

Condition 3 - Proposed Materials Schedule and Response to Previous Officer Feedback

Warren Creek, The Warren, Caversham, Reading RG4 7TQ
Planning permission PL/24/1614 / discharge application PL/26/0352

Prepared by	STL Architecture Ltd, 15 Bridge St., Caversham, Reading RG4 8AA
Submitted on behalf of	Mr & Mrs R. Arnold
Purpose	Planner-facing response to Condition 3 materials comments and current proposed materials schedule
Issue	Final submission issue - materials schedule, compliance response, index and supporting datasheets

1. Purpose of this submission

This document is submitted for the Local Planning Authority review of Condition 3. It brings together the proposed external materials schedule, manufacturer/product information, technical drawings, product datasheets and a response matrix showing where the previous officer comments have been addressed.

The document is written for the planning assessment. It is not an internal construction note and it does not rely on any previous draft structure. The current schedule below is the operative Condition 3 materials submission for approval.

2. Condition 3 requirement

Condition 3 requires approval of a schedule of all materials to be used in the construction of the external surfaces of the development, including manufacturer specification details of all external facing materials. Once approved, the development is to be carried out and maintained in accordance with the approved details.

The officer report explained that the purpose of the condition is visual amenity and ensuring the development responds positively to the local context and character, including the River Thames and Major Landscape Feature.

3. Applicant response to the previous materials feedback

The table below is provided to help the case officer locate the relevant material quickly. Page references are to the page labels within the Materials Schedule section and the appended technical drawings/datasheets.

Previous issue raised	Where addressed in this submission	Response now provided
Weblinks / TBC references could not be accepted; precise manufacturer and product details required.	Materials Schedule pages 2/19-18/19 and appended datasheets.	The schedule now fixes supplier, product, colour/finish and supporting technical data for the external materials. Datasheets are appended as evidence rather than relying on changing web links.
No details of proposed canopy and surround to front door.	Entrance door page 6/19; entrance door/canopy drawing 3863/310 in appendix.	Bespoke painted Accoya timber entrance door and moulded timber doorcase are specified, with the canopy/door surround shown on the appended entrance door detail.
Only a single window detail was previously provided; supplier/source was TBC.	Windows page 4/19; Harmony Homes profile drawing in appendix.	Windows are specified as Harmony Homes painted timber, RAL 9016 off-white, with sash and casement examples and profile details attached.
Door details were previously lacking and included TBC references.	Entrance door page 6/19; utility door page 7/19; sliding doors page 8/19; George Barnsdale datasheet in appendix.	External doors are now identified by supplier, material, finish and product type, with manufacturer technical details appended.
No details of soldier courses / brick heads above proposed windows.	Flat Arch Lintels page 5/19.	IG Masonry / B.O.S.S. units are specified to provide the approved brick-head treatment above window, door and flood openings, using Michelmersh Heritage Light Blend brick slips to match the adjacent facing brickwork.

Previous issue raised	Where addressed in this submission	Response now provided
No details of underside of terraces.	External Terrace & Balcony Soffits page 12/19.	The exposed underside is specified as a continuous exterior-grade soffit beneath the beam and block construction, finished in render and painted matt black RAL 9005.
No details of mortar and brick bonding.	External Face Brick Walls page 3/19; Heritage Light Blend datasheet in appendix.	Michelmersh Heritage Light Blend brickwork is specified in Flemish bond with natural grey mortar, 5:1:1 sand:cement mix and lightly bucket-handle joints.
No details of steps or railings.	Steps page 9/19; External Balustrades page 12/19.	Heath Sawn Sandstone Bullnose steps are specified. Balustrades are matt black powder-coated steel RAL 9005, 1100 mm high with rod spacings not exceeding 99 mm.
No fascia and soffit details.	External Joinery to Roof Areas page 11/19; Fascia & Soffit Details drawing 3863/311 in appendix.	Softwood fascia boards, painted plywood soffits, RAL 9016 finish and cornice/gutter details are included.
No details of proposed obscure glazing.	Windows page 4/19; Condition 22 drawings 3863/244E and 3863/245E referenced.	Side-facing windows identified on the Condition 22 drawings as requiring Level 3 privacy are specified with Pilkington Level 3 privacy/obscure glazing or equivalent Level 3 product.
No chimney details.	Chimney Details page 17/19; Chimney drawing 3863/312 in appendix.	Chimney brick, mortar, cap, clay pot/cowl and Code 4 lead flashing/soakers are specified and shown on the appended chimney detail.
No details of materials associated with the cycle store.	Overlord Modular Apex Shed page 15/19; Dunster House datasheet in appendix.	Rear garden storage/cycle storage is specified as an Overlord Modular Apex Shed in pressure-treated slow-grown spruce timber, with tongue-and-groove roof/floor and locking details.
No driveway materials.	Hard Landscaping Surface page 14/19; Breedon Golden Amber datasheet, laying instructions and maintenance information in appendix.	Breedon Golden Amber self-binding gravel is specified with natural buff/golden-buff finish and installation to manufacturer recommendations.
Requirement for all external facing materials.	Whole Materials Schedule and appendix.	The schedule also includes roof slates, rainwater goods, window cills, terrace paving, bin store, solar PV panels and associated appended data.

4. Summary of compliance position

- The submitted schedule now provides a fixed manufacturer/product/finish basis for the principal external materials and appends manufacturer specification information where applicable.
- The information directly addresses each specific item listed in the previous officer comments: brickwork, mortar/bonding, roof, windows, doors, canopy/front door surround, lintels/brick heads, terrace undersides, steps, balustrades, fascia/soffits, privacy glazing, chimney, shed/cycle storage and driveway materials.
- The schedule is coordinated with the Condition 22 privacy information by specifying full-depth/variable-width WovenWood willow privacy screens and Level 3 privacy glazing only where identified on the approved Condition 22 drawings.
- The material palette - natural slate, handmade brick, painted timber joinery, natural stone steps/paving, matt black steelwork and natural willow screening - is intended to respond positively to the site context, including the River Thames/Major Landscape Feature setting identified in the officer report.

On that basis, the applicant considers that the information now provides the comprehensive and precise materials details required to enable Condition 3 to be discharged.

5. Document structure

The following pages contain the Materials Schedule index, the external materials schedule and the appended supporting drawings/datasheets. The index is included only to help navigation through the schedule; it does not amend the material specifications.



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Proposed Materials Schedule

Warren Creek, The Warren,
Caversham, Reading,
RG4 7TQ

Warren Creek Materials Schedule

Index / navigation guide

This index is inserted for navigation only. It does not amend or replace the material specifications, product datasheets, drawings or appendices contained in this schedule.

Schedule section	PDF page
Roof materials	3
Rainwater system; external face brick walls	4
Windows, including Level 3 privacy / obscure glazing where identified on Condition 22 drawings	5
Window cills; flat arch lintels / brick-head treatment	6
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Appendix / supporting information

Schedule section	PDF page
3863/311 Fascia and soffit details	21
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Roof materials

- Supplier – Premium slates UK Ltd
- Product – Liso Natural Spanish Slates
- Colour – Smooth Grey



Liso 600mm x 450mm Slate and Half-STANDARD

Liso Slates are by far our most affordable and best-selling Slates.

Liso slates are grey in colour and have a slight riven texture to them. They are renowned for being consistently flat with little grading required. Liso slates come with a Quarry Guarantee of 75 years for peace of mind.

Minimal pyrite visible, which does not bleed, giving an attractive sheen to the occasional few slates with it.

Thickness ranges from 6-10mm giving you a variety of usable purposes depending on your requirements.

Fully complaint under B.S. EN12326-1:2004 Water

Absorption: W1

Thermal cycle test: T1

Sulphur dioxide resistance test : S1



Rainwater System

- Product: Half round Anthracite Grey (7016M) Galvanised steel gutter and round downpipes and fittings, as supplied by “Infinity Rainwater Systems”.
- Refer to attached Data Sheet



External Face Brick Walls

- Supplier: Michlemersh
- Product: Heritage Light Blend
- Refer to attached Data Sheet
- Handmade Heritage Light Blend brickwork laid in Flemish bond. Mortar to be mixed 5:1:1 (sand:cement) natural grey colour with lightly bucket handle joints.



Flemish Bond Face Brick External Walls.



Windows

- Supplier: Harmony Homes
- Product: Painted timber
- Colour: RAL 9016 Off-white
- Profile details attached
- Privacy glazing to side-facing windows

Where side-facing windows are identified on drawings 3863/244E and 3863/245E as requiring Level 3 privacy, those windows shall be supplied with Pilkington Level 3 privacy / obscure glazing, or an equivalent Level 3 privacy obscure glazing. This applies only to the windows identified on the approved Condition 22 drawings.



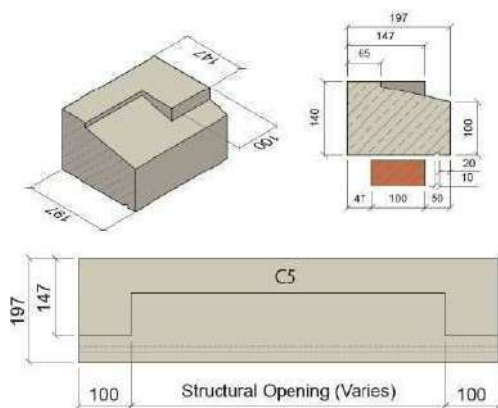
Typical Sash Window



Typical Casement Window

Window Cills

- Supplier: Serene Stone
- Product: Wet Cast Reconstituted Stone Cill
- Colour: Bath



Bath

Flat Arch Lintels

- Supplier: IG Masonry
- Product: Half Lap Bond
- Colour: Brick slip facings to match adjacent facing brickwork.
- Description: The IG Masonry / B.O.S.S. units shall be used to form the approved brick-head treatment above window, door and flood openings, with brick slip facings in **Michelmersh Heritage Light Blend** to match the adjacent facing brickwork. Where the elevations show a soldier-course or flat-arch appearance, the proprietary unit shall be configured to provide that external appearance.

FLAT ARCH 1½ brick deep

IG's Flat Arch BSL comprises of a modified C-section that allows brick to be fixed to the front face. This design can incorporate 1 brick, 1½ brick or a 2 brick soldier course.





Typical Entrance Door

- Supplier: George Barnsdale Entrance Doors
- Product: Bespoke Painted Accoya timber panelled entrance door & moulded timber doorcase, glazed upper panels
- Finish: Painted Off- White, Colour – RAL 9016





Typical Utility Door

- Supplier: George Barnsdale
- Product: Bespoke Accoya timber single door & frame, painted, with glazed upper panel and solid lower raised-and-fielded panel.
- Finish: Painted Off- White, Colour – RAL 9016
- Profile details attached





Timber Sliding Doors

- Supplier: George Barnsdale
- Product: Timber Sliding Doors
- Finish: Painted Off- White, Colour – RAL 9016
- Data Sheet & Technical drawings attached.





Steps

- Supplier: London Stone
- Product: Heath Sawn Sandstone Bullnose Steps



SPECIFICATION

Tolerance:	+/- 2mm
Packaging:	Wooden Crates, internal foam protection, plastic wrap
Suitable for:	Steps
Surface Finish:	Sawn
Edges:	Sawn
Edge Profile:	Bullnose & Drip
Material Type:	Sandstone (Sedimentary natural stone)
Country of Origin:	India
Sealing:	Highly Recommended
Application:	External
Weight:	Weight per step: 2000x500 = 97.2kg 900x500 = 43.47kg
Slip Resistance:	62 Dry / 48 Wet
Frost Resistant:	Yes
Flexural Strength:	17.83 Mpa (48 Cycles)
Water Absorption:	2.06%



Terrace

- Supplier: London Stone
- Product: Heath Sawn Sandstone Paving



SPECIFICATION

Tolerance:	+/- 2mm
Packaging:	Wooden Crates, internal foam protection, plastic wrap
Suitable for:	Paths, Patios, Steps
Surface	Finish: Sawn
Edges:	Sawn
Edge	Profile: Square
Material	Type: Sandstone (Sedimentary natural stone)
Country Of Origin:	India
Sealing:	Highly Recommended
Application:	External
Weight:	m ² weight = 60.75kg/m ² Weight per slab: 900x600 = 32.80kg 600x600 = 21.87kg 600x400 = 14.58kg
Slip Resistance:	62 Dry / 48 Wet
Frost Resistant:	Yes
Flexural Strength:	17.83 Mpa (48 Cycles)
Water Absorption:	2.06%



External Joinery to Roof areas

- Fascia Boards: To be painted 200x25mm softwood.
- External Soffits: To be 12mm thick painted plywood soffit with eaves overhang. Soffits to be fixed to and supported on 25x50mm softwood treated framing.
- Colour: Fascias and soffits to be painted Off-White (RAL 9016)

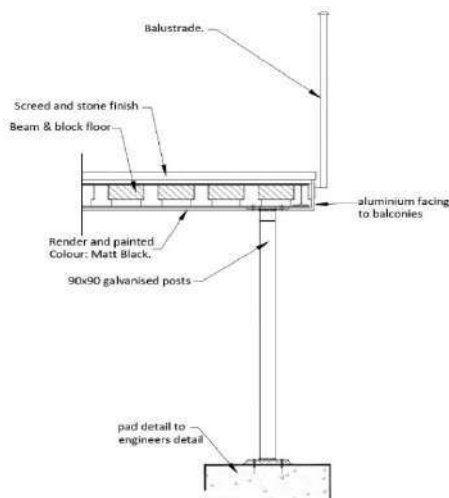


Typical Fascia and Soffit Detail



External Terrace & Balcony Soffits.

- The exposed underside of the beam and block floor will be provided with a continuous finished soffit beneath the beam and block floor construction. The structural beams and infill blocks will be fully concealed behind an exterior-grade soffit system, finished in render and painted matt black, ensuring the terrace appears as an integrated element of the face-brick dwelling. The soffit's matt black (RAL 9005) finish will provide a clean contemporary appearance to the underside of the terrace while complementing the overall architectural design.



External Balustrades.

- The terrace will be enclosed by a balustrade constructed from matt black powder-coated steel (RAL 9005), comprising evenly spaced vertical steel rods with a continuous top handrail. The balustrade shall be installed to a height of 1100 mm above finished floor level, with vertical rod spacings not exceeding 99 mm. The simple, contemporary design provides the required level of safety and fall protection while maintaining openness and minimising visual impact when viewed from the surrounding areas. All steelworks shall be finished in a durable exterior-grade powder coating suitable for long-term external exposure.



Privacy screens to East & West Elevations.

- WovenWood framed natural willow hurdle privacy screens will be installed to the east and west side boundaries of the first-floor balcony and ground-floor terrace as shown on drawings 3863/244E, 3863/245E and detail drawing 3863/313. The screens shall be 1800 mm high above the finished balcony / terrace floor level, with the panel width variable to suit the relevant location, and shall extend along the full depth of the terrace and first-floor balcony side boundary where shown on the approved drawings. The panels shall comprise natural woven willow rods set within a treated timber frame and shall be fixed to the balustrades using galvanised steel U-bolts with backing plates. Cable ties or temporary fixings shall not be used.



Framed Wovenwood Willow Hurdle



Hard Landscaping Surface (Driveway Finish).

- Breedon Golden Amber Self Binding Gravel, laid and compacted in accordance with the manufacturer's recommendations. Finish to be a natural buff/golden-buff colour with a firm self-binding surface, providing a traditional gravel appearance. Material to comprise a well graded blend of natural aggregates, 22mm and fines to achieve a cohesive and visually consistent finish.



Breedon Golden Amber Self Binding Gravel

Overlord Modular Apex Shed.

- A storage shed will be provided within the rear garden in the form of an Overlord Modular Apex Shed. The shed is manufactured from premium, pressure-treated slow-grown spruce timber, offering a durable and long-lasting external finish suitable for year-round outdoor use. The traditional apex roof design provides practical weather protection and complements the character of the dwelling and surrounding landscape.
- The structure incorporates a 15 mm tongue-and-groove timber roof and floor construction, together with secure hinges and an integrated locking system to provide safe and secure storage for garden equipment, bicycles and household items. The natural timber finish will harmonise with the proposed willow screening and other external landscaping elements, ensuring the shed forms a functional yet visually unobtrusive addition to the garden.



**Timber Framed Willow Bin Store.**

A bin store enclosure will be provided on a permeable stone base. The enclosure will comprise a natural treated timber frame with woven willow infill panels, matching the style and material of the willow screening proposed to the balcony and terrace. The use of natural timber and willow will provide a cohesive appearance across the site and soften the visual impact of the bin storage area, ensuring it integrates with the landscaping and residential character of the property.





Chimney Details

- Brick Supplier: Michlemersh
- Product: Heritage Light Blend Handmade Facing Brick
- Mortared in natural grey mortar with lightly bucket-handle joints to match the main dwelling.
- Chimney constructed in traditional masonry with a projecting brick capping course and clay chimney pot as shown on Drawing No. 3863-312.
- Code 4 lead stepped flashings and lead soakers to all roof junctions.
- Chimney to match the architectural character, materials and detailing of the approved dwelling.



Brick Detail



Chimney Cowl



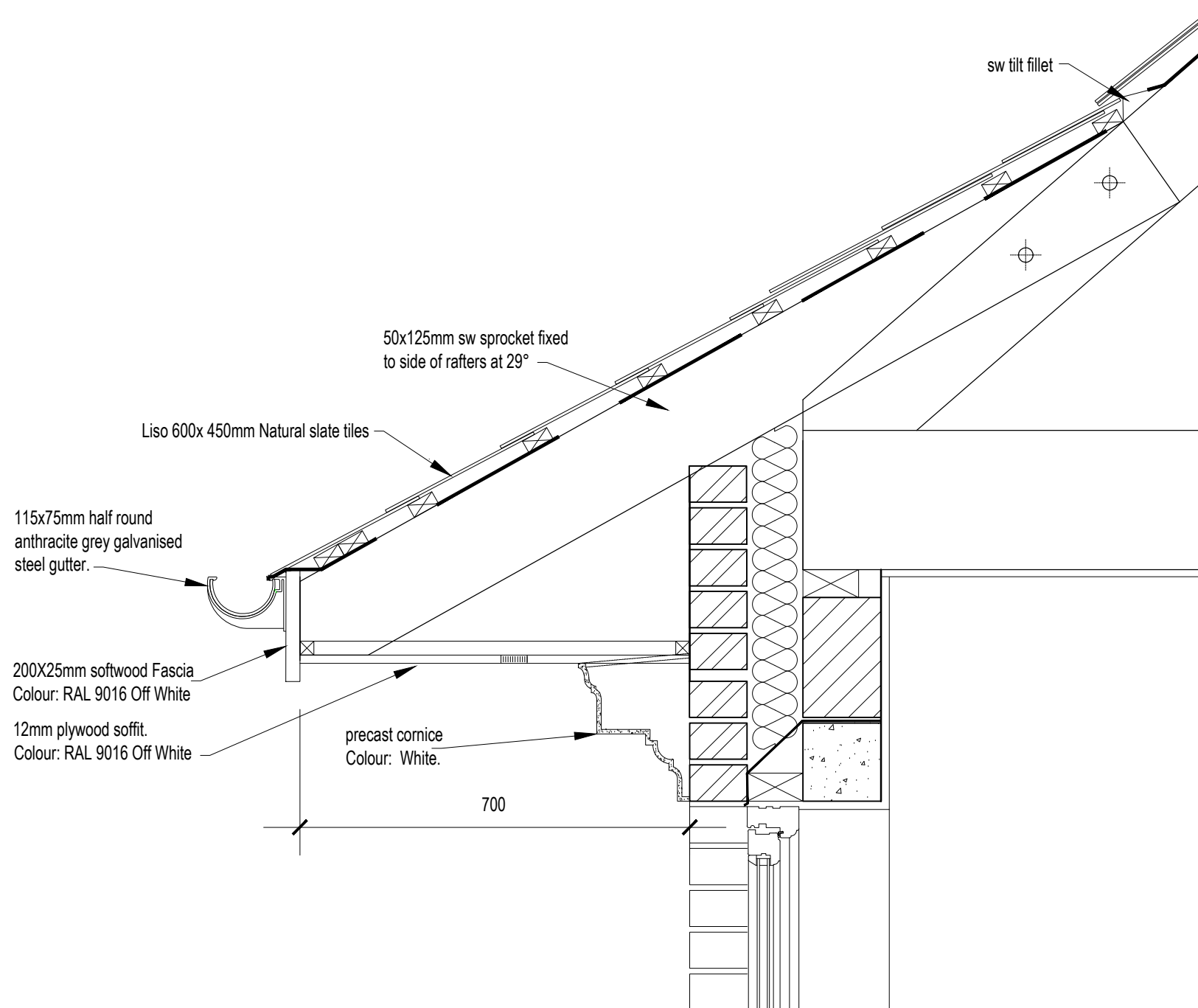
Solar Photovoltaic (PV) Panels

- Supplier: AIKO Solar
- Product: Neostar 3S N-Type BC Monocrystalline PV Modules
- Colour/Finish: All-black modules with black anodized aluminium frame
- Description: High-performance photovoltaic panels installed to the south-facing roof slope to generate renewable electricity. All-black modules provide a clean, contemporary appearance with minimal visual impact.
- Data Sheet attached.





