

Landscape and visual effects

One of a series of background topic papers prepared by db symmetry in support of a public consultation on proposals for a strategic rail freight interchange in Blaby district, to the north-east of Hinckley in Leicestershire.

INTRODUCTION

1. In 2019 db symmetry will apply to the government for a Development Consent Order (DCO) for a proposed strategic rail freight interchange (SRFI) on a site in Blaby District, to the east of Hinckley in Leicestershire. The project is known as the Hinckley National Rail Freight Interchange (HNRFI).
2. A DCO is a special form of planning permission for large infrastructure projects. It can include a range of additional powers required to implement the proposals, such as powers to acquire land, undertake works to streets, trees and hedgerows and divert utility services.
3. The Environmental Dimension Partnership Ltd (EDP) has been commissioned by db symmetry to provide ongoing landscape and visual advice, a Landscape and Visual Impact Assessment (LVIA) and Landscape Strategy to inform the planning proposals, including the EIA process, and accompany the DCO application.
4. EDP is an independent environmental planning consultancy with offices in Cirencester, Shrewsbury and Cardiff. The practice provides advice to private and public sector clients throughout the UK in the fields of landscape, ecology, archaeology, cultural heritage, arboriculture, rights of way and master planning. Details of the practice can be obtained at www.edp-uk.co.uk.
5. Landscape and visual effects are independent but related issues. Landscape effects relate to changes to the landscape fabric and the features contributing to the landscape character and quality. Visual effects relate to the appearance of such changes within views and the resulting effect on visual amenity.

LAW, POLICY AND GUIDANCE

Legislative framework

European Landscape Convention 2007

6. The European Landscape Convention (ELC), which was signed by the UK in February 2006 and became binding in 2007, is the first international convention to focus specifically on landscape issues and aims to protect and manage landscapes in Europe and to plan positively for change within them. The ELC highlights the importance of developing landscape policies dedicated to the protection, management and creation of landscapes, and establishing procedures for the general public and other stakeholders to participate in policy creation and implementation.
7. The ELC defines landscape as ‘an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors’ (Council of Europe, 2004).

Hedgerow Regulations 1997

8. The Hedgerow Regulations (UK Parliament, 1997) aim to protect hedgerows, which play an important role in supporting and enhancing biodiversity, as well as defining the character of the English and Welsh countryside.
9. According to the regulations, a hedgerow is important if it has existed for 30 years or more, and it satisfies various wildlife, landscape or historical criteria specified in the regulations.

Policy framework

National Policy Statement for National Networks (2014)

10. The National Policy Statement for National Networks, hereafter referred to as ‘NPS’, sets out the need for, and government’s policies to deliver Nationally Significant Infrastructure Projects (NSIPs) on the national road and rail networks in England. It is the primary statement of policy for promoters of NSIPs on the road and rail networks and forms the basis for the examination by the Examining Authority and decisions by the Secretary of State.
11. The landscape and visual effects of national networks projects are considered on pages 75-79 of the National Networks NPS. In paragraphs 5.144 – 5.146 the NPS states:

‘Where the development is subject to EIA the applicant should undertake an assessment of any likely significant landscape and visual impacts in the environmental impact assessment and describe these in the environmental assessment. A number of guides have been

produced to assist in addressing landscape issues¹. The landscape and visual assessment should include reference to any landscape character assessment and associated studies, as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England.

'The applicant's assessment should include any significant effects during construction of the project and/or the significant effects of the completed development and its operation on landscape components and landscape character (including historic landscape characterisation).

'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.'

12. In terms of NSIP development in areas that are not subject to a national landscape designation such as Areas of Outstanding Natural Beauty or National Parks, at para 5.156 the NPS states:

'Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England has policies based on landscape character assessment, these should be given particular consideration. However, local landscape designations should not be used in themselves as reasons to refuse consent, as this may unduly restrict acceptable development.

'In taking decisions, the Secretary of State should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to avoid adverse effects on landscape or to minimise harm to the landscape, including by reasonable mitigation.'

