

DESIGN AND ACCESS STATEMENT

Unit 1, Acre Road, Reading, RG2 0RJ



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1.0 Introduction

This Design and Access statement describes the proposed works to Unit 1, Acre Road. The proposed works include: replacing the front façade, rendering two structures on either side of the front elevation, installing new ventilation grilles and new condenser and increasing the number of parking spaces for the Unit.

This document forms part of the planning application submitted to Reading Borough Council. The document is therefore to be read in conjunction with the planning drawings and various appendices, listed within sections 5.0 and 6.0.

2.0 Site Context

2.1 Unit 1, Acre Road

Unit 1 is located in the centre of Acre Road between numbers 2 Acre Road and B1 Business Park. Unit 1 is within the district of Reading Borough Council.

The surrounding area is largely occupied by industrial units with a large proportion of warehouses and industrial business parks.

Unit 1 is an industrial unit with office accommodation at first floor level located towards the front of the warehouse. There is a car park located at the front of the building and a service yard to the rear with 4No. loading bay doors.

The overall building footprint is approximately 5680m² on a site of approximately 13000m².

3.0 Planning Context

Unit 1 is not a listed building and is not located within a conservation area.

4.0 Design and Access Statement

4.1 The Brief

The proposed works at Unit 1 include the internal and external refurbishment of Unit 1, Acre Road. This application relates to the external alterations to the property.

The existing front elevation is weathered, having been installed in 2002. It is proposed to replace the front façade with a new Kingspan MicroRib composite cladding and glass PPC aluminium framed curtain walling.

The two existing rendered structures either side of the front elevation are in poor condition with paintwork and render cracking and peeling away. It is intended to re-render these structures with a dark grey finish in keeping with the proposed front façade finishes.

The existing office is served by comfort cooling which is dated and unsustainable. It is intended to replace the comfort cooling with a new 3 pipe VRF system which will serve the first floor office and reception as detailed in Appendix 6.3. The condenser to serve the comfort cooling will be located adjacent to the side elevation away from the highway.

The existing uneconomical air handling unit is proposed to be replaced with new localised ventilation units within the ceiling void of

the first floor office. These internal ventilation units will be served by installing ventilation grilles on side return office elevations which will be finished in light grey to match the proposed Kingspan MicroRib cladding.

The previous tenant had installed external floodlighting to the front and rear elevations. It is intended to replace these floodlights with new LED fittings to provide a more energy efficient means of illuminating the external grounds (Appendix 6.4).

It is proposed to increase the number of car parking spaces, including disabled parking, and additional hard standing to the rear service yard.

Refer to Section 6.1 for existing photos of the site.

4.2 Summary Scope of Works

- Replacement of front Façade with new composite cladding and glass PPC aluminium framed curtain walling to the office entrance.
- Render the two structures either side of the front elevation.
- Installation of new condenser to serve the comfort cooling to the first floor office and entrance reception.
- New ventilation grilles on side return office elevations to serve the internal localised ventilation units to the first floor office.
- New external lighting to the front elevation and rear elevation.
- Creating 2 No. accessible and 7 No. additional parking spaces within the existing car park located at the front of the property.
- Creating additional hard standing to rear service yard.
- Replacing 4No. loading bay doors.

4.3 Design Statement

The proposed design of the front façade is in keeping with the surrounding area and will provide fresh new finishes to what is currently a tired and dated façade. The colours chosen are sympathetic and generally in line with other buildings within the industrial business parks in the immediate locale. The glazing will also contribute to improving the natural light within the building.

4.4 Access Statement

The proposed works will have no negative impact on the existing access into the building. Level threshold access will be provided within the proposed design to the new office reception entrance and alternative access point, both of which are located on the front elevation. The remaining access and egress points shall be as existing with the exception of replacing the existing loading bay doors with new.