Appendix



FASCIA & SOFFIT DETAILS 1:10



TYPICAL CORNICE DETAIL



TYPICAL GUTTER DETAIL

REV	COMMENTS	DATE



CLIENT Mr R. Arnold
 PROJECT Warren Creek, The Warren
 Caversham, Reading, RG4 7TQ
 DRAWING Fascia & Soffit Details

STATUS Planning DATE June 2026
 SCALE 1:10 DRAWN Pari CHECKED NO 3863/311 REV .

THIS DRAWING MUST NOT BE SCALED UNLESS ISSUED FOR PLANNING PURPOSES. ALL DIMENSIONS ARE TO BE VERIFIED PRIOR TO SETTING OUT, COMMENCING WORK, OR PRODUCTION OF FABRICATION DRAWINGS. REPORT ANY DISCREPANCIES TO THE SUPERVISING OFFICER IMMEDIATELY. ©

PRODUCT SUMMARY

The lightweight Infinity galvanised steel rainwater range provides a contemporary, eco-friendly and cost effective alternative to uPVC gutters.

Infinity galvanised steel is a lightweight range of contemporary, eco-friendly and cost effective alternative to plastic gutters, without the risk of shrinking, leaking or colour fading. The gutter is available in a choice of four widths in the popular Half Round profile along with a connecting round downpipe system.

Applications

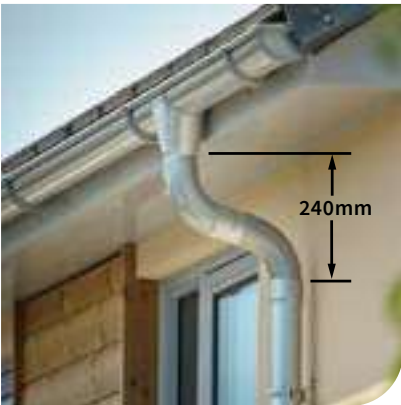
- Ideal for traditional and modern buildings in both new build and refurbishment applications
- A competitive alternative to uPVC systems, with increased flow rates and longevity

Features & Performance

- All gutter widths are deep half round providing maximum flow rates
- Higher flow capacity on outlets due to larger inlet funnels
- Gutter angle is ‘deep drawn’ and one piece giving greater flow capacity
- Lightweight, durable and non-corrodible
- Quick and easy installation
- Internally seamed downpipe gives a smooth and modern finish
- Downpipe brackets have two concealed vertical fixing points
- Low maintenance

Manufacture

- Manufactured to ISO 9001: 2008
- Manufactured to ISO 14001: 2004



Colours & Finishes

- Available in steel in either a Galvanised and 6 other galvanised pre-coated colour finishes from stock for next day delivery, and a few others in 15 days. The system is also available in Quarz Zinc, Natural Zinc or Copper
- All colour coated lengths are protected with an adhesive film to prevent damage on-site

Installation & Fixing

- Dry Joint system without the need for additional silicone sealants
- Gutter lengths and angles are jointed with ‘EPDM rubber sealed’ connectors for fast and watertight installation
- Downpipes and offsets are push fit with ‘Swaged’ ends, again for fast and watertight installation
- Stop ends are push-fit with ‘EPDM rubber sealed’ inserts

Gutter Profile & Sizes

STEEL HALF ROUND GUTTER

115 X 70MM _ST100HRG
125 X 80MM _ST125HRG
150 X 90MM _ST150HRG
190 X 90MM _ST190HRG

NATURAL & QUARTZ ZINC HALF ROUND GUTTER

115 X 70MM QZ100HRG
125 X 80MM QZ125HRG

COPPER ROUND GUTTER

115 X 70MM CP100HRG
125 X 80MM CP125HRG
150 X 90MM CP150HRG

STEEL CIRCULAR DOWNPIPE

80MM (3½") _ST80RDP-
100MM (4") _ST100RDP

NATURAL & QUARTZ ZINC CIRCULAR DOWNPIPE

80MM (3½") QZ80RDP

COPPER CIRCULAR DOWNPIPE

80MM (3½") CP80RDP
100MM (4") CP100RDP

15 YEARS
PRODUCT
WARRANTY

infinity
RAINWATER SYSTEMS

HALF ROUND GUTTERS & FITTINGS

Gutters - 3M Length

Note: All dimensions are in mm unless shown otherwise.

Gutter Size	A	B	T	WEIGHT	GALVANISED	COLOUR COATED
115MM (4")	115	75	0.6	3.24 KG	GST100HRG	__ST100HRG
125MM (5")	125	80	0.6	3.63 KG	GST125HRG	__ST125HRG
150MM (6")	150	90	0.6	4.32 KG	GST150HRG	__ST150HRG

Union Connector

Gutter Size	A	GALVANISED	COLOUR COATED
115MM (4")	45	GST100HRU	__ST100HRU
125MM (5")	45	GST125HRGU	__ST125HRU
150MM (6")	45	GST150HRU	__ST150HRU

Push-Fit Stop-Ends

Gutter Size	A	B	C	GALVANISED	COLOUR COATED
115MM (4")	140	75	10	GST100HRE1	__ST100HRE1
125MM (5")	165	85	10	GST125HRE1	__ST125HRE1
150MM (6")	190	100	10	GST150HRE1	__ST150HRE1

Prefabricated Gutter Outlet

Gutter Size	PIPE SIZE	A	B	C	GALVANISED	COLOUR COATED
115MM (4")	80 DIA	300	245	75	GST100HO4	__ST100HO4
125MM (5")	80 DIA	300	270	75	GST125HO4	__ST125HO4
150MM (6")	80 DIA	300	290	75	GST150HO4	__ST150HO4
150MM (6")	100 DIA	300	290	95	GST150HO5	__ST150HO5

Wrap-Around Gutter Outlet

Gutter Size	PIPE SIZE	A	B	C	GALVANISED	COLOUR COATED
115MM (4")	80 DIA	170	145	75	GST100HRO1	__ST100HRO1
125MM (5")	80 DIA	190	160	75	GST125HRO1	__ST125HRO1
150MM (6")	80 DIA	200	190	75	GST150HRO2	__ST150HRO2
150MM (6")	100 DIA	200	190	95	GST150HRO1	__ST150HRO1

90° External Angle

Gutter Size	A	B	GALVANISED	COLOUR COATED
115MM (4")	160	295	GST10090E	__ST10090E
125MM (5")	145	300	GST12590E	__ST12590E
150MM (6")	110	295	GST15090E	__ST15090E

90° Internal Angle

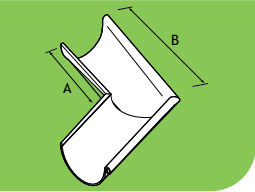
Gutter Size	A	B	GALVANISED	COLOUR COATED
115MM (4")	160	290	GST10090I	__ST10090I
125MM (5")	150	300	GST12590I	__ST12590I
150MM (6")	120	300	GST15090I	__ST15090I

STOCK COLOURS		*begin code with
RAL9005M	Black	B
RAL 7016M	Anthracite Grey	AG
RAL 7037M	Dusty Grey	DG
RAL 9002M	Grey White	GW
RAL8019M	Sepia Brown	SB
RAL 9016M	White	WH
RAL9007M	Grey Aluminium	GA

HALF ROUND GUTTERS & FITTINGS

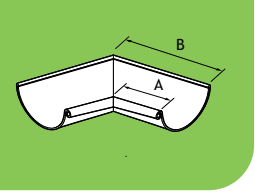
135° External Angle

Note: All dimensions are in mm unless shown otherwise.



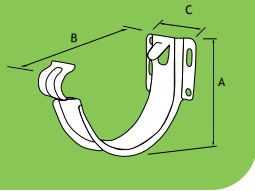
Gutter Size	A	B	GALVANISED	COLOUR COATED
115MM (4")	250	300	GST100135E	__ST100135E
125MM (5")	250	300	GST125135E	__ST125135E
150MM (6")	250	300	GST150135E	__ST150135E

135° Internal Angle



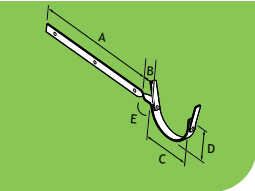
Gutter Size	A	B	GALVANISED	COLOUR COATED
115MM (4")	300	250	GST100135I	__ST100135I
125MM (5")	300	250	GST125135I	__ST125135I
150MM (6")	300	250	GST150135I	__ST150135I

Fascia Bracket (short back)



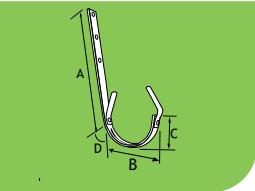
Gutter Size	A	B	C	GALVANISED	COLOUR COATED
115MM (4")	90	140	60	GST100HRFB	__ST100HRFB
125MM (5")	100	155	62	GST125HRFB	__ST125HRFB
150MM (6")	115	190	62	GST150HRFB	__ST150HRFB

Side Fix Gutter Rafter Bracket



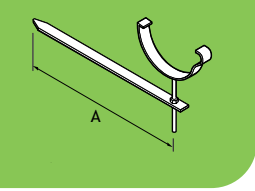
Gutter Size	A	B	C	D	E	GALVANISED	COLOUR COATED
115MM (4")	248	20	130	205	40°	GST100RAFT	__ST100RAFT
125MM (5")	248	20	130	225	40°	GST125RAFT	__ST125RAFT
150MM (6")	248	20	130	240	40°	GST150RAFT	__ST150RAFT

Top Fix Gutter Rafter Bracket (bend on site*) *N.B. To bend on-site a vice or bracket bender will be required



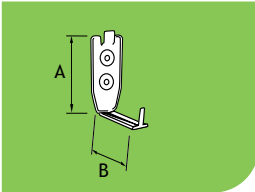
Gutter Size	A	B	C	D	GALVANISED	COLOUR COATED
115MM (4")	250	130	205	Bend on site	GST100RAFT1	__ST100RAFT1
125MM (5")	250	130	225	Bend on site	GST125RAFT1	__ST125RAFT1
150MM (6")	250	130	240	Bend on site	GST150RAFT1	__ST150RAFT1

Rise & Fall Bracket



Gutter Size	A	GALVANISED
115MM (4")	300	GST100RFB
125MM (5")	300	GST125RFB
150MM (6")	300	GST150RFB

Fascia Bracket Angle Adjuster



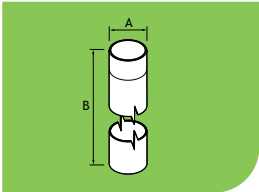
Gutter Size	A	B	GALVANISED
ONE SIZE	95	80	GSTFBA

Note: Only for use with Standard Fascia Bracket - see page 7

ROUND DOWNPIPES & FITTINGS

Pipes

Note: All dimensions are in mm unless shown otherwise.

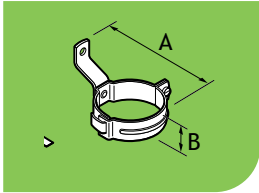


Pipe Size (A)	PIPE LENGTH (B)	GALVANISED	COLOUR COATED
80 DIA	3000	GST80RDP	__ST80RDP
100 DIA	3000	GST100RDP	__ST100RDP

STOCK COLOURS

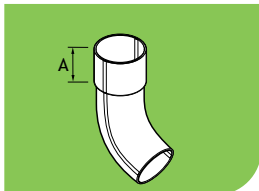
*begin code with
B
AG
DG
GW
SB
WH
GA

Pipe Clip



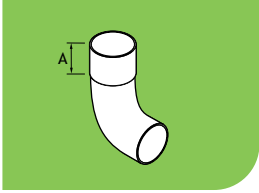
Pipe Size	A	B	GALVANISED	COLOUR COATED
80 DIA	120	25	GST80DPC	__ST80DPC
100 DIA	135	25	GST100DPC	__ST100DPC

Offset Bend 70°



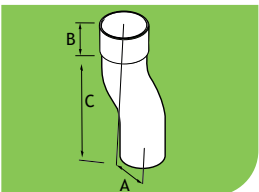
Pipe Size	A	GALVANISED	COLOUR COATED
80 DIA	34	GST80B70	__ST80B70
100 DIA	30	GST100B70	__ST100B70

Offset Bend 90°



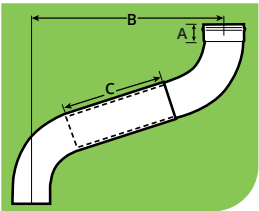
Pipe Size	A	GALVANISED	COLOUR COATED
80 DIA	43	GST80B90	__ST80B90
100 DIA	34	GST105B90	__ST100B90

Fixed Offset



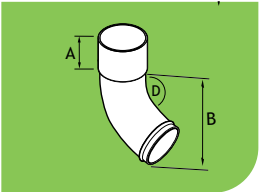
Pipe Size	A	B	C	GALVANISED	COLOUR COATED
80 DIA	64	60	160	GST80OS60	__ST80OS60
100 DIA	68	60	195	GST100OS60	__ST100OS60

2-part Adjustable Offset



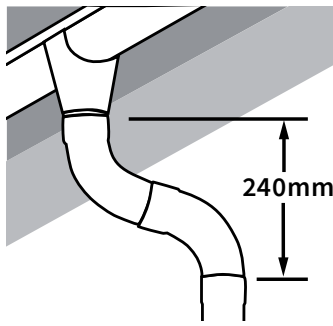
Pipe Size	A	B	C	GALVANISED	COLOUR COATED
80 DIA	36	200-700	330	GST80TP700	__ST80TP700
100 DIA	29	200-700	270	GST100TP700	__ST100TP700

Shoe - long heel



Pipe Size	A	B	D	GALVANISED	COLOUR COATED
80 DIA	36	127	70 °	GST80SH	__ST80SH
100 DIA	29	155	70 °	GST100SH	__ST100SH

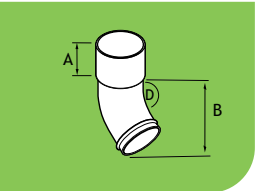
2no. 70° Offset Bends make a swan-neck



ROUND DOWNPIPES & FITTINGS

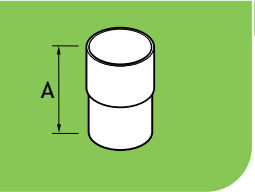
Shoe - Short heel

Note: All dimensions are in mm unless shown otherwise.



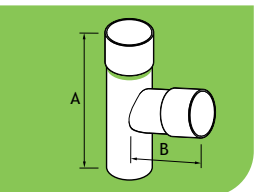
Pipe Size	A	B	D	GALVANISED	COLOUR COATED
80 DIA	36	127	40 °	GST80SHS	__ST80SHS
100 DIA	29	155	40 °	GST100SHS	__ST100SHS

Downpipe Connector



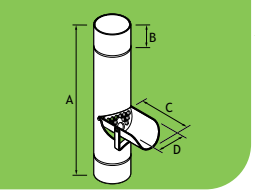
Pipe Size	A	GALVANISED	COLOUR COATED
80 DIA	118	GST80SOC	__ST80SOC
100 DIA	117	GST100SOC	__ST100SOC

Branch 72°



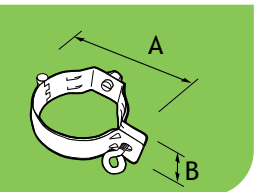
Pipe Size	A	B	GALVANISED	COLOUR COATED
80 DIA	280	72	GST80J	__ST80J
100 DIA	285	55	GST100J	__ST100J

Rainwater Diverter



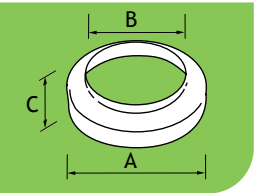
Pipe Size	A	B	C	D	GALVANISED	COLOUR COATED
80 DIA	400	57	135	78	GST80DIV	__ST80DIV
100 DIA	400	53	155	98	GST100DIV	__ST100DIV

M10 Pipe Clip - for use with M10 Screw (sold separately)



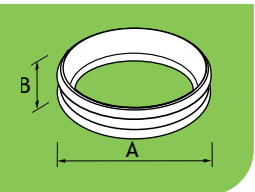
Pipe Size (A)	B	GALVANISED	COLOUR COATED
80 DIA	32	GST100M10	__ST100M10
100 DIA	32	GST125M10	__ST125M10

Downpipe Drain Cover



Pipe Size	A	B	C	GALVANISED
80 DIA	118	98	27	GST80110
100 DIA	118	98	27	GS100110

Downpipe Drain Cover Rubber Seal

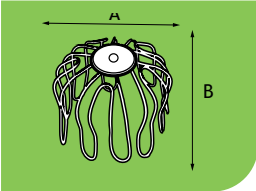


Pipe Size	A	B	RUBBER
80 DIA	25	105	RS80110
100 DIA	25	120	RS100110

ROUND DOWNPIPES & FITTINGS

Leaf Guard

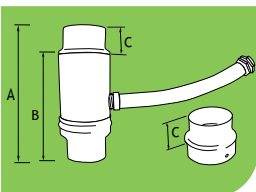
Note: All dimensions are in mm unless shown otherwise.



Pipe Size	A	B	GALVANISED	COLOUR COATED
80 DIA	85-80	100	GST80LG	BST80LG
100 DIA	105-100	100	GST100LG	BST100LG

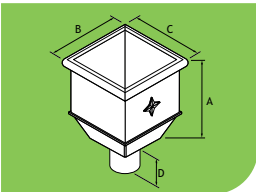
STOCK COLOURS			*begin code with
RAL9005M	Black		B
RAL 7016M	Anthracite Grey		AG
RAL 7037M	Dusty Grey		DG
RAL 9002M	Grey White		GW
RAL8019M	Sepia Brown		SB
RAL 9016M	White		WH
RAL9007M	Grey Aluminium		GA

Rainwater Collector



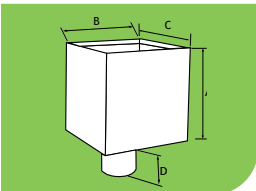
Pipe Size	B	C	GALVANISED	COLOUR COATED
80 DIA	1000	110	GST80COL	__ST80COL
100 DIA	1000	120	GST100COL	__ST100COL

Hopper Head - embellished



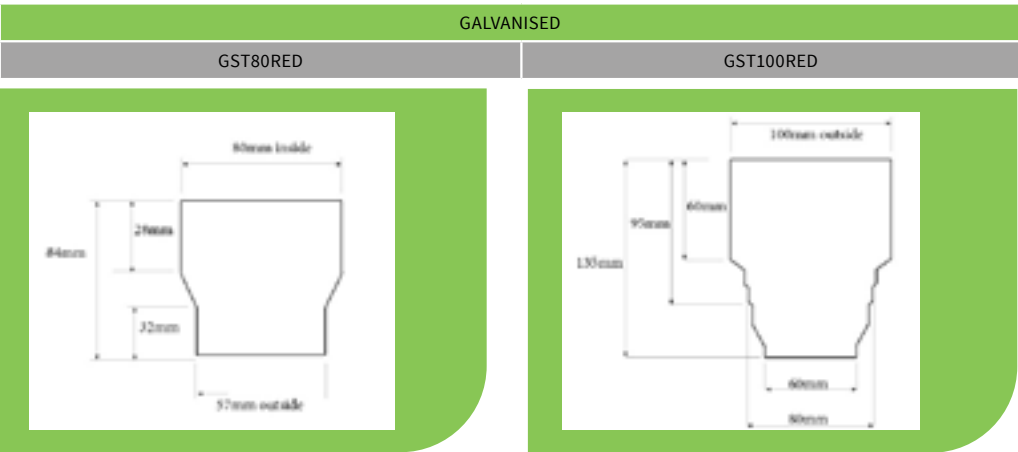
Pipe Size	A	B	C	D	GALVANISED	COLOUR COATED
80 DIA	385	220	220	80	GST80HO1	__ST80HO1
100 DIA	385	220	220	80	GST100HO1	__ST100HO1

Hopper Head - plain box



Pipe Size	A	B	C	D	GALVANISED	COLOUR COATED
80 DIA	200	200	200	80	GST80HO2	__ST80HO2
100 DIA	200	200	200	80	GST100HO2	__ST100HO2

Downpipe Reducer



HALF ROUND GUTTERS & FITTINGS

Gutters

Gutter Size	Gutter Length	A	B	T	WEIGHT (KG)	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
115MM (4")	3000MM	100	75	0.6	3.24	CP100HRG	QZ100HRG	NZ100HRG	
125MM (5")	3000MM	125	80	0.6	3.63	CP125HRG	QZ125HRG	NZ125HRG	SST125HRG
150MM (6")	3000MM	150	90	0.6	4.32	CP150HRG			

Note:
T = Gutter Thickness
(nominal +/- 0.1mm)

Union Connector

Gutter Size	A	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
115MM (4")	45	CP100HRU	QZ100HRU	NZ100HRU	
125MM (5")	45	CP125HRU	QZ125HRU	NZ125HRU	SST125HRU
150MM (6")	45	CP150HRU			

*N.B. QUARTZ ZINC COLOUR COATED GALVANISED STEEL

Push-Fit Stop-Ends

Gutter Size	A	B	C	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
115MM (4")	140	75	10	CP100HRE1	QZ100HRE1	NZ100HRE1	
125MM (5")	165	85	10	CP125HRE1	QZ125HRE1	NZ125HRE1	SST125HRE1
150MM (6")	190	100	10	CP150HRE1			

*N.B. QUARTZ ZINC COLOUR COATED GALVANISED STEEL

Standard Fascia Brackets

Gutter Size	A	B	C	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
115MM (4")	80	70	135	CP100HRFB			
125MM (5")	80	70	145	CP125HRFB			
150MM (6")	80	70	210	CP150HRFB			

Short-Back Fascia Brackets

Gutter Size	A	B	C	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
115MM (4")	90	140	60		QZ100HRFB	NZ100HRFB	
125MM (5")	100	155	62		QZ125HRFB	NZ125HRFB	SST125HRFB
150MM (6")	115	190	62				

*N.B. QUARTZ ZINC COLOUR COATED GALVANISED STEEL
Natural Zinc and Stainless steel versions do not exist so use the Galv Steel version

Wrap-Around Gutter Outlet

Gutter Size	PIPE SIZE	A	B	C	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
115MM (4")	80 DIA	170	145	75	CP100HRO1	QZ100HRO1	NZ100HRO1	
125MM (5")	80 DIA	190	160	75	CP125HRO1	QZ125HRO1	NZ125HRO1	SST125HRO1
150MM (6")	80 DIA	200	190	75	CP150HRO2			
150MM (6")	100 DIA	200	190	95	CP150HRO1			

Prefabricated Gutter Outlet

Gutter Size	PIPE SIZE	A	B	C	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
115MM (4")	80 DIA	300	245	75	CP100HO4	QZ100HO4	NZ100HO4	
125MM (5")	80 DIA	300	270	75	CP125HO4	QZ125HO4	NZ125HO4	SST125HO4
150MM (6")	80 DIA	300	290	75	CP150HO4			
150MM (6")	100 DIA	300	290	95	CP150HO5			

ROUND DOWNPIPES & FITTINGS

Side Fix Gutter Rafter Bracket

Note: All dimensions are in mm unless shown otherwise.

