

CLIENT: TORBAY DEVELOPMENT AGENCY

REF No: B223924/1

PROJECT NAME: WHITEROCK ACADEMY

ROOF AREA NAME: ROOF 1

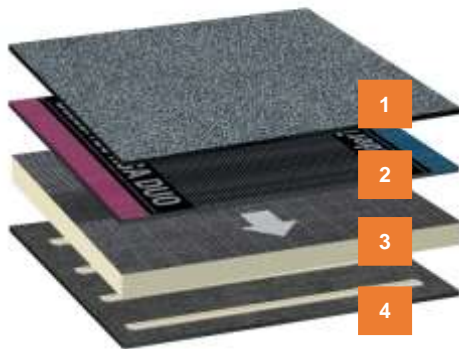
DATE: 18/08/22

SPECIFICATION SUMMARY

System	Bauderflex
Project plan	Refurbishment
Applicable Structural decks	Overlay existing felt waterproofing system
Roof construction	Warm Roof

Reinforced bitumen membrane warm roof covering system - self adhered

Two layer, self adhered, warm roof, bitumen membrane waterproofing system suitable for both new build and refurbishment applications. Option of using a root-resistant cap sheet for green roofs. Can be used in cold and inverted roof scenarios. Torch free detailing for application in the vicinity of combustible construction materials.



Product	Description	thickness	weight
1 K4E Capping Sheet	Torch bonded, heavy duty elastomeric bitumen capping sheet; 250g/m ² spunbond polyester reinforcement; fire retardant.	4.2mm	5.5Kg/m ²
2 Sprint Duo Underlayer	Self-adhesive elastomeric bituminous membrane; glass lattice reinforcement; 'DUO' lap technology.	2.0mm	2.5Kg/m ²
3 PIR FA Tapered Insulation	Thermally efficient, lightweight and zero ODP rated; foil faced. Shaped to create effective drainage falls.	<i>Approx. average thickness Thickness subject to tapered scheme design</i>	Kg/m ²
4 KSD Mica Air and Vapour Control Layer	Self-adhesive elastomeric bitumen air and vapour control layer; mica finished upper surface for easy bonding of insulation in Bauder insulation adhesive.	2.5mm	2.5Kg/m ²
System Build up		mm	Kg/m²

SYSTEM OPTIONS

MEMBRANE COLOURS	
Charcoal grey 5.5Kg/m ²	
Grey slate 5.0Kg/m ²	
Brown 5.0Kg/m ²	
AP2 Root resistant 5.0Kg/m ²	

INSULATIONS	BauderPIR FA-TE Flatboard	BauderPIR FA Tapered	Weight Loading
THICKNESS (mm)	Approx. 'U' VALUE (W/m ² K) assuming concrete, metal or plywood deck		Kg/m ²
120	0.17	0.17	4.56
130*	0.16	0.16**	4.94
140	0.15	0.15**	5.32
160	0.13	0.13**	6.08
180*	0.12	0.12**	6.84
200*	0.11	0.11**	7.6

* denotes thicknesses only available for orders over 1000m²

** denotes U-value based on the average thickness

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

IMPORTANT NOTE

Please note that changes made to the content of this document, outside of the available choices may impact technical suitability and eligibility to meet Bauder Limited's requirements for guarantee. For additional items to be added, not already included, please contact your local Area Technical Manager.

Design Information and Supporting Documents

This specification is to be read in conjunction with the supporting Specification-Appendix, Torch Free Report (where available), Calculations (where available), Bauder Installation Guides and Standard Detail Drawings.

This specification has been produced based on the information supplied at the time of writing and is deemed to apply subject to the conditions outlined below unless additional calculations proving otherwise have been completed by Bauder Ltd or an approved supplier.

Windloads: Suitable for roofs where the design load does not exceed 3.2KN. Should the site be situated in a location subject to increased windloads or have a Design Windload Pressure exceeding this, Bauder Ltd must be informed and a site specific windload calculation must be completed.

U-Values: U-Values quoted are based on the Bauder waterproofing system construction including insulation and underlying deck material only, this may not include the supporting structure and/or any other materials within the construction below the deck. Refer to the project specific U-Value Calculation for additional information.

Drainage: Where Bauder Ltd have produced supporting drainage calculations based on the data supplied, and the resulting calculation states that 1 drainage outlet will be sufficient, Bauder Ltd additionally recommends the use of overflows on all roofs and that there should always be at least 2 outlets and/or overflows per drainage area.

Safe2Torch Advice: *The application of torch-on materials to or in the vicinity of combustible deck materials does not conform to the recommendations of BS8217:2005, clause 7.3.2.1, paragraph 3, or the advice given in the 'Safe2Torch' document produced by the National Federation of Roofing Contractors.*

This specification should be read in conjunction with the Bauder Roof Survey Report.

