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Building Services Engineering | Sustainability | Acoustics

Saltbox – RMG Showroom
Richmond Motor Group

External Lighting Statement

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Scotch Partners LLP

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Project Particulars

Client Name: Richmond Motor Group

Project Name: Saltbox – RMG Showroom

Project Number: 5203

Document Reference:

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Revision History

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1 Introduction

This document describes the proposed external lighting systems to be provided in connection with the proposed new car showroom on the Saltbox – Bognor Regis site. It sets out the basis of design and criteria to be adopted for the external lighting design for the development including on site access roads and paths, car parking areas, external surface storage area and landscaped courts.

1.1 Design Requirement and Philosophy

The design requirement is to provide site wide lighting systems, to facilitate safe and secure movement around the site for pedestrians, cyclists, cars and delivery vehicles. Key drivers include:

- Energy efficiency, dictating that illuminance is directed to areas required, that high efficiency luminaires and lamp sources are used and that lighting is controlled to ensure that luminaires are not lit when not required.
- Minimised obtrusive light spill from the site, dictating that luminaires are selected and directed to manage light distribution to the areas required and to minimise light spill from the site either vertically, that would result in light pollution or horizontally, that may be obtrusive to external observers.

1.2 Relevant Sources

In determining the basis of design for the external lighting systems, the following sources have been duly considered:

Ref.	Title
1.	CIBSE LG6 –Lighting Guide, The Outdoor Environment, 1992
2.	BREEAM New Construction, Non-Domestic Buildings, Technical Manual SD5073 - 2.0:2011. Section Ene 03, External Lighting and Poi 04, Reduction of night time light pollution.
3.	ILE Guidance Notes for the Reduction of Obtrusive Light, as referenced by BREEAM (above).
4.	BS 5489 Code of Practice for the Design of Roadway Lighting, Part 9 – Car Park Lighting, dated 1992
5.	Previously issued “Design Statement for Pre-application Enquiries”, issued by Hampton Brook in connection with previous planning enquires.
6.	Email from Brian Rodger, Crime Prevention Design Advisor, Safer MK to Debbie Kirk, senior planning officer at Milton Keynes Council, dated 16 th March 2011.

Criteria defined by these reference sources identified by superscript numbers (e.g. ⁽¹⁾)

1.3 Basis Of Design

External lighting will be provided to site access roads and paths, car parking areas, external surface storage areas and landscaped courts in accordance with the above “Relevant Sources” and the following specific design criteria:

Area	Maintained Illuminance
General Car Parking Area	20 lux ⁽¹⁾
Service Yards	50 lux
Access Road	25 lux
Pedestrian Walkways	20-25 lux

Appendix 1 contains a plan showing deliniation of areas.

Uniformity ratio (minimum to average) 0.4 typical. 0.25 minimum. ⁽⁶⁾

Minimum colour rendering performance of light sources = 60Ra ^(2,6)

Luminaires will be selected to comply with the ILE Guidance Notes for the Reduction of Obtrusive Light⁽³⁾ based on the site being clasified as Environmental Zone E3 – “Medium district brightness area – Small town centres or Urban Locations”, including:

Environmental Zone	Sky Glow ULR (Max %)	Light Trespass into windows (lux)		Source Intensity (kcd)		Building Luminance
		Pre-curfew	Post-curfew	Pre-curfew	Post-curfew	Average, L (cd/m2)
E3 - Urban Locations	5	10	2	10	1	10

1.4 Luminaire Types

Lighting to on-site roads and parking aeas will be provided by LED column mounted luminaires, with a maximum column height of 8m and a minimum luminous efficiency of 95 lamp lumens / circuit watt ⁽²⁾.

Luminaires will be contemporary in style, in keeping with the architectural style and colour pallet of the new building.

1.5 Control

External light will be controlled using a combination of photo cells, time switches and other control devices to:

- Prevent operation during daylight hours. ⁽²⁾
- Facilitate reduced coverage between midnight and 6am (curfew hours, variable by client) to satisfy minimum security requirements and reduce light pollution during unoccupied hours. ⁽³⁾

Luminaires will be divided on to logical circuits and control groups to facilitate different control strategies for primary access roads, general parking areas and primary pathways

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