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**From:** Paul Barnes

**Sent:** Sunday, June 28, 2020 7:14:28 PM

**To:** Martin, Elizabeth <[Elizabeth.Martin@camden.gov.uk](mailto:Elizabeth.Martin@camden.gov.uk)>

**Subject:** 20-06-28 pba to BM Camden - worhouse North facade staircase window level 2

Dear Beth,

Thank you for coming back swiftly on the workhouse grilles and will incorporate your recommendation.

We are currently revising the design to incorporate sprinklers, which will require a basement tank to the new build area. We will more than likely need to submit information to update the design. If need be, I will keep a list of the small changes we have discussed regarding the listed building and we can incorporate when we submit information regarding sprinklers.

I do have a further favour to ask regarding your views on the workhouse AOV.

Re: Workhouse AOV – North Façade 2nd Floor Staircase Window

We have looked at several design options for the Workhouse Automatic Opening Vent solution to provide life-saving fire escape from the workhouse. These are as follows:

#### Option 1 - Sash Window with Actuator

Retain the existing sash window and make good. Incorporate an actuator within the window frame to provide an AOV releasing the window when triggered with the fire alarm. You attended a site visit with myself in early 2019 and confirmed the sash windows to the staircase can be replaced like for like. This option does not meet fire requirements BS standards EN12101-2.

This option was not developed any further.

#### Option 2 – Mock Sash Window with Actuator

We revised the scheme for planning and incorporated a dummy sash window with an actuator. This has been approved. The objective was to create an AOV window, which would appear like a sash window from the outside matching the 2 lower staircase sash windows, when the fire

alarm sounded the top panel sash would lower and allow the smoke to ventilate and extract smoke from the staircase.

During the detailed design process and discussing with the window manufacturer, the manufacturer confirmed to the design team that they could not obtain an actuator that met the requirements nor complied with the BS standards EN12101-2 for life safety standards for fire escape. They also confirmed that no product currently exists on the market to meet the fire requirements. Previously in the past, Building Control had allowed normal ventilation activator to be used on Listed Buildings to meet the AOV requirements. Unfortunately, post Grenfell, changes in building regulation, Building Control requirements and our Fire Consultants will not allow this method of smoke ventilation, and secondly manufacturers cannot provide warranties/test certificates for insurance companies to insure the building.

This option was not developed any further.

### Option 3 – Mock Sash Window with Magnet Lock Actuator

The design team developed a further option with the window manufacturer. This was to provide a window that looked like a sash window externally, but was a casement window, hung from the bottom. This would not open normally for natural ventilation; therefore the appearance from the outside would appear like a sash window. Once the fire alarm was triggered, the magnets holding the window at the top would release, tilting the window forward on a chain at an angle of 14 degrees to provide the correct square metres of smoke ventilation. This meant we could use an approved fire smoke vent actuator with a bespoke casement window design.

See drawing Option 3A - Workhouse AOV.pdf

The drawing above by the manufacturer was rejected, due to the fact it looked like a casement window and did not resemble the sash windows on the staircase. I subsequently asked the manufacturer to provide a bespoke window that was truly a dummy sash window, except the window opened like a bottom hung basement window. This would then provide adequate smoke ventilation.

A new design was developed that met the visual requirements for the listed building.

See drawings Option 3B1 - Workhouse AOV.pdf & Option 3B2 - Workhouse AOV.pdf

We agreed with the manufacturer that this was a bespoke solution and asked for the manufacturer to provide the necessary certificates that this would meet BS standards EN12101-2. The manufacturer then informed the design team that due to the bespoke nature of the window, the AOV actuator, that this approach had not been tested together and would not meet the fire requirements.

We have looked into fire testing and been advised that we would have to undertake a bespoke fire test and to allow for a budget of £30,000 - £50,000 to undertake the fire, maintenance testing etc. Secondly, if we could afford to undertake the testing, the manufacturer and tester have confirmed that after 3 - 6 months of testing they cannot guarantee this setup approach will pass. After discussing with the manufacturer, asking them to undertake the test as they would benefit in possible future sales for similar properties, they have declined and were not willing to commit to the resources to testing.

We have exhausted all approaches to obtain an AOV that looks like a sash window. Secondly, no actuator exists on the market that fully complies with BS standards EN12101-2 for fire & life Safety protection with a bespoke window. We cannot specify and ask the contractor to install equipment that does not meet these criteria. Likewise Building Control and our Fire Engineer will not approve the building is safe from fire and is fire & smoke compliant. This means the building is technically not insurable and more importantly the future purchaser of the residential property cannot obtain mortgages for the apartments, thus making the entire scheme unviable.

The only approach we have left is to install a fully compliant AOV that complies with all relevant fire/smoke & life safety standards with the correct test certificate and documentation.

This option was not developed any further.