Planning policy

13. At the heart of the National Planning Policy Framework 2018 (NPPF) is a presumption in favour of sustainable development. For landscape, this means recognising the intrinsic beauty of the countryside (paragraph 170) and balancing any 'harm' to the landscape resource with the benefits of the scheme in other respects. The Framework is supported by the National Planning Policy Guidance (NPPG) where relevant.
14. Paragraph 127 seeks to achieve high quality design in development, whilst in paragraph 130 it is stated that development should improve the 'character and quality of the area and the way that it functions'.

¹ *Guidelines for Landscape and Visual Impact Assessment*, 3rd Edition, April 2013. Natural England publishes profiles for National Character Areas.

Local planning policy

15. The statutory development plan relevant to the site comprises the Blaby District Local Plan 1999 (saved policies 2007) and the Blaby District Core Strategy (adopted February 2013). A review of the local planning policy, including relevant supplementary planning documents, evidence base documents and associated guidelines relevant to the LVIA, is contained below.

Blaby District Local Plan 1999 (saved policies 2007)

16. Saved policies of relevance to landscape and visual amenity in the Blaby District Local Plan 1999 include the following:

- CE22 – Landscaping;

'Planning permission will only be granted for development which:

(i) Takes into account, and retains where appropriate, existing landscape, ecological or geological features.

(ii) Incorporates general landscaping and planting of an appropriate quality to assimilate the development into its local landscapes and ecological context.

(iii) Provides a well landscaped and informal edge where development adjoins the countryside or other areas of open land.'

- CE23 – Croft Hill Area of Local Landscape Value.

'Planning permission will not be granted for development which would have an adverse effect on the appearance or character of Croft Hill which is identified on the proposals map as an Area of Local Landscape Value.'

Blaby District Core Strategy (adopted February 2013)

17. Policies in the Blaby District Local Plan Core Strategy DPD (Adopted 2013) of relevance to landscape and visual amenity include the following:

- Policy CS2 – Design of New Development;

'In order to secure a high quality environment, all new development should respect distinctive local character and should contribute to creating places of a high architectural and urban design quality, contributing to a better quality of life for the

local community.'

- Policy CS14 – Green Infrastructure (GI);

'Blaby District Council and its partners will seek to protect existing, and provide new, 'networks of multi-functional green spaces'. This network will comprise public and privately owned land. Green Infrastructure can include formal open spaces for sport and recreation, green areas that can be used for informal recreation, areas that are valuable for their biodiversity (flora and fauna and network links), areas that are of cultural importance (heritage assets and their settings), areas that maintain natural and ecological processes (such as floodplains) and other areas that contribute to the health and quality of life of communities.'

- Policy CS18 – Countryside;

'Land will be designated as Countryside where it is outside the limits to built development and outside designated Green Wedges and Areas of Separation.

'Within areas designated as Countryside, planning permission will not be granted for built development, or other development which would have a significantly adverse effect on the appearance or character of the landscape.'

Emerging local plan policy – Blaby District Local Plan 2029

18. The land within the Draft DCO Boundary lies in the Countryside Policy Area as shown on the emerging Local Plan 2029 proposals map and thus Development Management Policy 2 'Development in the Countryside' in the Submission Version of the Local Plan (Delivery) is of relevance as follows:

'In areas designated as Countryside on the Policies Map, development proposals consistent with Core Strategy Policy CS18 will be supported where the following criteria are met:

'General

- a) *The development is in keeping with the appearance and character of the existing landscape, development form and buildings. Decisions in respect of impact on landscape character and appearance will be informed by the Blaby Landscape and Settlement Character Assessment, Leicestershire and Rutland Historic Landscape Characterisation Study, National Character Areas and any subsequent pieces of evidence; and,*

- b) *The development provides a satisfactory relationship with nearby uses that would not be significantly detrimental to the amenities enjoyed by the existing or new occupiers, including but not limited to, consideration of:*
- i. *overdevelopment of the site due to factors including footprint, scale and mass;*
 - ii. *privacy, light, noise, disturbance and overbearing effect; and,*
 - iii. *vibration, emissions, hours of working, vehicular activity.'*

Other local planning policy

19. The Hinckley and Bosworth Borough Council (HBBC) administrative area bounds the westernmost extent of the Draft DCO boundary and makes up a large part of the broad 5km landscape and visual study area.
20. The statutory development plan for HBBC comprises 'The Local Plan 2006 – 2026' which is made up of a series of documents. Those of relevance include:
- Core Strategy (adopted 2009);
 - Site Allocations and Development Management Policies (adopted 2016).
21. A review of the local planning policy circumstances, including relevant supplementary planning documents, evidence base documents and associated guidelines relevant to the LVIA assessment, is contained below. A detailed review of planning policy will be undertaken within the Planning Statement accompanying the DCO application.

