

## 11. EXTERNAL LIGHTING

### 11.1 INTRODUCTION

11.1.1 This chapter sets out the assessment of any likely significant effects of the Proposed Development in terms of external lighting. The Proposed Development is described in detail in Chapter 2 of this ES, with the site and proposed development identified on various plans which form part of the submission, including the Parameters Plan. This Chapter describes the assessment methodology; the baseline conditions at the Site and surroundings; the likely environmental effects; the mitigation measures required to prevent, reduce or offset any significant adverse effects; and the likely residual effects after these measures have been employed.

### 11.2 RELEVANT POLICY

#### **National Policy Statement for National Networks (NPSNN), (Dept for Transport, Dec 2014)**

- 11.2.1 The NPSNN provides specific guidance regarding the assessment of Nationally Significant Infrastructure Projects including Strategic Rail Freight Interchanges. Section 5 of the NPSNN provides guidance regarding the methodological and other issues regarding the assessment of generic impacts, and includes a section regarding lighting (alongside issues relating to dust, odour, smoke and steam).
- 11.2.2 The guidance underlines the importance of lighting impacts in the context of the amenity of nearby communities, and offers general advice regarding the importance of ensuring that any effects are minimised through design and mitigation measures. It is consistent with the guidance provided in the National Planning Policy Framework.
- 11.2.3 Paragraph 5.87 of NPSNN sets out the criteria by which the acceptability of the Proposed Development will be determined in relation to lighting effects:  
*“The Secretary of State should be satisfied that all reasonable steps have been taken, and will be taken, to minimise any detrimental impact on amenity from emissions of odour, dust, steam, smoke and artificial light. This includes the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.”*
- 11.2.4 Paragraph 5.146 of NPSNN explains what the assessment should entail in relation to lighting effects:  
*“The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include any noise and light pollution effects, including on local amenity, tranquillity and nature conservation.”*
- 11.2.5 The NPSNN encourages limitation of impacts, on both humans and ecology, by good design. Its premise is that the potential impacts caused by external lighting will not be a reason for refusal provided the assessment demonstrates that potential adverse effects will be minimised. The requirements of the NPSNN have informed the environmental impact assessment of the Proposed Development.

## ILP Guidance Notes (2011)

- 11.2.6 Professional design guidance is given in *Guidance Notes for the Reduction of Obtrusive Light* (Guidance Note 01, Institution of Lighting Professionals, 2011, hereafter referred to as the *ILP Guidance Notes*). This guidance is intended to be used in the planning context and can be applied through planning conditions or requirements in a Development Consent Order. It sets out best practice for lighting design and control of obtrusive light (light pollution), defines environmental zone categories based on their capacity to absorb lighting effects, and gives guidance on the limitation of obtrusive light in terms of sky glow, glare and light trespass for each category. It therefore echoes the approach set out in the NPSNN that impacts can and should be controlled by appropriate design.
- 11.2.7 *ILP Guidance Notes* recommends that the immediate environment is classified systematically as shown in Table 11.1.

**Table 11.1: ILP Guidance Notes environmental zones**

Zone	Surrounding	Lighting environment	Examples
E0	Protected	Dark	UNESCO Starlight Reserves, IDA Dark Sky Parks
E1	Natural	Intrinsically dark	National Parks, Areas of Outstanding Natural Beauty etc
E2	Rural	Low district brightness	Village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Small town centres or suburban locations
E4	Urban	High district brightness	Town/city centres with high levels of night-time activity

- 11.2.8 *ILP Guidance Notes* then make recommendations for limiting obtrusive light (light pollution) appropriately according to the environmental zone in which the lighting would be situated. The stringency depends on the capacity to absorb lighting effects, with E0 requiring the tightest level of control and E4 the lowest.

### Local Planning Policy

- 11.2.9 SNC published the South Northamptonshire Design Guide (Issue 3.4) during in 2017. Chapter 4 of the Design Guide deals with design considerations, with section 4.12 covering external lighting and light pollution. This section echoes the recommendations given in the *ILP Guidance Notes*. In relation to Planning Permission, it states the following (paragraph 4.154):

*“Where planning permission is required for an external lighting scheme or where external lighting is required as part of a development proposal, planning applications will normally only be favourably considered where:*

- The lighting scheme should not exceed that which is required for the satisfactory undertaking of the task involved; and
- Glare and spillage is minimised through good design, particularly in areas of open countryside, on the edge of settlements, adjacent to highways or in other environmentally sensitive settings; and
- Illuminance is appropriate to the surroundings and character of the area as a whole; and
- The lighting is positioned to minimise the impact on the surroundings; and
- There is no significant adverse impact on the local community or environment”.

