

Dalton Ellis- External Lighting Replacement

Validation Report

Prepared for University of Manchester
December 2025

High-performing partnership
Higher performing buildings

PROJECT

Dalton Ellis Road Lighting

PROJECT NO

EA0039

REPORT

Planning Condition Report

PREPARED FOR

University of Manchester

DOCUMENT NUMBER (if applicable)

EA0039-E-RPT-002

STATUS

Contract Issue

DATE

12/12/2025

This report has been authorised by:

Christos Karafyllidis

2025.12.15 11:37:50

Christos Karafyllidis

Project Associate

Revision	DCC No.	Comments	Date	Author	Checked
C01	-	Contract Issue	12/12/2025	KO	CK

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EA0039-E-RPT-002

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I.0 Introduction

Troup Bywaters + Anders (TBA) were appointed to design the replacement of street lighting along the access road serving the Dalton Ellis Student Halls site. The site comprises the following accommodation buildings and is accessed via a single road from Denison Road:

- Dalton Ellis Building (including Neild Wing)
- Sutherland
- Graham Building
- Ewings Building
- Eaglesfield (currently unused)

The project has been fully installed and commissioned on site. This report presents the lux level readings recorded on-site at 10:30 PM on 10/12/2025, providing an accurate assessment of the lighting performance under real operating conditions. The lux levels were measured using a calibrated lux meter.

I.1 Scope of Works

The scope of the project was to replace the existing column luminaires with new LED lighting including new luminaires, columns and associated wiring, fed from the existing site supply located within the Dining Block. The new lighting installation was to comply with planning requirements including the restrictions of the conservation area, and avoiding impact on the mature trees on the site.

2.0 Design Criteria

Design criteria as given below and manufacturers data, included in appendices.

External Lighting

Lighting Levels

- Pathways 5 lux, 0.25 uniformity.
- Steps/ramps 5 lux, 0.25 uniformity.
- Car park 10 lux, 0.4 uniformity.

Colour Temperature 3000K

3.0 Validation Report

Name of site	Dalton Ellis
Objective of measurement	The purpose of this validation exercise is to confirm that the installed car park lighting system along the access road serving Dalton Ellis Student Halls complies with the design intent and performance requirements outlined in the Stage 4 Report (EA0039-E-RPT-001).
Type(s) of measurements	Static Measurements
Date of test	10/12/2025
Time of test	Beginning: 10:30 PM End : 11:30PM
Names of personnel participating in test	Kalu Onuma
Luminaire Information	Please see attached proposed layout (Appendix 2)
Electrical Information	Please see attached EIC in attached O&M.
Weather and Visibility	The weather was 8°C Mostly Clear.
Condition of Installation	The state of luminaries are new and in good condition. The luminaires are parallel to the floor.
Obstruction to lighting	Future tree growth may impact lux levels and lighting uniformity.
Extraneous light	There is lighting from the main road that affects the measurements.
Method and Results	A total of 34 lux level readings were recorded. These readings were compared against the design recommendations and requirements specified in the Stage 4 report. All measured values meet or exceed the minimum lux levels required for safe pedestrian and vehicular movement at the time of the survey. The installed street lighting layout and measured lux levels comply fully with the recommendations and requirements outlined in the Stage 4 report at the time of the survey. The design intent has been achieved, and no corrective actions are required.

Appendix I-Standard Limitations for Building Reviews

I. Scope of inspection

Troup Bywaters + Anders LLP (TB+A) is not responsible for and shall have no liability as a result of or in connection with any events occurring after preparing the report and/or any other matters of which TB+A was not aware when preparing the report.

All comments relating to the condition of the building services are made on a purely visual inspection of visible and readily accessible parts of the system/building, without any destructive or exploratory investigations.

Accessible voids in the property e.g. riser ducts, floor voids and suspended ceilings, etc., can only be inspected at random and where practical without disturbing building occupants.

Identification or Inspection of asbestos or deleterious materials are excluded and we would recommend a specialist is engaged to obtain assurance in this respect.

All building fabric and structural form of the property is outside the scope of our expertise and inspection.

Any comments within the report with regard to compliance of the Building Services with current and statutory legislation, is to be taken as a guide and is based on the inspection undertaken. Nothing in this report is a guarantee of compliance with legislation. Where we have identified that there may be contraventions, the comments of the appropriate authority should be sought to assess the scope of remedial work or corrective measures needed to meet requirements.

2. Building services operation

The inspection is visual in nature and excludes specific tests to establish operational status and as such, no assurance can be given that these are free from operational defect. Only the visual condition and state of repair of visible and accessible parts of each system will be assessed and recommendations made for testing or recommissioning, at extra cost, where needed to determine operational condition.

