

Document Verification

Project Title	New Church Street, Radcliffe
Project Number	6654
Document Title	Validation Completion Report
Document Number	6654val_comp
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Prepared by

Checked and Approved




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Document Revision

Report Reference	Date	Description	Prepared	Checked and Approved
6654val_comp	11/12/2017	Gas Membrane Installation	J Collins	A Williams

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GAS MITIGATION VALIDATION COMPLETION REPORT

Developer	Kier Living Ltd.
Site Name	New Church Street, Radcliffe
Date of Certificate:	11 th December 2017
Covering Plots	1-40

PRODUCT	MANUFACTURER	PRODUCT NAME
Gas Membranes	Radbar	Radbar Amber 1 500 Micron Gas Barrier (orange) Radbar Amber 2 500 Micron Foil Barrier (black)
Sealing Tape	Radbar	Radbar Double Sided Tape Radbar Self Adhesive Detail Strip (300mm)
Preformed Tophat	Radbar	Rigid Preformed Pipe Sleeve (Top Hat) Unit
Girth Jointing Strap	Radbar	Radbar Single Sided Tape

Gas Mitigation Requirements

Characteristic Situation 2 mitigation measures are to be incorporated within the ground floor slab for all plots on the site. This design should be in accordance with Triangle Architects Ground Floor/Wall detail drawing ref: Triangle Architects Drawing No. 14-009/A/22/01, Rev. D - Ground Floor/Wall Detail, with design and verification requirements detailed in Coopers correspondence to Bury Metropolitan Borough Council, dated 16th March 2017 ref. 6654BMBC170316L. While the Radbar Amber 1 500 Micron Gas Barrier membrane was adequate, Kier opted for a the higher specification Radbar Amber 2 500 micron Foil Barrier for the majority of the development. The specifications for each of these membranes are appended to this report.

Plot Specific Verification Requirements

The approved verification approach consisted of Coopers inspection of the gas membrane installation for 1 in 5 plots, supplemented by inspection records and photographs of all other plots by the construction management to ensure the same standard of gas membrane installation was maintained.

Due to the construction method adopted by Kier Living Ltd. A two stage verification and validation procedure was adopted. During the first stage the membrane along the outer and partition walls was inspected as was the subfloor void. The second stage which was undertaken once the plot was constructed and prior to the placement of concrete screed verified that the membrane had been adequately sealed to the membrane underlying the external and partition walls and no damage had occurred. The inspection criteria for each plot are as follows:

1. Product Verification: *Confirmation that suitable products have been installed to consist of photographs of product types, labels on packaging and delivery tickets.*
2. General Condition: *The membrane is to be inspected to ensure there are no tears, punctures or rips.*
3. Jointing: *Checking the overlaps between membranes are correctly sealed, with correct tapes with sufficient overlaps.*
4. Wall Cavity Inspection: *Confirming that proprietary gas membrane or gas DPC spans the external wall.*
5. Service Entry Points: *Verification of the presence of preformed tophats sealed to the pipe and membrane.*
6. Venting: *Verifying the presence of periscopic venting at approximately 2m centres on at least three sides of the plot and that there is sufficient void space beneath the slab.*

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PHOTOGRAPHIC RECORDS OF TYPICAL INSTALLATION

Coopers' Inspection – First Stage



Photograph 1: Showing the first stage of membrane construction on top of the cavity wall, with corners showing sufficient seal and overlap using detailing strip and the general condition of the membrane installation on Plots 7-10 during inspection on 4th May 2017.



Photograph 2: Showing the first stage of membrane construction on top of the cavity wall, with corners showing sufficient seal and overlap and the general condition of the membrane installation on Plots 7-10 during inspection on 4th May 2017.



Photograph 3: Showing the first stage of membrane construction across the party walls and the general condition of the membrane installation on Plots 7-10 during inspection on 4th May 2017.



Photograph 4: Showing the first stage of membrane construction on top of the cavity wall, with corners showing sufficient seal and overlap and the general condition of the membrane installation on Plots 7-10 during inspection on 4th May 2017.

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Photograph 5: Showing the first stage of membrane construction on top of the cavity wall, with corners showing sufficient seal and overlap using detailing strip and the general condition of the membrane installation on Plots 28-31 during inspection on 7th April 2017.



Photograph 6: Showing the first stage of membrane construction on top of the cavity wall, with corners showing sufficient seal and overlap and the general condition of the membrane installation on Plots 28-31 during inspection on 7th April 2017.



Photograph 7: Showing the first stage of membrane construction across the party walls and the general condition of the membrane installation on Plots 28-31 during inspection on 7th April 2017.



Photograph 8: Showing a periscopic vent which was installed on Plots 28-31 during inspection on 7th April 2017.

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Photograph 9: Showing the first stage of membrane construction on top of the cavity wall, with corners showing sufficient seal and overlap using detailing strip and the general condition of the membrane installation on Plots 36-37 during inspection on 8th August 2017.



Photograph 10: Showing the first stage of membrane construction across the party walls and the general condition of the membrane installation on Plots 36-37 during inspection on 7th April 2017.



Photograph 11: Showing the first stage of membrane construction on top of the cavity wall, with corners showing sufficient seal and overlap using detailing strip and the general condition of the membrane installation on Plots 36-37 during inspection on 8th August 2017.



Photograph 12: Showing the first stage of membrane construction on top of the cavity wall, with corners showing sufficient seal and overlap using detailing strip and the general condition of the membrane installation on Plots 36-37 during inspection on 8th August 2017.

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Coopers' Inspection – Second Stage



Photograph 13: Showing the general condition of the membrane installation on Plot 4 during inspection on 14th August 2017.



Photograph 14: Showing the general condition of the membrane installation on Plot 9 during inspection on 27th July 2017.



Photograph 15: Showing the general condition of the membrane installation on Plot 28 with detailing strip used to seal and join onto the perimeter during inspection on 18th August 2017.



Photograph 16: Showing the general condition of the membrane installation on Plot 36 with detailing strip used to seal and join onto the perimeter during inspection on 17th October 2017.



Photograph 17: Showing the typical installation of a preformed tophat using a jubilee clip, butyl and silver joining tape on Plot 33 during inspection on 31st July 2017.



Photograph 18: Showing the typical installation of a preformed tophat using butyl and silver joining tape on Plot 15-17 during inspection on 29th June 2017.

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Photograph 19: Showing the typical installation of a preformed tophat using butyl and silver joining tape on Plot 9 during inspection on 27th July 2017.



Photograph 20: Showing the typical installation of a preformed tophat using a jubilee clip, butyl and silver joining tape on Plot 4 during inspection on 14th August 2017.



Photograph 21: Showing the jointing of two sections of membrane with greater than 150mm of overlap, sealed with butyl and silver joining tape on Plot 13 during inspection on 11th July 2017.



