CLIENT: WATES LIVING SPACE
REF NO: B201439
PROJECT NAME: SOLENT ROAD, 77-105
ROOF AREA NAME: MAIN ROOF (TAPERED OPTION)
DATE: 16/04/2020

'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. When encountering an area which contains combustible material a minimum 900mm deep zone of the flat area around the material and any detail flashing to the material itself there is a requirement for 'Torch-Free' detailing. In these instances an appropriate alternative Bauder self-adhesive membrane should be used as described in: 'TORCH-FREE' & 'SAFE TO TORCH' ZONES - ALTERNATIVE MEMBRANES AND APPLICATION. The 'Torch-Free' & 'Safe to Torch' zone detailing and method of application will be described in the Additional Items section and the 'Torch-Free' & 'Safe to Torch' zones section of this specification and further detailed in the Bauder 'Torch-Free' & Bauder Bituminous detail drawings. This specification should be read in conjunction with the Bauder Roof Survey Report.

This specification should be read in conjunction with the Bauder Roof Survey Report (supplied separately) and the 'TORCH-FREE ZONES REPORT' attached.

SYSTEM CONSTRUCTION

Waterproofing System: Bauder Total Roof System – Warm roof construction
Substrate: Existing Structural Deck-Strip to Existing Asphalt
Roof Fall: Assumed to be 0°. Roof falls to be provided by the tapered insulation scheme.

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

RETENTION OF EXISTING ASPHALT

Carefully remove the waterproofing system, including insulation materials, as far as the surface of the existing asphalt. Remove all debris and insulation residue to provide a surface suitable for overlay. The existing waterproofing must also be removed from all upstands, edge detailing, and from penetrations such as outlets or vent pipes etc. and the exposed surfaces prepared for receiving the new waterproofing. Cut, seal and make good all loose or damaged areas of the remaining asphalt to provide an adequate surface for receiving the new overlay system. Fully clean and thoroughly prime all surfaces receiving the new waterproofing with fast drying bitumen primer and allow it to dry thoroughly.

Note: - An adequate provisional sum should be set aside to cover for any unforeseen issues related to the removal of the existing waterproof covering and preparing the existing asphalt.

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PRIMER

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

OR

Bauder Quick Dry Primer. All areas receiving the new torch-on membranes to be thoroughly primed with **Bauder Quick Dry Primer.**
Purpose: Quick drying substrate primer to seal and prepare dry surfaces of a variety of common substrate material prior to the application of Bauder bituminous waterproof membranes.
Before application: All surfaces must be dry, clean and free from dust, dirt, oil, grease and loose material.
Application method: Apply a thin even coat using a brush or roller to provide full coverage. Avoid pooling.
Application rate: between 4-8m^2 per litre, dependent upon substrate porosity
Application temperature: 5-25°C
Drying time: 3-6 hours dependent upon ambient temperature and substrate porosity.
Coats: Fully bond. Allow volatiles to dry off thoroughly between coats. Never attempt torching within 30 min of primer application, even if the surface appears dry.
Re-application: Necessary after 24 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.

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AIR AND VAPOUR CONTROL LAYER – ALL AREAS EXCEPT 'TORCH-FREE' ZONE

Bauder VB4-EXPAL, 3.5mm thick aluminium lined, elastomeric bitumen air and vapour control layer, partially bonded by torching. Laps to be 100mm, with all laps torch sealed to provide a continuous bitumen bead extrusion. A 30% bond per m² must be achieved on the main roof area. The air and vapour control layer to be fully bonded at all perimeter edges, including roof lights, rainwater outlets, vent pipes, to a width of 400mm.

IMPORTANT NOTE:

The **Bauder VB4-EXPAL** must be dressed up all upstands above the insulation, to a height of 150mm minimum. This is to ensure that a 100mm lap is constructed above the Bauder PIR angle fillet. The contractor is to form all perimeter details in such a way that a 100mm lap is obtained between the air and vapour control layer and the underlayer.

AIR AND VAPOUR CONTROL LAYER – 'TORCH-FREE' / 'SAFE TO TORCH' ZONE

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 +5ºC. At all abutments and details the bitumen bead must be extruded from the lap joints to ensure a seal.

