

Appendix 11.2: Assessment Methodology

Purpose

1. The Landscape and Visual Impact Assessment (LVIA) examines two linked but separate sets of potential environmental impacts arising from a proposed development. They are impacts affecting the landscape resource and impacts affecting visual amenity. The distinction between these two types of impact is explained in the following paragraphs.

Impacts on the landscape resource

2. Impacts on the landscape resource concern physical changes to the fabric of the landscape itself. They can include: changes in land use, removal of vegetation and new plantings, land modelling, alterations to watercourses, removal or addition of surface water features and removal or addition of built form and infrastructure (described as 'landscape receptors').
3. Collectively, significant changes to the physical fabric of the landscape will alter the intrinsic landscape character of the affected area and may also impact indirectly on the landscape character of a wider area. The extent to which a locally significant change affects a wider landscape character area is usually a function of the scale of change relative to the size of the landscape character area that is affected.

Impacts affecting visual amenity

4. Visual impacts are changes to the visual amenity of individuals or groups of people (described as 'visual receptors') who experience views towards a site that is undergoing or has undergone change. Assessment of visual impact therefore concerns the perception of change as seen from surrounding locations that afford views towards that site.
5. By definition, unless a site is undergoing physical change, there will be no perception of change to visual amenity. However, where a site is exceptionally well-screened and there are no external views towards it, there may be circumstances in which there are no impacts on visual amenity.
6. For the purpose of the LVIA, and in line with accepted practice, only changes in views towards the application site that can be obtained from publicly accessible viewpoints are assessed. This accords with an important principle of the planning system in the United Kingdom, namely that it acts in the public interest only. Consequently, residents of houses overlooking a proposed development site whose private views may be changed as a result of development, cannot be considered as a visual receptor group in their own right.
7. This principle should not be confused with the protection of privacy of individual occupiers who may be affected by a proposed development. This is a material consideration of any planning application that is considered as part of the normal development control process.

Direct and indirect impacts

8. As noted previously, indirect impacts on the character of the wider landscape may arise from a proposed development. In addition, there may on occasion be other impacts on landscape and visual receptors beyond a development site that are generated by the development. This can occur, for example, where off-site planting is undertaken to provide mitigation of views.
9. In the case of the proposed development on the application site, no indirect landscape impacts would be generated as all construction activity and permanent changes to the landscape resource would take place on the application site itself.

Temporary and permanent impacts

10. Impacts on both the landscape resource and those affecting visual amenity can occur over a temporary period, or permanently. In the case of a residential development scheme a number

of impacts arising from site preparation and construction activity will occur over a temporary period. Some of these may be intermittent in nature or they may occur over the full period of construction activity.

11. In the case of the proposed development, building is currently proposed to proceed in two phases, commencing with phases 1A and 1B of the residential development (located respectively, on the north and south sides of the site), followed by phase B comprising 1400 dwellings and the local centre within the remainder of the site.. However as no permission has yet been granted for the development, the proposed phasing programme is entirely provisional and the location and timing of different stages of development may vary in accordance with a scheme to be agreed with the Local Planning Authority. Accordingly, for the purposes of assessing landscape and visual impacts, the assumption has been made that a range of construction activities may occur at any location within the site throughout the entire site preparation and construction period.
12. Using the same approach, permanent impacts are assessed in relation to the fully completed scheme at the end of the construction period, when there are no further temporary impacts relating to construction activity.

Cumulative impacts

13. Best practice for conducting an LVIA of a proposed residential development would require the examination of cumulative impacts, where it is anticipated that generated impacts would arise not only from the assessed scheme but also from any other residential developments schemes proposed or in course of construction.
14. In the case of the proposed development at Winchester City North, it is assumed that no other major residential development schemes will be undertaken within the study area. Accordingly, it is not anticipated that significant cumulative landscape or visual impacts would occur.