5.0 Drawings

5.1 Drawings Submitted with Application

- SP – 01a : Existing Site Plan
- G – 01a : Existing Ground Floor GA Plan
- 1 – 01a : Existing First Floor GA Plan
- EL – 01a : Existing North & East Elevations
- EL – 02a : Existing South & West Elevations

- PL – 01a : Proposed Site Plan
- PL – 02a : Proposed Ground Floor Plan
- PL – 03a : Proposed First Floor Plan
- PL – 04a : Proposed North & East Elevations
- PL – 05a : Proposed South & West Elevations

- LP – 01 : Location Plan

- 2no. CGI illustrations of the proposed front elevation

6.0 Appendix

6.1 Existing Site Photos



Photo 1 – Front Elevation

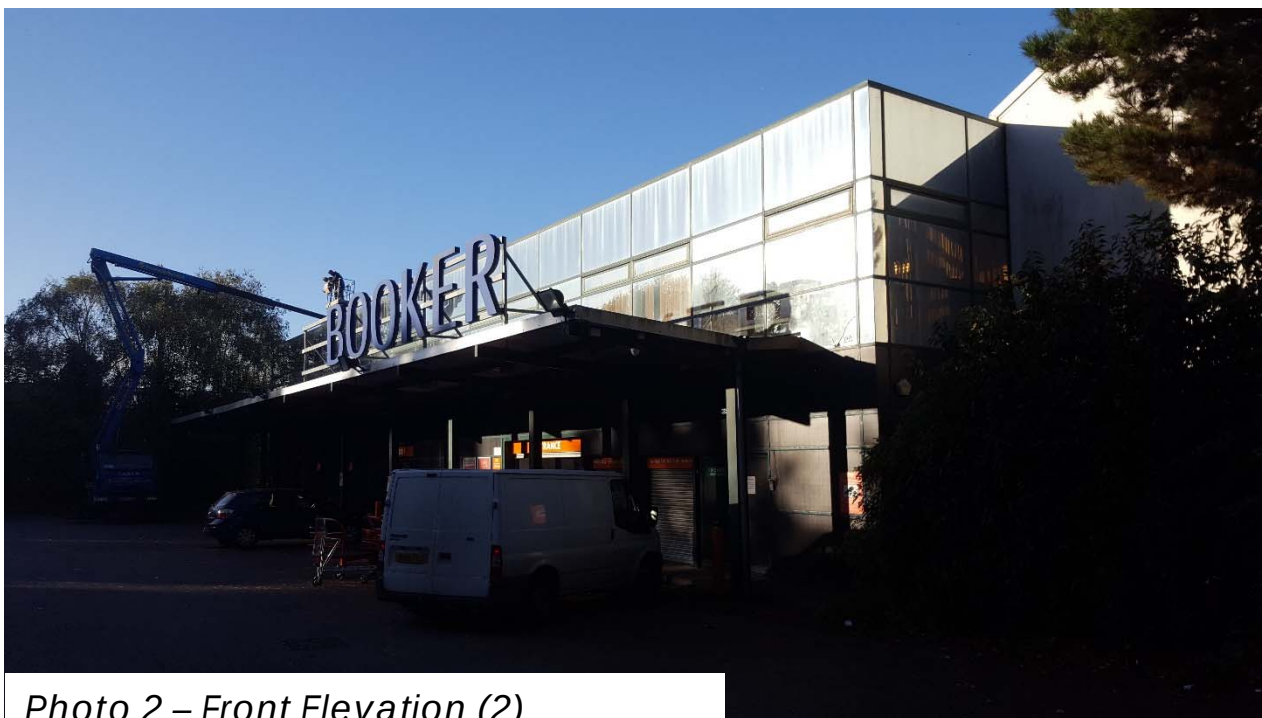


Photo 2 – Front Elevation (2)



Photo 3 – Area to be rendered.



Photo 4 – Area to be rendered.