For 'Torch-Free' & 'Safe to Torch' the self-adhesive AVCL is to finish 150mm higher than the finished height of the insulation. Where combustible materials extend beyond this then the remainder of the upstand detail receives SA underlay. This is lapped 100mm onto the AVCL and taken to completely encapsulate the upstand and / or capping detail. This is installed at the AVCL stage to complete the entire roof area. The underlay on top of the insulation then laps onto this upstand by 100mm above the top edge of the angle fillet. Please see Bauder 'Torch-Free' drawings.

FA TAPERED INSULATION

Product: BauderPIR FA Tapered
Description: Foil faced, rigid urethane tapered insulation.
Thickness: *Average Thickness TBC**.
Performance: Zero ODP.
Setting out: Laid strictly in accordance with the Bauder scheme plan and installation instructions. Bauder tapered insulation systems are designed to be installed on a level deck surface. 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

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discrepancies. **The client and Bauder Limited** should be informed immediately if back-falls or serious deflection being discovered.

- **Long edges:** Fully supported (if metal deck - run at right angles to metal deck troughs)
- **End edges:** Fully supported.
- **Joints:** close butted together.
- **End joints:** Stagger.

Before installing: No tapered boards should be laid on site without a copy of the latest scheme to hand. Contractors should always refer to the Bauder plan with regard to the recommended start point and layout of boards. If contractors are unsure of the correct plan being on site they should check with the Bauder Technical Department ASAP.

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

- **Application of BauderPIR FA Tapered to AVCL:** Bonded to the upper surface of the air and vapour control layer (AVCL) using suitable Bauder Polyurethane Insulation Adhesive. Adhesives applied in strips following the direction of the board length giving 4 no. (increase to 6 no. at roof perimeter)** continuous and equally spaced adhesive beads within each 1200 mm board width.
    - It is essential that the surface of the air and vapour control layer is clean, dry and free from dust etc., before applying the adhesive.
    - Boards should be laid with the **Bauder** number/arrow/grid pattern facing upwards.
    - Adhesive bead widths are stated on appropriate product label and datasheet.
    - Boards should be laid off-set and staggered.

  Important Note: Foil to AVCL installation (e.g. FA Tapered directly to KSD Mica) must **not** be carried out using Bauder Foil Contact Adhesive (Canister).

Multiple-layer tapered systems:

Where the total thickness of insulation required is greater than can be achieved by a single layer of FA Tapered Insulation, then additional base layer(s) boards of BauderPIR FA-TE can be adhered to the previous layer(s) or AVCL to make up the total thickness required before the uppermost layer of BauderPIR FA Tapered boards are installed.

Product: BauderPIR FA-TE
Description: Aluminium faced, rigid urethane flatboard insulation.
Thickness: *Refer to Bauder Tapered Insulation Layout Plan for details**.
Performance: Zero ODP, and a Green guide rating of 'A'.

- **Application of the BauderPIR FA-TE base layer to the AVCL:** Bonded to the upper surface of the air and vapour control layer (AVCL) using suitable Bauder Polyurethane Insulation Adhesive. Adhesives applied in strips following the direction of the board length giving 2 no. (increase to 3 no. at roof perimeter)** continuous and equally spaced adhesive beads within each 600 mm board width.
    - Adhesive bead widths are stated on appropriate product label and datasheet.
    - Boards should be laid off-set and staggered.
- **Application of multiple base layers of BauderPIR FA-TE:** These additional boards should be bonded using **Bauder Foil Contact Adhesive (Canister)** spray applied to the surface of both layers.

- Adhesive spray patterns and coverage rates are stated on appropriate product label and datasheet.
- Boards should be laid off-set and staggered with the layer below.

Tapered Layer (Uppermost layer in multiple layer systems):

- **Application:** The **BauderPIR FA Tapered** board layer should be bonded to the BauderPIR FA-TE base layer(s) using **Bauder Foil Contact Adhesive (Canister)** spray applied to the surface of both layers.
  - Adhesive spray patterns and coverage rates are stated on appropriate product label and datasheet.
  - 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:

- **Application:** The **BauderPIR Ridge & Valley Infills** should be bonded using **Bauder Foil Contact Adhesive (Canister)**, spray applied to the tapered board and bottom of the infill giving continuous full coverage of the infill and the area the infill is to be placed.
  Coverage rates are stated on appropriate product label and datasheet.
  Installation must be carried out using the appropriate Bauder Installation Manual.

