UCL Bicentennial Projects : Main Quad and Wilkins Cloisters

Addendum to Lighting Assessment for Planning and Listed Building Consent Submission

Revision: 00
Date: February 2025

BDP.

Introduction

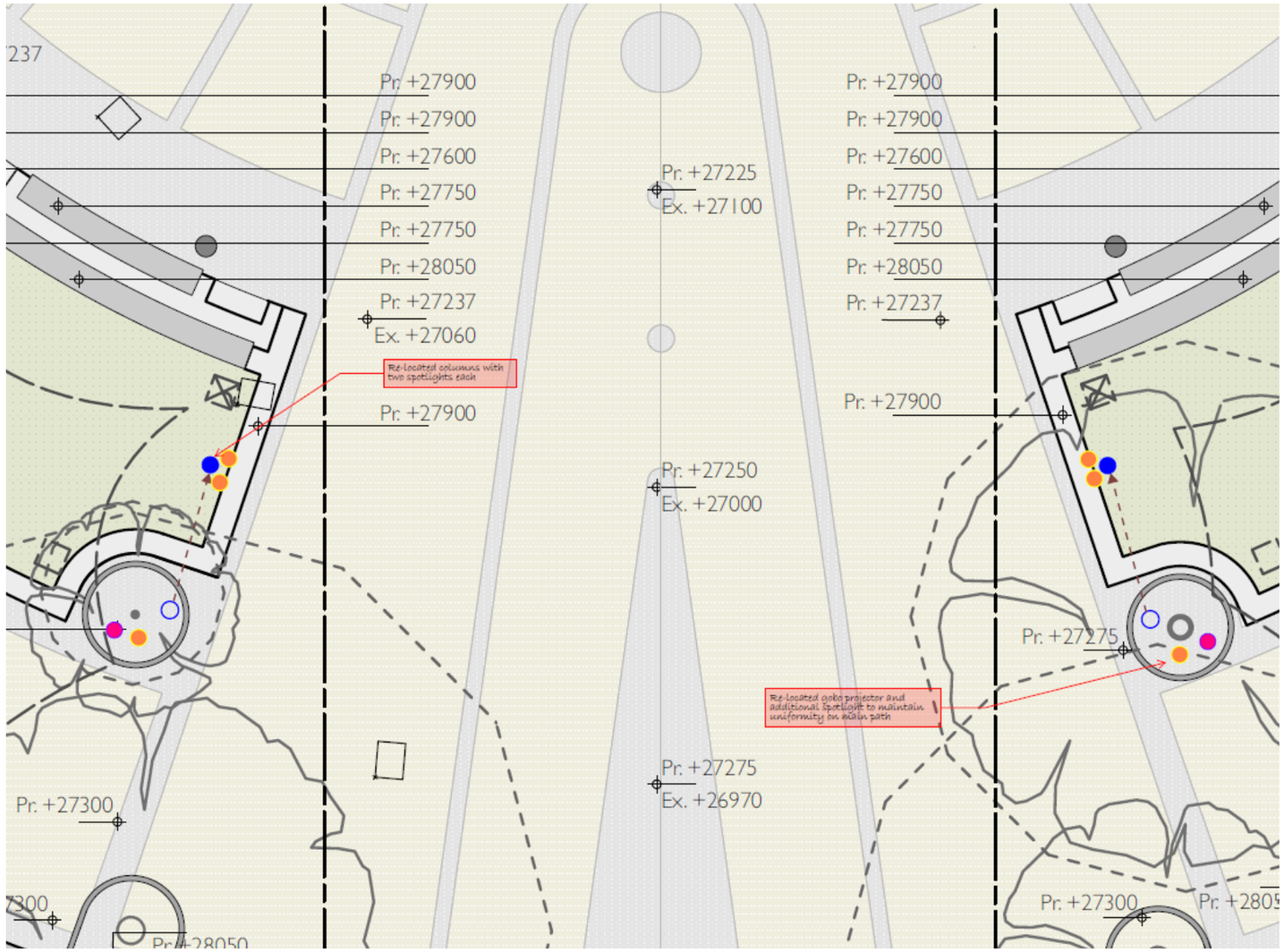
The purpose of this addendum is to showcase the impact on the proposed lighting design for the UCL Main Quad by the revised strategy of retaining four of the existing trees.

Layout Changes

The retention of the trees has meant that two proposed lighting columns (3.0m high) have had to be re-located away from the trees. The columns have been moved to align with the centre of the proposed planters. Two of the spotlights have moved to the new column positions. The gobo projectors that were mounted on the columns will be moved to the trees and one additional spotlights will be added to those positions as well. This will ensure that the uniformity of the curved path lighting is maintained, along with the feature effect of the gobo projectors.

Calculation Results

The lighting calculations have been updated in line with these changes. The column move has necessitated the addition of two spotlights of the same size, appearance and optics to maintain light levels and good uniformity to the curved path. The re-location of the columns has improved the light levels on the main path leading to the centre of the Quad.
The emergency escape lighting has not been adversely affected by the column move. The spill light calculations (detailed on the next page) have not been adversely affected by the column move.



