

February 2009

Uniclass L521
CI/SFB (47) N

# Redland

## GUIDE TO ROOFING SYSTEMS

PAGES 108-120



**MONIER**

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# PRODUCT CODES – SLATE RANGE

Product codes are given with dimensions below in small text. All dimensions are in mm (unless stated) in the order: length, width and height (where applicable).  
For fittings colour range availability refer to table on page 108-109.



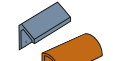
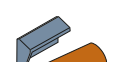
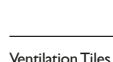











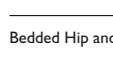
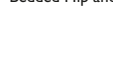



	Natural Slate	Cambrian	Saxon	Landmark Slate	Richmond	Stonewold II	Mini Stonewold/ MockBond Mini Stonewold
<b>Slates</b>							
Standard Slate (shown above)	For sizes see page 21	4701 300 x 336	4951 412 x 334	4601 412 x 334	4851 412 x 334	4161 430 x 380	4261/4271 418 x 334
Cambrian Slate-and-a-half	–	4702 300 x 486	–	–	–	–	–
Cambrian Left-hand Verge Slate	–	4703 300 x 300	–	–	–	–	–
Cambrian Left-hand Verge Slate-and-a-half	–	4704 300 x 450	–	–	–	–	–
Cambrian Double Slate	–	4705 300 x 636	–	–	–	–	–
Half Slate Pair (left-hand) (right-hand)	–	–	4954 412 x 150 412 x 182	4604 412 x 150 412 x 184	4854 412 x 150 412 x 182	4164 430 x 172 430 x 208	4263 418 x 147 418 x 187
Top Slate	–	–	4955 412 x 334	4605 412 x 334	4855 412 x 334	–	–
Eaves Slate	–	–	4964 412 x 334	4614 412 x 334	4864 412 x 334	–	–
<b>Underlays</b>							
Spirtech 250 vapour permeable underlay	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m
Veltitech non-breathable underlay	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m
<b>Eaves Systems</b>							
RedVent Eaves Ventilation System 350-450mm	9189	9189	9189	9189	9189	9189	9189
RedVent Eaves Ventilation System 450-600mm	9190	9190	9190	9190	9190	9190	9190
Extension Trays 350-450mm	9498	9498	9498	9498	9498	9498	9498
Extension Trays 450-600mm	9499	9499	9499	9499	9499	9499	9499
RedVent 25 Over-Fascia Vent Underlay Support Tray	9593 9076	9593 9076	9593 9076	9593 9076	9593 9076	9593 9076	9593 9076
<b>Verge Systems</b>							
Ambi-DryVerge System	–	9570	9573	9573	9573	9576	9550
Ambi-Dry Eaves/Ridge System	–	9491	9487	9487	9487	9495	9552
Continuous DryVerge	9412	–	–	–	–	–	–
<b>Hip Systems</b>							
Cambrian Mitred Hip System	–	9504	–	–	–	–	–
Dry Hip System	9048	9048	9047	9047	9047	9046	9046
Rapid Hip	9503	9503	9524	9524	9524	9028	9028
Universal Angle Hip/Ridge Junction	9520	9520	9520	9520	9520	9520	9520
Universal Angle Hip without nail holes	7777	7777	7777	8322	7777	7777	7777
Universal Angle Hip with nail holes	7778 450 x 226 x 75	7778 450 x 226 x 75	7778 450 x 226 x 75	8321 450 x 226 x 75	7778 450 x 226 x 75	7778 450 x 226 x 75	7778 450 x 226 x 75
Third Round Hip without nail holes	8122	8122	8122	8312	8122	8122	8122
Third Round Hip with nail holes	7411 450 x 233 x 70	7411 450 x 233 x 70	7411 450 x 233 x 70	8311 450 x 233 x 70	7411 450 x 233 x 70	7411 450 x 233 x 70	7411 450 x 233 x 70
Hip Iron	9258	9258	9258	9258	9258	9258	9258

