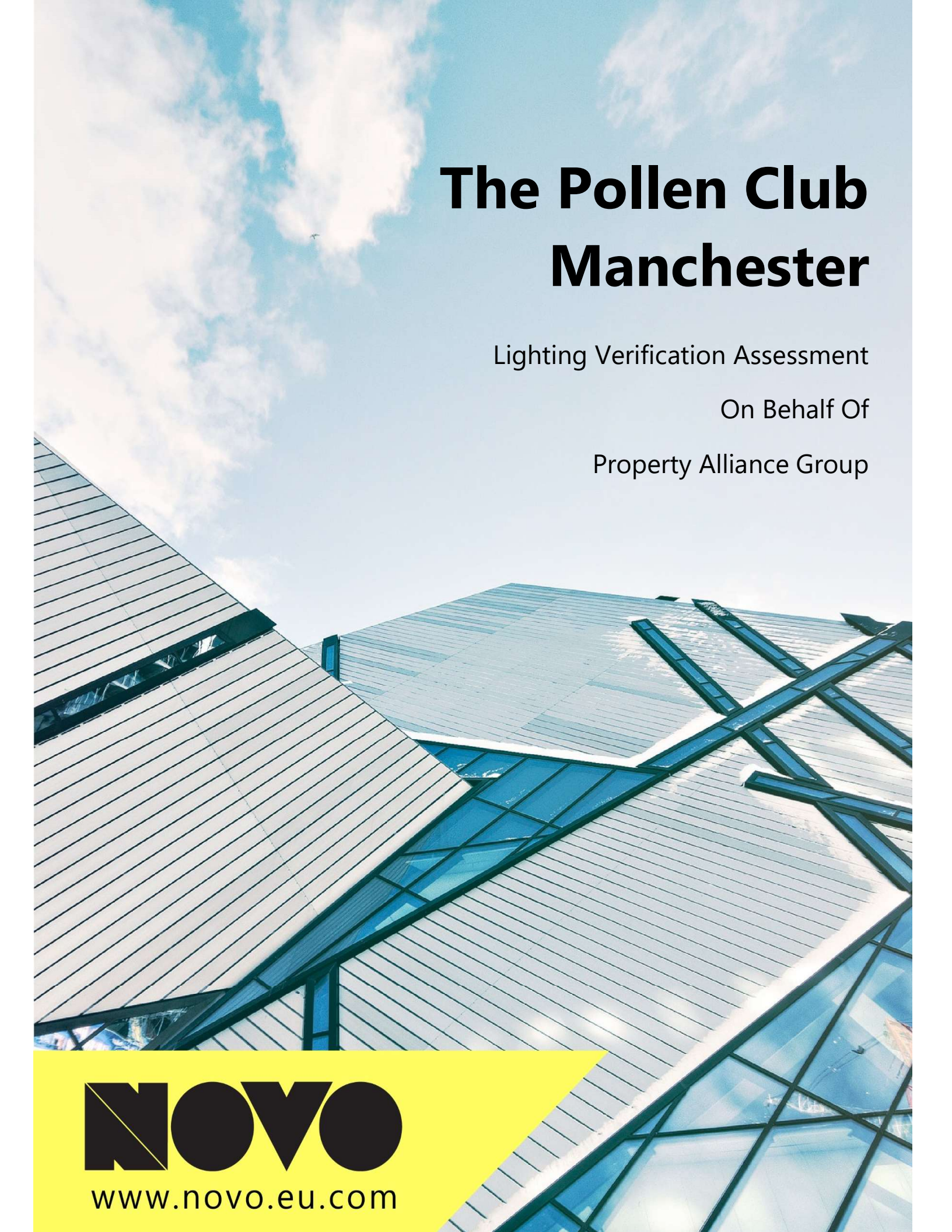




The Pollen Club Manchester

Lighting Verification Assessment

On Behalf Of

Property Alliance Group

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REVISION	DESCRIPTION	DATE	AUTHOR	CHECKED
A	Lighting Assessment	April 2025	J. Veale	B. Duckworth



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1 EXECUTIVE SUMMARY

The aim of this lighting environmental impact report at The Pollen Club, Blackfriars Street, Manchester, M3 2EQ was to identify and measure physical effects of the lighting within the padel courts, seating areas and perimeters.

The design goal was to provide adequate horizontal illumination occupancy usage during non-daylight hours which provides increased productivity/ revenue.

A lighting survey was undertaken which demonstrates that the installed illuminance levels on site are within suggested legislative limits as set out in the design specification. The survey was undertaken in the hours of darkness on 30th April 2025.

Any adverse nuisance spill light and/or glare impact to the surrounding properties has been minimised and controlled while fulfilling the functional needs of the project.