#### Option 4 – AOV Glazed Louvre Window

See attached drawing BPD-LDW-WH-ZZ-DR-A-253012 AOV WINDOW DETAIL.pdf

This shows a glass louvered AOV SHEVTEC system that is fully compliant and meets the requirements for EN12101-2. I have attached a link that shows a photograph of the system.

<https://www.secontrols.com/en-gb/products/louvres/shevtec-glazed-louvre-aov/>

I have also attached a revised elevation called E\_LB\_03-04 Listed Building Proposed Elevation 03 & 04 RevG.pdf. This shows the full North elevation. The glass louvers will also match the louvered glass panels to the new proposed lift tower east of the workhouse. The simplicity of the glass louvers I believe will be less invasive than installing a metal or UPVC window system to this location.

The metal / UPVC windows would be a bottom hung system with a release magnet and chain to open the window in the event of fire & smoke. As these are pre-tested unit we cannot amend or alter the design of the window. These will not be inkeeping with the sash windows. Therefore, we feel the glass louvered system will be more appropriate to the Listed Building.

If you feel Option 4 glass louvres is acceptable in principle, subject to us confirming the design, manufacturer drawing etc I can arrange for further information to be issued in due course.

If you would like to discuss any alternative approaches that would be acceptable, please feel free to contact me on this number [07968 490 143](tel:07968490143) , but I feel this is the only option left to use that would work as an acceptable solution.

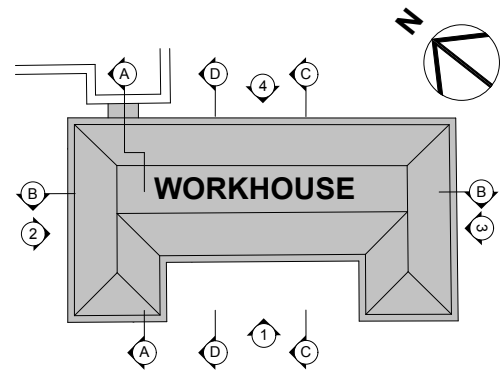
Kind regards

Paul Barnes

Llewelyn Davies



### Key plan



| Rev | Description           | Date | By | Chk                 |
|-----|-----------------------|------|----|---------------------|
|     | Structural Consultant |      |    | Services Consultant |

AECOM ARUP

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Cost Consultant

## EQUALS CONSULTING

Project Title \_\_\_\_\_

## BEDFORD PASSAGE DEVELOPMENT

### WORKHOUSE (OLIVER HOUSE)

MARKET HOUSING (C3)

Client \_\_\_\_\_

MIDDLESEX ANNEXE LLP

Drawing Title

### AOV WINDOW DETAIL

|                |          |
|----------------|----------|
| Project Number | Revision |
|----------------|----------|

LD15 078.00

Drawing Number \_\_\_\_\_

BPD-LDW-WH-ZZ-DR-A-253012

Scale @ A3 Date

1:20 21/08/2018

Architects

## CLAIMS

## LEVELLYN

DAVIES

## DAVIDS

Architects | Planners | Designers

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E-LB-03

1:100

E-LB-04

1:100

Notes

- All dimensions to be checked on site
- Do not scale off this drawing
- All dimensions are shown in mm unless otherwise stated
- Refer to drawing issue sheet for purpose of issue
- If in doubt ask
- © Llewelyn Davies

Key plan

0 0.5 1 1.5 2 2.5 Metres

E 02

E 03

E 01

E 04

|     |                     |          |    |     |
|-----|---------------------|----------|----|-----|
| G   | Planning Amendments | 28.06.20 | FM | PB  |
| F   | Planning Amendments | 31.05.19 | FM | PB  |
| E   | Planning Amendments | 15.02.19 | FM | PB  |
| D   | Revised Scheme      | 24.08.18 | LD | PB  |
| C   | Revised Scheme      | 12.03.18 | AM | PB  |
| B   | For Planning Rev B  | 02.06.17 | AM | PB  |
| A   | For Planning Rev A  | 04.04.17 | GC | PB  |
| 0   | For Planning        | 20.01.17 | GC | PB  |
| Rev | Description         | Date     | By | Chk |