Detailed Methodology

15. The detailed methodology for undertaking the Landscape and Visual Impact Assessment of the application site is described in this section. It is based closely on the guidance contained in the revised (Second Edition) 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA), published in 2002 by the Landscape Institute and the Institute of Environmental Management and Assessment.
16. GLVIA does not specify that practitioners should adhere to a rigid or prescribed methodology for landscape and visual assessment. Accordingly, the guidance contained within the GLVIA has been used to draw up a straightforward methodology to meet the requirements of this Environmental Statement.

Identification and assessment of potential landscape and visual impacts

17. The assessment process commences by identifying all of the temporary and permanent activities or changes arising from the proposed development (see section 11.6) that may give rise to landscape and visual impacts. These activities and changes are tabulated in Table 11.6 (temporary activities/ changes) and Table 11.7 (permanent activities/ changes).
18. Potential impacts are then determined by assembling a Landscape and Visual Impact Identification Matrix (see table 11.7). The matrix plots the temporary and permanent activities/ changes against all the landscape and visual receptor groups that were identified in the Baseline Landscape and Visual Assessment (see Section 11.5).
19. The matrix simply identifies where impacts are anticipated to occur but does not give any indication of the type of impact (whether harmful or beneficial) or its significance.

Assessment of the significance of landscape and visual impacts

20. Having identified the likely impacts that will occur, it is then necessary to determine the significance of each impact. Separate assessments are undertaken in respect of landscape and visual impacts, and in relation to temporary and permanent effects. As noted earlier in this section, the scope of this LVIA only includes direct impacts, as no indirect impacts are anticipated.
21. Similarly, for the reasons set out previously, this LVIA does not include an assessment of cumulative landscape and visual impacts.
22. The significance of potential impacts is assessed by reference to stated significance thresholds that examine the magnitude of proposed change in relation to the sensitivity of the relevant receptor.

Assessment of sensitivity

23. **Landscape receptors** and their sensitivity are identified in Section 11.5 (Baseline Conditions) by reference to the landscape units in which they are situated. Eighteen landscape receptors are identified for this assessment. Five landscape receptors are assessed as having high or medium/high sensitivity to change. These are:
 - LR3 (highway trees along Andover Road in Landscape Unit A)
 - LR5 (woodland belt in Landscape Unit A)
 - LR6 (copse on Andover Road in Landscape Unit A)
24. The remaining landscape receptors are assessed as having low or medium sensitivity to change.
25. **Visual receptor** groups and their sensitivity are also identified in Section 11.5 (Baseline Conditions). Thirteen visual receptor groups are identified for this assessment in the primary visual envelope, and a further twenty-nine visual receptor groups are identified in the secondary visual envelopes.
26. The majority of visual receptors, comprising residents, walkers, riders, cyclists or users of outdoor recreational facilities, situated at different location looking towards the site, are assessed as having high sensitivity to change. Where the viewpoints of these visual receptor groups lie within the South Downs National Park, their sensitivity is considered to be very high.
27. Vehicle occupants using roads with views towards the site, and railway passengers passing the site are assessed as having medium sensitivity to change, while schoolchildren/staff and agricultural workers are assessed as having low sensitivity to change.

Assessment of magnitude

28. The remainder of the methodology (with the exception of mitigation measures and residual impacts) refers to the identification and analysis of potential significant impacts set out in Section 11.6.
29. The assessment of magnitude of an impact cannot be a rigid quantitative process and the revised GLVIA presents examples, for the purposes of guidance, of different approaches to the determination of magnitude. Broadly speaking, all such systems will assess impacts between negligible (little or no effect on the receptor) to high (major or complete change in the effect on the receptor).
30. The example table shown under option 2 on p.145 of the GLVIA will be used for this LVIA. It is based on the (former) DETR's 'Guidance on the Methodology for Multi-Modal Studies' and

accurately defines a range of magnitude of impacts that can be readily understood and appreciated. The table is set out below:

Table 11.17: Criteria for assessing magnitude of landscape or visual change

Magnitude	Typical criteria
High	Total loss of or major alteration to key elements/features/characteristics of the baseline i.e. pre-development landscape or view and/ or introduction of elements considered to be totally uncharacteristic when set within the attributes of the receiving landscape.
Medium	Partial loss of or alteration to one or more key elements/features/characteristics of the baseline i.e. pre-development landscape or view and/or introduction of elements that may be prominent but may not necessarily be considered to be substantially uncharacteristic when set within the attributes of the receiving landscape.
Low	Minor loss of or alteration to one or more key elements/features/characteristics of the baseline i.e. pre-development landscape or view and/or introduction of elements that may not be uncharacteristic when set within the attributes of the receiving landscape.
Negligible	Very minor loss or alteration to one or more key elements/features/characteristics of the baseline i.e. pre-development landscape or view and/or introduction of elements that are not uncharacteristic with the surrounding landscape – approximating the ‘no change’ situation.

31. In respect of a detailed planning application, full design information would be available for the purpose of assessing the magnitude of identified landscape and visual impacts. However, as the planning application for the proposed development is in outline only, the assessment has been undertaken by reference to the following data:

- Parameter Plans issued by John Thompson and Partners, comprising
 - (i) Land Use Parameters (Fig. 4.2 in the Environmental Statement)
 - (ii) Developable Areas (Fig. 4.3 in the Environmental Statement)
 - (iii) Residential Densities (Fig. 4.4 in the Environmental Statement)
 - (iv) Indicative Building Heights (Fig. 4.5 in the Environmental Statement)
 - (v) Phasing (Fig. 4.6 in the Environmental Statement)
 - (vi) Illustrative Masterplan (Fig. 4.1 in the Environmental Statement)
 - (vii) Local Centre, drawing 00150/P07
- Supporting design studies and explanatory information prepared for public exhibitions undertaken by John Thompson and Partners and Studio Engleback. (Note: these will be described more fully in the Design and Access Statement).
- Indicative junction designs by Pinnacle Transportation shown on drawing 0710-64/ SK27, rev. B

32. Although they do not constitute a detailed design, the above data nevertheless show sufficient information to enable reliable assessments to be made of the likely magnitude of the construction operations that would take place, the permanent changes that would occur as a result of the development and the effect of any mitigation measures that are implemented. It is anticipated that these assessments may be updated (subject to the requirements of the Local Planning Authority) when reserved matters approvals are sought.

33. In relation to assessment of the magnitude of visual impact, this would normally be assessed by reference to one or more zones of visual influence (ZVI) which are predicted having regard to the characteristics of the proposed development. Typically, the magnitude of a visual impact from a representative viewpoint is determined by reference to the proportion of the development that would be visible from the viewpoint, and the distance of the viewpoint from the development. The latter criteria recognises that less detail of the new development will be observable at increasing distances, and that the development will occupy a progressively smaller part of the field of view of the observer.
34. Detailed computer-generated ZVIs were prepared to inform the Landscape and Visual Impact chapter of the 2004 Environmental Statement and these will be used to guide the assessment of the magnitude of the visual impacts arising from the current scheme. Using a detailed landform model and mapping of significant visual barriers (such as tree belts and built up areas), the 2004 ZVIs mapped the proportion of the site that could theoretically be seen, before and after development, within a 6.5km radius of any target point within the site. The selection of a 6.5km 'cut-off' point was a limitation of the model used to generate the ZVIs. Accordingly, theoretical intervisibility from certain distant elevated viewpoints (such as Cheesefoot Head to the south-east of Winchester) has not been mapped.
35. While the earlier ZVIs plainly do not relate to the current scheme, their use to inform the current assessment is justified for the following reasons:
- the planning application is in outline form only and the precise distribution of development, notably the location, massing and heights of buildings has not been fixed;
 - the proposed distribution of built form across the site as shown on the indicative masterplan is not markedly different from that proposed for the 2004 Planning Application;
 - with the exception of the flues of the CHP plant (whose visual impact is assessed separately in this assessment) the masterplan does not propose the construction of tall buildings (above four storeys or 16m) maximum height, which was the maximum height of buildings proposed in the 2004 application
 - the proposed distribution of building heights across the site as shown on the indicative masterplan is not markedly different from that proposed for the 2004 Planning Application; and
 - there will be a greater proportion of two-storey dwellings in comparison to the 2004 planning application.
36. The above approach is open to criticism that changed circumstances will not be taken sufficiently into account. Nevertheless, it should be noted that the role of the ZVIs is to inform the determination of the magnitude of visual impacts arising from the development. By themselves the ZVIs do not determine the magnitude of the visual impact. Moreover, having regard to the broad similarities between the previous and current masterplans, changes in scheme design will be most noticeable within those parts of the primary visual envelope lying close to the site. In these locations, medium and high magnitude impacts are anticipated to occur, irrespective of the changes in scheme design. Conversely, in longer distance views, where impacts of lower magnitude are anticipated, changes in scheme design will be less obvious and are less likely to alter the magnitude of impact.
37. In addition, the assessment of the magnitude of visual impacts on the identified visual receptors takes account of the number of visual receptors that expected to be affected. This information is included in the tables of significance of temporary and permanent visual impacts.

