



# BRITANNIA

ARCHITECTURAL METALWORK  
& RESTORATION

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**Date:** 20<sup>th</sup> January 2015  
**Job Ref:** 7505 Downshire Hill 9  
**Client:** John Taylor Construction Ltd

## **Detail Development Report**

[Please read with Britannia Drawings appended]	'Belvedere Comparison'	7505/15.01.19
	'Belvedere Detail'	7505/15.01.19

- 1 Britannia Architectural Metalwork have developed and prepared fabrication drawings for the 2no Belvedere structures to be fitted to the front elevation of 9 Downshire Hill , based upon John Taylor Construction Ltd's 1:20 scale 'single line' design drawing 'Balcony Details' 3626-A-501 Rev C
- 2 We understand JTC Ltd's design drawing has been approved by London Borough of Camden.
- 3 The detailing of the Belvedere has been developed with due regard to current regulatory and structural requirements whilst adhering as closely as possible to the aesthetic principles embodied in JTC Ltd's *Approved* drawing

### **a. Design of Balustrading:**

- i. The *Approved* balustrading has been designed to closely resemble the existing historical balustrading on buildings adjacent and opposite to 9 Downshire Hill.
- ii. However, this existing balustrading will not conform to current regulations due to -
  1. its height being less than the 1100mm required by Building regulations *Approved* Document K
  2. its infill not being able to resist the passage of a 100mm sphere
  3. its infill matrix being too slender in cross section to withstand the required uniformly distributed line load at 1100mm above guarded floor level of 0.76kN/lin.m, the required uniformly distributed area load to the infill of 1.0kN/m<sup>2</sup> and the required point load on the infill of 0.5kN.

- iii. Thus, the *Approved* balustrade has been designed to meet these requirements. In order to meet these present-day strength requirements, structural engineering analysis has shown that the individual elements making up the balustrade panel matrix must be no less than 12mm wide and no less than 30mm deep and that a 'leg' is required every 300mm, or 3<sup>rd</sup> bay: our drawing reflects this requirement.
- iv. Like the balustrading on the adjacent and opposite existing buildings the balustrade is to be formed in iron by a sand-casting process, so will match in this respect.

**b. Design of Belvedere Structure:**

- i. The belvedere is to be fabricated using 12mm x 30mm steel bar to form the structural matrix of the pilasters and beams with sand-cast iron decorative infills, resulting in an appearance that closely resembles the previously existing but perished belvedere structure, whilst conforming to current structural design requirements

**c. Alignment of Balustrading with Belvedere Structure:**

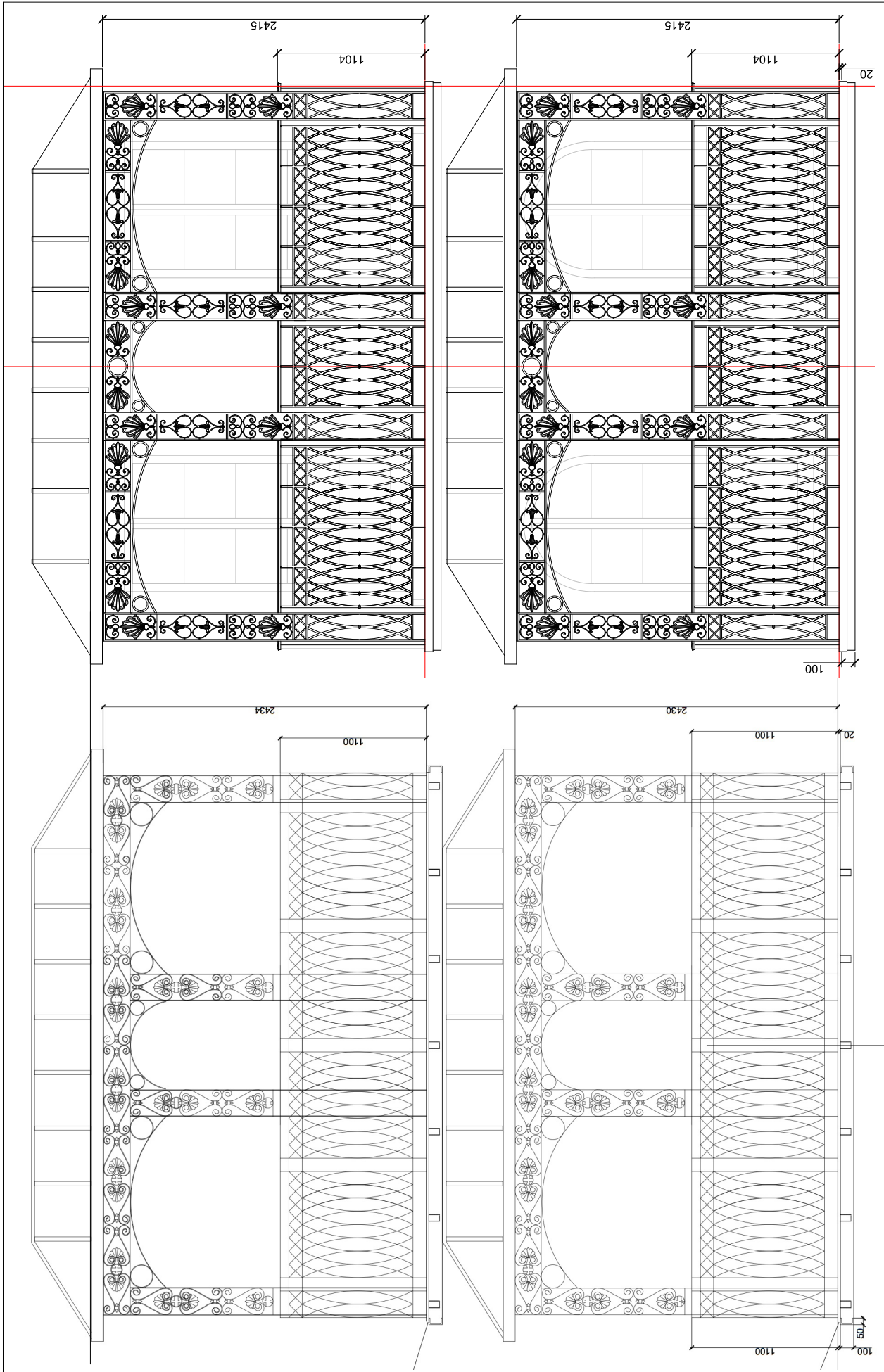
- i. Due to the necessary structural depth of the Belvedere pilasters and the balustrade panels, our proposal is to set the two elements side by side and in the same plane as each other, rather than one behind the other as implied by the *Approved* drawing. This 'single plane' arrangement is by far the most common arrangement for these types of structures and avoids the unfortunate overlapping of elements shown on the *Approved* drawing, resulting in a visually lighter and more resolved and considered appearance.
- ii. In order that the Belvedere pilasters are able to have continuous vertical members - which is a structural requirement - we have altered the rhythm of the balustrade panels. In our view, this arrangement not only works structurally, but better expresses the architectural arrangement of the fenestration behind, with the balustrade panels directly reflecting the French windows that let on to the Belvedere