	Natural Slate	Cambrian	Saxon	Landmark Slate	Richmond	Stonewold II	Mini Stonewold/ MockBond Mini Stonewold
<b>Hip Systems (continued)</b>							
Universal Angle Block-end Hip	7779 450 x 226 x 75	7779 450 x 226 x 75	7779 450 x 226 x 75	8327 450 x 226 x 75	7779 450 x 226 x 75	7779 450 x 226 x 75	7779 450 x 226 x 75
Third Round Block-end Hip	7784 450 x 233 x 70	7784 450 x 233 x 70	7784 450 x 233 x 70	8317 450 x 233 x 70	7784 450 x 233 x 70	7784 450 x 233 x 70	7784 450 x 233 x 70
<b>Valley Systems</b>							
Cambrian GRP Valley	–	9553	–	–	–	–	–
125 GRP Valleys	–	–	9595	9595	9595	9595	9595
Natural Slate GRP Valley	9413	–	–	–	–	–	–
<b>Abutment Systems</b>							
Top Edge Abutment Ventilation System	9548	9548	9548	9548	9548	9548	9548
Rapid Flashing (5m/10m x 280mm)	9955/9956	9955/9956	9955/9956	9955/9956	9955/9956	9955/9956	9955/9956
Rapid Flashing (5m x 370mm)	9957	9957	9957	9957	9957/9	9957/9958	9957/9958
Abutment GRP Secret Gutter	9596	9596	9596	9596	9596	9596	9596
<b>Ridge Systems</b>							
Dry & DryVent Ridge System – Universal Angle	9059	9059	9059	9059	9059	9059	9059
Dry & DryVent Ridge System – Half Round	9058	9058	9058	9058	9058	9058	9058
Dry & DryVent Ridge System – Rosemary Half Round	9056	9056	9056	9056	9056	9056	9056
Rapid Ridge System – Universal Angle	9306	9306	9306	9306	9306	9306	9306
Rapid Ridge System – Half Round	9303	9303	9303	9303	9303	9303	9303
Rapid Vented Ridge – Universal Angle	9308	9308	9308	9308	9308	9308	9308
Rapid Vented Ridge – Half Round	9302	9302	9302	9302	9302	9302	9302
Rapid Vented Ridge – Universal System	9311	9311	9311	9311	9311	9311	9311
Rapid Ridge Gas Flue Conversion Roll	9486	9486	9486	9486	9486	9486	9486
Ridge Ventilation Terminal – Universal Angle	7254 450 x 259 x 140	7254 450 x 259 x 140	7254 450 x 259 x 140	8330 450 x 259 x 140	7254 450 x 259 x 140	7254 450 x 259 x 140	7254 450 x 259 x 140
Ridge Ventilation Terminal – Hi-Pitch Universal Angle	7255 678 x 255 x 187	7255 678 x 255 x 187	7255 678 x 255 x 187	–	7255 678 x 255 x 187	–	7255 678 x 255 x 187
Ridge Ventilation Terminal – Half Round	7253 450 x 256 x 150	7253 450 x 256 x 150	7253 450 x 256 x 150	8310 450 x 256 x 150	7253 450 x 256 x 150	7253 450 x 256 x 150	7253 450 x 256 x 150
Ridge Ventilation Terminal – Rosemary Half Round	8486 450 x 256 x 180	8486 450 x 256 x 180	8486 450 x 256 x 180	8486 450 x 256 x 180	8486 450 x 256 x 180	8486 450 x 256 x 180	8486 450 x 256 x 180
Ridge Ventilation Terminal Adaptor	9175	9175	9175	9175	9175	9175	9175
Flexible Pipe (100 to 100)	9172	9172	9172	9172	9172	9172	9172
Gas Flue Ridge Terminal – Universal Angle	7242 450 x 259 x 172	7242 450 x 259 x 172	7242 450 x 259 x 172	8329 450 x 259 x 172	7242 450 x 259 x 172	7242 450 x 259 x 172	7242 450 x 259 x 172
Gas Flue Ridge Terminal – Half Round	7241 450 x 256 x 176	7241 450 x 256 x 176	7241 450 x 256 x 176	8309 450 x 256 x 176	7241 450 x 256 x 176	7241 450 x 256 x 176	7241 450 x 256 x 176
Gas Flue Ridge Terminal Extension Adaptor	9143	9143	9143	9143	9143	9143	9143
Gas Flue Blanking Plates	9099	9099	9099	9099	9099	9099	9099
Ridge Tile Outlet – Universal Angle	8192	8192	8192	–	8192	8192	8192
Ridge Tile Outlet – Half Round	8191	8191	8191	–	8191	8191	8191
Universal Angle Ridge	7146 450 x 259 x 106	7146 450 x 259 x 106	7146 450 x 259 x 106	8319 450 x 259 x 106	7146 450 x 259 x 106	7146 450 x 259 x 106	7146 450 x 259 x 106
Hi-Pitch Universal Angle Ridge	7151 335 x 255 x 153	7151 335 x 255 x 153	7151 335 x 255 x 153	–	7151 335 x 255 x 153	–	7151 335 x 255 x 153
Half Round Ridge	8101 450 x 256 x 98	8101 450 x 256 x 98	8101 450 x 256 x 98	8302 450 x 256 x 98	8101 450 x 256 x 98	8101 450 x 256 x 98	8101 450 x 256 x 98
Rosemary Half Round Ridge	8450 300 x 256 x 128	8450 300 x 256 x 128	8450 300 x 256 x 128	8450 300 x 256 x 128	8450 300 x 256 x 128	8450 300 x 256 x 128	8450 300 x 256 x 128
Universal Angle Block-end Ridge	7518 450 x 259 x 106	7518 450 x 259 x 106	7518 450 x 259 x 106	8320 450 x 259 x 106	7518 450 x 259 x 106	7518 450 x 259 x 106	7518 450 x 259 x 106
Hi-Pitch Universal Angle Block-end Ridge	7401 365 x 255 x 153	7401 365 x 255 x 153	7401 365 x 255 x 153	–	7401 365 x 255 x 153	–	7401 365 x 255 x 153
Half Round Block-end Ridge	7519 450 x 256 x 98	7519 450 x 256 x 98	7519 450 x 256 x 98	8303 450 x 256 x 98	7519 450 x 256 x 98	7519 450 x 256 x 98	7519 450 x 256 x 98
Rosemary Half Round Block-end Ridge	8456 300 x 256 x 128	8456 300 x 256 x 128	8456 300 x 256 x 128	8456 300 x 256 x 128	8456 300 x 256 x 128	8456 300 x 256 x 128	8456 300 x 256 x 128

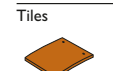









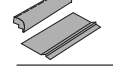
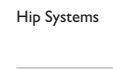










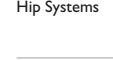


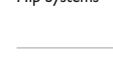













# PRODUCT CODES – SLATE RANGE

Product codes are given with dimensions below in small text. All dimensions are in mm (unless stated) in the order: length, width and height (where applicable).  
For fittings colour range availability refer to table on page 108-109.

