Condition 10.

Bradshaw Street

Installation :

Project number	:	LD18587
Customer	:	Edmundson Widnes
Processed by	:	JG
Date	:	22.03.2017

Project description:
As no information has been provided as to the specification for this project we have produced the attached calc to achieve the following :-

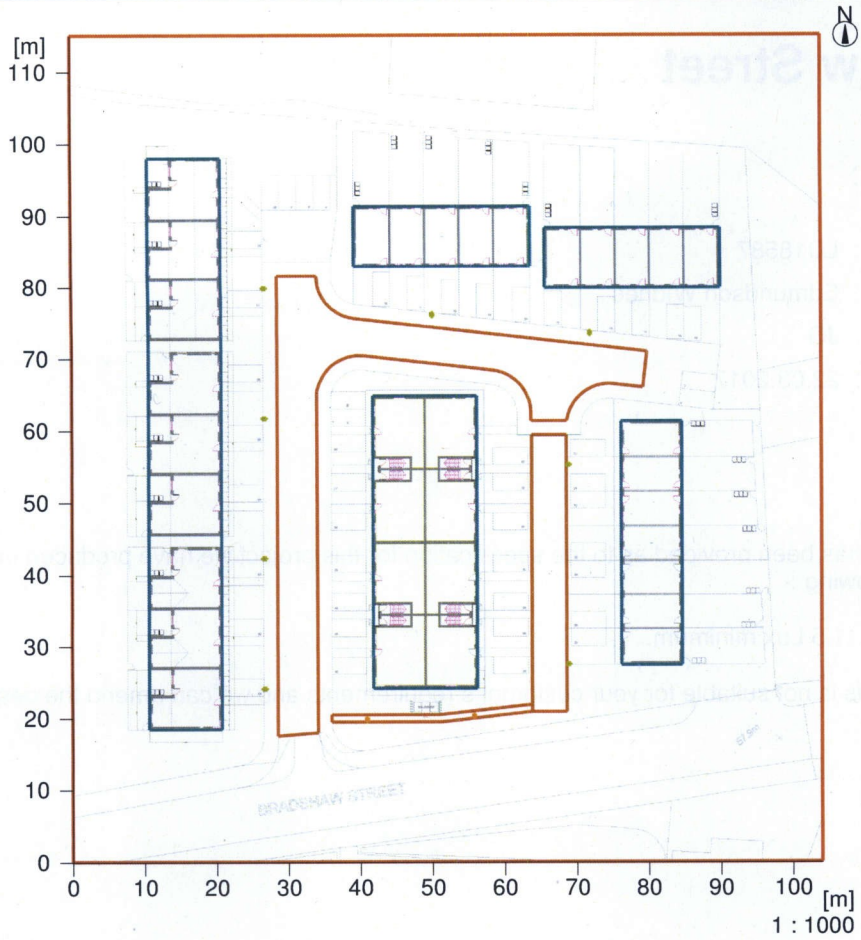
7.5 - 11.25 Lux Av. _1.5 Lux minimum.

Please advise if this is not suitable for your customer's requirements and we can amend the design accordingly.