The lighting design proposed provides an optimal combination of lamps, luminaire height, location, configuration and controls to achieve the required illumination on the required area whilst avoiding light pollution and associated light spill.

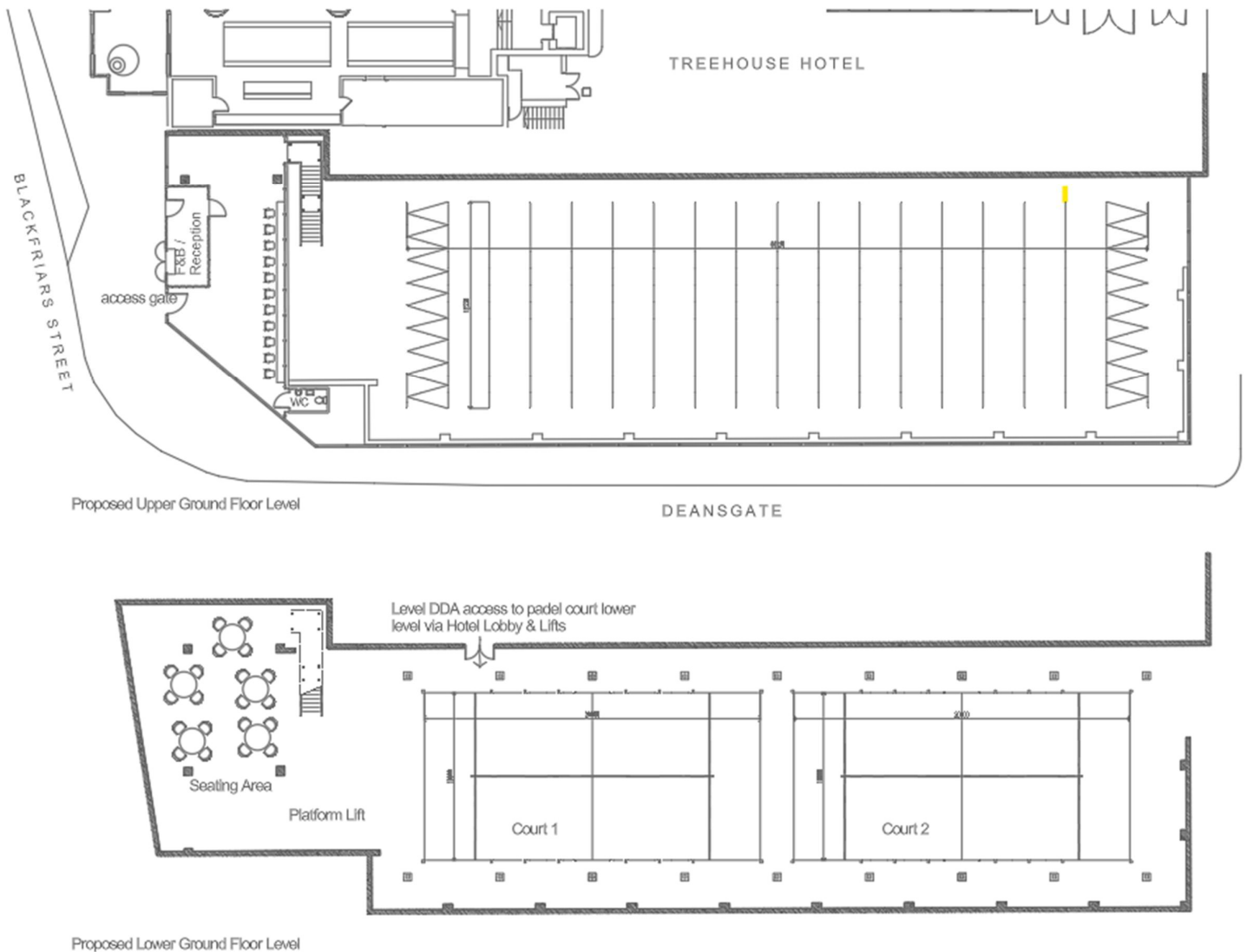
It is evident from the survey findings that the new proposed lighting installation is illuminating the padel courts, seating areas and perimeters in compliance with the relevant British Standard & Guidance documents.

2 INTRODUCTION

The aim of this lighting environmental impact report at The Pollen Club, Blackfriars Street, Manchester, M3 2EQ is to measure and validate the new installed LED lighting within padel courts, seating areas and perimeters in line with the proposed design.

Figure 1 Pollen Club – Site Plan

2.1 SITE LOCATION & CONTEXT



The proposed floodlighting system and the seating area ceiling mounted lighting was evaluated to ensure the installation lux levels are as per the design calculations and meet the necessary regulations and guidance documents.

This lighting assessment was undertaken to ensure compliance with the following standards.