Photo 5 – Area for additional hard standing in rear service yard



Photo 6 – Area for additional hard standing in rear service yard



Photo 7 – Car Entrance



Photo 9 – Car Park (2)



Photo 8 – Car Park (1)



Photo 10 – Car Park (3)

6.2 Design Team

Client	<i>South Yorkshire Pension Authority</i>
Project Manager	<i>tmd Building Consultancy Ltd</i>
Project M&E consultant	Watkins Payne Partnership
Principle Designer (CDM 2015)	<i>tmd Building Consultancy Ltd</i>

6.3 Condenser Data Sheet

VRV IV heat recovery

Outdoor system				REYQ	8T	10T	12T	14T	16T	18T	20T
Capacity range				HP	8	10	12	14	16	18	20
Cooling capacity	Nom.			kW	22.4 (1) (2)	28.0 (1) (2)	33.5 (1) (2)	40.0 (1) (2)	45.0 (1) (2)	50.4	56.0
Heating capacity	Nom.			kW	22.4 (3) (4)	28.0 (3) (4)	33.5 (3) (4)	40.0 (3) (4)	45.0 (3) (4)	50.4	56.0
	Max.			kW	25.0	31.5	37.5	45.0	50.0	56.5	63.0
Power input - 50Hz	Cooling	Nom.		kW	5.31 (1) / 4.56 (2)	7.15 (1) / 6.19 (2)	9.23 (1) / 8.31 (2)	10.7 (1) / 9.61 (2)	12.8 (1) / 11.9 (2)	15.2	18.6
	Heating	Nom.		kW	4.75 (3) / 4.47 (4)	6.29 (3) / 5.47 (4)	8.05 (3) / 6.83 (4)	9.60 (3) / 9.37 (4)	11.2 (3) / 9.88 (4)	12.3	14.9
		Max.		kW	5.51	7.38	9.43	11.3	12.9	14.3	17.5
					4.22 (1) / 4.92 (2)	3.92 (1) / 4.52 (2)	3.63 (1) / 4.03 (2)	3.74 (1) / 4.16 (2)	3.52 (1) / 3.79 (2)	3.32	3.01
EER					4.54	4.27	3.98	3.88	3.88	3.95	3.60
COP - Max.					4.72 (3) / 5.01 (4)	4.45 (3) / 5.12 (4)	4.16 (3) / 4.90 (4)	4.17 (3) / 4.27 (4)	4.02 (3) / 4.56 (4)	4.10	3.76
COP - Nom.					7.41	7.37	6.84	7.05	6.63	6.26	5.68
ESEER								64 (5)			
Maximum number of connectable indoor units											
Indoor index connection	Min./Nom./Max.				100/200/260	125/250/325	150/300/390	175/350/455	200/400/520	225/450/585	250/500/650
Dimensions	Unit	HeightxWidthxDepth		mm		1,685x930x765			1,685x1,240x765		
Weight	Unit			kg	210		218	304	305	337	
Fan	Air flow rate	Cooling	Nom.	m³/min	162	175	185	223	260	251	261
Sound power level	Cooling			dBA	78	79		81		86	88
Sound pressure level	Cooling			dBA		58		61		65	66
		Night	Level 1	dBA	56	58	58	58	58	60	60
		Quiet	Level 2	dBA	55	54	54	52	52	52	52
		Mode	Level 3	dBA	53	52	52	47	47	48	48
Operation range	Cooling	Min.~Max.		°CDB				-5.0~43.0			
	Heating	Min.~Max.		°CWB				-20~15.5			
Refrigerant								R-410A / 2,087.5			
Piping connections	Charge			kg/TCO ₂	9.7/20.2	9.8/20.5	9.9/20.7		11.8/24.6		
	Liquid	OD		mm		9.52		12.7		15.9	
	Gas	OD		mm	19.1	22.2			28.6		
	Discharge gas	OD		mm	15.9		19.1		22.2		28.6
Total piping length				System	Actual			1,000			
Power supply	Phase/Frequency/Voltage			Hz/V				3N~/50/380-415			
Current - 50Hz	Maximum fuse amps (MFA)			A	20	25		32	40		50