11.2.10 Adherence to the recommendations given above under NPSNN and ILP Guidance Notes will ensure that the requirements of this guidance are fully met.

### **11.3 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA**

#### **Methodology – general**

11.3.1 The assessment methodology is qualitative and desk based, looking at the likely effects of the Development during both construction and operation. The baseline conditions are determined by the existing provision of lighting on the Main Site, the Bypass Corridor and in the surrounding area.

11.3.2 The methodology is based on the principles set out in *Guidance on undertaking environmental lighting impact assessments* (Professional Lighting Guide 04, Institution of Lighting Professionals, 2013). This guidance is supplemented for this assessment by *Controlling light pollution and reducing energy consumption* (Guidance Note, Scottish Executive, March 2007) which introduces additional assessment parameters that are particularly relevant for rural settings. Reference is also made to *ILP Guidance Notes*.

#### **Study area**

11.3.3 Lighting effects can be experienced over a considerable distance and therefore the area for assessment includes receptors with more distant views as well as those closer to the Proposed Development (the Main Site and Bypass Corridor).

11.3.4 For the Main Site, the study area extends out to the villages of Milton Malsor and Blisworth to the west, the Courteenhall Road ridge to the southwest, and northern end of the Courteenhall Estate to the south and east.

11.3.5 For the Bypass Corridor, the study area is focused on the western side of Road, taking in residential properties lying within 500 metres of the Corridor.

11.3.6 The Highways Mitigation Works are at locations on the highway network (focused on the A508 corridor) and these works are not proposed to be lit. Therefore they will have no direct lighting effects and as a result are not assessed in this Chapter.

#### **Baseline condition methodology**

11.3.7 The night time baseline condition is assessed by a combination of desk study and night time surveys, taking in as many sensitive receptor viewpoints as possible. The location, type and intensity of existing sources of light is identified in relation to each viewpoint and the sensitivity of each receptor to any future change in the lighting conditions is judged. As far as possible night time surveys are conducted in good weather.

#### **Effect assessment and significance**

11.3.8 Artificial lighting can give rise to several types of light pollution impact. Details are given in Appendix 11.1. Their relevance for different receptors types is set out in Table 11.2 below.

**Table 11.2: Receptor types and lighting impacts**

Category of receptor	Potential lighting impacts
(A) Residential properties within 100m of new lit development	(1) Nuisance: excessive illumination falling on bedroom windows (2) Nuisance: glare causing visual disability or discomfort (3) Loss of amenity: light spill onto property/gardens, changing their character after dark (4) Visual: light presence – light sources and other lit elements appearing in dark views (5) Visual: local sky glow appearing over new lit development
(B) Residential properties more than 100m away from new lit development	(4) Visual: light presence – light sources and other lit elements appearing in dark views (5) Visual: local sky glow appearing over new lit development
(C) Night time views from dark non-residential areas	(4) Visual: light presence – light sources and other lit elements appearing in dark views (5) Visual: local sky glow appearing over new lit development
(D) Transport (roads, railways, airports, navigation)	(7) Hazard: glare causing visual disability (8) Hazard: light sources affecting visibility and interpretation of signals, runway lights, etc.
(E) Night sky views	(6) Visual: general brightening of night sky, reducing visibility of stars and affecting astronomical observation
(F) Light-sensitive ecology close to new lit development	(9) Disturbance: light spill onto dark habitat, reducing its ecological value (esp. in relation to bats) (10) Disturbance: UV light emission, affecting airborne invertebrates

11.3.9 The magnitude of a lighting impact is assessed as a change from the baseline condition, taking into account the relative scale of the new effect. To do this, a Lighting Strategy has been set out for the Proposed Development and is included in Appendix 11.3. The Strategy is based on employing best practice design principles as appropriate to the sensitivity of the Main Site’s surroundings, with a view to preventing adverse effects or, where that is not possible, keeping them to the absolute minimum. It sets out the parameters and characteristics of the lighting systems and their performance, and thus defines the principles of a future detailed lighting strategy ahead of the precise details regarding the location of all lighting on the site. The magnitude of a lighting impact is assessed on the basis that this Lighting Strategy has been implemented. The details of the position and number of lighting units would be prepared and submitted in accordance with the principles of the Lighting Strategy, for agreement by the Local Authorities post approval of the DCO.

