

PART 5 : LANDSCAPE EFFECTS

5.1 Methodology

5.1.1 This part of the ES summarises the landscape, townscape and visual impact assessment as detailed in the A453 Widening *Landscape Effects* report, reference A021959-REP-E-ES-223, June 2008. The methodology for the assessment follows guidance in DMRB Volume 11, Section 3, Part 5 Landscape Effects (June 1993). It also uses guidance within the Department for Transport's Transport Analysis Guidance (TAG) June 2003 and the Highways Agency's Interim Advice Note (IAN) 81/06, June 2006.

5.1.2 The DMRB methodology is supplemented with more recent advice contained within the following documents:

- Guidelines for Landscape and Visual Impact Assessment (GLVIA) (Second Edition, 2002) published by the Landscape Institute and the Institute of Environmental Management and Assessment;
- Landscape Character Assessment: Guidance for England and Scotland. (2002) – published by the Countryside Agency and Scottish Natural Heritage.

5.1.3 In accordance with best practice guidance, the assessment follows three stages:

- Collection, description and evaluation of baseline environmental information leading to conclusions on **sensitivity**, importance and/or **quality** of the landscape and existing views;
- Identification and prediction of the **magnitude** of landscape and visual impacts i.e. the level of change as a result of the scheme; and
- Evaluation of the **significance** of the impacts identified.

5.1.4 Landscape impacts are a result of a change to the fabric, character or quality of the landscape within the rural section between M1 J24 and Clifton as a result of the scheme. Townscape impacts are a result of a change to the fabric, character or quality of the townscape within the urban section. Visual impacts result from the change in views of the landscape and townscape due to the scheme.

Assessing Landscape & Townscape Effects

5.1.5 The criteria used to define predicted adverse (negative) or beneficial (positive) impacts upon the landscape/townscape character follows the procedure set down in TAG unit 3.3.7 and 3.3.8, as follows:

- *Description of the countryside character:* The **character** of the **existing** (baseline) landscape is described using the Countryside Agency (now Natural England) Guidelines;
- *Appraisal of environmental capital:* The **quality** (or condition) and value of the existing (baseline) landscape (when making judgements). Table 2.5.1 below describes the criteria adopted using a five-point scale. The appraisal of environmental capital also considers the ability of the landscape to accommodate change without adverse effects on its character (based on the **value** or **sensitivity** of the landscape using criteria within IAN 81/06 as shown in Table 1.3.1 in Section 1 Part 3 of this ES); and
- *Appraisal of the scheme's impact:* The nature of predicted impacts (**scale** or **magnitude** of the impact). This is generally based on the scale or degree of change to the landscape/townscape resource, the nature of the effect and its duration. Table 2.5.2 below describes the criteria adopted for assessing the magnitude of impact of the scheme, based on experience of other road scheme proposals.

Table 2.5.1: Landscape Quality and Typical Descriptors

| Landscape Quality | Typical Descriptors |
|----------------------------|--|
| 1 - High Quality | Landscapes that are nationally recognised with National Park or Area of Outstanding Natural Beauty status. |
| 2 - Very Attractive | Attractive, diverse landscapes with few visual detractors, often designated locally as Special Landscape Areas or similar for their quality. |
| 3 – Good | Pleasant landscapes with some distinctive qualities. |
| 4 – Ordinary | Average landscapes with no particularly distinctive features and occasional visual detractors. |
| 5 – Poor | Unattractive landscapes with many visual detractors. |

Table 2.5.2: Magnitude of Impact and Typical Descriptors

| Scale of Landscape/ Townscape Impact | Description |
|---|---|
| Major | Where significant elements and characteristics that contribute to landscape character are lost or new uncharacteristic features are added to landscapes (adverse) or characteristic elements are gained or condition improved (beneficial). |
| Moderate | Where a number of elements of landscape character are lost or uncharacteristic elements added (adverse) or (beneficial). |

| Scale of Landscape/ Townscape Impact | Description |
|---|--|
| Minor | Few elements and characteristics are lost (adverse) or gained (beneficial) to landscapes as a result of the proposals. |
| Negligible | No significant change to the elements, which contribute to landscape character. |
| No Change | No loss or alteration of characteristics, features or elements, no observable impact in either direction. |

5.1.6 Overall significance of landscape, townscape and visual effects of the scheme are then assessed using the standard matrix from IAN 81/06 given in Table 1.3.2 in Section 1 Part 3 of this ES, to ensure consistency throughout the assessment process.

Assessing Visual Effects

5.1.7 Visual impact is the result of a change in view either from residential property, public rights of way, land with public access, roads and offices. The **sensitivity** of receptors relates principally to three factors:

- The *location* and context of the viewpoint;
- The *expectations* and occupation or activity of the receptor; and
- The importance of the view (which may be determined with respect to its popularity or *numbers* of people affected).

5.1.8 Using these factors the most sensitive receptors may include the following:

- Occupiers of *residential* properties with views affected by the development;
- Users of all outdoor recreational facilities including public rights of way, whose attention and interest may be focused on the landscape; and
- Communities where the development results in changes in the landscape setting or valued views enjoyed by the community.

5.1.9 The least sensitive receptors are likely to be people at their place of work, or engaged in similar activities, whose attention may be focussed on their work or activity and therefore may be potentially less susceptible to changes in the view. Road users are included in this category as their experience is transient.

5.1.10 The **magnitude** of impact is assessed according to the scale of the effect, which will depend largely upon the size and type of the development and the distance of the receptor from the site. The **significance** of visual impact depends upon the

sensitivity of the receptor and the magnitude and duration of the effect. Therefore, the significance of the visual impact is higher for sensitive receptors where there are large-scale effects on a view for a long time. Table 2.5.3 below is a guide to how the visual impact of the proposed development has been assessed, based on guidance in both DMRB and GLVIA 2002.

Table 2.5.3: Arriving at Significance of Visual Impact

| Visual Impact (Significance) | Description |
|--|---|
| Substantial (adverse or beneficial) | The proposals would cause substantial deterioration or improvement to a view from a highly sensitive receptor and would constitute a major dominant element in the view. |
| Moderate (adverse or beneficial) | The proposals would cause change to a view from a sensitive receptor or less change to a view from a more sensitive receptor and would be an obvious element in the view. |
| Slight (adverse or beneficial) | The proposals would cause limited deterioration/improvement to a view from a receptor of higher sensitivity or greater change to a view of a lesser sensitive receptor when there is a noticeable change in view. |
| Negligible | The change to the view is discernible but restricted and thus not significant. |

5.1.11 The night-time impact of the proposed scheme lighting on the character of the landscape is assessed separately where appropriate to the daytime impact of lighting columns and gantries.

Assessment Scenarios

5.1.12 In accordance with DMRB guidance, the assessment of landscape and visual impacts of the proposed road improvements is based on three stages of development: during the construction stage; at completion (i.e. Year 0); and then at 15 years after completion, in summer for the landscape impacts and winter and summer for visual impacts. This method of assessment serves to provide a greater level of understanding of any likely landscape and visual impact through a period of time and considers the development of mitigation proposals particularly screen planting which takes a period of time to establish.

5.2 Key Guidance and Legislation

5.2.1 The scheme is being prepared under the Highways Act 1980. A range of national legislation and policy guidance / statements are of relevance to the assessment of landscape and visual impacts, for example Planning Policy Statement (PPS) 1: *Delivering Sustainable Development* and Planning Policy Guidance (PPG) 2: *Green Belts*. A full list is given within the detailed assessment report mentioned in

paragraph 5.1.1 above. The relevance of the scheme to land use legislation and other policies is detailed within the A453 Widening report *Impact on Policies and Plans* reference A021959-REP-E-ES-232, May 2008.

- 5.2.2 Regionally, the scheme is recognised within the Regional Spatial Strategy for the East Midlands (RSS 8) as being of significance and is identified as a Regional Transport Investment Priority under the Regional Transport Strategy Objective.
- 5.2.3 Local planning policy of relevance to the scheme is given within the structure plans covering Leicestershire and Nottinghamshire, and relevant local plans of North West Leicestershire District, Rushcliffe Borough and Nottingham City.
- 5.2.4 Further, non-statutory policy on Mature Landscape Areas (MLAs) is provided by Nottinghamshire County Council. The proposed scheme passes close to four MLA's and would cut through the edge of a fifth, the Burrows Farm MLA (No. 127) at the Barton Lane junction.