Gutter Size	A	B	C	D	COPPER
115MM (4")	280	20	130	205	40° CP100RAFT
125MM (5")	280	20	130	225	40° CP100RAFT
150MM (6")	280	20	130	240	40° CP100RAFT

Natural Zinc and Stainless steel versions do not exist so use the Galv Steel version

Top Fix Gutter Rafter Bracket (bend on site*)

Gutter Size	A	B	C	D	COPPER
115MM (4")	300	130	205	Bend on site	CP100RAFT1
125MM (5")	300	130	225		CP100RAFT1
150MM (6")	300	130	240		CP100RAFT1

Natural Zinc and Stainless steel versions do not exist so use the Galv Steel version

*N.B. To bend on-site a vice or bracket bender will be required

90° External Angle

Gutter Size	A	B	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
115MM (4")	160	295	CP10090E	QZ10090E	NZ10090E	
125MM (5")	145	300	CP12590E	QZ12590E	NZ12590E	SST12590E
150MM (6")	110	295	CP15090E			

90° Internal Angle

Gutter Size	A	B	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
115MM (4")	160	290	CP10090I	QZ10090I	NZ10090I	
125MM (5")	150	300	CP12590I	QZ12590I	NZ12590I	SST12590I
150MM (6")	120	300	CP15090I			

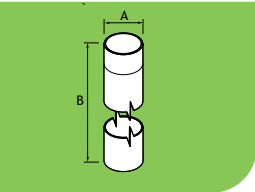
135° External Angle

Gutter Size	A	B	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
115MM (4")	250	300	CP100135E	QZ100135E	NZ100135E	
125MM (5")	250	300	CP125135E	QZ125135E	NZ125135E	SST125135E
150MM (6")	250	300	CP150135E			

135° Internal Angle

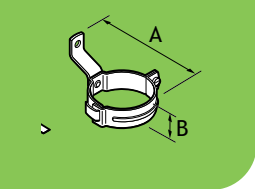
Gutter Size	A	B	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
115MM (4")	300	250	CP100135I	QZ100135I	NZ100135I	
125MM (5")	300	250	CP125135I	QZ125135I	NZ125135I	SST125135I
150MM (6")	300	250	CP150135I			

Pipes



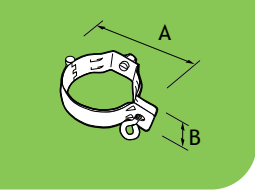
Pipe Size (A)	PIPE LENGTH (B)	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
80 DIA	3000	CP80RDP	QZ80RDP	NZ80RDP	SST80RDP
100 DIA	3000	CP100RDP	QZ100RDP	NZ100RDP	

Pipe Clip



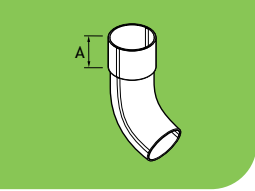
Pipe Size	A	B	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
80 DIA	120	25	CP80DPC	QZ80DPC	NZ80DPC	SST80DPC
100 DIA	135	25	CP100DPC	QZ100DPC	NZ100DPC	

M10 Pipe Clip - for use with M10 Screw (sold separately)



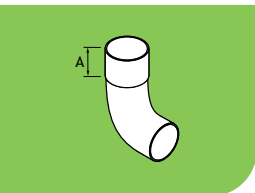
Pipe Size (A)	B	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
80 DIA	25	CP80DPC	QZ80DPC	NZ80DPC	SST80DPC
100 DIA	25	CP100DPC	QZ100DPC	NZ100DPC	

Offset Bend 70°



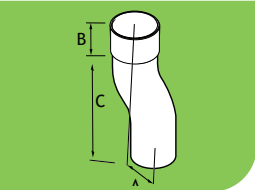
Pipe Size (A)	A	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
80 DIA	34	CP80B70	QZ80B70	NZ80B70	SST80B70
100 DIA	30	CP100B70	QZ100B70	NZ100B70	

Offset Bend 90°



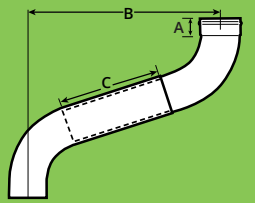
Pipe Size (A)	A	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
80 DIA	43	CP80B90	QZ80B90	NZ80B90	SST80B90
100 DIA	34	CP100B90	QZ100B90	NZ100B90	

Fixed Offset



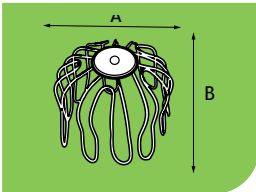
Pipe Size (A)	A	B	C	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
80 DIA	64	60	160	CP80OS60	QZ80OS60	NZ80OS60	SST80OS60
100 DIA	68	60	195	CP100OS60	QZ100OS60	NZ100OS60	

2-part Adjustable Offset



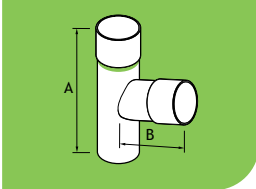
Pipe Size	A	B	C	NATURAL ZINC
80 DIA	36	200-700	330	NZ80TP700
100 DIA	29	200-700	270	NZ100TP700

Leaf Guard



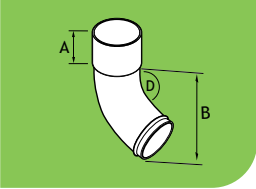
Pipe Size	A	B	COPPER
80 DIA	85-80	100	CP80LG

Branch 72°



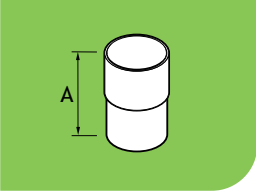
Pipe Size (A)	A	B	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
80	280	72	CP80J	QZ80J	NZ80J	SST80J
100	285	55	CP100J	QZ100J	NZ100J	

Shoe



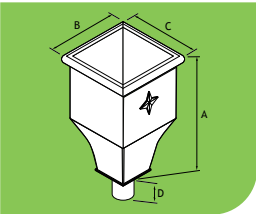
Pipe Size	A	B	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
80 DIA	36	127	CP80SH	QZ80SH	NZ80SH	SST80SH
100 DIA	29	155	CP100SH	QZ100SH	NZ100SH	

Downpipe Connector



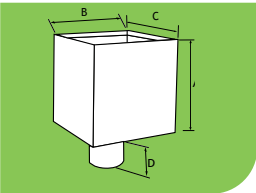
Pipe Size	A	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
80 DIA	118	CP80SOC	QZ80SOC	NZ80SOC	SST80SOC
100 DIA	117	CP100SOC	QZ100SOC	NZ100SOC	

Hopper Head - Embellished



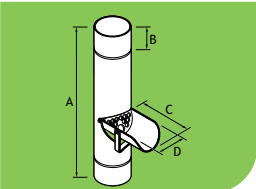
Pipe Size	A	B	C	D	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
80 DIA	390	250	250	80	CP80HO1	QZ80HO1	NZ80HO1	SST80HO1
100 DIA	390	250	250	80	CP100HO1	QZ100HO1	NZ100HO1	

Hopper Head - plain box



Pipe Size	A	B	C	D	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
80 DIA	200	200	200	80	CP80HO2	QZ80HO2	NZ80HO2	SST80HO2
100 DIA	200	200	200	80	CP100HO2	QZ100HO2	NZ100HO2	

Rainwater Diverter



Pipe Size	A	B	C	D	COPPER	QUARTZ ZINC	NATURAL ZINC	STAINLESS STEEL
80 DIA	400	57	135	78	CP80DIV	QZ80DIV	NZ80DIV	SST80DIV
100 DIA	400	53	155	98	CP100DIV	QZ100DIV	NZ100DIV	

Note: All dimensions are in mm unless shown otherwise.

STOCKED RANGES

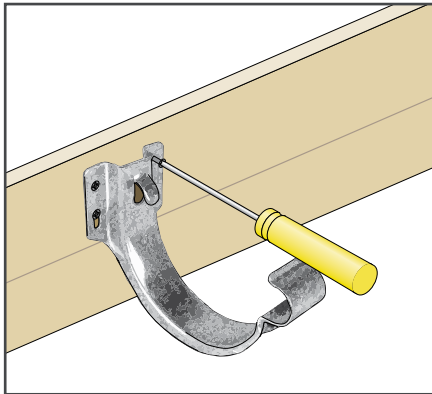
	*begin code with
COPPER	CP
NATURAL ZINC	NZ
STAINLESS STEEL	SST
QUARTZ ZINC	QZ

DELIVERED IN 15 DAYS

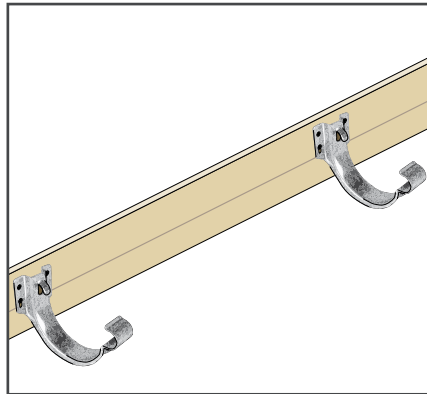


Infinity gutters are available in the half round profile in four sizes with a range of brackets to accommodate all types of eaves. The system is dry jointed without the need for additional silicone sealant.

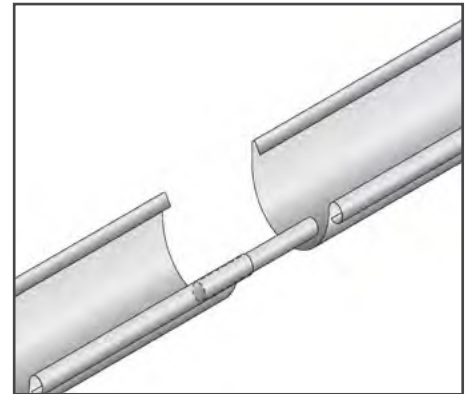
The gutter range can be connected to the steel pipework system and secured by standard pipe clips. The assembly and installation must be considered individually depending on the project, although general aspects of preparation are common to all as shown below.



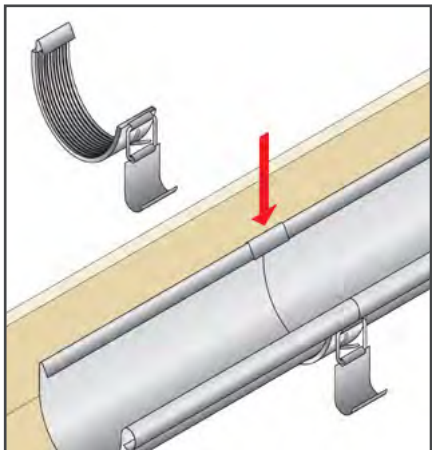
1. Generally position the fascia brackets at 915mm centres, using at least 3 brackets per gutter length. Use 2 screws on both the left and right fixing options (i.e. use 4 screws in total per bracket).



2. Use a string line to set out your fascia brackets along the gutter run allowing for a fall of 1:600 to 1:350 (max). (The system can be laid without a fall if you prefer)

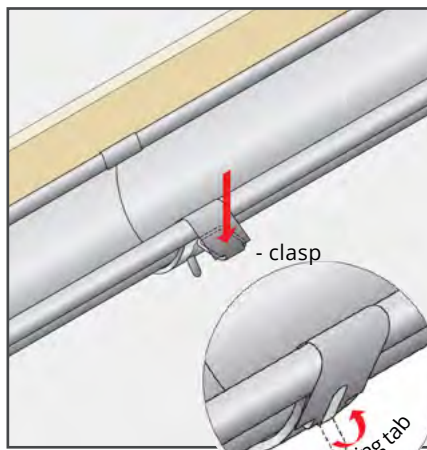


3. A bead connector (comes with the Union connector) is used to join two lengths of gutter. Insert the connector into the front roll of each gutter length. Allow for a 4mm expansion gap.



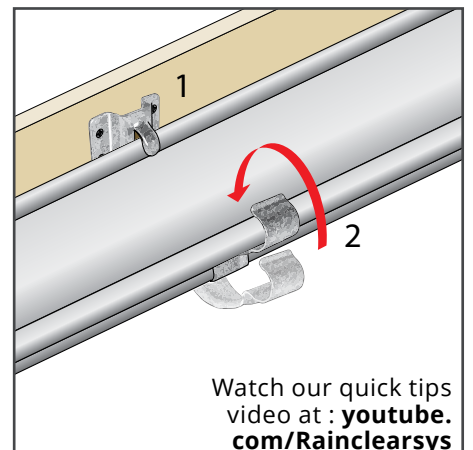
4. An EDPM rubber sealed union connector is used to connect the gutter lengths and angles together. Push open locking tab with thumb by peeling back rubber seal.

Locate the union connector over the rear edge of the gutter. Ensure rubber does not obstruct good fit.



5. Locate the clasp over the front roll edge of the gutter. Pull union tight to the gutter and push the clasp down to squeeze shut.

N.B. Fold the locking tab over and press flush to fully secure the clasp.



6. Locate the back of the fascia bracket over the rear edge of the gutter first, then pull the front of the fascia bracket up and over the front roll of the gutter. If you're finding this a bit of a struggle, use the bead connector (or other suitable tool) to open/raise the rear 'tab' of the fascia bracket a little.

Watch our quick tips video at : [youtube.com/Rainclearsys](https://www.youtube.com/Rainclearsys)

NB. The end/last fascia bracket on the gutter run should be placed 30 cm from the gutter end or corner. Gutter angles/corners are supported by two unions and don't require their own fascia bracket - this is sufficient.

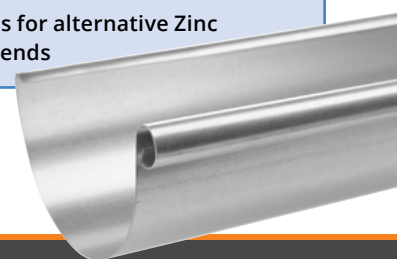
N.B. Wear gloves when installing Plain Galvanised Steel:

The Plain Galv will dull over time. Touching it without gloves breaks through the oily surface and starts the weathering process earlier in those areas. In a few months the 'weathering' will catch up all over.

Quick tip videos: visit [youtube.com/Rainclearsys](https://www.youtube.com/Rainclearsys)

Watch the 'Push-fit' stopends video: Simply match the stopend 'ear' to the gutter bead at the front, then 'push' the stopend on. The 'ear' at the rear will finish higher than the rear edge of the gutter.

Watch the 'Glue-in' or 'Seaming' methods for alternative Zinc & standard 190mm Galvanised Steel stopends

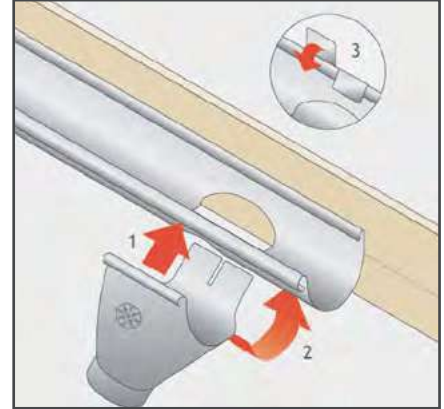
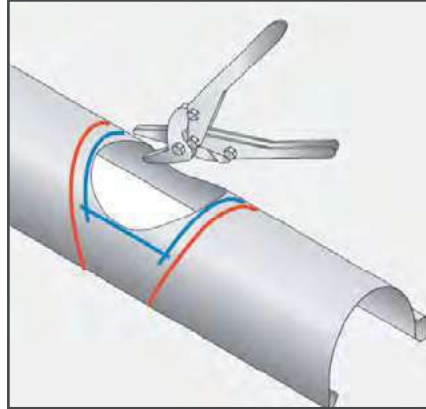
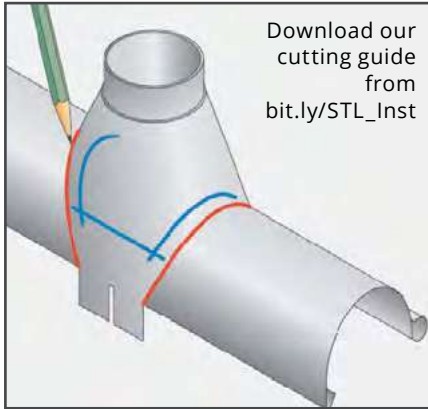




Infinity downpipes are available as a circular profile in 3 sizes with a range of pipe clips and fittings to accommodate all types of installation situations. The downpipes and offsets are push-fit with 'swaged' ends, again for fast and watertight installation.

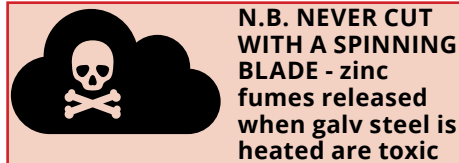
The assembly and installation must be considered individually depending on the project, although general aspects of preparation are common to all as shown below.

Wrap-around Outlet (★ alternatively use prefab outlets)

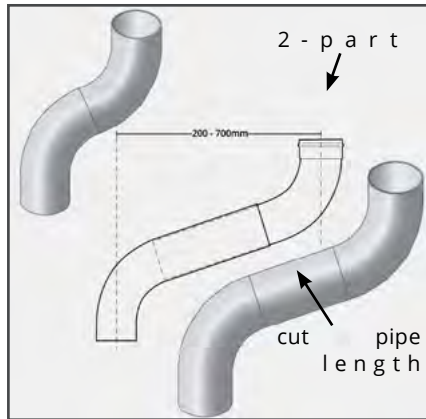
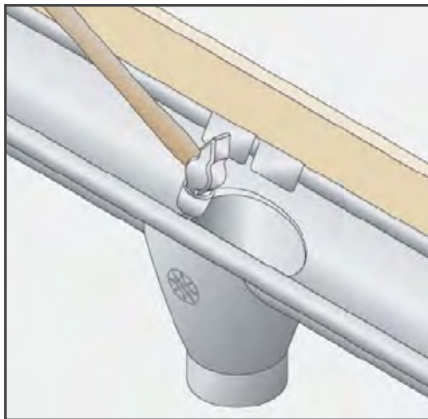


1. When installing a 'wrap around outlet' mark the desired location of the outlet by drawing a line either side of the outlet along its edge. Draw another line 20mm inside of the outer lines and join these inner lines together in an oval. This becomes the line to follow to cut out the hole.

2. Use a hacksaw to make an initial hole in the gutter, and then use a set of tin snips to cut out the inner hole that you have marked out.



3. Attach the outlet to the gutter and fold the rear tabs of the outlet over the rear edge of the gutter, making sure the outlet is aligned correctly to accept the downpipe.

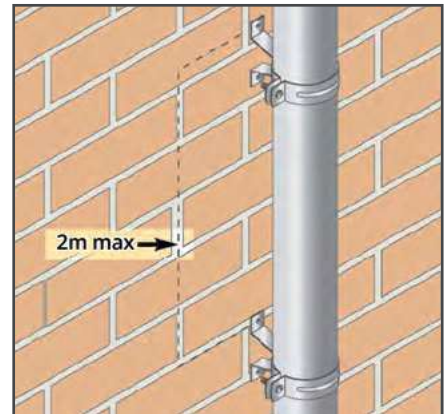


4. Tap the inner rough edges of the hole that was cut in the gutter, down into the outlet, to ensure a smooth flow of water.