Assessment of significance

38. In order to assess the significance of any impact, a table of thresholds must be applied that links the sensitivity of the receptor to the magnitude of the impact. Examples of threshold criteria used by practitioners are contained within the GLVIA.
39. In order to define meaningful thresholds for assessing significance, it is necessary to consider the nature of the proposed development on the application site. The Indicative Masterplan and (insert other references) propose that the development will comprise mainly low-rise residential built form (up to 2.5 storeys in height) at a range of densities, including lower density development around the periphery of the development and higher density development near the central core and local centre. The latter, comprising mixed land uses may include buildings up to four storeys in height, while some landmark residential buildings may also be up to three storeys in height.
40. Major open space areas are broadly distributed around the periphery of the built development and along the central Barton Farm ridge. There will also be a school with grounds located on the north side of the Barton Farm ridge and a combined heat and power plant (CHP unit) to be sited adjoining the primary school site. Other components of the masterplan, such as minor open space areas, and play provision, roads and footpaths, and drainage elements, while important in their own right, will generally be subservient (particularly in terms of visual impact) to the main component of built form.
41. The definition of thresholds for the significance of landscape impacts is relatively straightforward and the following table is proposed which identifies four levels of significance ranging from 'no change' to 'high'.

Table 11.18: Significance thresholds for assessing landscape impact.

Threshold	Description of typical criteria	Examples
No change	<ul style="list-style-type: none"> No perceptible impact within the receiving landscape. 	<ul style="list-style-type: none"> Effect of negligible magnitude occurring in a landscape resource of any sensitivity.
Slight	<ul style="list-style-type: none"> Minor impact generating small but perceptible change within the receiving landscape. 	<ul style="list-style-type: none"> Effect of low magnitude occurring in a landscape resource of low or medium sensitivity.
Moderate	<ul style="list-style-type: none"> Moderate impact generating significant perception of change within all or part of the receiving landscape. 	<ul style="list-style-type: none"> Effect of low magnitude occurring in a landscape resource of high sensitivity. Effect of medium magnitude occurring in a landscape resource of low or medium sensitivity. Effect of high magnitude occurring in a landscape resource of low sensitivity.
High	<ul style="list-style-type: none"> Major impact generating perception of substantial or complete change within the receiving landscape. 	<ul style="list-style-type: none"> Effect of medium magnitude occurring a landscape resource of high sensitivity Effect of high magnitude occurring in a landscape resource of medium or high sensitivity.

42. The definition of thresholds for the significance of visual impacts is also a function of the sensitivity of the receptor group and the magnitude of the effect. However, it is appropriate to rank the significance of visual impacts over a wider range of thresholds that describe the interaction between magnitude and sensitivity more precisely. The following table, which follows

the format shown in Example 1 (p.138) of the GLVIA, is considered to be suitable. This identifies five levels of significance ranging from 'negligible' to 'severe'.

