LIGHTING ASSESSMENT ADDENDUM

PROJECT: MEMORIAL PARK, SONNING COMMON

PREPARED FOR: SONNING COMMON PARISH COUNCIL

AUGUST 2021

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1. Addendum

1.1 Introduction

1.1.1 This addendum is provided by Designs for Lighting Ltd, a specialist lighting design consultancy with experience and knowledge in lighting impact assessments, mitigation and lighting design.

1.1.2 The purpose of this addendum is to provide additional detail and mitigation measures to the proposed lighting at Memorial Park, Sonning Common; supplementing and at times superseding measures set out in the *Lighting Impact Assessment* document *1716-DFL-LS-001*.

1.1.3 This addendum is prepared in accordance with the Institution of Lighting Professionals (ILP) Professional Lighting Guide 04 – Guidance for Undertaking Environmental Lighting Impact Assessments (PLG04).

1.1.4 As outlined in the initial report, the Proposed Development consists of the construction of a new Multi Use Games Area (MUGA) and walking/running/learn to cycle track. Lighting is required to allow the safe use of the proposed facilities during the hours of darkness.

1.2 Changes to Legislative Requirements and Guidance

1.2.1 At the time of writing the original Lighting Impact Assessment, ILP GN01:2020 was referenced as the most recent guidance related to the Proposed Development. In the intervening period, this guidance has been updated to GN01:2021 – *Guidance Notes for the Reduction of Obtrusive Light*.

1.2.2 The updated guidance document features relatively minor changes, which are predominantly not relevant to the Proposed Development. However, the updated document does clarify the appropriate starting time for curfew hours to be between 21:00 and 23:00 hours.

1.3 Lighting Proposal Detail

1.3.1 Consultation on the Proposed Development has identified the need for additional detail on several areas of the lighting design. Specifically:

- The nature and appearance of lighting columns throughout the site and to the proposed MUGA;
- The Correlated Colour Temperature (CCT) of light sources to be used;
- Measures to be taken to control lighting throughout the Application Site; and
- Additional luminaire shielding.

Lighting Columns

1.3.2 Lighting for the proposed MUGA is to be mounted to 8m columns, however, these columns are to be suitable to the character of the Application Site. This is to be achieved through the use of decorative “street” style columns, in place of galvanised floodlighting columns, which are to be finished in a colour in keeping with the character of the area (eg. RAL 6013 Reed Green).

1.3.3 When specifying columns for the illumination of the walking/running/learn to cycle track, the finishing colour of these columns would match that used for the MUGA facilities.

1.3.4 Drawings and visualisations of indicative column designs and finishes are presented in **Appendix 1**.

Correlated Colour Temperatures

1.3.5 The correlated colour temperature of luminaires used throughout the Application Site will have a significant impact upon the character and prominence of the Proposed Development in the landscape.

1.3.6 In accordance with the guidance set out in GN08/18, lighting to the proposed walking/running/learn to cycle track is not to exceed a CCT of 2700 Kelvin (very warm white). The use of warm white luminaires softens the appearance of the lighting to human receptors when compared to a neutral white option, and reduces the potential impact of the proposed lighting on nearby ecological receptors.

1.3.7 Lighting to the proposed MUGA is not to exceed a CCT of 3000 Kelvin (warm white). The range of colour temperatures available for this application is currently limited by the technology available; however, the intention is to reduce the colour temperature in this area to 2700 Kelvin as the technology progresses.

Lighting Controls – MUGA

1.3.8 The original design proposals indicated that the proposed MUGA luminaires were to be switched according to the following switching regime: OFF until Dusk. Sensor controlled from Dusk until 22:30 hours. OFF from 22:30 hours.

1.3.9 Consultation on the Proposed Development has identified the need for additional detail on the sensor control to ensure that switching regimes are suitable.

1.3.10 The MUGA is proposed to be split into three individual playing spaces, each to be individually lit. An on-demand button to each third of the MUGA space is to switch lighting on for approx. 60 minutes, before dimming to zero light output over a period of 2 minutes. The approximate division of the MUGA is shown in **Figure 1**:

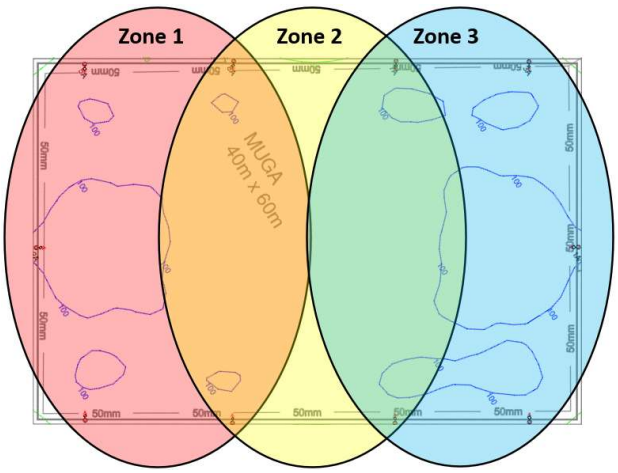

Figure 1 – MUGA Lighting Zone Division

1.3.11 Lighting is now to be subject to a more stringent 21:30 hours curfew, after which all lighting will be switched off.

