



www.hughesforrest.com

VAT Reg. No. 134 2103 24
WEEE ID 4529

AN INDEPENDENT BUILDERS MERCHANT SINCE 1931

BRANCHES AT:

Bolt Street, Newport NP20 2UP Sales Tel: 01633 250515, Accounts Tel: 01633 235951 Showroom Tel: 01633 235958
Newbridge Road Industrial Estate, Pontllanfraith, Blackwood NP12 2XF Tel: 01495 221991 Showroom Tel: 01495 239453
Tredegar Road, Ebbw Vale NP23 6JQ Tel: 01495 301775
Ipswich Road, Cardiff CF23 9AQ Tel: 02920 471669
Glyntaff Sidings, Pentrebach Road, Pontypridd CF37 4BW Tel: 01443 407774
Pantglas Road, Aberfan, Merthyr Tydfil CF48 4QQ Tel: 01443 561667

SALES INVOICE

DOCUMENT NO. B1540270
PAGE NO 1
DATE/TAX POINT 14Oct24
ACCOUNT F011

Invoice to:

FRY & FEWINGS
ACORN HOUSE
CAERLEON ROAD
PONTHIR
NP18 1GZ

Deliver To:

SITE TROSTREY STREET
ADRA HOMES LLP
TROSTREY STREET
NEWPORT

00 Delivered Branch Newport
Advice note AS184829 14Oct24

Customer order OS073610
Tel: Gavin 07531494845 M:Brian 07769904463

QUANTITY	DESCRIPTION	PRICE AND TERMS	VALUE EXCL. VAT	VAT RATE
1	Radius Puriton Barrier Pipe 25mm x 50m XQ2528 02261194	326.50		20.00%

Invoice due for payment by 30Nov24

TOTAL GOODS EXCL. VAT
VAT 20.00%

INVOICE TOTAL

Quotations are valid only on the date at the top of this quote, after which they become an estimate only. Due to price sensitivities in the marketplace prices are subject to change at anytime, with no given notice. A member of staff will be happy to re-quote you at any time. All products are subject to availability. Subject to our terms and conditions of sale. Copies available upon request.



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SALES INVOICE

DOCUMENT NO. B1541672
PAGE NO 1
DATE/TAX POINT 19Oct24
ACCOUNT F011

Invoice to:

FRY & FEWINGS
ACORN HOUSE
CAERLEON ROAD
PONTHIR
NP18 1GZ

Deliver To:

SITE TROSTREY STREET
ADRA HOMES LLP
TROSTREY STREET
NEWPORT

00 Delivered Branch Newport
Advice note AS184915 19Oct24

Customer order OS073711
Tel: Gavin 07531494845 M:Brian 07769904463

QUANTITY	DESCRIPTION	PRICE AND TERMS	VALUE EXCL. VAT	VAT RATE
1	Radius Puriton Barrier Pipe 25mm x 50m XQ2528 02261194	326.50		20.00%

Invoice due for payment by 30Nov24

TOTAL GOODS EXCL. VAT
VAT 20.00%

INVOICE TOTAL

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PURITON® BARRIER PIPE AND FITTINGS SYSTEM



RADIUS
SYSTEMS

Protecting drinking water
through contaminated
land



01 2025





**PROTECTING
OUR DRINKING
WATER WITH
PURITON®**



BUILDING NEW HOMES ON BROWNFIELD SITES

The push for the regeneration of land or premises - previously used for farming, industrial or commercial purposes - into housing, has been encouraged since 1998. These new developments, built on derelict or contaminated land, were promoted to protect the green belt, minimise urban sprawl and make better use of those disused areas.

With governments promoting the regeneration of brownfield sites for new homes, there is a need for a new polyethylene pipeline solution, that will ensure the protection of our drinking water against soil contaminants commonly found in brownfield sites.

Designed for new or replacement potable water supply, Puriton® is an engineered barrier pipe and fittings system.