	Natural Slate	Cambrian	Saxon	Landmark Slate	Richmond	Stonewold II	Mini Stonewold/ MockBond Mini Stonewold
<b>Ridge Systems</b> (continued)							
 DryVent Monoridge System – Universal Angle	9084	9084	9084	9084	9084	9084	9084
 DryVent Monoridge System – Half Round	9084	9084	9084	9084	9084	9084	9084
 Universal Angle Monoridge	7148 450 x 154 x 273	7148 450 x 154 x 273	7148 450 x 154 x 273	8324 450 x 154 x 273	7148 450 x 154 x 273	7148 450 x 154 x 273	7148 450 x 154 x 273
 Hi-Pitch Universal Angle Monoridge	7154 335 x 154 x 320	7154 335 x 154 x 320	7154 335 x 154 x 320	–	7154 335 x 154 x 320	–	7154 335 x 154 x 320
 Half Round Monoridge	7203 450 x 154 x 273	7203 450 x 154 x 273	7203 450 x 154 x 273	8304 450 x 154 x 273	7203 450 x 154 x 273	7203 450 x 154 x 273	7203 450 x 154 x 273
 Universal Angle Block-end Monoridge Left-hand	7297 450 x 154 x 273	7297 450 x 154 x 273	7297 450 x 154 x 273	8325 450 x 154 x 273	7297 450 x 154 x 273	7297 450 x 154 x 273	7297 450 x 154 x 273
 Universal Angle Block-end Monoridge Right-hand	7298 450 x 154 x 273	7298 450 x 154 x 273	7298 450 x 154 x 273	8326 450 x 154 x 273	7298 450 x 154 x 273	7298 450 x 154 x 273	7298 450 x 154 x 273
 Hi-Pitch Universal Angle Block-end Monoridge Left-hand	7785 365 x 154 x 320	7785 365 x 154 x 320	7785 365 x 154 x 320	–	7785 365 x 154 x 320	–	7785 365 x 154 x 320
 Hi-Pitch Universal Angle Block-end Monoridge Right-hand	7786 365 x 154 x 320	7786 365 x 154 x 320	7786 365 x 154 x 320	–	7786 365 x 154 x 320	–	7786 365 x 154 x 320
 Half Round Block-end Monoridge Left-hand	7266 450 x 154 x 273	7266 450 x 154 x 273	7266 450 x 154 x 273	8305 450 x 154 x 273	7266 450 x 154 x 273	7266 450 x 154 x 273	7266 450 x 154 x 273
 Half Round Block-end Monoridge Right-hand	7267 450 x 154 x 273	7267 450 x 154 x 273	7267 450 x 154 x 273	8306 450 x 154 x 273	7267 450 x 154 x 273	7267 450 x 154 x 273	7267 450 x 154 x 273
<b>Ventilation Tiles</b>							
 RedLine Ventilation Tile with Underlay Seal	–	–	9120	9120	9120	–	9118
 RedLine Ventilation Flexible Pipe	–	–	9194	9194	9194	–	9194
 Natural Slate Standard Vent Tile	9414	–	–	–	–	–	–
 4.5k ThruVent Tile with Underlay Seal Flexible Pipe (75 to 100)	–	7705	–	–	–	–	–
 8.8k ThruVent Tile with Underlay Seal Flexible Pipe (100 to 100)	9188	9188	–	–	–	–	–
 Natural Slate Hi-Capacity Vent Tile	–	–	7937	7940	7936	7934	7935
 Hi-Flow ThruVent Tile with Underlay Seal	–	–	9172	9172	9172	9172	9172
 Natural Slate Hi-Capacity Vent Tile	9416	–	–	–	–	–	–
 Hi-Flow ThruVent Tile with Underlay Seal	–	7349	7361	8336	7360	–	–
<b>Fixing</b>							
 Slate Nails (Alum. Alloy)	–	–	9332 50 x 3	9332 50 x 3	9332 50 x 3	–	9338 50 x 3.35
 Natural Slate Nails (Copper)	9417 30 x 3	–	–	–	–	–	–
 Natural Slate Nails (Copper)	9418 38 x 3	–	–	–	–	–	–
 Eaves Clip	–	9192 (inc nails)	9296	9296	9296	9296	9527
 Eaves Clip Nails (Alum. Alloy)	–	–	9332 50 x 3	9332 50 x 3	9332 50 x 3	9332 50 x 3	9332 50 x 3
 Slate Clip	–	9196 (inc nails)	9299	9299	9299	9240	9530 (inc nails)
 Verge Clip	–	9193 (inc nails)	9481 25 x 2.65 Clout	9481 25 x 2.65 Clout	9481 25 x 2.65 Clout	9297 25 x 2.65 Clout	9529 25 x 2.65 Clout
 Double Battening Clip (Alum. Alloy)	–	–	–	–	–	9204 40 x 2.65	–
<b>Bedded Hip and Ridge Mechanical Fixing</b>							
 Stainless Steel Batten Straps	9447	9447	9447	9447	9447	9447	9447
 Universal Angle Clamping Plates	9567	9567	9567	9567	9567	9567	9567
 Half Round Clamping Plates	9566	9566	9566	9566	9566	9566	9566
 Woodscrews (100 x 4), Washers & Grommets	9584	9584	9584	9584	9584	9584	9584
<b>Safety Systems</b>							
 Safety Hook	–	–	–	–	–	–	9889























