

# LiAS Design Notes

This preliminary design is produced by the Lighting Application Specialist (LiAS) team of Signify UK based on information supplied by the Customer for the purpose of identifying suitable products and costing the proposal. This design cannot be used for Construction, as this design does not purport to eliminate health and safety risks as a CDM Regulation risk assessment has not been undertaken.

Depending on the level of information received, a number of assumptions may have been applied in order to create an indicative lighting proposal and costing model, according to lighting industry guidelines and incorporating industry best practice methods. These assumptions are documented below and will require confirmation by the Principle Designer (which is not Signify UK) during the detailed design phase.

**Generic Assumptions (unless specifically informed differently)**

- Preliminary Design proposals produced by the Signify LiAS Team are not to be used for installation purposes. It is the responsibility of the Principle Designer and/or Principle Contractor to ensure all Installation and Maintenance can be done in a safe manner, carried out by competent persons, based on their agreed Risk Assessments and Method Statements.
- The Luminaire Maintenance Factors have been based on 6-year cleaning intervals within an E3/E4 Environmental Zone and it is assumed that lamp/luminaire failures will be replaced on a 'spot replacement'.
- Energy consumptions have been based on the luminaire/s having Constant Light Output (CLO) enabled and the quoted wattage/s are the average over 100,000 hours (without dimming).
- The design calculations produced by Signify do not account for the effect obstructions, such as trees, will cause.
- Signify has not been provided with utility plans showing Buried, Above Ground or Overhead utilities. Therefore, all column/luminaire locations are indicative and are subject to review/verification by the Principle Designer.
- Unless stated otherwise, Signify has not visited site. Therefore, all column/luminaire locations are indicative and are subject to an onsite verification arranged/performed by the Principle Designer.
- Signify has not produced any Private Cable Network electrical calculations or reviewed the DNO network to confirm power supplies to the proposed lighting.
- Signify has not performed any asset condition testing and therefore assumes that any existing lighting columns/wall mounted brackets are structurally capable of supporting the weight & windage of the proposed luminaire/s. This must be verified by the Principle Designer before installation works commence.
- Unless stated otherwise, Signify is not supplying the new lighting columns (including brackets etc) and therefore it is the responsibility of the Principle Designers to confirm that all proposed equipment is suitable for the intended locations (e.g. raise & lower, ground condition, foundation type, saline environment, etc).
- Unless stated otherwise, luminaires will be supplied in their standard colour.

## Luminaire Schedule

 Luma Gen2 Medium BGP704 80 LED DX10 15KLM WW 2700K  
lamp(s): LED-HB 5.2S 727  
candela file 'Luma Gen2 Medium\_BGP704\_DX10\_15000\_80LED\_5.2S\_CLO\_L90\_727.Idt'  
1 lamp(s) per luminaire, 15500 initial lumens per lamp  
Maintenance Factor = 0.760, watts per luminaire = 73  
Outreach (from mounting axis to photometric center)= 400 mm  
mounting height= 6 m  
number locations= 3, number luminaires= 3

 BL2 Luma Gen2 Medium BGP704 80 LED DX10 BL2 15KLM WW 2700K  
lamp(s): LED-HB 5.2S 727  
candela file 'Luma Gen2 Medium\_BGP704\_DX10 BL2\_15500\_80LED\_5.2S\_CLO\_L90\_727.Idt'  
1 lamp(s) per luminaire, 15500 initial lumens per lamp  
Maintenance Factor = 0.760, watts per luminaire = 95  
Outreach (from mounting axis to photometric center)= 400 mm  
mounting height= 6 m  
number locations= 3, number luminaires= 3

 Luma Gen2 Mini BGP703 40 LED DM10 7.5KLM WW 2700K  
lamp(s): LED-HB 5.2S 727  
candela file 'Luma Gen2 Mini\_BGP703\_DM10\_7500\_40LED\_5.2S\_CLO\_L90\_727.Idt'  
1 lamp(s) per luminaire, 7500 initial lumens per lamp  
Maintenance Factor = 0.760, watts per luminaire = 46  
Outreach (from mounting axis to photometric center)= 400 mm  
mounting height= 6 m  
number locations= 1, number luminaires= 1