Completion: Boards must be in good condition, well-fitting and stable.
Important Note: Foil to foil installation (e.g. FA Tapered to FA-TE) must **not** be carried out using Bauder insulation adhesive from the 6.5 Kg tin.

**(Refer to Bauder Tapered Insulation Layout Plan for details of 'U' value achieved by this scheme).*

***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*.

UNDERLAYER

BauderTEC KSA DUO, 3mm thick, 200g/m² glass grille reinforced, self-adhesive elastomeric bitumen underlayer, fully bonded by removing the peel off release film. 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.

CAPPING SHEET

Bauder K5K, 5mm 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

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to provide a continuous bitumen bead extrusion. A continuous bead of bitumen must extrude from all laps.

UPSTANDS AND DETAILING

Detail work to be carried out in Bauder K5K 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.

The minimum recommended height for constructing waterproofing details is 150mm from the top of the waterproofing. Special attention should be paid to all structures, such as rooflights, counter-flashings, window and door cills, etc. These may have to be raised to enable a 150mm high waterproofing detail to be formed. Bauder cannot take responsibility for water ingress over waterproofing details insufficiently high.

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

Level Thresholds: Acceptable, providing conforms to BS6229:2018 and current NHBC Standards, chapter, 7.1.
Requirements:

- Minimum 75mm upstand height. (This must be taken from the waterproofing or top of the insulation if an inverted roof).
- Falls are directed away from the door cill.
- Waterproofing is dressed up and under the door cill.
- Door cill has a minimum 45mm overhang.
- Provision is made for emergency overflow to prevent water getting to the waterproofing and cill interface.

Any level threshold details not meeting this standard cannot be guaranteed by Bauder.
Note: Bauder recommends the installation of a linear drain (Bauder KH-60 linear drain is suitable for this purpose) in front of the access door threshold, to help prevent rainwater splash back and snow build-up.

ADDITIONAL FIXING OF BITUMEN MEMBRANES TO UPSTANDS

Torch Applied Capping Sheets: Upstand details in excess of 250 mm in height; the top leading edge of the capping sheet will need to be mechanically fixed using 5 no. fixings per sheet at 200mm centres, using screw fasteners as stated below. Screw fix through into the underlying substrate, (for cold roofs, ensuring that the pressure plates lie flush within membrane surface), utilising a separate flashing of capping sheet to cover the lap and fixings. In the event of doubt, Bauder should be consulted regarding any specific requirement.
Up to and including 250mm, it is permissible to use a **Bauder Termination Bar** to mechanically fix the top leading edge. **Please note:** Termination bars are not suitable for brickwork substrates.

- **Underlayers:** Upstand details in excess of 500mm, provision should be made to mechanically fix through the underlayer using 5 no. fixings per sheet width at

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200mm centres, using screw fasteners as stated below. The underlayer will also need to be fixed every 500mm thereafter.
For insulated upstands, please use appropriate tube fasteners to prevent cold bridging from occurring.

Self-Adhesive Capping Sheets: The capping sheet will need to be mechanically fixed at 500mm in height and every 500mm thereafter using 5 no. fixings per sheet at 200mm centres, using screw fasteners as stated below. Screw fix through into the underlying substrate, (for cold roofs, ensuring that the pressure plates lie flush within membrane surface), utilising a separate flashing of capping sheet to cover the lap and fixings.
Up to and including 250mm, it is permissible to use a **Bauder Termination Bar** to mechanically fix the top leading edge. **Please note:** Termination bars are not suitable for brickwork substrates.
Note: It is not necessary to mechanically fix the underlayer when using Self-Adhesive Capping Sheets.

MECHANICAL FASTENER SUPPLIER

SFS Group Fastening Technology Ltd. 153 Kirkstall Road, Leeds, West Yorkshire. LS4 2AT
Tel: +44 (0)113 208 5500, Fax: +44 (0)113 208 5539, Email: uk.leeds@sfsintec.biz
Web: www.sfsintec.biz/uk

Mechanical Fasteners (Cold Roof Upstands):
Type: IWF-5.2x35 screws together with associated IFC/IW–82x40 galvanised pressed steel washer plates.

