246868-SKB-127

1 TRITON SQUARE

WIND FIN & AUTOMATIC OPENABLE GLAZING

REV 01
DECEMBER 2020

Introduction

The following document sets out the proposal for:

1. A wind fin to be installed on the south east corner of 1 Triton Square next to the main entrance in order to provide wind protection to the users of the building when entering/exiting the building.

2. Automatic opening glazing to be incorporated into the FT 11 facade (Main Entrance Facade) at the ground floor level on the east facade, in order to provide makeup air to the smoke extract system which forms part of the fire strategy for 1 Triton Square.

1.0 Wind Fin

Funnel Effect

The proposal to consider a vertical fin was arrived at after considering other potential measures to mitigate the wind speed. The Arup report prepared in March 2018 highlighted the existing condition caused by downdrafts as south westerly winds hit Euston Tower and then funnel at low level back across the square funnelling between 1 and 2,3 Triton Square.

The mitigation measures to deal with the low level wind need to be at ground level.

Higher canopies mounted on 1 Triton Square would not assist with this.

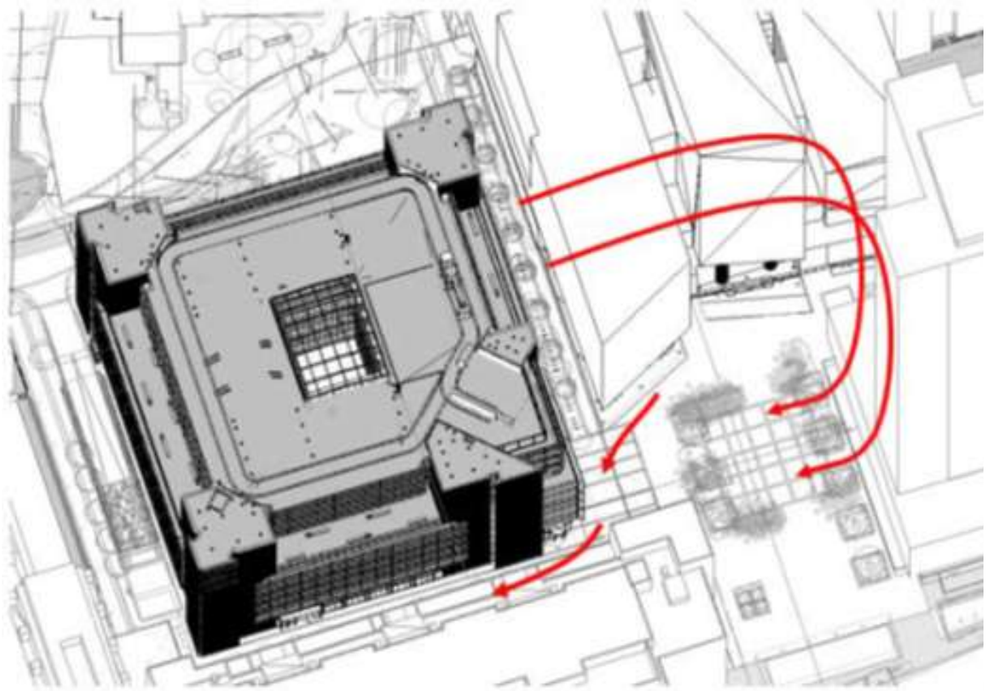
Alternative approaches of installing additional trees within the Square would also be less effective at addressing the local condition at the corner of the building. Tree canopies start several metres above ground, in winter when the winds are at their strongest there would be no foliage, and to address the local condition near the entrance they would form a greater obstruction to pedestrians than the localised fin.

We have located the fin as close to the building as possible to achieve the mitigation, and limited its footprint as much as possible. A single projection is sufficient to provide the mitigation. Creating additional projections to harmonise the fin with other elements would create more 'visual clutter' in the low level area.

Planning Consideration

We consider in this location its impact on general pedestrian movement is very limited as;

- The fin is located close to the line of the façade
- The projection is similar to the projection of the revolving doors
- The fin sits within the projected line of the adjacent solid facades
- There are wide generous spaces all around so pedestrians are not forced to walk close to the building line.