Outdoor system				REYQ	10T	13T	16T	18T	20T	22T	24T	26T	28T	30T	32T
System	Outdoor unit module 1				REMQST			REYQ8T		REYQ10T	REYQ8T		REYQ12T		REYQ16T
	Outdoor unit module 2				REMQST	REYQ8T		REYQ10T	REYQ12T		REYQ16T	REYQ14T	REYQ16T	REYQ18T	REYQ16T
Capacity range				HP	10	13	16	18	20	22	24	26	28	30	32
Cooling capacity	Nom.			kW	28.0	36.4	44.8	50.4	55.9	61.5	67.4	73.5	78.5	83.9	90.0
Heating capacity	Nom.			kW	28.0	36.4	44.8	50.4	55.9	61.5	67.4	73.5	78.5	83.9	90.0
	Max.			kW	32.0	41.0	50.0	56.5	62.5	69.0	75.0	82.5	87.5	94.0	100.0
Power input - 50Hz	Cooling	Nom.		kW	6.34	8.48	10.62	12.46	14.54	16.38	18.11	19.93	22.03	24.43	25.6
	Heating	Nom.		kW	5.42	7.46	9.50	11.04	12.80	14.34	15.95	17.65	19.25	20.35	22.4
		Max.		kW	6.50	8.76	11.02	12.89	14.94	16.81	18.41	20.73	22.33	23.73	25.8
					4.42	4.29	4.22	4.04	3.84	3.75	3.72	3.69	3.56	3.43	3.52
EER					4.92	4.68	4.54	4.38	4.18	4.10	4.07	3.98	3.92	3.96	3.88
COP - Max.					5.17	4.88	4.72	4.57	4.37	4.29	4.23	4.16	4.08	4.12	4.02
COP - Nom.					7.77	7.54	7.41	7.38	7.06	7.07	6.87	6.95	6.72	6.48	6.63
ESEER - Automatic					6.55	6.36	6.25	5.98	5.68	5.54	5.46	5.41	5.23	5.03	5.14
ESEER - Standard															
Maximum number of connectable indoor units															
Indoor index connection	Min.				125	162.5	200	225	250	275	300	325	350	375	400
	Nom.				250	325.0	400	450	500	550	600	650	700	750	800
	Max.				325	422.5	520	585	650	715	780	845	910	975	1,040
					9.52	12.7			15.9				19.1		
Piping connections	Liquid	OD		mm				28.6					34.9		
	Gas	OD		mm	22.2										
	Discharge gas	OD		mm		19.1		22.2				28.6			
	Total piping length	System	Actual	m			500					1,000			
Current - 50Hz	Maximum fuse amps (MFA)			A			40			50		63			80
Continuous heating										v					

Outdoor system				REYQ	34T	36T	38T	40T	42T	44T	46T	48T	50T	52T	54T
System	Outdoor unit module 1				REYQ16T		REYQ8T	REYQ10T		REYQ12T	REYQ14T		REYQ16T		REYQ18T
	Outdoor unit module 2				REYQ18T	REYQ20T		REYQ12T		REYQ16T			REYQ16T		REYQ18T
	Outdoor unit module 3						REYQ18T			REYQ16T				REYQ18T	
Capacity range				HP	34	36	38	40	42	44	46	48	50	52	54
Cooling capacity	Nom.			kW	95.4	101.0	106.3	111.9	118.0	123.5	130.0	135.0	140.4	145.8	151.2
Heating capacity	Nom.			kW	95.4	101.0	106.3	111.9	118.0	123.5	130.0	135.0	140.4	145.8	151.2
	Max.			kW	106.5	113.0	119.0	125.5	131.5	137.5	145.0	150.0	156.5	163.0	169.5
Power input - 50Hz	Cooling	Nom.		kW	28.0	31.4	29.74	31.58	32.75	34.83	36.3	38.4	40.8	43.2	45.6
	Heating	Nom.		kW	23.5	26.1	25.10	26.64	28.69	30.45	32.00	33.6	34.7	35.8	36.9
		Max.		kW	27.2	30.4	29.24	31.11	33.18	35.23	37.1	38.7	40.1	41.5	42.9
					3.41	3.22	3.57	3.54	3.60	3.55	3.58	3.52	3.44	3.38	3.32
EER					3.92	3.72	4.07	4.03	3.96	3.90	3.91	3.88	3.90	3.93	3.95
COP - Max.					4.06	3.87	4.24	4.20	4.11	4.06	4.02	4.02	4.05	4.07	4.10
COP - Nom.					6.43	6.06	6.66	6.68	6.79	6.68	6.75	6.63	6.49	6.37	6.26
ESEER - Automatic					4.97	4.70	5.25	5.20	5.28	5.20	5.23	5.14	5.03	4.93	4.84
ESEER - Standard															
Maximum number of connectable indoor units															
Indoor index connection	Min.				425	450	475	500	525	550	575	600	625	650	675
	Nom.				850	900	950	1,000	1,050	1,100	1,150	1,200	1,250	1,300	1,350
	Max.				1,105	1,170	1,235	1,300	1,365	1,430	1,495	1,560	1,625	1,690	1,755
										19.1					
Piping connections	Liquid	OD		mm							41.3				
	Gas	OD		mm	34.9										
	Discharge gas	OD		mm		28.6					34.9				
	Total piping length	System	Actual	m						1,000					
Current - 50Hz	Maximum fuse amps (MFA)			A		80			100				125		
Continuous heating										v					