11.3.10 Table 11.3 sets out the criteria for assessing the magnitude of impacts.

**Table 11.3: Lighting impact in terms of magnitude of change**

Magnitude of change	Criteria for assessment
Large	The light pollution associated with the Proposed Development is considerably greater than the baseline situation, thus fundamentally changing the character of the nightscape (visual impacts) or exceeding ILP Guidance Notes recommendations (nuisance, loss of amenity and hazard impacts).
Medium	The light pollution associated with the Proposed Development is of a similar magnitude to the baseline situation, thus noticeably adding to it, but not fundamentally changing the character of the nightscape (visual impacts) or exceeding ILP Guidance Notes recommendations (nuisance, loss of amenity and hazard impacts).
Small	The light pollution associated with the Proposed Development is discernible but its magnitude and type are not noticeably different from the pre-Development situation.
Negligible	The light pollution associated with the Proposed Development is barely distinguishable, approximating to a 'no change' situation.

11.3.11 To assess the significance of lighting effects it is first necessary to determine the sensitivity of the receptors. This is set out in Table 11.4. The likely effects on light-sensitive ecology (receptor type F) are dealt with in Chapter 5 (Ecology and Nature Conservation).

**Table 11.4: Receptor sensitivity to lighting impacts**

Sensitivity	Examples of receptor
High	Rural and dark landscapes. Views over significant water bodies and large unlit spaces. SSSIs and SINCS. Astronomical observatories.
Medium	Views with existing lighting visible in the middle distance or beyond. Larger villages. Conservation areas. Railways, major roads, aerodromes and navigable waterways.
Low	Urban and suburban environments. Commercial and industrial property.

11.3.12 The significance of a lighting effect is determined by the interaction of impact magnitude and receptor sensitivity. This is set out in Table 11.5. In some instances, a distinction is made between the significance of different types of lighting effects; see Table 11.2 and Appendix 11.1 for further information. For the purposes of this assessment, a significant effect is any effect greater than minor adverse.

**Table 11.5: Significance matrix for lighting effects**

Magnitude of change	Sensitivity of receptor		
	High	Medium	Low
Large	Major	Major <sup>a</sup> / Moderate <sup>b</sup>	Moderate <sup>a</sup> / Minor <sup>b</sup>
Medium	Major <sup>a</sup> / Moderate <sup>b</sup>	Moderate <sup>a</sup> / Minor <sup>b</sup>	Minor
Small	Moderate <sup>a</sup> / Minor <sup>b</sup>	Minor	Negligible
Negligible	Negligible	Negligible	Negligible

<sup>a</sup> for **nuisance, loss of amenity and hazard effects**      <sup>b</sup> for **visual effects**

## 11.4 BASELINE CONDITIONS

### Night time survey

- 11.4.1 A survey was carried out on 08 March 2017. The weather was calm and dry with some cloud cover and the moon phase was 85% full. Several locations were visited and photographs were taken. Details of the survey are given in Appendix 11.2.

### Assessment of baseline conditions

- 11.4.2 The surrounding rural area to the west and south of the Main Site is largely devoid of lighting, apart from settlements such as Milton Malsor, Blisworth and a few further afield. The Main Site itself is unlit.
- 11.4.3 The grade separated junctions on the M1 motorway (J15 and J15a) are lit. The motorway mainline carriageway, which runs alongside the eastern edge of the Main Site, is now unlit, the old lighting having been recently removed as part of the M1 Junctions 16-19 and 13-16 Smart Motorway schemes. The lighting associated with the junction slip roads at J15 (M1/A45/A508) and elevated junction dumb-bell is visible in many views.
- 11.4.4 Adjacent to the east of the junction lies the Grange Park employment (logistics) park and hotels. The lighting of this park is highly visible from some surrounding viewpoints, and local sky glow is discernible above it in many views. Adjacent to the north and east side of the motorway lies the Northampton conurbation, which is well lit and creates local sky glow that is clearly visible from most viewpoints in the surrounding area.
- 11.4.5 From the survey records, it is evident that residential receptors on the north- and east-facing perimeter of both Milton Malsor and Blisworth currently see some lighting effects, especially when looking in the direction of the Northampton conurbation and Grange Park. There are significant patches of sky glow in several directions, and from more elevated positions lighting can be directly sighted. However, residential properties inside the perimeter of these settlements do not see these effects because they are screened by perimeter properties and, furthermore, any local street lighting in the field of view tends to dominate, making the subtler night time effects much less noticeable.
- 11.4.6 The baseline conditions for the Bypass Corridor are similar to those of the Main Site. Nearby residential properties currently see some lighting effects, particularly in the direction of Roade, while the Corridor itself is unlit.
- 11.4.7 Based on the assessments undertaken, and referring to the environmental zone categorisation set out in *ILP Guidance Notes*, most sensitive receptors would be considered as lying within Environmental Zone E2, defined as *Rural, Low District brightness, e.g. Village or relatively dark outer suburban locations*.
- 11.4.8 Table 11.6 summarises the existing sources of light in the area.