Photograph 22: Showing the membrane jointed to the perimeter stage one membrane underneath the blockwork with >150mm overlap on Plot 33 during inspection on 31st July 2017.



Photograph 23: Showing the membrane jointed to the perimeter stage one membrane underneath the blockwork and formation around the corner and door threshold using detailing strip with >150mm overlap and the condition of the corners on Plot 4 during inspection on 14th August 2017.



Photograph 24: Showing the membrane jointed to the perimeter stage one membrane underneath the blockwork using detailing strip with >150mm overlap on Plot 28 during inspection on 18th August 2017.

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Plot Specific Gas Inspection

Coopers undertook inspections at different stages of slab construction in order to verify that all aspects of the membrane were installed correctly. Of these inspections Coopers witnessed the membrane during the first stage of construction on Plots 7-10, 28-31 and 36-37. All other Plots were inspected by Kier with Coopers verifying the inspection record sheets and the photographic records.

The following Plots were validated by Coopers on site for the second stage inspection: 4, 9, 11 (tophat repair only), 13, 18, 23, 28, 33 and 36. Plots not included within this range were inspected by Kier and the subsequent documentation and photographic records verified by Coopers with photographs and inspection sheets emailed to Coopers on the day of installation for review and approval prior to placement of insulation and concrete screed. Where discrepancies were identified in photographs or inspection records, they were queried by Coopers who advised on how to correct the issue, for example, with Plot 11 a tophat repair was inspected on site following an absence of a tophat being observed within the Kier inspection records. Hence Plot 11's 2nd stage inspection is a combined inspection by both site and Coopers.

The two stage inspections were adopted to ensure that the membrane was present over the entire internal floor space of each plot, sealed to the 1st stage installation sections on the perimeter and partition walls and was sealed to service entrance points via pre-formed top hats. Joints between membrane sections were noted to be sealed using the double-sided tape with overlaps of at least 150mm. The overlaps were taped down using the silver foil jointing tape to protect the sealing joint. All joints to service entry tophats were constructed with at least a 150mm overlap and sealed with butyl tape and single sided jointing tape.

The attached "Gas Membrane Installation Record Sheets" detail the protective measures that were witnessed on these plots. All measures were determined to have been installed in accordance with Triangle Architects approved design and manufacturers details. Coopers Inspection Record sheets are appended to the end of this report.

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Kier Living Inspection records

What follows is the inspection records provided by Kier to Coopers and comprises of Inspection Record Sheets and Photographic records of the first and second stage inspections.

Coopers confirm the gas precaution measures were installed in accordance with the approved construction details for these plots.

Documents appended:

1. Coopers Gas Protection - Validation Record Sheet (1st Stage) – Plots 7-10 & 25-27, dated 4th May 2017.
2. Coopers Gas Protection - Validation Record Sheet (1st Stage) – Plots 28-31, dated 7th April 2017.
3. Coopers Gas Protection - Validation Record Sheet (1st Stage) – Plots 36-37, dated 8th August 2017.
4. Coopers Gas Protection - Validation Record Sheet (2nd Stage) – Plot 4, dated 11th August 2017.
5. Coopers Gas Protection - Validation Record Sheet (2nd Stage) – Plot 9, dated 27th July 2017.
6. Coopers Gas Protection - Validation Record Sheet (2nd Stage) – Plot 13, dated 11 July 2017.
7. Coopers Gas Protection - Validation Record Sheet (2nd Stage) – Plot 18, dated 29th June 2017.
8. Coopers Gas Protection - Validation Record Sheet (2nd Stage) – Plot 23, dated 18th September 2017.
9. Coopers Gas Protection - Validation Record Sheet (2nd Stage) – Plot 28, dated 18th August 2017.
10. Coopers Gas Protection - Validation Record Sheet (2nd Stage) – Plot 33, dated 31st July 2017.
11. Coopers Gas Protection - Validation Record Sheet (2nd Stage) – Plot 36, dated 17th October 2017.
12. Radbar Amber 1 Gas Barrier data sheet
13. Radbar Amber 2 Foil Barrier data sheet

Footnote: -

It is advisable that this document is forwarded to the local authority environmental health department and NHBC engineering department for their approval. This Certificate is a record of Coopers' inspection on the dates given within the aforementioned text. Coopers undertake inspections when requested by the developer. Compliance or non-compliance of the criteria is ascertained on those dates only. Coopers cannot be held responsible for any subsequent actions by third parties not under Coopers direct supervision, which may compromise the integrity of the gas precaution measures after the date of validation.

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Gas Protection - Validation Record Sheet

One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Plot No.: Block 3 (7-10) + Block 9 (25 + 26 + 27)

Inspection date:	4/5/17	Weather:	Sunny, warm, dry	Inspected by:	ST	Company:	Coopers
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	N/A – Front and rear vents present.					
1.2	External Wall Venting – cranked vent spacing	~ 2m (~1.6m)					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	Wall cavity stage					
2.2	Condition of sub-grade & underside of gas membrane	Good – no concerns for wall cavity.					
2.3	Gas membrane type	Radbar (Amber 2 membrane)					
2.4	Gas membrane condition and coverage	Full cavity is spanned by membrane					
2.5	Jointing tape product	Radbar double sided tape +					
2.6	Lapping tape product	Radbar J/s tape (foil) +					
2.7	Condition of joints/seals	Good – >150mm overlaps achieved.					
2.8	Number and condition of service entry seals	N/A					
2.9	Membrane steps/corner seals	Good – framed corners					
2.10	Repairs or Corrections:	None required.					
3) Photograph Check List – Tick to Confirm – Refer to Examples		I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance. Signed: <u>ST</u> Dated: <u>4/5/17</u>					
3.1	Internal Venting Pipes Spacing						
3.2	External Cranked Vents Spacing						
3.3	Sub Floor Void						
3.4	Membrane Overview						
3.5	Overlaps						
3.6	Corners						
3.7	Services						
3.8	Product Types/Labels						
Photographs witnessed and approved by Coopers:			Signed: _____ Dated: _____				

For Residential Development at New Church Street, Radcliffe.

