

EXTERNAL LIGHTING REPORT & SPECIFICATION



PROPOSED ALDI RETAIL STORE

SUSSEX HOUSE

PERRYMOUNT ROAD

HAYWARDS HEATH

RH16 1DN

BMT Ref: B2340

ISSUE: A –11.12.2024

1. INTRODUCTION & SITE CONTEXT

This report has been compiled specifically for Aldi Stores Ltd to support the planning application for to the proposed Aldi store development in relation to the local surroundings.

The development site is on the B2028 Perrymount Road and comprises the Sussex House office building, Colourschemer Interiors retail and office building and a Budgens and Post Office retail unit.



The site is surrounded by residential, commercial and community use buildings to the north, south and west.

The purpose of the report is to highlight the design parameters of the external lighting in considering the locality and Aldi UK's commitment to being a good and responsible neighbour.

Measures have been taken in the design and specification of the external lighting to minimise the overspill of artificial light across the Aldi boundary and also Sky Glow.

From **ILP Guidance** note 01/20 for the Reduction of Intrusive Light – Environmental Zone Classification would be:

SUBURBAN – Medium district brightness, well inhabited rural and urban settlements, small town centres of suburban locations – E3.

2. PURPOSE & OBJECTIVES OF THE LIGHTING DESIGN

The proposed External lighting installation will generally be provided for the following reasons:

- To meet the Health & Safety and Security obligations for Staff and Customers using the site
- Safe navigation of the external access routes and car park by private & delivery vehicles and pedestrians during the hours of darkness
- To aid the operation of the CCTV security surveillance systems
- To limit light pollution and sky glow.
- To limit obtrusive light, sky glow, spill light / trespass light and glare to neighbouring land and properties.

3. LIGHTING DESIGN ILLUMINATION CALCULATIONS & RESULTS

Statistics				
Description	Symbol	Avg	Min	Min/Avg
Spill Light	+	0 lux	0 lux	N/A
Car Park (20/5)	+	20 lux	4 lux	0.20
Walkway	+	21 lux	3 lux	0.20

Back lighting prevention shields shall be fitted to the single head columns on the car park boundaries to reduce light overspill behind the luminaire. The effects of these back shields is not reflected on the lux level plot shown on submitted drawing **B2340-ZZ-ZZ-DR-E-Ss_70_80_25_00-2101-A5-P01** so we would expect the values listed above to reduce when actually measured.

The standard shields prevent a direct view of the light source at certain angles from behind the luminaire. Further bespoke shielding (column fixed) can be added on the rare occasions where subjective comments are received.

All column and wall mounted luminaires are angled flat in relation to ground minimising any potential for upward light distribution.

Spill light falls well below the levels in Table 2 of the ILP Guidance.

All column luminaires specified in the proposal utilise high quality optics to ensure Zero, direct upward light output.

4. DESIGN & GUIDANCE REFERENCES

CIBSE Lighting Guide LG6. Surface car park accessible to the public.

ILP Guidance notes for the Reduction of Intrusive Light GN01/20.

BS EN 12464-2: Lighting of Work Places - Outdoor Work Places, British Standards Institute, 2007.

BS 5489-1: Code of Practice for the Design of Outdoor Lighting - Lighting of Roads and Public Amenity Areas, British Standards Institute, 2003.

Mid Sussex District Plan 2014-2031 [adopted March 28th 2018]

5. PROPOSED LIGHTING EQUIPMENT

Luminaires	Holophane Europe Ltd, FACTOR SMALL series (FTS), Metallic silver finish 	City Beam Wall Light CBU200WNWG 	Civic Lighting FLUX Canopy recessed 
Control Gear	Electronic driver	Electronic driver	Electronic Driver
IP Rating	IP65	IP65	IP44
Light Source	LED Array, nominal 3000k, 9000lumen	LED Array, nominal 3000k , 2000 lumen, 17w	LED Array, nominal 4000K, 2242 lumen, 19w