There are no identifiable 'TORCH-FREE' areas found within this roof area. An allowance must be made by the Contractor to use 'ALTERNATIVE MEMBRANES AND APPLICATION' methods as outlined within this specification where there is any fire risk.

SYSTEM CONSTRUCTION

Waterproofing System: Bauderflex – Warm roof construction

Substrate: Overlay existing felt waterproofing system.

Roof Fall:

- For the purpose of the tapered insulation scheme design, the roof deck is assumed to be level.
- Roof falls to be provided by the tapered insulation scheme.

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

- The design should take account of construction tolerances, permitted deviations and deflections under load, as per Item 4.4 of BS6229:2018.
- No deflections or back-falls.

It is imperative that should this information change for whatever reason, then Bauder should be contacted so that the specification can be amended accordingly.

OVERLAY EXISTING WATERPROOFING SYSTEM

Overlay existing waterproofing system: Carefully remove all surface items (including chippings, pavers, pebbles, inverted insulation, debris etc) (where relevant) from the surface of the existing waterproofing.

IMPORTANT NOTES:

- The Bauder approved contractor is to inspect the existing waterproofing and report any issues that may have a detrimental effect upon the proposed attachment/installation of the new waterproofing system to both the Client's representative and Bauder Limited.
- An adequate provisional sum should be set aside to cover for any unforeseen issues related to the removal of the existing waterproof covering that may necessitate localised repairs to the existing deck. If it is discovered that the deck is degraded in any way and is beyond localised repair, it is imperative that the Bauder approved roofing contractor informs both the client and Bauder Limited immediately in order that the problem be addressed prior to the waterproofing works to be carried out.
- An adequate provisional sum should be set aside to cover for any unforeseen issues related to remedial works that may be required to either the existing waterproofing or existing roof falls.

Remove all existing waterproofing, insulation, and any Air & Vapour Control Layers from all perimeter upstands and detailing to abutment upstands and vertical skirtings.

Exposed Waterproofing: The existing waterproofing should be examined and then prepared by removing any rough edges and/or defects in its surface, loose or flaking solar reflective paint, liquid overlays, surface chippings etc., repairing any localised damaged areas. Waterproofing generally should be secure and properly attached to the sub-structure, clean, dry, smooth, free from frost, contaminants, loose material, voids, protrusions, and organic growths. Dust, dirt, debris, moss, plants and grease must be removed.

IMPORTANT NOTE - Blisters / Detached bitumen membrane: Repair, re-adhere and protect with additional layer of matching bitumen membrane if necessary.

All new materials and accessories: Must be compatible with existing.

Falls (Tapered insulation): Falls to be provided by the tapered insulation and comply with the drainage requirements of BS 6229:2018 and current codes of practice BS 8217:2005. Where back-falls/ deflection are discovered which will reduce the effectiveness of the tapered design notify the client and Bauder immediately so the roof can be fully assessed and the correct remedial actions identified.

Existing Warm roofs only – Localised areas of defective insulation (where relevant): All defective or wet boards to be cut out and removed and replaced with new insulation material of the same thickness,

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

additional layers of membrane may be required to bring up level to match existing surface finish. Please contact Bauder in order that the build-up and proposals are assessed before works commence/continue.

Preliminary work: Complete including:

- Formation of abutment upstands, kerbs, box gutters, sumps, grooves, chases and expansion joints.
- Fixing of battens, fillets and anchoring plugs/strips as required.

Priming: Before priming and application of the membrane, the substrate must be clean and dry, free from surface water, ice, snow or frost, dust, dirt, oil, grease, or any foreign matter detrimental to the adhesion of the waterproofing system.

IMPORTANT NOTE:

- Where it has not been possible to ascertain whether there is existing insulation below the deck; should it be discovered that existing insulation is found within the ceiling void space, there may be a requirement for this to be removed to prevent interstitial condensation forming. Any existing ventilation openings must be sealed for the warm roof to perform, regardless of whether the insulation in the void remains or is removed. Please contact Bauder in order that the build-up and proposals are assessed before works commence/continue.

PRIMER

Bauder Activator-Primer (Canister), APR01-Black. All areas receiving the new self-adhesive membranes to be thoroughly primed with **Bauder Activator-Primer (Canister), APR01-Black.**

Purpose: substrate primer to seal and prepare dry surfaces of a variety of common substrate material prior to the application of **Bauder** self-adhesive bitumen membranes.

Before application: All surfaces must be dry, clean, and free from dust, dirt, oil, grease, and loose material.

Application method: Spray Applied to provide even and full coverage. Avoid pooling. Never attempt torching within 10 min of primer application, even if the surface appears dry.

Application rate:

- 300mm wide spray
- Coverage: Approx. 96 g/m²
- Two coats may be required for very porous substrates.

Application temperature: +5 - +30°C

Drying time: Approx. 5 - 10 mins, dependent upon ambient temperature and material porosity.