Table 11.19; Significance thresholds for assessing visual impact

Threshold	Description of typical criteria	Examples
No change	<ul style="list-style-type: none"> • Only a very small part of the development is discernible • The development only occupies a small and/or insignificant part of the wider view. • Awareness of the development would have no significant effect on the overall perception of the view. 	<ul style="list-style-type: none"> • Effect of negligible magnitude on visual receptor groups of any sensitivity.
Slight	<ul style="list-style-type: none"> • A small part of the development is visible. • The development constitutes only a minor component of the wider view • Awareness of the development would not have a marked change on the overall perception of the view. 	<ul style="list-style-type: none"> • Effect of low magnitude on visual receptor groups of any sensitivity • Effect of medium magnitude on visual receptor group of low sensitivity
Moderate	<ul style="list-style-type: none"> • A significant part of the development is visible. • The development may form a visible and recognisable new element within the overall view and may be readily noticeable by the visual receptor. • Awareness of the development would change the overall perception of the view. 	<ul style="list-style-type: none"> • Effect of medium magnitude on visual receptor groups of medium sensitivity • Effect of high magnitude on visual receptor group of low sensitivity
Substantial	<ul style="list-style-type: none"> • Much or all of the development is visible • The development forms a significant and immediately apparent part of the view • The development substantially affects and changes the overall character of the view 	<ul style="list-style-type: none"> • Effect of medium magnitude on visual receptor groups of high or very high sensitivity • Effect of high magnitude on visual receptor groups of medium sensitivity
Severe	<ul style="list-style-type: none"> • Much or all of the development is visible • The development becomes the dominant feature of the view to which other elements become subordinate • The development entirely changes the visual character of the view. 	<ul style="list-style-type: none"> • Effect of high magnitude on visual receptor groups of high or very high sensitivity.

43. Permanent visual impacts in the primary visual envelope (less than 2kms from the site) are considered individually because significant variations in magnitude of impact will be perceived by visual receptors at different locations looking towards the application site. However, visual receptors in the secondary visual envelopes are mainly located between 2 and 5kms from the

site. At these distances, although more prominent individual elements of the scheme could be identified, the development will generally be perceived as a single element in the field of view and, if measured individually, there would only be small variations in the magnitude of impact between different elements. Accordingly, the resulting assessment of the significance of the permanent visual impact would not vary greatly. Therefore, to assess the significance of permanent visual impacts in the secondary visual envelopes, the anticipated impacts are considered jointly, rather than individually.

Mitigation of impacts and identification of residual impacts

44. The final stage of the methodology is consideration of mitigation measures and the application of such measures to identified negative (adverse) impacts. The aim of the mitigation measure is to reduce, as far as possible, the significance of an impact to one of no impact, or to one of beneficial impact. The resulting impact after mitigation is described as the residual impact.
45. GLVIA recommends that the mitigation strategy for identified negative (adverse) landscape or visual impacts on a project should follow a sequential process, considering each of the following options in turn:
 - Avoidance is the ideal strategy because careful siting, planning and design can be employed to prevent potential negative impacts from occurring in the first place.
 - Reduction is the second preferred option, whereby the magnitude of an adverse impact can be reduced through careful consideration of site characteristics to ensure that an optimum design is achieved. For example, careful siting and attention to building heights can be a particularly important aspect of the reduction of landscape and visual impacts.
 - Remediation is a less satisfactory mitigation measure because it relies on new landscape measures, such as screen planting, to remedy negative impacts. However, GLVIA acknowledges that good design of the external environment of a new development, while coming under the heading of remediation, can augment the integration of a scheme with the surrounding landscape.
 - Compensation for negative landscape and visual impacts that cannot otherwise be mitigated is the least satisfactory form of mitigation. It can, for example, take the form of off-site planting to screen harmful visual impacts, but this approach to mitigation should only be considered as a 'last resort'.
46. Normally, a mitigation measure will be applied where it can reduce the magnitude of impact on a particular receptor (whether landscape or visual). It may not be possible to apply mitigation measures to all identified impacts and, in such cases, the significance of the residual impact would remain unchanged.
47. The proposed mitigation measures for adverse landscape and visual impacts are described in Section 11.8