

Gateway Plaza Car Park Lighting

Background

The Council own the freehold of Gateway Plaza, which includes the whole of the car park. All levels, with the exception of 2a are leased to 3rd parties, with 4 out of 6 being on long leases of 250 years. The tenants are responsible for the maintenance of their leased areas however the Council remains responsible for providing services to the common structures, areas, and services in the car park. This would include the emergency lighting. The costs of providing these services are recoverable via a service charge.

Under the current service charge BMBC recovers approximately 65% of the costs incurred in managing the common services in the car park. This will vary as and when tenants move in and out. Consideration will need to be given to how the cost of the lighting scheme is allocated in the service charge budget to ensure that it is recovered fairly and in accordance with the leases.

Gateway Plaza car park offers 4 separate levels of parking.

1. Ground floor vehicular and pedestrian access from Shambles Street with parking for 80 vehicles
2. First floor with parking for 93 vehicles, pedestrian access/egress via 3no stair cores
3. Second floor with parking for 184 vehicles. Vehicular access/egress from Fitzwilliam Street, pedestrian access/egress from 4no stair cores and direct access/egress via passenger lift from Gateway Plaza offices
4. Third floor with parking for 189 vehicles. Pedestrian access/egress via 5no stair cores onto Sackville Street and the pedestrianised area outside of premier inn/gateway offices.

Current Position

Following a recent fixed wire/emergency lighting inspection it was noted that there are a number of failed units (approximately 60% of installed lighting) throughout the car park which places the council at risk of an unintentional event.

The car park is a concrete structure with the south/southwest elevations open providing natural ventilation and natural light. The stair cores on these elevations also benefit from glazing allowing natural lighting.

Property Services have carried out a preliminary survey of the car park and the findings are as follows.

- The car park lighting is predominantly linear fluorescent luminaires surface mounted onto a steel lighting trunking.
- Car park emergency lighting is a mix of combined luminaires and separate units which have been retro fitted where failures have occurred.
- There is no form of lighting control present, all luminaires are permanently energised 24 hours a day 365 days a year.

Recommendation

To retain the existing wiring which is in good condition but to wholesale replace the lighting and emergency lighting throughout the car park for high efficiency LED equivalent. Because of the improved design and optics associated with the new luminaires we are able to reduce the number of installed luminaires across the site. This is detailed in the energy and payback calculation shown.

Advances in lighting controls have allowed our design team to put forward a lighting scheme which takes full advantage of the available natural daylight and also coupled with presence sensing and wireless linking gives the highest efficiency available.

Using the luminaires in built intelligence, Property services will be able to remotely monitor/conduct emergency lighting testing and provide a health report without the need for 3rd party attendance on site, this alone gives a year-on-year efficiency saving.

BMBC currently have a cyclical maintenance responsibility for maintaining and testing the emergency lighting throughout the car park. From previous records the annual cost for this (external contractor) is circa £6,000.

As landlord BMBC has a responsibility under the terms of the leases on site to ensure that the common areas, services, and structures remain safe and in good repair. If the Council do nothing i.e., the works to repair/replace the lighting are not undertaken this would leave BMBC at risk from action from tenants and possible claims from users of the car park.

Energy Reduction projections.

The energy projections are based on the original lighting installation being fully functioning. Electricity Tariffs for the site are currently:

7am – 7pm 33.9p/Kwh
7pm – 7am 25p/Kwh

Calculations reflect the above tariffs and usage of the car park over a 24-hour period.

- Annual anticipated minimum savings on reduced energy reduction £30,698
- Annual anticipated minimum reduction in CO2 20,260 kg

Based on current energy consumption for the building this installation will contribute to a minimum 15% reduction in energy and carbon.

Budget Costs and expected payback.

- Budget cost for Installation of all Lighting and emergency lighting £285,000 (£185,250 recoverable).
- Annual cost for cyclical testing of emergency lighting (% increase yearly) £6,000.
- Anticipated savings from energy reduction Circa £31,000

Anticipated payback for the installation 7 years

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