**Table 11.6: Existing sources of light**

Type	Location of source	Lighting description
Commercial, industrial and other non-residential areas	Grange Park	Area and floodlighting. Some light spill onto building facades.
	Swan Valley Industrial Estate	Area and floodlighting.
	Brackmills Industrial Estate	Major source of illumination, albeit further away than other sources.
Major highways	M1 motorway	Mainline lit from southern end of J15 slip roads southwards. Mainline also lit through J15a.
	A45	Fully lit.
	M1/A408/A45 grade separated interchange (J15)	Fully lit, elevated position.
Conurbations	Northampton	Street and other lighting.
Smaller settlements	Roade	Local street lighting.
	Blisworth	Local street lighting.
	Milton Malsor	Local street lighting.
	Collingtree	Local street lighting.

11.4.9 Sensitive receptors have been identified and the existing night time conditions they experience are summarised in Table 11.7.

**Table 11.7: Receptors and baseline conditions**

Category of receptor	Receptors	Baseline conditions
(A) Residential properties within 100m of new lit development	Collingtree (properties on the southern fringe)	Local street lighting, sky glow from the Northampton conurbation, and other sources of light are present. Few dark night time views are obtainable.
	Roade (properties on western/northern fringe close to proposed Bypass Corridor)	Local street lighting, sky glow from the Northampton conurbation, and other sources of light are sometimes present. Dark views can be glimpsed from certain properties and in certain directions.
(B) Residential properties more than 100m away from new lit development	Collingtree; Milton Malsor and its outlying properties	Dark views can be glimpsed from certain properties and in certain directions. However, sky glow from motorway junctions, Northampton Conurbation and, most noticeably, Grange Park is widely visible.
	Blisworth	Few properties have clear views towards the Site. Those that do, currently see lighting associated with the whole Northampton conurbation, including commercial/industrial development and highway lighting on the M1 motorway junctions.
	Courteenhall village	Remoteness gives rise to many opportunities for dark night views. Towards the horizon from the north-west clockwise to the east, sky glow from the Northampton conurbation, Grange Park and M1 motorway J15 is evident.
(C) Night time views from dark non-residential areas	Courteenhall parkland	Sky glow over the Northampton conurbation, Grange Park and M1 motorway J15 is widely visible but otherwise views are predominantly dark.
	Grand Union Canal	Sky glow over the Northampton conurbation and Grange Park is widely visible but otherwise views are predominantly dark.
(D) Transport)	Roads, railways, airports, navigation	There are no existing adverse lighting conditions.
(E) Night sky views	Rural locations well away from all lighting (including street lights)	On a clear night good quality views of the overhead night sky are obtainable. However, in many directions the quality diminishes towards the horizon due to sky glow from lit development.
(F) Light-sensitive ecology within and very close to the Main Site and By Pass Corridor	Woodland and hedgerows	Habitats for light-sensitive species currently experience negligible light spill.



## 11.5 ASSESSMENT OF LIKELY SIGNIFICANT ENVIRONMENTAL EFFECTS

### Construction

- 11.5.1 Construction related effects are temporary by nature, and change over the course of the construction period. The construction lighting effect will be managed as part of the Construction Environmental Management Plan (CEMP) (ES Appendix 2.1). This contains requirements to prevent light spill and glare as well as to minimise the usage of lighting, with special care taken in proximity to ecologically sensitive locations. The CEMP will specify the types of temporary construction and security lighting to be used, the hours of operation (as part of the agreement of hours of operation of the construction site as a whole), and measures to ensure that construction and security lighting is located and maintained so as to cause minimal effects.
- 11.5.2 Details of the significance of effects on receptors during construction have been determined and are given in Appendix 11.4, Table A11.4.1. The only significant effect (that is, an effect exceeding minor adverse) is on Milton Malsor properties that have full or partial views of the Main Site and properties on Collingtree Road and Barn Lane that are close to the Main Site boundary. Here, construction lighting effects are predicted to be moderate adverse until earthworks mounding (bundling) has been formed, whereupon this effect is mitigated. No other significant effects are predicted. Earthworks will form part of the initial phases of work on-site as part of the process of creating the development plateau, and will continue throughout the early phases of construction. Creation of the main earthworks mounding along the western edge of the site, which will deliver screening benefits to receptors to the west of the Main Site, will therefore begin early in the construction process, and hence some screening benefits to mitigate lighting (and other effects of construction) will be provided and maintained throughout. As construction moves from east to west the mounding will increase in both length and height.