Core Strategy (adopted 2009)

22. One policy within the HBBC Core Strategy DPD, 'Policy 6 – Hinckley/Barwell/Earl Shilton/Burbage Green Wedge' is of relevance to landscape and visual amenity. This Green Wedge lies adjacent to the western boundary of the site.

Site Allocations and Development Management Policies (adopted 2016)

23. Policies within the Site Allocations and Development Management Policies DPD of relevance to landscape and visual amenity include the following:
- Policy DM4 – Safeguarding the Countryside and Settlement Separation;

'To protect its intrinsic value, beauty, open character and landscape character, the countryside will first and foremost be safeguarded from unsustainable development.'

- Policy DM9 – Safeguarding Natural and Semi-Natural Open Spaces.

'All developments within or affecting Natural and Semi-Natural Open Spaces should seek to retain and enhance the accessibility of the space and its recreational value whilst ensuring the biodiversity and conservation value is also enhanced.'

Supplementary planning documents

24. The following additional supplementary guidance is relevant in terms of understanding landscape character across both the Blaby and Hinckley and Bosworth LPA areas:
- Blaby District Character Assessment (2008); and
 - Landscape Character Assessment for Hinckley and Bosworth (2017).

THE SITE

National Landscape Character

- 1.2 A National Character Area is a natural subdivision of England based on a combination of landscape, biodiversity, geodiversity and economic activity. There are 159 National Character Areas and they follow natural, rather than administrative, boundaries. They are defined by Natural England, the UK government's advisors on the natural environment. At a national level the site lies within Natural England's National Character Area (NCA) No 94 'Leicestershire Vales', which is briefly described as 'low-lying clay vales and river valleys'.

Local Landscape Character

25. The local landscape character is defined in the Blaby District Character Assessment (2008), and the Hinckley and Bosworth Landscape Character Assessment (2017). Also of relevance is the Blaby Landscape and Settlement Character Assessment, and the Leicestershire and Rutland Historic Landscape Characterisation Study.
26. The Blaby District Character Assessment (2008) identifies the land within the Draft DCO Boundary ("the site") across two Landscape Character Types (LCT). The northern area of the site falls within LCT A 'Floodplain' and the southern area is within LCT G 'Wooded Farmland'.
27. In terms of Landscape Character Areas (LCA), the site falls similarly within two zones. The northern parts of the site lie in LCA E: 'Elmesthorpe Floodplain' and the southern portions are located within LCA A: 'Aston Flamville Wooded Farmland'.
28. The character of the site and its immediate surroundings is generally consistent with published assessments identified above, particularly in relation to the regularly shaped field pattern dominated by arable fields and woodland.

29. Across the whole site, the topography slopes broadly from north to south at a height of between c.85 metres in the north to c.110 metres AOD, although there are a number of more localised undulations across the site within this range.
30. Given the arable land use, landscape features on site are largely limited to field boundary trees and hedgerows and a variety of agricultural dwellings and buildings associated with the farmsteads across the site. The site is traversed by Burbage Common Road as well as a number of Public Rights of Way (PRoW).
31. In addition to reviewing the above documents, the assessment will take heed of the guidance provided in relation to trees, provided in BS 5837:2012 Trees in Relation to Design, Demolition and Construction (BSI, 2012).