Structural Consultant  
**AECOM** 020 7061 7000

Services Consultant  
**Arup** 020 7636 1531

Cost Consultant  
**Equals Consulting** 020 7580 3360

Planning Consultant  
**TEMPLE** 020 7394 3700

Project Title  
**Middlesex Hospital Annex**

Client  
**University College London Hospitals Charity (UCLHC)**

Drawing Title  
**Listed Building Proposed Elevation 03 & 04**

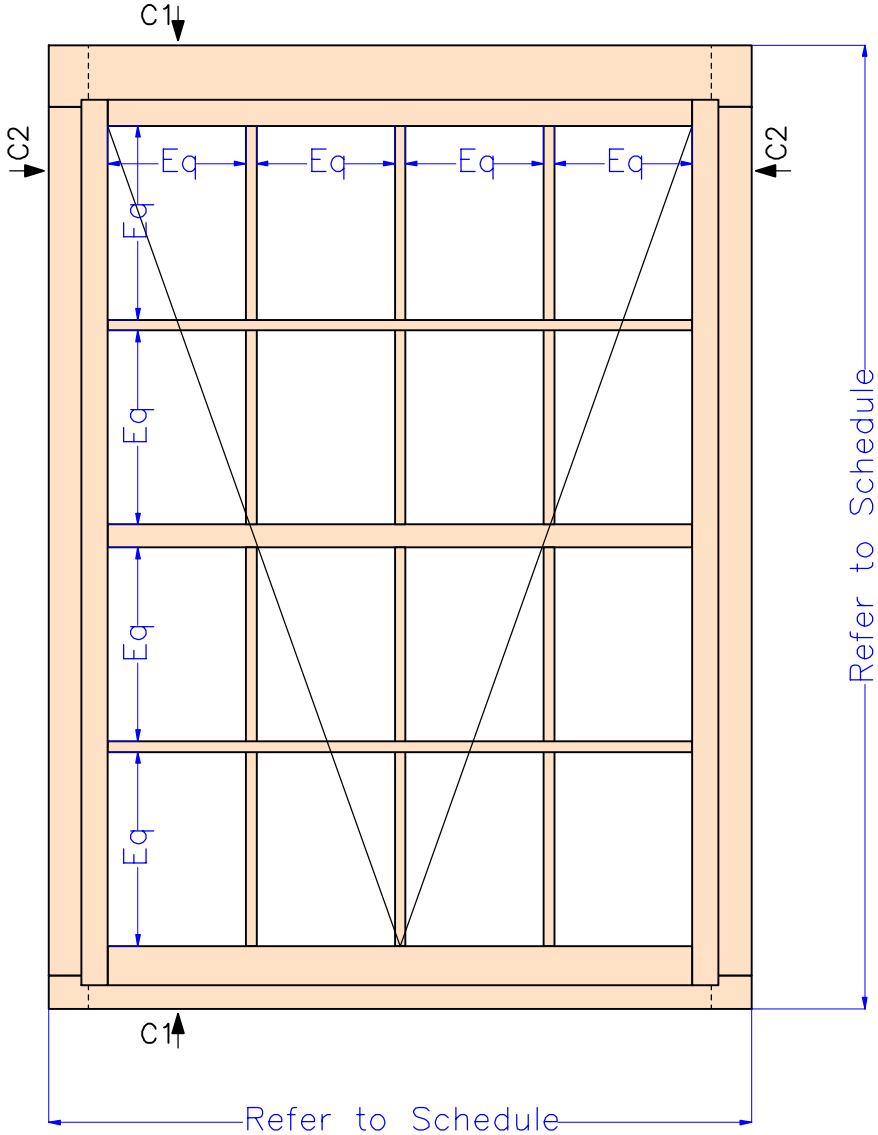
|                |                |          |
|----------------|----------------|----------|
| Project Number | Drawing Number | Revision |
| LD15 078.00    | E_LB_03-04     | G        |

Scale @ A3  
1:100  
Date  
04/04/2017  
Architects

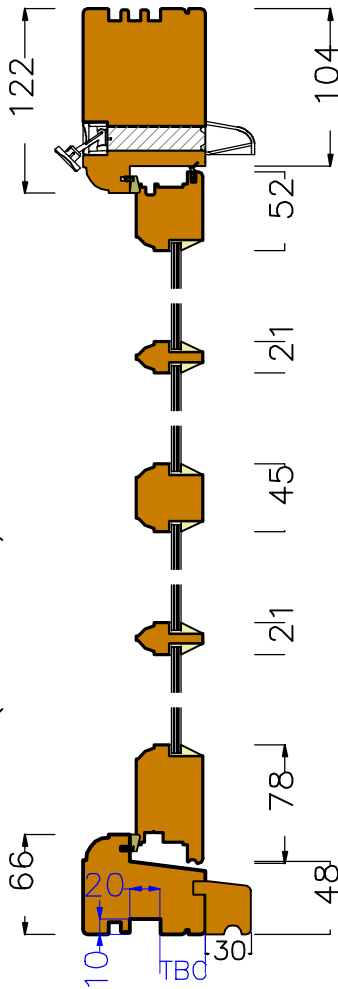
**LLEWELYN DAVIES**

3rd floor | 3-5 Rathbone Place | London | W1T 1HJ  
T +44(0)20 7907 7900 | E london@ldavies.com  
www.ldavies.com

