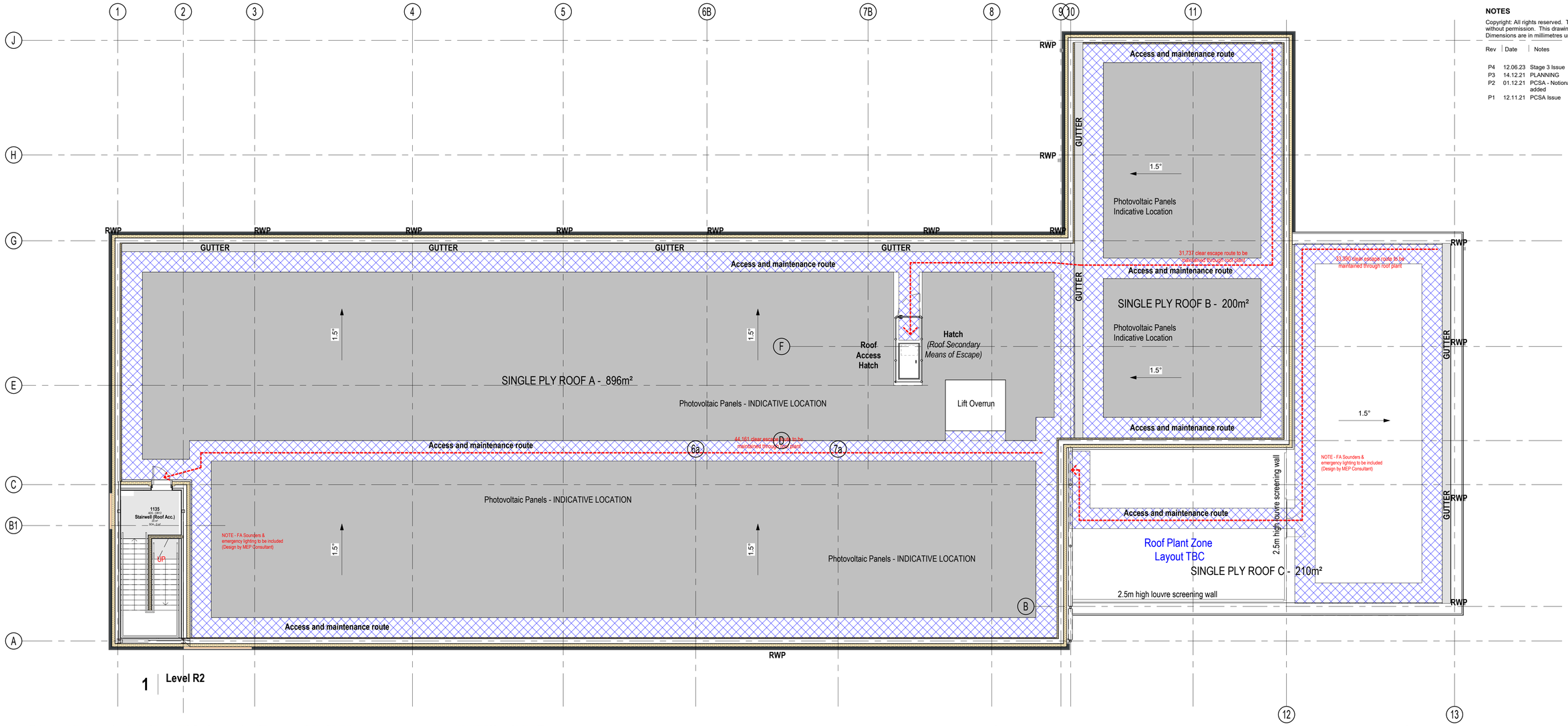



## NOTES

Copyright: All rights reserved. This drawing must not be reproduced without permission. This drawing must not be scaled.
Dimensions are in millimetres unless specified.

| Rev | Date | Notes | By | Che |
|---|---|---|---|---|
| P4 | 12.06.23 | Stage 3 Issue | JP | AS |
| P3 | 14.12.21 | PLANNING | AS | ME |
| P2 | 01.12.21 | PCSA - Notional 1:60 Roof Gradient added | HTP | ME |
| P1 | 12.11.21 | PCSA Issue | HTP/AS | ME |

## Single Outlet Calculation
## Rainfall
## BS EN 12056-3:2000

| Town | Oldham | Oldham | Oldham | |
|---|---|---|---|---|
| Category | CAT 2 | CAT 2 | CAT 2 | |
| Rainfall Intesity (l/s/m²) | 0.05 | 0.05 | 0.05 | |

### Catchment Area

| | Calc 1 | Calc 2 | Calc 3 | |
|---|---|---|---|---|
| Roof Length (m) | | | | |
| Roof Width (m) | | | | |
| Roof Area (m²) | 996 | 200 | 225 | |
| Roof Slope | > in 80 | > in 80 | > in 80 | |

### Outlet

| Outlet | 6TW (h) Std two way horizontal | 6TW (h) Std two way horizontal | 6TW (h) Std two way horizontal | |
|---|---|---|---|---|
| Outlet Diameter (mm) | 150mm | 150mm | 150mm | |
| Number of outlets | 7 | 2 | 2 | |
| Sump Depth (mm) | 50 | 50 | 50 | |

### Results

| Outlet Achieved Flow (l/s) | 7.34l/s | 7.34l/s | 7.34l/s | |
|---|---|---|---|---|
| Outlet Required Flow (l/s) | 7.11l/s | 5.00l/s | 5.62l/s | |
| | PASS | PASS | PASS | |

**Roof Hatches**

Bilco

Thermally broken cover and frame design provide superior thermal performance.

