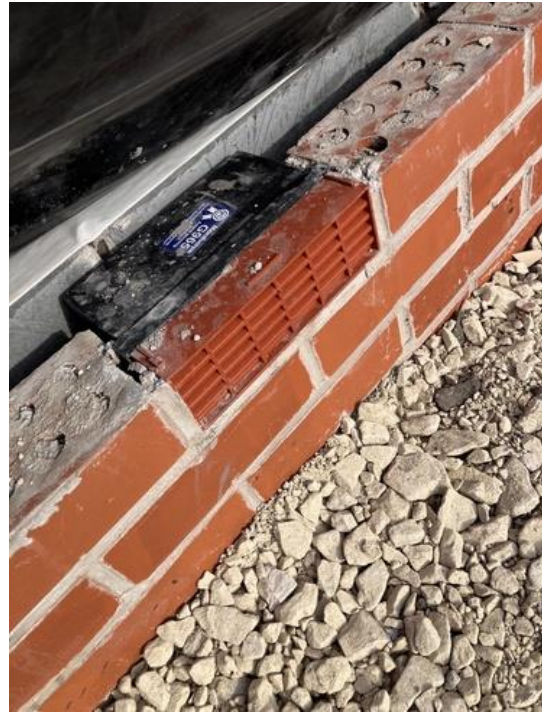


Photo 154



Photo 155



Photo 156



Photo 157



Photo 158



Photo 159



Photo 160



Photo 161



Photo 162



Photo 163



Photo 164



Photo 165



Photo 166



Photo 167



Photo 168



Photo 169



Photo 170



Photo 171



Photo 172



Photo 173



Photo 174



Photo 175



Photo 176



Photo 177



Photo 178



Photo 179



Photo 180



Photo 181



Photo 182



Photo 183



Photo 184



Photo 185



Photo 186



Photo 187



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Photo 189



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Photo 192



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Photo 218



Photo 219



Photo 220



Photo 221



Photo 222



Photo 223



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Photo 226



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Photo 228



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Photo 231