Mechanical Fasteners (Warm Roof Upstands):
Type: Respective tube washers to be used for both membrane and insulation.
Product reference: Tube fastener - Tube size and fastener type for both membrane and insulation as recommended by supplier specifically for project and installed in accordance to their fixing plan. Please note that insulation tubes (round) differ from membrane tubes (rectangular 80 x 40 mm).

'TORCH-FREE' & 'SAFE TO TORCH' ZONES - ALTERNATIVE MEMBRANES AND APPLICATION

- For detailing application in locations constructed from or within the 'Torch-Free' & 'Safe to Torch' zones to potentially combustible materials or otherwise where it is considered appropriate by the contractor necessary to minimise the potential risk.
- **Primer: Bauder Primer-Activator (Canister), APR01-Black** must be used when using Bauder self-adhesive membranes and a 'Torch-Free' application is required.
- **Underlayers:** it is permissible to use a Bauder self-adhesive membrane so long as this product is a recognised component of the system specified.
- Acceptable alternatives underlayers are listed below: -
    - **Bauder G4E** to be replaced with **Bauder KSA Duo**

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- **Capping sheets:** Where appropriate, the installing contractor can use **Bauder KSO-P SN / KSO SN** self-adhesive capping sheet, applied using the hot air hand tools approved for use with bituminous systems. Please note that **Bauder Primer-Activator (Canister), APR01-Black** must be applied to the underlayer prior to installation of the self-adhesive capping sheet.
  Bauder KSO-P SN is only available in one colour – Charcoal Grey.
  Bauder KSO SN is available in two colours – Natural Slate or Brown.
  Self-adhered membranes - Mechanically fix the top leading edge of all upstand details at 300mm centres using appropriate fasteners, and suitable termination bar if required.
  Approved Hot Air Equipment
- The **Bauder KSO-P SN / KSO SN** membrane must be applied using the approved hot air hand tools. The list of permissible hot air electrical equipment suppliers for installing Bauder waterproofing membranes are stated below. These are available either for purchase or hire from the below companies:

HOT AIR WELDING EQUIPMENT

LEISTER
Contact: Welwyn Tool Group, Tel 01707 331 111, http://www.welwyntoolgroup.co.uk

SIEVERT
Contact: Lister Gas Pro, Tel 0800 801 046, ch300@lister.co.uk

NON-COMBUSTIBLE SURFACES - ALTERNATIVE DETAILING MEMBRANES

- 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 the Bauder underlayer appropriate to the specified system where this product is considered to be better for application to these surfaces. For all other situations, and particularly to vertical insulation, the Bauder Self-Adhesive Underlayer appropriate to the specified system must be used.

TECHNICAL NOTES

1. 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.
2. Against all insulation boards where the edge of the board is susceptible to mechanical damage, provision is to be made to supply and fix a timber protection batten 10mm thinner than the insulation. This to be suitably mechanically fixed to the roof deck. On internal details such as internal gutters/outlets it is permissible to use a metal hard edge angle.
3. When the ambient temperature is below 5°C, care should be taken to ensure proper adhesion of the self-adhesive membranes.

4. Any peculiarities or details discovered, which might affect the performance of the **Bauder** system, should be reported immediately to the specifier and **Bauder Limited** in order that they may assist in overcoming the problem.
5. At the end of each working day, the new waterproofing should be terminated with a secure and waterproof temporary seal, which will be left in situ, utilising **Bauder** self-adhesive underlayer material (e.g. **BauderTEC Sprint DUO**) to create the seal. The **Bauder** self-adhesive underlayer should be extended onto the flat AVCL by a minimum of 200mm from the exposed edge of the insulation and heat activate to ensure a satisfactory seal.
   To ensure that no moisture contamination of the system can occur between each working period, it is essential that the night seal is properly and securely bonded. No mopping or loose covers will be permitted.
6. Where building works are to be carried out by other trades, following completion of the waterproofing, the contractor must make adequate provision for supplying protection to prevent damage to the new membranes. The final inspection will not be carried out by the **Bauder** Site Technician until all associated trades are complete and the roof areas are clear from all debris and protection layers.
7. All mechanical and electrical work to plant and equipment should be carried out by competent mechanical and electrical qualified tradesmen. All plant is to be reinstated and recommissioned on completion of the roofing works in accordance with the client's detailed specification.
8. If any items of plant/equipment are to be situated on the finished roof, a sacrificial layer of **Bauder** capping sheet is to be loose laid beneath. This is to extend a minimum 25mm past the point of contact all round. In the case of heavy items it may be necessary to introduce a load spreading slab, please contact **Bauder** for further advice.

