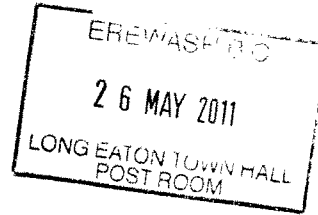


25 May 2011

Tesco Sandiacre Lighting design report:



Summary

This is a lighting strategy which sets out how the scheme will seek to ensure that it meets operational requirements without creating excessive overspill to neighbouring properties. We have taken due regard to British Standards and also to ILP guidance.

Main Car Park Area

The lighting strategy for the main car park area will provide 8m columns carrying Orion 1 lanterns accommodating 400W Sodium lamps. In terms of column height, this is reduced from standard Tesco 12m to 8m seeking to minimise any potential for overspill beyond the Tesco site boundary line, and to keep these structures in scale with the surrounding area. The lighting strategy will specify lanterns that produce <1% upward light. This specification allow us to minimise the amount of columns required to meet operational lighting needs (as specified by applicable British Standards) and, at the same time, minimise upward light spill.

Pedestrian Routes

The lighting strategy for the pedestrian routes will again seek to ensure that these areas are adequately lighted to meet operational and British Standard requirements, whilst minimising overspill. For the Pedestrian link, we will specify Pathseeker2 bulkhead lighting mounted at 3m height to meet this requirement. The draft lighting scheme has considered and undertaken vertical calculations for the nearest residential buildings on Station road and Longmoor lane.

Service Yard Area

The lighting strategy will recommend that the service yard should utilise Trent floodlights which are elevated just 10 degrees from horizontal and have a double asymmetric reflector as stated in ILP guidance notes- to prevent upward light and glare outside the service yard area. The Service Yard access road will be designed with flat glass Trivium road lanterns which are elevated just 5 degrees from horizontal which again satisfy the ILP guidance notes. This means that service yard lighting can be adequately controlled within the Tesco boundary line.

Overspill Comments

The lighting strategy has sought to minimise overspill, and has had consideration of the standing ILP guidance. The attached plan provides an indicative worst case assessment of the extent of overspill based upon the proposed lighting scheme. However, this takes no account of the intervening trees which will inevitably absorb light and recue overspill yet further. In addition, the lights can be dimmed as necessary to ensure that any overspill is minimised and is well within the recommendations of the ILP guidance. The maximal initial value of light trespass to windows is 2.2 lux. We are satisfied that the scheme will be wholly compliant with the standing ILP guidance, with opportunities to minimise overspill even further as may be necessary or desirable.

Report by:
Laura Karaleviciute
Lighting Designer

For and on behalf of
Abacus Lighting Ltd

25 May 2011

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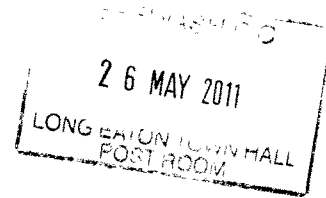
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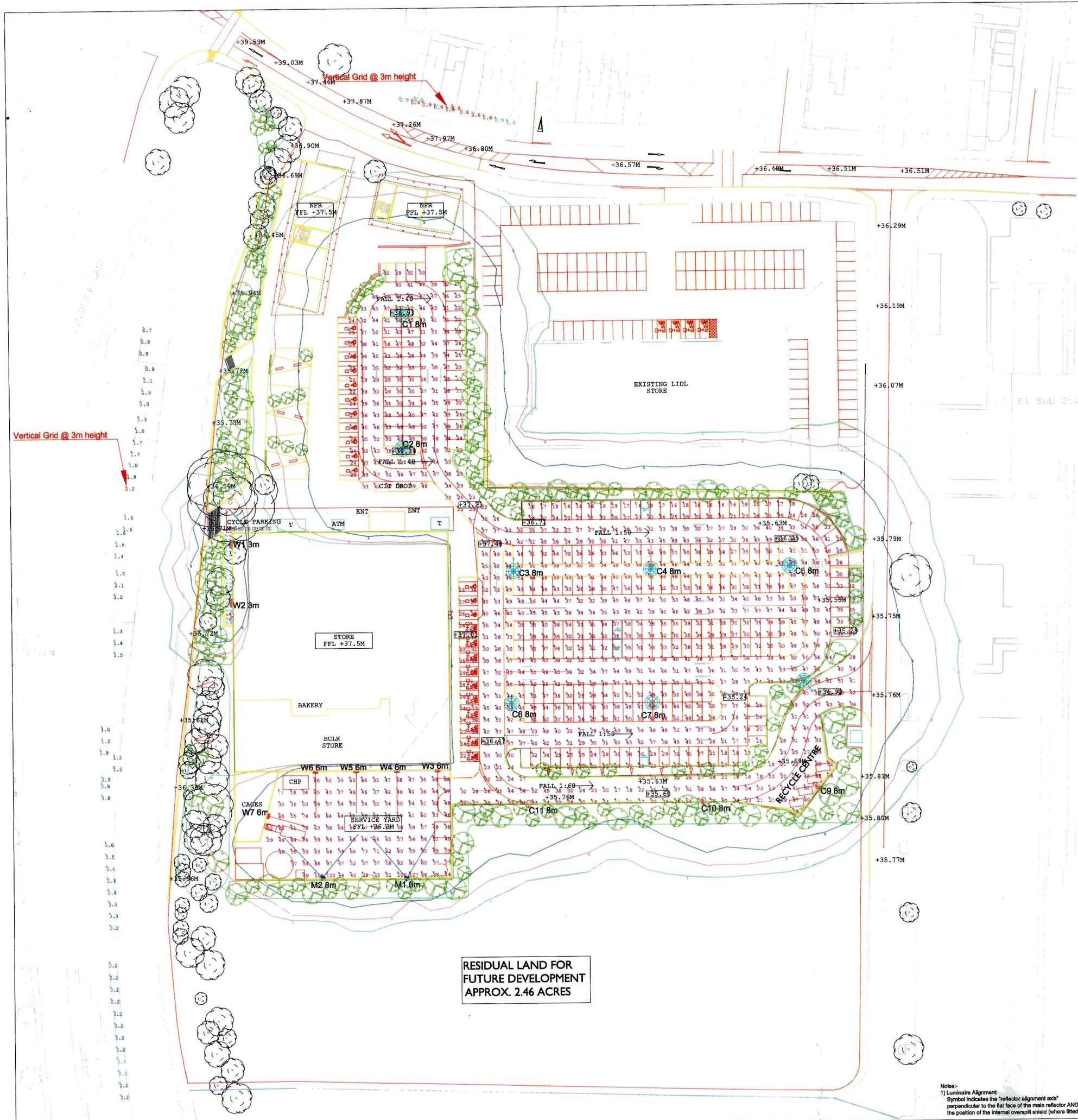
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Report by:
Laura Karaleviciute
Lighting Designer