# PLAIN TILE RANGE



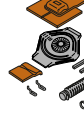












	Rosemary Craftsman	Rosemary Classic	Heathland	Downland	Plain Tile	DuoPlain Tile	
<b>Tiles</b>							
 Standard Tile (shown above)	6921 265 x 165	As per colour 265 x 165	6661 265 x 165	6651 265 x 165	6151 268 x 165	6101 268 x 330	
 Rosemary Red	–	6501	–	–	–	–	
 Rosemary Russet Mix	–	6701	–	–	–	–	
 Rosemary Light, Medium Mixed & Blue Brindle	–	6801	–	–	–	–	
 Rosemary Burnt Blend/Copper Brindle/Dark Antique	–	6601	–	–	–	–	
 Eaves/Top Tile	6924 200 x 165	As per colour 215 x 165	6664 215 x 164	6654 200 x 165	6154 200 x 165	–	
 Rosemary Red	–	6504	–	–	–	–	
 Rosemary Russet Mix	–	6704	–	–	–	–	
 Rosemary Light, Medium Mixed & Blue Brindle	–	6804	–	–	–	–	
 Rosemary Burnt Blend/Copper Brindle/Dark Antique	–	6604	–	–	–	–	
 Tile-and-a-half	6929 265 x 248	As per colour 265 x 248	6669 265 x 246	6659 265 x 248	6159 268 x 248	6102 268 x 480	
 Rosemary Red	–	6509	–	–	–	–	
 Rosemary Russet Mix	–	6709	–	–	–	–	
 Rosemary Light, Medium Mixed & Blue Brindle	–	6809	–	–	–	–	
 Rosemary Burnt Blend/Copper Brindle/Dark Antique	–	6609	–	–	–	–	
 Left-hand Verge (Three Quarter) Tile	–	–	–	–	–	6103 268 x 222	
 Right-hand Verge (Three Quarter) Tile	–	–	–	–	–	6104 268 x 255	
<b>Underlays</b>							
 Spiritech 250	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	
 Veltech	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	
<b>Eaves Systems</b>							
 RedVent Eaves Ventilation System 350-450mm	9189	9189	9189	9189	9189	9189	
 RedVent Eaves Ventilation System 450-600mm	9190	9190	9190	9190	9190	9190	
 Extension Tray 350-450mm	9498	9498	9498	9498	9498	9498	
 Extension Tray 450-600mm	9499	9499	9499	9499	9499	9499	
 RedVent 25 Over-Fascia Vent Underlay Support Tray	9593	9593	9593	9593	9593	9593	
 RedVent 25 Over-Fascia Vent Underlay Support Tray	9076	9076	9076	9076	9076	9076	
<b>Hip Systems</b>							
 Dry Hip System	–	–	–	–	–	9534	
 Rapid Hip System	–	–	–	–	–	9562	
 Bonnet Hips	35° - 42.5° 43° - 60° 35° - 50°	8428 8429 –	8428 8429 –	– – 7671	– – 7602	– – 8125	– – –
 Arris Hips	35° 40° 45° 50° 35° - 42° 42.5° - 50°	– – – – – –	8411 8412 8413 8414 – –	– – – – – –	– – – – – –	– – – – 7128 7127	– – – – – –
 Third Round Hips (without/with nail holes)	–	8454/NA 300 x 233 x 70	–	–	–	8122/7411 450 x 233 x 70	8212/8211 450 x 233 x 70
 Hip Iron	9258	9258	9258	9258	9258	9258	9258
 Third Round Hip Block-end	–	–	–	–	–	–	7404
 Baby Ridge*	8482 300 x 140 x 70	8482 300 x 140 x 70	7675 300 x 140 x 70	7606 300 x 140 x 70	7107 300 x 140 x 70	7408 300 x 140 x 70	–
 Pascal Roll*	–	–	–	–	7126 300 x 150 x 70	–	–
<b>Valley Systems</b>							
 Curved Valley Tiles	40° - 50° 35° - 50°	8432 –	8432 –	– 7672	– 7603	– 8133	– –
 Angular Valley Tiles	35° 40° - 50°	8431 8437	– –	– –	– –	– –	– –
 GRP 125 Valley	9595	9595	9595	9595	9595	9595	9595

\* Not suitable for main roof areas (should be used on porches/bay windows only)

# PRODUCT CODES – PLAIN TILE RANGE

Product codes are given with dimensions below in small text.  
All dimensions are in mm (unless stated) in the order: length,  
width and height (where applicable).  
For fittings colour range availability refer to table on page 108-109.

	Rosemary Craftsman	Rosemary Classic	Heathland	Downland	Plain Tile	DuoPlain Tile
<b>Abutment Systems</b>						
 Top Edge Abutment Ventilation System	9548	9548	9548	9548	9548	9548
 Rapid Flashing (5m/10m x 280mm)	9955/9956	9955/9956	9955/9956	9955/9956	9955/9956	9955/9956
 Rapid Flashing (5m x 370mm)	9957	9957	9957	9957	9957	9957
 Abutment GRP Secret Gutter	-	-	-	-	-	9596
<b>Ridge Systems</b>						
 Dry & DryVent Ridge System – Half Round	9056	9056	9057	9057	9058	9058
 Rapid Ridge System – Half Round	-	-	-	-	9303	9303
 Rapid Vented Ridge – Half Round	-	-	-	-	9302	9302
 Rapid Vented Ridge – Universal System	-	-	-	-	9311	9311
 Ridge Ventilation Terminal – Half Round	8486 450 x 256 x 180	8486 450 x 256 x 180	7678 450 x 256 x 150	7621 450 x 256 x 150	7253 450 x 256 x 150	7402 450 x 256 x 150
 Ridge Ventilation Terminal Adaptor Flexible Pipe (100 to 100)	9175 9172	9175 9172	9175 9172	9175 9172	9175 9172	9175 9172
 Gas Flue Ridge Terminal – Half Round	-	-	7679 450 x 256 x 176	7622 450 x 256 x 176	7241 450 x 256 x 176	7410 450 x 256 x 176
 Gas Flue Ridge Terminals Extension Adaptor	-	-	9143	9143	9143	9143
 Gas Flue Blanking Plates	-	-	9099	9099	9099	9099
 Rapid Range Gas Flue Conversion Roll	-	-	-	-	9486	9486
 Ridge Tile Outlet – Half Round	-	-	-	-	8191	7405
 Hogsback Ridge	8480 300 x 292 x 119	8480 300 x 292 x 119	-	-	-	-
 Plain Angle Ridge	-	-	-	-	7102 450 x 286 x 178	-
	-	-	-	-	7105 450 x 286 x 103	-
	-	-	-	-	7106 450 x 286 x 71	-
 Half Round Ridge	8450 300 x 256 x 128	8450 300 x 256 x 128	7670 300 x 256 x 98	7601 300 x 256 x 98	8101 450 x 256 x 98	8201 450 x 256 x 98
 Half Round Block-end Ridge	-	-	7691 300 x 256 x 98	7663 300 x 256 x 98	7519 450 x 256 x 98	7409 450 x 256 x 98
 DryVent Monoridge System – Half Round	-	-	9084	9084	9084	9084
 Half Round Monoridge	-	-	7683 450 x 154 x 273	7625 450 x 154 x 273	7203 450 x 154 x 273	7403 450 x 154 x 273
 Half Round Block-end Monoridge (left/right-hand)	-	-	7266/7267	7266/7267	7266/7267	7406/7407