Coats: Fully bond. Allow volatiles to dry off thoroughly between coats.

Re-application: Necessary after 4 hours exposure if waterproofing has not yet been applied, to maintain adhesion performance.

Caution: Use only outdoors in well ventilated areas or with respiratory apparatus and keep away from all sources of ignition. Take necessary precautions to avoid the solvent vapour from entering the buildings ventilation system.

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

AIR AND VAPOUR CONTROL LAYER

BauderTEC KSD Mica, 2.5mm thick, aluminium lined, self-adhesive elastomeric bitumen air and vapour control layer, cold applied by removing the peel off release film. Side laps to be 100mm and head laps to be 100mm and staggered and sealed by hot air welding/torching and rolling (depending on 'Torch-Free' & 'Safe to Torch' zoning), to extrude a continuous bead of bitumen. Care should be taken to ensure adhesion when the temperature is below +5°C. At all abutments and details the bitumen bead must be extruded from the lap joints to ensure a seal.

For 'Torch-Free' zones the air and vapour control layer must be dressed up all upstands and to the full extent of the detail. This is to ensure that the detail is fully encapsulated to reduce the risk of fire to exposed combustible materials. The contractor is also to form all details in such a way that a fully bonded 100mm lap is obtained between the air and vapour control layer and the underlayer – Please see **Bauder** 'Torch-Free' detail drawings.

INSULATION

Product: **BauderPIR FA Tapered**

Description: Foil faced, rigid urethane tapered insulation.

Thickness: *Average Thickness TBC**.

Performance: Zero ODP.

Before installing: No insulation boards should be laid on site without a copy of the current **Bauder** Tapered Insulation Layout drawing to hand. Contractors should always refer to the Layout Drawing for the recommended start point and layout of boards. If contractors are unsure whether the correct Layout Drawing is on site, they should contact the **Bauder** Technical Department before commencing installation. For installation guidance, Contractors should refer to the **BauderPIR FA Tapered** Installation Guide.

Deck Suitability: **Bauder** cannot be held responsible for the drainage performance of tapered insulation schemes applied to an inappropriate deck surface and it is the responsibility of the installing contractor to check the roof deck surface and report any discrepancies.

Thermal performance: Refer to **Bauder** Tapered Insulation Layout drawing for details of the 'U' values achieved by this scheme.

Wastage: All off-cuts are considered usable and are included as such within the insulation Layout.

Protection to exposed edges of insulation: Reduced thickness treated timber hard edge (or equivalent plywood construction), suitably sized and 10mm less in thickness than the insulation to accommodate the build-up of the waterproofing layers – all securely fixed to the deck. Outer edges chamfered at changes in level.

Setting out: Installation must be carried out following the **BauderPIR FA Tapered** Installation Guide and laid strictly in accordance with the correct **Bauder** Tapered Insulation Layout drawing and installation instructions. The **BauderPIR FA Tapered** boards should be laid with the **Bauder** number / arrow / grid pattern facing upwards.

- **Long edges:** Fully supported.
- **End edges:** Fully supported.
- **Joints:** close butted together.
- **End joints:** Stagger.

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

Bedding: BauderPIR FA Tapered boards are to be bonded to the upper surface of the Air and Vapour Control Layer (AVCL) (unless where a base-layer is required – please see Multiple-layer tapered schemes below) using suitable Bauder Polyurethane Insulation Adhesive:

- **Bauder PU Insulation Adhesive - Tin** or **Bauder PU Insulation Adhesive – Twin Cartridge** applied in strips following the direction of the board length giving 4No. continuous and equally spaced adhesive beads within each board width (increase to 6No. at the roof perimeter) *
- **Non-FA Tapered insulation board types:** Where **BauderPIR Tapered** Insulation (Unfaced 1:80 / 1:40 boards) or **BauderPIR Flatboard** Insulation (tissue faced boards) are included within the Bauder Tapered Insulation Layout, these boards are to be bonded to the upper surface of the Air and Vapour Control Layer (AVCL) using either **Bauder PU Insulation Adhesive - Tin** or **Bauder PU Insulation Adhesive – Twin Cartridge**, applied in strips following the direction of the board length giving continuous and equally spaced adhesive beads within each board width as below:
 - 600mm width insulation boards - 2 no: (increase to 3 no. at roof perimeter)*
 - 800mm width insulation boards - 3 no: (increase to 4 no. at roof perimeter)*

Multiple-layer tapered systems: Where the total thickness of tapered insulation required is greater than can be achieved by a single layer, base-layer board(s) of **BauderPIR FA-TE Flatboard** can be adhered to the AVCL/previous layer(s) to make up the total thickness required before the uppermost layer of **BauderPIR FA Tapered** boards are installed.

