# **Appendix 1 LED lighting replacement (lot 1)**

### Bj's Leisure and Skegness aquarium internal lighting

#### Bj's Leisure;

| Current (old) Lighting Situation |                           |          |                   |                             |                                 |                         |  |
|----------------------------------|---------------------------|----------|-------------------|-----------------------------|---------------------------------|-------------------------|--|
| Room ID                          | Existing                  | Quantity | Watts per<br>Unit | Total<br>Installed<br>Watts | Estimated<br>Operating<br>hours | Electricity consumption |  |
|                                  |                           | [x]      | [W]               | [W]                         | [h/a]                           | [kWh/a]                 |  |
| Cloakroom                        | T8 6-ft single            | 1        | 81                | 81                          | 3,360                           | 272                     |  |
| Atrium                           | Metal Halide Bulb 2000W   | 10       | 2,200             | 22,000                      | 3,360                           | 73,920                  |  |
| Arcade                           | Light Bulb 60W            | 17       | 60                | 1,020                       | 3,360                           | 3,427                   |  |
| High cash                        | CFL 2D/square             | 20       | 28                | 560                         | 3,360                           | 1,882                   |  |
| Ваг                              | Metal Halide Bulb 150W    | 14       | 160               | 2,240                       | 3,360                           | 7,526                   |  |
| Showbar                          | Metal Halide Bulb 150W    | 12       | 160               | 1,920                       | 3,360                           | 6,451                   |  |
| Workshop                         | T8 2-ft (4 panel) 600x600 | 3        | 84                | 252                         | 3,360                           | 847                     |  |
| Ground floor tollets             | CFL 2D/square             | 1        | 28                | 28                          | 3,360                           | 94                      |  |
| 1st floor drinks lockup          | T8 6-ft single            | 2        | 81                | 162                         | 3,360                           | 544                     |  |
| Back Stage                       | T8 4-ft                   | 4        | 41                | 164                         | 3,360                           | 551                     |  |
| Back Stage                       | CFL 2D/square             | 3        | 28                | 84                          | 3,360                           | 282                     |  |
| Soft Play area                   | T8 6-ft twin              | 1        | 162               | 162                         | 3,360                           | 544                     |  |
| External                         | CFL 2D/square             | 5        | 16                | 80                          | 3,360                           | 269                     |  |
| External                         | CFL 2D/square             | 3        | 28                | 84                          | 3,360                           | 282                     |  |
| External                         | Floodlight 2x32W          | 7        | 74                | 518                         | 3,360                           | 1,740                   |  |
| External                         | Halogen floodlight 150W   | 9        | 173               | 1,557                       | 3,360                           | 5,232                   |  |
| Rear of Bowling alley            | T8 4-ft                   | 2        | 41                | 82                          | 3,360                           | 276                     |  |
| Total                            |                           | 114      |                   | 27,821                      |                                 | 93,479                  |  |

The savings potential was carried out as a like for like replacement within a desktop audit. Alternative replacement options that use more or less lights, but fulfill the lighting requirements at the site are welcomed. Replacement options need to save a significant amount of energy while still offering a good quality light, which is adequate to the requirements of each room.

#### **Skegness Aquarium**;

Lights at the aquarium have specific requirements in terms of quantity and quality of the emitted light. Suggested replacements should take this into account.



| Current (old) Lighting Situation |              |          |                   |                             |                                 |                         |  |
|----------------------------------|--------------|----------|-------------------|-----------------------------|---------------------------------|-------------------------|--|
| Room ID                          | Existing     | Quantity | Watts per<br>Unit | Total<br>Installed<br>Watts | Estimated<br>Operating<br>hours | Electricity consumption |  |
|                                  |              | [x]      | [W]               | [W]                         | [h/a]                           | [kWh/a]                 |  |
| Triphosor (Misc)                 | T8 6-ft twin | 51       | 162               | 8,262                       | 3,640                           | 30,074                  |  |
| Total                            |              | 51       |                   | 8,262                       |                                 | 30,074                  |  |

## **Appendix 2 Neon replacement (Lot 2)**

### Bj's Leisure neon lighting replacement

Saving potential was estimated in a desktop audit using a count of the transformers and an estimated average transformer power consumption. Exact dimensioning and layout of the neon installation will need to be confirmed on site.

| Current (old) Lighting Situation |                  |          |                   |                             |                                 |                         |  |
|----------------------------------|------------------|----------|-------------------|-----------------------------|---------------------------------|-------------------------|--|
| Room ID                          | Existing         | Quantity | Watts per<br>Unit | Total<br>Installed<br>Watts | Estimated<br>Operating<br>hours | Electricity consumption |  |
|                                  |                  | [x]      | [W]               | [W]                         | [h/a]                           | [kWh/a]                 |  |
| Horizontal Stripes               | Neon transformer | 125      | 300               | 37,500                      | 3,360                           | 126,000                 |  |
| L Shaped                         | Neon transformer | 10       | 300               | 3,000                       | 3,360                           | 10,080                  |  |
| C Shaped                         | Neon transformer | 23       | 300               | 6,900                       | 3,360                           | 23,184                  |  |
| Total                            |                  | 158      |                   | 47,400                      |                                 | 159,264                 |  |

The vast majority of the neon fixtures are located outside of the building, however some are internal.

The positioning of the retrofitted LED neons may differ slightly due to works.

The neon replacement may require additional fixtures (these will be quoted for in addition to the funded lot)

The neon replacement may be subject to a site survey to clarify positioning and colouration.

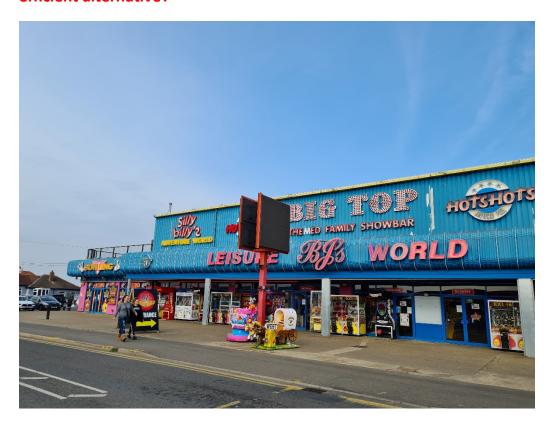


## **Appendix 3 neon and LED signage replacement (Lot 3)**

Bj's Leisure neon lighting replacement

Saving potential was estimated in a desktop audit using a count of the transformers and an estimated average transformer power consumption. Exact dimensioning and layout of the neon signs and LED sign installation will need to be confirmed on site.

The following bespoke signs of unknown wattage are to be replaced with an energy efficient alternative.



All of the main signage fixtures are located outside of the building.

The positioning of the retrofitted Signs may differ slightly due to works.

The signage replacement may require additional fixtures (these will be quoted for in addition to the funded lot)

The signage replacement may be subject to a site survey to clarify positioning and colouration.