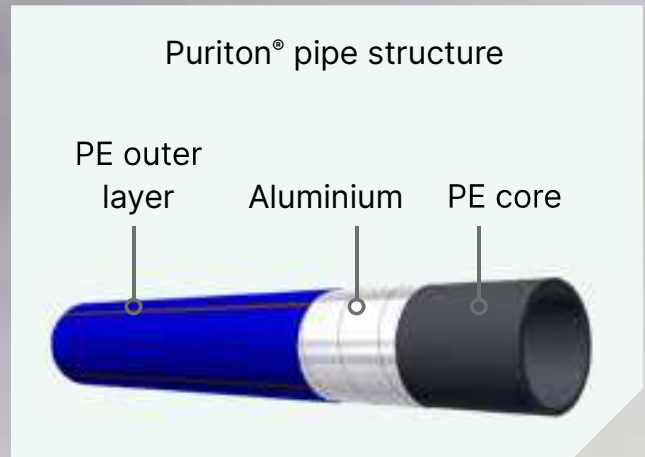
Puriton® provides a cutting-edge solution for the distribution of drinking water which safeguards potable water against soil contaminants by incorporating permeation resistance with flexibility.

PURITON® BARRIER PIPE

The 21st century pipe system for contaminated land.

With its multi-layer composite structure, Radius Systems Puriton® pipe brings together the unique flexibility of polyethylene (PE) with the exceptional barrier properties of aluminium (Al), giving you the assurance of a durable pipe solution for the safe distribution of drinking water through contaminated land.

Lightweight, flexible, corrosion resistant and easy to install our Puriton® pipe is joined using our range of approved mechanical, Redman™ or electrofusion fittings as well as the butt-fusion technique for Puriton® pipe 90mm and above, without the need to post-wrap the finished joint.





Puriton® is joined using the following methods as specified in BS8588 certificate KM672956

- Puriton® plastic mechanical fittings
- Redman™ fittings
- Puriton® electrofusion fittings
- Puriton® gunmetal tapping tees
- Butt-fusion in accordance with WIS 4-32-08 (see Radius Systems installation guidance page 52)

Features & Benefits

- Multi-layer pipe construction PE-Al-PE
- Full barrier pipe system
- Combines the flexibility of polyethylene with the barrier properties of aluminium
- Safeguards drinking water quality
- Easy to handle, flexible and lightweight
- End load resistant system
- Installation cost savings - no requirement for thrust blocks
- No requirement to post-wrap the joints
- Suitable for new and replacement drinking water supply systems
- Brown stripes denote a multi-layer pipe construction

Approvals

- WRAS approved material PE80 for pipe diameters 25 to 63mm (Approval number 1610528)
- BS 8588:2017 approval for pipe diameters 25 to 180mm (Approval number KM 672956)



Available in diameters 25 to 63 mm, our Puriton® service pipe is manufactured from a black PE80 core, an aluminium barrier layer and a light blue PE80 outer layer with brown stripes.

Our Puriton® service pipes are available in coils and also in straight lengths for the 63 mm pipe.

Puriton®
service pipe



To ensure that the barrier properties of the system are maintained, only Puriton® fittings should be used to connect Puriton® pipe. The use of non Puriton® fittings may compromise the barrier properties of the Puriton® system. For more information see page 49.

Nominal diameter mm	Materials	SDR	Pressure rating bar	Core pipe external diameter mm	Core pipe wall thickness mm	Internal diameter mm	Overall external diameter mm	Pipe weight Kg/m	Pipe length m	Product code
25	PE80/Al	11	12.5	25.0 - 25.3	2.3 - 2.7	19.6 - 20.7	27.0 - 27.6	0.3	50	XQ2528
32	PE80/Al	11	12.5	32.0 - 32.3	3.0 - 3.4	25.2 - 26.3	34.0 - 34.6	0.5	50	XQ2535
63	PE80/Al	11	12.5	63.0 - 63.4	5.8 - 6.5	50.0 - 51.8	64.8 - 65.8	1.5	6 25 50 100	XQ2568 XQ2570 XQ2571 XQ2572

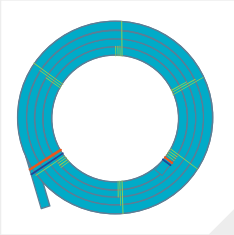
Nominal diameter mm	SDR	Pressure rating bar	Coil inner diameter mm	Coil outer diameter mm	Coil width mm	Coil banding sequence	Coil length m	Coil weight Kg
25	11	12.5	800	930	175	-	50	14.5
32	11	12.5	800	930	175	-	50	22.0
63	11	12.5	1275 1275 1275	1510 1815 1815	221 208 310	●	25 50 100	36.3 72.5 145.0

Puriton[®]

service

pipe coil

dimensions



Pipe weights are for lifting and handling purposes. They are calculated on a per metre length and are based on a maximum diameter and pipe wall thickness.

