MMA LIGHTING CONSULTANCY
Exterior Lighting Design Specialists

Langdale Mews
Private Lighting Design

Environmental Impact Assessment & Lighting Design Category Selection Process

MMA Project Number: MMA19394

Date: 16/05/2025

Produced by: Ben Tavill

Revision: R0

Issued by: -
MMA Lighting Consultancy Ltd
Summer Field House
99 Old Bath Road, Charvil, Reading, Berkshire, RG10 9QN
Tel: +44 (0) 0118 321 5636
Fax: +44 (0) 0118 321 5636
www.mma-consultancy.co.uk
info@mma-consultancy.co.uk

CONTENTS

LANGDALE MEWS – PRIVATE LIGHTING DESIGN

EXTERNAL LIGHTING ASSESSMENT

Clause	Description	Page No.
1.0	Introduction	3
2.0	Legal Requirements	3
3.0	Site Location	4
4.0	Baseline Conditions	5
5.0	Environmental Impact Assessment Conclusion	6
6.0	Lighting Design Selection Process	7
7.0	Site Safety, CDM and Risk Assessments	8

1.0 INTRODUCTION

This external lighting environmental impact assessment is a desk top exercise to establish the baseline conditions and the likely impact to the surrounding environment for the proposed housing development off Langdale Avenue, Levenshulme.

2.0 LEGAL REQUIREMENTS

This section summarises government policy on the environment with respect to external lighting.

2.1 STATUTORY DOCUMENTS

The Clean Neighbourhoods and Environment Act 2005 suggests under Town and County Planning (Assessment of Environmental Effects) Regulations 1988, developers should submit an assessment of the impact proposed external lighting will have on the environment.

While not specifically requiring external lighting schemes to be submitted for approval it does suggest planning authorities have the right to request such information as part of the approval process.

The Clean Neighbourhoods and Environment Act 2005 has made light pollution a statutory nuisance under the Environmental Protection Act 1990, which came into force on 6th April 2006.
Section 79 of the Environmental Protection Act 1990 (c43) is amended as follows: "artificial light emitted from premises so as to be prejudicial to health or a nuisance."

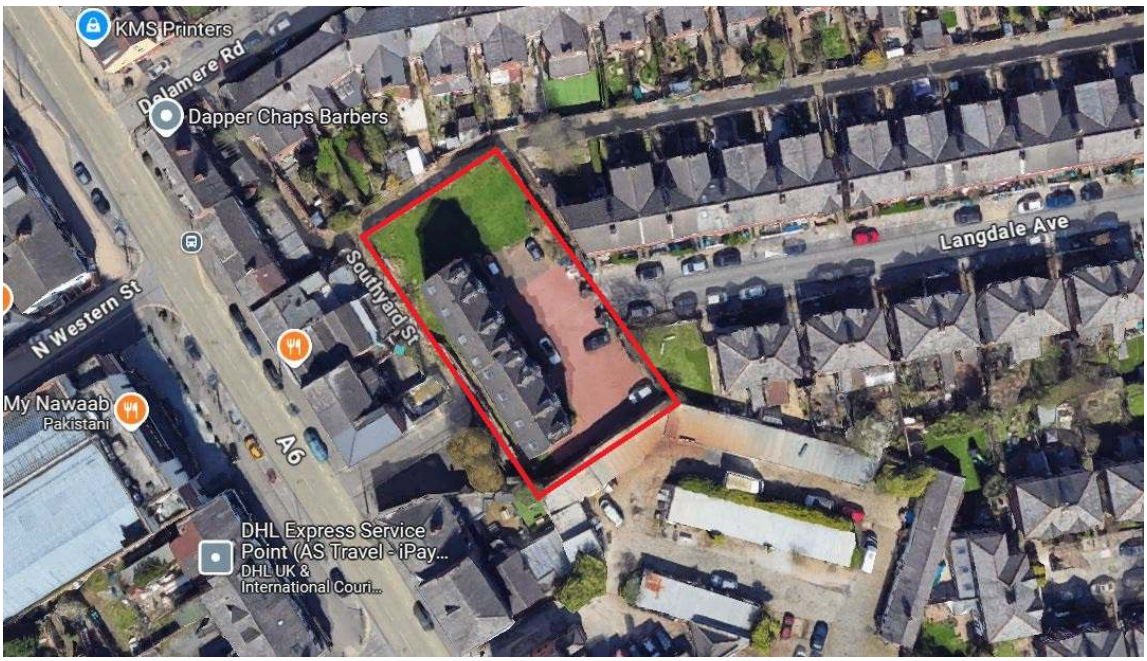
Although this specific act refers to artificial light emitted from a premise, it is good practice to ensure any newly installed external street lighting does not emit light on property frontages, nor should any new installation produce excessive upward light (know as light pollution) or be installed so as to 'over light' any street in relation to the external street lighting requirements detailed in the British and European lighting standards.