Distribution	Forward throw, Zero upward light output ratio Back light shields fitted	Downlight, Zero upward light	Downlight
Tilt angle relative to ground level	Zero	Zero	Zero
Control	Remote BMS Photocell and time schedule	Presence Detector	Remote BMS Photocell and time schedule
Mounting	6metre, galvanised finish conical column with base compartment for cut-out unit & bracket.	Wall	3.5m to underside of canopy
Final connection Cabling	3core 1.5sq.mm Heat resisting flexible.	3core 1.5sq.mm Heat resisting flexible.	3core 1.5sq.mm Heat resisting flexible.
Standards	EN60598, CE Marked	EN60598, CE Marked	

6. POWER SUPPLY & CONTROL DETAILS

All external lighting shown in the appended document **B2340-ZZ-ZZ-DR-E-Ss_70_80_25_00-2101-A5-P01** are subject to the following conditions and control measures:

- Private circuits from the retail store distribution board.
- Building Management System time schedule.
- Photo-electric cell sensing ambient light levels.
- Car park lighting **disabled** between 2300 – 0700 (i.e. curfew hours)
- Building perimeter security and task lighting only between hours of 2300 – 0700.
- Loading bay area Presence detection operated during hours of darkness only.

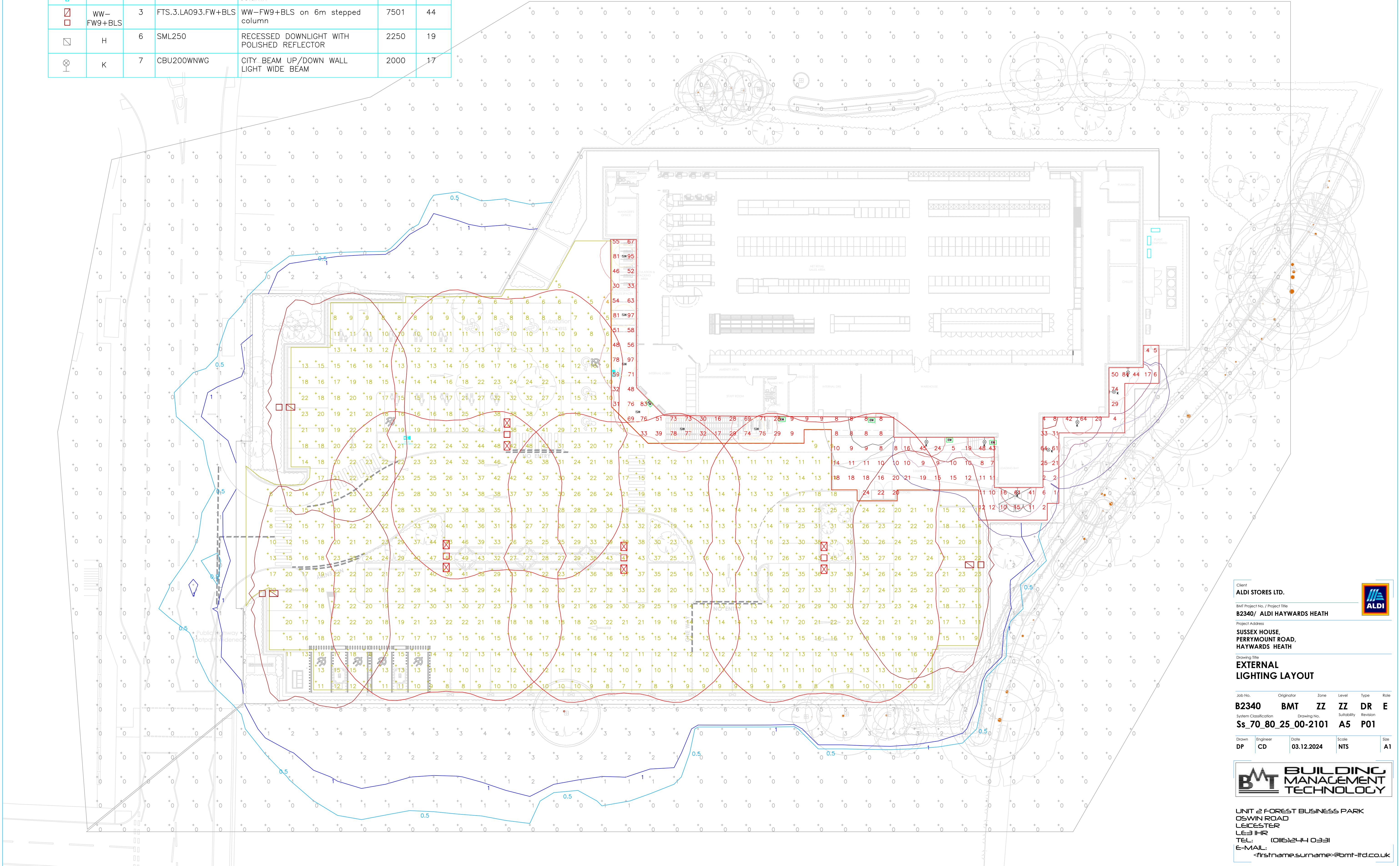
7. CONCLUSIONS

- The lux-plot provided demonstrates Aldi's commitment to providing lighting to ensure the health & safety of staff and public using the site but also shows that the lighting should not unduly affect the surroundings.
- Luminaires chosen for the task have very high quality, precision designed optics to accurately control the distribution of illuminance to the area that requires it and minimise spill light off the site.
- Luminaires have **zero direct upward light output ratio** and asymmetric distribution.
- Single head luminaires will also be fitted with purpose designed shields that masks the direct view of the light sources from behind the luminaire and mitigate affects to neighbours