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APPENDIX V
GAS PROTECTION MEASURES AND REPORTS

PRODUCT SPECIFICATION SHEET



RTEC 4

BS:8485:2015 + A1:2019 Compliant Ground Gas Resistant Membrane

COMPATABILITY TABLE

	CIRIA 665 CS2	CIRIA 665 CS 3-6	BS8485: 2015	NHBC Amber 1	NHBC Amber 2	BRE 211 Radon	VOC & Hydrocarbons
Radon			*	*	*	*	N/A
Carbon Dioxide	*	*	*	*	*	*	N/A
Methane	*	*	*	*	*	*	N/A
VOC / Hydrocarbons Vapours	*	*	*	*	*	*	*

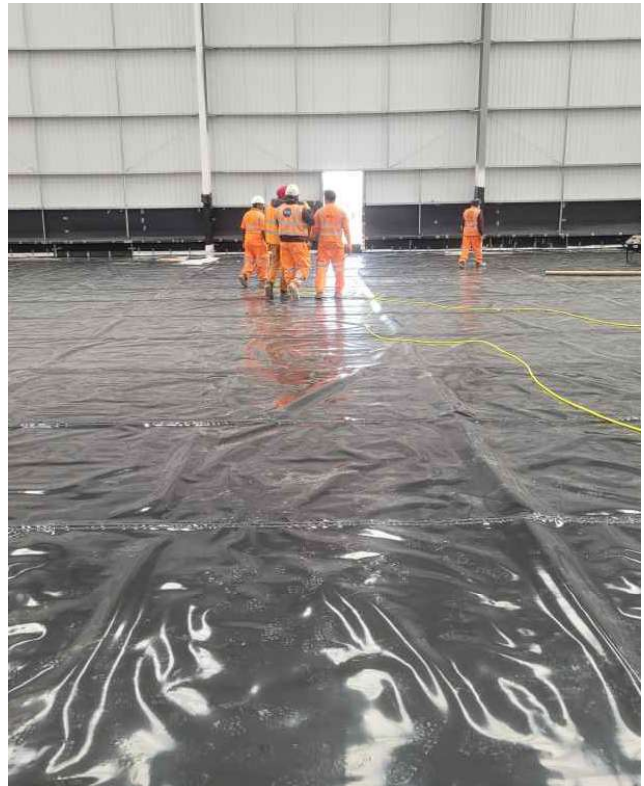
TECHNICAL DATA

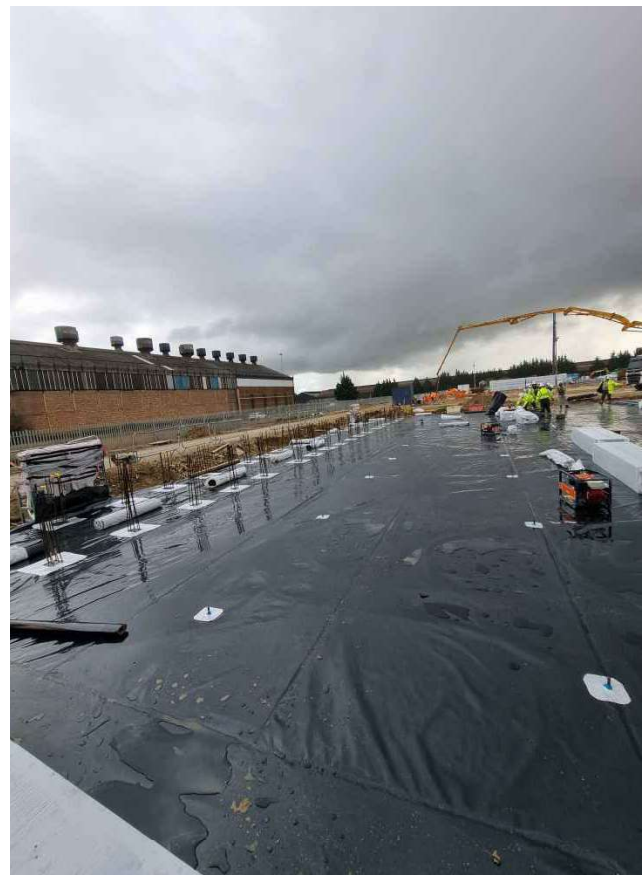
	Value	Units	Test Method
Width	2	M	EN 1849-2
Length	Various	M	EN 1849-2
Thickness	0.4	mm	EN 1849-2
Radon Perm	1.0X10 ⁻¹²	m ² /s	K124/02/95
Methane Perm	<10	ml/m ² /day/atm	BS EN ISO 15105-1
Carbon Dioxide Perm	<9	ml/m ² /day/atm	BS EN ISO 15105-1
weight	400	g/m ²	EN 1849-2
Oxygen Perm	0.08	ml/m ² /day/atm	BS EN ISO 15105-2
Petrol	(ave.)3.4x10 ⁻¹³	mol/m ² .s.pa)	BS EN ISO 15105-2
Diesel	(ave.)3.4x10 ⁻¹³	mol/m ² .s.pa)	BS EN ISO 15105-2
Resistance to static load	>20	kg	EN 12730
Tensile strength (md)	>300	N/50mm	EN 12311-2(A)
Tensile strength (cmd)	>300	N/50mm	EN 12311-2(A)
Tear strength (md)	>230	N	EN 12310-1
Tear strength (cmd)	>230	N	EN 12310-1
Resistance to impact	500	mm	EN 12691-B
Resistance to Puncture	>175	N	ASTM D 4833
Resistance to Puncture	1.7	KN	EN 12236
Reaction to Fire	E	-	EN 13501-1
Resistance to water penetration	pass	-	EN 1928(A)
Durability watertightness after artificial ageing	pass	-	EN 1926
Durability watertightness against chemicals	pass	-	EN1926