Bedding: As stated above. Surface should be clean and free of debris before application of the additional layer(s)

Additional Layer(s): Each additional layer of insulation board(s) should be laid off-set and staggered with the layer below and should be bonded together using the following adhesives:

- **Foil to Foil (e.g. FA-TE to FA-TE): Bauder Activator-Primer (Canister), APR01-Black** spray applied to the surface of both layers or **Bauder PU Insulation Adhesive – Twin Cartridge** applied in strips following the direction of the board length giving continuous and equally spaced adhesive beads within each board width (as stated above).
- **Foil to tissue Faced/unfaced boards (e.g. FA-TE to 1:80 tapered boards): Bauder PU Insulation Adhesive - Tin** or **Bauder PU Insulation Adhesive – Twin Cartridge**. Applied in strips following the direction of the board length giving continuous and equally spaced adhesive beads within each board width (as stated above).

Tapered Layer (Uppermost layer): The **BauderPIR FA Tapered** board layer should be bonded using **Bauder Activator-Primer (Canister), APR01-Black** spray applied to the surface of both layers or **Bauder PU Insulation Adhesive – Twin Cartridge** applied in strips following the direction of the board length giving continuous and equally spaced adhesive beads within each board width (as stated above). **BauderPIR FA Tapered** boards should be laid with the Bauder number/arrow/grid pattern facing upwards. Boards should be laid off-set and staggered with the layer below.

Ridge & Valley Infills: The **BauderPIR Ridge & Valley Infills** should be bonded using **Bauder Activator-Primer (Canister), APR01-Black**, spray applied to the tapered board and bottom of the infill giving continuous full coverage of the infill and the area where the infill is to be placed.

Completion: Boards must be in good condition, well-fitting and stable.

IMPORTANT NOTES:

- Adhesive bead widths, spray patterns and coverage rates are stated on the appropriate product label and datasheet.
- **Bauder Activator-Primer (Canister), APR01-Black**, must be applied to the uppermost surface of insulation prior to installation of the self-adhesive underlayer.
- Foil to Foil installation (e.g. FA-TE to FA-TE) must not be carried out using the 6.5kg **Bauder PU Insulation Adhesive – Tin**.

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

- Foil to AVCL installation (e.g. FA Tapered directly to KSD Mica) must not be carried out using **Bauder Activator-Primer (Canister), APR01-Black.**

**BS EN 1991-1-4 uses the following guidance to calculate perimeter zones. Buildings up to and including 10m in height have a perimeter zone of not more than 2m. Buildings over 10m, uses the calculation of 2 x the building height ÷ 10. These are general guidance rules and do not take into account all of the information used in a full wind uplift calculation, they are therefore superseded by a project specific calculation.*

PRIMER TO UPPER SURFACE OF ALL INSULATION / INSULATED UPSTANDS

Bauder Activator-Primer (Canister), APR01-Black. All areas of the uppermost layer of insulation receiving the new self-adhesive underlayer to be thoroughly primed with **Bauder Activator-Primer (Canister), APR01-Black.**

Purpose: substrate primer to seal and prepare dry surfaces of a variety of common substrate material prior to the application of **Bauder** self-adhesive bitumen membranes.

Before application: All surfaces must be dry, clean and free from dust, dirt, oil, grease and loose material.

Application method: Spray Applied to provide even and full coverage. Avoid pooling. Never attempt torching within 10 min of primer application, even if the surface appears dry.

Application rate:

- 300mm wide spray
- Coverage: Approx. 96 g/m²
- Two coats may be required for very porous substrates.

Application temperature: +5 - +30°C

Drying time: Approx. 5 - 10 mins, dependent upon ambient temperature and material porosity.

Coats: Fully bond. Allow volatiles to dry off thoroughly between coats.

Re-application: Necessary after 4 hours exposure if waterproofing has not yet been applied, to maintain adhesion performance.

Caution: Use only outdoors in well ventilated areas or with respiratory apparatus and keep away from all sources of ignition. Take necessary precautions to avoid the solvent vapour from entering the buildings ventilation system.

UNDERLAYER

BauderTEC Sprint DUO, 2mm thick, 200g/m² glass grille reinforced, self-adhesive elastomeric bitumen underlayer, fully bonded by removing the peel off release film.

Please note that **Bauder Activator-Primer (Canister), APR01-Black**, must be applied to the uppermost layer of Bauder Insulation prior to installation of the self-adhesive underlayer.

The side laps are to be 100mm and must be **laid red over blue**, and heat sealed/torched (depending on 'Torch-Free' & 'Safe to Torch' zones) and rolling with the **Bauder Long Handled Lap Roller** to extrude a continuous bead of bitumen. Head laps to be 100mm and staggered, side laps to be 80mm and heat sealed/torched (depending on 'Torch-Free' & 'Safe to Torch' zones) to extrude a continuous bead of bitumen. The underlayer must be taken up all upstands, edge details, in accordance with current British Codes of Practice, and fully heat sealed/torched (depending on 'Torch-Free' & 'Safe to Torch' zones) with the air and vapour control layer by a minimum 100mm.