5.3 Consultations

- 5.3.1 As described in Section 1, Part 3 of this ES, a scoping report was sent to English Heritage, the Environment Agency, Natural England, the county councils and the local planning authorities, to determine the scope of the EIA and to agree the methodologies to be used. A number of comments were received on the scope of the proposed landscape effects assessment, as summarised in Appendix F. These issues have all been addressed in the ES.
- 5.3.2 During the initial assessment of impacts, site meetings were held with conservation officers of Nottingham City Council and a Landscape officer from Nottinghamshire County Council, when preliminary mitigation proposals were also discussed. Advice given in these meetings has been taken into consideration during scheme design.
- 5.3.3 Meetings have also been held with the consultees mention in paragraph 5.3.1 above, together with representatives of the Nottinghamshire Wildlife Trust, where amongst other issues the effects of the scheme and mitigation measures to reduce landscape and visual impacts were discussed.

5.4 The Study Area

- 5.4.1 The Study Area for this assessment has been informed by defining a Zone of Theoretical Visual Influence (Theoretical ZVI) as an approximate area within which the existing A453 can be seen or is likely to be seen. The ZVI is determined by topography together with other factors such as vegetation and buildings. In this instance, the ZVI is based on approximate winter visibility.

5.5 Baseline Conditions

Existing Landscape and Townscape Character

- 5.5.1 No part of the study area is protected by any statutory landscape designation.
- 5.5.2 The wider context of the baseline landscape character assessment is provided by the Countryside Agency's (now Natural England) Character of England Map. The A453 runs through two regional areas: Trent Valley Washlands (Area 69) and Leicestershire and Nottinghamshire Wolds (Area 74). The key characteristics for these two areas and their extent are described and shown in the A453 Widening *Landscape Effects* report reference A021959-REP-E-ES-223, June 2008. The extent of these areas is shown in Figure 2.2.4.
- 5.5.3 Further guidance on the baseline character of the landscape through which the road would pass is provided by both Leicestershire County Council and Nottinghamshire County Council in the following two documents:
- 'Leicester, Leicestershire and Rutland Landscape and Woodland Strategy' 2001
 - Nottinghamshire County Council's 'Countryside Appraisal and Landscape Guidelines' 1997
- 5.5.4 Within Leicestershire the A453 passes through the *Trent Valley* Landscape Character Area (LCA) between the motorway and the River Soar. Within Nottinghamshire the road passes through or close to three LCA's: *Trent Washlands*; *Nottinghamshire Wolds*; and *South Nottinghamshire Farmlands*. The extent of these areas is also shown in Figure 2.2.4.
- 5.5.5 A detailed site survey including extensive fieldwork was carried out to establish the character of the landscape at a much smaller, scheme-specific level of detail. From this the study area was characterised into a number of 'scheme landscape and townscape character areas' which are largely consistent with the County-wide assessments but do vary slightly. These areas and their relationship with the County-wide assessments are shown in Figure 2.5.1 and 2.5.2. The scheme landscape (SLCA) and townscape (TCA) character areas are described below:
- A453 SLCA 1 – M1 to Ratcliffe*
- 5.5.6 This area is dominated by the Ratcliffe Power Station, associated infrastructure such as overhead transmission wires and M1. The A453 is prominent in the landscape, however is partially screened in areas by mature roadside vegetation. Noise from the A453 is also apparent in many locations. A north-south railway line and the M1 Motorway are apparent; the latter defines the western edge of the SLCA 1. The flat open topography affords long distance views of these features, and of isolated farm buildings. The predominant land use is medium scale agricultural,

mostly arable with some rough grazing. Mature hawthorn hedgerows provide the majority of the vegetation cover, forming boundaries to the agricultural fields. While many have hedge trees, there is some evidence of the hedgerows suffering from a lack of positive management intervention or restoration. There are pockets of woodland and shelterbelts, which provide some variety in the views. The Mature Landscape Area status of Ratcliffe on Soar is outweighed by the influences of the M1, Power Station and A453, therefore the quality/condition of the landscape is considered ordinary.

A453 SLCA 2 - South of A453 Kingston on Soar to Gotham, and north of Ratcliffe Power Station to edge of Thrumpton

- 5.5.7 An undulating, medium scale agricultural landscape of mixed arable and pastoral grazing, with wooded hills of mixed broadleaf species. While the Power Station is still very apparent, it is obscured in places by topography and vegetation cover from the south-east. The associated infrastructure is also less prominent, as is the A453, again due to topography and vegetation cover. Small scale villages dot the landscape, including Ratcliffe on Soar, Kingston on Soar and West Leake, and there are some good examples of quality local architectural vernacular within the SLCA 2. The village of Gotham lies between SLCA's 2 & 3, but is more influenced by the undulating topography and wooded hills of this character area. Remnants of designed parkland, estate landscape and woodlands from the grounds of the country house of Kingston Hall are evident, improving the quality of this landscape area. Some areas of mixed plantations add to the increased variety of vegetation in this area when compared to adjacent ones. The quality/condition of the landscape is considered good.

A453 SLCA 3 – Clifton Pasture and Barton Moor

- 5.5.8 A plain, medium to large scale, flat, agricultural landscape, comprising mainly arable land, but with some areas of rough pasture. This is an historically open, unenclosed landscape with very few hedgerows or field boundary features. Originally boggy moorland, its character has been changed by agricultural drainage. Occasional hedgerow trees, shelter belts, woodland clumps and isolated trees are present. Distant wooded hills bind the SLCA, however overhead transmission wires partially interrupt medium to long distance views. The Power Station and A453 are apparent, but do not dominate the area. The suburban edge of Clifton to the north east is also evident, lying along part of the boundary of the SLCA 3. The quality/condition of the landscape is considered ordinary.

A453 SLCA 4 – Trent Washlands and Clifton Edge

- 5.5.9 A character area very similar to SLCA 3, but more intimate in nature. A plain, medium scale, flat, agricultural landscape dominates, comprising mainly arable land, but with some areas of rough pasture. Degraded and gappy, predominantly hawthorn hedgerows with some hedge trees form field boundaries. Occasional shelter belts, woodland clumps and isolated trees are present adding little to the

quality of the landscape character. The Power Station and associated infrastructure are evident. Small settlements such as Thrumpton to the southern boundary edge and Barton in Fabis fall within the SLCA 4. There are some good examples of quality local architectural vernacular within these areas. The quality/condition of the landscape is considered ordinary.

A453 SLCA 5 - Clifton Edge and Brands Hill to Gotham Hill

5.5.10 A plain, open and relatively featureless agricultural landscape, dominated by arable land with large modern modified field patterns. With a sloping topography, the open fields fall away from the A453 and Mill Hill to the south east. The A453 and associated traffic are visible on the ridge line and the Power Station is visible from most locations within the SLCA 5. Occasional farm buildings dot the open landscape. There are few hedgerows, and occasional small woodland clumps and isolated trees provide poor screening to the Power Station and add little to the quality of the landscape. Wooded hills are visible in the distance, however overhead transmission wires interrupt medium to long distance views. The suburban edge of Clifton to the northeast is also evident. The quality/condition of the landscape is considered ordinary.

A453 TCA 1 – Clifton Suburbs

5.5.11 This TCA covers the area between Mill Hill on the southern edge of Clifton to the Crusader Roundabout, and a small section from the Crusader Roundabout to the Clifton Village Green. This TCA is essentially a suburban road, with well screened residential developments lying to the north and south. The development to the south is more urban in character. The residential developments of post war two and three-story brick terraces and flats, typically set back from the road, are well screened by semi-mature screen planting which characterises this area. It differs in character from its neighbouring areas in that the road corridor is relatively narrow, widening out at each end, onto the Crusader Roundabout (TCA 2) to the east, and the wider countryside (SLCA's 3, 4 and 5) to the west. The quality/condition of the landscape is considered ordinary.

A453 TCA 2 – Crusader Roundabout

5.5.12 The Crusader Roundabout is a relatively 'green' suburban roundabout. Semi-mature trees and rose beds provide a suburban character to this large interchange that sits well, in terms of scale and massing, within its suburban environment. Two-story, brick, terraced and semi-detached residential properties are set well back behind semi-mature screen planting surround the majority of this area. The Crusader public house forms a northern edge. Lighting on the outer edge of the roundabout along with road crossings, signage, and road markings are all utilitarian in character, reinforcing the character of a suburban roundabout. The quality/condition of the landscape is considered ordinary.