	Rosemary Craftsman	Rosemary Classic	Heathland	Downland	Plain Tile	DuoPlain Tile
<b>Ventilation Tiles</b>						
 RedLine Plain Tile Ventilation Unit with Underlay Seal	9119	9119	9119	9119	9119	9113
 RedLine Ventilation Adaptor Flexible Pipe (100 to 100)	9175 9172	9175 9172	9175 9172	9175 9172	9175 9172	- 9172
 4.5k ThruVent Tile with Underlay Seal (concrete) ThruVent Flexible Pipe (75 to 100)	-	-	7677 9188	7620 9188	7347 9188	- -
<b>Internal and External Vertical Angles</b>						
 External Angle 90° (left/right-hand)	8441/8440 165 x 83	8441/8440 165 x 83	7673/7674 165 x 83	7604/7605 165 x 83	8134/8135 165 x 83	-
 Internal Angle 90° (left/right-hand)	8443/8442 164 x 92	8443/8442 164 x 92	7680/7681 164 x 92	7623/7624 164 x 92	7136/7137 164 x 92	-
 External Angle 135° (left/right-hand)	-	-	7684/7685 168 x 92	7627/7628 168 x 92	7142/7143 168 x 92	-
<b>Fixing</b>						
 Tile Nail (Alum. Alloy)	9331 40 x 2.65	9331 40 x 2.65	9331 40 x 2.65	9331 40 x 2.65	9331 40 x 2.65	-
 Tile Nail (Alum. Alloy)	-	-	-	-	-	9334 45 x 3
 Eaves Screw (Stainless Steel)	-	-	-	-	-	9104 40 x 4.17
 Top Tile Clip	-	-	9282	9282	9282	-
 Tile-to-Tile Clip	-	-	-	-	-	9197
 Universal Verge Clip (left/right-hand)	-	-	-	-	-	9198
<b>Bedded Hip and Ridge Mechanical Fixing</b>						
 Stainless Steel Batten Straps	9447	9447	9447	9447	9447	9447
 Half Round Clamping Plates	9566	9566	9566	9566	9566	9566
 Woodscrew (100 x 4), Washers & Grommets	9584	9584	9584	9584	9584	9584

# PRODUCT CODES – PROFILE RANGE

Product codes are given with dimensions below in small text. All dimensions are in mm (unless stated) in the order: length, width and height (where applicable).  
For fittings colour range availability refer to table on page 108-109.

	Old Hollow Clay Pantile	Cathedral Clay Pantile	Landmark Double Pantile	Landmark Double Roman	Grovebury	50 Double Roman	Regent	Renown	Norfolk Pantile	49 Tile
<b>Tiles</b>	Standard Tile (shown above)									
	5991 343 x 242	5921 409 x 264	5901 418 x 332	5201 418 x 330	5741 418 x 332	2201 418 x 330	3401 418 x 332	1501 418 x 330	5101 381 x 227	1101 382 x 226
<b>Underlays</b>	Spiritech 250 vapour permeable underlay									
	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m	9077 50m x 1.5m
	Veltitech non-breathable underlay									
	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m	9072 30m x 1.5m
<b>Eaves Systems</b>	RedVent Eaves Ventilation System 350-450mm									
	9189	9189	9189	9189	9189	9189	9189	9189	9189	9189
	RedVent Eaves Ventilation System 450-600mm									
	9190	9190	9190	9190	9190	9190	9190	9190	9190	9190
	Extension Trays 350-450mm									
	9498	9498	9498	9498	9498	9498	9498	9498	9498	9498
	Extension Trays 450-600mm									
	9499	9499	9499	9499	9499	9499	9499	9499	9499	9499
	RedVent 25 Over-Fascia Vent									
	9593	9593	9593	9593	9593	9593	9593	9593	9593	9593
	Underlay Support Tray									
	9076	9076	9076	9076	9076	9076	9076	9076	9076	9076
<b>Verge Systems</b>	Cloaked Verge System (left/right-hand)									
	–	5927/5928#	8333/8334	8343/8344	7273/7274	7275/7276	7271/7272	7277/7278	–	–
	Left-hand Verge Tile									
	5992#	5926#	–	–	–	–	–	–	–	–
	Half Tile/Two-Thirds Tile									
	–	5929#	8331 418 x 182	–	7770 418 x 182	7730 418 x 180	7750 418 x 182	7710 418 x 180	–	–
	Ambi-Dry Verge System									
	–	–	9550	9550	9550	9550	9550	9550	–	–
	Ambi-Dry Eaves/Ridge Pack									
	–	–	9552	9552	9552	9552	9552	9552	–	–
<b>Hip Systems</b>	Dry Hip System									
	–	–	9046	9046	9046	9046	9046	9046	–	–
	Rapid Hip System									
	–	9870	9028	9028	9028	9028	9028	9028	9502	9502
	Third Round Hip/Ridge Junction									
	–	9521	9521	9521	9521	9521	9521	9521	9521	9521
	Third Round Hip (without/with nail holes)									
	–	8312/8311*	8312/8311 450 x 233 x 70	8312/8311 450 x 233 x 70	8122/7411 450 x 233 x 70	8122/7411 450 x 233 x 70	8122/7411 450 x 233 x 70	8122/7411 450 x 233 x 70	8122/7411 450 x 233 x 70	8122/7411 450 x 233 x 70
	Hip Iron									
	9258	9258	9258	9258	9258	9258	9258	9258	9258	9258
	Third Round Block-end Hip									
	–	8317*	8317 450 x 233 x 70	8317 450 x 233 x 70	7784 450 x 233 x 70	7784 450 x 233 x 70	7784 450 x 233 x 70	7784 450 x 233 x 70	7784 450 x 233 x 70	7784 450 x 233 x 70
<b>Valley Systems</b>	125 GRP Valley									
	9595	9595	9595	9595	9595	9595	9595	9595	9595	9595
<b>Abutment Systems</b>	Top Edge Abutment Ventilation System									
	–	–	9541	9543	9541	9543	9542	9544	9545	–
	Rapid Flashing (5m/10m x 280mm)									
	9955/9956	9955/9956	9955/9956	9955/9956	9955/9956	9955/9956	9955/9956	9955/9956	9955/9956	9955/9956
	Rapid Flashing (5m x 370mm)									
	9957	9957	9957	9957	9957	9957	9957	9957	9957	9957
<b>Ridge Systems</b>	Dry & DryVent Ridge System – Half Round									
	–	–	9094	9095	9094	9095	9096	9097	9055	–
	Rapid Ridge System – Half Round									
	–	–	9303	9303	9303	9303	9303	9303	9303	9303
	Rapid Vented Ridge System – Half Round									
	–	9304	9304	9304	9304	9304	9304	9304	9304	9304
	Rapid Vented Ridge – Universal System									
	–	–	9311	9311	9311	9311	9311	9311	9311	9311
	Rapid Range Gas Flue Conversion Roll									
	–	9486	9486	9486	9486	9486	9486	9486	9486	9486
	Ridge Ventilation Terminal – Half Round									
	–	8310*	8310 450 x 256 x 150	8310 450 x 256 x 150	7253 450 x 256 x 150	7253 450 x 256 x 150	7253 450 x 256 x 150	7253 450 x 256 x 150	7253 450 x 256 x 150	7253 450 x 256 x 150
	Ridge Ventilation Terminal Adaptor									
	–	9175	9175	9175	9175	9175	9175	9175	9175	9175
	Flexible Pipe (100 to 100)									
	–	9172	9172	9172	9172	9172	9172	9172	9172	9172