- Legislation & Design Guidance Performance Criteria
 - Institute of Lighting Professionals Guidance Note 01/20 - Reduction Of Obtrusive Light 2020
 - SLL Code for Lighting
 - CIBSE Lighting Guide 4
 - BS EN 12193

3 LEGISLATION & DESIGN GUIDANCE PERFORMANCE CRITERIA

The lighting survey and assessment was carried out in full accordance with the Society of Light & Lighting (SLL) recommendations and guidance. The SLL forms part of the Chartered Institution of Building Services Engineers and its members comprise lighting designers, consulting engineers, researchers, students, professors and manufacturers. The SLL Lighting Handbook Chapter 31 provides detailed procedure for performance verification of lighting installations, field surveys, measuring devices to be used and information to be recorded as a minimum. This procedure will be followed throughout.

For the lighting a 1000 x 1000mm interval grid was established and set out over internal office areas. A horizontal illuminance reading was taken with the digital illumination meter at each point on the grid and the resulting lux level recorded.

As stated in BS EN 12193: Light and lighting – Sports lighting, indoor padel courts can be categorised into 3 classes. The classes are shown below.

Figure 1 Extract of BS EN 12193: Light & Lighting – Sports Lighting Classes.

- g) **Lighting Class I:** Top level competition such as international and national competition which will generally involve large spectator capacities with long potential viewing distances. Top level training

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BS EN 12193:2018
EN 12193:2018 (E)

can also be included in this class. For some sports the requirements of the governing body might take precedence over the values in this standard.

Lighting Class II: Mid-level competition such as regional or local club competition which generally involve medium size spectator capacities with medium viewing distances. High level training can also be included in this class.

Lighting Class III: Low level competition such as local or small club competition which generally do not involve spectators. General training, physical education (school sports) and recreational activities will also come into this category.

As the padel courts are not used for top or mid-level competitions, class III can be utilised in this scenario.

The required Lux (lx) level of as noted in table A.4 is the required standard for the interior padel courts for this project.

Figure 2 Extract of BS EN 12193: Light & Lighting – Sports Lighting Table A.4.

Table A.4

Indoor ^a			Reference area		Number of grid points	
			Length m	Width m	Length	Width
Tennis	TA		36	18	13	7
	PA		30	15	15	7
Padel ^c	PA		20	10	13	7
Class	Horizontal illuminance PA		Horizontal illuminance TA		R_G ^b	R_a
	$E_{hor Ave}$ lx	U^2_{hor}	$E_{hor Ave}$ lx	U^2_{hor}		
I	750	0,70	75 % PA	75 % PA	35	80
II	500	0,70	75 % PA	75 % PA	40	60
III	300	0,50	75 % PA	75 % PA	40	60
^a No luminaires should be positioned in that part of the ceiling which is directly above the area limited by the marked area extended to 3 m behind the base lines. ^b R_G only applies for mounting heights above 10 m. ^c A safety zone around both entrances of width 2 m, height 4 m and extending 4 m from the centre to both sides is to be kept clear of any obstacles.						

For the perimeter and seating area lighting a 1000 x 1000mm interval grid was established and set out over the entire upper ground seating areas. A horizontal illuminance reading was taken with the digital illumination meter at each point on the grid and the resulting existing lux level recorded.

The required Lux (lx) level of as noted in each section is the required standard for the varying external areas and their usage.

Figure 3 BS EN 12464-2: 2014 Light & Lighting – Lighting of Workplaces Outdoor Table 34

5.4 Lighting requirements for areas, tasks and activities

Table 5.1 — General requirements for areas and for cleaning at outdoor work places

Ref. no.	Type of area, task or activity	$\overline{E_m}$ lx	U_o —	R_{GL} —	R_a —	Specific requirements
5.1.1	Walkways exclusively for pedestrians	5	0,25	50	20	
5.1.2	Traffic areas for slowly moving vehicles (max. 10 km/h), e.g. bicycles, trucks and excavators	10	0,40	50	20	
5.1.3	Regular vehicle traffic (max. 40 km/h)	20	0,40	45	20	At shipyards and in docks, R_{GL} may be 50
5.1.4	Pedestrian passages, vehicle turning, loading and unloading points	50	0,40	50	20	
5.1.5	Cleaning and servicing	50	0,25	50	20	All relevant surfaces

4 LIGHTING SURVEY & ASSESSMENT

As described above a detailed lighting survey was carried out on site to assess and confirm the nature of the new proposed internal office and external lighting installation.