A453 TCA 3 - Clifton Village – Amenity Open Spaces

5.5.13 The village green area, defined by the extent of the Clifton Conservation Area status, is split by the A453 into two distinctive character areas; TCA 3 to the south and TCA 4 to the north. TCA 3 is predominantly amenity open space with no apparent defined use. The area is of poor quality and not practically useable as an 'active' recreational 'village green' space due to the proximity of the A453 and side roads. It is bleak in appearance with scattered trees and close mown grass areas. Two-story, terraced residential properties with front gardens define the southern edges, and a row of semi-mature ash trees along the A453 define the northern edge. The Clifton Service Station and Man of Trent public house, both of poor quality, design and condition, dominate the built form in this area. The quality/condition of the landscape is considered ordinary.

A453 TCA 4 – Clifton Village Green

5.5.14 A line of ash trees to the north of the A453 defines an area of open amenity space with a distinctive 'village green' character (lacking to the south side of the A453). When viewed from the A453, the area does not appear to be a particularly attractive area or village green. However, once within the area, the boundaries of the space become apparent. Older, typically two-story detached buildings (some dated 1871), are of a local architectural vernacular, typically stone and brick built. The built form in this area is of a low density and informal form, more in line with a village, as opposed to the higher density of the surrounding suburban housing. Street lighting is sympathetic to the historical local vernacular, and the space is free from urban clutter. The quality/condition of the landscape is considered good. The A453 is apparent from within the character area.

A453 TCA 5 - Clifton Urban Greenway

5.5.15 Extending from the edge of the village green to the eastern edge of Clifton, this suburban road runs past Nottingham Trent University (NTU) to the northwest, and residential properties to the south and northeast. Residential properties, typically two-story terraces and semi-detached with some detached properties to the north, are set well back from the road behind a mature woodland tree belt of three to four trees depth. This provides an important characteristic that not only provides screening, but also integrates the road into its suburban environment. The NTU campus to the north of the road is a younger landscape, comprising some modern university buildings up to three and four stories, sports pitches and other open space. The planting along the NTU campus provides less screening and integration than the mature tree belts to the south of the A453. Roadside vegetation on the north side has recently been thinned out with the removal of dead elm trees for public safety reasons, leaving a somewhat unsightly verge. The road and its suburban setting of mature tree belts, residential properties, university campus and planting provide a good scale of components that work well together. The quality/condition of the landscape is considered ordinary/good.

Summary of Landscape & Townscape Character

- 5.5.16 Table 2.5.4 below summarises the quality / condition of each of the SLCA's and TCA's in accordance with the criteria given in Table 2.5.1. Overall the quality / condition of the landscape and townscape in the study area is considered ordinary.
- 5.5.17 Table 2.5.4 below also summarises the value or sensitivity of the landscape and townscape of the study area, in accordance with the criteria given in Table 1.3.1. The landscape has been assessed overall as being of ordinary quality. The landscape is not sensitive to the further changes proposed as the landscape has already undergone considerable transformation. The proposed widening is characteristic of the area particularly as it is predominantly online. However there will be areas that are valued by certain stakeholders higher than others in areas of ordinary or poor quality. Overall, it is considered that the value or sensitivity along the entire route is low (low or medium importance and rarity, local scale).

Existing Visual Amenity

- 5.5.18 A combination of gently undulating topography, areas of woodland, roadside planting and built structures determine the nature and availability of views within the study area. In general, there are few significantly elevated or prominent vantage points. Topographical variation is limited with shallow slopes forming a series of subtle ridges and valleys in an area that lies on the edge of the Trent Valley and the Wolds Landscape Character Areas. The Trent Washlands form a distinct, linear, landscape character where the Trent passes through its middle reaches in central England.
- 5.5.19 Comprehensive fieldwork identified 139 individual visual receptors or groups of receptors at various locations within the study area, where there are views of the A453. These are listed in the *Landscape Effects* report as referenced above. The report also contains descriptions of the views of each individual receptor and the sensitivity of the view, in accordance with the descriptions given in paragraphs 5.1.8 and 5.1.9 above.

Table 2.5.4: Summary of Landscape Quality and Value (or Sensitivity)

| Regional Landscape Character Areas (sources: Natural England Character Map of England) | Local Landscape Character Areas (sources: Leicester, Leicestershire & Rutland Landscape & Woodland Strategy and Notts County Council Countryside Appraisal & Landscape Guidelines) | Local Landscape Character Types | Local Landscape Character Area Quality/Condition (qualitative) (Ref. Table 1) | Scheme Landscape/Townscape Character Areas | Quality/Condition (Ref Table 1) | Overall Quality/Condition (Ref Table 1) | Overall (Environmental) Landscape Value (or sensitivity) (Ref Table 2) | |
|---|---|--|--|--|--|--|---|---|
| Trent Valley Washlands (69) | | | | | | | | |
| Leicestershire and Nottinghamshire Wolds (74) | | | | | | | | |
| | Trent Valley | | Poor | Assessment of predicted effects is made with reference to scheme landscape character areas only as SLCA's is largely consistent with the larger scale assessment work previously undertaken. | | | | |
| | Trent Washlands | River Meadowlands (A) River Meadowlands (B) Alluvial Estate Valley Wetlands | Poor | | | | | |
| | Nottinghamshire Wolds – | Wooded Hills and Scarps | Good | | | | | |
| | South Nottinghamshire Farmlands | Alluvial Levels Village Farmlands | Good | | | | | |
| | | | | | | | | |
| | | | | SLCA 1 | M1 to Ratcliffe | Ordinary | Ordinary Rural Section | Low (low or medium importance, local scale) |
| | | | | SLCA 2 | South of A453 Kingston on Soar to Gotham & north of Power Station to edge of Thrumpton | Good | | |
| | | | | SLCA 3 | Clifton Pasture and Barton Moor | Ordinary | | |
| | | | | SLCA 4 | Trent Washlands and Clifton Edge | Ordinary | | |
| | | | | SLCA 5 | Clifton Edge and Brands Hill to Gotham Hill | Ordinary | | |
| | | | | TCA 1 | Clifton Suburbs | Ordinary | Ordinary Urban Section | Low (low or medium importance and rarity, local scale) |
| | | | | TCA 2 | Crusader Roundabout | Ordinary | | |
| | | | | TCA 3 | Clifton Village – Amenity Open Spaces | Ordinary | | |
| | | | | TCA 4 | Clifton Village Green | Good | | |
| | | | | TCA 5 | Clifton Urban Greenway | Ordinary/Good | | |

5.6 Potential Impacts

- 5.6.1 The significance of effects on landscape/townscape and views rely on professional judgement and opinion based on experience of evaluating existing environmental sensitivity and value, and assessing the degree of change as a result of the scheme.
- 5.6.2 A new road can affect the appearance of the landscape by changing the landform, affecting existing vegetation and other landscape features, and the pattern of settlement and other man-made features including historic and cultural associations. In considering potential impacts consideration is given to the level of the road relative to existing ground level (including embankments, screen mounds, cuttings etc.); the road itself (including side roads, junctions and structures); lighting (both night time impact and daytime due to the columns); traffic on the road; loss of buildings, vegetation, open space and other features; and the relationships of scale and materials.
- 5.6.3 Scheme design therefore, including measures to avoid or reduce impacts, is an important consideration in the assessment of impacts and overall significance of effects. This is described in more detail below.

5.7 Design and Mitigation Measures

- 5.7.1 Mitigation measures included in the scheme design are illustrated in Figure 1.2.1 *Landscape Proposals and Mitigation* in the ES Volume 2, and are also shown in more detail in Figure 1.2.3 *Environmental Masterplan* on the large plans folded into this volume of the ES.
- 5.7.2 Key mitigation planting proposals are described on the drawings in terms of their environmental objective (such as screening or landscape integration) and how that objective would be achieved (for example by planting native woodland or new hedgerows). Other measures are illustrated where the primary objective is to enhance the scheme for nature conservation (for example by installing wildlife underpasses) or for drainage/water environment reasons (for example by creating balancing ponds). There are close interrelationships between the objectives and features or elements used to achieve them, and mitigation measures often fulfil more than one role. For example, native hedgerow planting could help integrate the scheme into the landscape whilst also being of nature conservation value. The codes shown in the figures are based on guidance within the Highways Agency's Interim Advice Note (IAN) 84/07, July 2007.
- 5.7.3 The main objectives of the landscape mitigation measures are to:
- Minimise the alteration of the existing pattern and character of the landscape in accordance with strategies set out in the County appraisals as described above;

- Minimise visual impacts;
- Minimise impacts on people in local communities by considering the effects on public rights of way;
- Minimise the loss and degradation of existing landscape and ecological features, including maintaining the quality of watercourses; and
- Increase the nature conservation resources of the area through the creation of areas of wildlife habitat as an integral part of the landscape proposals.