 BL2 Luma Gen2 Mini BGP703 40 LED DM10 BL2 7.5KLM WW 2700K  
lamp(s): LED-HB 5.2S 727  
candela file 'Luma Gen2 Mini\_BGP703\_DM10 BL2\_7500\_40LED\_5.2S\_CLO\_L90\_727.Idt'  
1 lamp(s) per luminaire, 7500 initial lumens per lamp  
Maintenance Factor = 0.760, watts per luminaire = 46  
Outreach (from mounting axis to photometric center)= 400 mm  
mounting height= 6 m  
number locations= 6, number luminaires= 6

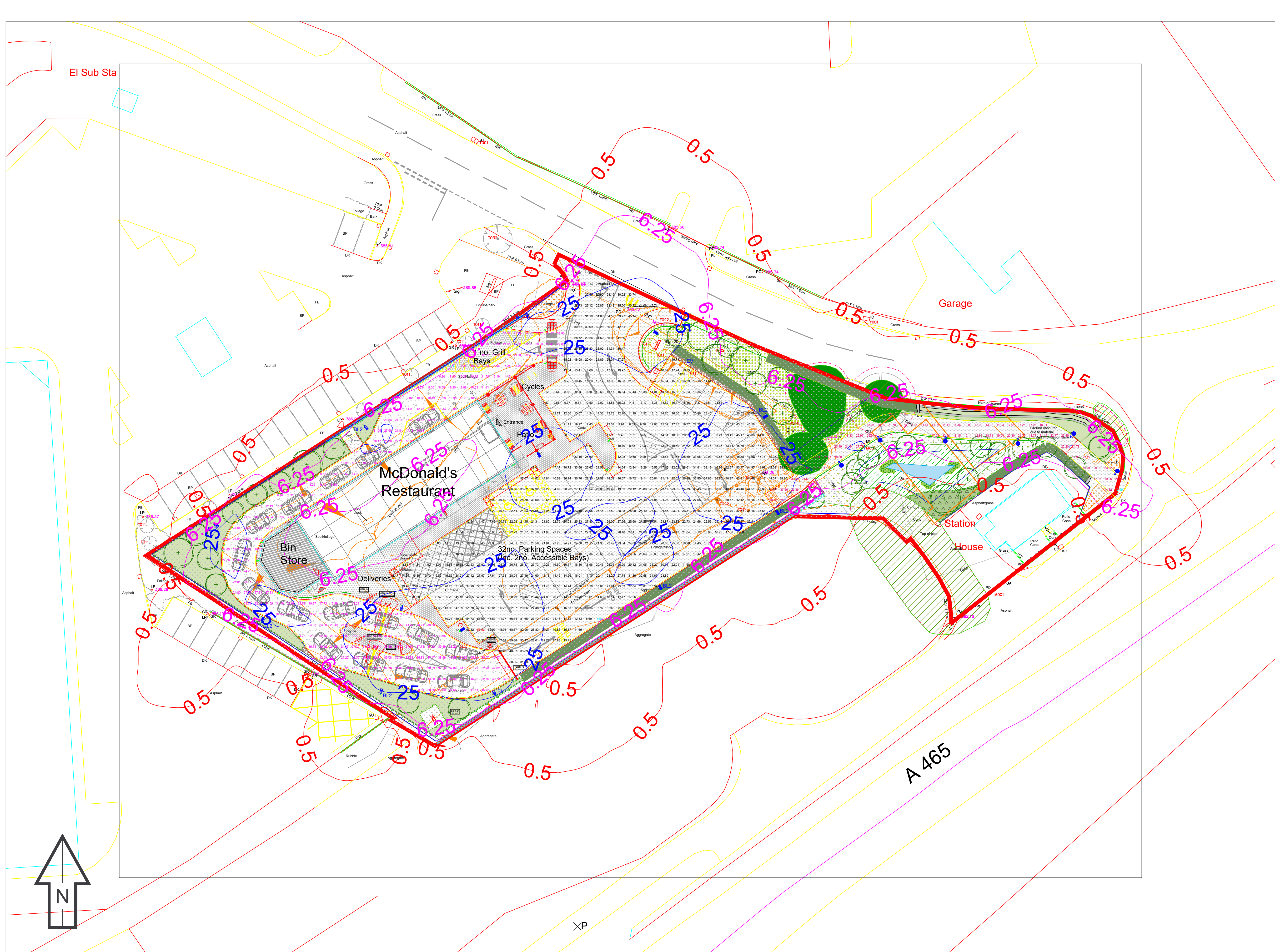
 OptiSpace BCB500 T25 1 xLED25/830 A  
lamp(s): LED25/830  
candela file 'BCB500 T25 1 xLED25\_830 A.Idt'  
1 lamp(s) per luminaire, 2500 initial lumens per lamp  
Maintenance Factor = 0.760, watts per luminaire = 22  
Outreach (from mounting axis to photometric center)= 0 mm  
mounting height= 1.05 m  
number locations= 6, number luminaires= 6