Similarly water quality in closed systems where applicable is assessed from available records, which will be requested and reviewed. The prevailing water quality, condition of internal surfaces of pipework and equipment can only be established by intrusive analysis which would be by a specialist organisation, separately from this report.

3. Suitability of the Property

We are not responsible for commenting on or advising on the suitability for any use, fitness for purpose and performance of the Property and such commentary and advice is outside the scope of the Appointment. The client must therefore ensure that your legal advisors ascertain assurances in this respect, including planning permissions, approvals, permitted uses, limitations etc.

Your legal advisors should advise on whether the Property and or its use, complies with statutes and local byelaws and is not subject to any outstanding enforcement orders or other such notices or proposals.

4. Ground conditions and environmental matters

We will not be investigating/reporting on ground conditions and environmental matters in any respect.

5. Predicted energy/carbon savings and associated operational costs

The energy and carbon reduction are high level estimations only. They are intended to give a preliminary indication only. Delivered energy and carbon reductions will be subject to factors that are outside the control of this project and cannot be

accounted for under this project. All energy and carbon reduction reductions must reviewed and reassessed by an engineer before progressing further into feasibility studies.

Appendix 2-Proposed External Lighting Lux Levels Layout

HEALTH AND SAFETY INFORMATION
IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING
CONSTRUCTION.
NO ABNORMAL HAZARDS HAVE BEEN IDENTIFIED AT THIS STAGE OF THE DESIGN.
MAINTENANCE/CLEANING/OPERATION.
NO ABNORMAL HAZARDS HAVE BEEN IDENTIFIED AT THIS STAGE OF THE DESIGN.
DECOMMISSIONING/DEMOLITION.
NO ABNORMAL HAZARDS HAVE BEEN IDENTIFIED AT THIS STAGE OF THE DESIGN.

- PLEASE DO NOT SCALE FROM THIS DRAWING.
- THIS DRAWINGS FORMS PART OF THE DETAILED DESIGN PACKAGE AND SHOULD BE READ IN CONJUNCTION WITH ALL PROJECT DOCUMENTS.
- THIS DRAWING IS NOT INTENDED FOR CONSTRUCTION PURPOSES. IN LINE WITH CONTRACT REQUIREMENTS THE CONTRACTOR MUST PRODUCE CONSTRUCTION DRAWINGS TO CAPTURE ALL INSTALLATION REQUIREMENTS, COORDINATION AND SETTING OUT.
- EXACT SETTING OUT OF LIGHTING COLUMNS TO BE AGREED WITH THE CLIENT TEAM ON SITE TO SUIT EXISTING VEGETATION, ROOT BALLS AND POSSIBLE OVER SHADOWING.

01		LUX LEVELS LAYOUT	MR	KM	11.04.2025
Rev	Doc	Description	Dwn	Chkd	Date

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Project

UNIVERSITY OF MANCHESTER
DALTON ELLIS HALLS
EXTERNAL ROAD LIGHTING

Title

PROPOSED EXTERNAL LIGHTING LUX
LEVELS LAYOUT
OPTION 1

Client

UNIVERSITY OF MANCHESTER

Architect

WILSON MASON

Project No.	Drawn By	Date	Checked	Scale
EA0039	MR	APR 2025	KM	1:200@A0

Acad Model	EA0039-XE-63-SP-003	Revision
Drawing No.	EA0039-E-63-SP-003	01

LEGEND	
B1	ACORN - 27 W - SMARTSCAN EXTERNAL - AREA DISTRIBUTION - 2700 K - VERTICAL 76 MM COLUMN TOP



Appendix 3- Existing External Lighting Layout with Lux Plot

NOTES

1. PLEASE DO NOT SCALE FROM THIS DRAWING.
2. THIS DRAWINGS FORMS PART OF THE DETAILED DESIGN PACKAGE AND SHOULD BE READ IN CONJUNCTION WITH ALL PROJECT DOCUMENTS.
3. THIS DRAWING IS NOT INTENDED FOR CONSTRUCTION PURPOSES. IN LINE WITH CONTRACT REQUIREMENTS THE CONTRACTOR MUST PRODUCE CONSTRUCTION DRAWINGS TO CAPTURE ALL INSTALLATION REQUIREMENTS, COORDINATION AND SETTING OUT.