1.3.12 The on-demand button to switch lighting is to be located within the MUGA fence to enable easy access for users of the Proposed Development.

1.3.13 This approach ensures that the MUGA is lit to the lowest possible level, and is only illuminated when in use.

Lighting Controls – Walking / Running / Learn to Cycle Track

1.3.14 The original design proposals indicated that luminaires to the proposed track were to be switched according to the following switching regime: OFF until Dusk. Sensor controlled from Dusk until 22:30 hours. OFF from 22:30 hours.

1.3.15 Consultation on the Proposed Development has identified the need for additional detail on the type of sensor control to ensure that switching regimes are suitable.

1.3.16 Sensor controls are to be implemented to each individual luminaire, with luminaires on a 'standby' level of 25% output until sensors are activated. Upon the detection of movement in the vicinity any individual column, all track luminaires will switch to 100% of the design level output for 5 minutes, before dimming back down. The detection of new movement within the 5-minute window will reset the dimming countdown.

1.3.17 The approximate maximum detection range of a commercially available PIR sensor is 10 metres; and they can be expected to reliably switch at a distance of 8 metres.

1.3.18 At switching, luminaires are to dim up / dim down over a period of 2 minutes, ensuring that changes in the level of lighting are gradual and minimally noticeable.

1.3.19 Lighting is to be subject to a more stringent 21:30 hours curfew, after which all lighting will be switched off.

1.3.20 Lighting is to be mounted at 4m in height; as per the previously submitted lighting strategy, to ensure that it is minimally obtrusive within the landscape.

1.4 Additional Luminaire shielding

1.4.1 To reduce and control obtrusive light, luminaires can be physically shielded (typically by baffles or cowls) affixed directly to the light source or to the mounting column. This practice directly blocks light from leaving the area to be lit, reducing spill light.

1.4.2 To ensure lighting leaving the Application Site does not exceed levels that could affect the wider AONB, lighting is to be shielded. Shields are to be affixed directly to the lantern where possible, and are to have a width equal to or greater than the luminous area of the lantern. Shields are to have a minimum depth of 40mm.

1.4.3 To reduce the potential for spill light to the western boundary and the wider AONB, rear shields are to be affixed to luminaires 5A, 6A, 7A, and 8A.

1.4.4 To reduce the potential for spill light to the northern boundary and the wider AONB, a rear shield is to be affixed to luminaires 1A, and side shields are to be fixed to the northern faces of luminaires 3A and 4A.

1.4.5 The use of the shielding outlined above would further reduce the relatively low levels of spill light to the boundaries of the Application Site. Examples of shielding options for LED luminaires are shown in **Appendix 2**.

1.5 Summary

1.5.1 This addendum provides supplementary detail to the lighting proposals outlined within DFL document *1716-DFL-LS-001*.

1.5.2 Measures outlined in this addendum are proposed to minimise the potential levels of obtrusive light associated with the Proposed Development.

1.5.3 The Application Site is located within an E2 Environmental Zone, defined as "sparsely inhabited rural areas, village or relatively dark outer suburban locations". This classification is supported by Sky Quality Meter (SQM) mapping provided by the CPRE:

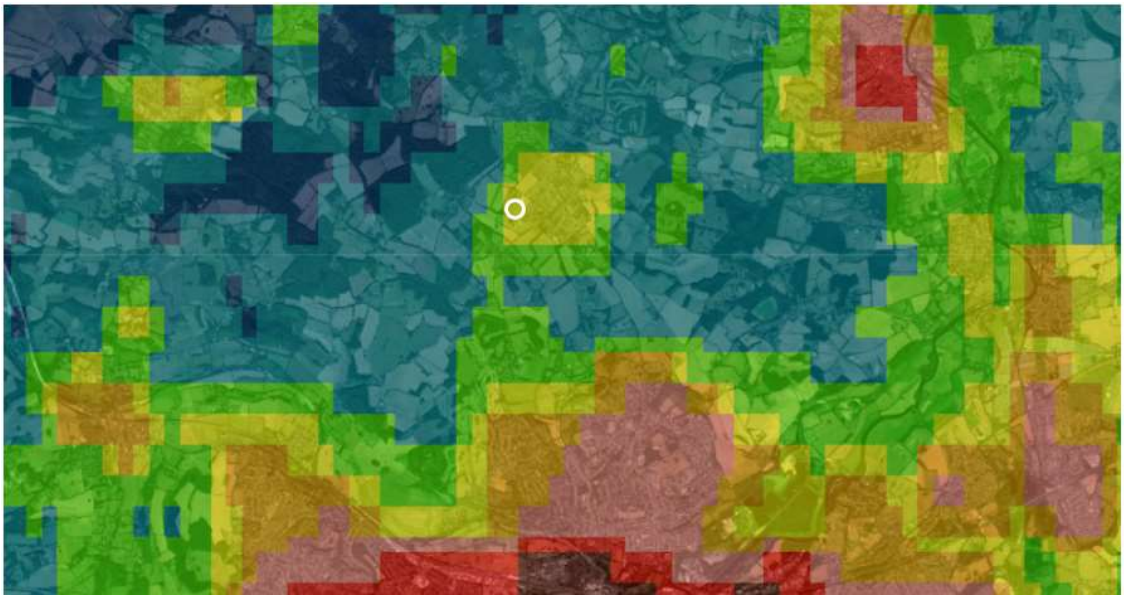

Figure 2 – Sky Quality Meter Mapping of the Application Site (Approximate Memorial Park location circled in white)