No prescriptive limits or rules are set for such assessments, but the following guidance documents have been referred to while compiling this assessment and in producing the external street lighting design for this specific project:

- British and European Standards for External Street lighting – BS 5489-1:2020 & BSEN 13201-2:2015
- Guidance notes for the reduction of obtrusive light – The Institution of Lighting Professionals (ILP)
- Environmental considerations for exterior lighting – Chartered Institution of Building Services Engineers (CIBSE).
- Outdoor Environment. Lighting guide 6 – CIBSE.
- CDM 2015 Regulations.

3.0 SITE LOCATION

The proposed site location for the housing development off Langdale Avenue, Levenshulme.



4.0 BASELINE CONDITIONS

The following describes the site in relation to existing sources of lighting. A review of areas and features of the landscape are also described.

The surrounding area to the proposed development is built up and mainly consists of residential dwellings.

All the surrounding streets are currently lit by systems of street lighting which are owned and maintained by the local council.

Sensitive receptors to light are surrounding residential properties and local wildlife.

The Institution of Lighting Professionals published a reference document GN01/21 – Guidance notes for the reduction of obtrusive light, which provides definitions of environmental zones and levels of permissible light trespass.

Using Table 2 below, it would indicate that the area would be classified as:
E3 Medium District Brightness Areas.

Table 2: Environmental Zones			
Environmental Zones	Surrounding	Lighting Environment	Examples
E0	Protected	Dark	Astronomical Observable dark skies, UNESCO starlight reserves, International Dark Sky Association (IDA) dark sky places
E1	Natural	Dark	Relatively uninhabited rural areas, National Parks, Areas of Outstanding Natural Beauty, IDA buffer zones etc.
E2	Rural	Low District Brightness	Sparsely inhabited rural areas, village or relatively dark outer suburban locations
E3	Suburban	Medium District Brightness	Well inhabited rural and urban settlements, small town centres of suburban locations
E4	Urban	High District Brightness	Town/city centres with high levels of night-time activity

Table 3: Maximum values of vertical illuminance on properties						
Light Technical Parameter	Application Conditions	Environmental Zone				
		E0	E1	E2	E3	E4
Illuminance in the vertical plane (Ev)	Pre-curfew	n/a	2 lux	5 lux	10 lux	25 lux
	Post-curfew	n/a	0.1 lux	1 lux	2 lux	5 lux

Table 6: Maximum values of upward light ratio (ULR) of luminaires					
Light Technical Parameter	Environmental Zone				
	E0	E1	E2	E3	E4
Upward light ratio (ULR) /%	0	0	2.5	5	15

5.0 IMPACT ASSESSMENT CONCLUSION

The proposed lighting scheme will ensure that the neighbouring residences do not have light spillage onto their property as that would be deemed to be unacceptable in line with current guidelines.

It is proposed that the lighting impact can be minimised by using accepted methods of lighting control, essentially limiting illuminance and controlling light spill.

It is proposed that the street lighting shall be installed on 5m lighting columns. Generally lighting shall be selected to provide safety and security without polluting the boundary site residents.

All luminaires are to have electronic drivers. The light source specified for this lighting scheme is LED, this is a low lumen output high efficiency light source.

The electronic drivers and LED's running together produce a very efficient street lighting system which reduces overall energy usage and environmental impact on natural resources.

Desk top calculations and assessments on the proposed street lighting installation indicate (with respect to identified sensitive receptors) that overall surrounding light pollution levels will not be significantly influenced by the proposed street lighting.

These accepted methods have all been adopted within the proposed lighting design to keep the overall impact of the lighting to a minimum.

In summary it is our considered opinion that the proposed street lighting installation will not have any significant negative impact on the immediate environment with respect to lighting pollution or energy usage and that all sensible steps have been taken within the design stage of this lighting scheme to keep the impact to the environment to a minimum.

6.0 LIGHTING DESIGN SELECTION PROCESS

It has been assessed that the lighting levels shall be in accordance with the British Standard BS 5489-1:2020 and BS EN 13201-2:2015 recommendations.