One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Plot No.: BLOCK 1A (PLOTS 28 TO 31)

Inspection date:	<u>7/4/17</u>	Weather:	<u>CLOUDY + DRY</u>	Inspected by:	<u>BEN HILL</u>	Company:	<u>COOPERS</u>
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	<u>N/A - FRONT + REAR VENTS</u>					
1.2	External Wall Venting – cranked vent spacing	<u><2m. (1.8m)</u>					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	<u>WALL CAVITY STAGE</u>					
2.2	Condition of sub-grade & underside of gas membrane	<u>GOOD - NO CONCERNS FOR WALL CAVITY</u>					
2.3	Gas membrane type	<u>RADBAR - TICKETS (AMBER 2 MEMBRANE)</u>					
2.4	Gas membrane condition and coverage	<u>FULL CAVITY</u>					
2.5	Jointing tape product	<u>RADBAR DOUBLE SIDED TAPE - ROLL WITNESSED</u>					
2.6	Lapping tape product	<u>RADBAR S/S TAPE (FOIL) - TICKETS</u>					
2.7	Condition of joints/seals	<u>GOOD - >150mm OVERLAPS</u>					
2.8	Number and condition of service entry seals	<u>NONE</u>					
2.9	Membrane steps/corner seals	<u>GOOD - FORMED CORNERS</u>					
2.10	Repairs or Corrections:	<u>NONE REQUIRED</u>					
3) Photograph Check List – Tick to Confirm – Refer to Examples			I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.				
3.1	Internal Venting Pipes Spacing	<u>N/A</u>	Signed: <u>Ben Hill</u>		Dated: <u>7/4/17</u>		
3.2	External Cranked Vents Spacing	<u>✓</u>					
3.3	Sub Floor Void	<u>N/A</u>	Photographs witnessed and approved by Coopers:				
3.4	Membrane Overview	<u>✓</u>					
3.5	Overlaps	<u>✓</u>	Signed: <u>N/A</u>				
3.6	Corners	<u>✓</u>					
3.7	Services	<u>N/A</u>	Dated: <u>N/A</u>				
3.8	Product Types/Labels	<u>✓</u>					

For Residential Development at New Church Street, Radcliffe.

One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Plot No.: Block 12 / Lts 36-37

Inspection date:	<u>8/8/17</u>	Weather:	<u>broken cloud & showers</u>	Inspected by:	<u>ST</u>	Company:	<u>Coopers</u>
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	–					
1.2	External Wall Venting – cranked vent spacing	✓					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	<u>Stage 1 – Walk Stage</u>					
2.2	Condition of sub-grade & underside of gas membrane	<u>Good – membrane clean, no large creases, flat on floor slab.</u>					
2.3	Gas membrane type	<u>RADBAR</u>					
2.4	Gas membrane condition and coverage	<u>Good – some external cavity, No c/p's / tears, confined access above ground.</u>					
2.5	Jointing tape product	<u>RADBAR Detail Strip</u>					
2.6	Lapping tape product	<u>“ “</u>					
2.7	Condition of joints/seals	<u>Good – Radbar detail strip used as overlap, sometimes multiple layers</u>					
2.8	Number and condition of service entry seals	–					
2.9	Membrane steps/corner seals	<u>Good – corners all formed flat and sealed with detail strip.</u>					
2.10	Repairs or Corrections:	<u>1 tear access party wall section : 3 overlaps sealed with detail strip.</u>					
3) Photograph Check List – Tick to Confirm – Refer to Examples			I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.				
3.1	Internal Venting Pipes Spacing	<u>✓</u>	Signed: <u>ST</u>		Dated: <u>8/8/17</u>		
3.2	External Cranked Vents Spacing	<u>✓</u>					
3.3	Sub Floor Void	<u>✓</u>					
3.4	Membrane Overview	<u>✓</u>					
3.5	Overlaps	<u>✓</u>	Photographs witnessed and approved by Coopers:				
3.6	Corners	<u>✓</u>					
3.7	Services	<u>✓</u>	Signed:		Dated:		
3.8	Product Types/Labels	<u>✓</u>					

For Residential Development at New Church Street, Radcliffe.

One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Plot No.: Block 2 Plot 4

Inspection date:	<u>11/8/17</u>	Weather:	<u>Sunny, warm, broken cloud</u>	Inspected by:	<u>ST</u>	Company:	<u>Coopers</u>
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1) Sub Floor Venting System		Comments:
1.1	Internal Wall Venting Pipes – size and spacing	—
1.2	External Wall Venting – cranked vent spacing	—
2) Gas Membrane Inspection		Comments:
2.1	Inspection Stage:	<u>Stage 2 - Floor Stage</u>
2.2	Condition of sub-grade & underside of gas membrane	<u>Good - clean, no rough surfaces/objects.</u>
2.3	Gas membrane type	<u>Black RADBAR gas membrane</u>
2.4	Gas membrane condition and coverage	<u>Covers whole plot; 150mm overlaps on middle/side walls / front & rear sections.</u>
2.5	Jointing tape product	<u>Black RADBAR double-sided tape.</u>
2.6	Lapping tape product	<u>Silver RADBAR ultra lapping tape.</u>
2.7	Condition of joints/seals	<u>Two middle overlaps - good; two sides ^{wall seals} double sided tape initially missing; rear / front ^{passed.}</u>
2.8	Number and condition of service entry seals	<u>Good - jubilee clips and tape present.</u>
2.9	Membrane steps/corner seals	<u>None.</u>
2.10	Repairs or Corrections:	<u>Norips / holes; two sides ^{wall seals} needed tape.</u>
3) Photograph Check List – Tick to Confirm – Refer to Examples		I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.
3.1	Internal Venting Pipes Spacing	—
3.2	External Cranked Vents Spacing	—
3.3	Sub Floor Void	☒
3.4	Membrane Overview	☒
3.5	Overlaps	☒
3.6	Corners	☒
3.7	Services	☒
3.8	Product Types/Labels	☒
Signed: <u>ST</u>		Dated: <u>11/8/17.</u>
Photographs witnessed and approved by Coopers:		
Signed: <u>N/A</u>		Dated: <u>N/A</u>

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One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Plot No.: 9

Inspection date:	<u>27/7/17</u>	Weather:	<u>Rain</u>	Inspected by:	<u>ST</u>	Company:	<u>Coopers</u>
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	<u>N/A</u>					
1.2	External Wall Venting – cranked vent spacing	<u>N/A</u>					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	<u>2</u>					
2.2	Condition of sub-grade & underside of gas membrane	<u>Good - no dips / tears</u>					
2.3	Gas membrane type	<u>Black Radbar (Amber 2. Spec) Membrane</u>					
2.4	Gas membrane condition and coverage	<u>Good - no cracks, overlaps clearly marked (>150mm).</u>					
2.5	Jointing tape product	<u>Black double sided butyle (RADBAR 10 x 50mm)</u>					
2.6	Lapping tape product	<u>Silver joint tape (RADBAR Silver uter).</u>					
2.7	Condition of joints/seals	<u>Clean, some failure to adhere due to rain splash*</u>					
2.8	Number and condition of service entry seals	<u>3 to phos, taped to spec, no jubilee clips on site**</u>					
2.9	Membrane steps/corner seals	<u>Good - forced tight into corners, sealed with tape.</u>					
2.10	Repairs or Corrections:	<u>* Need photo showing silver tape across all joints ** Photo needed showing jubilee clips</u>					
3) Photograph Check List – Tick to Confirm – Refer to Examples		I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.					
3.1	Internal Venting Pipes Spacing	<u>-</u>					
3.2	External Cranked Vents Spacing	<u>✓</u>					
3.3	Sub Floor Void	<u>✓</u>					
3.4	Membrane Overview	<u>✓</u>					
3.5	Overlaps	<u>✓</u>					
3.6	Corners	<u>✓</u>					
3.7	Services	<u>✓</u>					
3.8	Product Types/Labels	<u>✓</u>					
		Signed: <u>ST</u>		Dated: <u>27/7/17</u>			
		Photographs witnessed and approved by Coopers:					
		Signed: <u>N/A</u>		Dated: <u>-</u>			