1.5.4 As outlined within 1716-DFL-LS-001, the lighting for the Proposed development is designed to be fit for purpose without being detrimental to the surrounding environment. Potential effects of the proposed artificial lighting remain likely to be of low to negligible significance when considered against the environmental zone within which the Application Site is located.

1.5.5 This is further supported by the exceptionally low levels of spill light onto potentially sensitive receptors, with lighting proposals for the Proposed Development complying with the requirements for the more stringent E1 Environmental Zone; despite being situated in an E2 environment.

Appendix 1 – Column Details

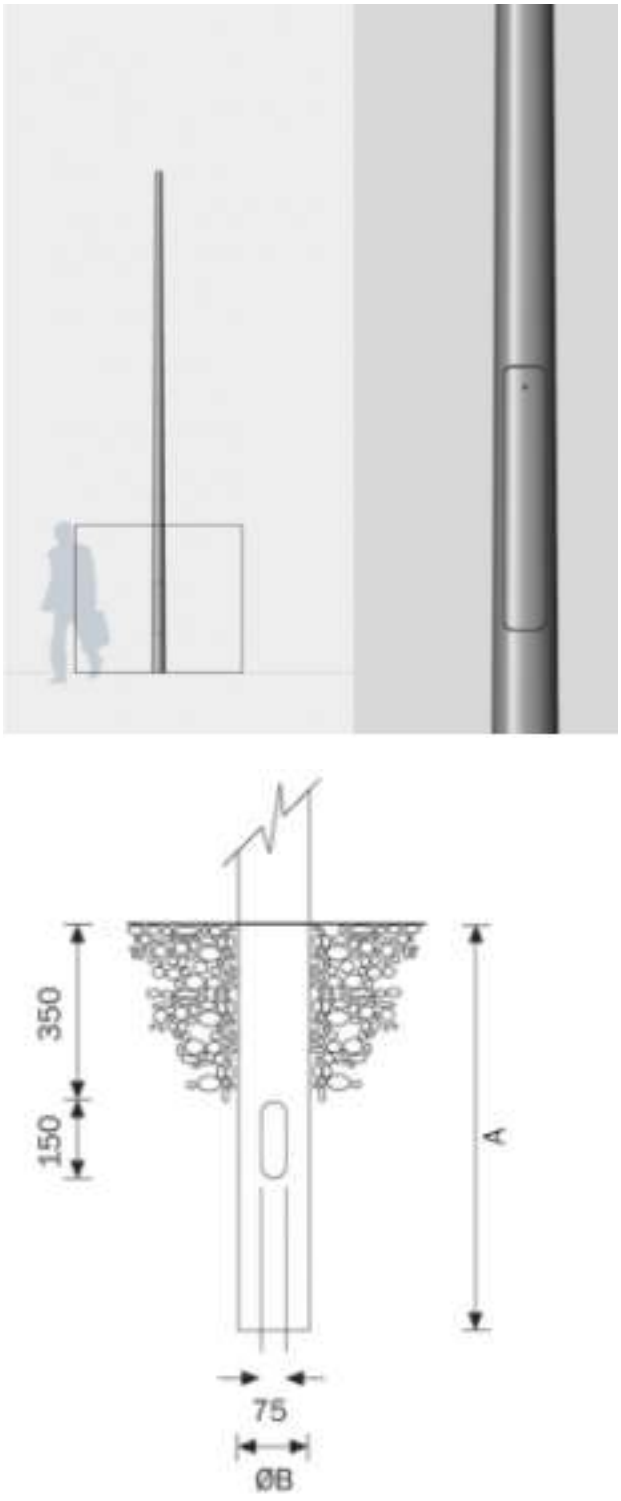

Figure 1.1 – Indicative Column design (As per DW Windsor Conical)

	Dimensions (mm)				
Nominal column height	A	B	C	D	E
4m	139	300	200	15	24 x 50 283pcd
5m	139	300	200	15	24 x 50 283pcd
6m	139	300	200	15	24 x 50 283pcd
8m	193	420	300	20	29 x 64 424pcd

Figure 1.2 – Standard dimension details for indicative lighting column (DW Windsor Conical)

Figure 1.3 – Indicative column finish (RAL 6013 – Reed Green)

Appendix 2 – Shielding examples

Figure 2.1 – Indicative lantern shielding option