INTERNAL/PARAPET OUTLETS

[1] Where the existing outlets are to be retained they must be carefully examined for damage and proper seating. Any faults must be rectified.
[2] A sump must be created around the outlets using the correct thickness of insulation as shown on the Bauder tapered insulation drawing.
[3] The contractor must ensure that the waterproofing is firmly sealed to the outlet.
[4] The contractor must ensure that all outlets are unblocked during and at the completion of the contract.
[5] The contractor is to provide suitable grilles/wire baskets to the outlets on completion of the contract.

ADDITIONAL ITEMS

Provision should be made by the contractor to:-

- **Raise Perimeter Kerbs** (B07)
  Raise all perimeter kerbs so as to provide a height of at least 50mm above the finished surface level. 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. 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.

- **Discard Cappings Apply New Trim** (D03)
  Remove all existing metal capping's and discard. Prepare the parapet wall by mechanically fixing 19mm exterior grade plywood to the horizontal surface.
  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:** 3 mm (minimum) clear from walls, fascia and 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.
    - 150mm deep trims – 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.
  - **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-Activator (Canister), APR01-Black**.
  - **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.

  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.

- **New Upvc Fascias** (G06)
  Supply and install a new UPVC fascia detail [and soffit where required] to the client's detailed specification. Self-adhesive membranes **must** be used and

installed using Torch-Free methods to avoid risk to the fascia detail during the application of the new waterproofing membranes.

- **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.
  - 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 from a seal with the downpipe beyond and should then be cut to the length required.
  - For detailed information, refer to the manufacturers installation guidelines.

- **Extend SVP's** (K04)
  Extend all soil vent pipes, flues, etc., to ensure that a minimum upstand collar flashing height of 150mm can be achieved above the finished roof surface.

- **Lead Sleeve To SVP's** (K05)
  Supply and install site fabricated Code 4 lead sleeves to all cast iron or plastic soil vent pipes. For longer pipes an appropriate weathering collar should be installed - solvent welded type for plastic pipes or a clamped metal unit sealed with mastic for cast iron. For short length pipes – consideration should be given to raise SVP to provide a minimum height of 150mm above the finished roof surface, also ensure integrity by turning the lead down into the orifice of the pipe by a minimum of 25mm so as to provide adequate weathering. A lead base flange, a minimum 100 mm width all around, must be provided to ensure that the new waterproofing forms a watertight seal. This flange must be situated on top of the **Bauder** underlayer, 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. Provide plastic or wire basket leaf guards to all pipes on completion.

- **Temporarily Disconnect And Re-Route Cables Using Conduit Caging** (P01)
  Temporarily disconnect all service cables so as to facilitate the installation of the new waterproofing system. Consultation should be undertaken with the client to determine the best way in which this can be approached. On reinstallation of these cables it is recommended that they be routed via a proprietary conduit caging.

- **Temporarily Support Pipes, Plant etc.** (Q03)
  Provide temporary support to fixed items of plant or pipework, in order to modify the existing supporting structure.

WORKMANSHIP

[1] The **Bauder** System must only be laid by properly certified operatives, who have been trained by **Bauder Limited** or approved by **Bauder Limited** and hold the certificate of approval.
[2] The **Bauder** System must be laid with the use of roll bars, and Long Handled Lap Rollers as provided by **Bauder Limited**.
[3] Workmanship that is incorrect and not to Codes of Practice BS 8217:2005, will not be permitted, even if the system is watertight. The client will be told that all such faults must be remedied, before the Guarantee is issued.
[4] Any building work which is the responsibility of the roofing contractor and has a bearing on the life of the **Bauder Total Roof System** must be carried out by properly trained tradesmen.
[5] Consideration must be given by the contractor at all times to the aesthetic appearance of the roof, ie. alternate head laps to be in line and no unnecessary short pieces of capping sheet are to be used.