5. Offsets are achieved using either the 60mm fixed offset, 2no. 70° bends, the 2-part variable offset (for up to 700mm) or, for larger projections, by inserting a cut pipe length between the two bends.

N.B. The 2no. bends do NOT require additional connectors when creating longer projections.

Downpipes



6. Downpipes should be installed using at least 2/no pipe clips per length. Mark out the clips locations and level with a spirit level or plumb line.

Choose either the standard Fixed Depth clip or M10 Boss Adjustable Depth downpipe clip (the standard one for the Copper system)

Open the tightening screw to allow the pipe to be inserted, close the clip and re-tighten, making sure not to over tighten and damage the downpipe.



★ alternatively choose to use prefabricated outlets
don't forget to order additional gutter unions!

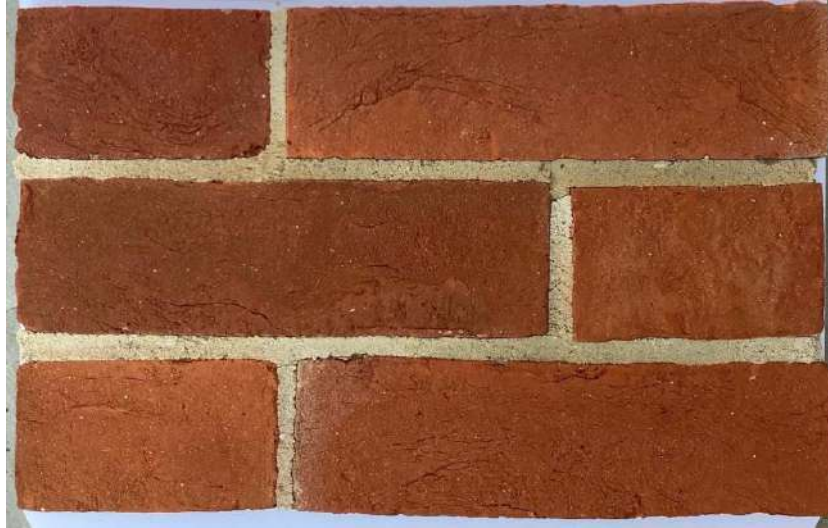
These instructions are applicable to Infinity Galvanised Steel, Colour Coated Galvanised Steel, Copper, Zinc & Stainless Steel



BUILDSCAPE

Masonry and Paving Solutions

Heritage Light Blend Data Sheet



Product Information

Type	Handmade
Facing Description	Sand Creased
Dry Brick Weight	2.8KG
Pack Quantity	671
Packaging	Skrink wrapped on pallets

Technical Specification

Brick Dimensions (L x W X H)	215 x 102 x 65mm
Size Tolerances	T2
Configuration	Single Frog
Compressive Strength	51 m/mm ²
Water Absorption	11%
Soluble Salts	2
Durability	F2



HARMONY HOMES

BUILDING & JOINERY

Harmony Homes
Building & Joinery Ltd

22 Valley Road
RG9 1RR
Henley on Thames

☎ 07778850762

✉ info@harmonyhomesltd.co.uk

🌐 www.harmonyhomesltd.co.uk

DRAWING NOTES

Do Not Scale

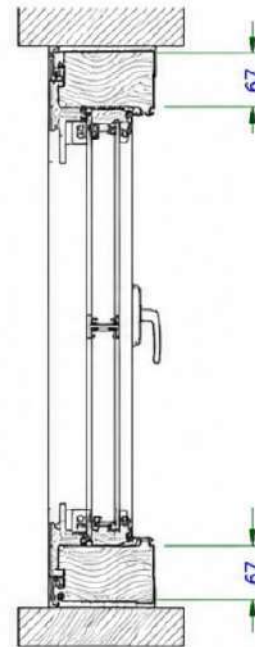
FRONT ELEVATION

SCALE 1:15



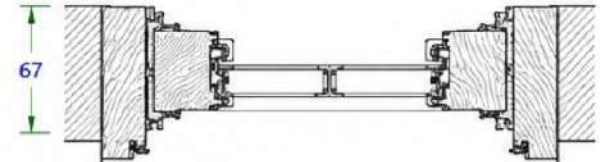
VERTICAL SECTION A-A

SCALE 1:15



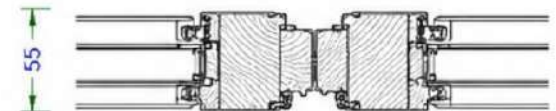
HEAD SECTION

SCALE 1:5



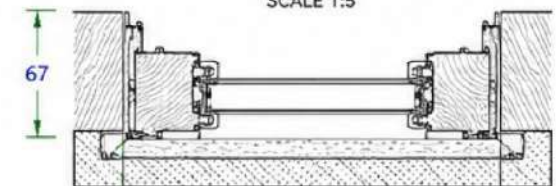
MEETING RAIL SECTION

SCALE 1:5



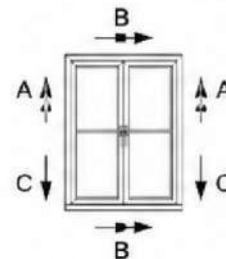
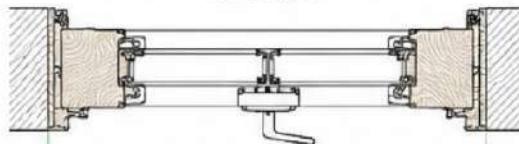
CILL SECTION

SCALE 1:5



PLAN VIEW (HEAD)

SCALE 1:15



CASEMENT WINDOW SPECIFICATION

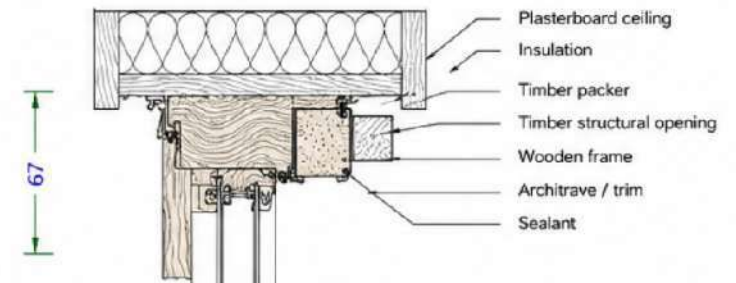
- Hardwood frame (e.g. Oak)
- Double glazed units (28mm)
- Multipoint locking system
- External hardwood cill
- External weather seals
- Painted / stained finish

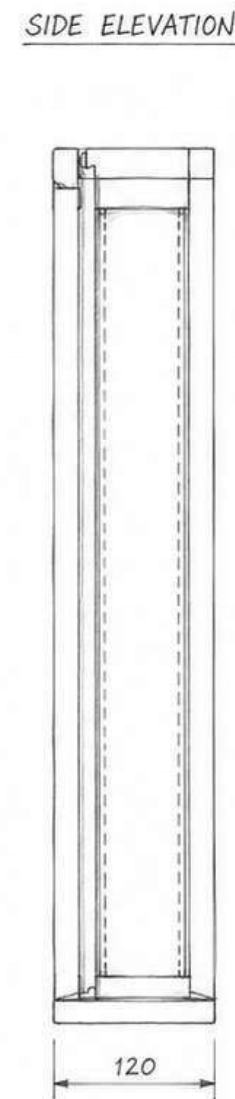
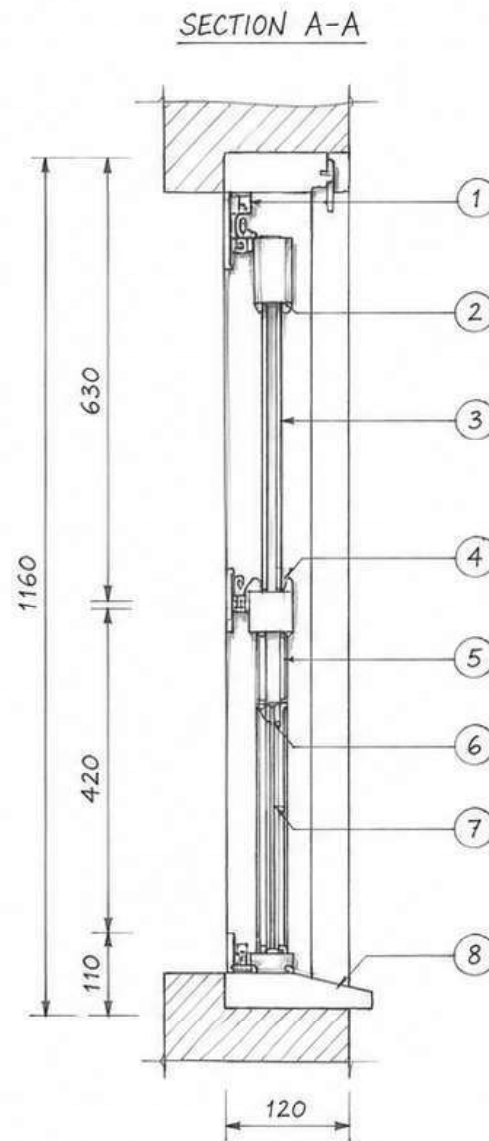
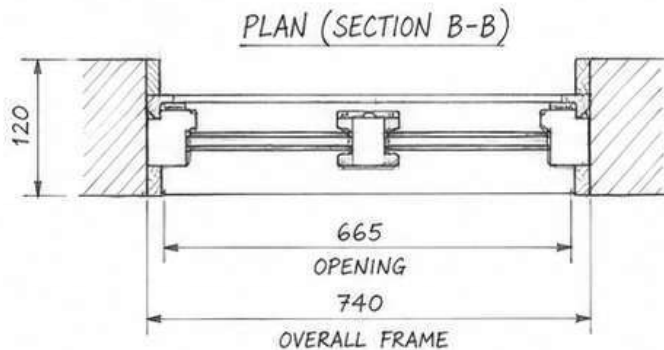
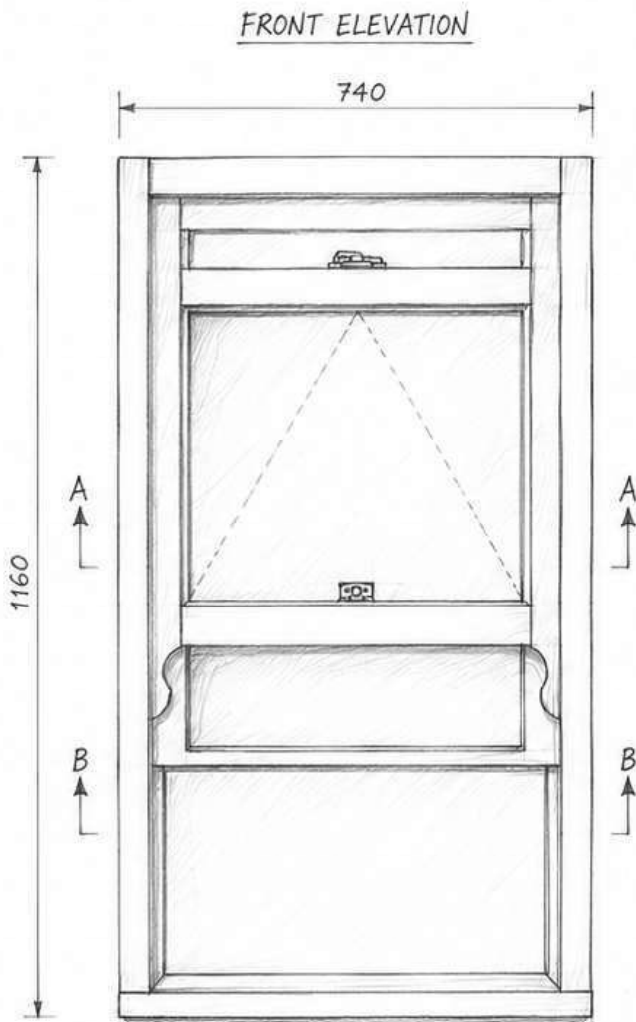
NOTE:

All timber to be finished with appropriate paint or stain system to suit external exposure and provide long term protection.

CEILING SECTION

SCALE 1:5





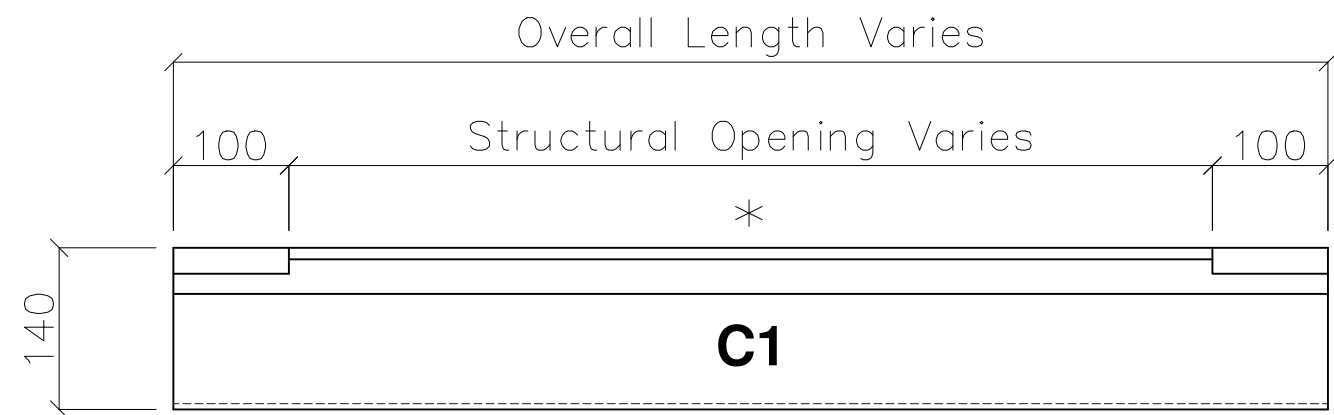
22 Valley Road
Henley on Thames
RG9 1RR
Tel 07778850760
info@harmonyhomesltd.co.uk

- NOTES
- ALL DIMENSIONS ARE IN MILLIMETERS.
 - DO NOT SCALE FROM DRAWINGS.
 - ALL TIMBER TO BE PAINTED.
 - HARDWARE FINISH: SATIN CHROME.

SCHEDULE OF MATERIALS / COMPONENTS		
NO.	DESCRIPTION	MATERIAL / FINISH
1	FRAME (HEAD & JAMB)	TIMBER / PAINTED
2	UPPER SASH FRAME	TIMBER / PAINTED
3	GLAZING	DOUBLE GLAZED CLEAR
4	SASH LOCK	SATIN CHROME
5	MEETING RAIL	TIMBER / PAINTED
6	FINGER PULL	INTEGRAL TIMBER
7	LOWER SASH FRAME	TIMBER / PAINTED
8	SILL	TIMBER / PAINTED

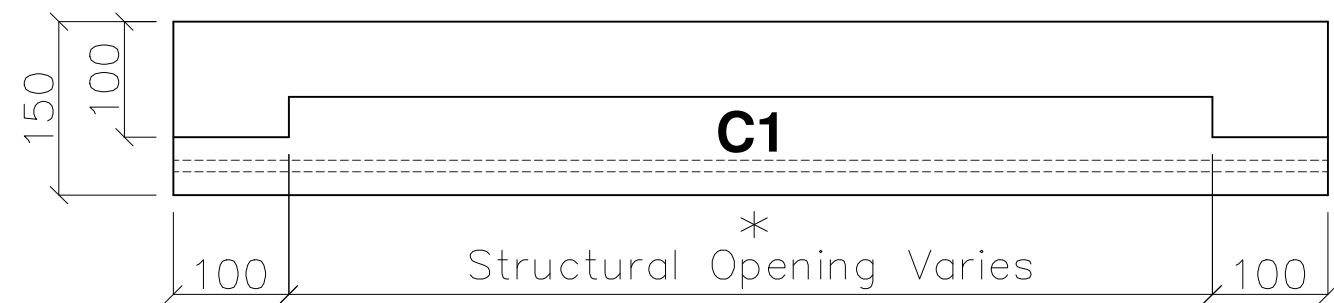
PROJECT	SASH WINDOW	
DRAWING TITLE	ELEVATIONS, SECTIONS & PLAN	
DRAWING NO.	W-01	REV. A
SCALE	1:10	DATE 25.05.2024

C1 STOOLED CILL FOR BRICKWORK - TECHNICAL DATA SHEET



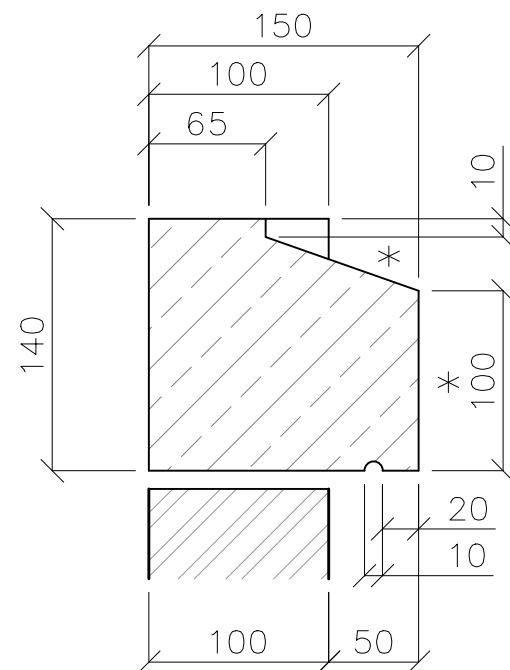
Front Elevation

* denotes SEEN FACES



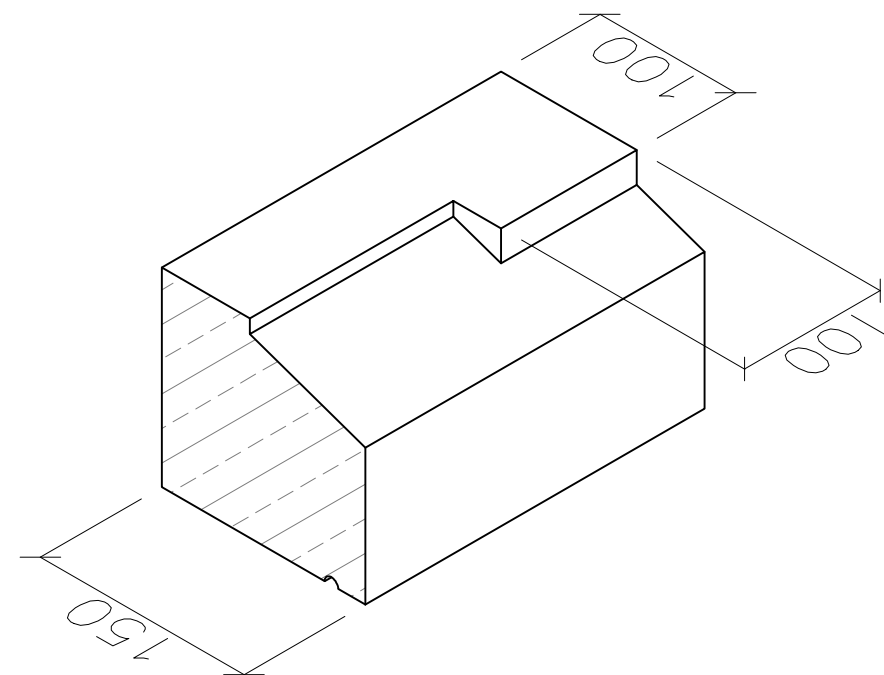
Plan View

* denotes SEEN FACES



Section

* denotes SEEN FACES



Product Specification

Wetcast Stone

Strength: >45N/mm²

Typical Density: 2500Kg/m³

Drying Shrinkage: <0.04%

Water Absorption: 0.09mg/mm²

Semi Dry Stone

Strength: >28N/mm²

Typical Density: 2000Kg/m³

Drying Shrinkage: <0.04%

Water Absorption: 0.95mg/mm²

SEMI DRY - Maximum length in 1 piece = 1200mm
WETCAST - Maximum length in 1 piece = 1500mm



Project/Site Address:

**SERENE STONE LIMITED
TECHNICAL DATA SHEET**

Drawing Title:

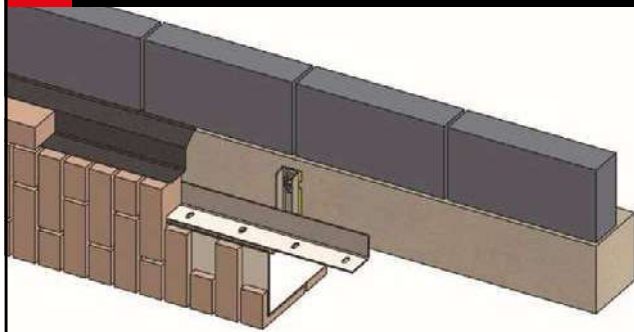
**C1 STOOLED CILL FOR
BRICKWORK**

Drawn: JJB Date: 08/2017 Scale: NTS

Drawing Ref: **SSP-001** Rev: **0**

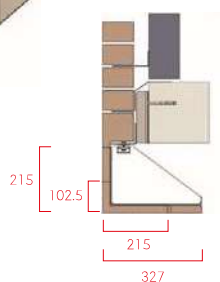
3

Half Lap Bond - 215 x 327mm

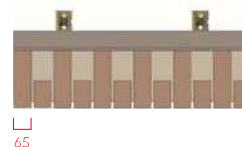


Length of B.O.S.S. unit | 890mm
Height of B.O.S.S. unit | 215mm
Width of B.O.S.S. unit | 327mm
Thickness of steel profile | 2.5mm
Mass with brick slip | 41.33kg·m⁻¹

This solution is used to create half lap bond details at openings and reveals. The half lap bond detail on the B.O.S.S. unit differentiates the soffit from the brickwork on the main facade.