Visual amenity

32. A Zone of Theoretical Visibility (ZTV), is a computer-generated tool to identify the likely (or theoretical) extent of visibility of a development. The elevation (or a set of elevations) of the development is tested against a 3D terrain model.
33. Using landform data within a Geographical Information System (GIS), EDP has prepared a broad ZTV. The ZTV is generated using landform height data only, and therefore it does not account for the screening effects of intervening buildings, structures or vegetation. The ZTV was then visited by walking and driving (as appropriate) local roads, rights of way and other publicly accessible viewpoints. Through this exercise the main visual receptors predicted to have actual visibility to the site were identified.
34. **Landscape Plans 1 and 2** illustrate the ZTV of:
 - a) the site in its current form;
 - b) the site with proposed development at a building height of 23 metres and a maximum regrading² of 7 metres, being assessed at a height parameter across the site of 30 metres above existing AOD.

These ZTVs illustrate the theoretical visibility of the site based on topographical data, built development data and National Tree Map³ (NTM) data up to 1km, assuming excellent visibility with no atmospheric attenuation. In reality, other components of the landscape such as buildings and hedgerows will introduce screening effects which, coupled with the atmospheric conditions, will reduce this visibility in some instances. The ZTVs will be refined and reviewed as the development parameters are explored further.

35. For its size, the visual influence of the site in its current form is very limited given the

² Regrading is the process of grading for raising and/or lowering the levels of land.

³ National Tree Map™ (NTM) provides location, height and canopy extents for individual trees over three metres in height covering all of England and Wales. The data can be provided in a variety of formats for both non-GIS and GIS users.

extent of woodland and built form in the local vicinity. As **Landscape Plan 2** (edp3267_d047) demonstrates, the visual influence of the site will increase with development. The visual assessment process will determine the extent of the increase in visual influence as well as the magnitude of any visual effects that arise.

36. The woodland along the south and south-western boundaries serves to limit views to the south, but higher ground to the north-west at Barwell and to the north at Elmsthorpe allows opportunities for more open views across the site from some locations.
37. Open views of the site are largely limited to those from Burbage Common Road as it passes through the site, the various PRow which cross the site and the M69, although roadside vegetation provides some interruption and the speed and nature of travel limit the availability of views. In the wider landscape there will be opportunities for partial views of the proposed development from roads, PRow and residential properties.
38. Other visual receptors include passengers on trains travelling on the Felixstowe to Nuneaton railway line along the western site boundary and properties in relatively close proximity such as at Langton Farm.
39. **Landscape Plan 3** (edp3267_d048) includes 35 representative viewpoints that have been identified in the ZTV for a development with a maximum height parameter of 30 metres above existing AOD. These viewpoints are at locations where there are likely to be sensitive visual receptors, including receptors in designated landscapes such as Burbage Common and Croft Hill Area of Local Landscape Value (ALLV) and those on PRow and at residential properties. These viewpoints will form the basis of the visual assessment, the significance of any effect being assessed in terms of the magnitude of change in the view and the sensitivity of the visual receptor.

OUR APPROACH TO ASSESSMENT

40. The landscape and visual assessment will be undertaken in accordance with the 'Guidelines for Landscape and Visual Impact Assessment' (Third Edition, 2013), published by the Landscape Institute (LI) and the Institute for Environmental Management and Assessment (IEMA).
41. In compiling the baseline landscape and visual assessment, EDP has:
 - reviewed the planning policy context for the site;
 - undertaken a desktop study and web search of relevant background documents and maps;
 - undertaken a *BS 5837:2012 Trees in Relation to Design, Demolition and Construction* survey of the trees on site;

- undertaken a field assessment of local site circumstances, including a photographic survey of the character and fabric of the site and its surroundings, using photography from a number of representative viewpoints. The field assessment was undertaken by qualified landscape architects;
- provided an analysis of the likely landscape and visual effects of the proposed scheme during construction and operation, which is determined by combining the magnitude of the predicted change with the assessed sensitivity of the identified receptors. The nature of any predicted effects is also identified (i.e. positive/negative, permanent/reversible); and
- provided an analysis of likely cumulative landscape and visual effects.