5.7.4 The following paragraphs describe the key mitigation measures adopted to meet these objectives within each of the scheme landscape and townscape character areas described above:

A453 SLCA 1 – M1 to Ratcliffe

5.7.5 Proposed woodland planting blocks within the highway boundary would replace those lost to the proposals, as well as adding to the existing pockets of woodland throughout the SLCA, and to the retained roadside vegetation which is mostly to the north of the A453. Hedgerows with trees along the highway boundary would link up with the existing mature hawthorn hedgerows, and would be in keeping with existing field boundary treatments in this character area. Some offsite hedgerow enhancements are proposed which would further help in achieving this whilst also strengthening wildlife corridors, subject to landowner permission.

A453 SLCA 2 - South of A453 Kingston on Soar to Gotham, and north of Ratcliffe Power Station to edge of Thrumpton

5.7.6 At the Parkway Junction, woodland planting and hedgerows with trees would be in keeping with this character area, as well as helping to screen the A453 proposals. Also in this area species-rich grassland is proposed to increase the ecological value. Scattered trees would improve the visual amenity of the roundabouts.

5.7.7 The character of mixed broadleaf wooded hills, mixed plantations and vegetation cover is retained through the planting of other large blocks of woodland, especially at the West Leake junction. Hedgerows with trees planted within and along the highways boundary link in with the medium scale agricultural hedgerow boundaries. Both the woodland planting and hedgerows with trees combine to link together existing woodland and vegetation. Some off-site hedgerow enhancement is proposed which would further help in achieving this whilst also strengthening wildlife corridors, subject to landowner permission. The planting will be enhanced by ground modelling within the West Leake Junction.

A453 SLCA 3 – Clifton Pasture and Barton Moor

5.7.8 The proposed scheme would not pass through this character area. However, concern has been raised locally and by English Heritage and the County

Archaeological officer about the impact of the offline route on this historic landscape. Agreement has been reached on the most appropriate form of mitigation to further reduce impacts of this section of the scheme, other than its alignment lower down the ridge of high ground at Brands Hill and Mill Hill than the current A453. These measures are described under SLCA 5 below.

A453 SLCA 4 – Trent Washlands and Clifton Edge

- 5.7.9 To reflect the open, while still more intimate character of the adjoining SLCA 5, the retained vegetation and hedgerows will be linked by the planting of new hedgerows and hedgerows with trees within the area between Thrumpton and Barton in Fabis. The hedgerows will be located at the toe of slopes, to enhance existing field boundaries but still keep the area open, and allow for the retention of extensive views. Woodland planting will be concentrated where the highway boundary widens out from the carriageway, for example between the proposed road and Barton Lane, Thrumpton (chainage 5900 – 6150), to aid with screening, and at existing woodland clumps and shelterbelts to provide enhancement, whilst avoiding an alteration to the openness to the area.
- 5.7.10 An area of mitigation for ecological habitat creation will be planted with species-rich grassland to the north of the A453, between chainages 6150 to 6600. This mitigation will again be in keeping with the openness of this character area, whilst introducing ecological enhancement.

A453 SLCA 5 - Clifton Edge and Brands Hill to Gotham Hill

- 5.7.11 The openness of this character area has been respected by minimising planting that might interrupt views and affect the setting of the Clifton Pasture and Barton Moor area to the east. In some areas only hedgerows will be planted, keeping the area open and allowing views to the wider landscape from the A453. Localised clumps of dense roadside woodland planting would respect the landscape and help reintroduce a more enclosed character that once existed here (this is described in more detail in Section 2, Part 2 Cultural Heritage). A substantial area of woodland planting at Barton Lane Underbridge will more than mitigate the impact of the removal of existing vegetation in this area, keeping the character of this Mature Landscape Area intact. Offsite (with landowner agreement) and slope/embankment woodland planting replaces lost vegetation at the Drift Lane Plantation, reinforcing this landscape feature.

A453 TCA 1 – Clifton Suburbs

- 5.7.12 Boundary treatments of woodland planting and individual trees at the south western section of this character area are in keeping with the existing screen planting, keeping this section as a relatively narrow road corridor. The existing semi mature screen planting is substantial enough to provide adequate screening from the proposals in the majority of this area. Some gap planting is proposed to enhance

the existing vegetation, as well as provide additional screening on the southern side of the road.

A453 TCA 2 – Crusader Roundabout

- 5.7.13 The existing semi-mature screen planting is substantial enough to provide adequate screening from the proposals in this area. The roundabout will benefit from scattered tree and shrub planting, breaking up the central space.

A453 TCA 3 - Clifton Village – Amenity Open Spaces

- 5.7.14 Scattered trees at the road junction will break up this expansive and bleak character area. This area will be subject to more detailed design to incorporate measures to enhance the Clifton Conservation Area, including hard landscape detailing.

A453 TCA 4 – Clifton Village Green

- 5.7.15 A small area which is currently highway on the northern edge of the A453 will become grass verge as an addition to the Clifton Village Green. As above, the emphasis will be given to detailed design of the road infrastructure and measures to 'soften' the impact of the road by, for example, amenity tree and shrub planting.

A453 TCA 5 - Clifton Urban Greenway

- 5.7.16 Existing vegetation will be retained where possible. Road edges will be graded into the existing margins and grassed. There is limited opportunity for replanting through this section other than the extensive offsite planting proposals which have been agreed with the University, and which will enhance the frontage to the campus with new railings, signage, hedges trees and shrubs.

5.8 Magnitude of Impacts

- 5.8.1 The impact of the scheme is described in sections, from west (M1 J24) to east (Farnborough Road Junction in Clifton) for ease of reference. Each section includes a description of the construction activities particular to that section, many of which are common to all sections, such as vegetation clearance.

Impacts during Construction

M1 to (and including) Long Lane (chainage 0 to 1400)

- 5.8.2 The initial phase involving removal of existing vegetation will have greatest landscape and visual impact. This operation will alter the landscape character of this section, opening up and exposing the existing A453 to the local landscape to the south. The existing A453 will become more visible within the landscape, in particular to Dowell's Barn and Long Lane Farm and towards Kegworth, and construction operations will also be visible from the identified view points further to

the south. The magnitude of landscape and visual impacts during construction will be moderate adverse.

Long Lane to (and including) Ratcliffe on Soar (chainage 1400 to 2600)

5.8.3 To the south of the existing carriageway the initial phase involving removal of existing vegetation will have significant landscape and visual impact particularly in the Cedar Isle area and to properties in Ratcliffe on Soar. This operation will alter the landscape character of this section of the site exposing the existing carriageway in an area where its elevated position is already a dominant feature to the north of the village.

5.8.4 The construction of the flood span and bridge extensions will also have considerable impact upon a very localised area to the north of the village. Several properties, most notably Cedar Isle and Riverside Farm will be significantly affected by the construction operations.

5.8.5 Other than the access ramp construction at the end of Ratcliffe Lane and the lowering of farmland to create flood compensation, there will be little change to the northern side of the existing A453. The magnitude of landscape and visual impacts during construction will be moderate adverse.

Ratcliffe on Soar to (and including) West Leake Junction (chainage 2600 to 4500)

5.8.6 The influence of the Power Station as a dominant landscape and visual feature is significant within the context of the proposed construction operations. The scheme requires clearance of large areas of plantation planting at both Parkway and West Leake junctions and in consequence will open up views of the Power Station structures and particularly the coal tip at West Leake Junction. In this area the significant landscape and visual impact will arise not from the construction or operational phases of the proposed scheme but from the greater visibility of the Power Station. Winking Hill Farm will suffer adverse visual impact during construction in this section. The magnitude of landscape and visual impacts during construction will be moderate adverse.

West Leake Junction to (and including) Thrumpton (chainage 4500 to 5600)

5.8.7 As well as vegetation clearance and carriageway construction, other impacts during construction in this section include major earthworks for the construction of the new layout at Barton Lane, extension of Thrumpton Accommodation Overbridge and private means of access on the south side. The magnitude of landscape and visual impacts during construction will be moderate adverse.