Outdoor unit module				REMQ	5T
Dimensions	Unit	HeightxWidthxDepth		mm	1,685x930x765
Weight	Unit			kg	210
Fan	Air flow rate	Cooling	Nom.	m³/min	162
Sound power level	Cooling			dBA	77
Sound pressure level	Cooling			dBA	56
Operation range	Cooling	Min.~Max.		°CDB	-5.0~43.0
	Heating	Min.~Max.		°CWB	-20~15.5
Refrigerant					R-410A / 2,087.5
Power supply	Charge			kg/TCO ₂	9.7/20.2
	Phase/Frequency/Voltage			Hz/V	3N~/50/380-415
Current - 50Hz	Maximum fuse amps (MFA)			A	20

(1) Nominal cooling capacities are based on: indoor temperature: 27°CDB, 19°CWB, outdoor temperature: 35°CDB, equivalent refrigerant piping: 5m, level difference: 0m. Data for standard efficiency series. (2) Nominal cooling capacities are based on: indoor temperature: 27°CDB, 19°CWB, outdoor temperature: 35°CDB, equivalent refrigerant piping: 5m, level difference: 0m. Data for high efficiency series, Eurovent certified. (3) Nominal heating capacities are based on: indoor temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, equivalent refrigerant piping: 5m, level difference: 0m. Data for standard efficiency series. (4) Nominal heating capacities are based on: indoor temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, equivalent refrigerant piping: 5m, level difference: 0m. Data for high efficiency series, Eurovent certified. (5) Actual number of connectable indoor units depends on the indoor unit type (VRV indoor, Hydrobox, RA indoor, etc.) and the connection ratio restriction for the system (50% ≤ CR ≤ 130%)

6.4 External Lighting Data Sheet

Castello



Overview

The Castello is a range of high-performance asymmetric floodlights with high output and excellent control of light emission. Elegant in design, the Castello is ideally suited for lighting facades, shopping malls, residential areas, streets and car parks.

Features

- Utilises the latest in high efficiency LED technology
- Different output options
- DALI and 1–10V dimmable versions available on request
- Anthracite finish
- 4mm thick tempered glass
- IP66 rated, die-cast aluminium housing

Materials and Finishes

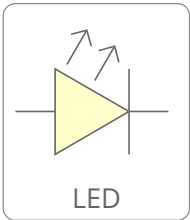
Body	Controller	Finish
Die-cast Aluminium	4mm Tempered Glass	Anthracite

Technical Details

Gear

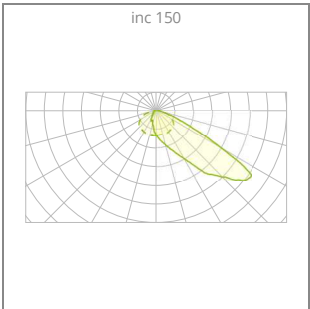
Integral Electronic LED Driver

Light Source



The output of LEDs is constantly improving therefore the type of LED in this product may change slightly to reflect the optimum performance offered by LED technology.