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One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Plot No.: 13

Inspection date:	<u>11th July 2017</u>	Weather:	<u>Showers</u>	Inspected by:	<u>M Ollier</u>	Company:	<u>Coopers</u>
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	<u>Witnessed on adjacent plots</u>					
1.2	External Wall Venting – cranked vent spacing	<u>Every 2m along external walls</u>					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	<u>Stage 2 = membrane installed across floor slab and connected to membrane through walls</u>					
2.2	Condition of sub-grade & underside of gas membrane	<u>Good quality - cleared for suitable adhesion of butyl tape</u>					
2.3	Gas membrane type	<u>Redber</u>					
2.4	Gas membrane condition and coverage	<u>Excellent condition and installed to good standard</u>					
2.5	Jointing tape product	<u>Redber Double Sided Tape</u>					
2.6	Lapping tape product	<u>Redber Silver Lapping Tape (Redber Detailing strip used around door entries</u>					
2.7	Condition of joints/seals	<u>750mm overlap and sealed with butyl and jointing tape</u>					
2.8	Number and condition of service entry seals	<u>3 service entries</u>					
2.9	Membrane steps/corner seals	<u>None</u>					
2.10	Repairs or Corrections:	<u>None</u>					
3) Photograph Check List – Tick to Confirm – Refer to Examples		I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.					
3.1	Internal Venting Pipes Spacing	<u>N/A</u>	Signed: <u>M. N. Ollier</u>		Dated: <u>11th July 2017</u>		
3.2	External Cranked Vents Spacing	<u>✓</u>					
3.3	Sub Floor Void	<u>N/A</u>					
3.4	Membrane Overview	<u>✓</u>					
3.5	Overlaps	<u>✓</u>	Signed: <u>M. N. Ollier</u>		Dated: <u>11th July 2017</u>		
3.6	Corners	<u>✓</u>					
3.7	Services	<u>✓</u>					
3.8	Product Types/Labels	<u>✓</u>					

For Residential Development at New Church Street, Radcliffe.

Gas Protection - Validation Record Sheet

One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Plot No.: ~~18/0000~~ 18.

Inspection date:	29/6/17	Weather:	cloudy	Inspected by:	ST	Company:	Coopers
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	—					
1.2	External Wall Venting – cranked vent spacing	—					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	Stage 2 – Floor stage					
2.2	Condition of sub-grade & underside of gas membrane	No punctures visible, membrane was not uneven as a result of any object below it.					
2.3	Gas membrane type	Radkine Gas barrier – 500 mm					
2.4	Gas membrane condition and coverage	Cover whole slab; sealed to stage one at wall cavity. Cleaned, including primer.					
2.5	Jointing tape product	Blue double sided tape.					
2.6	Lapping tape product	Silver jointing tape (Ultra).					
2.7	Condition of joints/seals	Good * – * Some creases; repair with detail strip witnessed on site.					
2.8	Number and condition of service entry seals	1 repair with detail strip; 1 good (2 total). Top hats (performed) confirmed.					
2.9	Membrane steps/corner seals	Good condition, all square, tape visible.					
2.10	Repairs or Corrections:	None noted * – * One tear behind service entry next to wall; repair with detail strip.					
3) Photograph Check List – Tick to Confirm – Refer to Examples		I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance. Signed:  Dated: 29/6/17 Photographs witnessed and approved by Coopers: Signed: N/A Dated: N/A					
3.1	Internal Venting Pipes Spacing						
3.2	External Cranked Vents Spacing	—					
3.3	Sub Floor Void	✓					
3.4	Membrane Overview	✓					
3.5	Overlaps	✓					
3.6	Corners	✓					
3.7	Services	✓					
3.8	Product Types/Labels	✓					

For Residential Development at New Church Street, Radcliffe.

Gas Protection - Validation Record Sheet

One record sheet to be completed for each plot This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Plot No.: Plot 23

Inspection date:	18/9/17	Weather:	overcast	Inspected by:	ST	Company:	Coopers
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1) Sub Floor Venting System		Comments:
1.1	Internal Wall Venting Pipes – size and spacing	—
1.2	External Wall Venting – cranked vent spacing	—
2) Gas Membrane Inspection		Comments:
2.1	Inspection Stage:	Stage 2 - floor stage
2.2	Condition of sub-grade & underside of gas membrane	membrane was uniform flat. No punctures on floor area.
2.3	Gas membrane type	Radbar gas barrier - 500 mm
2.4	Gas membrane condition and coverage	Covers whole of slab; sealed to wall membrane at wall cavity - cleaned + primer applied.
2.5	Jointing tape product	double sided tape
2.6	Lapping tape product	Silver jointing tape (Radbar ultra)
2.7	Condition of joints/seals	Good - no creases, >150 mm overlaps achieved.
2.8	Number and condition of service entry seals	Good - sealed with detail strip. Tubilee clips present.
2.9	Membrane steps/corner seals	Good - flat and square to corners.
2.10	Repairs or Corrections:	2 punctures on wall stage sealed with Radbar detail strip.