Thrumpton to Manor Road (chainage 5600 to 6600)

5.8.8 This section of the proposed scheme includes the start of the proposed offline route from a point approximately to the south of Tramway House on the southern edge of Thrumpton. The proposal locates the new carriageway south of the existing A453

with a 40 m wide footprint through agricultural land. The new alignment will minimise loss of roadside planting in contrast to previous sections, as most of the existing vegetation adjacent to the A453 will be retained. The offline route in this section will impact particularly upon the landscape and visual setting of Glebe Farm which will have open and close (200 m) views of the construction operations. In contrast, landscape and visual impacts upon the landscape to the north will be reduced by the screening influences of the existing carriageway and its associated planting. The magnitude of landscape and visual impacts during construction will be moderate adverse.

Manor Road to Barton Lane (chainage 6600 to 7700)

- 5.8.9 This section includes the offline route which is adjacent to and parallel with the existing carriageway at Manor Road and Barton Lane but approximately 50 m to the south in the central area. The proposal locates the entire new carriageway south of the existing A453 in this section with a 40 m to 50 m wide footprint through the agricultural land. The new alignment will minimise loss of roadside planting in contrast to previous sections, as most of the existing will be retained with the old A453 layout. The off line proposal in this section will impact particularly upon the landscape and visual setting of Top Farm Cottages and Shepherds Barn which are located on the section of Barton Lane to the south of the A453. In contrast, landscape and visual impacts upon the landscape to the north towards Barton in Fabis will be reduced by the screening influences of the existing carriageway and its associated planting. The magnitude of landscape and visual impacts during construction will be moderate adverse.

Barton Lane to Clifton, Nottingham City Boundary (chainage 7700 to 9050)

- 5.8.10 As with the previous section, in this section the offline route would be constructed through agricultural farmland to the south of the existing A453. This will minimise loss of existing roadside vegetation but will cut through the southern edge of Drift Lane Plantation where approximately 0.3 ha of low quality woodland will be lost.

- 5.8.11 The construction operations for the offline route in this section will impact particularly upon the open landscape and visual quality of the area to the south of the A453 in the section between Barton in Fabis and Clifton. Although there are very few receptors within this open landscape, construction work will be visible from those that do exist and particularly from Top Farm Cottages and Shepherds Barn (030) on Barton Lane at the western end of the section. The magnitude of landscape and visual impacts during construction will be moderate adverse.

City Boundary to (and including) the Crusader Roundabout (chainage 9050 to 9800)

- 5.8.12 This section of the proposed scheme includes the construction of the four lane single carriageway to the Crusader Roundabout. The proposal locates the entire new carriageway to the north of and adjacent to the existing A453 in this section. The construction operations will take place within a visually narrow corridor created

by dense vegetation particularly during the summer months. The four lane single alignment will minimise loss of existing roadside planting although there will be some loss to the southern margin. The existing vegetated mound to the northern side is to be retained providing some screening of views of the A453. The construction of the new road alignment, however, will be visible from properties to both the north and south in this section within the narrow visual corridor. The degree of impact from construction operations will also be seasonal as the existing hedgerows provide significant summer screening. The magnitude of townscape and visual impacts during construction will be moderate adverse.

Crusader Roundabout to Green Lane (chainage 9800 to 10000)

5.8.13 The proposal extends the new carriageway to both the north and south of the existing A453 in this section. The construction operations will take place within a visually narrow corridor created by dense vegetation particularly during the summer months. The construction of the new road alignment will be visible from receptors to both the north and south in this section particularly in the area adjacent to The Clifton Conservation Area where the urban landscape is more open with large grassed areas. The degree of impact from construction operations will also be seasonal as the existing trees provide summer screening. The magnitude of townscape and visual impacts during construction will be moderate adverse.

Green Lane to Glapton Lane (Clifton Village) (chainage 10000 to 10200)

5.8.14 The proposal extends the new carriageway particularly to the south of the existing A453 in this section. The construction operations will take place within a visual corridor dominated by the green open spaces associated with the Clifton Conservation Area and specifically Clifton Green. The localised removal of trees will have the greatest impact upon the landscape and visual setting of the Green Lane to Glapton Lane section of the proposed scheme. The magnitude of townscape and visual impacts during construction will be moderate adverse.

Glapton Lane To Farnborough Road (chainage 10200 to 11000)

5.8.15 The proposal extends the new carriageway mostly to the north of the existing A453 in this section, although the new access along Grasby Walk will affect land to the south. The construction operations will take place within a visual corridor dominated by the green open spaces associated with the NTU campus to the north and the mature tree belt to the south. Tree and hedgerow felling and removal to the either side of the existing carriageway is likely to have maximum impact upon the landscape and visual setting of the Glapton Lane to Farnborough Road section of the proposed scheme. The properties fronting the south side of the A453 will all have close views of the construction operations. The magnitude of townscape and visual impacts during construction will be moderate adverse.

Fabis Drive/Farnborough Road Junction (chainage 11000 to 11400)

- 5.8.16 The proposal modifies the existing Fabis Drive/Farnborough Road Junction creating a new roundabout within the widened A453. The construction operations will impact particularly on the green open space to the north of the existing carriageway.
- 5.8.17 Tree felling and removal to either side of Fabis Drive/Farnborough Road junction is likely to have a significant impact upon the landscape and visual setting of the section of the proposed scheme. The properties fronting both the north and the south side of the A453 will all have close views of the construction operations. The magnitude of townscape and visual impacts during construction will be moderate adverse.

Impacts following Road Opening (Year 0 and Year 15)

- 5.8.18 This section summarises the likely landscape and visual impacts during the operational phase of the proposed scheme immediately following road opening (Year 0) and fifteen years later both in the summer and winter (assessing the worse case without leaves on the vegetation). The effect of landscape mitigation measures as described in section 5.7 above are taken into account in the Year 15 assessment but not the Year 0 assessment. Impacts are described for each of the sections of the scheme as above. Visual impacts are illustrated in Figure 2.5.9 *Visual Impact Assessment* in the ES Volume 2.

M1 to (and including) Long Lane (chainage 0 to 1400)

- 5.8.19 *Landscape impacts:* the widened road and structures will impact upon the landscape to the south of the existing road including the secluded pastoral areas, with good hedgerow structure, and open arable fields with low hedges. The open nature of the raised road embankments will change the backdrop to this landscape type, which is currently typical of the area to the south of the existing A453. Replacement hedgerows with trees and woodland planting on the slip road embankments would replace such a loss and integrate the road into the landscape. Additional hedgerows would be planted in this section to redefine field boundaries and reconnect existing hedgerows. It is predicted that the resulting magnitude of landscape impact on this road section and SLCA 1 would be **minor and overall significance of effect slight adverse in Year 0**. By Year 15 planting should have reached heights of between 5m – 10m helping to restore the character of the landscape. The newly established roadside planting on the raised road embankments will help restore the backdrop to the landscape type which is currently typical of the area to the south of the existing A453. **Landscape effects will remain slight adverse in Year 15.**
- 5.8.20 *Visual impacts:* this section will become a less dominant visual feature in the local landscape at Year 15 from Year 0, largely due to the increased screening potential of the roadside planting. Trees and hedgerows will provide some screening of the road from the closest properties to the south, particularly Dowell's Barn, Long Lane

Farm and Willow Farm. By Year 15 the proposed A453 scheme will have similar visual impact from both north and south as currently exists.

Long Lane to (and including) Ratcliffe on Soar (chainage 1400 to 2600)

5.8.21 Landscape impacts: impacts would be similar to those described in the section above. Replacement hedgerows with trees and woodland planting on the south-facing embankments will replace lost vegetation and integrate the road into the landscape. Additional hedgerows would be planted in this section to redefine field boundaries and reconnect existing hedgerows to the west of the River Soar. It is predicted that the resulting magnitude of landscape impact on this road section and SLCA 1 would be **minor and overall significance of effect slight adverse in Year 0**. By Year 15 planting should have reached heights of between 5m – 10m helping to restore the character of the landscape. The newly established roadside planting on the raised road embankments will help restore the backdrop to the landscape type which is currently typical of the area to the south of the existing A453. **Landscape effects will remain slight adverse in Year 15**. Photomontage 1a in Figure 2.5.3 shows existing and predicted Year 0 views from Ratcliffe on Soar towards the A453. Photomontage 1b in Figure 2.5.3 gives an illustration of the view in Year 15, winter and summer.

