

BACK TURNER STREET EXTERNAL LIGHTING

Lighting Assessment
Ref: P712-EXT-001

NOVO

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AMENDMENT HISTORY



REVISION	DESCRIPTION	DATE	AUTHOR	CHECKED
A	Lighting Assessment	April 2022	R. Grubb	B. Duckworth

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1 EXECUTIVE SUMMARY

The aim of this lighting environmental impact report at Back Turner Street was to demonstrate that the internal lighting would not spill through the glazed façade that may have on the surrounding areas.

The design goal was to provide adequate horizontal illumination for the internal office working space during daylight & non-daylight hours which provides a safe method of passage & working environment.

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

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

The calculations demonstrate no adverse impact to residents above existing ambient values of illumination already in place.

2 INTRODUCTION

The design goal was to provide adequate horizontal illumination for the internal office working areas during daylight and non-daylight hours which provides a safe method of passage/ working environment without any potential nuisance lighting to the surrounding residents.

The basis of this report is to acknowledge, consider and apply the specific requirements of the Institute of Lighting Professionals (ILP) Guidance Note on the Reduction Of Obtrusive Light and to provide adequate new lighting in line with current British Standards & CIBSE Lighting Guidance Documents.

2.1 SITE LOCATION & CONTEXT

Back Turner Street is a commercial office building within Manchester. The 17-story development consists of a large number of open office space with view across Manchester.

Generally no surrounding buildings look directly towards the multi-storey office development.

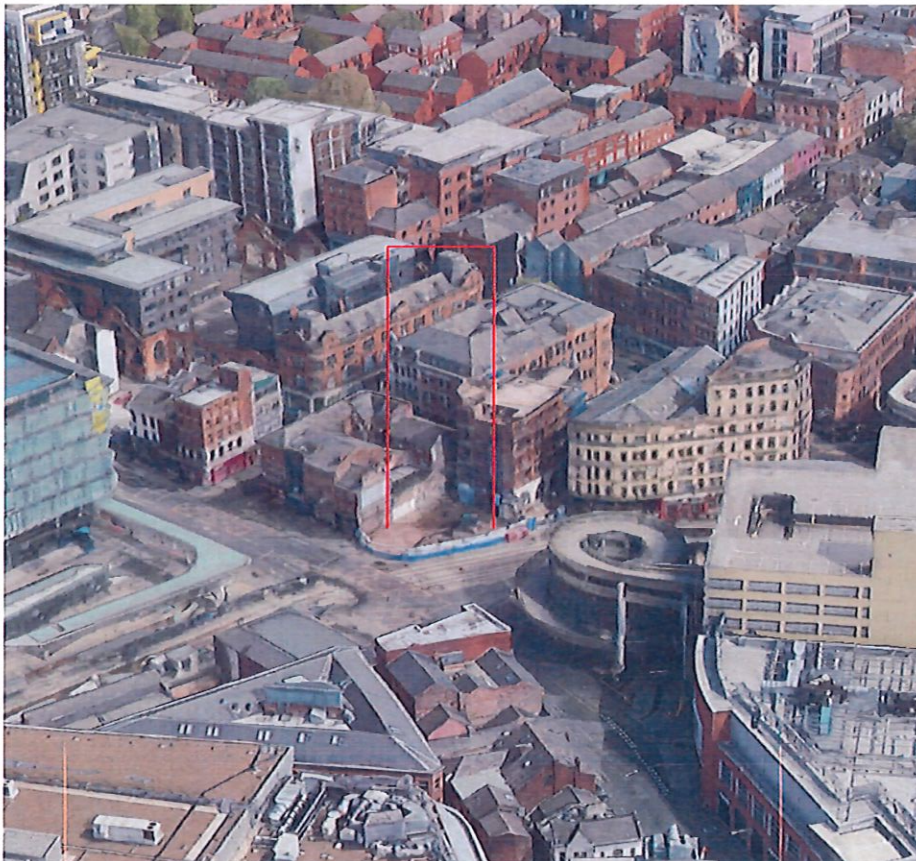


Figure 1: Back Turner Street Location Map

The proposed lighting is to provide generally office space lighting. This is to be via suspended linear LED luminaires mounted to the internal soffit of each level.

3 LEGISLATION & DESIGN GUIDANCE PERFORMANCE CRITERIA



3 LEGISLATION & DESIGN GUIDANCE PERFORMANCE CRITERIA

3.1 INSTITUTE OF LIGHTING PROFESSIONALS GUIDANCE GN1/20 NOTE ON THE REDUCTION OF OBTRUSIVE LIGHT 2020

The Institution of Lighting Professionals (ILP) is the UK and Ireland's largest and most influential professional lighting association.

The ILP have produced considerable design guidance with regard to obtrusive light, which is considered an industry standard in the avoidance of obtrusive light being present in external lighting installations.

In addition to wasted energy due to poorly controlled and misdirected light, the potential to cause a nuisance to surrounding areas through glare and sky glow have a potential adverse impact on local wildlife.

3.2 LUMINAIRE SELECTION

The luminaire proposed for the office area lighting is a Ricoman Estrella LED – Back finish. Surface linear LED luminaire 28W, 4000k completed with an opal polycarbonate diffuser to reduce the risk of glare. The LED linear luminaire is also available with an integral photocell as standard.

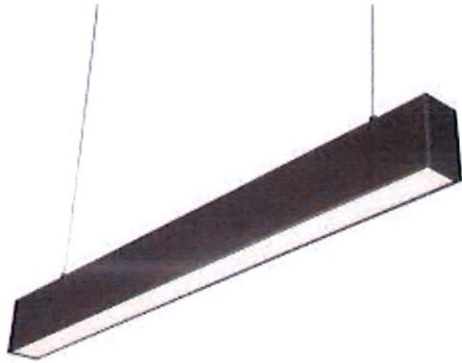


Figure 2: Proposed LED Linear

3.3 LIGHTING CONTROLS

The lighting is to be controlled via a photocell to reduce wasted energy within day light hours & non day light hours. The lighting will be set on 15minuet timers to switch the luminaires off.

3.4 SKY GLOW & BACKSPILL

Sky glow and backspill from the proposed lighting has been negated due to the fact the luminaires are complete with the upper eyelid eliminating potential upward lighting. The luminaires are located internally with solid ceilings, no sky glow back spill possible.

4 APPENDICES



4 APPENDICES

Appendix A	Internal Lighting Layout
Appendix B	Internal Lighting Calculation



Appendix A

Internal Lighting Layout

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DESIGNER: RISK ASSESSMENT
PROJECT: P712-NOV-XX-05-DR-E-6301
REVISION: C08

SAFETY, HEALTH & ENVIRONMENTAL INFORMATION
There are no significant, unusual or location specific risks which are not addressed to a competent contractor or likely to be difficult to manage.

LOGGING & LUMINAIRE LAYOUT

SYMBOL

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PLEASE REFER TO LUMINAIRE SCHEDULE

LIGHTING & EMERGENCY LIGHTING

STAGE 5

NOVO

Integration LED

7 Field Road, London, UK

020 8111 2270

www.novoleading.com

CLIENT

SALBOY

PROJECT

BACK TURNER STREET
MANCHESTER

TITLE

ELECTRICAL SERVICES
FIFTH FLOOR
LIGHTING & EMERGENCY LIGHTING

SCALE

1:100

DATE

AUG 20

REVISION

C08

PROJECT INFORMATION

PROJECT NAME: P712-NOV-XX-05-DR-E-6301

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PROJECT: P712-NOV-XX-05-DR-E-6301
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Appendix B

Internal Lighting Calculation