2 Exterior 1

2.1 Description, Exterior 1

2.1.1 Floor plan

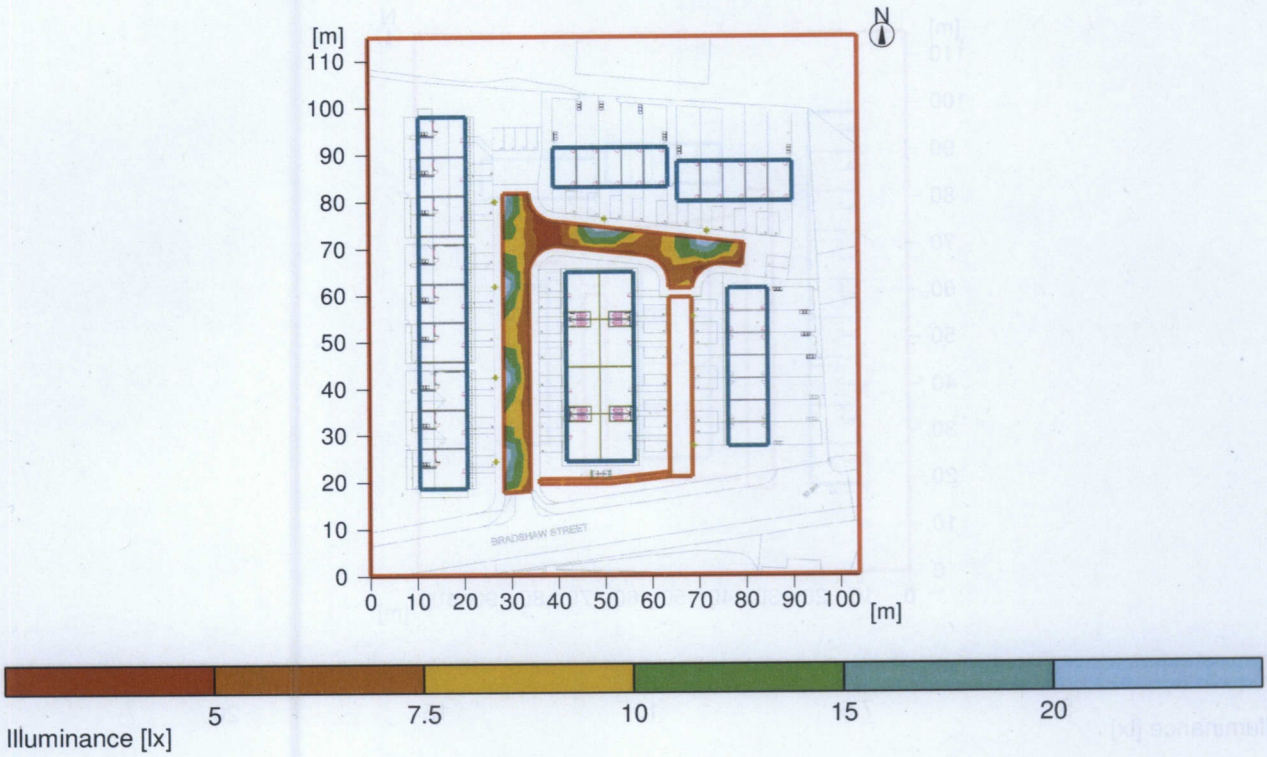


Object : Bradshaw Street
Installation :
Project number : LD18587
Date : 22.03.2017

2 Exterior 1

2.2 Summary, Exterior 1

2.2.1 Result overview, Measuring area 1.1



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
photometric centre height. [m]:	6.00 m
Maintenance factor	0.75
Total luminous flux of all lamps	32250 lm
Total power	306.8 W
Total power per area (11955.16 m²)	0.03 W/m²

Illuminance

Average illuminance	Eav	10.9 lx
Minimum illuminance	Emin	4 lx
Maximum illuminance	Emax	27.8 lx
Uniformity Uo	Emin/Em	1:2.74 (0.37)
Diversity Ud	Emin/Emax	1:6.96 (0.14)

Type No.\Make

NVC LIGHTING LTD

1 8

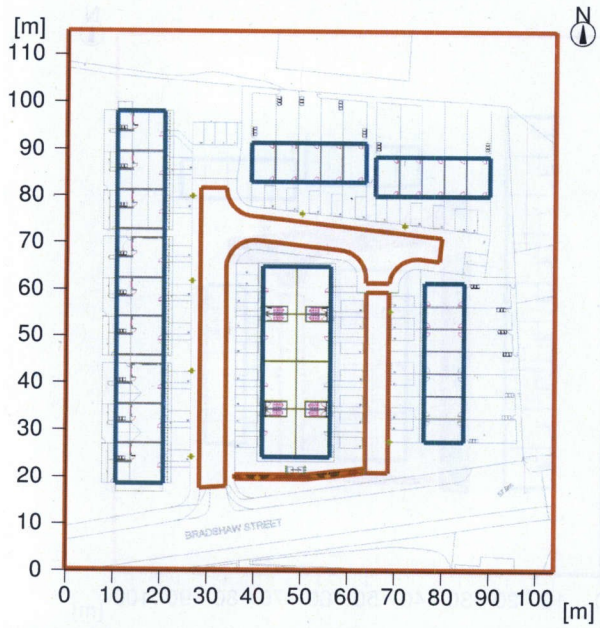
Order No.	: !NBF34/LED/OP2/740
Luminaire name	: NBF34/LED/OP2/740
Equipment	: 1 x LED MODULE 663mA 34.3 W / 3590 lm

