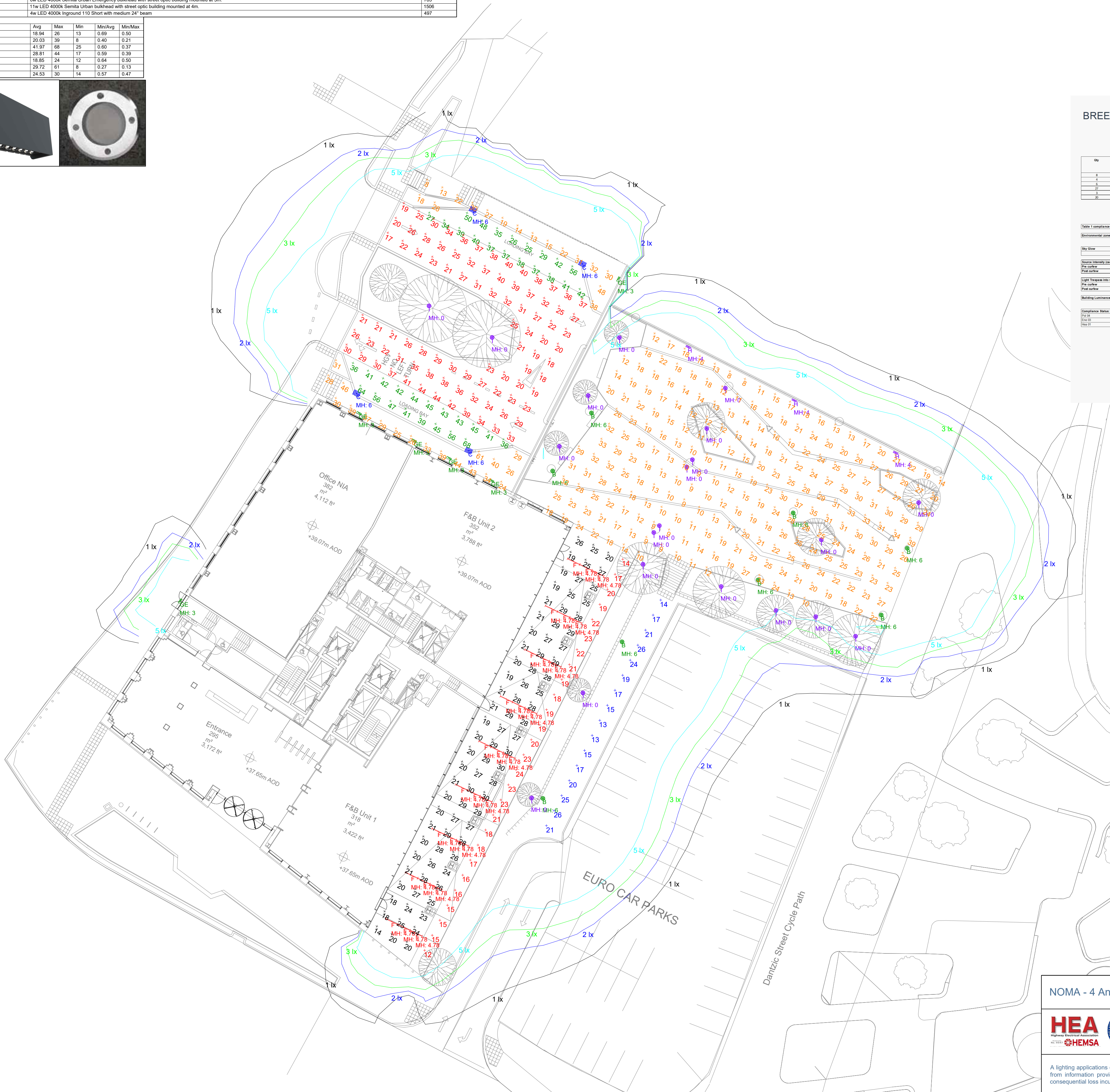
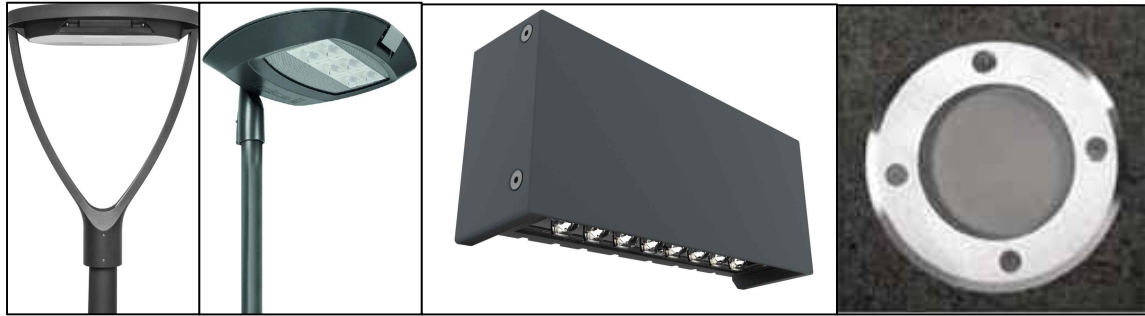