The lighting survey and assessment was carried out in full accordance with the Society of Light & Lighting (SLL) recommendations and guidance. The SLL forms part of the Chartered Institution of Building Services Engineers and its members comprise lighting designers, consulting engineers, researchers, students, professors and manufacturers. The SLL Lighting Handbook Chapter 31 provides detailed procedure for performance verification of lighting installations, field surveys, measuring devices to be used and information to be recorded as a minimum. This procedure was followed throughout.

4.1 LIGHTING SURVEY & ASSESSMENT OVERVIEW

The extent of the external lighting survey was primarily to take horizontal illuminance measurements with a calibrated illuminance meter at SLL recommended intervals on the plan below:

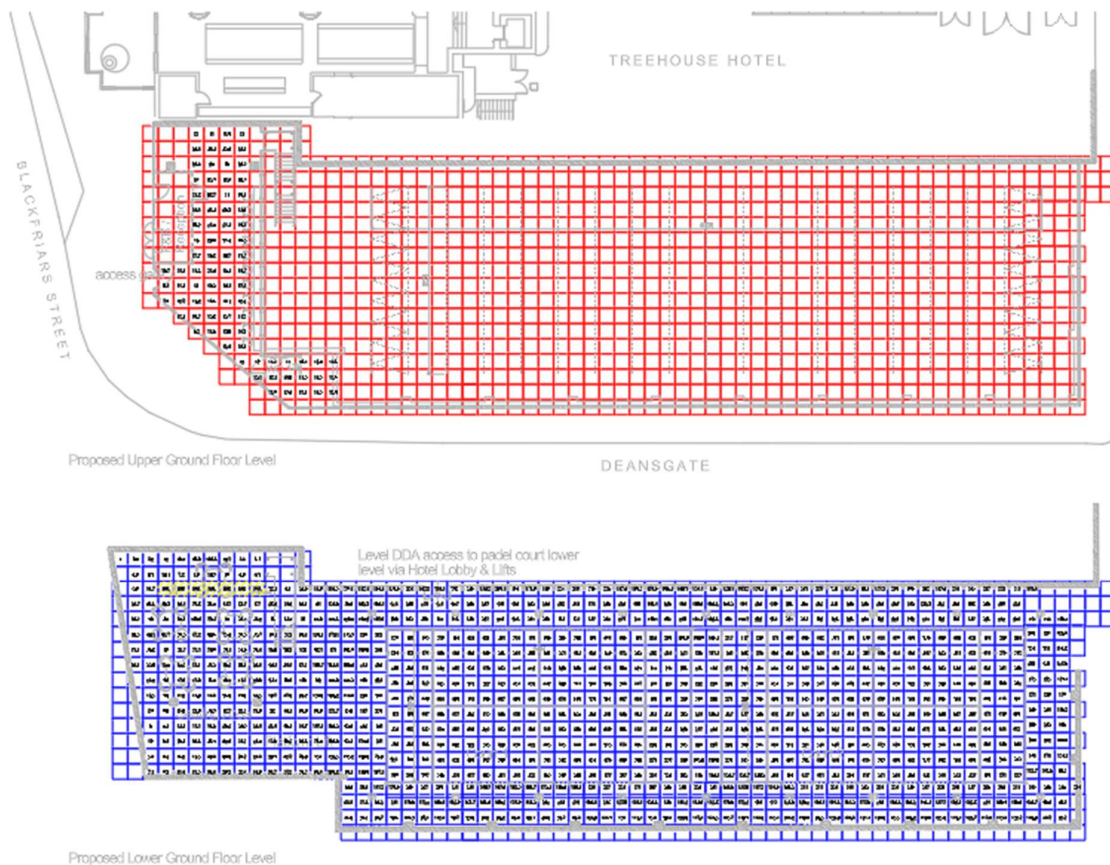


Figure 4 Pollen Club - Extent of Lighting Survey

4.2 ILLUMINANCE METER

The illuminance meter used for the survey was a Martindale LM195 Type F digital meter – serial number 245257450 with an accuracy of +/- 6% and a capability of obtaining illuminance readings ranging from 0.1 to 200,000 lux.

4.3 LIGHTING SURVEY TIME, DATE & ENVIRONMENTAL CONDITIONS

The lighting survey was undertaken on the 30th of April 2025, between the hours of 21:00 and 00:00. The external temperature was recorded at 11°C. At the time of survey, the weather was dry, though heavy cloud cover was evident and thus moonlight was not a contributing factor to the readings obtained.

4.4 LIGHTING SURVEY CONCLUSION

It is evident from the survey findings that the new proposed lighting installation is illuminating the padel courts, seating areas and perimeters in compliance with the relevant British Standard & Guidance documents.



5 APPENDICES

Appendix A	Lighting Survey Drawing – Grid Intervals and Recorded Existing Illumination Levels
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Appendix A

Lighting Survey Drawing
Grid Intervals and Recorded Existing Illumination Levels