2.0 Automatic Openable Glazing

Makeup Air

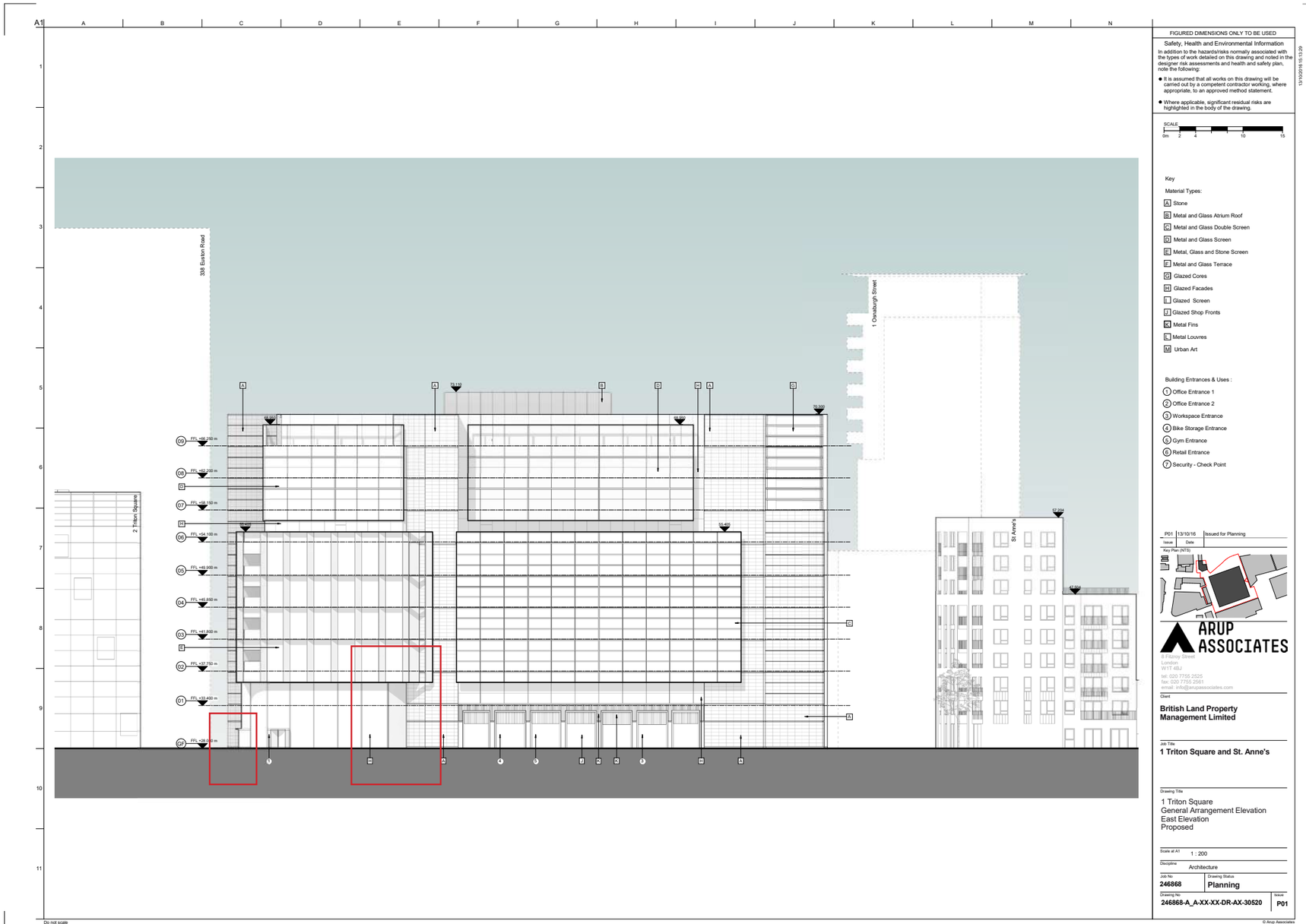
- Makeup air is required as part of the fire strategy and works in conjunction with the smoke extract which is located at L9 in the atrium. The makup air is provided through automatic openable glazing at high level on the east façade of the main entrance and also through the automated pass door to the main entrance. Both the door and automatic openable glazing will open automatically in the event of a fire alarm. The automatic openable glazing has been sized to provide a free area of 10.02m2 in line with the fire strategy.

Planning Consideration

- Initial planning consent did not include any automatic openable glazing to the main entrance.
- At planning approval stage, the makeup air was to be brought in through the soffit at high level above the FT11 façade (Main Entrance Facade).
- Once the strategy was further developed/calculated at stage 3 the required free area increased which meant that the soffit vents were no longer a viable option.
- To try and minimise the visual impact we opted for automatic openable glazing at high level tucked in the return on the east elevation.
- The automatic openable glazing is 2.5m wide and 6m high.
- All visible framing is stainless steel to match the rest of the façade. The glazing is flush bonded to give a similar aesthetic to the adjacent glazed vision panels.