DESCRIPTION

RTEC 4 is a high-performance Ground Gas resistant membrane. The membrane is extremely robust and provides protection from moisture therefore negates the need for a separate DPM. Suitable for hot-air and wedge welding.

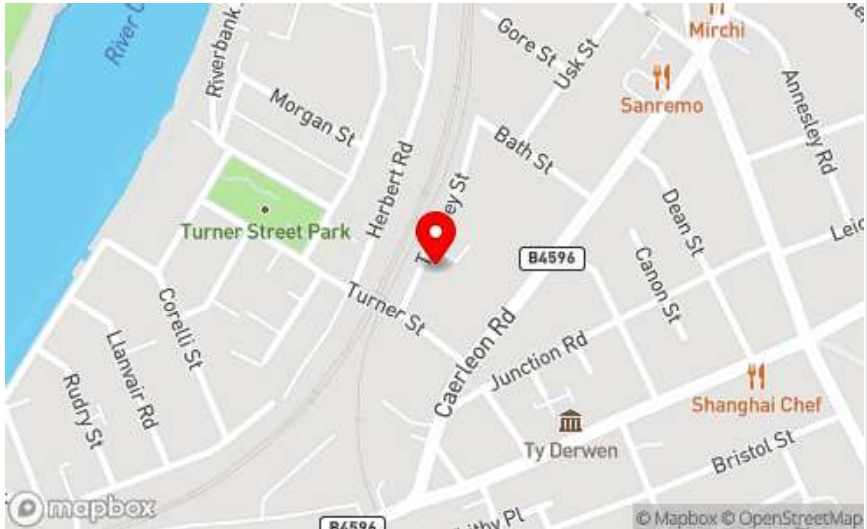
Complies to BS 8485:2015 & A1:2019. CE Certification standard EN13967:2012 EN13249:2016





Daily Handover

Section 1

Project Name	Newport
Customer Name	Adra homes
Description of Works	Total line out to plots 3-7 sealing all corners pipes and thresholds
RAMS signed	Yes
	17/04/2024 03:21 PM
Scope of Works	Complete Lineout
Material Used	RTEC 4, RTEC GRSAM
Date/Time	
Location / GPS	
	Lat: 51.59405517578125 Long: -2.9861537793742983
	17/04/2024 03:22 PM
How Many Pipes?	35
How Many Columns?	
Square Meterage installed?	300
Linear Meterage Installed?	
Rolls Taken	3
Tins Taken	0
Rolls Used	2
Tins Used	0
Validation Yes/No	Yes
Validation Company	Geoshield
Aborted Visit	
Reason for aborted visit	

