Digital Screen Installation – Technical/Operational Details

Light Spillage and Glare

The proposed displays are 55-inch high-brightness LCD screens installed internally behind the shop glazing and directed outward towards the normal pedestrian and vehicular viewing area.

The stated maximum luminance of the displays is 2,500 cd/m². This is the maximum available output intended to maintain image visibility during periods of high ambient daylight and direct sunlight; it does not represent the brightness at which the displays will operate continuously.

Each display incorporates an ambient-light sensor and automatic brightness control. The screen output will therefore reduce as external ambient-light levels fall, preventing the display from remaining at full daytime brightness during overcast conditions, dusk, or hours of darkness.

Unlike a spotlight or projector, the LCD displays do not produce a concentrated beam of light. Illumination is emitted diffusely from the front face of the display and is contained within the intended viewing direction. The screens will be positioned within the shop windows and orientated to avoid unnecessary upward light, direct illumination of neighbouring windows and avoidable reflections from the shop glazing.

The following measures will be used to minimise glare and potential distraction:

- automatic adjustment of luminance through the integrated ambient-light sensor.
- configuration of a maximum night-time brightness level appropriate to the location and planning requirements.
- positioning and angling of the screens to avoid direct glare towards drivers, nearby residential windows, and adjoining properties.
- use of predominantly static or slowly changing content, without flashing, strobing, or rapid transitions.
- appropriate dwell times between content changes.
- commissioning checks during daylight and after dark, with brightness settings adjusted where necessary; and
- ongoing remote or local adjustment of screen brightness should any concerns be identified.

The installation is therefore designed to provide sufficient daytime visibility without causing excessive light spill, disability glare or an unreasonable distraction to drivers, pedestrians or neighbouring occupiers.

Environmental Zone Assessment

The installation will be assessed in accordance with the Institution of Lighting Professionals' guidance, including:

- PLG05: *The Brightness of Illuminated Advertisements Including Digital Displays*; and
- GN01: *Guidance Notes for the Reduction of Obtrusive Light*.

The applicable ILP environmental zone will be determined from the character and existing ambient-light level of the installation location.

Based on its location within an established retail/commercial area, the site is anticipated to fall within either:

- **E3 – suburban or medium-district-brightness area**; or
- **E4 – urban area with high district brightness**, such as a town or city-centre commercial location.

The final environmental-zone classification should be confirmed against the precise site location and surrounding land uses. The displays' automatic brightness controls and commissioned night-time luminance settings will be configured to ensure that their operation is appropriate for the confirmed environmental zone and does not create unacceptable obtrusive light.

As required the displays can be set to automatically power down and back on at specified times of the morning/day/night