For and on behalf of
Abacus Lighting Ltd

26 MAY 2011
LONG EATON TOWN HALL
POST ROOM



Lighting Equipment

8 x 8m columns carrying the following Orion 1 lanterns:
C1 - C8... 1 x AL4001/400W SONP-T

3 x 8m columns carrying the following Trivium lanterns:
C9 - C11... 1 x AL6314/150W SONP-T
Arm Projection: 0.5m
Bracket +5° / Spigot +5° / Lantern 0°

2 x 3m wall mounted Pathseeker2 lanterns:
W1 - W2... 1 x AL3151/70W SONP-T

2 x 8m masts carrying the following Trent lanterns:
M1 - M2... 2 x AL5023/250W SONP-T twin arc

5 x 6m wall mounted Trent lanterns:
W1 - W5... 1 x AL5023/150W SONP-T

Lamps

- 400W SONP-T (56,500 Lm)
- 150W SONP-T (17,500 Lm)
- 70W SONP-T (6,600 Lm)
- 250W SONP-T twin arc (27,500 Lm)
- 150W SONP-T twin arc (15,000 Lm)

Maintained Illuminance Levels

Main Car Park
Average Horizontal Illuminance (Eave): 33 lx
Minimum Illuminance (Emin): 11 lx
Uniformity (Emin/Eave): 0.33

Small Car Park
Average Horizontal Illuminance (Eave): 33 lx
Minimum Illuminance (Emin): 19 lx
Uniformity (Emin/Eave): 0.58

Service Yard
Average Horizontal Illuminance (Eave): 50 lx
Minimum Illuminance (Emin): 11 lx
Uniformity (Emin/Eave): 0.33

Service Yard Access Road
Average Horizontal Illuminance (Eave): 30 lx
Minimum Illuminance (Emin): 10 lx
Uniformity (Emin/Eave): 0.33
When service Yard is in use separately from car park, columns C6, C7, C8, C9, C10 & C11 needs to be switched on to light Service Yard access road.

Grid intervals: 2m, 3m & 5m
Grid values in lux
Contour values are 5, 2 and 1 lx

Maintenance factor: 0.9
Location: medium pollution
Cleaning intervals: 12 months

Note

1. Please check suitability of lighting equipment positions before placing an order.
2. calculations are based on a flat and open area
3. Calculations do not include shadowing effects from buildings, landscaping or foliage.

RESIDUAL LAND FOR FUTURE DEVELOPMENT APPROX. 2.46 ACRES

Notes:
1) Luminaire Alignment:
Symbol indicates the 'reflector alignment axis' perpendicular to the flat face of the main reflector AND the position of the internal overspill shield (where fitted).

ABACUS LIGHTING LTD. Sutton-in-Ashfield, Nottinghamshire NG17 5FT England Tel: (+44) 01623 511111 Fax: (+44) 01623 552133 Email: light@abacuslighting.com Home page: www.lighting4sport.com		Lighting Project: Tesco Sandiacre Title: Initial Horizontal & Vertical Illuminance Levels Design Ref: LS19511 Revision(s) From Previous Design:	
Design By: Laura Karaleviciute Date: 24/05/2011 Scale: 1:500 @ A1		All illuminance values are the result of computer calculations, based upon precisely positioned luminaires in a fixed relationship to each other and to the area under examination. In practice the values may vary due to tolerances on luminaires, luminaire positioning, reflection properties and electrical supply.	

