Job / File No	**608 UCL Howland Street**
Doc No	**FN_877B**
Date	**19.08.13. rev A 07.10.13, rev B 10.10.13.**
Subject	**Response to West Wall art question**
Note Author	**GT**

The West Wall Art Strategy document was informally submitted by Dp9 22. 03.13). L.B. Camden raised a question concerning the relative brightness of the projected image by comparison with background lighting. This was identified in L.B. Camden e-mail 25.04.13 to Dp9.

I am curious on how bright 150 lux actually is, particularly at night? To be acceptable in amenity terms, the image should not be any brighter than the background light levels at night, as there are bedroom windows opposite.

Note: brightness is a difficult term to define, but generally accepted as the visual sensation associated with luminance. Luminance is the amount of light reflected by an object e.g. the combination of light received and surface reflectance.

The Pani AP2 Architectural Lighting Projector (or its next generation) will yield approximately 150 lux per m^2 at the projection surface (refer Pani e-mail 09.08.12 reference on quotation, (this refers to 120 lux per m^2 we are allowing a tolerance to this figure).

The image will be approximately 10m x 10m. The underside of the image is located approximately 10m above external ground level.

The ILE Guidance notes for reduction of Obtrusive Light indicates a figure of 25lux at neighbouring windows for high district brightness in town centres with high levels of night time activity as is the case in Fitzrovia.

It should be noted that the former Windeyer Building had external lighting to the west side and glazing facing the properties on the west side of Cleveland Street. See photos 1-4 below.

The viewed source intensity of the projected image from the windows in the buildings on the west side of Cleveland Street will be similar to the source emitted through general building windows in the Fitzrovia area (refer notes to photographs 6-15 below).

In order to answer the specific question concerning relative brightness of the projection it is useful to refer to photographs 6-15 below. These identify various night time display windows including a set of windows with flat screens. With a screen illuminance of 350 lux (see photo 8), this has fallen away to 120 lux at 1m distance and makes no impact on the opposite side of the street approximately 20m distance where the background lighting is 20-30 lux.

In the Cleveland Street location the projection will be similar to the luminance of the temporary lighting to the stair (see photo 11) and is not dissimilar to the illuminance of the restaurants on Cleveland Street see photo 12 and 13.

Thus the conclusion is that whilst the projection will create a brighter area, it is approximately 21m from the face of the windows on Cleveland Street and should not exceed the brightness identified in ILE Guidance Notes for reduction of Obtrusive Light. There will be no light leakage from the projector or the all weather housing and the operational hours will be limited to those identified in the submission.

PHOTOGRAPHS DAYTIME: FORMER WINDEYER BUILDING

PHOTOGRAPH 1: Glazing from former Windeyer Building facing Cleveland Street

PHOTOGRAPH 2 Glazing and external lighting former Windeyer Building facing Cleveland Street

PHOTOGRAPH 3 Glazing and forecourt lights former Windeyer Building facing Cleveland street

PHOTOGRAPH 4 Glazing former Windeyer Building facing Cleveland Street

PHOTOGRAPH 5 Cleveland street residential properties opposite former Windeyer Building

PHOTOGRAPHS COMPARITIVE NIGHT TIME illumination

PHOTOGRAPH 6 Wasibi West side Tottenham Court Road exceptionally bright 650lux at face of glazing

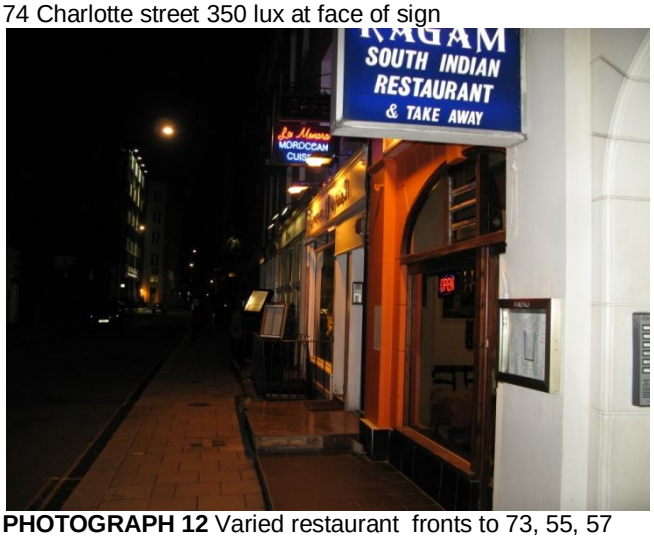
PHOTOGRAPH 7 Waitrose East side Tottenham Court Road 120-140 lux at face of glazing

PHOTOGRAPH 8 DfS East side of Tottenham Court Road with flat screens adjacent to window 350 lux at flat screen 120/130 lux 1m away.

PHOTOGRAPH 9 DfS east side Tottenham Court Road large internal flat screen 40-60 lux 6m away

PHOTOGRAPH 10 external illuminated sign at Ariel House 74 Charlotte street 350 lux at face of sign

PHOTOGRAPH 11 Temporary lighting to stair to UCL Howland Street



PHOTOGRAPH 12 Varied restaurant fronts to 73, 55, 57 Cleveland Street 80-130lux

PHOTOGRAPH 13 Cleveland Street Restaurants

PHOTOGRAPH 14 gallery display Conway Street 80-160 lux at window

PHOTOGRAPH 15 Studio with white film to glazing Chitty Street 130lux 1m from glazing

End.