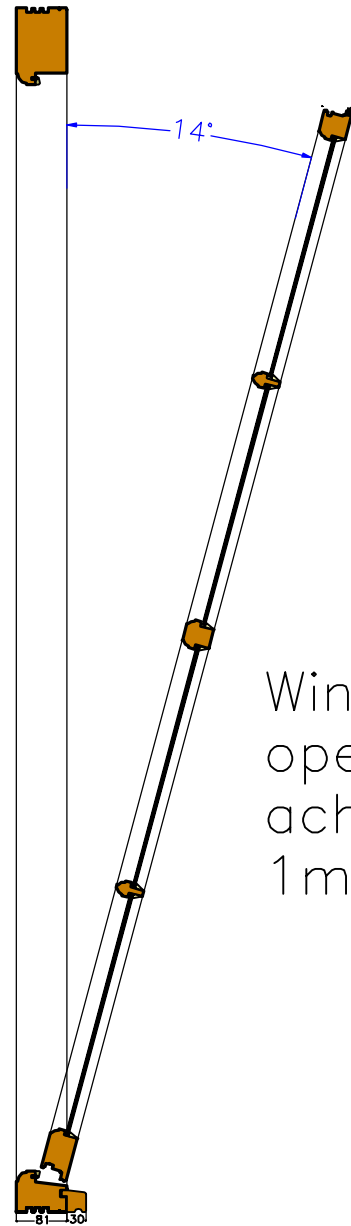
View from outside (scale 1:15)



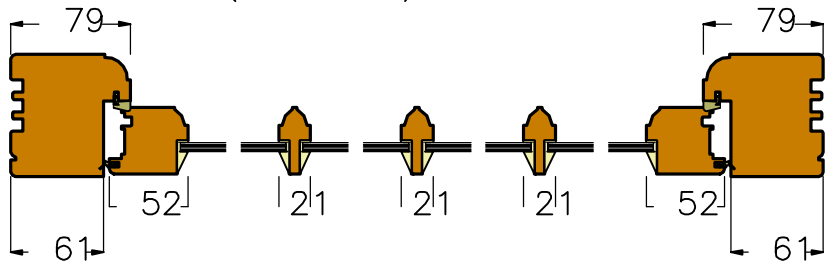
Section C1 (scale 1:5)



Section C1 (scale 1:12)



Section C2 (scale 1:5)



Comments

Customer: Ark Build PLC –  
Listed Building  
Ref: W-LB-3-09

– Refer to Order  
Confirmation for specification.

– Refer to schedule  
(OR107151 – Workhouse  
Dimension Schedule) for  
overall frame dimensions.

– 20mm x 10mm groove,  
for weatherbar as shown.

|          |  |
|----------|--|
| F/Sashes |  |
| F/Ironmo |  |
| Glaze    |  |
| P/O/B    |  |

Revisions

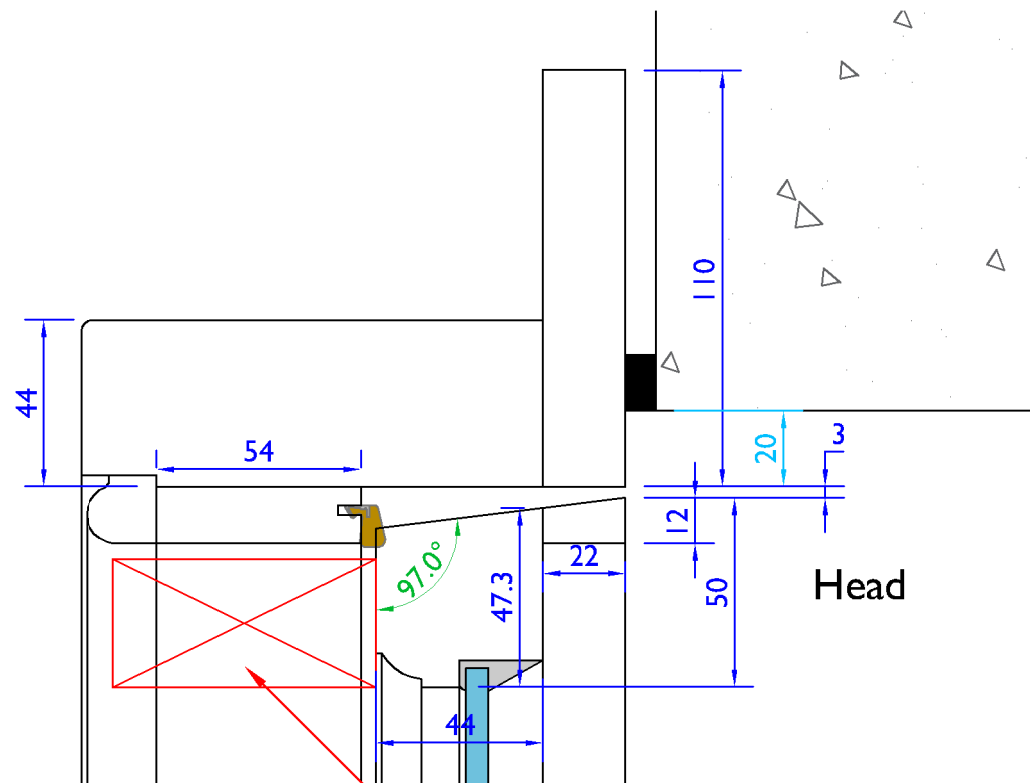
Project – OR107151

|            |                |
|------------|----------------|
| Drawing No | 5              |
| Scale      | As shown on A3 |
| Drawn by   | Jasmine Holmes |
| Date       | 01.11.2019     |