Private car park lighting classification: Light Traffic (BS 5489-1:2020, Table 4)

Minimum maintained average illuminance (Eav): >5.00 lux
Emin/Eav (Uniformity): >0.25 (>25%)

The street lighting proposals are to use a total of **three** galvanised tubular steel lighting columns of 5m nominal height with a post top mounted DW Windsor Kirium Pro Mini 1.93klm 3000k (KIRIUM PRO MINI 8LED 3k C2 Rear Shield 650mA UMSUG 42 0016 0000 100) LED lantern complete with integral rear shield and Electronic DALi enabled driver and Lucy Zodion ZCELL LED 20 lux (1:1 ratio).

Electrical supply connections to each lighting column shall be determined by others.

Hand digging shall be required for the installation of the new lighting columns.

Correct/up to date stats should be obtained by the contractor / developer, and all services are to be located and identified prior to installing any lighting columns.

Works should be carried out in accordance with current BS 7671, G39/1, and HSE regulations.

No illuminated sign details have been supplied by the client for this scheme.

No proposed utility information for Electricity, Gas and Water have been provided. As such the street lighting design should not be built until full information has been provided and the proposed lamp column positions checked against the stats details to ensure no conflict or danger to lives.

The provided site layout does not allow for a 6 digit coordinate to be provided within the equipment schedule. Therefore, the shown figures directly correlate to the layout drawing.

Each proposed road lighting column will require a protective wraparound barrier to be installed to protect against damage from vehicles.

Integral rear shields are proposed to all lanterns to reduce backward light spill.

7.0 SITE SAFETY, CDM AND RISK ASSESSMENTS

All street lighting installation works should be carried out whilst taking into account the current Health and Safety regulations and also where applicable the current CDM2015 regulations. Projects after the 6th April 2015 shall comply with CDM2015 or be in the transitional process.

As the 'Designer' under the CDM2015 Regulations, MMA Lighting Consultancy expects the 'Client' to fully understand their duties and responsibilities under the current CDM2015 Regulations; this statement is set out to make the client aware of "client duties" required under CDM2015. As a designer it is our responsibility to reduce and eliminate foreseeable health and safety risks to anyone effected by the project, take steps to reduce or control risks that cannot be eliminated and take account of any pre-construction information provided to us by the client or principal designer. On submission of this design to the client, the client must pass the full MMA Lighting Consultancy design pack onto the Principal Designer (if involved) for inclusion in the pre-construction information and health and safety file.
Under CDM2015 a project is notifiable if construction work lasts longer than 30 working days AND has more than 20 workers working simultaneously at any point, or exceeds 500 person days. An F10 form must be submitted if the above applies and the form can be found online at www.hse.gov.uk.

This form must be submitted by the Client to the Health and Safety Executive. The only exception to this is where the project is for a domestic scheme, in this instance the responsibility automatically passes to the Contractor (or Principal Contractor). The Principal Designer can assume the responsibility for notification of a domestic project, but only where there is a written agreement between the domestic client and the Principal Designer that that they will carry out the client duties. Works that do not exceed the 30 day, 20 workers or 500 person days rule may still need to have the CDM2015 regulations applied but may not be notifiable. It is advised that the companies CDM2015 regulations trained personnel assess the project and make the necessary arrangements to meet the CDM2015 regulation requirements.
If in doubt it is recommended that the company seeks professional advice.

As designers under the CDM2015 regulations it is our duty to recommend that an 'HEA' approved contractor be used for the electrical installation works. All lighting installation works should comply with the IET 18th Edition Wiring Regulations (BS 7671 The IET Wiring Regulations). This is the national standard to which all domestic and industrial wiring installations must conform to.

A Generic Risk assessment should be carried out by the approved contractor prior to the commencement of any site work. Specific Risk Assessments should then be carried out for all electrical street lighting works.

It is recommended that the approved contractor undertakes site supervision of the new installation at all times. Once the contractor has completed the installation works the contractor is to confirm the installation complies with the IET 18th Edition Wiring Regulations by producing electrical test certificates. All electrical test certificates shall be submitted to overseeing organisation.

Prepared By: -

[redacted]. (Signed) Ben Tavill (Print Name) 16th May 2025 (Date)

Reviewed By: -

[redacted] (Signed) Mark Chandler (Print Name) 16th May 2025 (Date)