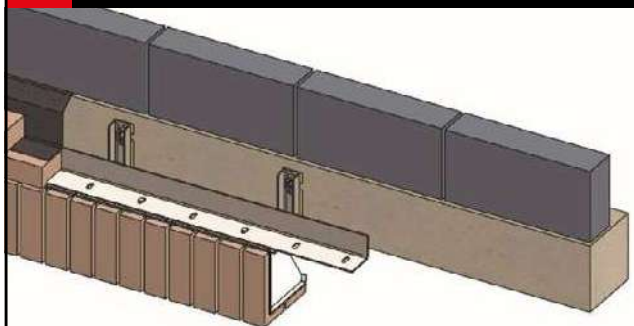
End view



Front elevation

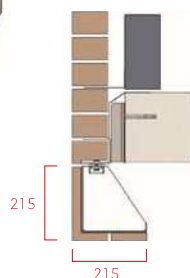
4

Soldier Bond - 215 x 215mm

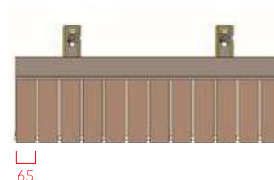


Length of B.O.S.S. unit | 890mm
Height of B.O.S.S. unit | 215mm
Width of B.O.S.S. unit | 215mm
Thickness of steel profile | 2.5mm
Mass with brick slip | 31.71kg·m⁻¹

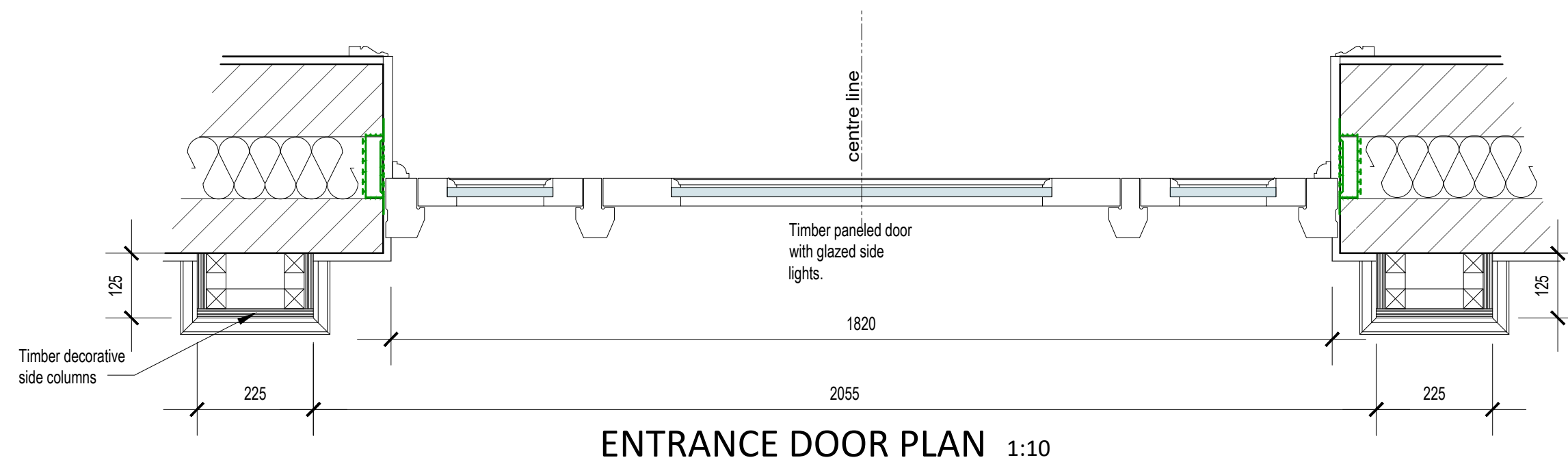
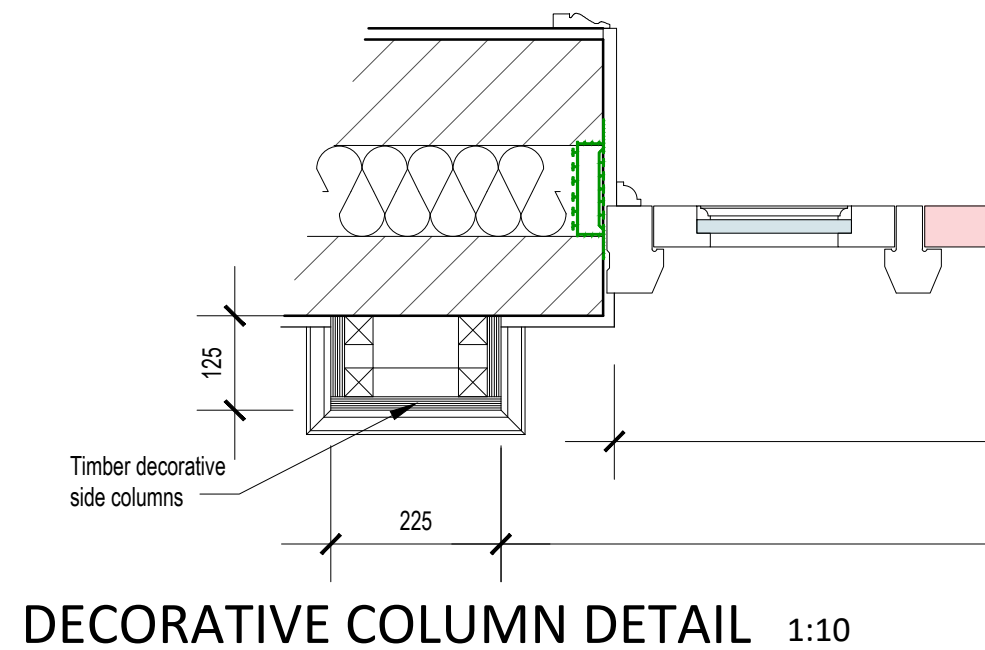
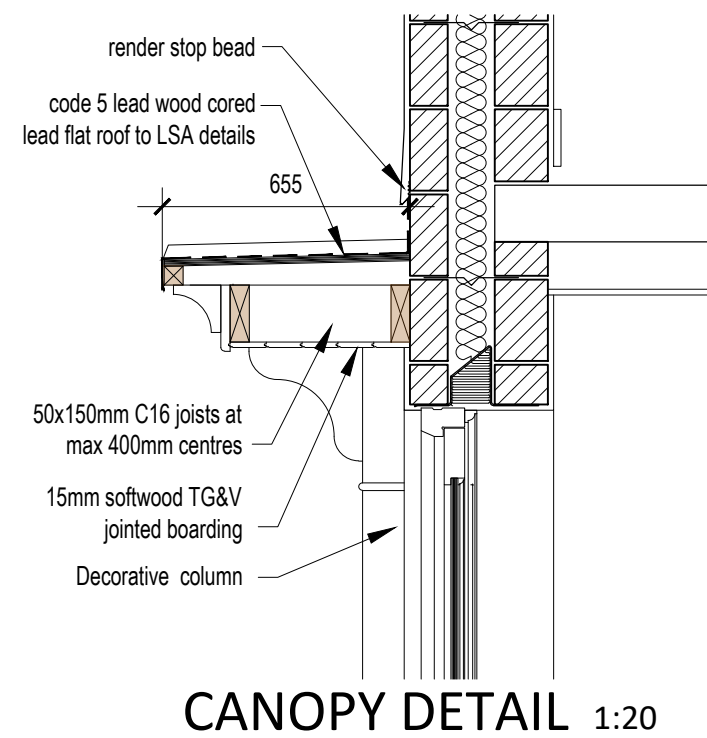
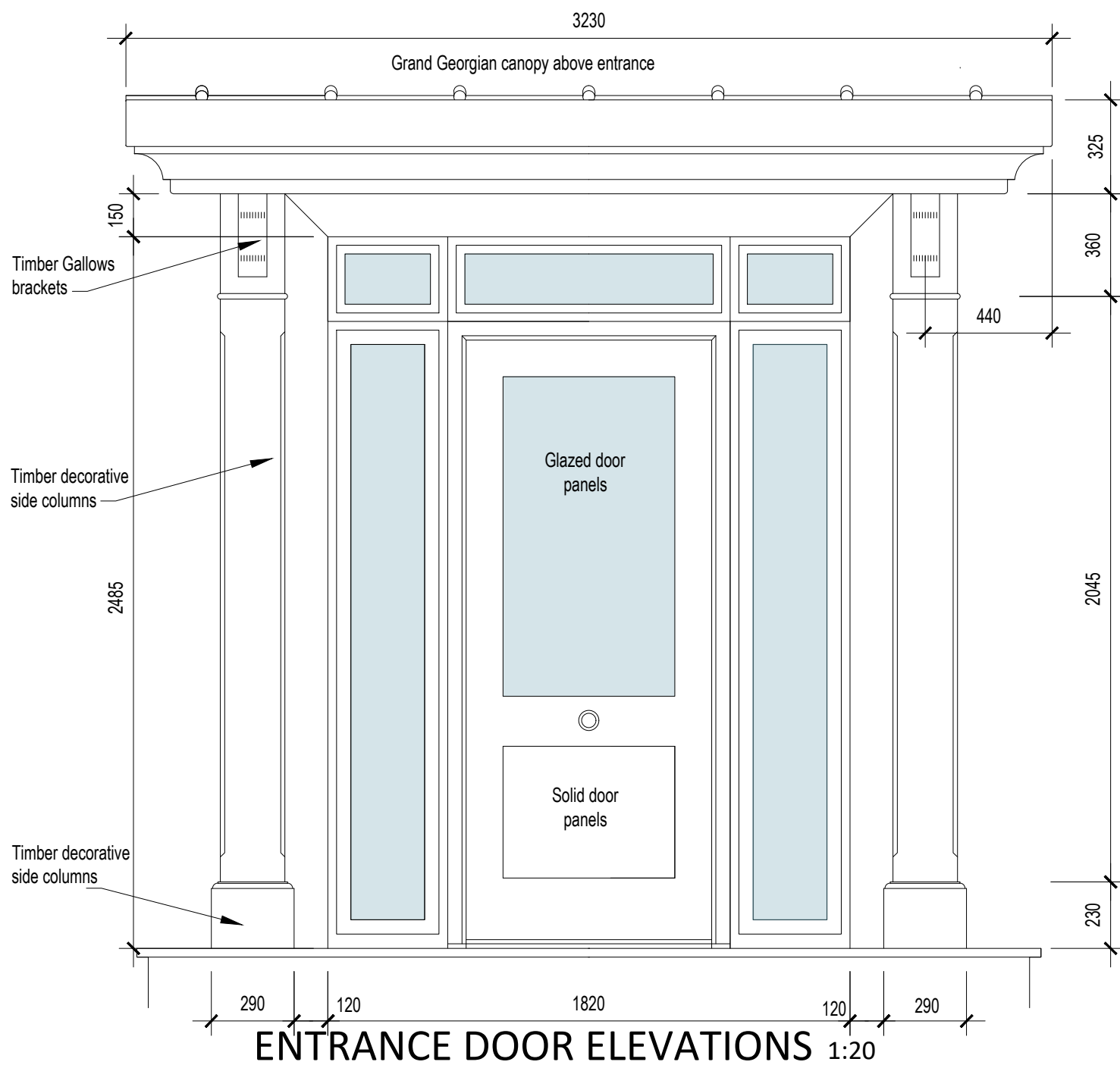
This solution is used to create soldier bond details at openings and reveals. The soldier bond detail on the B.O.S.S. unit differentiates the soffit from the brickwork on the main facade.



End view



Front elevation



REV	COMMENTS	DATE
-----	----------	------



CLIENT Mr R. Arnold
PROJECT Warren Creek, The Warren
Caversham, Reading, RG4 7TQ
DRAWING Entrance Door Details

STATUS Planning
SCALE 1:10 & 1:20 DRAWN Pari CHECKED NO 3863/310 REV .
DATE June 2026

THIS DRAWING MUST NOT BE SCALED UNLESS ISSUED FOR PLANNING PURPOSES. ALL DIMENSIONS ARE TO BE VERIFIED PRIOR TO SETTING OUT, COMMENCING WORK, OR PRODUCTION OF FABRICATION DRAWINGS. REPORT ANY DISCREPANCIES TO THE SUPERVISING OFFICER IMMEDIATELY. ©

Specification applies to the standard product. Our range of options usually allows us to accommodate any differences you may require. Certain options may affect the availability of other options and the performance levels. Please contact us and we will be happy to support in developing this specification to meet your project requirements.

[Option – delete / update as appropriate](#)

L20 – Doors/Shutters

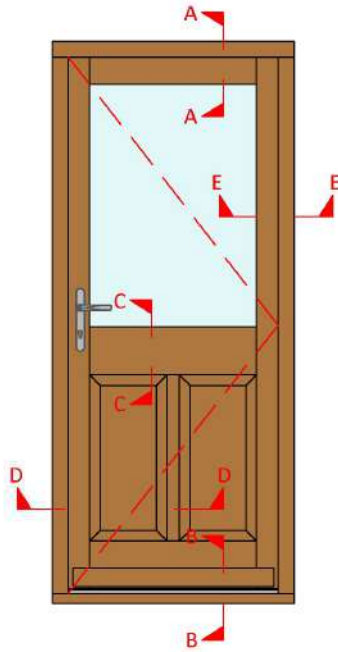
WOOD WINDOWS TYPE [ADD YOUR REFERENCE](#)

- DS2 OPEN IN TIMBER DOORSET
- Standard: To BS 644: 2012
- Manufacturer: George Barnsdale & Sons Ltd
 - High Street, Donington, PE11 4TA
 - Tel: 01775 823 000
 - Email: enquiries@georgebarnsdale.co.uk
 - Certification: Quality: EN ISO 9001: 2015; Environmental: EN ISO 14001: 2015; Health & Safety: EN ISO 45001: 2018
- Exposure Rating to BS 6375-1: 2015 - [2000](#)
 - Air Permeability: [Class 2 \(300Pa\)](#)
 - Weather Tightness: [Class 4A \(150Pa\)](#)
 - Resistance to Wind Load: [Class A3 \(1200Pa\)](#)
- Operation & strength characteristics: To BS6375-2: 2009
- Timber: Generally, to BS EN 942: 2007
 - Species: Engineered Redwood / [Engineered Grandis](#) / [Engineered Oak](#) / [Accoya](#)
 - Appearance class: J10 for glazing beads, drips and similar. J40 or better for all other members.
 - Moisture content on delivery: 10-16%
 - Certification: FSC chain of custody
- Finish: Fully Finished with George Barnsdale paint system (4 coats on opaque / 3 coats on translucent)
 - Colour: [RAL 9016](#)
 - Guarantee: 10 years Opaque; 7 years stain
- Thermal performance (U_{window} maximum): [1.4 W/m2K](#)
- Acoustic performance: [38 dB](#)
- Security: Certified to PAS 24 and Secured by Design when required by Building Regulations Document Q
- Glazing System: Traditional Drained and Vented / [Contemporary Drained and Vented](#) / [Historic External Putty](#)
- Glazing details: Factory glazed to meet performance specification
 - Glazing unit: To meet performance specification / specified
 - g value: ≤ 0.6
 - Light transmittance: $>70\%$
- Ironmongery/Accessories: Doors fitted with security espagnolette locking and 3* security cylinder lock.
 - Furniture Collection: Original / [Classic](#) / [Foundry](#) / [Modern](#) / [Special](#)
 - Finish: Polished Brass / [Polished Chrome](#) / [Satin Chrome](#) / [Black](#) / [Pewter](#) / [Stainless Steel](#) / [Special](#)
 - Locking: Standard / [Autolock](#) / [Electronic](#) (for access control system)
 - Ventilation: None / [Trickle ventilator in frame](#)
- Fixing: In accordance with George Barnsdale Installation Manual.
- Other Features:
 - [Add any additional features if required](#)

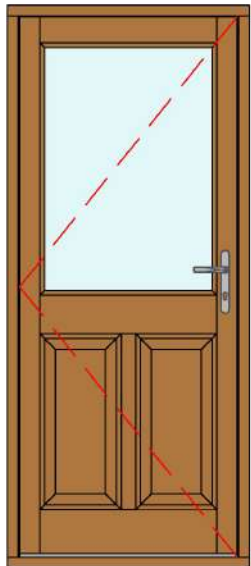


ELEVATIONS

Elevation 1 - Outside View (Scale 1:20)

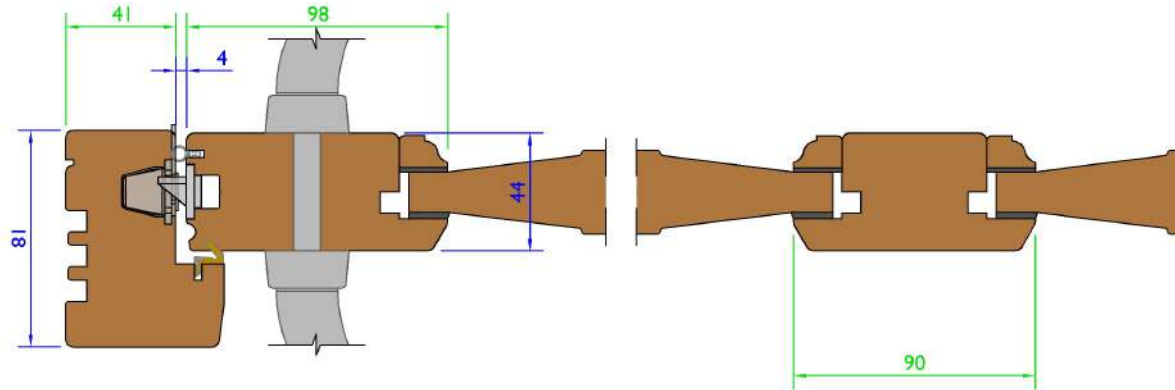


Elevation 2 - Inside View (Scale 1:20)

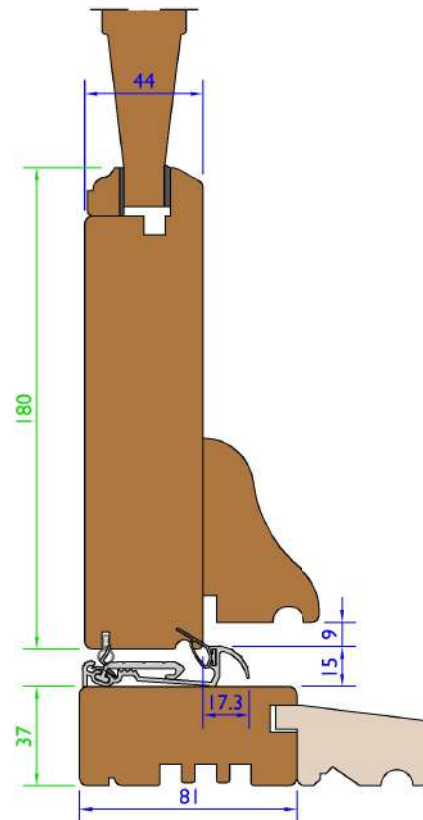


SECTIONS

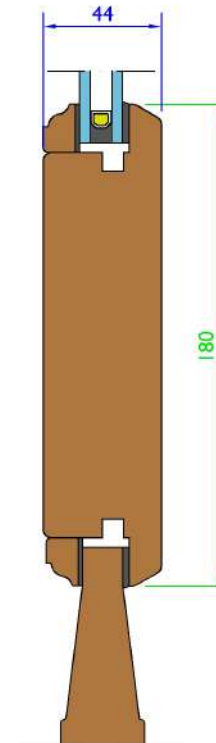
Section D-D - Jamb and Vertical Rail (Scale 1:2)



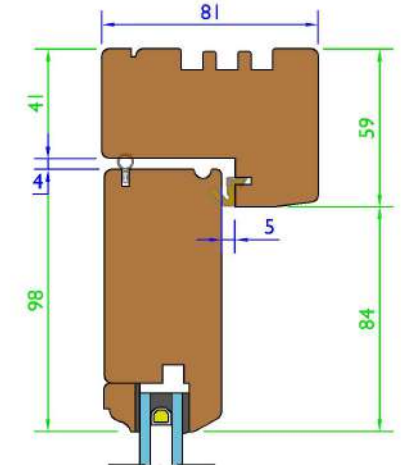
Section B-B - Cill Detail (Scale 1:2)