Dimensions are not to be scaled from this drawing

| Luminaire Schedule                                                              |     |       |             |                                                                                                 |  |             |
|---------------------------------------------------------------------------------|-----|-------|-------------|-------------------------------------------------------------------------------------------------|--|-------------|
| Symbol                                                                          | Qty | Label | Arrangement | Description                                                                                     |  | Lum. Lumens |
|  | 8   | S     |             | 42w (2 module) 700mA ECO RAYS TP with S05 Optic column mounted at 6m.                           |  | 4360        |
|  | 4   | C     |             | ITALO 2 Urban S05 4000K 700mA 4 module column mounted at 6m.                                    |  | 8610        |
|  | 27  | F     |             | 24w 4000K 1540mm (5ft) Climate Extra Single LED Array (Standard) mounted under canopy at 4.78m. |  | 860         |
|  | 6   | GE    |             | 6w LED 4000K Semita Urban Emergency bulkhead with street optic building mounted at 3m.          |  | 785         |
|  | 3   | H     |             | 11w LED 4000K Semita Urban bulkhead with street optic building mounted at 4m.                   |  | 1506        |
|  | 20  | I     |             | 4w LED 4000K Inground 110 Short with medium 24" beam                                            |  | 497         |

| Calculation Summary    |             |       |       |     |     |         |
|------------------------|-------------|-------|-------|-----|-----|---------|
| Label                  | CalcType    | Units | Avg   | Max | Min | Min/Avg |
| Car Park Footpath      | Illuminance | Lux   | 18.94 | 26  | 13  | 0.69    |
| Courtyard              | Illuminance | Lux   | 20.03 | 39  | 8   | 0.40    |
| Loading Areas          | Illuminance | Lux   | 41.97 | 68  | 25  | 0.57    |
| Parking Entrance Roads | Illuminance | Lux   | 28.81 | 44  | 17  | 0.59    |
| Pathway                | Illuminance | Lux   | 18.85 | 24  | 12  | 0.64    |
| Pavements              | Illuminance | Lux   | 29.72 | 61  | 8   | 0.27    |
| Under Canopy           | Illuminance | Lux   | 24.53 | 39  | 14  | 0.57    |



Kingfisher Lighting

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BREEAM New Construction 2018 (UK)



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| Qty | Range              | Light Source       | Lamp Lumens | Cloud Ratio | Lux/W  | LOI    | Luminaire Lumens | LA/CR | Upward Lumens | RA | MTF (Foot Day) | CO2 Calculation for year |
|-----|--------------------|--------------------|-------------|-------------|--------|--------|------------------|-------|---------------|----|----------------|--------------------------|
| 8   | ECO Rays           | S05 700mA 2 Module | 4360        | 42          | 104.26 | 100.0% | 36880            | 0.0%  | 0             | 20 | 12             | 0.34                     |
| 4   | ITALO 2 Urban      | S05 700mA 4 Module | 8610        | 29          | 111.07 | 100.0% | 72465            | 0.0%  | 0             | 20 | 12             | 0.55                     |
| 27  | Semita Urban       | 6w LED 30° Optic   | 785         | 5           | 155.50 | 100.0% | 8028             | 0.0%  | 0             | 20 | 12             | 0.04                     |
| 6   | Semita Urban       | 11w LED 30° Optic  | 1506        | 29          | 121.21 | 100.0% | 10590            | 0.0%  | 0             | 20 | 12             | 0.07                     |
| 20  | Inground 110 Short | 4w                 | 497         | 4           | 124.27 | 100.0% | 9945             | 30.0% | 2992          | 20 | 12             | 0.09                     |

Total Installation Lumens: 202786.00

Total LA/R: 6.9875

Table 1 Compliance

Compliance date: 13

City Data: Target: 1.00, Achieved: 0.80, Pass: Yes

Source intensity (candelas): 10000, Pass: Yes

Light trespass into windows (lux): 0.0, Pass: Yes

Building luminance (cd/m²): 10, Pass: Yes

Compliance Status: Pass

Pass 01: Reduction of night time light pollution: Pass

Pass 02: Energy efficient external lighting: Pass

Pass 03: Internal and external lighting levels: Pass

Note: BREEAM in this report only applies to external lighting

Total CO2 per year (tonnes): 1.97

Total Electrical consumption (kWh): 1.93

Total Electrical consumption per year (kWh): 4,780.24

Average luminance per square meter: 131.03

Kingfisher Lighting Ltd

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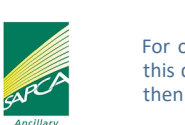
VAT No. 509145848 Company No. 3326327

A1

NOMA - 4 Angel Square - Miller Street - Manchester

Scale: 1:250 at A1

Project Number: D38478R



For our LED lighting designs a 0.9mf has been used. If this differs from the maintenance period for this project then you must advise us accordingly

Date: 7 January 2022

Drawing No: D38478/RD/R

Lighting Designer: Robert Dagley MSL

A lighting applications design service is provided by us in good faith and without charge, relating to Kingfisher products only. As such, whilst every endeavor is made for accuracy from information provided by yourselves, the final responsibility for the suitability of the design lies with the client. The company cannot, therefore, accept any liability or consequential loss incurred.