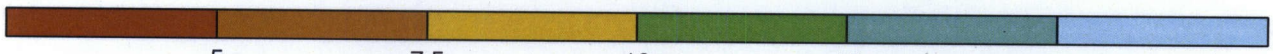
3 2

Order No.	: !NBF16/LED/OP2/740
Luminaire name	: NBF16/LED/OP2/740
Equipment	: 1 x LED MODULE 16.2 W / 1765 lm

2.2 Summary, Exterior 1

2.2.2 Result overview, Measuring area 1.2





Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
photometric centre height. [m]:	6.00 m
Maintenance factor	0.75
Total luminous flux of all lamps	32250 lm
Total power	306.8 W
Total power per area (11955.16 m²)	0.03 W/m²

Illuminance

Average illuminance	Eav	8.5 lx
Minimum illuminance	Emin	5 lx
Maximum illuminance	Emax	14 lx
Uniformity Uo	Emin/Em	1:1.69 (0.59)
Diversity Ud	Emin/Emax	1:2.77 (0.36)

Type No.\Make

NVC LIGHTING LTD

1 8

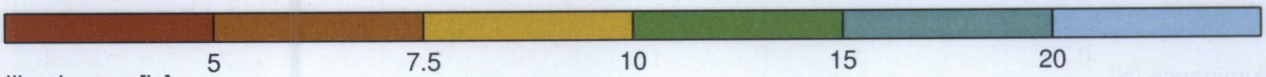
Order No.	: !NBF34/LED/OP2/740
Luminaire name	: NBF34/LED/OP2/740
Equipment	: 1 x LED MODULE 663mA 34.3 W / 3590 lm

3 2

Order No.	: !NBF16/LED/OP2/740
Luminaire name	: NBF16/LED/OP2/740
Equipment	: 1 x LED MODULE 16.2 W / 1765 lm

2.2 Summary, Exterior 1

2.2.3 Result overview, Measuring area 1.3



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
photometric centre height. [m]:	6.00 m
Maintenance factor	0.75
Total luminous flux of all lamps	32250 lm
Total power	306.8 W
Total power per area (11955.16 m²)	0.03 W/m²

Illuminance

Average illuminance	Eav	11.2 lx
Minimum illuminance	Emin	3.3 lx
Maximum illuminance	Emax	28.7 lx
Uniformity Uo	Emin/Em	1:3.42 (0.29)
Diversity Ud	Emin/Emax	1:8.77 (0.11)

Type No.\Make

NVC LIGHTING LTD

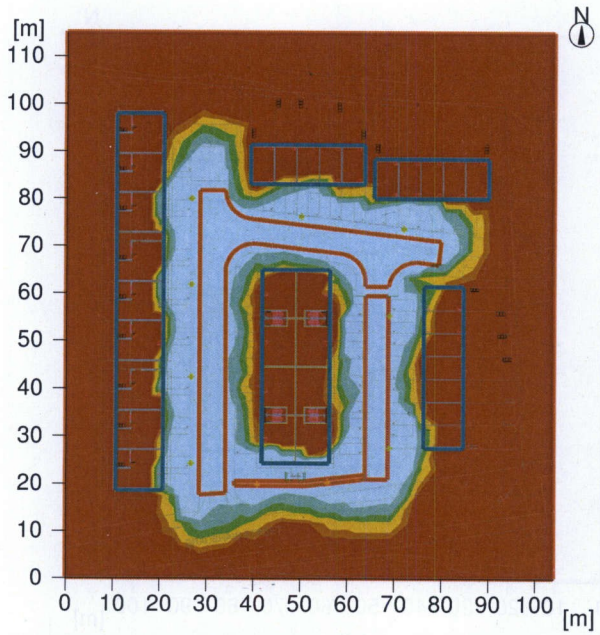
1 8
Order No. : !NBF34/LED/OP2/740
Luminaire name : NBF34/LED/OP2/740
Equipment : 1 x LED MODULE 663mA 34.3 W / 3590 lm