Approved East Elevation

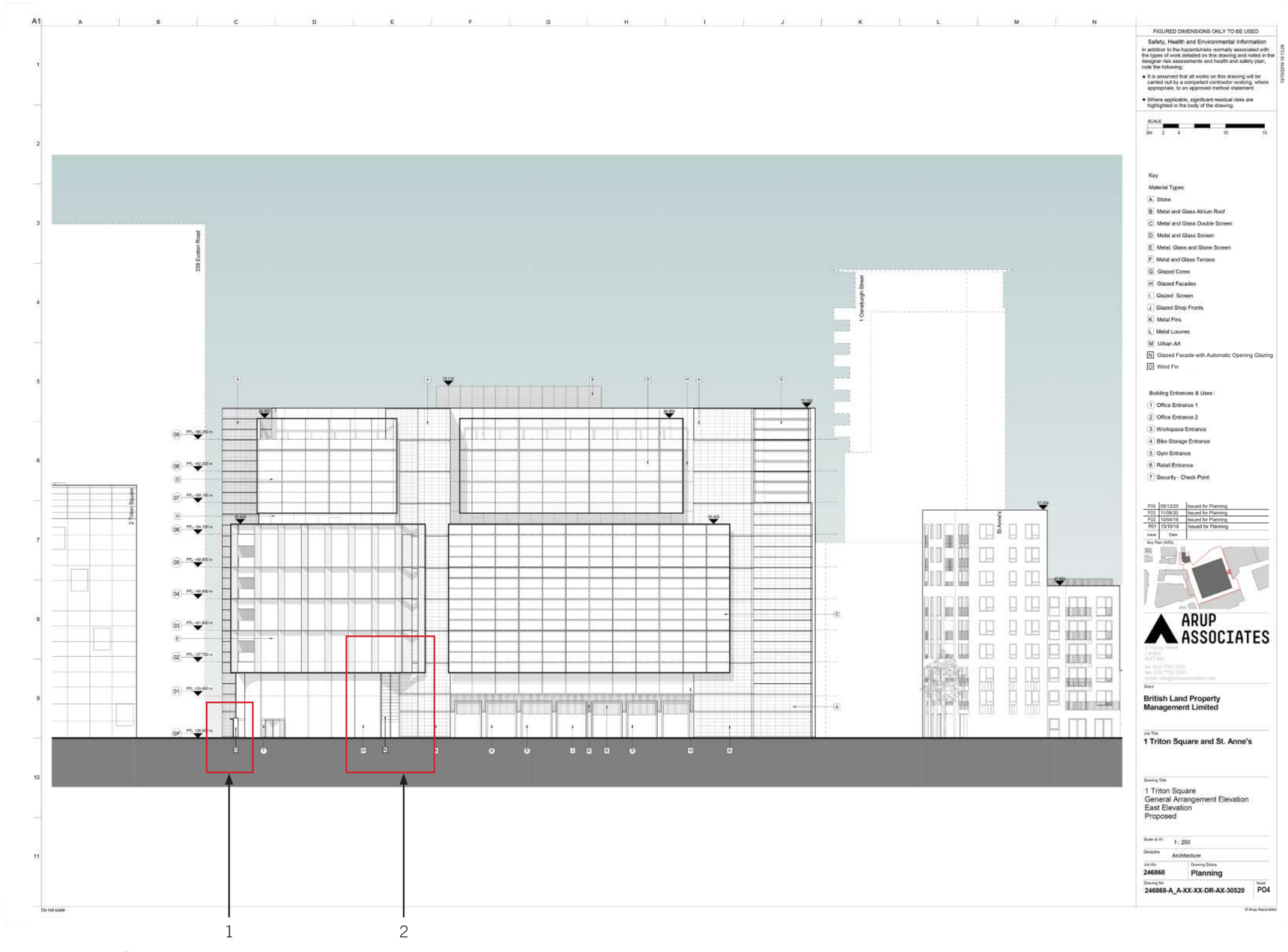
Drawing showing the approved east elevation for Triton Square with no automatic openable glazing or wind fin.