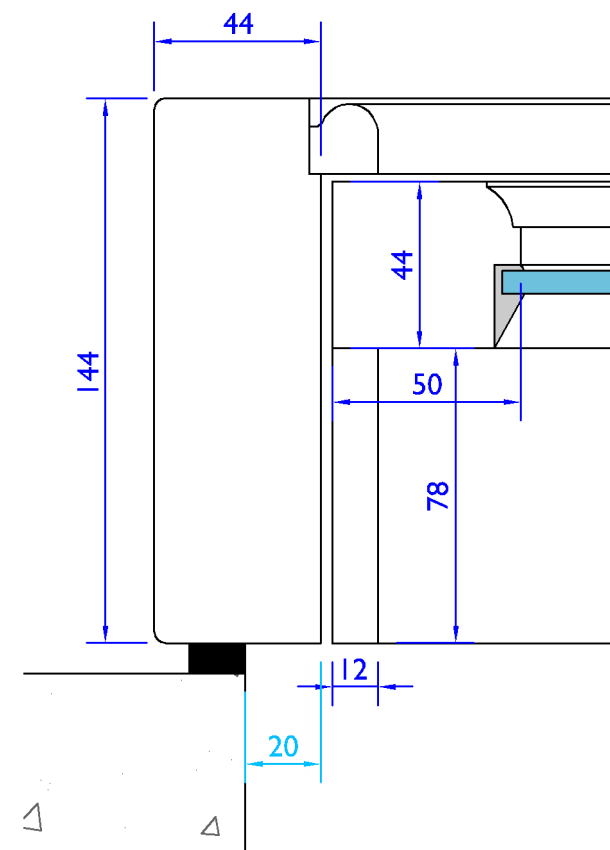
GEORGE  
BARNSDALE

Est. 1884

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

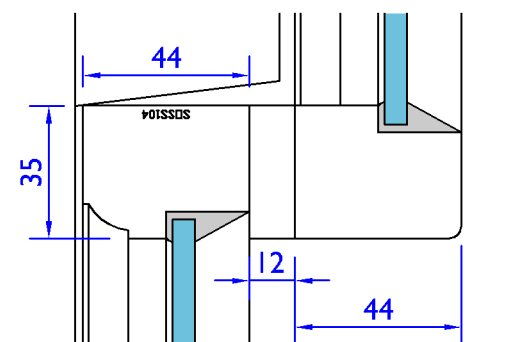
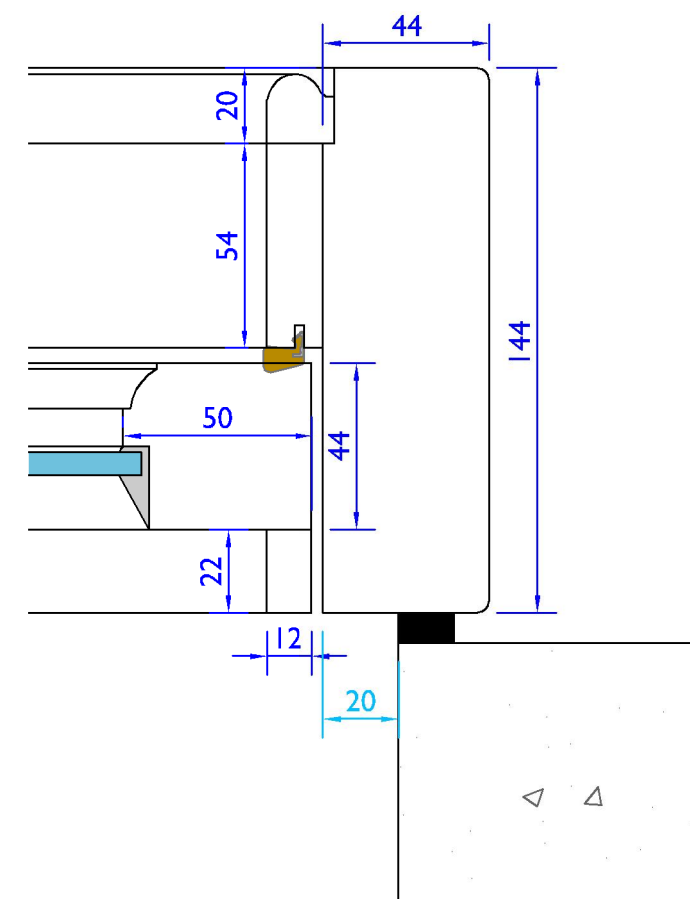