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

Optional underlayer for detail work

For detailing to un-insulated abutment upstands, where the waterproofing is to be applied to rough or uneven non-combustible surfaces i.e. brickwork or concrete, it is permissible for the installing contractor to use **Bauder EGV 3.5** underlayer where this product is considered to be better for application to these surfaces. For all other situations, and particularly to vertical insulation, the Sprint Duo underlayer must be used.

CAPPING SHEET

Bauder K4E, 4mm thick, 250g/m² polyester reinforced, elastomeric bitumen capping sheet, charcoal grey slate finish, fully bonded to the underlayer by torching in the approved **Bauder** manner. Head laps to be 100mm, side laps to be 80mm, torch sealed to provide a continuous bitumen bead extrusion from all laps.

IMPORTANT NOTE: The mineral slate finish is a natural product, so the raw material may differ in colour and shade, over which Bauder has no control. There may also be colour variations between each roll of membrane.

UPSTANDS AND DETAILING

Detail work to be carried out in **Bauder K4E** in accordance with current British Codes of Practice. Side laps to be 80mm, head laps to be 100mm. A continuous bead of bitumen must extrude from all laps. 50mm x 50mm **BauderPIR Angle Fillets** must be used at all right-angled upstands.

Angle fillets will need to be installed using **Bauder** insulation adhesive, or a suitable bitumen adhesive. Under no circumstances must fillets of an alternative material be incorporated (i.e. timber, cork, fibre, etc.) as this would invalidate the guarantee.

Separate flashings must always be formed. The capping sheet taken up a detail in one piece will not be permitted.

Refer to appendix for information on Required Upstand Heights and Level Thresholds.

ADDITIONAL ITEMS

Refer to the Bauder Standard Details Drawing sheet D0000-00W-200-001 for further information.

Provision should be made by the contractor to:-

- **New Chase & suitable flashing to Brickwork Upstand (A01)**
Cut new chases into brickwork upstands. The chase is to be a minimum of 25mm deep and 150mm above the finished surface level. Install suitable counter-flashing, this is to be base clipped and suitably plugged at 300mm centres. Lengths should not exceed 1.5 linear metres and laps should be not less than 150mm. All chases should be brushed clean and sealed using **Bauder Sealant Primer** prior to the application of **Bauder Sealant**. All work should be carried out by competent tradesmen in accordance with current British Codes of Practice and the recommendations of the Lead Contractor Association.
- **New Chase & suitable flashing to Rendered Upstand (A03)**
Cut new chases into rendered upstands. The chase is to be a minimum of 25mm deep and 150mm above the finished surface level. The new waterproofing is to be dressed so as to finish flush with the bottom of the new chase. Install suitable counter-flashing, this is to be base clipped

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

and suitably plugged at 300mm centres. Lengths should not exceed 1.5 linear metres and laps should be not less than 150mm. All chases should be brushed clean and sealed using **Bauder Sealant Primer** prior to the application of Bauder sealant. All work should be carried out by competent tradesmen in accordance with current British Codes of Practice and the recommendations of the Lead Contractor Association. A new render stop to be installed above the new flashing and re-rendered to match the existing and re-decorated according to any specific instruction by the client.

- **Raise Door sill (A12)**
Raise all door sills to ensure that a minimum upstand height of 150mm is achievable above the finished surface level. The method of raising the sill should be determined and specified by the client.
- **Re-Waterproof Ventilator Kerbs (& Raise if Necessary) (B03)**
Temporarily remove the existing ventilators from their kerbs. The kerbs are to be inspected for any signs of degradation and repaired as necessary. Check that a minimum 150mm upstand height can be achieved above the finished surface level and raise kerb if required. The first layer of membrane **must** be self-adhesive and dressed to the full extent of the detail using Torch-Free methods. This is to ensure that the detail is fully encapsulated to reduce the risk of fire to exposed combustible materials. The kerb must be insulated to a maximum U value of 0.35W/m²K in all insulated buildings to prevent thermal bridging. The new waterproofing system is to be dressed up and over the top of the kerb finishing flush with the inner edge. All exposed openings are to be temporarily protected and made watertight at the end of each working period. The ventilators are to be carefully reinstalled using suitable fixings. Provision should also be made for extending the ducting on the underside of the ventilator to suit.
- **Raise Perimeter Kerbs (B07)**
Raise all perimeter kerbs so as to provide a height of at least 50mm above the finished surface level. The new kerb must be of a suitable construction to allow adequate fixing and support of trims or weltd drips, and also to prevent the effects of wind uplift on the waterproofing system. Method of raising the kerb to be confirmed in the client's detailed specification. On external faces, allowance must be made for new fascia's or cladding due to the increased depth of kerb. Fixing trims into the fascia or cladding is not acceptable. The first layer of membrane **must** be self-adhesive and dressed to the full extent of the detail using Torch-Free methods. This is to ensure that the detail is fully encapsulated to reduce the risk of fire to exposed combustible materials.
- **Weltd Drip to External Gutters (Tapered System) (C07)**
Supply and fix a treated timber edge plate to all perimeters which are designed to shed water, where tapered insulation is being used. The plate is to be 10mm less than the thickness of the insulation and 150mm wide to accommodate the thickness of the drip flashing so as to prevent a water check from occurring. Supply and fix a suitably sized soft wood tanalised timber drip batten to the top edge of the perimeter face. Fixings are to be screwed at 300mm centres, using plugs when fixing into masonry or concrete. A weltd drip detail is to be formed in Bauder self-adhesive capping sheet if using Torch-Free methods or Bauder slate finished torch applied capping sheet for Safe to Torch methods, stagger nailed at 50mm centres with large headed