East Elevation

Proposed East Elevation

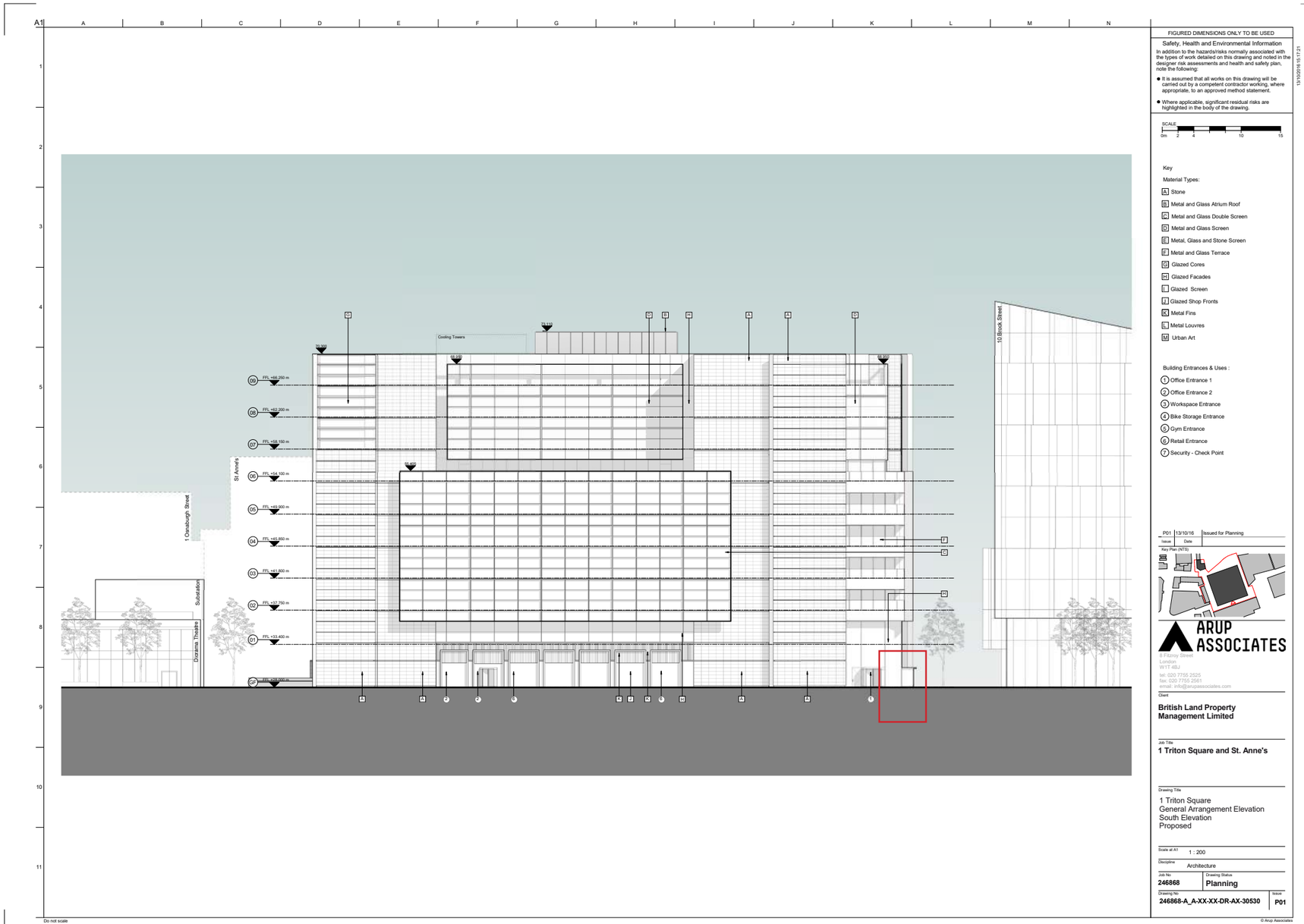
Drawing showing the proposed east elevation for Triton Square with the wind fin (1) and automatic openable glazing (2)



East Elevation

Approved South Elevation

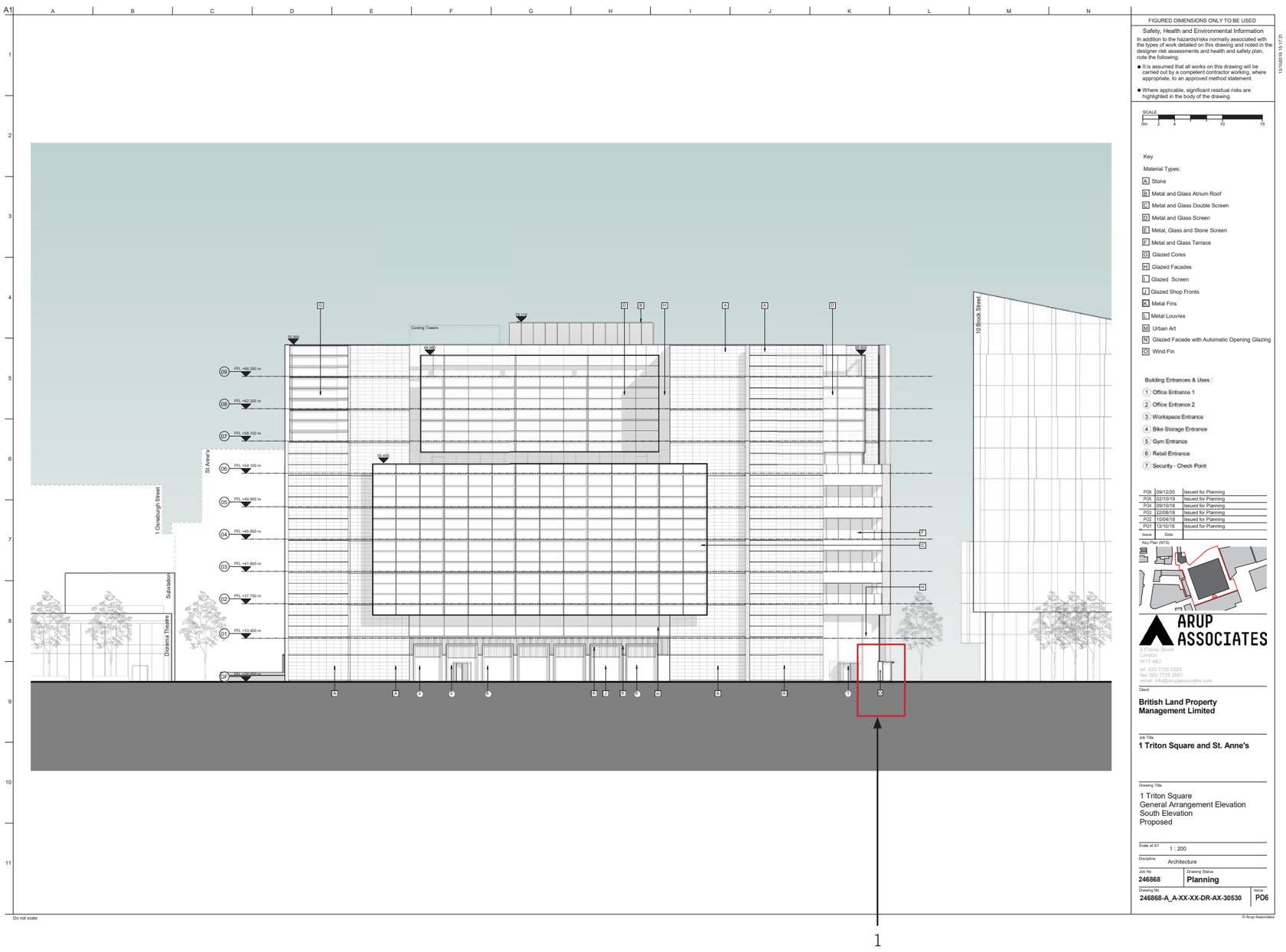
Drawing showing the approved south elevation for Triton Square with no wind fin.



