Highway Lighting

Our Team

WSP's Lighting and Energy Solutions Team provide comprehensive engineering consultancy services for lighting in the exterior environment for both Public and Private Sector Clients having the capability of undertaking both 2D and 3D BIM compliant innovative designs. We are actively involved in the Institution of Lighting Professionals (ILP) at both National and Regional Level with team members supporting various technical panels. We also support the National Illumination Committee (CIE-UK) and the Highway Electrical Registration Scheme (HERS) Advisory Board. This places us in a good position to be aware of and understand developments within the industry such as changes in standards, national guidance or new technology.

In addition to the lighting capability, developed through our project experience and pro-active involvement with the ILP our engineers are electrically qualified allowing us to provide the complete engineering solution. Through our integrated approach our specialist Lighting and Electrical Team provide added value through an understanding of specialist technical project issues and attention to detail, providing a comprehensive consultancy service for all types of lighting projects which include;

- Invest to save review and implementation.
- High level policy.
- Technical advice suggest changing Standards and Policy reports and appraisals.
- Lighting and electrical design, concept through to detailed.
- Tender procurement services.


Berkhamsted High Street

Highway Lighting

Good lighting design brings many benefits including the prevention of night-time road accidents, the provision of a safe environment for both motorists and non-motorised users, assisting in the reduction and perception of street crime, as well as contributing to the local night-time economy. Innovations such as adaptive lighting, the application of LED light sources and control systems can reduce energy and carbon costs, while ensuring correct lighting performances. Innovations such as the application of adaptive lighting can potentially increase savings further by regulating the brightness of an installation in response to traffic conditions.

Effective lighting helps to support roadway safety with sufficient and uniform illuminance that is best provided by luminaires with good optical control. The choice of light source, luminaire optical control, and control systems allow us to manage obtrusive light and sky glow concerns that meet the requirements of the areas to be lit, while being buildable, easy to maintain and cost effective.

Many of our highway and infrastructure projects across the globe now include adaptive lighting to maximise energy and carbon savings and to mitigate the environmental impact on fauna and flora, while ensuring that the task is correctly lit and that client service levels are maintained.

Approach to Trafford Centre, Manchester

Tunnel & Underpass Lighting

Our Tunnel Lighting Solutions Team look to understand the visual tasks of the users and those responsible for the maintenance and safe operation of the tunnel. We ensure all users have the right visual information to safely navigate through the tunnel and that equipment is considered and located from the perspective of the tunnel environment as well as access for maintenance operations. Designs are based upon the requirements of CIE and British Standards including BS5489-2 Code of Practice for the Design of Road Lighting, Part 2: Lighting for Tunnels.

In all our projects we look to coordinate with all of our specialists to avoid any conflict between luminaires, control systems and other tunnel systems such as ventilation, signage, emergency systems etc. Our designers consider but are not limited to:

- Production of preliminary light proposals.
- Liaison with tunnel designers regarding options for tunnel approach, as well as luminaire support gantries pending geometry of bore(s).
- Assessment of lighting levels and switching regimes.
- Assessment of photometer locations and switching levels.
- Assessment of tunnel emergency and backup lighting
- Consider approach and departure glare control measures.
- Identify control systems and interface.

Construction Support & Project Delivery

The design supervision and project management of the installation of lighting and electrical schemes are undertaken by experienced staff; with competency requirements relating to the National Highway Electrical Registration Scheme.

Projects include:

- Strategic Road Network (Motorway and All Purpose Trunk Roads).
- Local Authority Traffic and Residential Routes.
- Town and City Centre / Public Realm Areas.
- Public Transport Hubs.
- Tunnels and Underpasses.
- Commercial and Industrial Zones.
- Car Parks and Sports Area Lighting.
- Ports and Harbours.

A close working partnership is developed between contractors, design and client staff to address any unforeseen problems to ensure they are promptly addressed and an acceptable solution is achieved.

Post installation services include:

- Production of Operation and Maintenance Manuals including as-built lighting and electrical drawings.
- Full installation checks to ensure compliance with works information.
- Electrical Witness testing.
- Post photometric surveys to ensure lighting levels are achieved.

Belgrave Square

M25 Junction 18

Our Engineers and Designers bring practical experience of Design, Construction and Maintenance in order to produce buildable and maintainable Lighting Schemes.

Highway Lighting
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