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

galvanised clout nails and turned back around a mechanically fixed, pre-primed, suitable former and dressed onto the roof by a minimum of 150mm.
Please refer to Bauder standard detail for Welled Drip.

- **New Bauder GRP Trims (D01A)** (where applicable)

- **Bituminous Membranes:**

- The first layer of membrane **must** be self-adhesive and dressed to the full extent of the detail using Torch-Free methods. This is to ensure that the detail is fully encapsulated to reduce the risk of fire to exposed combustible materials.
 - Dress the underlayer up and over the perimeter detail to provide a 25mm overhang. Please refer to Bauder standard detail drawings.

- **Trim:**

- **Setting out:** 10mm gap between the back edge of the bottom of the drip to the fascia/wall and 3mm gap between abutting lengths of trim.
 - **Fasteners:** Screw fasteners of type appropriate to kerb or deck substrate. Nail fixing is not permitted.
 - **Fixing:** 30mm from ends and at 300mm (maximum) centres, stagger fixed. Can be used to retain the capping sheet where the capping sheet is taken to the full extent of the detail – please see Bauder detail drawing.
 - 150mm deep trims (type 6) – 3no. additional fixings per length of trim. The fixings are to be face fixed with screws and positioned 75mm down from the top edge, one fixing 100mm in from each end and one in the centre and capped with coloured matched plastic weathering caps. *A fixed timber packer will be required behind the face of the trim to help facilitate ease of fixing.*
 - *For roofs above 10 metres in height – the 100mm deep trim (type 4) will require face fixing, as per 150mm trim above. A fixed timber packer will be required behind the face of the trim to help facilitate ease of fixing.*
 - **Jointing sleeves / bridging piece:** All lengths should be close butt jointed using an internal jointing sleeve. This must be provided to each joint.
 - **Corner pieces:** Purpose made.

- **Completion:**

- **Contact surfaces:** Prime with **Bauder Primer**.
 - **Joints:** Cover with 200mm long pads of bitumen membrane, bonded to trim.

- **Completion of bitumen membrane:**

- **Top layer/ Capping sheet:** Butt joint to rear edge of trim.
 - **Cover strip:** Fully bond to trim and top layer/ capping sheet of bitumen membrane. Carry over roof edge upstand and lap 100 mm onto roof. The capping sheet is to be dressed tightly into the top lip of the trim, ensuring a bead of bitumen extrudes at the edge. Please see Bauder detail drawing.

Wall / kerb joints: The new trim must cover any open joint that may exist at the top of the kerb or wall, by a minimum distance of 20mm.

- **Temporarily Remove Cladding (G01)**

Temporarily remove the existing cladding so as to allow the waterproofing to be dressed up the upstand to a minimum height of 150mm. Thoroughly inspect the area around the upstand and clear out any combustible material that may have accumulated there. Flammable sarking materials should be carefully lifted clear and secured. Damaged sarking membrane should be

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

replaced/repared. Self-adhesive membranes that can be installed using Torch-Free methods to avoid the risk of fire **must** be used in this area. All cladding is to be inspected for damage or degradation and repaired/renewed where necessary and is to be securely replaced on completion. It should be noted that provision may have to be made for the cladding to be modified.

- **Temporarily Remove Fascia to Abutment Upstand (G07)**

Temporarily remove the existing fascia board from the abutment upstand detail to allow access for re-waterproofing the area behind. Thoroughly inspect the area around the upstand and clear out any combustible material that may have accumulated there. Self-adhesive membranes that can be installed using Torch-Free methods to avoid the risk of fire **must** be used in this area. Dress the new waterproofing up the upstand to a minimum height of 150mm above the finished surface of the new system. The fascia board should be inspected for signs of rot or degradation and repaired/replaced where necessary. Reinstall fascia upon completion. Allowance should be made for any subsequent decoration in accordance with client's recommendations and specification.