3) Photograph Check List – Tick to Confirm – Refer to Examples			I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.		
3.1	Internal Venting Pipes Spacing	—	Signed: 	Dated: 18/9/17	
3.2	External Cranked Vents Spacing	✓			
3.3	Sub Floor Void	✓			
3.4	Membrane Overview	✓			
3.5	Overlaps	✓	Photographs witnessed and approved by Coopers:		
3.6	Corners	✓			
3.7	Services	✓			
3.8	Product Types/Labels	✓			
			Signed: N/A	Dated: N/A	

One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Plot No.: 28

Inspection date:	18/8/17	Weather:	Rain showers, mild	Inspected by:	ST	Company:	Coopers
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1) Sub Floor Venting System		Comments:
1.1	Internal Wall Venting Pipes – size and spacing	–
1.2	External Wall Venting – cranked vent spacing	–
2) Gas Membrane Inspection		Comments:
2.1	Inspection Stage:	Stage 2 - Floor Stage.
2.2	Condition of sub-grade & underside of gas membrane	Good - no sharp objects pierced membrane; membrane laid uniform
2.3	Gas membrane type	Black RADBAR gas membrane.
2.4	Gas membrane condition and coverage	Good - whole plot covered up to party walls.
2.5	Jointing tape product	Black radbar double sided tape
2.6	Lapping tape product	RADBAR ultra foil tape
2.7	Condition of joints/seals	Good - overlaps >150mm achieved and detail strip used on perimeter.
2.8	Number and condition of service entry seals	Tophats & jubilee clips installed to spec. Sealed with detail strip
2.9	Membrane steps/corner seals	N/A
2.10	Repairs or Corrections:	4 No. punctures repaired on site. one section of detail strip added.
3) Photograph Check List – Tick to Confirm – Refer to Examples		I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance. Signed:  Dated: 18/8/17
3.1	Internal Venting Pipes Spacing	
3.2	External Cranked Vents Spacing	–
3.3	Sub Floor Void	✓
3.4	Membrane Overview	✓
3.5	Overlaps	✓
3.6	Corners	✓
3.7	Services	✓
3.8	Product Types/Labels	✓
		Photographs witnessed and approved by Coopers: Signed:  Dated: –

For Residential Development at New Church Street, Radcliffe.

One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Plot No.: 33

Inspection date:	<u>31/7/17</u>	Weather:	<u>cloudy, warm</u>	Inspected by:	<u>ST</u>	Company:	<u>Coopers</u>
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	—					
1.2	External Wall Venting – cranked vent spacing	—					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	<u>Stage 2 – Floor Slab</u>					
2.2	Condition of sub-grade & underside of gas membrane	<u>Good quality – butyl tape applied well & sealed.</u>					
2.3	Gas membrane type	<u>Black RADBAR</u>					
2.4	Gas membrane condition and coverage	<u>Good, few small holes. Whole plot covered, sealed on L & sides.</u>					
2.5	Jointing tape product	<u>RADBAR Double-sided tape</u>					
2.6	Lapping tape product	<u>Radbar ultra lapping tape</u>					
2.7	Condition of joints/seals	<u>Good – overlap visible</u>					
2.8	Number and condition of service entry seals	<u>Good – tape checked & jubilee clips visible</u>					
2.9	Membrane steps/corner seals	<u>Good None.</u>					
2.10	Repairs or Corrections:	<u>* Small holes repaired with patch near rear door. Witnessed on site.</u>					
3) Photograph Check List – Tick to Confirm – Refer to Examples		I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.					
3.1	Internal Venting Pipes Spacing	—		Signed: <u>ST</u>		Dated: <u>31/7/17</u>	
3.2	External Cranked Vents Spacing	✓					
3.3	Sub Floor Void	✓		Photographs witnessed and approved by Coopers:			
3.4	Membrane Overview	✓					
3.5	Overlaps	✓		Signed: <u>N/A</u>			
3.6	Corners	✓					
3.7	Services	✓		Dated: <u>N/A</u>			
3.8	Product Types/Labels	✓					

For Residential Development at New Church Street, Radcliffe.

Gas Protection - Validation Record Sheet

One record sheet to be completed for each plot This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Plot No.: Plot 36

Inspection date:	17/10/17	Weather:	Sunny, some cloud	Inspected by:	ST	Company:	Coopers
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	-					
1.2	External Wall Venting – cranked vent spacing	-					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	Stage 2 - floor stage					
2.2	Condition of sub-grade & underside of gas membrane	Good - no floor punctures, membrane is flat / uniform					
2.3	Gas membrane type	Black P AD BAR					
2.4	Gas membrane condition and coverage	Covers whole of floor slab					
2.5	Jointing tape product	Bulbar detail strip.					
2.6	Lapping tape product	Silver Butyl tape (adhesive under)					
2.7	Condition of joints/seals	Good - overlaps secured / visible.					
2.8	Number and condition of service entry seals	3 - preformed tophats + jubilee clips installed to spec.					
2.9	Membrane steps/corner seals	Concrete seals still intact from Stage 1.					
2.10	Repairs or Corrections:	2 small punctures along front wall. Repairs witnessed by Coopers.					
3) Photograph Check List – Tick to Confirm – Refer to Examples		I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.					
3.1	Internal Venting Pipes Spacing	Signed:  Dated: 17/10/17					
3.2	External Cranked Vents Spacing						
3.3	Sub Floor Void	Photographs witnessed and approved by Coopers:					
3.4	Membrane Overview						
3.5	Overlaps	Signed:  Dated: N/A					
3.6	Corners						
3.7	Services						
3.8	Product Types/Labels						



Radbar Amber 1 Membrane

Capital Valley Plastics Limited, Cwmavon Works, Cwmavon, Nr Pontypool, Gwent, NP4 8UW

Tel: 01495 772255

Characteristic	Test Method	Unit	Result
PHYSICAL PROPERTIES			
Thickness	EN 1849 - 2	mm	0.5
Width	EN 1848 - 2	M	2
Length	EN 1848 - 2	M	25
HYDRAULIC PROPERTIES			
Water tightness 2kPa	EN 1928	-	Pass
Water Vapour Trans	BS 3177 (1995)	g/m ² /day	0.15
MECHANICAL PROPERTIES			
Resistance to static loading	EN 12730 Method B	kg	Pass at 20kg
Tensile strength MD	EN 12311 - 1	N/mm ²	21.2
Tensile strength CD	EN 12311 - 1	N/mm ²	21
Elongation MD	BS 2782 (1996) 320A	%	400
Elongation CD	BS 2782 (1996) 320A	%	500
Resistance to Impact	EN 12691	mm	Pass at 250mm
Resistance to tearing (nail shank) MD	EN 12310 - 1	N	339
Resistance to tearing (nail shank) CD	EN 12310 - 1	N	346
CHEMICAL/GAS RESISTANCE			
Radon Perm	-	10 ⁻¹² m ² /s	8
Radon Trans	-	10 ⁻⁹ m/s ⁻¹	22
CO ₂ Perm	ISO 2782:1995	m ² /s ⁻¹ /Pa ⁻¹	2.055 x 10 ⁻¹⁷
CO ₂ Trans	ISO 2782:1995	m/s ⁻¹	4.357 x 10 ⁻⁹
Methane Perm	ISO 2782:1995	m ² /s ⁻¹ /Pa ⁻¹	1.248 x 10 ⁻¹⁷
Methane Trans	ISO 2782:1995	m/s ⁻¹	2.452 x 10 ⁻⁹

N.B. The information provided in the datasheet is based on independent laboratory results and correct at the time of production

Above mentioned data are of informative character only. The manufacturer reserves the right to alter specifications without prior notice. It is the responsibility of all users to satisfy themselves that the above specifications are current.