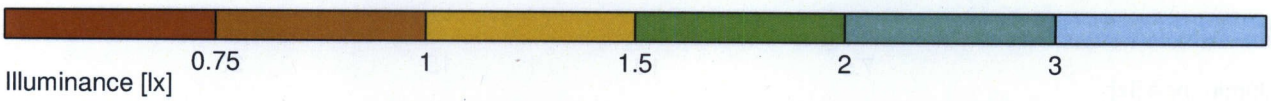
3 2
Order No. : !NBF16/LED/OP2/740
Luminaire name : NBF16/LED/OP2/740
Equipment : 1 x LED MODULE 16.2 W / 1765 lm

Object	:	Bradshaw Street
Installation	:	
Project number	:	LD18587
Date	:	22.03.2017

2.2 Summary, Exterior 1

2.2.4 Result overview, Evaluation area 1





General

Calculation algorithm used	Average indirect fraction
photometric centre height.	6.00 m
Maintenance factor	0.75
Total luminous flux of all lamps	32250 lm
Total power	306.8 W
Total power per area (11955.16 m²)	0.03 W/m² (1.48 W/m²/100lx)

Evaluation area 1	**Reference plane 1.1** Horizontal
Em	1.73 lx
Emin	0 lx
Emin/Eav (Uo)	---
Emin/Emax (Ud)	---
Position	0.00 m