- **Product name: Bauder Bitumen Refurbishment Warm Roof Outlet (I3)**

Material: Cast polyurethane body with integral bituminous connection flange.

Product size/ reference:

- 63mm Bauder Bitumen Refurbishment Warm Roof Outlet
- 90mm Bauder Bitumen Refurbishment Warm Roof Outlet

Suitability: Intended for existing roof overlay situations and limited to use where additional insulation is being provided. The insulation depth requirements for accommodating the bowl of these outlets are: -

- **63mm Outlet** – 70mm min.
- **90mm Outlet** – 105mm min.

Please note that when fitted within existing outlets, the minimum insulation thickness could be reduced further depending upon the bowl size of the existing outlet. This product is not suitable for uninsulated overlay applications. Please refer to product data sheet for further information regarding the minimum insulation thickness required or contact our Technical Department.

Flow rate: Based upon vertical pipework and a 35 mm head of water pressure – according to BS EN 12056:3:2000.

- **63mm Outlet** - 6.1 litres/sec
- **90mm Outlet** - 6.9 litres/sec

Pipe/ outlet connection: designed to fit inside existing pipework or outlet units using the seals provided, where the internal diameter of the bore is: -

- **63mm Outlet** - between 68mm - 86mm.
- **90mm Outlet** - between 89mm - 107 mm.

Type of grate/ fittings: supplied with a tough polyamide leaf guard.

Installation requirements: These outlets are components that form part of the Bauder waterproofing system and for guarantee reasons, should only be installed by Bauder Approved installers.

Fixing:

- The existing pipe bore should be first cleaned to ensure a good seal.
- The outlet is to be secured to the structural deck by a minimum of four fasteners through the outlet rim to obtain an adequate attachment to the deck substrate material.

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

- The appropriate seal to suit the internal diameter of the opening must be fitted before the outlet is inserted into the existing pipe/ outlet. The stepped outlet seal can be trimmed to fit.
 - When fixing through existing outlets, the long outlet spigot should extend beyond the spigot of the existing unit to form a seal with the downpipe beyond and should then be cut to the length required.
 - For detailed information, refer to the Bauder Product Data Sheet & Bauder Detail Drawing.
- **Bauder Parapet Emergency Overflow (I9)** (where applicable)
Product Name: Bauder Parapet Emergency Overflow Stainless Steel DN 70
Material and specification: Stainless Steel. Length of tube 800mm. 3° neck slope
Flow Rate: In accordance with BS EN 12056-3-2000, Overflows or emergency outlets should be provided on flat roofs with parapets and in non-eaves gutters in order to reduce the risk of over spilling of rainwater into a building or structural overloading.
Suitability: These emergency overflow outlets are designed to be used as a through chute to warn of a build-up of water on the roof due to a blockage of the drainage system(s). They are not suitable or intended for connection to internal pipework that is within a wall construction or boxed in and is inaccessible after construction.
Installation requirements: Emergency overflow (suitable for bitumen membranes) to be installed through the system and kerb after creation of a suitable size diameter opening. The overflow should be secured using suitable fixings. The fixing plates supplied will form part of the Bauder waterproofing system and for guarantee reasons, should only be installed by Bauder Approved installers.
Fixing: The deck or wall structure may require preparatory works before the emergency overflow can be installed: The bitumen waterproofing membrane should be suitably bonded on to the overflow plate. The overflow opening should be positioned approx. 35mm above the height of the waterproofing or landscape finish.
 - **Gutter Sole Piece (J18)**
Supply and fix a layer of **Bauder** capping sheet so as to run lengthways along the gutter detail forming a continuous sole piece. All adjacent waterproofing is to be dressed down onto the sole piece to avoid water checks.
 - **Extend SVP's (K04)**
Extend all soil vent pipes, flues, etc., using a suitable pipe material/ method of extension to ensure that the finished pipe height is a minimum of 150mm above the finished roof surface. A purpose made fabricated code 4 lead collar with base flange should be installed, incorporated between the waterproofing layers (underlayer/capping sheet) as per Bauder standard details drawings.
 - **Small Service Pipes & Cable Access for Contractors (Swan neck) (K17)**
Supply and install new proprietary pipe penetration conduit system where required. This is to be installed in accordance with the manufacturer's instructions. The base flange must be situated on top of the **Bauder** underlay, applied locally around the base of each pipe and extending past the lead base flange by a minimum of 200 mm to allow a seal to be formed with the main waterproofing layer.

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

- **New BauderDOME Rooflights (L01)**
Supply and install new **BauderDOME** triple skinned polycarbonate rooflights, fitted with insulated kerbs in accordance with the client's specification.

Ventilation / opening options: Unventilated / hit & miss ventilated / worm-gear opening / extractor fan in glazing / gas spring access hatch.

