

**MA/07/2092 : OUTLINE APPLICATION for KENT INTERNATIONAL GATEWAY, MAIDSTONE**

**IMPACT OF LIGHTING ON SURROUNDING COUNTRYSIDE AND NEARBY RESIDENTIAL PROPERTIES**

I have been requested by Maidstone Borough Council to examine the information within the accompanying Environmental Statement to application MA/07/2092 and later supplementary information concerning lighting submitted by the applicants. In this assessment I consider the impact of lighting on the surrounding countryside and nearby residential properties.

As an initial comment, I would point out a couple of significant discrepancies in the information submitted:-

- a) Table 7.1 on p3 - although the title refers to the ILE (2005) edition of the document, the figures quoted in the fifth column for 'Source Intensity before curfew' are in fact taken from an earlier edition, and the recommendations are now generally lower:

E1	2.5 (was 0)
E2	7.5 (was 20)
E3	10 (was 30)
E4	25 (was 30)

This means that there is a much greater constraint on the "intensity limits from a distant viewpoint" in Environmental Zones E2 - E4 than the Applicant has quoted.

- b) Table 7.6 on p34 - the mounting height quoted for lighting on the gantry cranes is 30m, whereas in para 7.6.7 it is stated as 25m. Are the lights in fact to be mounted 5m above the tops of the cranes? (I now understand the intended height to be 30m).

Since the Applicant has endeavoured to demonstrate compliance with the ILE Guidelines, I will comment first on the four aspects of light pollution to which the document refers:-

**Sky Glow**

This is defined by the ILE in terms of the maximum upward light percentage, and there is no doubt that the luminaires and mitigation measures described in section 7.6 of the Environmental Statement, will meet the criteria for direct upward light emission. However this is not the whole story - a large proportion of the sky glow from a lighting installation is caused by light reflected upwards from the ground and building surfaces, even though the hardstandings might be "finished in low-reflectance black-top". There is bound to be a considerable amount of upward reflection from the total of 536 luminaires proposed for the operational installation.

### Light Spill

The unwanted spillage of light onto specific adjacent premises is fairly easy to control by means of the design, positioning and shielding of luminaires, and the Applicant appears to be aware of the issues involved.

### Glare

Defined in terms of the 'Source Intensity' of each and every luminaire visible from sensitive viewpoints outside the site, this aspect of an installation is the one which usually causes the most nuisance. As well as loss of amenity to neighbouring dwellings and visitors to the AONB, the presence of high intensity discharge lamps on roads and gantry cranes close alongside the unlit motorway is almost certain to be distracting, or even 'disabling', to drivers. At the necessary mounting heights of 10m – 30m, no amount of screening vegetation will prevent this. We cannot fully assess this at present because the submission does not give sufficient details of location and orientation.

### Light Trespass

Defined as "light into windows", this is usually the result of high 'source intensity' in the direction of neighbouring dwellings. Again, the lack of luminaire location details precludes objective assessment.

These forms of light pollution were considered above in relation to the permanent operational installation, but are also likely to occur during the construction phase, particularly since this is planned to continue for up to seven years. Although it is proposed to stop work at 18.00 hours (what about movement of the workforce off the site?), there is bound to be a certain need for security lighting all night, every night, and this by its very nature is likely to be more glaring than the operational installation. In my experience, even though an approval might contain quite restrictive conditions relating to the use of construction site / security lighting, these could well be overridden on 'health and safety' or 'national security' grounds.

In conclusion it must be appreciated that the effects of light pollution are cumulative. No matter how well the luminaires are designed and installed, it is impossible to make any bright light mounted at significant height completely invisible, because dust and moisture in the atmosphere will always create a "halo" of reflected light around each lantern, visible from a considerable distance. The overall effect of both this and the 'sky glow' would be in direct proportion to the total quantity of individual light sources.

An illuminated facility of the size proposed would therefore have a hugely "urbanising" effect at night on the character and amenity of the rural Special Landscape Area within which it would be built, and in consequence would impact on the AONB for which the SLA is supposed to be a "protective foreground".

# ***Jon West Consultants***

*Jon West* CEng MCIBSE MILE FLL

JON WEST CONSULTANTS  
67 Weydon Hill Road  
Farnham  
Surrey GU9 8NY

222jw 28/4/09