Photo 232



Photo 233



Photo 234



Photo 235



Photo 236



Photo 237



Photo 238



Photo 239



Photo 240



Photo 241



Photo 242



Photo 243



Photo 244



Photo 245



Photo 246



Photo 247

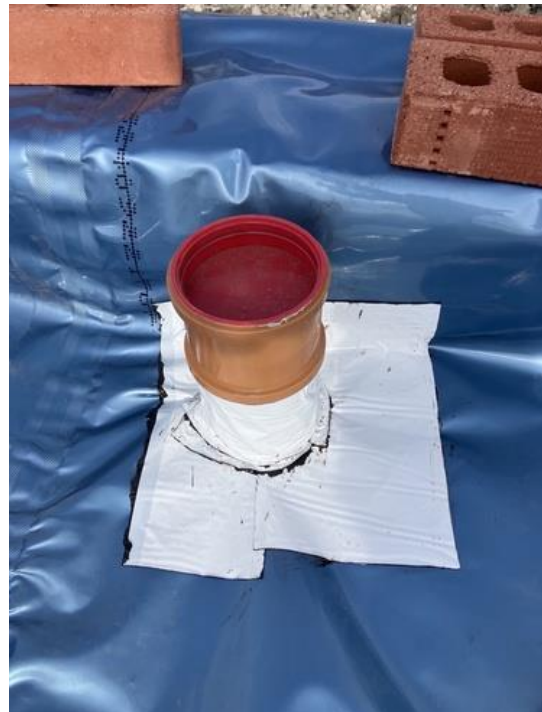


Photo 248



Photo 249



Photo 250



Photo 251



Photo 252



Photo 253



Photo 254



Photo 255



Photo 256



Photo 257



Photo 258



Photo 259



Photo 260



Photo 261



Photo 262



Photo 263



Photo 264



Photo 265



Photo 266



Photo 267



Photo 268



Photo 269



Photo 270



Photo 271

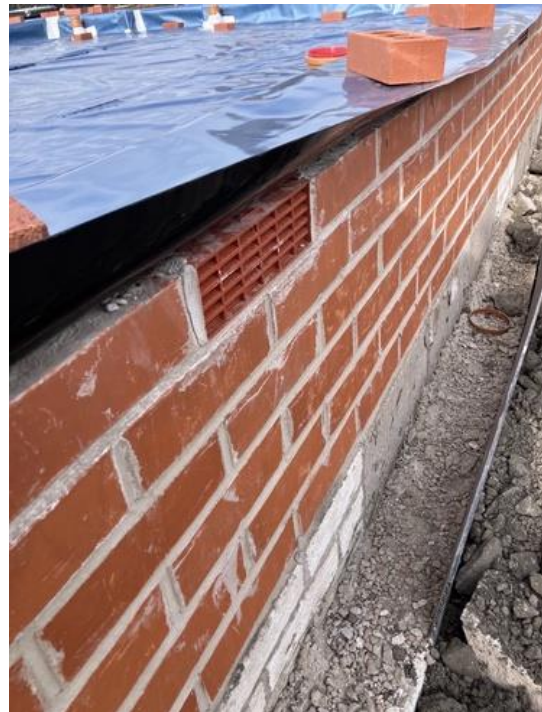


Photo 272



Photo 273



Photo 274



Photo 275



Photo 276



Photo 277



Photo 278



Photo 279

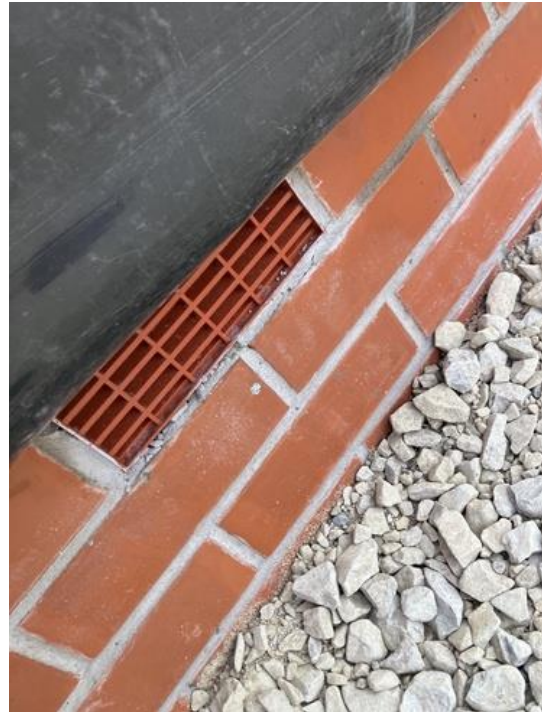


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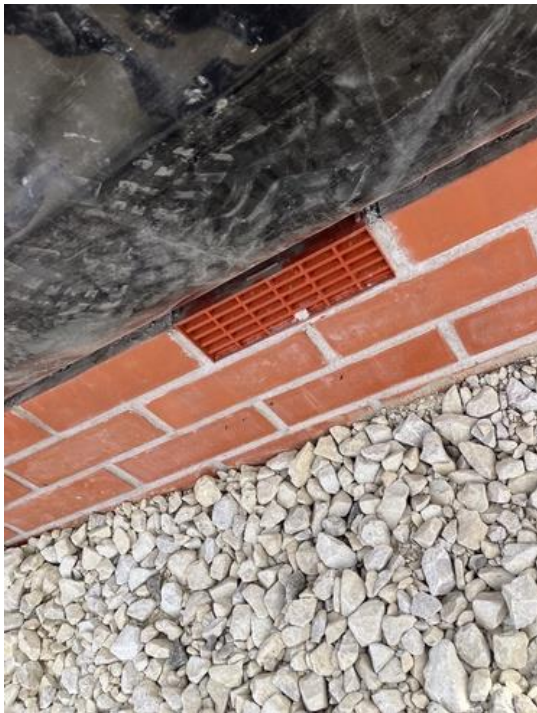


Photo 281



Photo 282



Photo 283



Photo 284

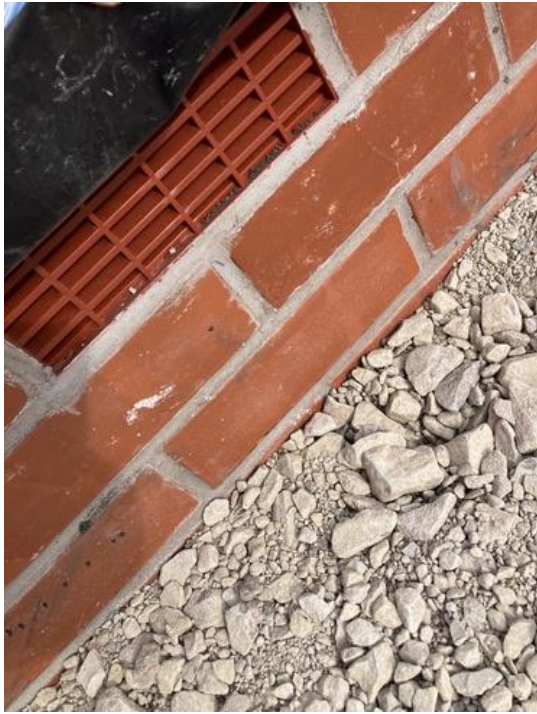


Photo 285



Photo 286