5.8.22 Visual impacts: visual impact upon a number of properties in Ratcliffe on Soar will be significant as the structures will be larger and closer and screening which currently exist will have been lost. The only mitigation at Year 0 will be that the embankments will have been seeded to grass and planted. The new hedgerows and trees will however have little visual screening value at Year 0. By Year 15 the proposed A453 scheme will have less visual impact where adjacent embankments have been planted although the flood spans and particularly the bridges will remain more prominent than they currently are.

Ratcliffe on Soar to (and including) West Leake Junction (chainage 2600 to 4500)

5.8.23 Landscape impacts: the scheme proposes large-scale replacement of the existing planting in this area. Replacement hedgerows with trees and large scale woodland planting around the Parkway Junction will replace the loss of significant areas of plantation woodland here and also in the area north of Winking Hill Farm, to integrate the road into the landscape. Additional hedgerows would be planted in this section to redefine field boundaries and reconnect existing hedgerows to the east of the River Soar. Between the Parkway Junction and West Leake Junction hedgerows with trees to the north and hedgerows to the south will reconnect field boundaries and existing woodland blocks. Extensive woodland planting, hedgerows with trees and open grassland areas will help integrate the slip road cuttings and embankment earthworks into the landscape. It is predicted that the resulting magnitude of landscape impact on this road section and SLCA 1 would be **minor and overall significance of effect slight adverse in Year 0**. By Year 15 established roadside planting on the raised road embankments, accommodation hedgerows and peripheral areas will restore the backdrop to the landscape type

which is currently typical of the area to the south of the existing A453. Although impacts will reduce as the planting integrates the widened road, it is predicted that the resulting landscape effects on this road section and SLCA's 1 & 2 would continue as **slight adverse at Year 15**.

5.8.24 Visual impacts: the only mitigation at Year 0 will be that the embankments will have been seeded to grass and planted. It is critical in this area that loss of existing plantation is minimised, retained areas protected from damage during construction and woodland blocks should be retained as long as possible prior to felling. The new woodland blocks and hedgerows proposed in the scheme will have little visual screening value at Year 0 and the Power Station structures are also likely to have greater dominance in the landscape due to the absence of screen planting. By Year 15 most of this section of the proposed A453 scheme will have similar visual impact from the south as currently exists although the character of Parkway Junction in particular will necessarily remain open and more visible than at present. In good ground conditions, trees should have achieved 5 m to 10 m in height and will provide an element of the screening lost at Year 0.

5.8.25 This section includes the introduction of 10-12m high lighting columns with single and twin lanterns around the new junctions and along the road. Columns erected along the A453 during development of the East Midlands Parkway Station to the west of the railway will be removed, with some slight improvement in night-time views from Ratcliffe on Soar. Lighting associated with the existing facility at Ratcliffe Power Station is very apparent at night and the proposals are predicted to result in neutral change.

West Leake Junction to (and including) Thrumpton (chainage 4500 to 5600)

5.8.26 Landscape impacts: the open nature of the newly constructed, dualled A453 will adversely affect this landscape character type in the local area. Woodland is currently prominent from West Leake Junction, the areas adjacent to Barton Lane and both embankments of the existing carriageway in this section. Significant areas of linear roadside planting will be lost as a consequence of the proposal and at Year 0, grassed embankments will be the dominant landscape feature adjacent to the more prominent carriageway. Replacement hedgerows with trees and woodland planting on the roadside embankments and cuttings will start to replace such a loss and integrate the road into the landscape. Additional hedgerows would be planted in this section to redefine field boundaries and reconnect existing hedgerows and woodland blocks (at Cottages Hill Spinney). It is predicted that the resulting magnitude of landscape impact on this road section and SLCA 2 would be **minor and overall significance of effect slight adverse at Year 0**. By Year 15, the maturing planting will restore a more enclosed road which also acts as a visual barrier as existing. The planting will help restore the character of the landscape with good hedgerow structure. Although impacts will reduce as the planting integrates the widened road, it is predicted that the resulting landscape effects on this road section and SLCA's 2, 4 & 5 would continue as **slight adverse at Year 15**.

5.8.27 Visual impacts: the Power Station structures will have greater dominance in the landscape of this section also due to the absence of screen planting from visual receptors. The proposed dual carriageway will be closer to Hillside Cottage to the south which will have open views of the scheme. The visual impacts upon properties to the north on Barton Lane are unlikely to be significant because the majority of the proposed development is to the south of the existing carriageway. The only mitigation at Year 0 will be that the embankments will have been seeded to grass and planted. The new hedgerows and trees will however have little screening value at Year 0. However the road being in cutting to the north of West Leake Junction will have an immediate impact at year 0, providing some screening. By Year 15 most of this section of the proposed A453 scheme will have similar visual impact from the south as currently exists although the character of West Leake Junction in particular will necessarily remain open and more visible than at present. There will also be generally less visual impact from properties to the north on Barton Lane where significant areas of planting will have enhanced the screening effect of retained trees and hedgerows.

Thrumpton to Manor Road (chainage 5600 to 6600)

5.8.28 Landscape impacts: impacts will be concentrated at the area close to Fields Farm and Canterbury House where Barton Lane at the eastern end of Thrumpton will be modified. The start of the offline section moves the carriageway further south thus enabling retention of much of the existing roadside vegetation. However the widened road will cut through arable fields and it is predicted that the resulting magnitude of landscape impact on this road section and SLCA's 4 & 5 would be **minor and overall significance of effects slight adverse at Year 0**. By Year 15, planting will integrate the road into the existing character of the landscape and will also reduce the visual prominence of the relatively wide road corridor in this local area (the combination of the start of the offline section and local access road running parallel for a short distance). Impacts will remain as **slight adverse at Year 15**.

5.8.29 Visual impacts: the new four lane route would be located parallel with and only 15 m south of the retained section of the existing A453. This will potentially have the cumulative visual impact of a wider road corridor through the section to Manor Road. The visual impact upon Glebe Farm to the south of the offline section will be significant at Year 0 although this is the only property overlooking the new dual carriageway. By Year 15 planting will have matured to help screen views, in particular from Glebe Farm, and thus reduce the significance of impact.

Manor Road to Barton Lane (chainage 6600 to 7700)

5.8.30 Landscape impacts: the main landscape impact in this section will arise from the new four lane carriageway which will be located offline and to the south of the existing A453 alignment. The new alignment will pass through agricultural land affecting the character of this local area. Small areas of tree and hedgerow planting will be lost in the area adjacent to the Barton Lane Underbridge where the existing

and new carriageways are in close proximity to each other. Proposed planting around the Barton Lane Underbridge follows existing field boundaries which shall be reinstated to also redefine the extent of the Mature Landscape Area (Burrows Farm MLA 127) with woodland planting. The resulting magnitude of landscape impact is predicted to be **minor and overall significance of effect slight adverse at Year 0**. By Year 15, the maturing planting will visually unite the existing retained woodland of Brandshill Wood on the north side adjacent Barton Lodge and reinforce the extent of the MLA. Although impacts will reduce it is predicted that the effect upon the landscape at **Year 15 will remain as slight adverse**.

5.8.31 Visual impacts: the new four lane route is located parallel with and between 15 m to 60 m south of the retained section of the existing A453. This will potentially have the cumulative visual impact of a wider road corridor where the new and old carriageways are located close together. There will be some loss of existing screen vegetation from the south side of the existing A453 adjacent to Keepers Cottage and Barton Lodge, although this would be minimal. Residents at Top Farm Cottage on Barton Lane will have close open views of the new carriageway. Properties on the south and western edges of Barton in Fabis will have unchanged open views to the existing A453 but visual impacts from the new route will be more limited due to its location farther away from the village, the retained trees and hedgerows and the influence of local topography. By Year 15 the visual impact of this section of the proposed A453 scheme upon Glebe Farm and on Top Farm Cottage and Shepherds Barn on Barton Lane, and adjacent areas to the south, will be less significant due to the visual screening effect of roadside trees and hedgerows.

