

# What's happening?

## Best practice at:

 <p><b>BCS Design Ltd</b> Building Civil &amp; Structural Engineering Consultant</p>	<p>In partnership with</p>	 <p>carillion</p>
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### Overview:

*BCS Design was contracted by Carillion to complete the GRIP 5 design for the Stabling and Depot site at Brighton as part of Thameslink Key Output 2.*

*The GRIP 5 design EMP was put in place early on and listed key sustainability objectives aligned with Carillion's Sustainability Delivery Statement that should be considered. The main problem associated with Environmental Management Plans is typically that they are voluminous and confusing- especially to engineers. It was agreed at the start that the designers will be given a list of simplified design actions aimed at achieving sustainable outcomes.*

*To better understand the Whole Life Costing impact of traditional halogen versus alternative lighting technologies such as Light Emitting Diodes (LED), it was agreed that other options must be properly investigated by specialists.*

### Benefits:

*A Whole Life Costing study for lighting was commissioned as a result of the DEMP. Although the study highlighted an increased capital cost of £22,455 for the direct replacement of traditional*

*halogen lamps there were a number of savings identified:*

- Improved lumens per watt leading to increased spacing between lights from 3.0m to 4.5m*
- 27% reduction in the number of light fittings saving £7,110 installation cost*
- An estimated saving of £30,271 on materials used during the installation*
- An annual saving of £6,859 on electricity costs based on a reduced number of fittings*
- An annual saving of £3,916 on electricity costs based on a reduced load of 70Watts to 40Watts*

*Based on the study it was estimated that payback, for increased capital cost, would be achieved within the first year. Over a 25 year lifetime it was estimated that ongoing annual savings of £12,919 would be achieved.*

*Operational life costs and savings were calculated at*

- £322, 971.00 over 25 years*
- 169.8 Tonne CO<sub>2</sub>e annually*

### Meeting our objectives & targets:

- Maximising resource efficiency through effective design*
- Delivering sustainable design that represent value for money*