Daily Handover

Photos and Handover



Daily Handover

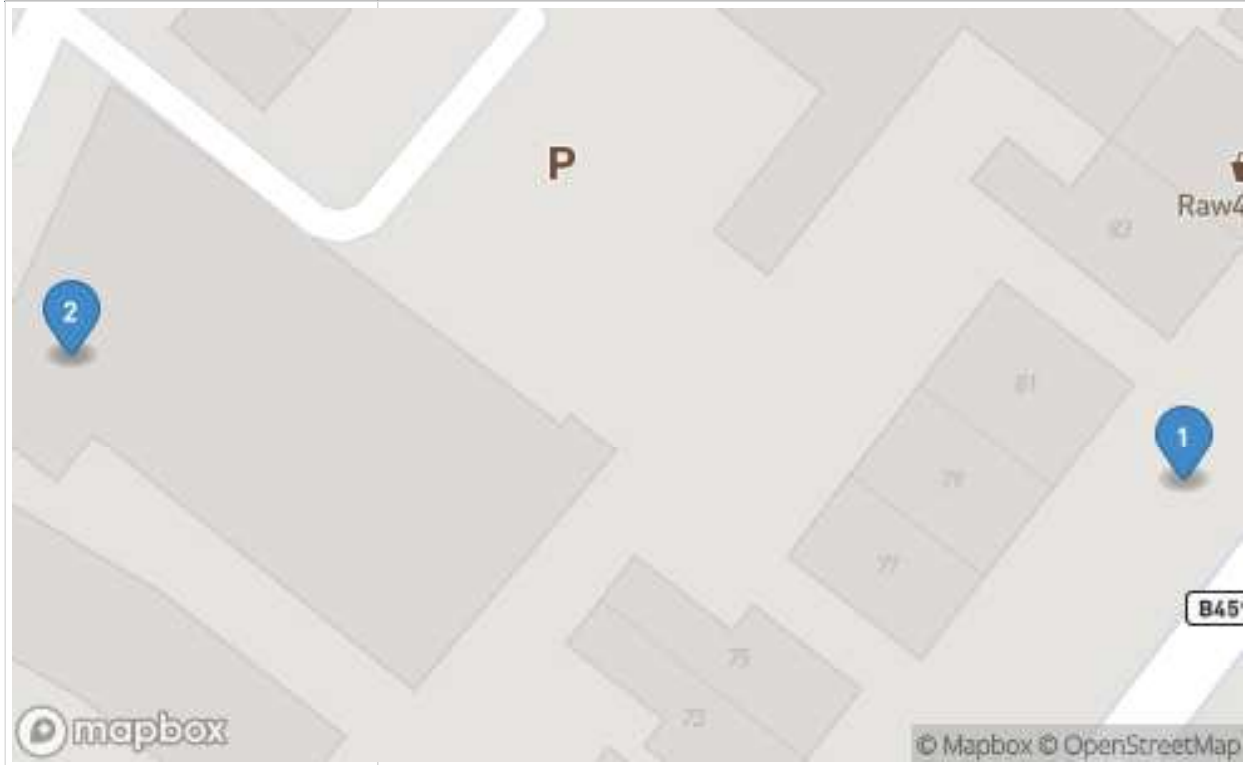
	
Video	
Static Text	We can confirm that we have inspected the works carried out by Dance-Reeves Ltd and are satisfied that the condition and scope of works ordered has been executed in accordance without sub-contract order and specification.
Print Name (Dance-Reeves Operative)	James shaw
Dance-Reeves Employee Signature	

Daily Handover

	 51.593945, -2.985090 17/04/2024 03:28 PM
Static Text	Dance-Reeves Ltd Unit A5a, Barton Industrial Estate Faldo Road Barton Beds, MK45 4RP
Print Name (Customer)	
Customer Signature	
	 51.594021, -2.986173 17/04/2024 03:24 PM
Customer Email	Fryandfewings@hotmail.com

Daily Handover

Form Locations



Daily Handover

Section 1

Project Name	Newport
Customer Name	Adra homes
Description of Works	Total line out to plots 1,2,8,9 sealing all corners pipes and thresholds All 9 plots Passed validation zero faults
RAMS signed	Yes
	18/04/2024 12:45 PM
Scope of Works	Complete Lineout
Material Used	RTEC 4, RTEC GRSAM
Date/Time	
Location / GPS	
	Lat: 51.593719482421875 Long: -2.9860054601610155
	18/04/2024 12:45 PM
How Many Pipes?	24
How Many Columns?	
Square Meterage installed?	300
Linear Meterage Installed?	
Rolls Taken	2
Tins Taken	0
Rolls Used	2
Tins Used	0
Validation Yes/No	Yes
Validation Company	Geoshield
Aborted Visit	