Sketch showing re-located columns and spotlights.

Light spill analysis updated

Special considerations

In line with Camden Planning Guidance - Amenity, Jan 2021,special consideration has been given to choice and positioning of luminaires. The beam angles of all proposed lights are well bellow the advised 70 degrees, with the wide beam luminaires set at 55 degrees and tilting restricted to a maximum 5-20 degrees. BDP conducted a simulation of the proposed external lighting scheme to ensure the chosen equipment meets our requirements for the space, particularly in controling light trespass into neighbouring areas.

Calculation Process

Calculations are done in DIALux Evo 12.0 program. For this purpose, we placed horizontal calculation surfaces at the areas of activity and vertical calculation surfaces along the South, half of the North, and half of the West facades. The vertical calculation was performed on half of the buildings given that the scheme is almost entirely symmetrical.

Calculation Results

The calculation results, illustrated here with false colours, demonstrate our strategy to provide lighting where it is needed. This is achieved using high-quality lighting equipment with precise optics. Main circulation areas and entrances are illuminated the most, while greenery and natural areas are left unlit to preserve their natural cycles. The calculated illumination levels on the building facades indicate minimal light spill into the interiors, maintaining levels well below ILP Guidance which states maximum value of vertical illuminance on properties post-curfew at 5 lux.