**d. Arrangement of Belvedere structure decorative infill**

- i. The sand-cast decorative elements forming part of the belvedere pilasters and eaves beams are proposed to be arranged in a more ordered pattern than proposed in the *Approved* design drawing, more closely reflecting the modular appearance characteristic of these types of structure

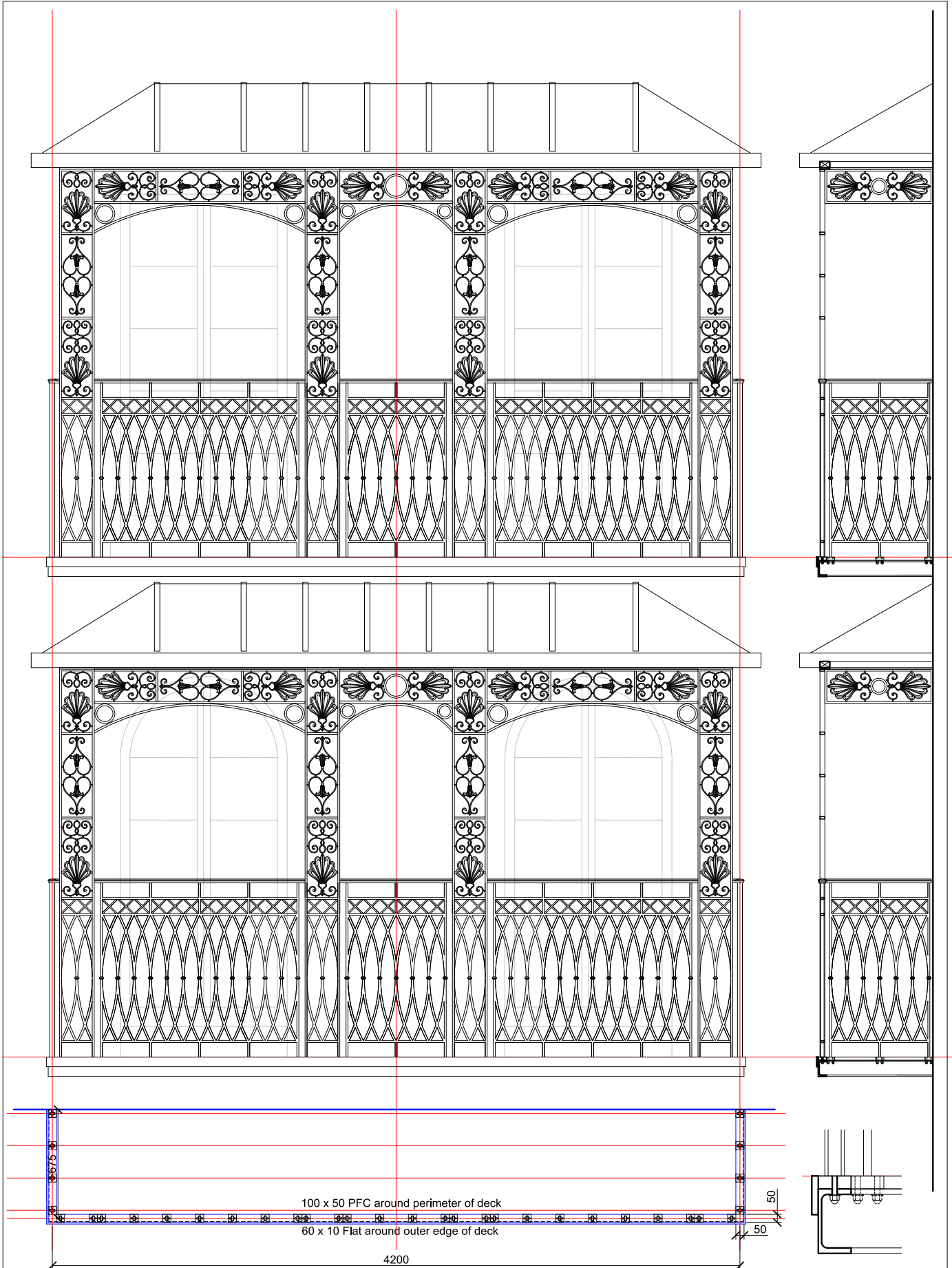
- 4** We respectfully submit that the above design and fabrication developments do not constitute a change of any significance to the design and that in all other respects the proposal remains faithful to the *Approved* design drawing.

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