Barton Lane to Clifton, Nottingham City Boundary (chainage 7700 to 9050)

5.8.32 Landscape impacts: the major landscape impact in this section will arise from the new four lane carriageway which will be located offline and approximately 250 m to the south of the existing A453 alignment. The new alignment will pass through agricultural land affecting the landscape character of this local area. Small areas of tree and hedgerow planting will be lost in the area between Mill Hill Roundabout and the urban edge of Clifton where the road alignment removes the southern embankment to the existing A453. However, the new route will take vehicles off the ridgeline, and the new roundabout would be in approximately 3 metre-deep cutting, and thus would be less apparent in the landscape. The resulting magnitude of landscape impact on SLCA's 4 & 5 is predicted to be **minor and overall significance of effect slight adverse at Year 0**. By Year 15, tree planting within hedgerows along the northern boundary become more apparent in the landscape. The trees along the southern highway boundary will mature to help recreate the more enclosed character of the landscape which once existed in this area. Although impacts will reduce it is predicted that the effect upon the landscape at **Year 15 will remain as slight adverse**.

5.8.33 Visual impacts: Figures 2.5.4 and 2.5.5 illustrate photomontages of views from Nottingham Road looking northwest to the A453 and from the existing A453 looking south, respectively. In Year 0 the visual impact of the Mill Hill Roundabout will be

mitigated by its position below existing ground level and because of its location beneath the crest of the hill above the surrounding receptors including the future residents of Lark Hill Retirement Village (under construction). Mounding and fencing along the north-eastern boundary of Lark Hill will further reduce its impact. Lighting columns will be seen at Year 0. Night-time effects of lighting are predicted to be **slight adverse** in winter for the residents of Lark Hill Retirement Village upon completion. Street lighting within the village complex will be apparent in the view. The visual impact upon residents at Top Farm Cottage is likely to be significant at Year 0 due to their location relative to the scheme and the absence of screening impact from new tree and shrub planting. The proposed road scheme will be less visually dominant at Year 15 largely due to the increased height and thus softening effect of the proposed roadside and other mitigation planting. The landscape proposals include extensive tree, hedgerow and woodland planting at the Mill Hill Roundabout and in the area immediately to the north where the new and existing A453 alignments meet. At Year 15, this will extend the 'green' corridor from Clifton out to the Mill Hill Roundabout through a well wooded area. By Year 15 the visual impact of this section of the proposed A453 scheme upon Top Farm Cottage on Barton Lane and adjacent areas to the south will be less significant due to the visual screening effect of roadside trees and hedgerows. Existing views to the south from the A453 would be preserved and the nature of planting along the offline section will ensure that the longer views to East Leake, Ruddington and the Wolds are not unduly impeded.

City Boundary to (and including) the Crusader Roundabout (chainage 9050 to 9800)

- 5.8.34 Landscape impacts: this section comprises townscape character areas TCA 1 & 2, and is considered more urban to the south of the corridor and suburban to the north of it. This difference is largely defined by density of housing which is high to the south but lower and more open to the north. The corridor within which the new road alignment is proposed will have more hard surfacing as a result of the widening but most of the standing vegetation and screen mounding on the north side will be retained. Therefore it is considered that the resulting magnitude of landscape impacts is likely to be **minor and overall significance of effects slight adverse at Year 0**. There will be little significant landscape change during the 15 year period and resulting effects **likely to remain as slight adverse at Year 15**.
- 5.8.35 Visual impacts: most of the screening effects will be retained during construction and will mitigate the impact of the new carriageway layout on the receptors. At Year 0 the scheme will rely on the retention of existing trees and hedgerows because any replacement and infill planting will be too immature to fulfil any screening role. The road is currently well screened albeit with considerable seasonal variation. The proposed road scheme is unlikely to be less visually dominant at Year 15 largely due to the increased prominence of the proposed road scheme relative to the areas of peripheral planting as indicated above. Although trees planted could achieve 5 m to 10 m in height and hedgerows would mature, the planting is limited to infilling gaps in the boundaries.

Crusader Roundabout to Green Lane (chainage 9800 to 10000)

5.8.36 Landscape impacts: the major landscape impact in this section will arise from the new four lane single carriageway which will extend the impact of the road in what is a narrow landscape corridor largely enclosed on either side by mature trees and hedgerows. The landscape corridor will still be defined by trees and hedgerows from the Crusader Roundabout to the Man of Trent and Clifton Service Station but vegetation opposite these facilities would be removed which would extend the open, 'green' urban landscape character in this local area. It is therefore predicted that the resulting magnitude of impacts on the landscape is likely to be **minor and overall significance of effects slight adverse at Year 0** on this townscape character area. It is unlikely that the impact of the four lane single carriageway in the local urban landscape will reduce by Year 15 as the new planting is minimal. The increase in proportion of hard surfacing will increase whilst the adjoining areas of verge and planting areas will decrease. Resulting effects are therefore considered to continue to be **slight adverse at Year 15**.

5.8.37 Visual impacts: the changes to the junction layout at Green Lane will remove approximately 20% of the green space to the east of the Clifton Service Station. The proposed Green Lane/A453 slip road will reduce the distance from the carriageway to residential properties off Green Lane by approximately 30m where views to the proposed scheme will be close and open. A 2.5m high close boarded timber screen fence is proposed adjacent to properties on Morgan Mews and Gavell Close to replace boundary screen fencing and planting. This will provide an effective screen from ground floor rooms and reduce potential impacts. At Year 0 the scheme will rely on the retention of existing trees and hedgerows because any replacement planting will be too immature to fulfil any screening role. The proposed road scheme is unlikely to be less visually dominant at Year 15 largely due to the increased height and thus softening effect of the proposed road scheme relative to the areas of peripheral planting as indicated above.

Green Lane to Glapton Lane (Clifton Village) (chainage 10000 to 10200)

5.8.38 Landscape impacts: the major landscape impact in this section will arise from the new four lane carriageway which will extend the impact of the road through the southern end of the Clifton Conservation Area. The Conservation Area is characterised by the green wedge which extends for over 400 m both sides of the existing carriageway. The loss of mature trees at the northern end of Glapton Lane will have a significant effect upon this area due to reduction of the green corridor character with the greater influence of hard surfacing and grassed verges. Retention of the mature trees on the northern side of existing road will reduce the affect of the widening on Clifton Village Green. Replacement tree and shrub planting around the road junctions will assist in integrating the scheme. The resulting magnitude of landscape impacts on TCA's 3 & 4 are predicted to be **minor and overall significance of effects slight adverse at Year 0**. It is unlikely that the impact of the four lane layout in the local urban landscape will be significantly reduce by Year 15 largely due to the relatively open character of this local urban

landscape area. The proportion of hard surfacing will increase whilst the adjoining areas of green open space will decrease. Although replacement tree planting will be undertaken within the mitigation scheme the **resulting effects at Year 15 are predicted to remain as slight adverse.**

5.8.39 Visual impacts: changes to the junction layout at Glapton Lane will remove a number of trees opening up peripheral views across the open space area. At Year 0 the scheme will rely on the retention of existing trees and hedgerows because any replacement planting will be too immature to fulfil any screening role. The proposed road scheme is unlikely to be less visually dominant at Year 15, although proposed mitigation on the form of ornamental tree and shrub planting, bulb planting and hard surface detailing will help to integrate the road into the landscape and thus soften visual impacts.

Glapton Lane To Farnborough Road (chainage 10200 to 11000)

5.8.40 Landscape impacts: the major landscape impact in this section will arise from the new four lane single carriageway, which will extend the impact of the road between the residential area to the south and the Nottingham Trent University campus to the north. A 20 m belt of mature trees dominates the south side of the proposed carriageway from a point opposite the NTU central pedestrian access to Farnborough Road, which will be retained. The loss of the entire NTU frontage hedgerow will affect the character of this section, diminishing the 'green' corridor effect on the north side exposing the large areas of playing field open space and NTU buildings to the north. The resulting magnitude of impacts on TCA 5 is predicted to be **minor and overall significance of effects slight adverse at Year 0**. The agreed offsite planting and other improvements to the University frontage will in time enhance this section when compared with the existing 'do-minimum' situation, **with adverse effects remaining at slight adverse in Year 15.**

5.8.41 Visual impacts: the new four lane single carriageway will increase the impact of the road in what is a relatively narrow and green visual corridor. The existing road is relatively enclosed on either side and the consequence of the proposed scheme will be that the visual corridor is extended particularly into the University campus to the north. The changes to the NTU junction layouts and modification to the boundary with railings and planting will change the character of the northern boundary which will remain open at Year 0 because any replacement structure planting will be too immature to fulfil any screening role. The proposed road scheme is likely to be less visually dominant at Year 15 largely due to the increased height and thus softening effect of the replacement planting associated with the proposed road scheme.