Engineered with compression spring operators to provide smooth, easy, one-hand operation, regardless of size. All BILCO hatches meet the requirements of Manual Handling Regulations.

Automatic hold-open arm locks the cover in the open position to ensure safe egress. Grip handle allows for easy, one-hand release and closing.

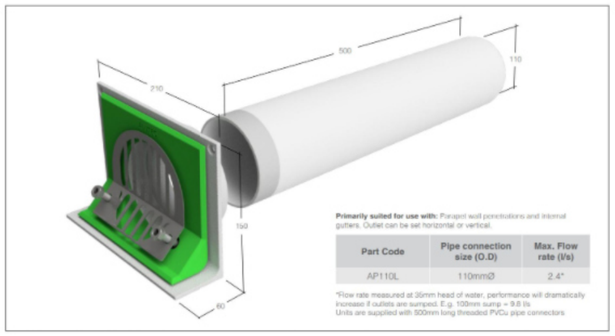
Ladder UP Safety Post to all Hatches.

Hatches 02 / 03 to have an automatic motor driven (externally operated) retractable ladder with trap door & handrail to both sides - Bilco BL-ZBOX-SS.

Overlapping cover design, fully welded corners on cover and curb, closed-cell EPDM rubber gasket, and fully insulated cover and curb ensure weathertightness and energy efficiency.

Constructed with corrosion-resistant materials to provide many years of trouble-free, dependable service.

Heavy gauge construction and positive latching mechanism maintain building security. Curb features the Bil-Clip® Flashing System, an innovative method to quickly and easily secure single-ply roofing material to BILCO roof products.






COMPANIONWAY ACCESS ROOF HATCH

CS-50TB 760x1560mm

*The CS 50TB Roof Access Hatch is ideal for installations where frequent access to the roof area is required. At 760mm x 1560mm, the CS 50TB allows easier movement of maintenance personnel, tools and equipment to and from the roof (Where needed).*

BILCO Roof Access Hatches feature a thermally broken frame and cover design that minimizes heat transfer between interior and exterior metal surfaces. The result is a product that resists harmful condensation and provides superior energy efficiency. Products are tested and approved to BS EN standards for weathertightness, sound rating, and security.





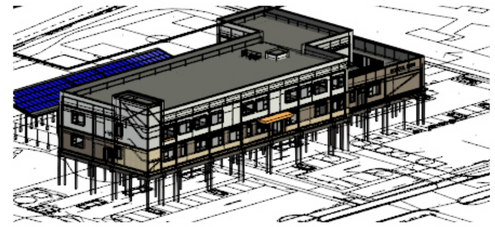
RAILING SYSTEMS SAFETY PRODUCTS

BilGuard® 2.0 Hatch Railing System

*The BilGuard 2.0 fixed roof Hatch Railing System provides a permanent means of fall protection around the top of roof hatch openings. BilGuard 2.0 has been developed to exceed OSHA Fall Protection Regulations (29 CFR 1910.23).*

BilGuard 2.0 is strong and easy to install with Aluminium rail construction and non-penetrating attachment. It can be installed quickly and easily to new or existing Bilco Roof Access Hatches and Smoke Vents with capflashing.

PERFORMANCE STANDARDS CS-50TB
U-VALUE0.278 W/m²K (homogeneous)
1.39 W/m²K (Developed Area)
BS EN 12207:2000Air Permeability 4.83 m³/hour/m² at 600Pa
BS EN 12208:2000Water Tightness Class 9A
BS EN 12210:2000Wind Resistance Class E2400
BS EN 1991-1Snow Load 1200Pa for 1 hour
BS 8200Impact Resistance Pass
BS EN ISO 140Acoustic 25dB
BS EN 1627-1630Security Pass
Wind SpeedWith Open Cover 30 m/s



3D Axo View

NORTH

1 0 1 2 3 4 5
SCALE 1: 100 m

elliswilliams

Project Number: 2718
Project Name: FS0911 Rochdale SEND

Drawing Status: Stage 3
Drawing Number: **FS0911- EWA- ZZ- RF- D- A- 0402**
Drawing Name: Roof Plan - GA

Date: 09.11.21 Rev: P4
Drawn By: HTP Scale: 1 : 100 @A1

Wellfield Chester Road Preston Brook WA7 3BA
T: 01928 752200 E: info@ewa.co.uk W: ewa.co.uk