South Elevation

Proposed South Elevation

Drawing showing the proposed south elevation for Triton Square with the wind fin (1)

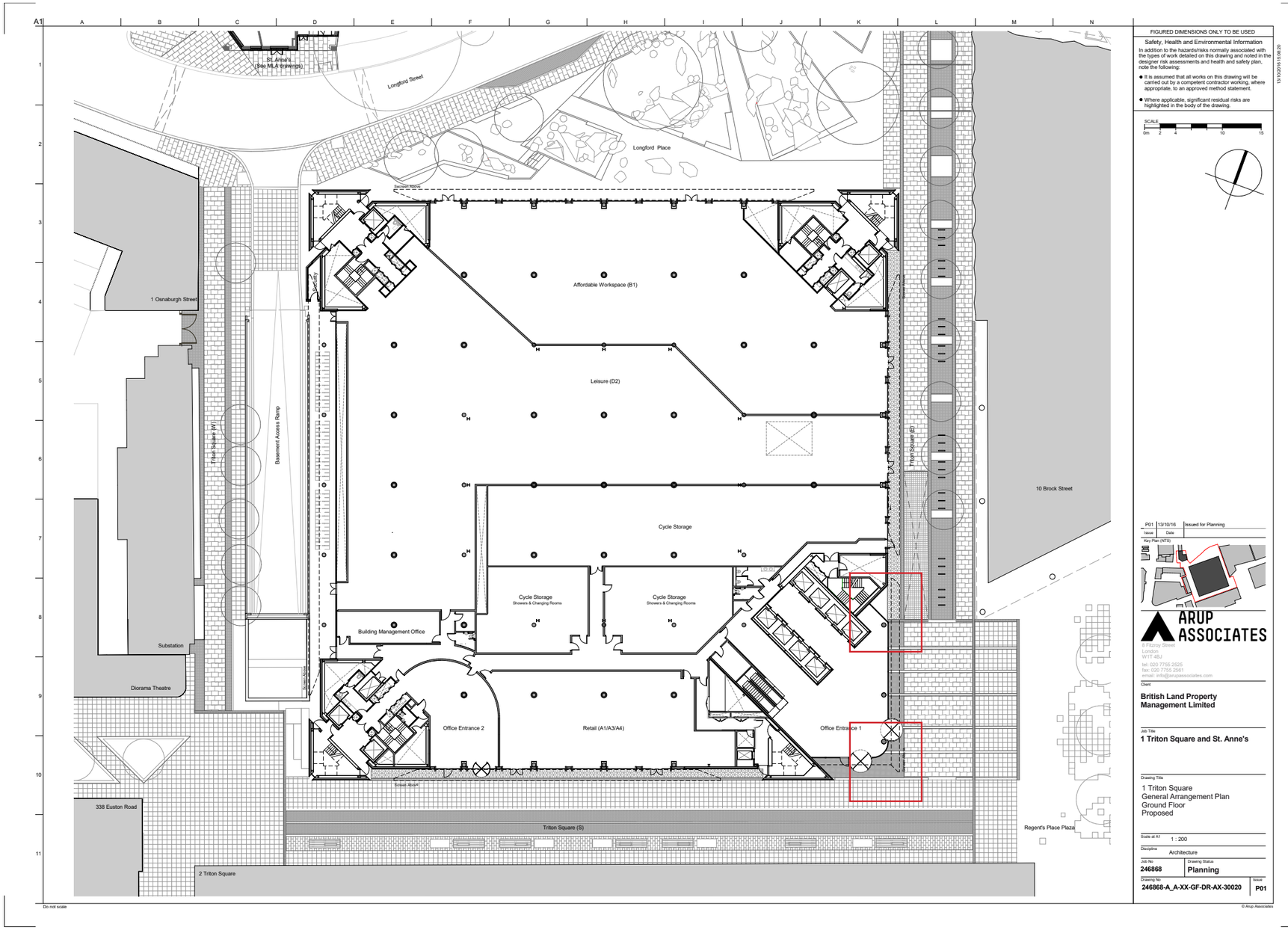


1

South Elevation