Radbar Amber 2 Foil Barrier

Capital Valley Plastics Limited, Cwmavon Works, Cwmavon, Nr Pontypool, Gwent, NP4 8UW

Tel: 01495 772255

Characteristic	Test Method	Unit	Min	Avg	Max
PHYSICAL PROPERTIES					
Thickness	EN 1849 - 2	mm	0.5	0.6	0.7
Width	EN 1849 - 2	M		2	
Length	EN 1849 - 2	M		50	
HYDRAULIC PROPERTIES					
Water Column Test	EN20811	-	>300		
Resistance to Water Penetration	EN13967, EN1928	-	PASS		
Durability of watertightness against ageing	EN1296, EN13967, EN1928	-	PASS		
MECHANICAL PROPERTIES					
Resistance to static loading	EN 12730 Method B	KG	20		
Tensile strength MD	EN 12311 - 1	N/50mm	500	600	700
Tensile strength CD	EN 12311 - 1	N/50mm	380	480	580
Elongation MD	EN 12311 - 1	%	10	20	30
Elongation CD	EN 12311 - 1	%	10	20	30
Puncture Resistance (CBR)	EN 12236	KN	1.19	1.25	1.29
Resistance to tearing (nail shank) MD	EN 12310 - 1	N	270	330	400
Resistance to tearing (nail shank) CD	EN 12310 - 1	N	330	400	500
DURABILITY AND CHEMICAL RESISTANCE					
Transmission rate of volatile liquids - Diesel	ISO 6179:2010 (METHOD B)	g/m²/h	0.246		
Transmission rate of volatile liquids - Xylene	ISO 6179:2010 (METHOD B)	g/m²/h	0.571		
Transmission rate of volatile liquids - Toluene	ISO 6179:2010 (METHOD B)	g/m²/h	0.583		
Transmission rate of volatile liquids - Petrol	ISO 6179:2010 (METHOD B)	g/m²/h	0.135		
Radon Permeability	K124/02/95	m² s-1	8 x 10-15		
Carbon Dioxide Permeability Coefficient	DIN 53380 - 2	m² pa -1 s-1	2.58 x 10-19		
Methane Permeability Coefficient	DIN 53380 - 2	m² pa -1 s-2	1.56 x 10-19		
Methane Permeability	ISO 15105 - 1	ml/day.m².atm	30.66		

N.B. The information provided in the datasheet is based on independent laboratory results and correct at the time of production

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One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Block

Plot No.: 1 PLOTS 1+2

Inspection date:	16/5/17	Weather:	OVERCAST + DRY	Inspected by:	D BARNES	Company:	KIER LIVING
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	N/A, FRONT + REAR VENTS, AS PREVIOUS INSPECTIONS					
1.2	External Wall Venting – cranked vent spacing	LESS THAN 2M – 1.8M					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	WALL CAVITY STAGE					
2.2	Condition of sub-grade & underside of gas membrane	ALL GOOD					
2.3	Gas membrane type	RADBAR – AMBER 2 MEMBRANE, AS PER PREVIOUS INSPECTIONS					
2.4	Gas membrane condition and coverage	FULL CAVITY					
2.5	Jointing tape product	RADBAR DOUBLE SIDED TAPE + RADBAR S/A DETAIL STRIP 300mm x 20m					
2.6	Lapping tape product	RADBAR S/S TAPE (SILVER) 75mm x 50m					
2.7	Condition of joints/seals	GOOD – 150mm OVERLAPS					
2.8	Number and condition of service entry seals	NONE					
2.9	Membrane steps/corner seals	GOOD + TIDY					
2.10	Repairs or Corrections:	NONE VISIBLE					
3) Photograph Check List – Tick to Confirm – Refer to Examples		I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.					
3.1	Internal Venting Pipes Spacing	N/A	Signed: <u>D Barnes</u>		Dated: <u>16/5/17</u>		
3.2	External Cranked Vents Spacing	✓					
3.3	Sub Floor Void	✓					
3.4	Membrane Overview	✓					
3.5	Overlaps	✓	Photographs witnessed and approved by Coopers:				
3.6	Corners	✓					
3.7	Services	N/A	Signed: <u>A. Dutton</u>		Dated: <u>16/5/17</u>		
3.8	Product Types/Labels	✓					

For Residential Development at New Church Street, Radcliffe.

















PLOT
1

03

04

05

06

07

2017-09-02

2017-09-02

One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Block

Plot No.: 2

Inspection date:	<u>03/05/17</u>	Weather:	<u>FINE + DRY (SUNNY)</u>	Inspected by:	<u>DAVE BARNES</u>	Company:	<u>KIER LIVING</u>
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	<u>N/A – FRONT + REAR VENTS, AS PREVIOUS INSPECTIONS.</u>					
1.2	External Wall Venting – cranked vent spacing	<u>LESS THAN 2M – 1.8M</u>					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	<u>WALL CAVITY STAGE</u>					
2.2	Condition of sub-grade & underside of gas membrane	<u>VERY GOOD, NO ISSUES</u>					
2.3	Gas membrane type	<u>RADBAR-AMBER 2 MEMBRANE, AS PER PREVIOUS BLOCK INSPECTIONS</u>					
2.4	Gas membrane condition and coverage	<u>FULL CAVITY</u>					
2.5	Jointing tape product	<u>RADBAR DOUBLE SIDED TAPE + RADBAR S/A DETAIL STRIP 300mm x 20mm</u>					
2.6	Lapping tape product	<u>RADBAR S/S TAPE (SILVER) 75mm x 50mm</u>					
2.7	Condition of joints/seals	<u>GOOD – 150mm OVERLAPS</u>					
2.8	Number and condition of service entry seals	<u>NONE</u>					
2.9	Membrane steps/corner seals	<u>ALL OK, CORNER SEALS TIDY</u>					
2.10	Repairs or Corrections:	<u>NONE VISIBLE</u>					
3) Photograph Check List – Tick to Confirm – Refer to Examples			I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.				
3.1	Internal Venting Pipes Spacing	<u>N/A</u>	Signed: <u>DS Barnes</u>		Dated: <u>8/5/17</u>		
3.2	External Cranked Vents Spacing	<u>✓</u>					
3.3	Sub Floor Void	<u>✓</u>	Photographs witnessed and approved by Coopers:				
3.4	Membrane Overview	<u>✓</u>					
3.5	Overlaps	<u>✓</u>	Signed: <u>A.O. Williams</u>				
3.6	Corners	<u>✓</u>					
3.7	Services	<u>N/A</u>	Dated: <u>12/5/17</u>				
3.8	Product Types/Labels	<u>✓</u>					

For Residential Development at New Church Street, Radcliffe.