Photometric Data

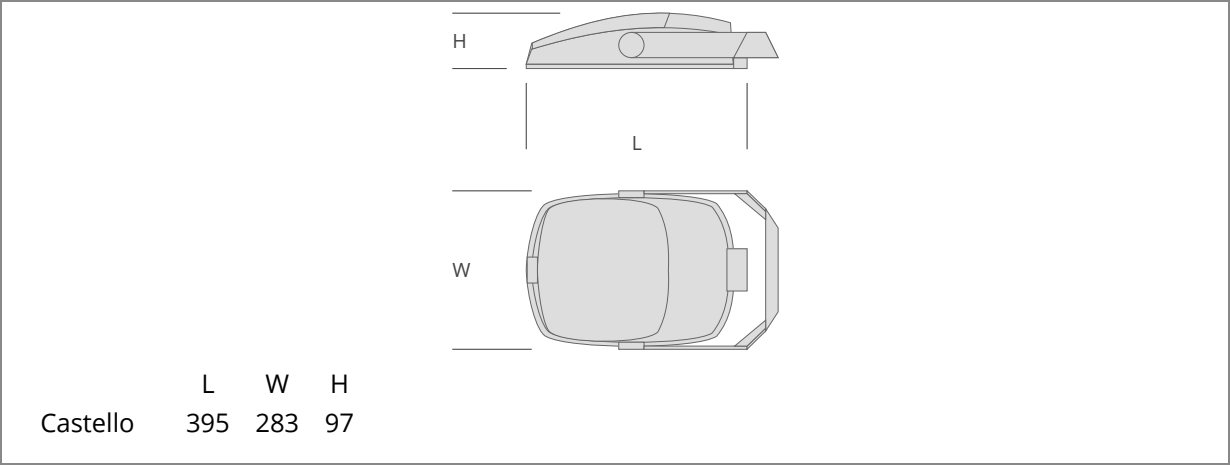


CAS128

Effective Output 16640 lm

Product Dimensions

Castello Dimensional Diagram



Options and Variations

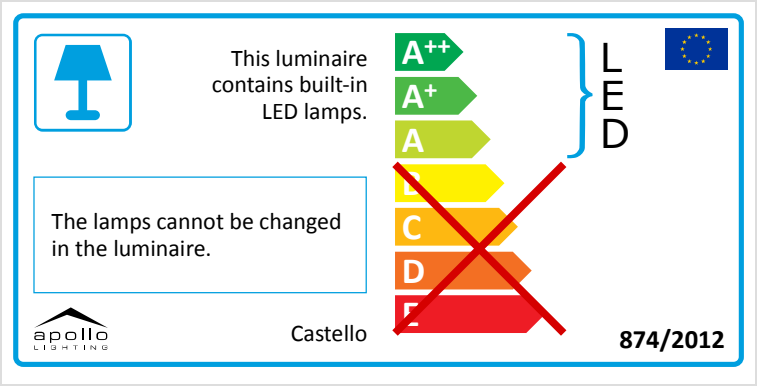
Order Code	Description	Light Source	Nom. Power (W)	Nom. Weight (kg)
CAS32	Castello Asymmetric Floodlight	4160lm 4000K LED	32	5.6
CAS64	Castello Asymmetric Floodlight	8320lm 4000K LED	64	5.6
CAS96	Castello Asymmetric Floodlight	12480lm 4000K LED	96	5.6
CAS128	Castello Asymmetric Floodlight	16640lm 4000K LED	128	5.6

Order Code Builder

CAS32

Castello Asymmetric Floodlight, 4160lm 4000K LED

Classification





Apollo Lighting Ltd

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