Approved Ground Floor Plan

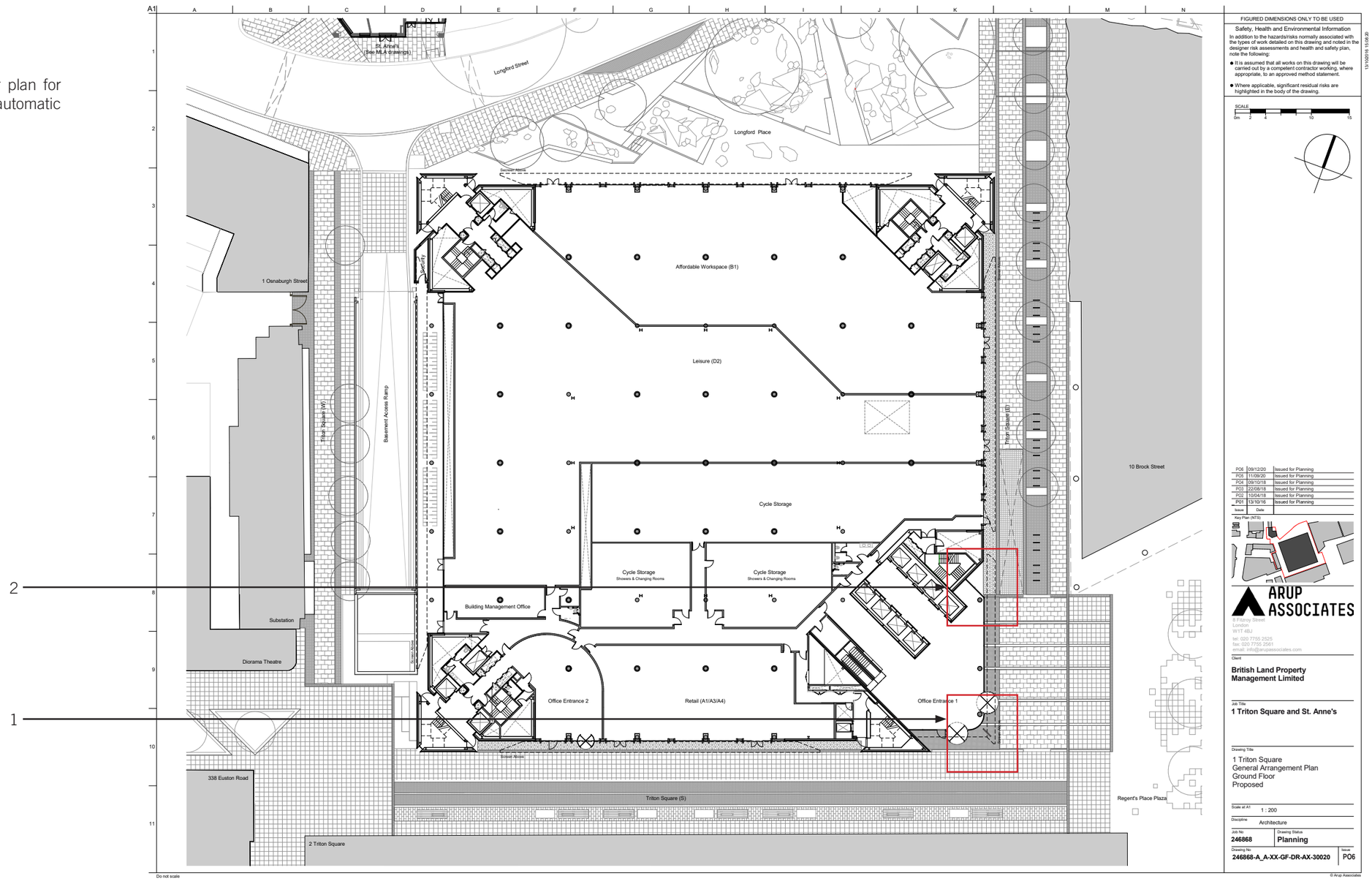
Drawing showing the approved ground floor plan for Triton Square with no automatic openable glazing or wind fin.