HEALTH & SAFETY INFORMATION – ROOFING WORK

[1] Follow the advice shown in the "Safe2Torch Checklist" produced by the National Federation of Roofing Contractors.

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[2] Suitable precautions must be taken to prevent accidents occurring when roofing systems are being installed.

[3] The contractor must ensure that adequate measures are taken to effectively prevent injury to members of the public, contractors and any other persons who may be affected by the works including the public

[4] Where microwave equipment is installed at roof level, care must be taken to prevent persons working on the roof from being exposed to large doses of microwave radiation.

[5] Similarly, the contractor should liaise with the client to ensure that there are no extract outlets situated on the roof where noxious or harmful emissions could affect persons working. Suitable precautions will be necessary to prevent exposure where this situation arises.

[6] The contractor is responsible for providing adequate fire fighting equipment in the form of extinguishers during work on the roof. These should be kept in easily accessible locations and be suitably signed.

[7] Whenever possible, access to the roof should be made via internal staircases rather than by temporary means. Where this is not available, it is the responsibility of the contractor to ensure a safe means of access, egress and a safe workplace.

As far as roofs are concerned, edge protection in the form of scaffolding or a fixed structure should be in place to a height of 1.1 metres in accordance with the Workplace (Health, Safety and Welfare) Regulations 1992.

Failing this, the hierarchy of controls should be applied from the Work at Height Regulations 2005. Means of access should be by fixed ladder, passenger hoist or scaffolding.

[8] The contractor must ensure that suitable written method statements and risk assessments are available for the work being undertaken. In particular, it is essential that manual handling methods be fully assessed as roofing materials are heavy and can cause serious injury.

[9] The contractor must ensure that suitable information about the roof covering is provided to the Client at the end of the work to ensure that work in future can be carried out safely. This information will form part of the Safety File.

[10] All persons working on the roof should be provided with, and wear, suitable personal protective equipment and wet weather gear. Training must be provided to all contract staff on the safe use of the equipment.

[11] The installer must observe Product Safety Datasheets, relevant to the materials

being used as well as completing and complying with COSHH risk assessments

[12] We draw your attention to your duties under the Construction (Design and Management) Regulations 2015. Regulation 4, Client's duties in relation to managing projects states that the client must make suitable arrangements for managing a project, including the allocation of sufficient time and other resources. Regulation 5, Appointment of the Principal Designer and the Principal Contractor states that where more than one contractor will be working on a project at any time, the client must appoint a Principal Designer and a Principal Contractor.

Please note that although Bauder will assist with the roof waterproofing system design, we will not undertake the role of Principal Designer.

[13] It is always the responsibility of the contractor to carry out a risk assessment on all aspects of the contract. The 'Safe2Torch' checklist is solely for guidance for the safe installation of torch-on reinforced bitumen membranes and use of gas torches in the workplace.

[14] No work must be carried out on fragile roofs or where there are skylights unless suitable precautions have been taken to prevent persons falling through fragile roofs and openings. In particular, the following are likely to be fragile:

- Non reinforced fibre cement sheets e.g. asbestos
- Corroded metal decking
- Woodwool slabs
- Rotten chipboard or similar
- Stramit
- Slates or tiles
- Old roof lights
- Glass (including wired)

Specifying non fragile rooflights will help reduce the risk of falls from height. A non-fragility rating is required by the HSE (Health and Safety Executive) in order to comply with CDM (Construction Design and Management) Regulations 2015.

[15] HSE guidance must be followed when carrying out any work involving interference with asbestos.

IMPORTANT NOTE:
On sites where asbestos has or has possibly been detected, it is to be treated in accordance with the **Control of Asbestos Regulations 2012.**
Bauder specification documentation is subject to any revisions necessary pending the findings from the above.

CLIENT: WATES LIVING SPACE
REF NO: B201439
PROJECT NAME: SOLENT ROAD, 77-105
ROOF AREA NAME: MAIN ROOF (TAPERED OPTION)
DATE: 16/04/2020

GUARANTEE

A 20 year system product, workmanship and design (including consequential loss) 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

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