\*Terracotta and Brindle codes. Consult Customer Service Hotline for Black product codes. Note all fittings are concrete unless marked # which are clay.

	Old Hollow Clay Pantile	Cathedral Clay Pantile	Landmark Double Pantile	Landmark Double Roman	Grovebury	50 Double Roman	Regent	Renown	Norfolk Pantile	49 Tile
<b>Ridge Systems (continued)</b>	Gas Flue Ridge Terminals – Half Round									
	–	8309	8309	8309	7241	7241	7241	7241	7241	7241
	Gas Flue Ridge Terminals Extension Adaptor									
	–	9143	9143	9143	9143	9143	9143	9143	9143	9143
	Gas Flue Blanking Plates									
	–	–	9098	9098	9098	9098	9098	9098	9089	–
	Ridge Tile Outlet – Half Round									
	–	–	–	–	8191	8191	8191	8191	8191	8191
	Half Round Ridge									
	–	8302	8302	8302	8101	8101	8101	8101	8101	8101
	Capped Half Round Ridge									
	7835#	7831#	–	–	–	–	–	–	–	–
	Half Round Block-end Ridge									
	–	8303	8303#	8303	7519	7519	7519	7519	7519	7519
	Capped Half Round Block-end Ridge									
	–	7832/7833#	–	–	–	–	–	–	–	–
	DryVent Monoridge System – Half Round									
	–	–	9080	9082	9080	9082	9079	9081	83	–
	Half Round Monoridge									
	–	8304*	8304	8304	7203	7203	7203	7203	7203	7203
	Half Round Block-end Monoridge (left/right-hand)									
	–	8305/8306*	8305/8306	8305/8306	7266/7267	7266/7267	7266/7267	7266/7267	7266/7267	7266/7267
	Dentil Slip									
	7172	7172	7173	7172	7173	7172	7174	–	7172	–
<b>Ventilation Tiles</b>	RedLine Ventilation Tile with Underlay Seal									
	–	–	9114	9117	9114	9117	9115	9116	–	–
	RedLine Ventilation Flexible Pipe (100 to 100)									
	–	–	9194	9194	9194	9194	9194	9194	–	–
	4.5k ThruVent Tile with Underlay Seal									
	7834	7830	–	–	–	–	–	–	7329	7334
	Flexible Pipe (75 to 100)									
	9188	9188	–	–	–	–	–	–	9188	9188
	8.8k ThruVent Tile with Underlay Seal									
	–	–	7938	7939	7931	7933	7930	7932	–	–
	Flexible Pipe (100 to 100)									
	–	–	9172	9172	9172	9172	9172	9172	–	–
<b>Fixing</b>	Tile Nails (Alum. Alloy)									
	9638 55 x 2.65	9634 60 x 2.65	9336 70 x 3.75	9333 60 x 3.35	9336 70 x 3.75	9333 60 x 3.35	9337 75 x 3.75	9332 58 x 3	9334 45 x 3	9332 50 x 3
	Eaves Clip									
	9178	9178	9287 (inc nails)	9287 (inc nails)	9287 (inc nails)	9287 (inc nails)	9287 (inc nails)	9186	9178	9527
	Eaves Clip Nails (Alum. Alloy)									
	9332 50 x 3	9332 50 x 3	–	–	–	–	–	9332 50 x 3	9332 50 x 3	9332 50 x 3
	Reform Eaves Filler Unit									
	–	–	9216	–	9216	–	9217	–	9207	–
	Eaves Comb Filler									
	9965	9965	–	–	–	–	–	–	–	–
	Tile Clip									
	9637	9636	9246	9288	9246	9288	9246	9185	9177	9185
	Tile Clip Nail (Alum. Alloy)									
	–	–	9333 60 x 3.35	9333 60 x 3.35	9333 60 x 3.35	9333 60 x 3.35	9333 60 x 3.35	9333 60 x 3.35	9333 60 x 3.35	9333 60 x 3.35
	Verge Clip (left/right-hand)									
	9639/9640	9632/9633	9121/9298	9297/9121	9121/9298	9297/9121	9121/9298	9297/9297	9148/9149	9297/9297
	Bedded Hip and Ridge Mechanical Fixing									
	–	–	9447	9447	9447	9447	9447	9447	9447	9447
	Stainless Steel Batten Straps									
	–	9566	9566	9566	9566	9566	9566	9566	9566	9566
	Half Round Clamping Plates									
	–	9584	9584	9584	9584	9584	9584	9584	9584	9584
	Woodscrews (100 x 4), Washers & Grommets									
<b>Safety Systems</b>	Safety Hook									
	–	–	9889	9889	9889	9889	9889	9889	–	–

\*Terracotta and Brindle codes. Consult Customer Service Hotline for Black product codes. Note all fittings are concrete unless marked # which are clay.

# PERFORMANCE AND APPEARANCE

## Authority

All concrete slates and tiles conform to BS EN 490:2004: Concrete roofing tiles and fittings for roof covering and wall cladding – Product specifications.

All clay tiles conform to BS EN 1304:2005: Clay roofing tiles and fittings – Product definitions and specifications.

Redland Natural Slates have been tested in accordance with BS EN 12326-1:2004: Slate and stone products for discontinuous roofing and cladding. Product specification.