Type No.\Make

NVC LIGHTING LTD

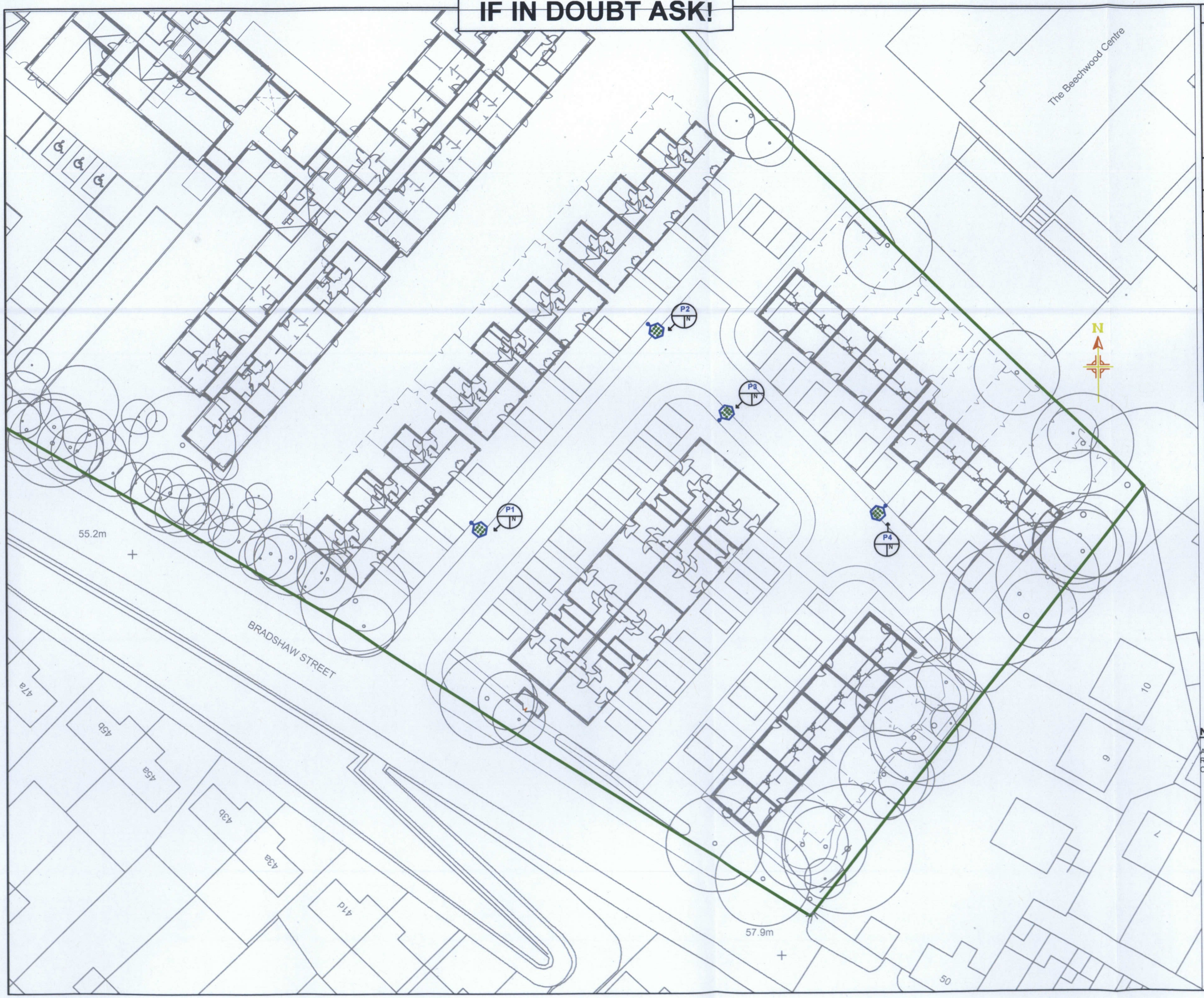
1 8

Order No.	: !NBF34/LED/OP2/740
Luminaire name	: NBF34/LED/OP2/740
Equipment	: 1 x LED MODULE 663mA 34.3 W / 3590 lm

3 2

Order No.	: !NBF16/LED/OP2/740
Luminaire name	: NBF16/LED/OP2/740
Equipment	: 1 x LED MODULE 16.2 W / 1765 lm

IF IN DOUBT ASK!



PLACES DIRECTORATE - INFRASTRUCTURE

BRADSHAW STREET WIGAN

SECTION 38 LIGHITNG LAYOUT

Drawing Number
SP1718/S38/B

Drawn: NG	Checked: CAP
Date: JULY 2017	Scale: 1:500

Wigan Council

Development Division
Places Directorate
Wigan Council
PO Box 100
Wigan.
WN1 3DS

AMENDMENTS	DATE

PROPOSED EQUIPMENT

New 6 metre Stainton Stainless steel lighting column with the Philips LWRTL MICRO LUMA RS 12-30 DS-NW 1 1100-7850 NW 12LED 4.0kim complete with starsense MK1.5RF node set to 50% unless stated.

Class	P Class lighting levels Horizontal Illuminance		
	$\bar{E}$ in Lux (min. maintained)	$\bar{E}$ in Lux (max. maintained)	$\bar{E}$min in Lux (maintained)
P5	3	4.5	0.6

NOTES:

ALL EXISTING SIGN PLATES SHALL BE TRANSFERRED FROM REDUNDANT LIGHTING COLUMNS TO NEW LIGHTING COLUMNS

KEY

P — Denotes proposed street lighting equipment

E — Denotes existing street lighting equipment

ES (ELECTRICAL SERVICES)

- **T** Electricity North West transfer of electricity service is required
- **N** Electricity North West new electricity service connection is required
- **D** Electricity North West disconnection of electricity service is required
- **LA** Local Authority electricity service connection is required
- **D/R** Direct replacement of lighting column is required. This includes same day disconnection and reconnection of United Utilities electricity service