Actuator position, supplied and fitted by others



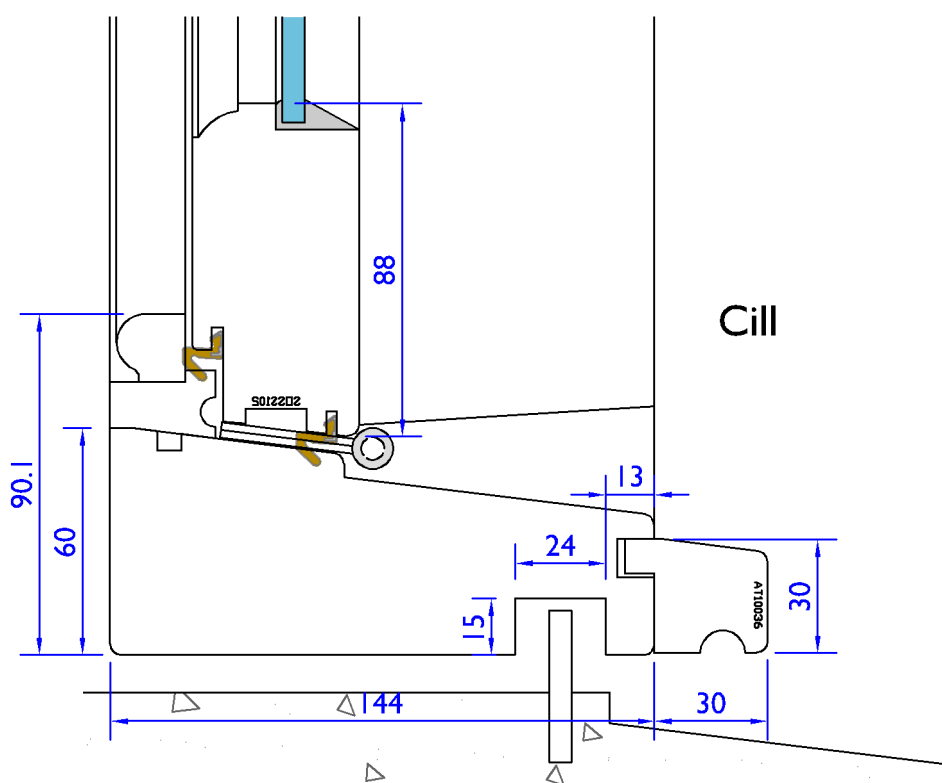
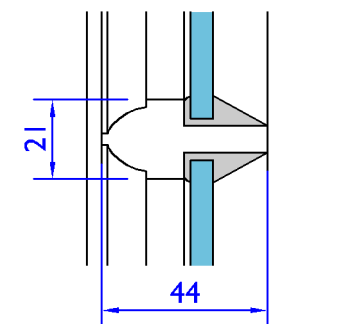
LH Jamb section through lower sash

RH Jamb section through upper sash



Meeting Rail  
(sashes glued and Screwed together during manufacture)