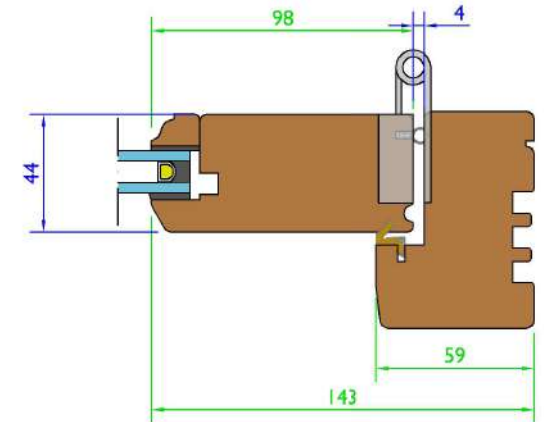
Section C-C - Midrail (Scale 1:2)



Section A-A - Head Detail (Scale 1:2)



Section E-E Hinge Detail - (Scale 1:2)



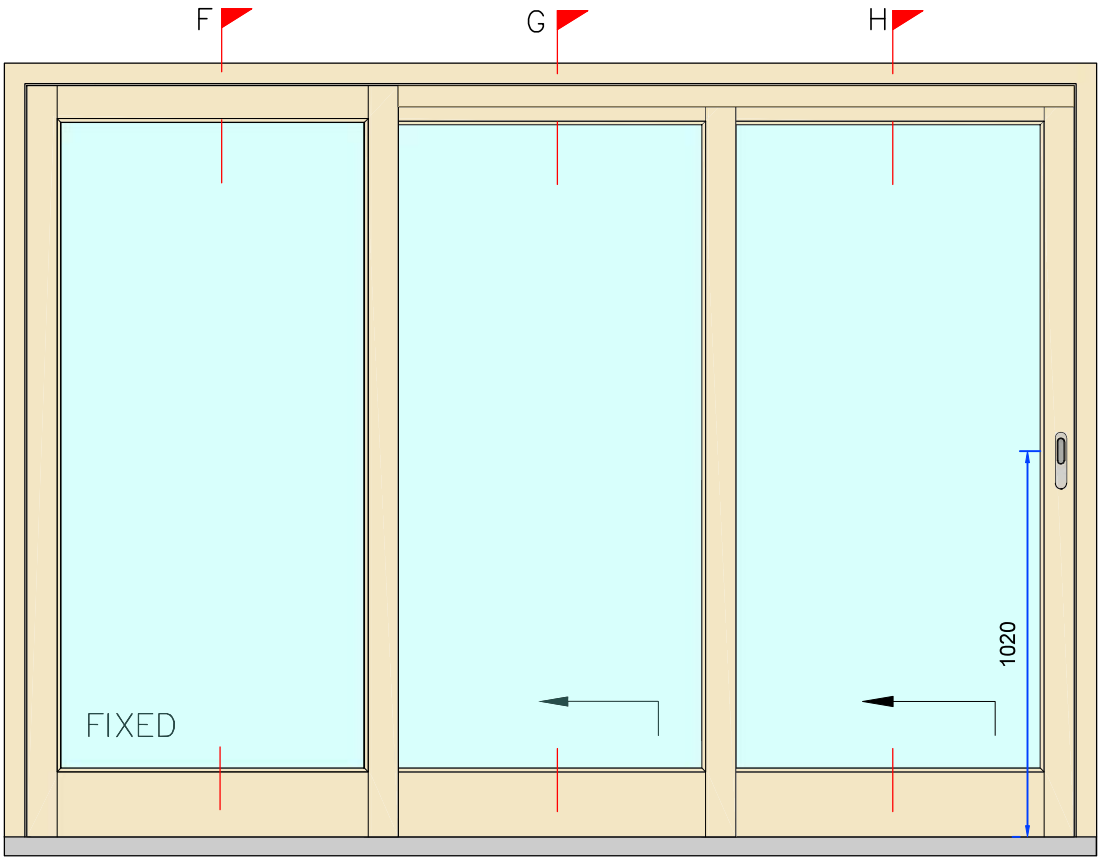
Variable Dimensions
(Dim shown is usually min)

Fixed Dimensions

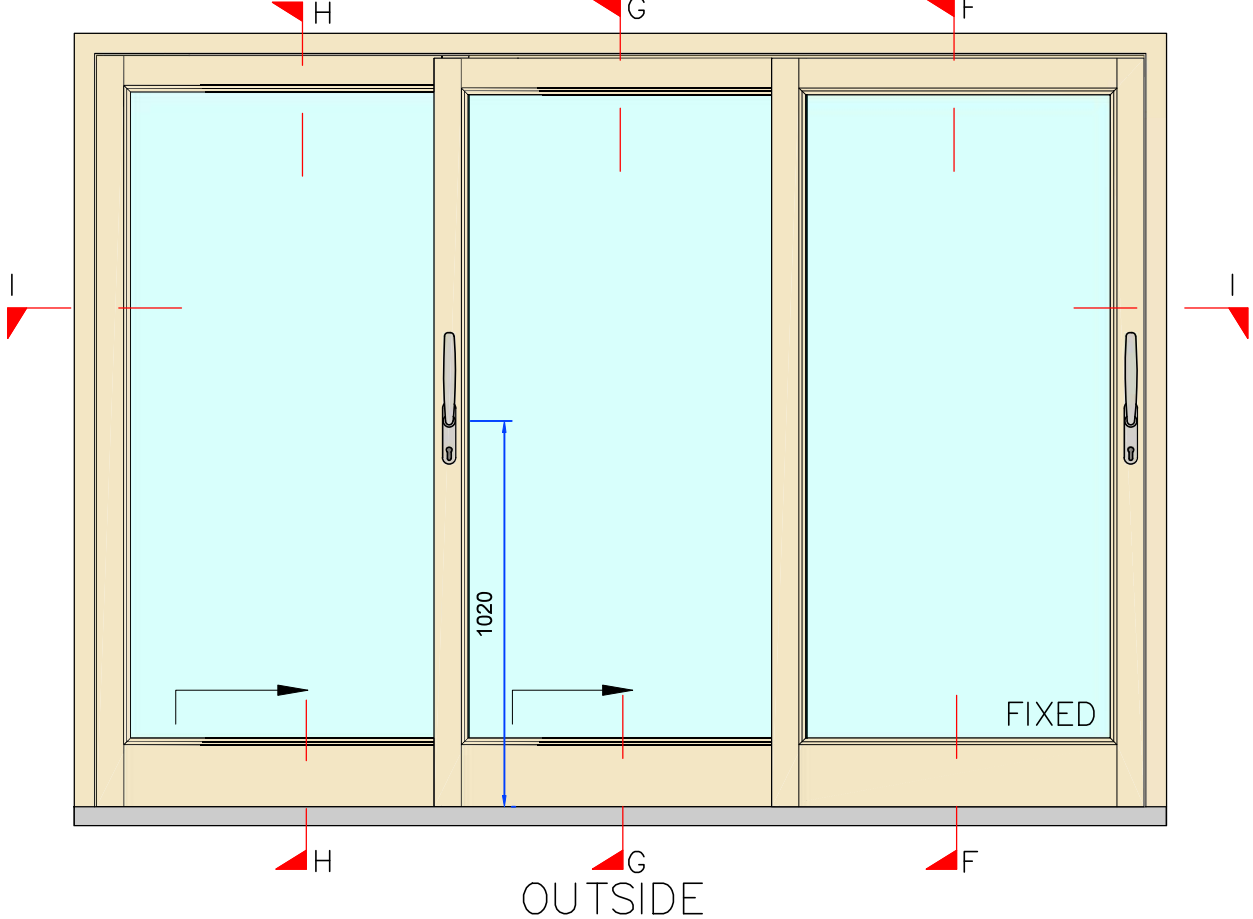
System: T-DS2-81		
Title: Traditional - Inward Opening Doorset (44mm)		
Scale:	As Shown	Rev No: A
Drawn By:	LS	Date: 27-Oct-16
Sheet No: 1		Status: WIP

SECTIONS

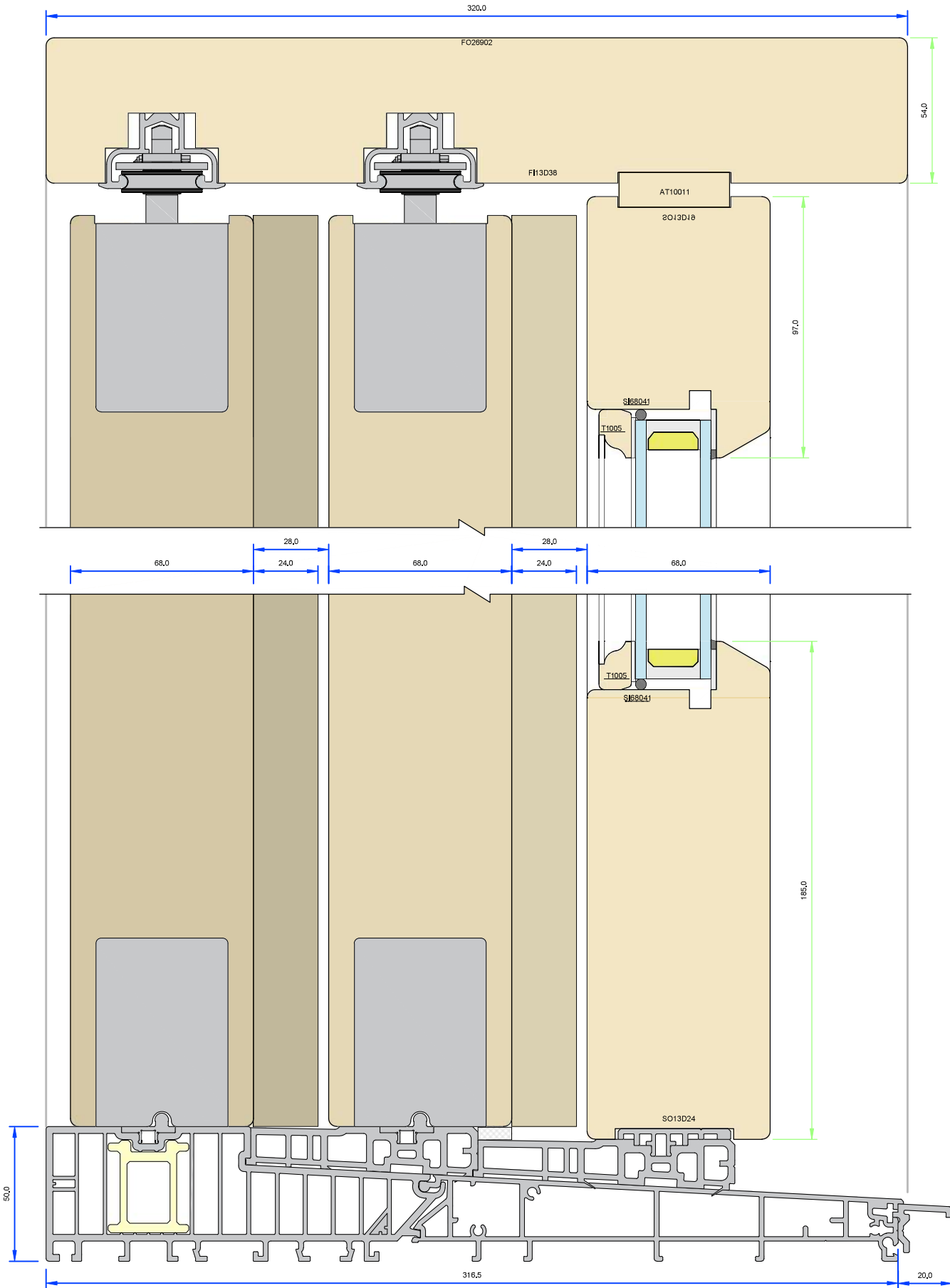
Elevation 1 – Outside View (Scale 1:20)



Elevation 2 – Inside View (Scale 1:20)



Section F-F – Vertical Section Detail (Scale 1:2)



Variable Dimensions
(Dim shown is usually min)

Fixed Dimensions

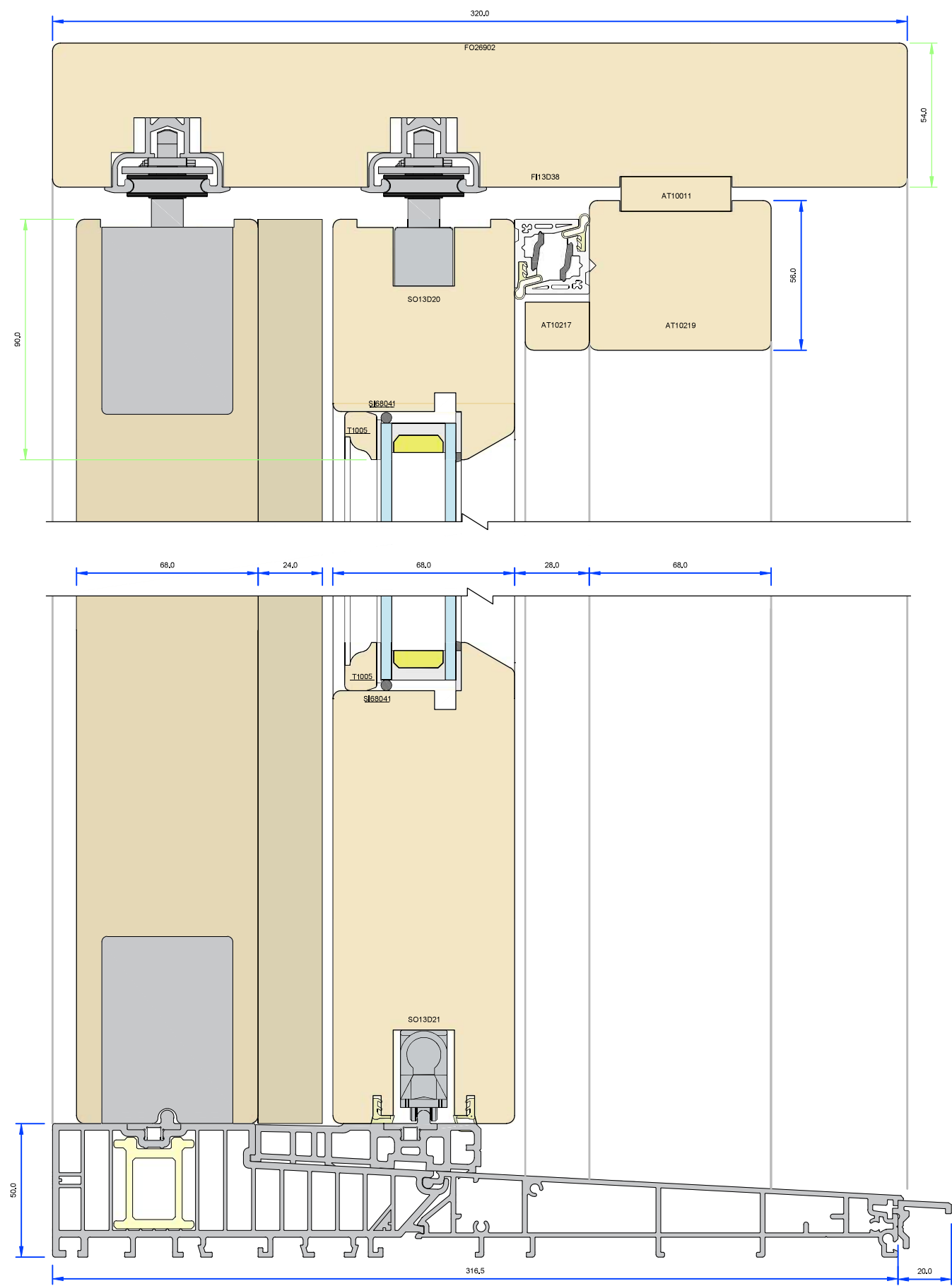
System: T-DS13-XX-68		
Title: Traditional DS13 - 2 & 3 Row Sliding Doorset Scheme E & L main vertical sections		
Scale: As Shown	Rev:	Date: 25-Jul-24
Drawn By: M Hollands	No.: T-DS13-XX-68-05	

GEORGE BARNSDALE
Est. 1884

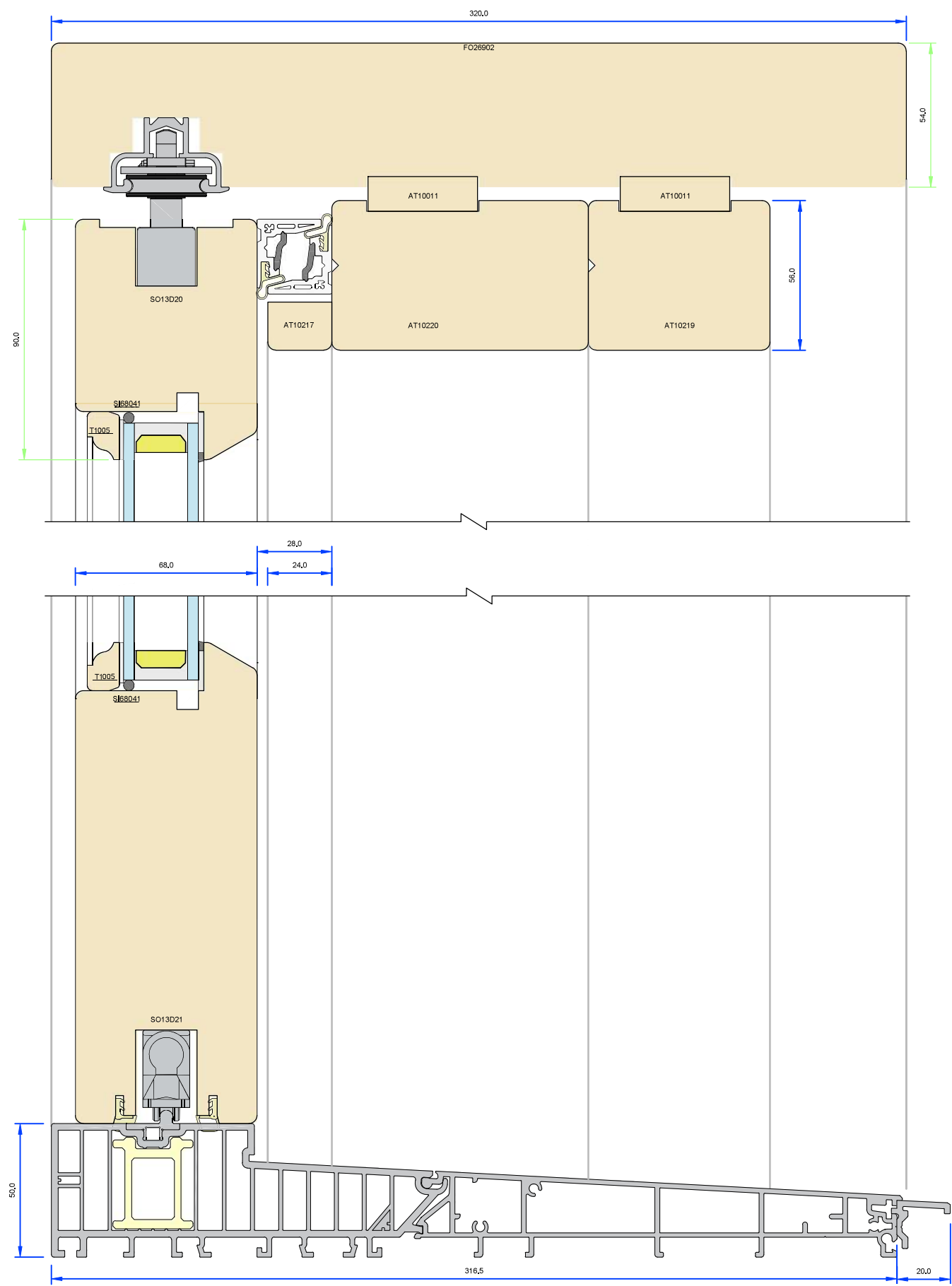
High Street, Donington, Spalding, Lincs, PE11 4TA
01775 82300
www.georgebarnsdale.co.uk

SECTIONS

Section G-G - Vertical Section Detail (Scale 1:2)



Section H-H - Vertical Section Detail (Scale 1:2)



Variable Dimensions
(Dim shown is usually min)

Fixed
Dimensions

System: T-DS13-XX-68		
Title: Traditional DS13 - 2 & 3 Row Sliding Doorset Scheme E & L main vertical sections		
Scale: As Shown	Rev:	Date: 25-Jul-24
Drawn By: M Hollands	No.: T-DS13-XX-68-06	