|                                    |       |
|------------------------------------|-------|
| Car Park                           |       |
| 575 points at z=0, sp 1.5m by 1.5m |       |
| HORIZONTAL LUX                     |       |
| Average                            | 25.07 |
| Maximum                            | 56.92 |
| Minimum                            | 6.52  |
| Min/Avg(Uo)                        | 0.260 |
| Min/Max                            | 0.115 |
| Coef Var                           | 0.416 |
| UnifGrad                           | 1.99  |

|                                    |       |
|------------------------------------|-------|
| Drive Thru                         |       |
| 254 points at z=0, sp 1.5m by 1.5m |       |
| HORIZONTAL LUX                     |       |
| Average                            | 25.19 |
| Maximum                            | 55.39 |
| Minimum                            | 6.41  |
| Min/Avg(Uo)                        | 0.254 |
| Min/Max                            | 0.116 |
| Coef Var                           | 0.458 |
| UnifGrad                           | 2.24  |

|                                   |       |
|-----------------------------------|-------|
| Walkway 2                         |       |
| 63 points at z=0, sp 1.5m by 1.5m |       |
| HORIZONTAL LUX                    |       |
| Average                           | 21.18 |
| Maximum                           | 44.77 |
| Minimum                           | 12.95 |
| Min/Avg(Uo)                       | 0.611 |
| Min/Max                           | 0.289 |
| Coef Var                          | 0.295 |
| UnifGrad                          | 2.38  |

| Rev | DSR no. | Comment                    | Date     | LIAS | KAM | Project Number     | Project Name                                               |
|-----|---------|----------------------------|----------|------|-----|--------------------|------------------------------------------------------------|
| 0   | 6154074 | INITIAL PROPOSAL           | 10.04.25 | CP   | LC  | 501734912          | MCDONALDS MERTHYR TYDFIL                                   |
| 1   | 6435587 | NEW LAYOUT/ADDITIONAL AREA | 01.09.25 | CP   | LC  |                    |                                                            |
| 2   | 6445159 | BOLLARD LAYOUT CHANGE      | 05.09.25 | CP   | LC  |                    |                                                            |
|     |         |                            |          |      |     | Scale & Sheet Size | Drawing Name<br><br>LIAS DESIGN NOTES & LUMINAIRE SCHEDULE |
|     |         |                            |          |      |     | NTS @ A3           |                                                            |
|     |         |                            |          |      |     | Sheet No           |                                                            |
|     |         |                            |          |      |     | DWG 00             |                                                            |