As there is no British Standard for Cambrian Slate, it has been designed to meet the relevant performance requirements of BS 5534:2003: Code of practice for slating and tiling (including shingles) and has been awarded British Board of Agrément certificate No. 87/1907.

## Sustainability

As members of the Concrete Tile Manufacturers Association and Clay Roof Tile Council, data supplied for our concrete and clay roof tiles enabled the 2008 BRE Green Guide to Specification to award the highest A+ rating for generic concrete and A+ or A rating for clay tiles depending on roof construction.

Redland Cambrian Slates are the most eco-friendly resin slates available. The 2008 Green Guide to Specification awards generic resin slates an A rating when part of standard roof constructions.

## Roof System Guarantee

All of our products are designed and tested to work together. So not only is every product guaranteed weathertight, all the junctions between them are similarly guaranteed. If any Redland product fails during its first 15 years, we will not only replace it, we will also pay for the cost of labour and associated materials.

Besides guaranteeing the tiles and slates, this guarantee includes all our fittings and accessories. Indeed, the guarantee is so comprehensive that it is transferable to all future owners. A complete Redland roof is a completely guaranteed roof.



## Composition and Manufacture

Concrete tiles and slates are manufactured by a high-pressure extrusion and compaction process.

Rosemary clay plain tiles are extruded; Old Hollow and Cathedral clay pantiles are pressed.

Redland Del Carmen natural slate is quarried in the Cabrera Mountains in north-western Spain and Redland Riverstone is mined from the San Luis quarry in central Argentina's La Florida region. Cambrian Slates are manufactured from crushed Welsh natural slate (minimum content over 60%), stone, resin and glass-fibre reinforcement.

## Performance

All slates and tiles have been rigorously tested in our wind tunnel where combinations of high wind and driving rain are used to determine the products' performance with respect to wind loading and weathertightness. Slates and tiles will meet the requirements of BS 5534:2003: Code of practice for slating and tiling, providing our fixing recommendations are complied with – refer to FixMaster on page 15.

The information contained in this Guide relating to Cambrian, concrete slates and DuoPlain is based on a maximum rafter length of 10 metres. For rafter lengths greater than this, telephone the Technical Solutions Hotline on +44 (0)8708 702595 for advice.

The minimum pitch may be affected by roof features such as dormers, roof windows and chimneys. For advice on the inclusion of such features in a roof slope contact the Technical Solutions Hotline.

## Strength and Durability

Slates and tiles do not delaminate and despite having high strength properties, are easy to cut. All Redland clay and concrete slates and tiles exceed the minimum strength requirements as laid down in BS EN 1304 or BS EN 490 respectively. Redland Natural Slates exhibit high flexural strength and are tested in accordance with BS EN 12326-1:2004.

## Movement

Designed vertical and horizontal laying tolerances will accommodate normal thermal and other movements.

## Fire Resistance

Cambrian Slates are classified as follows: EXT.S.A.A. when tested for fire protection to BS 476-3:2004: Fire tests on building materials and structures – Classification and method of test for external fire exposure to roofs.

Class 2 when tested for surface spread of flame to BS 476-7:1997: Fire tests on building materials and structures – Method of test to determine the classification of the surface spread of flame of products. Fire propagation index 12.3 when tested to BS 476-6:1989: Fire tests on building materials and structures – Method of test for fire propagation for products.

Under the Building Regulations there are no restrictions on the use of Cambrian Slates as a roofing material but for mansards above 69° or vertical slating, it is essential to comply with Approved Document B.

All other slates and tiles are non-combustible and are classified S.A.A. when tested for fire protection and spread of flame to BS 476-3:2004: Fire tests on building materials and structures. There are no restrictions on their use under the Building Regulations.

## Environmental Effects

Frost: unaffected by frost action.

Heat: unaffected by temperature extremes.

Sunlight: unaffected by prolonged exposure to ultraviolet light and sunlight. Atmospheric pollution: suitable for all rural, marine and normal industrial environments. Resistant to all but the most highly polluted atmospheres, where sulphur dioxide levels exceed 70 microgrammes/m<sup>3</sup> of air. Redland Natural Slates are classified S1 under BS 12326 for resistance to pollution.

## Biological Effects

Birds and rodents: tiles and slates are not attacked, or degraded by birds, rodents or insects.

Mosses and lichens: tile and slate durability is not affected by the growth of lichens and mosses. However, the removal of growths may be necessary when the flow of rainwater off the roof is impeded and valleys, gutters or downpipes become blocked.

## Health & Safety

Data sheets covering properties, storage and safe use of our products are available on request from Redland's Safety Manager; telephone our Customer Service Hotline for details. When cutting tiles or slates using an angle grinder on a scale to generate large concentrations of dust, the measures defined in the Health and Safety Executive Guidance Note EH 40 must be followed.

## Appearance

Under normal production conditions colour variation may occur in slates, tiles and fittings. Natural weathering may also cause changes in colour and appearance. In both cases this is acceptable under BS EN 490. Scratches and abrasions caused by packing, loading and transportation are also permissible as long as the overall slate or tile quality is not affected.

Cambrian Slates can be pre-weathered during manufacture if required. After installation slight lightening may occur due to natural weathering. Landmark slates and tiles are designed to change over time, just as natural slate and clay mellow and develop character. With the exception of Landmark, efflorescence, which is a surface phenomenon associated with concrete products, may result in a temporary lightening of the surface colour. This will be removed by weathering.

Natural Slates are devoid of artificial pigments but some natural colour variation, variability in grain and inclusions can occur. Redland Natural Slate products attain a T1 classification in BS EN 12326 and therefore oxidation, change of appearance and colour changes which may affect the structure or form runs of discolouration are unlikely to occur.

For the best visual effect on the roof, slates and tiles must be selected randomly from a minimum of three different pallets. When laying tiles in prominent areas it is advisable to ensure that there are sufficient stocks of mixed tiles available to complete the elevation. Slates or tiles of the same colour or profile, which are manufactured at different plants, must not be mixed on the same roof area.