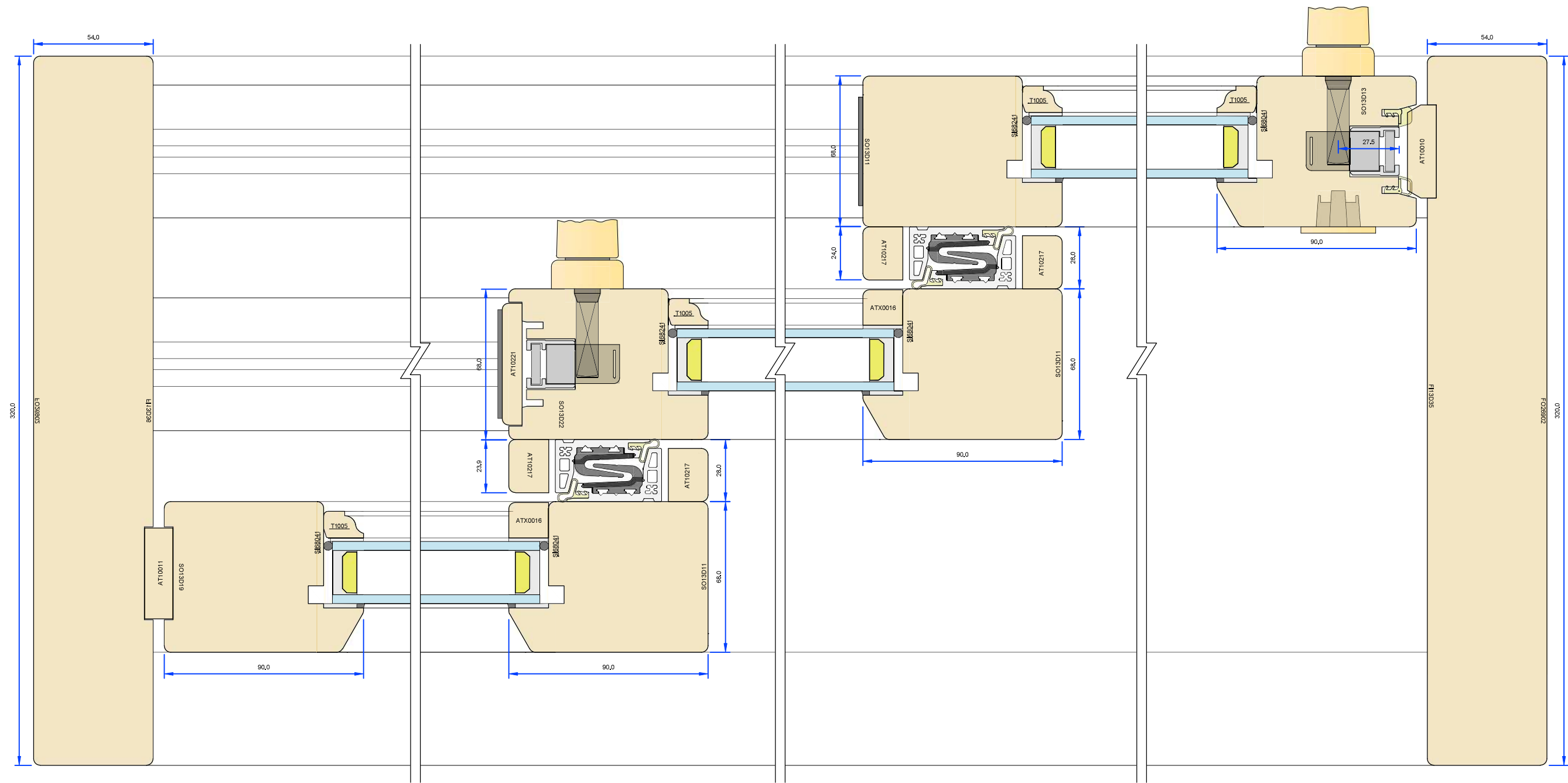
GEORGE
BARNSDALE
Est. 1884

High Street, Donington, Spalding, Lincs, PE11 4TA
01775 82300
www.georgebarnsdale.co.uk

Tolerances: All tolerances are to George Barnsdale Standard Tolerance definitions (see supporting document for more detail) unless stated on the drawing. ©George Barnsdale & Sons Ltd. All rights reserved. No part of this drawing may be reproduced without the permission of George Barnsdale & Son Ltd.

SECTIONS

Section I-I - Jamb and Mid-Rail Detail (Scale 1:2)



Tolerances: All tolerances are to George Barnsdale Standard Tolerance definitions (see supporting document for more detail) unless stated on the drawing. ©George Barnsdale & Sons Ltd. All rights reserved. No part of this drawing may be reproduced without the permission of George Barnsdale & Son Ltd.

Variable Dimensions
(Dim shown is usually min)

Fixed Dimensions

System: T-DS13-XX-68		
Title: Traditional DS13 - 2 & 3 Row Sliding Doorset Scheme E & L Horizontal Sections		
Scale: As Shown	Rev:	Date: 25-Jul-24
Drawn By: M Hollands	No.: T-DS13-XX-68-07	

GEORGE
BARNSDALE

Est. 1884

High Street, Donington, Spalding, Lincs, PE11 4TA
01775 82300
www.georgebarnsdale.co.uk

BREEDON GOLDEN AMBER GRAVEL

BREEDON GOLDEN AMBER GRAVEL

ROBUST PERFORMANCE WITH A SOFT NATURAL GOLDEN FINISH, ENHANCING SOME OF BRITAIN'S MOST PRESTIGIOUS PROJECTS.

Breedon Golden Amber Gravel provides exceptional performance, durability and versatility with a soft, natural appearance which compliments both modern day and historical projects, from cottages to castles, traditional or contemporary.

APPLICATIONS

- Footpaths
- Private driveways
- Car parks
- Cycleways
- Bridleways
- Golf courses
- Canal towpaths
- Parks, leisure and recreational
- Colleges
- Historical

LAYING INSTRUCTIONS

Please note that Breedon self-binding gravel is not a free-draining product and requires a cross-fall or camber to shed water effectively. Adequate drainage **MUST** be installed at every 5 metres to avoid the ingress of surface water (rather than shedding) this can cause the material to soften and lead to potholes over a period of time.

Breedon Gravel is a natural material quarried from selected limestone and graded approximately 12mm (1/2") to fines; the fines content being naturally occurring marl which acts as the self-setting agent when the material is watered and rolled to fullest compaction in the manner described below.

Breedon Gravel must be laid onto a compacted quarried MOT Type 1 sub-base to clause 803. The depth of which should be of sufficient strength and stability to carry the proposed traffic (we suggest a minimum of 150mm if the ground is good) and also the area concerned should be porous enough to ensure that water is not held directly in or immediately below the Breedon Gravel. If a weed suppressant membrane is required, this must be installed underneath the Type 1 sub-base and not in between the sub-base and Breedon Gravel.

The Type 1 sub-base should be laid and rolled using a roller of suitable weight, i.e. minimum 1.5 tonnes for footways and similar works, and minimum 2.5 tonnes for car parks etc.



By using a heavier roller, this helps achieve maximum compaction with fewer passes, however on smaller areas a pedestrian roller may be used although it is vital that the surface is rolled sufficiently to achieve fullest compaction prior to water rolling. This may take a few more passes over the area. The sub-base should be laid with cross falls or cambers prior to the application of the Breedon Golden Amber surface course.

Prior to use it is recommended that the moisture content of the Breedon Gravel is checked, particularly in prolonged dry conditions or where material has been stocked for a period before use. When squeezed by hand the material should have enough moisture within it that it should stick together. If the material is dry, we advise that a hose with a fine mist setting is sprayed over the Breedon Gravel and the heap is turned over sufficiently to replenish lost moisture to achieve the necessary consistency.

The Breedon Golden Amber Gravel should be spread onto the prepared foundation using a flat board or the back of a rake. Do not use the prongs of a rake as this will segregate the

material. Spread the material out to a depth of approximately 75mm in order to achieve a finished compacted thickness of 50mm.



The surface must then be rolled using a roller of similar type to that used for compacting the foundation with the vibratory action of the roller switched on and the area should be continually rolled until fullest compaction is achieved. It is imperative that Breedon Gravel is laid to a cross fall or camber in order to shed surface water - it must **NOT** be laid flat. To give some indication, an adequate fall would be 1 in 55 for a pathway with a width of 1 metre approximately and a minimum of 1 in 40 for much wider walkways, courtyards and car parks etc. The same gradient should apply when installing the Type 1 sub-base. Please ensure that adequate drainage is installed in proportion to the surface area being laid. If rainfall is not dispelled rapidly this can lead to an ingress of surface water which will prevent the hardening and binding process of the Breedon Golden Amber Gravel. After this initial laying to cambers and falls it is probable

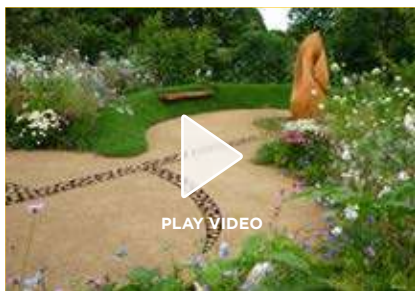




that occasional coarse areas will be evident where segregation of the Breedon Gravel may have occurred. At this point, fines can be sieved from the main heap of material and scattered onto these coarse areas before being re-rolled.

Once a uniform appearance has been achieved the second stage can be undertaken. This is the water rolling of Breedon Gravel for which the vibratory action of the roller must be switched off.

By using a water roller, water is automatically sprayed onto the drum of the roller. The fundamental aim is to have a film of water covering the whole Breedon Gravel surface but in most instances the water tank on the roller is insufficient for dispelling enough water onto the drum and additional water will be required. This is almost always the case in dry warm weather. If the Breedon Gravel is sticking to the roller, this indicates that there is insufficient water being applied. To rectify this, it is advisable that a hose is directed onto the drum of the roller as the material is rolled, saturating the drum. There should be a flood of water pushing forward as the drum rolls the surface. Never direct a hose directly onto the Breedon Golden Amber Gravel itself as this will wash out the necessary fines which are required for the material to bind. The object of water rolling this material is to float enough fines to the top surface of the gravel to obtain a well-bonded finish.



Please view the short video guide on our website prior to installation



It is imperative that sufficient water is added to the material during the water rolling process. Failure to float the fines to the Breedon Golden Amber Gravel surface will result in the re-softening of the material, leading to an unbound finish. Approximately five gallons of water for each tonne of laid material is required to adequately float the marl fines to the Breedon Gravel surface, which will allow the product to bind and harden. As a visual guide when enough water has been applied, the area should have a similar appearance of freshly laid concrete, giving a shiny, glassy finish over the whole surface. Once this has been achieved the binding process can begin.



If there are any lines or grooves in the gravel left by the weight of the roller, a soft wide broom can be used to gently pass over the surface whilst still wet – this will remove any lines and leave a uniform surface finish.

If laying large expanses of Breedon Golden Amber Gravel, it is important that the whole laying process is completed per section. Newly laid areas can be “butted up” next to previously laid material provided that a neat edge is used. When floating the fines up to the surface in the adjoining sections simply pull a soft broom across the surface as previously advised.

It is important that the area should then be allowed to dry out fully



before being opened up to general use. The length of time to allow is dependent on weather conditions, but this can take up to a period of 2 weeks or more. We would also advise that during the drying process that the area is not used. Please note that materials should never be laid in frozen conditions.

Because Breedon Gravel depends entirely on its own binding properties for its stability, it is not practical to lay Breedon Gravel on steep slopes where the angle of fall is steeper than a 1 in 15 gradient. Long continuous fall over sloping ground can be minimised by the formation of deep steps. This will reduce the risk of ruts occurring caused by the action of flowing storm water.

On completion, the Breedon Golden Amber Gravel surface will be very smooth and uniform. Over time, with weathering and trafficking the surface will scarify, giving a light dressing of chippings over the area, whilst maintaining a bound, solid base. Should a lasting smooth appearance be required, the loose chippings can be swept from the surface using a soft broom. However, the surface will naturally scarify with use, therefore the sweeping process would need to be repeated when necessary.



BREEDON GOLDEN AMBER GRAVEL FAQ

Do you supply to the general public or do I need to hold a Credit Account with you?

We supply Account and Non-account customers alike on a Nationwide basis. All products are available both loose tipped and in 800kg bulk bags. Please get in touch to discuss your requirements.



I only require a small amount of material; can I get this directly from you?

We can supply you with a minimum quantity of 800kg in a bulk bag and can offer delivery nationwide.

Is Breedon Golden Amber Gravel free draining?

No. Breedon Golden Amber self-binding gravel is not free draining and therefore requires a cross fall or camber to shed water from its surface into adequate drainage.



How much does 1 tonne cover?

One tonne will cover approximately 8sqm laid at our recommended finished compacted thickness of 50mm. This equates to an 800kg bulk bag coverage of approximately 6.4sqm per bag. These calculations build in a 10% wastage factor.

What is the density of Breedon Gravel?

2.2 tonnes per compacted cubic metre.

What depth should I lay Breedon Gravel?

Breedon Golden Amber Gravel must be laid to a finished compacted thickness of 50mm as per our laying instructions. If material is laid any thicker, fullest compaction will not be achieved and the fines will not float to the surface when water rolled. If laid thinner than 50mm the wearing course will be compromised, which will affect the durability of the surface.

Can I use a membrane directly under the Breedon Gravel?

No. Breedon Golden Amber Gravel must be laid directly onto the quarried Type 1 sub-base. A membrane or terram may be used underneath the MOT Type 1 if required.

Do you have recommended contractors to lay Breedon Gravel?

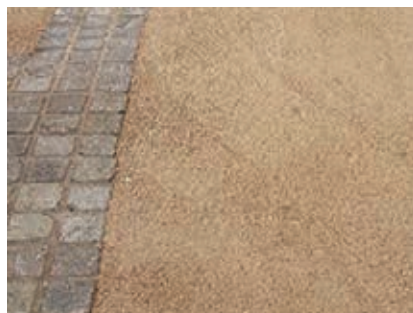
Unfortunately, it would be impossible for us to provide a list of 'recommended' contractors as Breedon Gravel travels to each and every part of the UK and we simply could not check the installation countrywide. We do however provide all the instructions necessary for you to carry out the work. We have written guidelines along with an informative video on our website, which allows you or your contractor to visualise how the product should look and behave at each stage of the installation process. We also have a team of experienced technical advisers based at our Special Aggregates Sales Office who can assist you with any queries you may have or talk you through the process step-by-step.

Can I lay Breedon Gravel on top of existing concrete or asphalt?

No. Breedon Gravel must be laid directly onto a MOT Type 1 sub-base to clause 803. Any existing concrete or asphalt must be broken up and removed. MOT Type 1 sub-base provides a solid sub-structure for the Breedon Gravel and also has voids, which the Breedon Gravel fills, grips and binds on to. Although Breedon Gravel is not free draining and must be laid to falls in order to shed water, throughout spells of prolonged rainfall, some rainwater may ingress through the product and the MOT Type 1 sub-base underneath will allow that water to continue to drain away. Concrete or asphalt would not facilitate this, and water would be held in or below the layer of Breedon Gravel causing it to soften and pothole.

Do I need to use edgings?

Edgings are optional. Concrete, timber, metal or stone edgings can be used and will help achieve fullest compaction; however, edgings should not stand proud of the Breedon Golden Amber Gravel. If this is the case with timber or metal edgings, then holes must be drilled through the edgings at half metre intervals at the level of the surface, or a 'v' can be cut down to the Breedon Golden Amber Gravel level to allow water to flow off the surfaces. If curbs or sets are used as edgings the mortar joint can be left out at half metre intervals, again, this will allow water to escape from the surface.



Can I lay Breedon Gravel in the rain?

Laying Breedon Gravel in the rain can actually prove beneficial as it helps the water rolling process, provided the rain is not so intense that it could wash away the fines content!

Can I lay Breedon Gravel in frozen conditions?

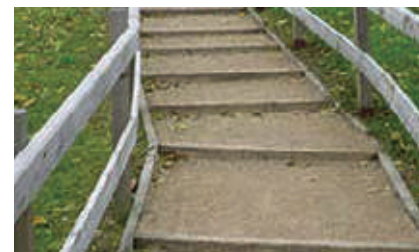
Breedon Golden Amber Gravel as with all aggregates that contain fines should never be laid in a frozen state. This can lead to shrinkage and movement of materials upon thawing.

Can I lay Breedon Gravel on a slope?

Breedon self-binding products are not recommended to be laid on slopes steeper than a 1 in 15 gradient. This is because the action of storm water flowing across the surface can cause damage to the material and can result in the occurrence of potholes and ruts. Where you have a slope steeper than 1 in 15, the installation of steps at irregular intervals will reduce the risk of ruts occurring and damage to the finished surface.

What is the minimum/maximum gradient to shed surface water?

An adequate gradient for smaller areas (such as footpaths) would be 1 in 50 to allow water to shed from the surface, however, for large surface areas such as car parks or driveways, then a minimum of 1 in 40 gradient would be preferable (25mm drop for every metre of width).



What equipment would I need to lay it?

A flat boarded rake to initially spread the material (you can use the back of a garden rake, but do not use the prongs as this will segregate the coarse components). For footpaths a minimum of a 1 tonne sit-on water roller should be used. For larger areas, a 1.5 tonne sit-on water roller will be required. Access to additional water via a hosepipe or water bowser is necessary and also a soft broom to finish the surface.

Continues on page 5

BREEDON GOLDEN AMBER GRAVEL FREQUENTLY ASKED QUESTIONS

Continued from page 4

How much water is required?

Approximately 5 gallons per tonne is required. In hot, dry spells more water may be required and in winter slightly less. Please be aware the water which is dispelled from a vibrating roller will be inadequate and additional water will be necessary via a hosepipe directed onto the drum.

How long does it take to set?

The time taken for the surface of the Golden Amber Gravel to set is dependent on the weather conditions at the time of laying. This can vary from between one week in the height of summer to two weeks plus in the wet colder winter months. The area should remain unused in this period. Breedon Gravel should be treated with respect in the first three months whilst gaining strength. After that, the more the area is used the better it will perform.

Can heavy vehicles use the area?

Breedon Golden Amber Gravel has the strength and durability to allow heavy vehicles to drive carefully on the surface, however, be aware that if a vehicle is stationary and the wheels are turned, this could cause scuffing and potholes, particularly when the material is wet. It is advisable to apply a speed limit of 5mph. It is not recommended that Breedon Golden Amber Gravel is used by HGV or agricultural vehicles.



Can I brush the surface?

After the Breedon Golden Amber Gravel has been water rolled there may be some lines from the roller in the material. A soft broom should be used at this point, whilst the material is still wet, to gently run across the surface to remove any roller marks and leave a nice smooth finish.

Breedon Golden Amber Gravel will naturally self-scarify with use but if you choose to remove the surface chippings for visual purposes, a soft broom may be used to do so. However please note the surface will continually scarify so this process may need to be repeated if a smoother appearance is required.

Is Breedon Golden Amber Gravel suitable for use on car parking areas and driveways?

Yes, but please bear in mind that Breedon Golden Amber Gravel is a 100% natural limestone product and will sustain scuff damage to its finished surface if the steering is used on stationary vehicles or if vehicle wheels are spun upon it. This can lead to the occurrence of potholes and therefore, the project will require a higher level of maintenance to keep the Golden Amber Gravel surface in good order. The preferred design for

a driveway or car parking area using Golden Amber Gravel is where the vehicle is driven on to and reversed off without the need to turn the power steering. Where these turning points are required then a hard-paved landscape surface would be more suitable in these particular areas. Please ensure that adequate drainage is installed in proportion to the surface area being laid. If rainfall is not dispelled rapidly this can lead to an ingress of surface water, which will prevent the hardening and binding process of the Breedon Golden Amber Gravel.

Is Breedon Golden Amber Gravel suitable for bridleways?

Yes, but as bridleways are often in woodlands or fields, try to get the sub-base above ground level and then lay the Breedon Gravel on the top to allow water to drain off the surface. If edgings are not used, then the material should be laid to a camber and feathered off at the edges. If this isn't done and the bridleway is lower than the surrounding area, water will flow down onto the bridleway and will pond causing weakness, potholes and potentially a breakdown of the whole surface. Please also note that whilst our self-binding products are perfectly suitable for horses to walk over, they are not strong enough to withstand horses cantering or galloping over their surface.

Is Breedon Gravel suitable for wheelchair use?

Yes. When Breedon Gravel is installed in accordance with our laying instructions, it provides a solid bound base which does not separate or segregate with wheelchair use. The surface does lightly scarify with use leaving a dressing of grit/chippings on the surface. Please note that this may pick up on shoes or wheels so it would be advisable for a hard-paved area prior to entering a building to reduce the migration of dust.



BREEDON GOLDEN AMBER GRAVEL MAINTENANCE PLAN

Breedon Golden Amber Gravel is a natural limestone. It is important that occasional maintenance is carried out as required to ensure its performance and appearance are maintained.

POTHOLES

There are two basic reasons why potholes may occur - it is either due to surface damage or where surface water cannot drain away caused by lack of cambers or cross falls. (Wacker) Repairs should be carried out as soon as a pothole appears. Cut out a neat square around the pothole and remove all material within the square down to the Type 1 sub-base. Fill the area with new Breedon Golden Amber Gravel and compact using a wacker plate or roller in accordance with our laying instructions, following the entire water rolling process.

RE-SURFACING

In the event of resurfacing at a later date, use a rake to scarify the top surface down to an approximate depth of between 35-45mm, whilst taking care to protect the integrity of the type 1 sub-base layer beneath. This may need some effort if the material has been down for a long period of time. Once the surface has been loosened, discard the loose debris. It is advisable that the existing laid Breedon Gravel is sprayed with water using a hose with a fine mist to improve its moisture content. Then a new layer of Breedon Golden Amber Gravel laid on to it, rolled and water rolled in accordance with our laying instructions.