Sash Bars



Cill

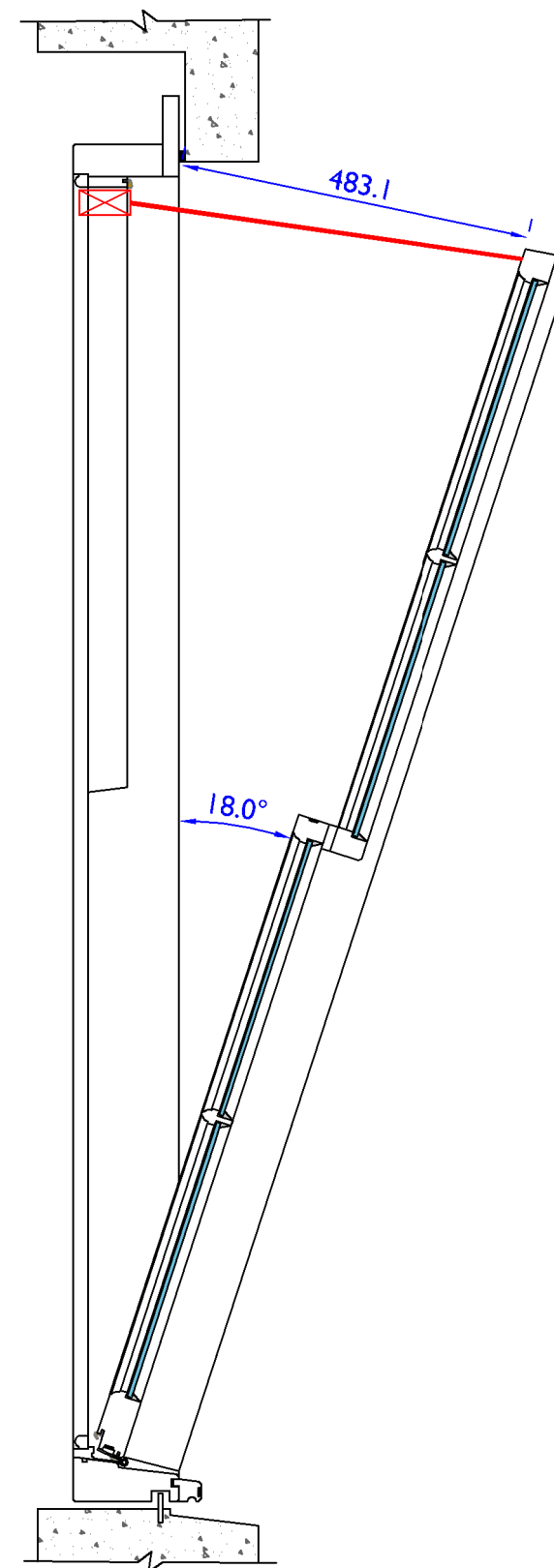
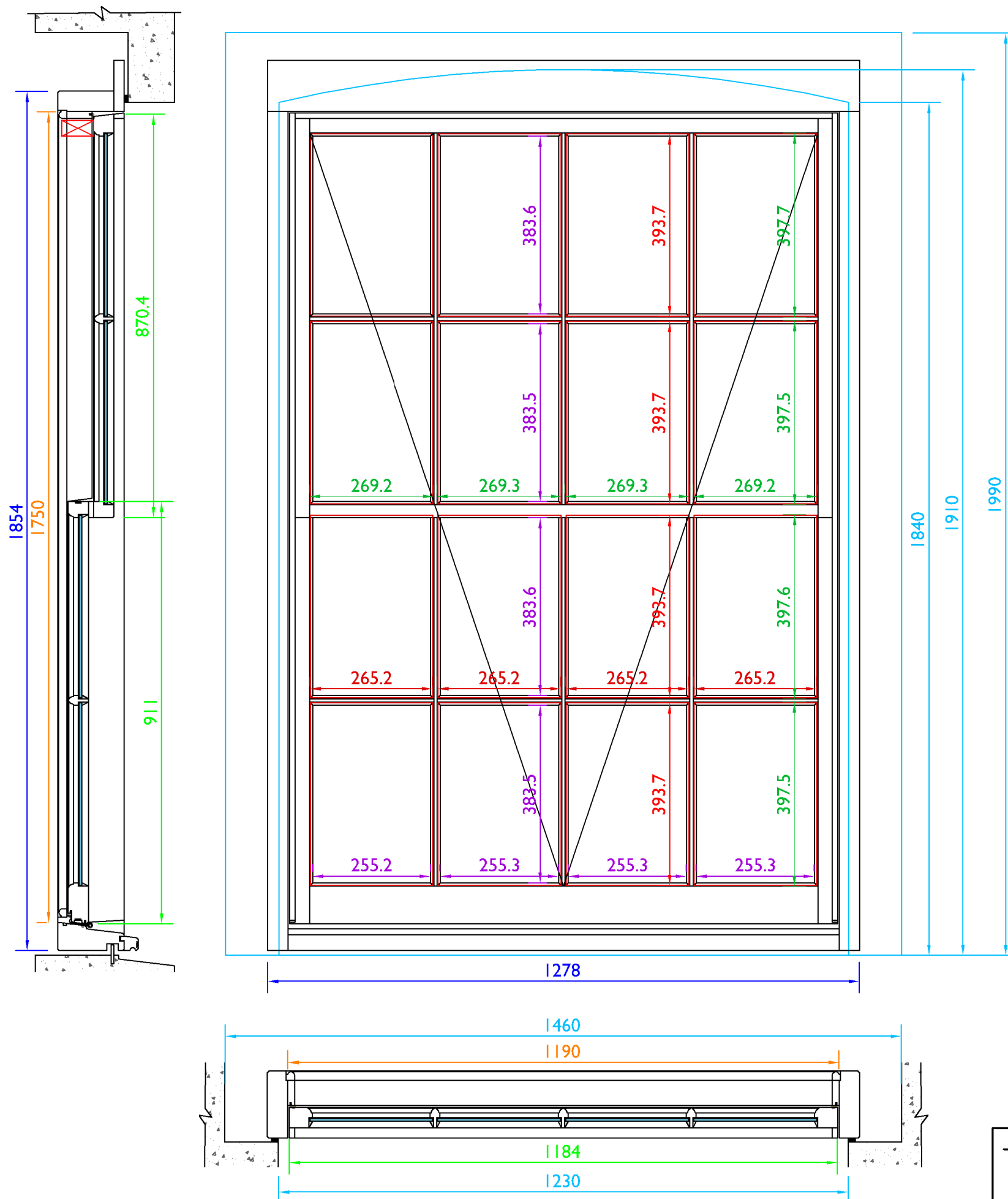
Tolerances: All tolerances are to George Barnsdale Standard Tolerance definitions (see supporting document for more detail) unless stated on the drawing.  
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| Revision: |  |
|-----------|--|
|           |  |