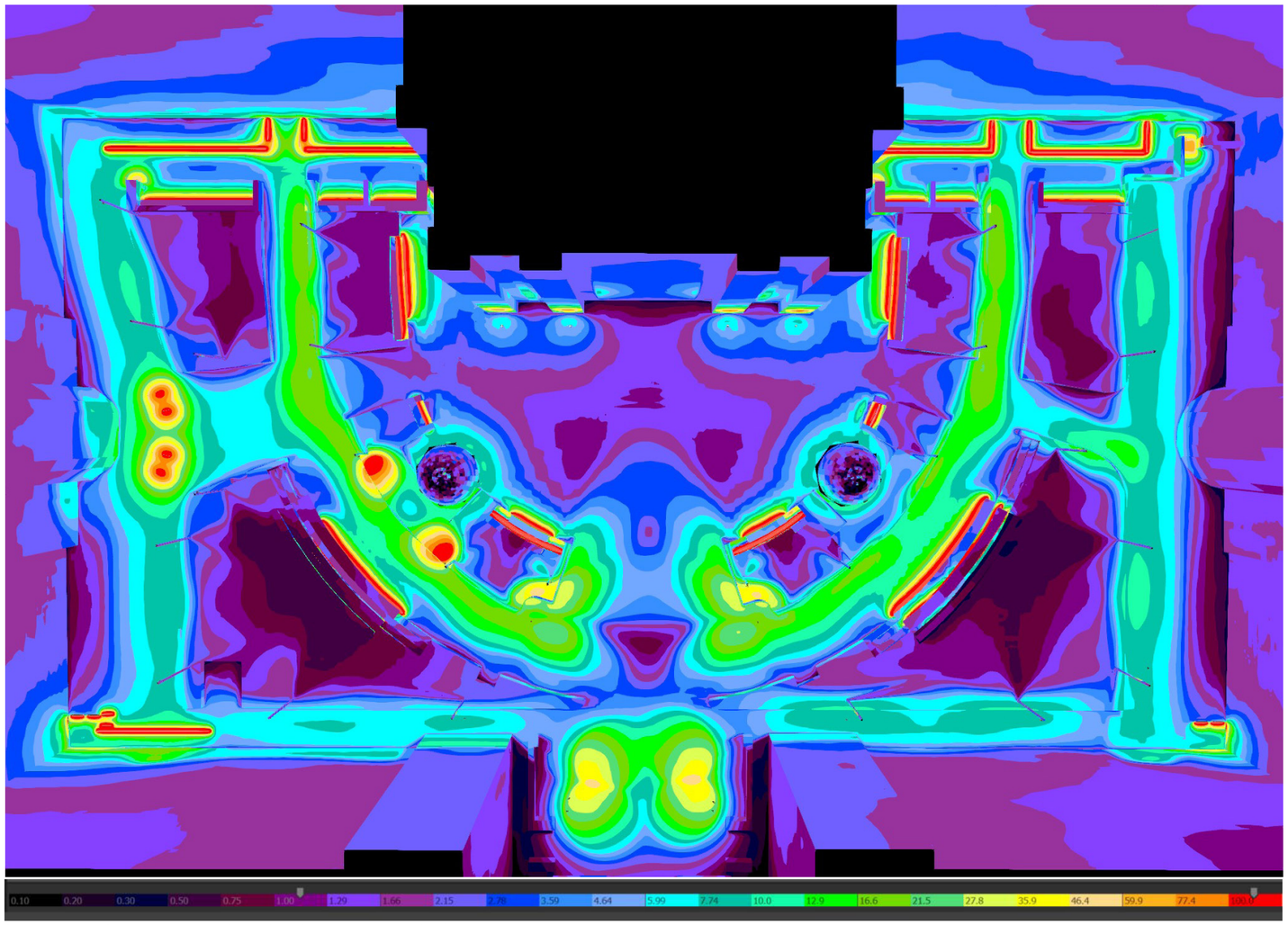


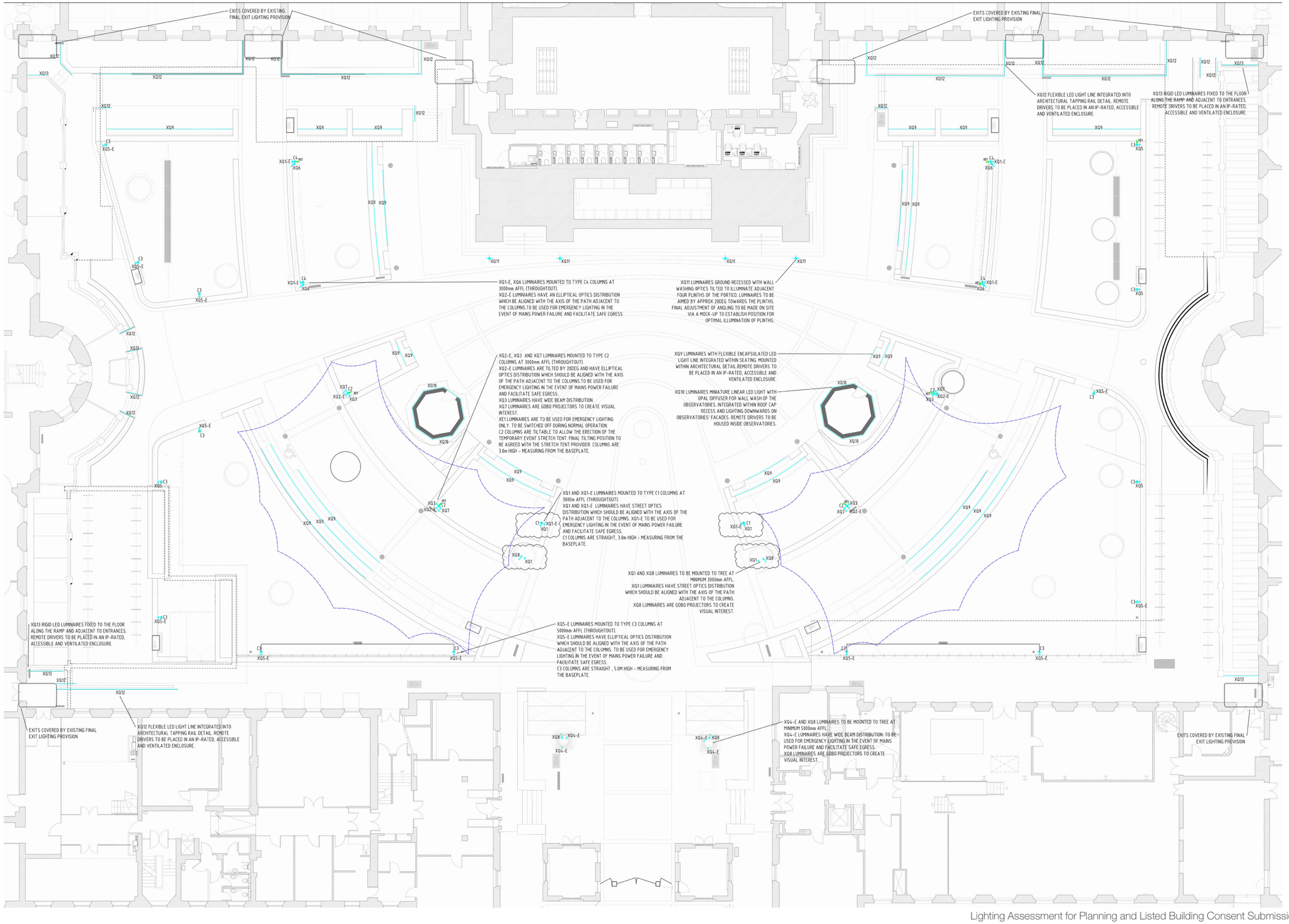
Image showing calculated illumination presented in false colours

Illumination levels in lx on the vertical calculation surfaces at the North, South and West facades

Light technical parameter	Application conditions	Environmental zone				
		E0	E1	E2	E3	E4
Illuminance in the vertical plane (E_v)	Pre-curfew	n/a	2 lx	5 lx	10 lx	25 lx
	Post-curfew	n/a	<0.1 lx*	1 lx	2 lx	5 lx

Table 3 (CIE 150 table 2): MAximum values of verrtical illuminance on premises

Updated Lighting Layout



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16 Brewhouse Yard, London EC1V 4LJ February 2025