- Lighting is designed to the recommendations of the Institute of Lighting Professionals (ILP) Guidance for the Reduction of Intrusive Light and meets E3 Zone recommended requirements.
- Lighting design illumination levels are chosen from Lighting Guide 6 published by the Chartered Institute of Building Service Engineers.
- 3000K temperature LED lighting is applied to all columns, the warmer colour temperature cause less impact to bats [than 4000K temperature [Aldi Stores Ltd standard]] [[Stone, 2021,2015a,2015b] Taken from Guidance Note 08/18 Bats and artificial lighting in the UK]
- All external (and internal) lighting will be LED, chosen not only for its high energy efficiency but also for their reduced spectrum of wavelengths and UV values.
- Car park column lighting is illuminated only when ambient light levels fall and is extinguished before 2300 hours.
- Building mounted lights to the delivery ramp primary function is task lighting (as opposed to flood lighting) for staff access/egress and presence controlled.

Schedule						
Symbol	Label	Quantity	Catalog Number	Description	Lumens Per Lamp	Wattage
	H	0	JEE.5312.157.37	Flux LED 1x34,5W LED nw VETRO SABBATO	3986	34.5
	K	0	MTA.5407.157AS.37	Apollo LED 25,8W LED nw	2220	25.8
	WW-2FW9	4	FTS.3.LA093.FW	3K-2FW9 3000K on 6m stepped column	7501	132
	WW-FW9+BLS	3	FTS.3.LA093.FW+BLS	WW-FW9+BLS on 6m stepped column	7501	44
	H	6	SML250	RECESSED DOWNLIGHT WITH POLISHED REFLECTOR	2250	19
	K	7	CBU200WNWG	CITY BEAM UP/DOWN WALL LIGHT WIDE BEAM	2000	17

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REV	DATE	DESCRIPTION	DRW	ENG
P01	03.12.2024	FIRST ISSUE	DP	CD



Client
ALDI STORES LTD.

BMT Project No. / Project Title
B2340/ ALDI HAYWARDS HEATH

Project Address
**SUSSEX HOUSE,
PERRYMOUNT ROAD,
HAYWARDS HEATH**

Drawing Title
**EXTERNAL
LIGHTING LAYOUT**

Job No.	Originator	Zone	Level	Type	Role
B2340	BMT	ZZ	ZZ	DR	E
System Classification	Drawing No.	Subsidiary	Revision		
Ss_70_80_25_00-2101	A5	P01			

Drawn
DP

Engineer
CD

Date
03.12.2024

Scale
NTS

Size
A1

BMT

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