THE LIKELY MAIN EFFECTS OF THE PROPOSALS

42. The land within the Draft DCO Boundary is not covered by any statutory landscape designations and will be designed and developed in accordance with national and local landscape planning policy.
43. There are no significant constraints to development in landscape, visual and arboricultural terms. However, development of the site in the manner proposed would alter the character of the landscape in the local area.
44. Whilst the landscape is not subject to a protective designation, it is crossed by public rights of way and is visible to a variety of receptors locally. Detractors such as the noise and movement from the M69 and railway are noted but are not so significant as to ‘urbanise’ the landscape, which retains its rural agricultural character.
45. The most notable landscape effect as a result of the development would be the change in character from open agricultural land to commercial development across the site. Other potential effects include the removal of sections of hedgerow and occasional individual boundary trees to allow for access and layout, together with the planting of new hedgerows and trees to strengthen the structure of the landscape.
46. The main potential likely significant landscape and visual effects of the proposed development once completed, irrespective of any mitigation measures, are summarised below.
 - Potential adverse landscape impacts caused by the operational development would generally be localised in scale and restricted to the site itself and immediate environs, where existing woodland and linear tree belts provide visual screening.
 - Change to the character of the landscape of the site through the alteration of land use and the introduction of new temporary and permanent features, the latter including beneficial effects such as the creation of new habitats within the site boundary.

- A permanent, long-term adverse impact on landscape character would occur due to physical impact on landscape within the site including introduction of new built form and associated ground remodelling within existing agricultural land, movement of vehicles and people within the site, a lighting strategy which will increase the number and intensity of light sources within the site.
- There is potential to affect the landscape setting of villages in close proximity to the site, particularly Sapcote, Aston Flamville, Elmsthorpe and Burbage where there is potential intervisibility.
- There would be an adverse physical impact on landscape elements and features within the site caused by the localised removal of existing landscape features such as trees and hedgerows.
- Potential adverse visual effects upon close proximity views from roads including Burbage Common Road and the M69, PRow, Burbage Common (Registered Common Land) and Burbage Common and Woods Country Park, adjacent railway line and residential receptors due to visibility of the completed scheme (including built development, traffic and lighting).

MITIGATION AND ENHANCEMENT OPPORTUNITIES

47. Opportunities exist to improve and enhance the structure of the landscape across the area, which has been partially degraded and fragmented with the intensification of agricultural practices. A strong framework of Green Infrastructure (GI) across the site is likely to be required as mitigation, incorporating hedgerow and woodland planting and connectivity to the landscape beyond the site. As stated within 'Green Infrastructure: An integrated approach to land use' (LI, 2013) page 3:

'GI is the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect villages, towns and cities. Individually, these elements are GI assets, and the roles that these assets play are GI functions. When appropriately planned, designed and managed, the assets and functions have the potential to deliver a wide range of benefits – from providing sustainable transport links to mitigating and adapting the effects of climate change.'

48. As such, a preliminary landscape strategy has been prepared, identifying constraints and opportunities to protect and enhance green infrastructure across the site and is illustrated in Landscape Plan 4 (edp3267_d049). Opportunities to improve the green infrastructure network include:
- provision of high quality public open space and community routes, utilising the site's mature landscape framework where possible;

- enhancement of biodiversity corridors within the site, particularly areas of wet pasture and the small watercourse running through the site, seeking opportunities to extend these areas where feasible;
- retention of existing ecologically important hedgerows within the site where possible, particularly where these relate to early enclosure historic field boundaries;
- visual connections between new public open space and mature landscape features in the wider context;
- improvement and n of links with adjacent landscapes, including PRoW links utilising Burbage Common Road;
- enhancement of pedestrian/cycle/bridleway connections through the site;
- provision of Sustainable Drainage Systems;
- delivery of a net gain in tree planting across the site to address climate change;
- development of a sensitive lighting strategy which follows key parameters designed to limit light spill such as maximum heights, directional units and specific light sources.

NEXT STEPS

49. Further work is programmed to advise on the ongoing design and landscape and visual mitigation of the proposed development – this will be an iterative process, whereby landscape and visual considerations will have an influence on the proposed form of the built development. Once the Parameter Plan and landscape strategy for the proposed development near completion, the LVIA assessment of the proposals will be progressed and finalised. Consultation with statutory and non-statutory consultees continues to assist in the preparation of the Environmental Impact Assessment.

EDP ◆ October 2018