- Key:
- Luma Gen2 Medium BGP704 80 LED DX10 15KLM WW 2700K  
lamp(s): LED-HB 5.25 727  
candle file Luma Gen2 Medium\_BGP704\_DX10\_15000\_80LED\_5.2S\_CLO\_L90\_727.klt  
1 lamp(s) per luminaire, 15500 initial lumens per lamp  
Maintenance Factor = 0.760, watts per luminaire = 13  
Outreach (from mounting axis to photometric center)= 400 mm  
mounting height= 6 m  
number locations= 3, number luminaires= 3
  - BL2 Luma Gen2 Medium BGP704 80 LED BL2 15KLM WW 2700K  
lamp(s): LED-HB 5.25 727  
candle file Luma Gen2 Medium\_BGP704\_DX10\_15000\_80LED\_5.2S\_CLO\_L90\_727.klt  
1 lamp(s) per luminaire, 15500 initial lumens per lamp  
Maintenance Factor = 0.760, watts per luminaire = 95  
Outreach (from mounting axis to photometric center)= 400 mm  
mounting height= 6 m  
number locations= 3, number luminaires= 3
  - Luma Gen2 Mini BGP703 40 LED DM10 7.5KLM WW 2700K  
lamp(s): LED-HB 5.25 727  
candle file Luma Gen2 Mini\_BGP703\_DM10\_7500\_40LED\_5.2S\_CLO\_L90\_727.klt  
1 lamp(s) per luminaire, 7500 initial lumens per lamp  
Maintenance Factor = 0.760, watts per luminaire = 46  
Outreach (from mounting axis to photometric center)= 400 mm  
mounting height= 6 m  
number locations= 1, number luminaires= 1
  - BL2 Luma Gen2 Mini BGP703 40 LED DM10 BL2 7.5KLM WW 2700K  
lamp(s): LED-HB 5.25 727  
candle file Luma Gen2 Mini\_BGP703\_DM10\_7500\_40LED\_5.2S\_CLO\_L90\_727.klt  
1 lamp(s) per luminaire, 7500 initial lumens per lamp  
Maintenance Factor = 0.760, watts per luminaire = 46  
Outreach (from mounting axis to photometric center)= 400 mm  
mounting height= 6 m  
number locations= 6, number luminaires= 6
  - OptiSpace BCB500 T25 1 xLED25/830 A  
lamp(s): LED25/830  
candle file 'BCB500 T25 1 xLED25\_830 A.klt'  
1 lamp(s) per luminaire, 2500 initial lumens per lamp  
Maintenance Factor = 0.760, watts per luminaire = 22  
Outreach (from mounting axis to photometric center)= 0 mm  
mounting height= 1.05 m  
number locations= 6, number luminaires= 6

|                                    |       |
|------------------------------------|-------|
| Car Park                           |       |
| 575 points at z=0, sp 1.5m by 1.5m |       |
| HORIZONTAL LUX                     |       |
| Average                            | 25.07 |
| Maximum                            | 56.92 |
| Minimum                            | 6.52  |
| Min/Avg(Uo)                        | 0.290 |
| Min/Max                            | 0.115 |
| Coef Var                           | 0.416 |
| Uni/Grad                           | 1.99  |
| Drive Thru                         |       |
| 254 points at z=0, sp 1.5m by 1.5m |       |
| HORIZONTAL LUX                     |       |
| Average                            | 25.19 |
| Maximum                            | 55.39 |
| Minimum                            | 6.41  |
| Min/Avg(Uo)                        | 0.254 |
| Min/Max                            | 0.116 |
| Coef Var                           | 0.458 |
| Uni/Grad                           | 2.24  |
| Walkway 2                          |       |
| 63 points at z=0, sp 1.5m by 1.5m  |       |
| HORIZONTAL LUX                     |       |
| Average                            | 21.18 |
| Maximum                            | 44.77 |
| Minimum                            | 12.95 |
| Min/Avg(Uo)                        | 0.611 |
| Min/Max                            | 0.289 |
| Coef Var                           | 0.295 |
| Uni/Grad                           | 2.38  |

Notes:

1) Unless agreed otherwise, the lighting proposal produced by the Lighting Application Specialist (LIAS) team of Signify UK&I is not intended for construction purposes, as it does not take into account the elimination of health and safety risks at this stage. For further details please refer to sheet number **DWG 00**

2) Do not scale for this drawing

**PROPOSAL**  
(NOT FOR CONSTRUCTION)

| Rev | DSR no. | Comment                    | Date     | LIAS | KAM |
|-----|---------|----------------------------|----------|------|-----|
| 0   | 6154074 | INITIAL PROPOSAL           | 10.04.25 | CP   | LC  |
| 1   | 6435587 | NEW LAYOUT/ADDITIONAL AREA | 01.09.25 | CP   | LC  |
| 2   | 6445159 | BOLLARD LAYOUT CHANGE      | 05.09.25 | CP   | LC  |
|     |         |                            |          |      |     |
|     |         |                            |          |      |     |
|     |         |                            |          |      |     |
|     |         |                            |          |      |     |
|     |         |                            |          |      |     |
|     |         |                            |          |      |     |
|     |         |                            |          |      |     |

|                    |            |
|--------------------|------------|
| Project Number     | 501734912  |
| Scale & Sheet Size | 1:250 @ A1 |
| Sheet No           | DWG 01     |

|              |                          |
|--------------|--------------------------|
| Project Name | MCDONALDS MERTHYR TYDFIL |
| Drawing Name | PROPOSED LIGHTING LAYOUT |