|                                    |                   |                 |
|------------------------------------|-------------------|-----------------|
| Title: MO100057                    |                   |                 |
| Title: Ark Build - Middlesex Annex |                   |                 |
| AOV Section detail drawing         |                   |                 |
| Scale: 1:10 on A3                  | Rev: 0            | Date: 24-Mar-20 |
| Drawn By: H A Darley               | No.: MO100057-101 |                 |

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### I No. Bespoke Bottom hung Mock sash window

|                 |                                     |
|-----------------|-------------------------------------|
| Timber Frame:   | Engineered Softwood (FSC Certified) |
| Timber Cill:    | Grandis Hardwood (FSC Certified)    |
| Timber Sash:    | Engineered Softwood (FSC Certified) |
| Timber Linings: | Accoya (FSC Certified)              |
| Frame Profile:  | Historic/Flush Linings              |
| Sash Profile:   | Historic Gothic                     |
| CE/WBG:         | 30mm / No                           |
| Sash Bar:       | 44mm Sash Bar                       |
| Finish:         | White - RAL 9016                    |
| Gasket:         | White                               |
| Glass:          | 6Tough                              |
| Glazing Method: | Putty, White                        |
| Hardware:       | AOV actuator (By others)            |
|                 | 18 degree opening angle required    |

| # | Horns | Additional Information                    |
|---|-------|---|
|   | None  | Bottom hung white butt hinges: Sash loose |

Uw Value: 3.8W/m2K  
Approx Weight: 68 kg

Refer to drawing MOI0057-101

Tolerances: All tolerances are to George Barnsdale Standard Tolerance definitions (see supporting document for more detail) unless stated on the drawing.  
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| Revision: |  |            | Title: MOI00057                    |              |                 |
|-----------|--|------------|------------------------------------|--------------|-----------------|
|           |  |            | Title: Ark Build - Middlesex Annex |              |                 |
|           |  |            | AOV Elevation and spec drawing     |              |                 |
| Scale:    |  | 1:10 on A3 | Rev:                               | 0            | Date: 24-Mar-20 |
| Drawn By: |  | H A Darley | No.:                               | MOI00057-102 |                 |

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**From:** Martin, Elizabeth <[Elizabeth.Martin@camden.gov.uk](mailto:Elizabeth.Martin@camden.gov.uk)>  
**Sent:** Monday, June 29, 2020 6:50:37 PM  
**To:** Paul Barnes <[p.barnes@ldavies.com](mailto:p.barnes@ldavies.com)>  
**Cc:** Sexton, Gavin <[gavin.sexton@camden.gov.uk](mailto:gavin.sexton@camden.gov.uk)>; Quigley, Elaine <[Elaine.Quigley@camden.gov.uk](mailto:Elaine.Quigley@camden.gov.uk)>  
**Subject:** RE: 20-06-28 pba to BM Camden - worhouse North facade staircase window level 2

Hi Paul,

Thanks for sending all this information. It is a shame regarding the louvres, but I think in this instance we need to consider the necessity of the works (which are clearly essential) and then the least harmful way of achieving the required outcome. I agree with you that based on the different options available, the louvres look to be the least harmful way of achieving this. So I support this in principle, but please do send further details once you have them; I'm wondering if the frames could be painted black and whether this would help make them appear less conspicuous.

Kind Regards,

Beth

Elizabeth Martin  
Senior Planner (Conservation)

Telephone: [0207 974 1204](tel:02079741204)

The majority of Council staff are now working at home through remote, secure access to our systems.

Where possible please now communicate with us by telephone or email. We have limited staff in our offices to deal with post, but as most staff are homeworking due to the current situation with COVID-19, electronic communications will mean we can respond quickly.

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**From:** Paul Barnes <[p.barnes@ldavies.com](mailto:p.barnes@ldavies.com)>  
**Sent:** 28 June 2020 19:14  
**To:** Martin, Elizabeth <[Elizabeth.Martin@camden.gov.uk](mailto:Elizabeth.Martin@camden.gov.uk)>  
**Subject:** 20-06-28 pba to BM Camden - worhouse North facade staircase window level 2

**[EXTERNAL EMAIL]** Beware – This email originated outside Camden Council and may be malicious Please take extra care with any links, attachments, requests to take action or for you to verify your password etc. Please note there have been reports of emails purporting to be about Covid 19 being used as cover for scams so extra vigilance is required.