Ground Floor Plan

Proposed Ground Floor Plan

Drawing showing the proposed ground floor plan for Triton Square with the wind fin (1) and automatic openable glazing (2)



Ground Floor Plan

1.1 Wind Fin, Proposed Visual

Fig 1. - View looking south

Fig 2. - View looking east

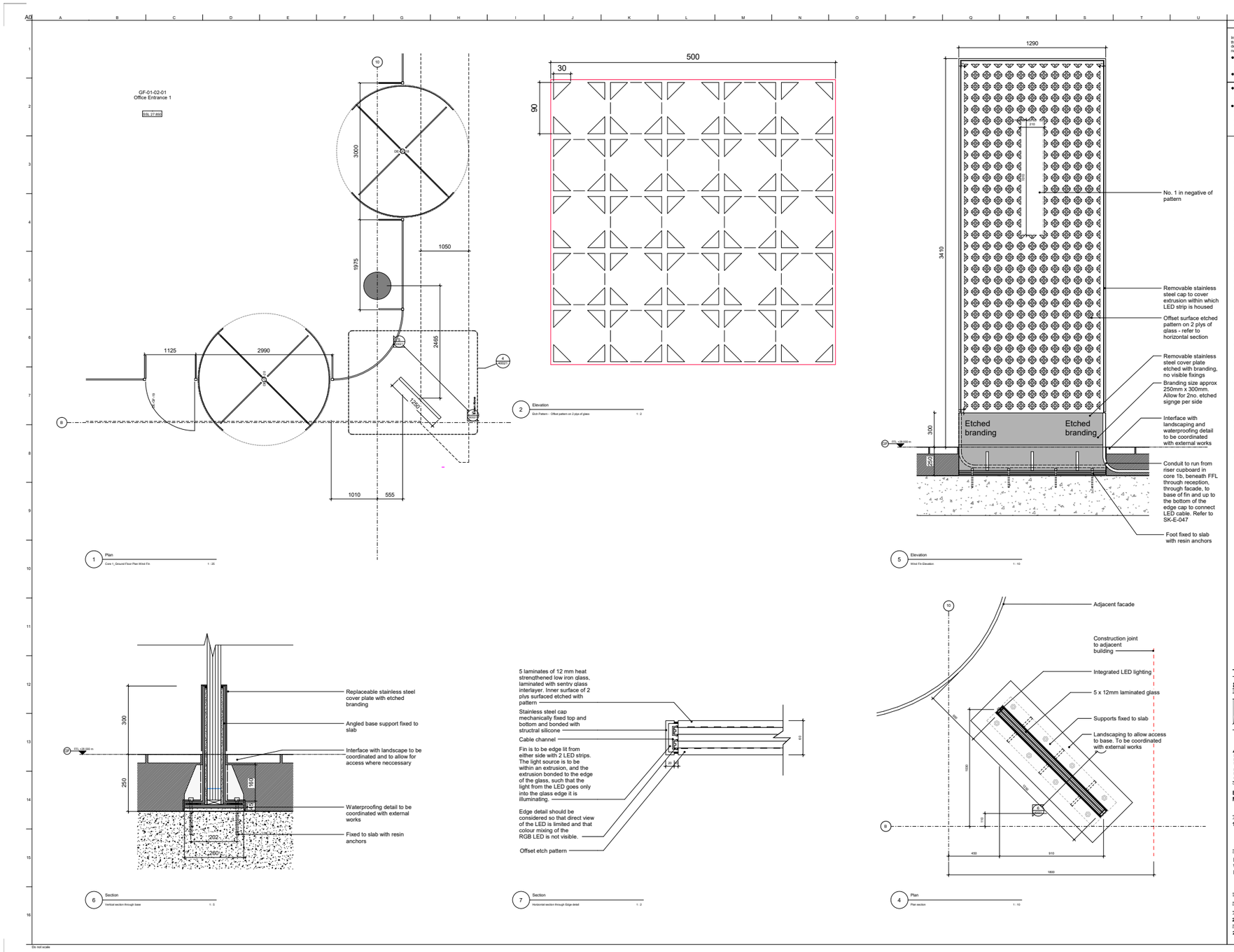
Fig 3. - Precedent Image

Fig 1.

Fig 2.

Fig 3.