Glazing profile options: Dome / Pyramid

Glazing finish options: Clear / diffused

Size: Available in a range of standard sizes (refer to **BauderDOME** literature for details). **The dimension of the roof opening / builder's kerb needs to be modified as necessary to match the size of the rooflight chosen.**

The following items will always be included for refurbishment projects:

1. Remove existing redundant rooflights and dispose of in accordance with the clients detailed instructions.
 2. Carry out any making good that may be required internally as a result of the installation of the new rooflight.
 3. All works must be carried out strictly in accordance with the client's detailed specifications.
 4. If a lightning protection system exists on the roof, provision should be made to incorporate the new rooflight into the system in accordance with BS EN 62305.
- **Retain Coated Lightning Conductor (Type 4 Clip) (M02)**
Temporarily remove the PVC coated lightning conductor without buckling or damaging so as to allow for the new waterproofing to be installed beneath. The lightning conductor is to be replaced on completion using **Bauder Type 4 Lightning Conductor Clips** incorporating Bauder capping sheet pad fully bonded using suitable heating methods to the main capping sheet at 1m centres. The fixing to the new membranes is only to be carried out by the approved **Bauder** contractor. The re-commissioning of the conductor is to be carried out by a specialist company in conjunction with the roofing contractor.
 - **Install New Cavity Tray (Q08)**
Supply and install a cavity tray system to designated wall areas in accordance with the client's detailed specification and the manufacturer's recommendations.
 - **LiquiDETAIL, Incorporating 110g Reinforcement Fleece to Specific Items of Detailing (S06)**
Product: Bauder LiquiDETAIL incorporating Bauder 110g Reinforcement Fleece
Location: The existing single ply areas

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

Preparation: Ensure that the surface receiving the **Bauder LiquiDETAIL** is clean, dry and free from dust, laitance, grease, oil, and any other contaminants.

- **Protection:** Cover the completed bituminous / Single Ply membranes with a clean tarpaulin to protect from any spills and splashes.
- **Metal:** should be rubbed down thoroughly with **Bauder PMMA Cleaner** and abraded before carrying out adhesion testing. **Bauder PMMA Cleaner** allowed to evaporate for 20 minutes and over-coated within 60 minutes. All paint should be removed back to clean metal. Any rust should be treated with 'Hammerite No.1 Rustbeater' strictly in accordance with the manufacturer's instructions.
- **Plastics:** should be rubbed down thoroughly with **Bauder PMMA Cleaner** and lightly abraded before carrying out adhesion testing. **Bauder PMMA Cleaner** allowed to evaporate for 20 minutes and over-coated within 60 minutes.
- **Concrete, brick, timber, asphalt:** Apply **Bauder LiquiPRIME GP** (available separately) in accordance with **Bauder** instructions and allow to cure prior to installing **Bauder LiquiDETAIL**.
- **Note:** **Bauder PMMA Cleaner** must not come into contact with bituminous membranes.

Application: Apply **Bauder LiquiDETAIL** incorporating **Bauder 110g Reinforcement Fleece** to specified areas, in strict accordance with the Bauder application instructions. **Bauder** will provide on-site training in the use of this product on request. The product must not be used in any areas of Bauder Roof Systems without prior consent of **Bauder Limited**. Where this product is used, it will be covered under separate Guarantee Terms and Conditions.

GUARANTEE

A 20 year product and workmanship guarantee is to be provided upon completion following a Final Inspection by Bauder.

Details regarding the full terms and conditions are available separately from Bauder Ltd upon request. This system must be installed by a Bauder Approved Contractor, to be eligible for guarantee. The system comprises the waterproofing membranes, insulation, air and vapour control layer, and attachment of these products.

IMPORTANT NOTE

It is imperative that the contractor conforms with the workmanship criteria as listed above. Any deviation from this will result in the contract being considered unguaranteeable by our insurers.

CONTACT INFORMATION

For further information contact Bauder Limited.

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Area Technical Manager: Liam Rose, T: 07771 774142

Site Technician: Rob Curtis, T: 07436 246294

CLIENT: TORBAY DEVELOPMENT AGENCY
REF No: B223924/1
PROJECT NAME: WHITEROCK ACADEMY
ROOF AREA NAME: ROOF 1
DATE: 18/08/22

Bauder reserves the right to amend information and product specifications without prior notice. All reasonable care has been taken to ensure that the information is current and correct at the time of issue. Please note that any future regulation changes could result in this specification requiring an update. In the case of a previous roof survey a new survey will be necessary to establish if the condition has further deteriorated and therefore if the specification requires amendment. The specifier is responsible for ensuring that this specification information is still current prior to issue, as Bauder Ltd can accept no liability for any resulting errors or omissions. Any deviation or modification to this specification without Bauder's consent may result in the system not achieving the stated Fire Performance or Guarantee Requirements.