WEED GROWTH

Should any weed growth occur, spray the area with a water-based weed killer and allow the vegetation to die back before lightly sweeping away. Never pull the weeds up through the gravel, this will loosen the bonded surface and allow pooling water to soften the material in these areas. Areas constantly shaded or only ever lightly used may be susceptible to moss growth. For these areas apply a moss growth weed killer or moss remover and cover the affected area when dry (and with no rain expected for a few days). This will take a few days to take effect. Once the moss has died back use a light rake to loosen and sweep away. Do take care not to put too much pressure on the surface and disturb the Breedon Gravel itself.

DRAINAGE

Always ensure that drains and gullies are kept free of debris to allow surface water to drain away easily.

WINTER MAINTENANCE

For best results, ensure that any leaves are removed from the surface by using a blower or a vacuum. Alternatively, a very soft broom can be used.

SURFACE APPEARANCE

Breedon Golden Amber Gravel scarifies with use to leave a dressing of chippings over its surface, however as a matter of personal choice, they can be swept away using a very soft broom to leave a smoother finish. This process would however need to be repeated as the surface will naturally scarify with use. Please also be advised that this will also affect the wearing course and longevity of the product.



When ordering your self-binding limestone please specifically ask for **"Breedon Golden Amber Gravel"** as some of our market competitors use the term "Golden Amber Gravel" to promote their alternative products which are not produced by Breedon Trading Ltd.



HEALTH AND SAFETY

Product

Crushed limestone aggregate.

Application

Crushed limestone is used as a basic construction material and as a component in other materials such as concrete, mortar, asphalt and coated roadstone.

Precautions

The products are not considered hazardous. Inhalation of any dust should be avoided. Dust masks to BS 2091 Type B, or their equivalent, should be worn in enclosed spaces where handling or further processing is taking place and where adequate ventilation is not provided.

Physical and chemical characteristics

This limestone consists primarily of calcium and magnesium carbonates.

Protective clothing

No protective clothing is required.

PH value

The pH value of Breedon limestone is 8.5.

Transportation, storage and disposal

The carriage of aggregates is not subject to hazardous substance conveyance regulations and vehicle labelling is not required. Aggregates are inert but should be disposed of in accordance with local legal requirements.

This brochure is provided for general guidance only and may contain information which could be inappropriate under particular conditions of application use. In keeping with our policy of continual product development, Breedon Trading Ltd reserve the right to alter any specification shown. All information is correct at time of print. Liability in respect of any statement conditions, warranties and representations made on behalf of the company are limited to the standard conditions of sale which are available on request.

TO DISCUSS YOUR INDIVIDUAL REQUIREMENTS PLEASE CONTACT:

☎ 01332 694001

✉ specialaggs@breedongroup.com

🌐 www.breedon-special-aggregates.co.uk

Breedon Special Aggregates, Breedon Quarry,
Breedon-on-the-Hill, Derby, DE73 8AP.

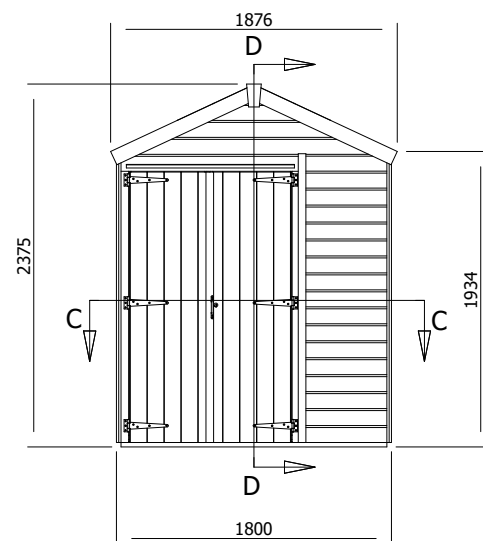
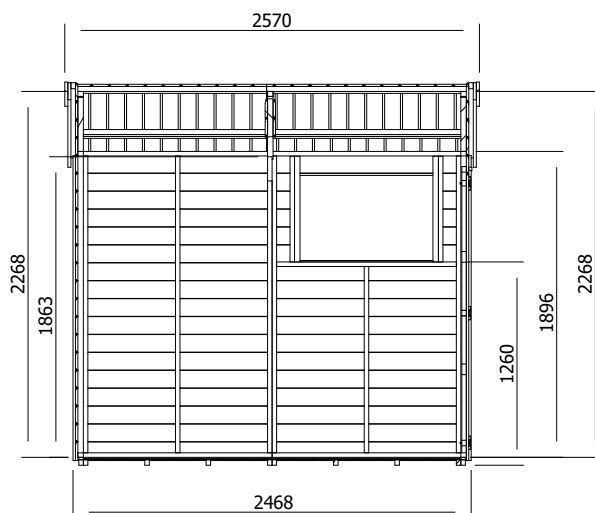
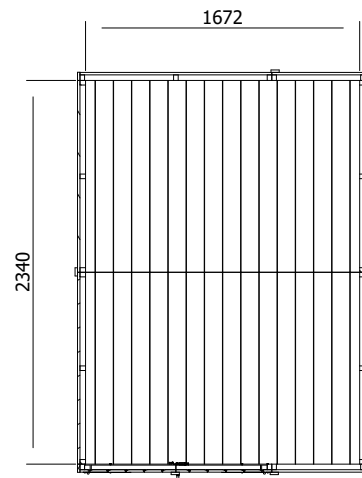


Nationwide service available.
Visit our website to view the delivery
option to suit your requirements



Overlord Modular Apex Shed

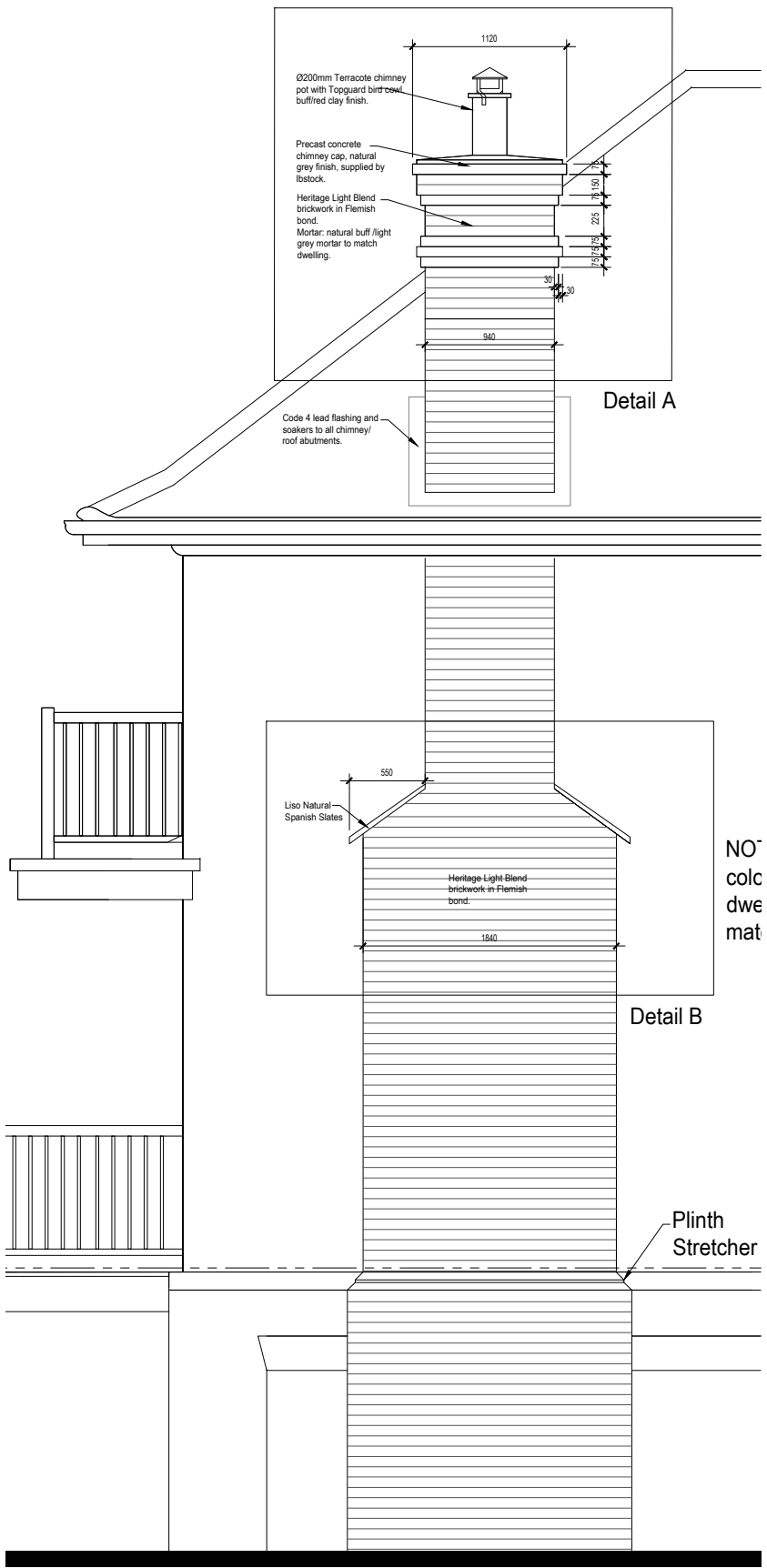
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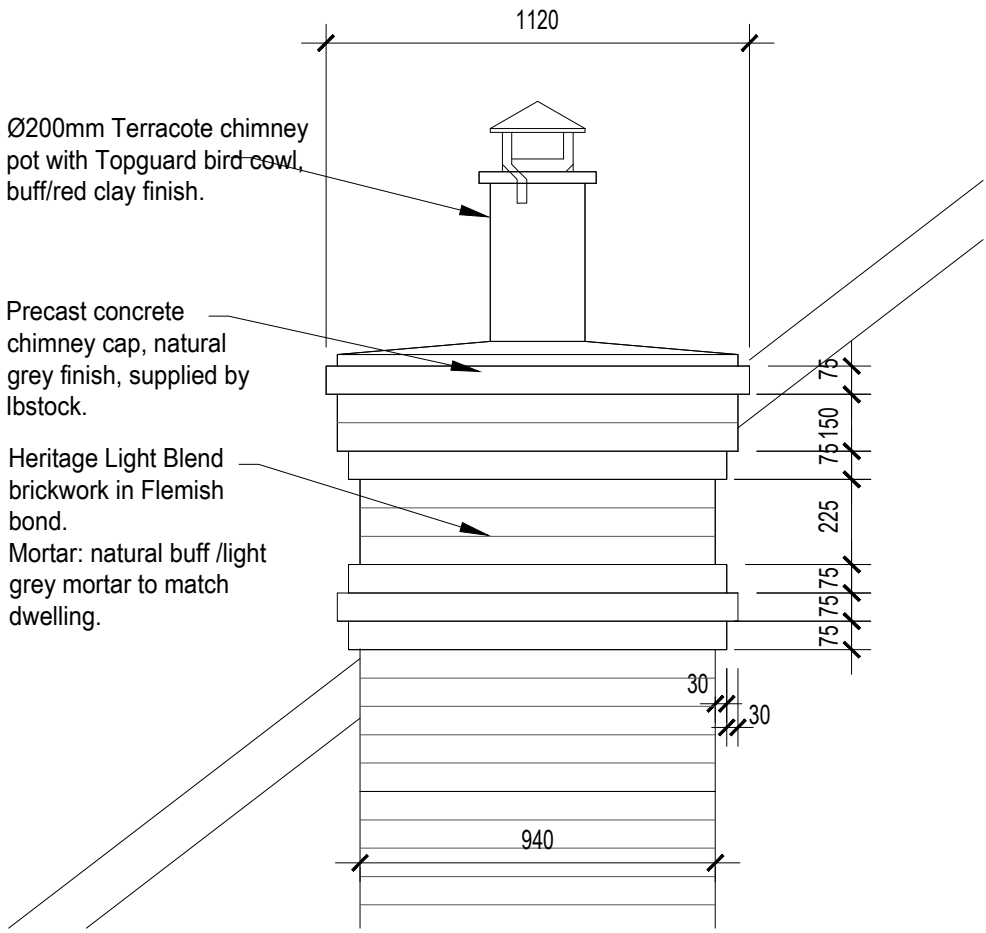
Specification

- **Overall External Dimensions:** 1.876m x 2.570m (6' 2" x 8' 5")
- **External Width:** 1.800m (5' 11")
- **External Depth:** 2.468m (8' 1")
- **Internal Width:** 1.672m (5' 6")
- **Internal Depth:** 2.340m (7' 8")
- **Internal Eaves Height:** 1.896m (6' 3")
- **Internal Area (m²):** 3.912m²
- **Overall Height:** 2.375m (7' 9.5")
- **Roof Thickness:** 15mm Tongue & Groove
- **Roof Covering Options:** Felt Included as Standard
- **Roof Purlins:** 70mm x 35mm
- **Wall Thickness:** 15mm Tongue & Groove
- **Floor Thickness:** 15mm Tongue & Groove
- **Framing:** 28mm x 34mm
- **Floor Bearers:** Pressure Treated for Longevity
- **Treatment:** Fully Pressure Treated Timber

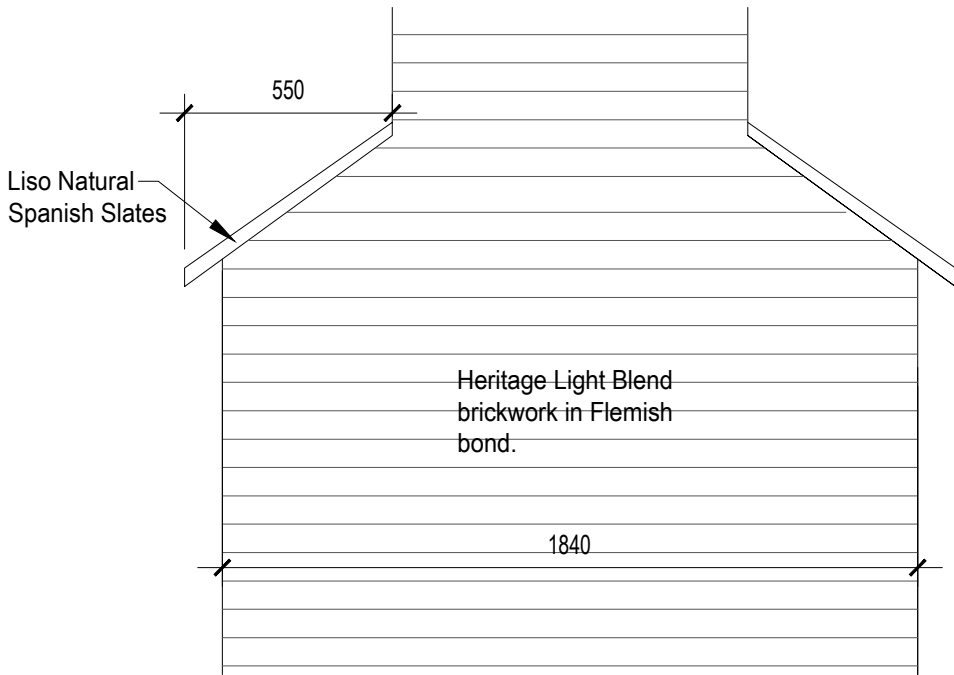
- **Double Door Walkthrough Height:** 1.727m (5' 8")
- **Double Door Walkthrough Width:** 1.046m (3' 5.25")
- **Single Door Walkthrough Height:** 1.740m (5' 8.5")
- **Single Door Walkthrough Width:** 0.850m (2' 9.5")
- **Double Door Locking System:** Lock and 2x Shoot Bolts
- **Single Door Locking System:** Lock and 2x Turn Buttons
- **Approx DIY Assembly Time:** 2 Days* *This is an approximate time only, based on 2 people. Assembly time may vary depending on season/weather conditions, foundation type, ability of those constructing, etc.
- **Guarantee:** 10 years on pressure treated timber against rot and insect infestation



Chimney Elevation 1:50



Detail A 1:20



Detail B 1:20



Brewer Cows Birdguard round chimney cowl with strap fix.



CLIENT Mr R. Arnold
PROJECT Warren Creek, The Warren
Caversham, Reading, RG4 7TQ
DRAWING Chimney Details

STATUS Planning
SCALE 1:10
DRAWN Pari
CHECKED NO
3863/312
REV .
DATE June 2026

REV	COMMENTS	DATE

THIS DRAWING MUST NOT BE SCALED UNLESS ISSUED FOR PLANNING PURPOSES. ALL DIMENSIONS ARE TO BE VERIFIED PRIOR TO SETTING OUT, COMMENCING WORK, OR PRODUCTION OF FABRICATION DRAWINGS. REPORT ANY DISCREPANCIES TO THE SUPERVISING OFFICER IMMEDIATELY. ©

NEOSTAR

3S54 Mono-Glass Module

465W-495W

Technical Features:

 Partial Shading Optimisation

 Better Temperature Coefficient

 High Temperature Restriction

 Micro-crack Resistance

 Higher Power

 Lower BOS

 More Aesthetic Values

 Infinite Technology



red dot winner 2023



Product
Warranty



Performance
Warranty



Warranty partner

Munich RE



Made in China

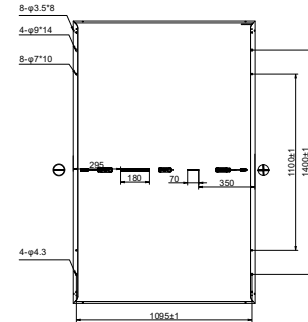
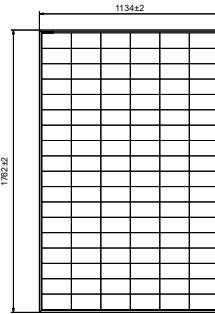
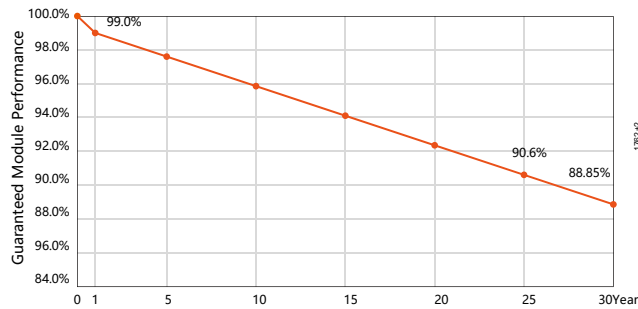
495W
Output

24.8%
Efficiency

1%
First-year Degradation

0.35%
Annual Degradation from Year 2-30

30-year Linear Performance Warranty



Tolerance
L: ±2mm
W: ±2mm
Unit: mm

Electrical Characteristics (STC: AM1.5 1000W/m² 25°C NOCT: AM1.5 800W/m² 20°C 1m/s)

Power Binning Tolerance: 0~ +3%

Module Type	AIKO-A465-MCE54Mb		AIKO-A470-MCE54Mb		AIKO-A475-MCE54Mb		AIKO-A480-MCE54Mb		AIKO-A485-MCE54Mb		AIKO-A490-MCE54Mb		AIKO-A495-MCE54Mb	
Test Conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
P _{max} [W]	465	352	470	356	475	360	480	364	485	367	490	371	495	375
V _{oc} [V]	40.60	38.52	40.70	38.61	40.80	38.71	40.90	38.80	41.00	38.90	41.10	38.99	41.20	39.09
V _{mp} [V]	34.20	32.45	34.30	32.54	34.40	32.64	34.50	32.73	34.60	32.83	34.70	32.92	34.80	33.02
I _{sc} [A]	14.69	11.87	14.72	11.89	14.76	11.93	14.80	11.96	14.84	11.99	14.88	12.02	14.92	12.06
I _{mp} [A]	13.60	10.87	13.71	10.96	13.81	11.04	13.92	11.13	14.02	11.21	14.13	11.29	14.23	11.37
Module Efficiency	23.3%		23.5%		23.8%		24.0%		24.3%		24.5%		24.8%	

Product Specification

Cell Type	N-Type BC
Glass	3.2mm tempered glass
Backsheet	High weather resistant backsheet
Frame	Black anodized aluminum
Cable	4mm ² (IEC) 12AWG(UL) ±1200mm
No. of Cells	108(6*18)
Junction Box	IP68, 3 bypass diodes
Connector	PV-KST4-EVO 2A/6I/ PV-KBT4-EVO 2A/6I from Staubli Electrical Connectors AG
Weight	20.6kg±3%
Dimension	1762*1134*30mm
Package Detail	37pcs per pallet / 222pcs per 20'GP / 962pcs per 40'HC

Temperature Ratings (STC)

Temperature Coefficient of I _{sc}	+ 0.05%/ °C
Temperature Coefficient of V _{oc}	- 0.22%/ °C
Temperature Coefficient of P _{max}	- 0.26%/ °C

Installation Guide

T ₉₈ max	70°C
Module Operation Temperature	-40°C - +85°C
Maximum Series Fuse Rating	25A
Protection Class	Class II
P _{MAX} and V _{OC} and I _{SC} Tolerance	±3%
Maximum System Voltage	DC1500V
Maximum Static Loading	Front 5400Pa Back 2400Pa
Hail Test	40 mm diameter hail at 27.5 m/s
Fire Rating	IEC Class C