PLOT
3

4043

240417

PLOT
3

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PLOT
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PLOT
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03E

02E

01E













One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Block

Plot No.: 4

Inspection date:	26/04/17	Weather:	FINE + DRY (SUNNY)	Inspected by:	ANDREW LUGDEN + DAVE BARNES	Company:	KIER LIVING
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	N/A (FRONT + REAR VENTS)					
1.2	External Wall Venting – cranked vent spacing	LESS THAN 2M (1.8m)					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	WALL CAVITY STAGE					
2.2	Condition of sub-grade & underside of gas membrane	GENERALLY VERY GOOD, NO ISSUES FOR WALL CAVITY					
2.3	Gas membrane type	RADBAR (AMBER 2 MEMBRANE) SAME AS PREVIOUS TICKET COPIED BY BEN HILL					
2.4	Gas membrane condition and coverage	FULL CAVITY					
2.5	Jointing tape product	RADBAR DOUBLE SIDED TAPE					
2.6	Lapping tape product	RADBAR S/S TAPE (FOIL) SAME AS PREVIOUS TICKET COPIED BY BEN HILL					
2.7	Condition of joints/seals	ALL GOOD - 150mm OVERLAPS					
2.8	Number and condition of service entry seals	NONE					
2.9	Membrane steps/corner seals	GOOD - CORNER SEALS NEAT AND TIDY					
2.10	Repairs or Corrections:	NONE					
3) Photograph Check List – Tick to Confirm – Refer to Examples			I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.				
3.1	Internal Venting Pipes Spacing	N/A	Signed: <u>DJ Barnes</u>		Dated: <u>26/4/17</u>		
3.2	External Cranked Vents Spacing	✓					
3.3	Sub Floor Void	✓					
3.4	Membrane Overview	✓					
3.5	Overlaps	✓	Photographs witnessed and approved by Coopers:				
3.6	Corners	✓					
3.7	Services	N/A					
3.8	Product Types/Labels	✓					
			Signed: <u>Ben Hill</u>		Dated: <u>28/4/17</u>		

For Residential Development at New Church Street, Radcliffe.













BLK
4
PLOTS
11 to 14









One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Block

Plot No.: S

Inspection date:	<u>24/4/2017</u>	Weather:	<u>DRY + SUNNY</u>	Inspected by:	<u>ANDY WOODEN + DAVE BARNES</u>	Company:	<u>KIER LIVING</u>
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	<u>N/A - FRONT & REAR VENTS</u>					
1.2	External Wall Venting – cranked vent spacing	<u>LESS THAN 2.4 (1.8m)</u>					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	<u>WALL CAVITY STAGE</u>					
2.2	Condition of sub-grade & underside of gas membrane	<u>ALL GOOD, NO ISSUES FOR WALL CAVITY</u>					
2.3	Gas membrane type	<u>RADBAR (AMBER 2 MEMBRANE) SAME AS PREVIOUS TICKETS COPIED BY B HILL</u>					
2.4	Gas membrane condition and coverage	<u>FULL CAVITY</u>					
2.5	Jointing tape product	<u>RADBAR DOUBLE SIDED TAPE</u>					
2.6	Lapping tape product	<u>RADBAR S/S TAPE (FOLL) AGAIN, AS PER TICKET COPIED BY B HILL</u>					
2.7	Condition of joints/seals	<u>VERY GOOD - 150mm LAPS</u>					
2.8	Number and condition of service entry seals	<u>NONE</u>					
2.9	Membrane steps/corner seals	<u>VERY GOOD - CORNER SEALS NEAT + TIDY</u>					
2.10	Repairs or Corrections:	<u>NONE</u>					
3) Photograph Check List – Tick to Confirm – Refer to Examples		I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.					
3.1	Internal Venting Pipes Spacing	<u>N/A</u>	Signed: <u>DS Barnes</u>		Dated: <u>24/4/17</u>		
3.2	External Cranked Vents Spacing	<u>✓</u>					
3.3	Sub Floor Void	<u>✓</u>					
3.4	Membrane Overview	<u>✓</u>					
3.5	Overlaps	<u>✓</u>	Photographs witnessed and approved by Coopers:				
3.6	Corners	<u>✓</u>					
3.7	Services	<u>N/A</u>	Signed: <u>Ben & Co</u>		Dated: <u>25/4/17</u>		
3.8	Product Types/Labels	<u>✓</u>					

For Residential Development at New Church Street, Radcliffe.