Fabis Drive/Farnborough Road Junction (chainage 11000 to 11400)

5.8.42 Landscape impacts: a section of a tree block will be lost from the Farnborough Junction to the west in order to achieve visibility splays from Farnborough Road. Only a few individual trees will be lost on the northern side of the proposed roundabout for similar reasons. The increase in proportion of hard surfacing,

widened carriageway and the introduction of the roundabout in this section will have an adverse affect on the character of TCA 5 although the dominance of the existing road reduces the affect of the magnitude of change to **minor and overall significance of effects slight adverse at Year 0**. The impact of the four lane single carriageway widening and the proposed roundabout in the local urban landscape is predicted to remain the same as **slight adverse at Year 15**. New planting would be limited and as such maturing vegetation will have little effect.

5.8.43 Visual impacts: the existing road is relatively enclosed on the south side but open to the north either side of Fabis Drive. The changes to the junction layout and introduction of the new roundabout will only slightly change the character of this section. At Year 0, the local urban landscape will remain relatively open because any replacement planting will be too immature to fulfil any significant visual role. However, mitigation measures are very limited in this section and thus visual impacts in Year 15 are unlikely to change significantly to those predicted in Year 0.

5.9 Summary of Significance of Landscape, Townscape & Visual Effects

5.9.1 From the above it can be seen that all *landscape and townscape effects* as a result of the A453 Widening scheme are predicted to be slight adverse when the road is opened, compared to the situation in 2012 without the road. In the design year 2027 some mitigation measures will have matured to reduce some landscape effects, but overall effects would remain slight adverse. The following Table 2.5.5 provides a summary of landscape and townscape effects:

Table 2.5.5: Summary of Landscape and Townscape Effects

| | Local Landscape /Townscape Character Areas | Quality/Condition | Overall Quality/Condition | Overall (Environmental) Landscape Value (or sensitivity) | Magnitude of Impact | Significance (construction) | Significance (at Year 0) | Significance Residual Impact (at Year 15) |
|----|--|-------------------|---------------------------|--|---------------------------|-----------------------------|--------------------------|---|
| 1 | SLCA 1 M1 to Ratcliffe | Poor/ordinary | Ordinary Rural Section | Low (low or medium importance and local scale) | Moderate adverse | Slight (adverse) | Slight (adverse) | Slight (adverse) |
| 2 | SLCA 2 South of A453 Kingston on Soar to Gotham & north of Power Station to edge of Thrumpton | Good | | | Minor to moderate adverse | Slight (adverse) | Slight (adverse) | Slight (adverse) |
| 3 | SLCA 3 Clifton Pasture and Barton Moor | Poor | | | Negligible | Slight (adverse) | Slight (adverse) | Slight (adverse) |
| 4 | SLCA 4 Trent Washlands and Clifton Edge | Poor /ordinary | | | Moderate adverse | Slight (adverse) | Slight (adverse) | Slight (adverse) |
| 5 | SLCA 5 Clifton Edge and Brands Hill to Gotham Hill | Poor | | | Moderate adverse | Moderate (adverse) | Slight (adverse) | Slight (adverse) |
| 6 | TCA 1 Clifton Suburbs | Ordinary | Ordinary Urban Section | Low (low or medium importance and rarity, local scale) | Minor adverse | Slight (adverse) | Slight (adverse) | Slight (adverse) |
| 7 | TCA 2 Crusader Roundabout | Ordinary | | | Moderate adverse | Slight (adverse) | Slight (adverse) | Slight (adverse) |
| 8 | TCA 3 Clifton Village – Amenity Open Spaces | Poor | | | Moderate adverse | Slight (adverse) | Slight (adverse) | Slight (adverse) |
| 9 | TCA 4 Clifton Village Green | Good | | | Minor adverse | Slight (adverse) | Slight (adverse) | Slight (adverse) |
| 10 | TCA 5 Clifton Urban Greenway | Ordinary/good | | | Minor adverse | Slight (adverse) | Slight (adverse) | Slight (adverse) |

5.9.2 The A453 Widening *Landscape Effects* report, reference A021959-REP-E-ES-223, June 2008, includes a detailed table of predicted *visual impacts* on all identified properties, rights of way and views from other receptors within the study area. By way of summary the following is a list of the most significant visual effects where impacts are predicted to be moderate or substantial adverse:

Dowell's Barn: moderate adverse effects (Year 0 and Year 15);

Cedar Isle: substantial adverse effects (Year 0 and Year 15);

Manor Cottage: substantial adverse (Year 0); slight adverse (Year 15);

Riverside Farm: substantial adverse effects (Year 0 and Year 15);

Old School House: substantial adverse (Year 0); slight adverse (Year 15);

Chestnut Barn: substantial adverse (Year 0); slight adverse (Year 15);

Little Oak Barn: substantial adverse (Year 0); slight adverse (Year 15);

Winking Hill Farm: moderate adverse effects (Year 0 and Year 15);

Hillside Cottage: substantial adverse (Year 0); slight adverse (Year 15);

Glebe Farm: substantial adverse (Year 0); slight adverse (Year 15);

Keeper's Cottage: moderate adverse (Year 0); slight adverse (Year 15);

Barton Lodge: moderate adverse (Year 0); slight adverse (Year 15);

Top Farm Cottage: substantial adverse (Year 0); slight adverse (Year 15);

No's 1-13 Todd Close: substantial adverse effects (Year 0 and Year 15);

No's 1-12 Porter Close: substantial adverse effects (Year 0 and Year 15);

No's 1-11 Hodgkin Close: substantial adverse effects (Year 0 and Year 15);

No's 1-3 Krebs Close: substantial adverse effects (Year 0 and Year 15);

No's 18-35 Raleigh Close: substantial adverse effects (Year 0 and Year 15);

No's 24-46 Wilkins Gardens: substantial adverse (Year 0); slight adverse (Year 15);

No's 14-25 Haworth Court: substantial adverse (Year 0); slight adverse (Year 15);

No's 1-20 Richardson Close: substantial adverse (Year 0); slight adverse (Year 15);

Crusader Public House: moderate adverse (Year 0); slight (Year 15);

No's 11-14 Morgan Mews: moderate adverse effects (Year 0 and Year 15);

No's 7-10 Cavell Close: moderate adverse effects (Year 0 and Year 15);

Clifton Village Hall: moderate adverse (Year 0); slight adverse (Year 15);

No's 1-11 Dalehead Road: moderate adverse (Year 0 and Year 15);

No's 1-7 Glapton Lane: substantial adverse (Year 0); moderate adverse (Year 15);

No's 9-23 Glapton Lane: moderate adverse (Year 0); slight adverse (Year 15);

No's 1-8 Grasby Walk: substantial adverse (Year 0); moderate adverse (Year 15);

Four Winds Rest Home: moderate adverse (Year 0 and Year 15);

Baird House Residential Home: moderate adverse (Year 0); slight adverse (Year 15);

No's 1-24 Kinsale Walk: moderate adverse (Year 0); slight adverse (Year 15);

No's 1-15 Meden Close: moderate adverse (Year 0); slight adverse (Year 15);

No's 1-4 Farnborough Road: moderate adverse (Year 0); slight adverse (Year 15);

No's 69 & 71 Sturgeon Avenue: moderate adverse (Year 0); slight adverse (Year 15);

5.9.3 Although under construction at the time of assessment, moderate adverse visual impacts are predicted at Lark Hill Retirement Village (under construction) at Year 0. A 1.5m high timber screen fence would be constructed on a 1.5m high planted earth mound around Mill Hill Roundabout. Whereas the roundabout is in cutting and the mitigation measures are predicted to screen high sided vehicles from dwellings inside the Village area, maturing planting will provide additional screening over time from open space areas within the Village site and of the lighting columns which are predicted to be visible from within the Village site.

5.9.4 Two long distance national Public Rights of Way (PROW) run through the study area: Midshires Way and Trent Valley Way. A number of other PROW including footpaths, bridleways and cycleways circulate around the study area. All routes will be maintained with some alterations to the routes proposed. Impacts are predicted in consideration of the activity of the receptor and the change to the existing situation. As the A453 is already a significant feature of the landscape affecting all the PROW identified, impacts are likely to be slight adverse at worst, generally due to the increased physical prominence of the road as a result of widening. However, impacts are predicted to reduce as integration and screen planting replaces lost vegetation lost due to construction of the road.