C01		CONTRACT ISSUE	JK	KM	16.09.2025
Rev	Occ	Description	Dwn	Chkd	Date

CONTRACT ISSUE

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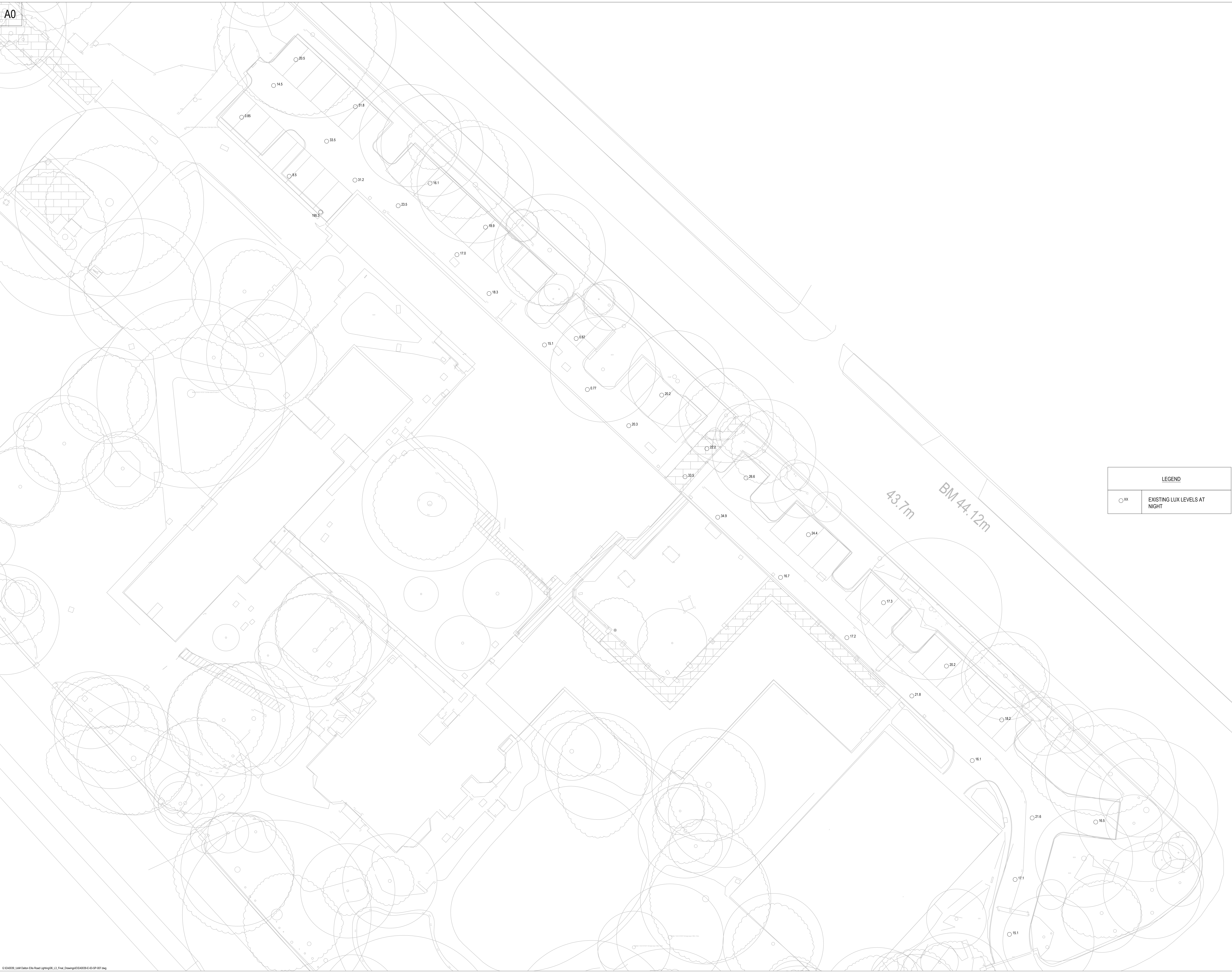
Project	UNIVERSITY OF MANCHESTER DALTON ELLIS HALLS EXTERNAL ROAD LIGHTING
Title	EXISTING EXTERNAL LIGHTING LAYOUT WITH LUX PLOT

Client	UNIVERSITY OF MANCHESTER
Architect	WILSON MASON

Project No.	Drawn By	Date	Checked	Scale
EA0039	JK	16.09.2025	KM	1:150

Acad Model	Revision
Drawing No. EA0039-E-63-SP-005	C01

Appendix 4- As Built Lighting Measurement Layout



A0

NOTES

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LEGEND

○ xx

EXISTING LUX LEVELS AT NIGHT

C01		CONTRACT ISSUE	DW	KO	12.12.2025
Rev	Doc	Description	Dwn	Chkd	Date

CONTRACT ISSUE

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Project	UNIVERSITY OF MANCHESTER DALTON ELLIS HALLS EXTERNAL ROAD LIGHTING
Title	AS BUILT LIGHTING MEASUREMENT LAYOUT

Client	UNIVERSITY OF MANCHESTER
Architect	WILSON MASON

Project No.	Drawn By	Date	Checked	Scale
EA0039	JK	16.09.2025	KM	1:150

Acad Model	Revision
Drawing No. EA0039-E-63-SP-007	C01

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