### Operation

- 11.5.3 On the Main Site, lighting will operate in all external working areas in order to provide a safe and secure working environment after dark. The design principles to be applied to the external lighting on the Proposed Development are set out in the Lighting Strategy given in Appendix 11.3 (see also paragraph 11.3.9) and the assessment of potential lighting effects in this Chapter is based on this Strategy in conjunction with proposed earthworks mounding and planting shown on the Parameters Plan and other submitted plans. The latter are in part a measure to help contain and limit any potential off-site lighting effects as part of a wider design strategy intended to minimise or eliminate visual effects on nearby receptors. The landscaping strategy is based around the creation of the substantial perimeter earthworks mounding (bundling) around the western, northern and eastern boundaries in particular, together with tree planting (and retention of existing woodlands on-site).
- 11.5.4 The proposed Road Bypass will be lit at each of the three roundabouts connecting it into the existing road network. Lighting will extend back from the roundabout along each approach road, typically for a distance of about 100 metres. Lighting will comply with industry standards for highway lighting in rural locations, thus ensuring that all adverse effects are prevented or minimised as far as possible. The remainder of the road will be unlit.

- 11.5.5 Details of the significance of effects on receptors during operation have been determined and are given in Appendix 11.4, Table A11.4.2. No significant effects from lighting on the Main Site are predicted. Nineteen properties situated relatively close to the proposed new roundabouts on the Roade Bypass are likely to experience significant (moderate adverse) effects of 'light presence' (light sources appearing in dark views) but not any other type of more pronounced or invasive lighting effect. Furthermore, with the exception of Hyde Farm, the 'light presence' effect will largely disappear as new planting matures. This is a visual effect, not an intrusive effect, and is the result of the change from the current baseline conditions of relatively dark views in certain directions to a context which sees new lighting introduced. Nevertheless, no property will experience the more intrusive adverse effects of nuisance and loss of amenity, such as glare or light spill, as light will be directed downwards to the road surface and will not directly shine towards the properties.
- 11.5.6 Appendix 11.5 shows the light spill plot for the Main Site based on the implementation of the Lighting Strategy (Appendix 11.3). It shows how the light spill on the ground would fall rapidly to negligible levels within a few tens of meters from the perimeter of the Main Site. This is to be expected, as the Lighting Strategy requires that the best lighting technical solutions are employed. No equivalent plot has been prepared for the Bypass because road lighting outputs are much less bright, and will be mounted at a lower height than those on the Main Site, creating minimal light spill by comparison. Also, the landscaping and planting associated with the Bypass will entirely screen all ground level light spill from the nearest residential receptors.

## **11.6 MITIGATION**

### **Construction**

- 11.6.1 The CEMP will ensure that, inter alia, any potentially significant lighting effects are sufficiently mitigated during the construction period, as referred to above.
- 11.6.2 Also, the creation of the earthworks bunding (mounding) which will begin early during the construction period, and will play a direct role in the mitigation of construction lighting effects.

### **Operation**

- 11.6.3 The Lighting Strategy (Appendix 11.3) in conjunction with proposed earthworks and planting will incorporate all necessary mitigation and design measures to limit off-site lighting effects from the Main Site. Chapter 4 also provides fuller details of the visual mitigation measures and residual effects.
- 11.6.4 No further mitigation for Main Site lighting is considered necessary beyond the design measures associated with the landscaping strategy, and the Lighting Strategy proposed – see below regarding residual effects.
- 11.6.5 For the proposed Roade Bypass, some additional mitigation can be provided by baffles/shields to alleviate light presence effects. It should be noted, however, that the design and specification of adoptable lighting on the proposed Roade Bypass would need to be in accordance with Northamptonshire Highways' street lighting policy current at the time of design.