## Fixing Specification

Every Redland Del Carmen and Redland Riverstone slate must be fixed with either copper or stainless steel nails or stainless steel hooks. There is only one recommended fixing specification for Cambrian Slates – they must be twice nailed and clipped using proprietary nails and clips. In addition, verge clips are required for every verge, raking valley cut and rooflight abutment. For information on how to obtain recommended fixing specifications for all other Redland slates and tiles, refer to FixMaster on page 15.

## General Guidance

### Special Notes on laying Natural Slates

- All slates must be sorted into a minimum of three thicknesses prior to laying.
- Thick slates should be laid at the eaves with the thinnest used on upper roof sections using slates of consistent thickness in any one course.
- Fix each slate with two nails through prepared holes.
- At all eaves, a double course of slates is required.
- All slates should be laid broken bond and double lapped.
- Form verges by using Standard Slates and Slate-and-a-halves in alternate courses.
- At ridges and top edge abutments, a shouldered slate should be used in the course below the top course to enable the short top course slates to be nailed directly to the batten.
- At hips and valleys, care should be taken to preserve an adequate bond by using Slate-and-a-halves.
- When used with mechanically fixed ridge or top edge abutment systems, further fixing may be required. Please contact Technical Solutions.
- Please contact Technical Solutions for use on Vertical or on Curved Roofs.

### Special Notes on laying Cambrian and Concrete Slates

- All slates must be laid broken bonded, normally from right to left. MockBond Mini Stonewold should be laid with a ¾ tile offset, as opposed to a standard ½ tile offset.
- At the eaves for Saxon, Landmark Slate and Richmond use Eaves Slates. For all other slates use Standard Slates.
- At right-hand verges for Cambrian Slates, use Standard Slates and Slate-and-a-halves in alternate courses. For all other slates except MockBond Mini Stonewold use Standard Slates and Right-hand Half Slates in alternate courses. For MockBond Mini Stonewold use standard slates (with interlocks removed) or Right-hand Half Slates and site cut ¾ width slates in alternate courses.
- At left-hand verges for Cambrian Slates, use Left-hand Verge Slates and Left-hand Verge Slate-and-a-halves in alternate courses. For all other slates except MockBond Mini Stonewold use Standard Slates with interlocks removed, and Left-hand Half Slates in alternate courses. For MockBond Mini Stonewold use Standard Slates (with interlocks removed) or Left-hand Half Slates and site cut ¾ width slates in alternate courses.
- At side abutments, allow for cover flashing and secret gutter.
- At top courses and top edges for Saxon, Landmark Slate and Richmond use Top Slates. For all other slates use Standard Slates.

### Additional Notes when laying Cambrian Slates

- For rafter pitches below 45° with mitred hip, Double Slates will be required on all courses either side of the hip. At pitches greater than this Slate-and-a-halves can be used.
- For rafter pitches below 25° for valleys, dry and mechanically fixed bedded hip, Double Slates will be required on all courses either side of the valley or hip. At pitches greater than this Slate-and-a-halves can be used.

- For advice on the replacement of individual slates, contact the Technical Solutions Hotline.
- All mortar bedded hips/ridge must be mechanically fixed.

### Special Notes on laying Plain Tiles

- At eaves, use double courses with purpose made Eaves/Top Tiles for the undercourse.
- At verges and abutments to maintain broken bond, use Standard Plain Tiles and Tile-and-a-halves in alternate courses.
- Adjacent to hips, valleys and angles use Tile-and-a-halves.
- At side abutments, allow for stepped flashing and soakers.
- At top courses use double courses with purpose made Eaves/Top Tiles for the top course.
- For Winchester Cuts use two Tile-and-a-halves per course. Winchester Cut detail must not be used to abut roof pitches below 40° or in exposed locations. In these cases soldier or double soldier courses must be used.
- For Heathland, Downland and concrete Plain Tiles secure top course with a Top Tile Clip with mortar bedded ridges and top edge abutments.

### Special Notes on laying DuoPlain

- All tiles must be laid broken bond with a three-quarter tile offset, normally from right to left. On gable-to-gable roofs try and lay out the tiles so that the eaves course starts with a Standard Tile and finishes with a LH Verge (three quarter) Tile.
- At right-hand verges use Standard Tiles and RH Verge (three quarter) tiles in alternate courses.
- At left-hand verges use Standard Tiles with interlocks removed and LH Verge (Three Quarter) Tiles in alternate courses. If it is not possible to end the eaves course in this way, cut verge tiles of the required length from Tile-and-a-halves.
- Do not use any cut pieces of tile smaller than a LH Verge (Three Quarter) Tile.
- At hips and valleys use Tile-and-a-halves on each course either side.
- At side abutments, allow for cover flashing and secret gutter.

### Special Notes on laying Profile Tiles

- Tiles must be laid straight bonded, normally from right to left.
- Reform Eaves Filler Units must be used at all eaves situations with Landmark Double Pantile, Grovebury, Regent and Norfolk Pantile
- Eaves Comb Fillers must be used at all eaves situations with Cathedral and Old Hollow Clay Pantiles.
- At left-hand verges, use Standard Tiles with interlocks removed. At right-hand verges, use Standard Tiles. Half Tiles must not be used at verges. Use Left-hand Verge Tiles with Cathedral and Old Hollow Clay Pantiles.
- Dentil slips must be used for mortar bedded ridges and hips with Cathedral and Old Hollow Clay Pantiles, Landmark Double Pantile, Landmark Double Roman, Grovebury, Regent, 50 Double Roman and Norfolk Pantile.
- Half Tiles should be used with Landmark Double Pantile, Landmark Double Roman, Grovebury, 50 Double Roman, Regent and Renown to avoid the use of small pieces of tiles. Use Two-Thirds Tile with Cathedral Clay Pantile.
- As Old Hollow Clay Pantiles have no interlocks, it is very important that perpendicular lines are struck prior to laying to ensure the correct side overlap is achieved.

## Timber Sarking

Roofing practice in Scotland includes the use of timber sarking and counterbattens. Insulation board is also widely used as rigid sarking throughout the UK. The presence of sarking board in either of these forms will affect many of our standard details.

It must be noted that the combined thickness of the sarking and counterbatten chosen may alter details slightly. For insulation board, advice on the size and fixing of the counterbattens should be obtained from the specific insulation manufacturer.



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