

Lighting Design Summary

1093_Lighting Design Summary

Key Details:

1. Car Park Layout:

- Permanent and temporary parking areas.
- 6m foldable black lighting columns proposed for the permanent area.
- Designed using landscape architect's plan for optimal fitting positions.

2. Environmental & Planning Considerations:

- Designed per CIE 150:2017 for limiting light pollution, especially in E1 zones (rural/dark areas).
- Minimized light spill and obtrusiveness.
- Compliant with ILP guidance and CIBSE Lighting Guide 6.

3. Lighting Technology & Sustainability:

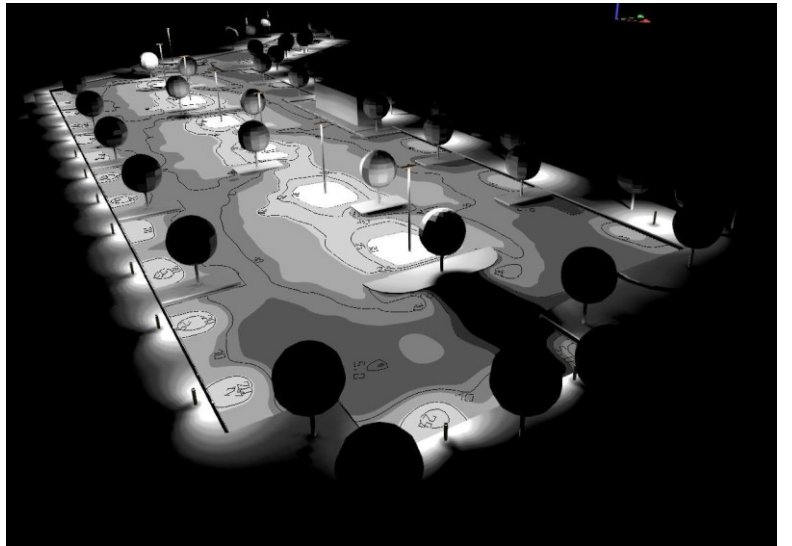
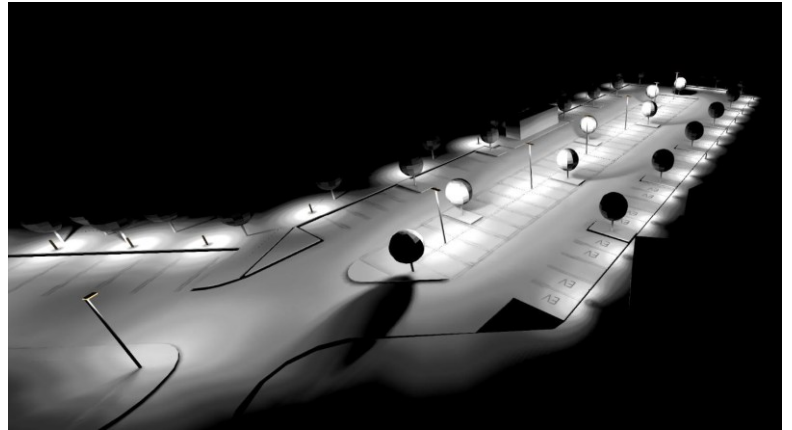
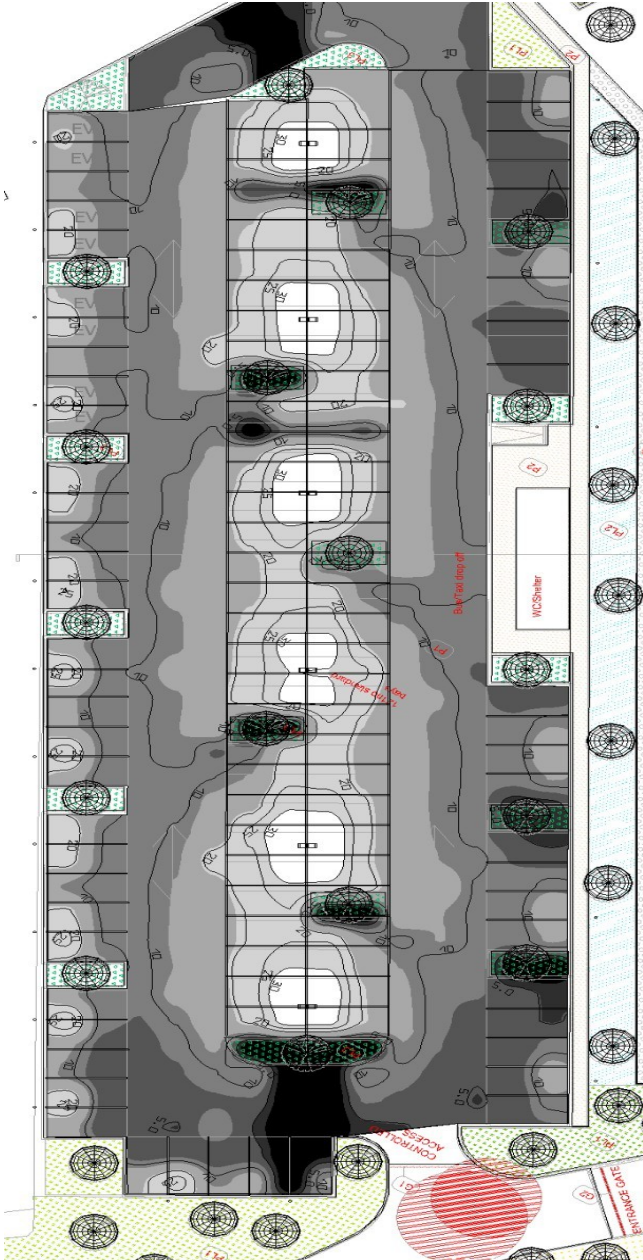
- Thorlux Star Beam Plus: LED, zero uplight, long life (100,000 hours), SmartScan wireless control.
- Thorlux Passway EV: Combines EV charging (up to 2 x 22 kW) with high-performance lighting; includes radar/PIR detection and internet connectivity.
- Full LED system selected for energy efficiency, reduced UV output, and control flexibility (e.g., by time or motion).



4. Visual Impact & Control:

- Raytrace models and lux plots show low light spillage.
- SmartScan system allows remote control, movement sensing, and daylight/time scheduling.
- Summary Conclusions:
- Lighting design meets planning, ecological, and technical standards.
- Minimal visual or environmental impact due to careful design and luminaire selection.
- System is energy-efficient, low-maintenance, and future-ready with smart controls.

5. Lighting Design:



6. In Summary

- The lux plots confirm that the proposed lighting will have no significant impact on the surrounding environment.
- High-quality luminaires with precision-engineered optics have been selected to ensure targeted illumination, minimizing light spill and glare. All fittings have a zero upward light output ratio and feature asymmetric distribution to further reduce obtrusive light.
- The lighting design fully complies with the Institute of Lighting Professionals (ILP) Guidance for the Reduction of Obtrusive Light.

https://bmsteels.sharepoint.com/sites/Main/Shared Documents/Carnegie Architecture/Client Files/Live Projects/2024_1093_COS/1093-0_Pro_Service/3.0 Con/3.12 Lighting/1093_Lighting Design Summary.docx

- Illumination levels have been set in accordance with Lighting Guide 6 from the Chartered Institute of Building Services Engineers (CIBSE).
- All external and internal lighting will use LED technology, chosen for its energy efficiency, long lifespan, and reduced emission of ultraviolet and short-wavelength light.
- Car park lighting columns will incorporate smart controls, enabling adjustment based on time schedules or motion detection, helping to minimize unnecessary usage and environmental impact.