## 11.7 RESIDUAL EFFECTS

- 11.7.1 The residual effects will be as set out in Appendix 11.4 Tables A11.4.1 and A11.4.2.
- 11.7.2 As a result of the proposed approach to mitigation and associated design measures, including the principles set out in the draft Lighting Strategy, all residual effects from the Main Site are considered minor adverse or negligible and are therefore not significant.
- 11.7.3 For those receptors potentially affected by lighting on the roundabouts of the proposed Road Bypass, any mitigation that can be applied is unlikely to be sufficient to enable the significance of the adverse light presence effects to be lowered by much. However, as already stated, there will be no effects giving rise to nuisance or loss of amenity.

## 11.8 CUMULATIVE EFFECTS

- 11.8.1 Any other approved development in the vicinity of the site will inevitably introduce a new element of night time lighting. This includes the allocated Northampton South Urban Extension at Collingtree to the north on the opposite side of the M1. The local authority is also keen for consideration of any cumulative effects with the allocated South of Brackmills SUE to the east of Northampton.
- 11.8.2 It is assumed that any site will be designed to meet best practice standards, with lighting strategies which minimise or eliminate off-site effects.
- 11.8.3 The cumulative effects of the Proposed Development in conjunction with only the Northampton South Urban Extension are expected to be approximately the same as already assessed. The South of Brackmills SUE is some distance from the Proposed Development site, and there would be no direct cumulative effects between the two sites beyond a general, but minimal, impact on the local sky glow effects of urban development.
- 11.8.4 Therefore, when assessed with committed developments the cumulative effects are expected to be very similar to those assessed for the Proposed Development scheme alone as presented in this Chapter, and in the appendices, in part due to the limited number of shared receptors, and the distances involved between the sites.
- 11.8.5 However, the additional cumulative effects in conjunction with the proposed but not committed 'Rail Central' SRFI scheme are likely to be somewhat different. Even assuming best practice measures, the cumulative effects are likely to be moderate adverse for many receptors considered in this ES assessment. This is a result of a number of site specific issues, but most notably the topography and proximity of the Rail Central site in the context of the surrounding settlements and residential properties. The site sits lower in the landscape than many surrounding receptors and in a more exposed and open area of countryside close to large parts of the boundaries of both Milton Malsor and Blisworth. The likely effects will be visual, in the form of increased light presence and local sky glow.
- 11.8.6 It is assumed that other types of effect (nuisance, loss of amenity, hazard, ecological disturbance) would be eliminated through mitigation measures, but even so cumulative effects are likely to be significant (i.e. greater than minor adverse) on a relatively large number of receptors if the 'Rail Central' scheme proceeds alongside the Proposed Development and the committed developments referred to above.

## 11.9 CONCLUSIONS

- 11.9.1 The Proposed Development will include external lighting that has the potential to give rise to adverse effects. This is to be seen in the context of the existing conditions in the surrounding area, which already contains a significant amount of lighting.
- 11.9.2 A Lighting Strategy has been set out enabling assessment of potential operational lighting effects on sensitive receptors. The Strategy will minimise light pollution in all its forms.
- 11.9.3 The assessment has found that the only significant effect (an effect exceeding minor adverse) for receptors of lighting on the Main Site is likely to be on a few properties in Milton Malsor that have views of the Main Site during construction, and that this effect will be mitigated as soon as the northwest bunds are constructed.
- 11.9.4 Receptors close to the proposed Roade Bypass roundabouts will mostly experience minor adverse effects from highway lighting. Nineteen properties will experience a moderate adverse effect of 'light presence', which is therefore of significance, due to light sources being visible in specific views that are currently dark. However, with one exception (Hyde Farm), this will largely disappear over time as new planting matures. For all these properties all other types of lighting effect (including those associated with nuisance and loss of amenity) will be negligible or minor adverse and therefore of no significance.
- 11.9.5 The likely effect of lighting on ecological receptors is reported in Chapter 5 (Ecology and Nature Conservation).
- 11.9.6 Based on all other committed development also implementing best practice measures and lighting strategies to minimise off-site effects, any cumulative effects are likely to be minimal and therefore of no significance. However, for the proposed but not committed 'Rail Central' SRFI scheme some cumulative effects are likely to be moderate adverse and therefore of significance.
- 11.9.7 A detailed lighting strategy, including specific details of the position and type of lighting units to be used for both the construction phase lighting and the built (operational) lighting will be agreed later in the Development Consent process. That detailed strategy will conform with the assumptions and approach set out in this chapter, Appendix 11.3 and the CEMP.