BLK 5

PLOTS

15 to 18

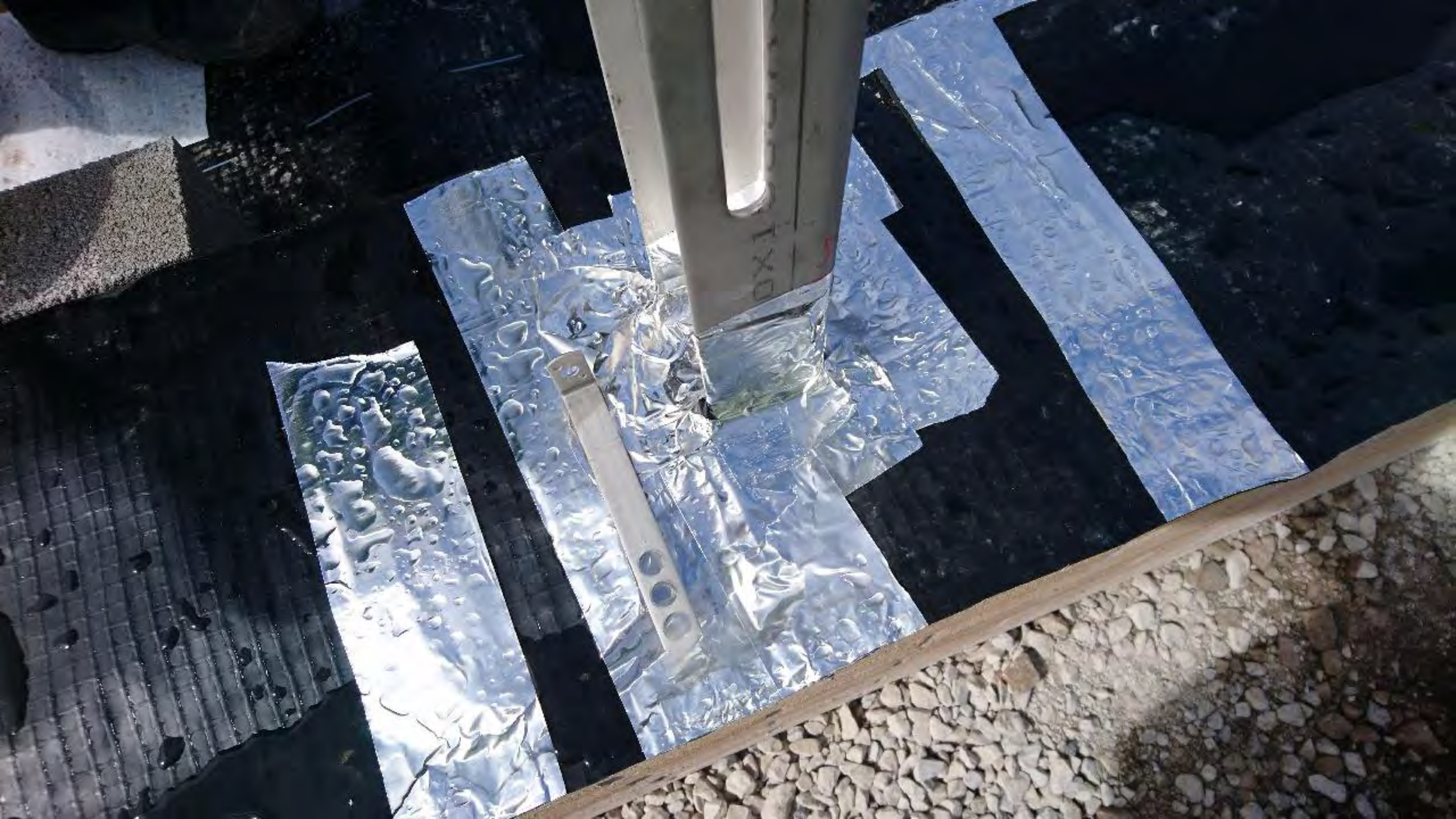
















One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Block

Plot No.: 6 PLOTS 19+20

Inspection date:	12/7/17	Weather:	FINE + DRY	Inspected by:	D BARNES	Company:	KIER LIVING
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1) Sub Floor Venting System		Comments:
1.1	Internal Wall Venting Pipes – size and spacing	N/A – FRONT + REAR VENTS, AS PER PREVIOUS INSPECTIONS
1.2	External Wall Venting – cranked vent spacing	LESS THAN 2M – 1.8M – SEE PHOTOS
2) Gas Membrane Inspection		Comments:
2.1	Inspection Stage:	WALL CAVITY STAGE
2.2	Condition of sub-grade & underside of gas membrane	ALL GOOD
2.3	Gas membrane type	RADBAR – AMBER 2 MEMBRANE, AS PER PREVIOUS INSPECTIONS
2.4	Gas membrane condition and coverage	FULL CAVITY
2.5	Jointing tape product	RADBAR DOUBLE SIDED TAPE + RADBAR SIA DETAIL STRIP 300mm x 20mm
2.6	Lapping tape product	RADBAR S/S TAPE (SILVER) 75mm x 50mm
2.7	Condition of joints/seals	ALL GOOD – 150mm OVERLAPS
2.8	Number and condition of service entry seals	NONE
2.9	Membrane steps/corner seals	NEAT + TIDY
2.10	Repairs or Corrections:	NOTHING VISIBLE UPON INSPECTION
3) Photograph Check List – Tick to Confirm – Refer to Examples		I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.
3.1	Internal Venting Pipes Spacing	
3.2	External Cranked Vents Spacing	Signed: <u>D Barnes</u> Dated: <u>12/7/17</u>
3.3	Sub Floor Void	
3.4	Membrane Overview	Photographs witnessed and approved by Coopers:
3.5	Overlaps	
3.6	Corners	Signed: <u>A.O. Williams</u> Dated: <u>14/7/17</u>
3.7	Services	
3.8	Product Types/Labels	

For Residential Development at New Church Street, Radcliffe.



BLOCK
6

Plot 19

SPEEDLINE





BLOCK 6
PLOT 19

Black
Rock 19

Post 19





BLOCK 6

PLOT 19



Block 6
Plot 19



LIFE
KEEP
OUT

Block

PLOT 20
BLOCK 6



BLOCK 6
PLOT 20



BLOCK 6
PLOT 20

Plot 20













KIER

20

SPEEDLINE

BLOCK
6



PLOT
19



PLOT

19

E06

E05

E04

E03

E02



PLOT
20

One record sheet to be completed for each plot

This Record sheet is only applicable to block and beam floor slabs for Characteristic Situation 2 gas protection systems

Block

Plot No.: 7

Inspection date:	<u>24/5/17</u>	Weather:	<u>CLOUDY + DRY</u>	Inspected by:	<u>D BARNES</u>	Company:	<u>KIER LIVING</u>
1) Sub Floor Venting System		Comments:					
1.1	Internal Wall Venting Pipes – size and spacing	<u>N/A, FRONT + REAR VENTS, AS PER PREVIOUS INSPECTIONS</u>					
1.2	External Wall Venting – cranked vent spacing	<u>LESS THAN 2M – 1.8M</u>					
2) Gas Membrane Inspection		Comments:					
2.1	Inspection Stage:	<u>WALL CAVITY STAGE</u>					
2.2	Condition of sub-grade & underside of gas membrane	<u>ALL GOOD</u>					
2.3	Gas membrane type	<u>RADBAR - AMBER 2 MEMBRANE, AS PER PREVIOUS INSPECTIONS</u>					
2.4	Gas membrane condition and coverage	<u>FULL CAVITY</u>					
2.5	Jointing tape product	<u>RADBAR DOUBLE SIDED TAPE + RADBAR SIA DETAIL STRIP 300mm x 20m</u>					
2.6	Lapping tape product	<u>RADBAR S/S TAPE (SILVER) 75mm x 50m</u>					
2.7	Condition of joints/seals	<u>GOOD - 150mm OVERLAPS</u>					
2.8	Number and condition of service entry seals	<u>NONE</u>					
2.9	Membrane steps/corner seals	<u>ALL GOOD + TIDY</u>					
2.10	Repairs or Corrections:	<u>NONE VISIBLE</u>					
3) Photograph Check List – Tick to Confirm – Refer to Examples		I confirm I have independently inspected and verified the gas membrane installation has been completed in accordance with construction details and manufacturers guidance.					
3.1	Internal Venting Pipes Spacing	<u>N/A</u>	Signed: <u>D J Barnes</u> Dated: <u>24/5/17</u>				
3.2	External Cranked Vents Spacing	<u>✓</u>					
3.3	Sub Floor Void	<u>✓</u>	Photographs witnessed and approved by Coopers:				
3.4	Membrane Overview	<u>✓</u>					
3.5	Overlaps	<u>✓</u>	Signed: <u>Aduttians</u> Dated: <u>25/5/17</u>				
3.6	Corners	<u>✓</u>					
3.7	Services	<u>N/A</u>					
3.8	Product Types/Labels	<u>✓</u>					

For Residential Development at New Church Street, Radcliffe.