1.2 Wind Fin, Proposed Details

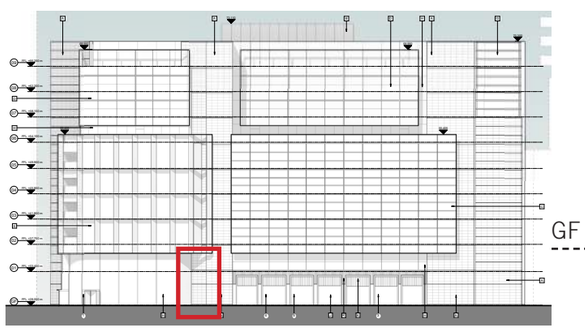


2.1 Automatic Openable Glazing, Approved & Proposed

Fig 1. - Elevation showing the approved facade with a single 8.4m x 2.5m glazed elemant.

Fig 2. - Elevation showing the proposed automatic openable glazing.

Fig 3. - Visual showing the proposed automatic openable glazing in context with finishes.



Elevation

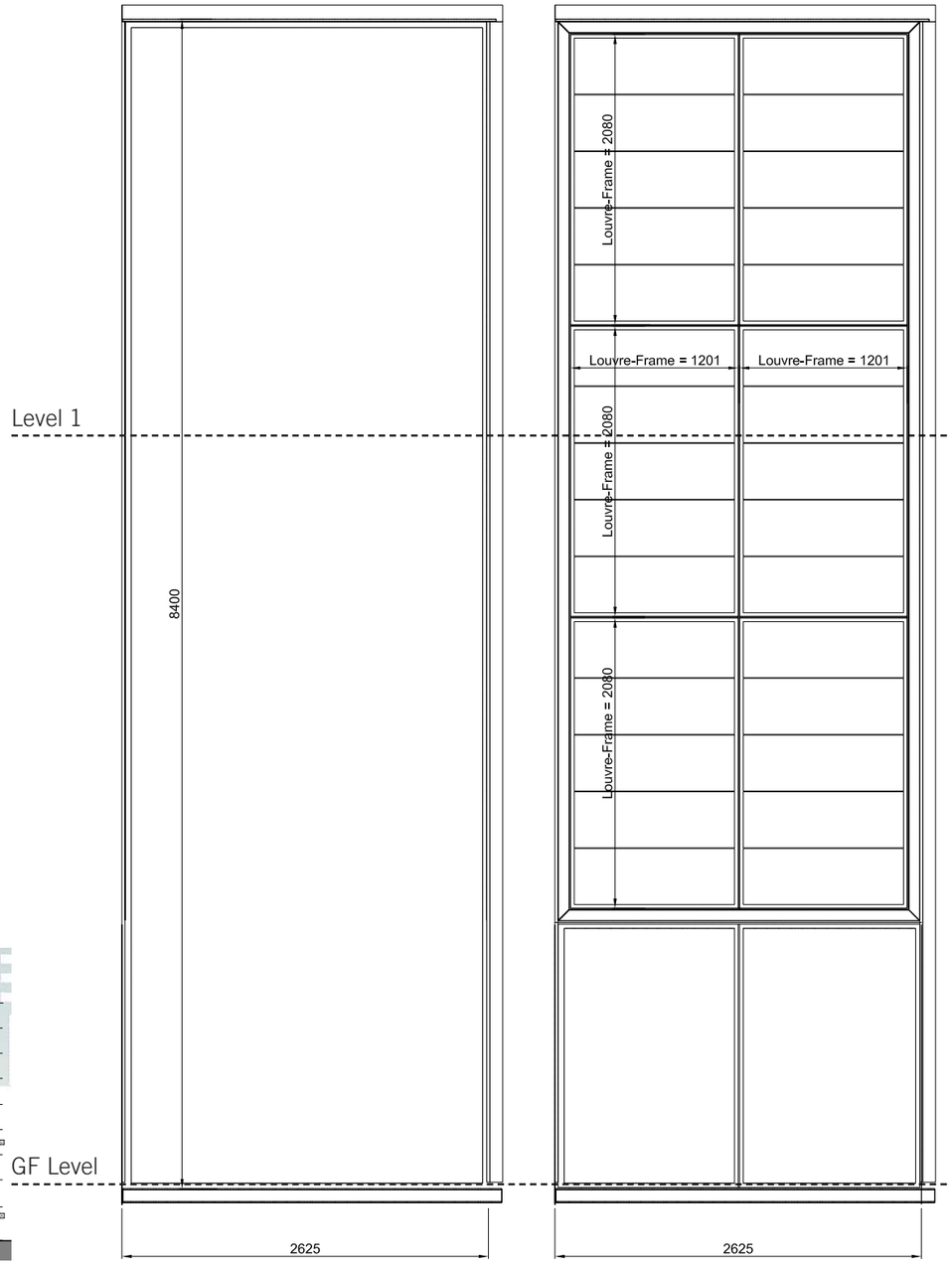


Fig 1 - Approved Planning

Fig 2 - Automatic Opening Glazing

Fig 3 - Proposed Visual