Chapter 2.14. Landscape and Visual Impact
14. **Landscape and Visual Impact Assessment**

14.1. **Introduction and Scope of Topic**

14.1.1. This chapter of the Environmental Statement identifies the impacts of the proposed South Bristol Link development on the existing landscape character and visual amenity receptors within the identified study area. The methodology used to collect this information is outlined and mitigation measures are proposed to reduce adverse impacts.

14.1.2. The assessment of landscape character and visual amenity are two distinct but related areas. A landscape character assessment is the systematic description and analysis of the features within the landscape and their value, such as landform, vegetation cover, settlement, transport patterns and land use. A visual amenity assessment is the description and analysis of the view of the landscape from receptors which include public open space, footpaths, transport corridors, residential properties and places of work.

14.1.3. The route of the scheme passes around the south west fringe of Bristol from the A370 in North Somerset (at the Long Ashton, Ashton Vale and Brookgate suburbs) and enters the urban fringe and Bristol City Council administrative area at Highridge, the scheme finishes between the Withywood and Bishopsworth suburbs. The scheme route passes through a diverse variety of landscapes from urban fringe countryside, through the strongly defined urban edge and into the urban environment. For the purposes of this assessment the scheme has been split into 5 sections due to the varied landscape character and setting along the route (refer to Scheme Sections Plan, Volume 3, Appendix 14.1, Figure 1.0).

14.1.4. The nature of landscape and visual impacts is closely related to other topics such as ecology, cultural heritage and arboriculture. Each of these topics can influence the landscape character of an area or will contribute to the importance and sensitivity of landscape or visual receptors. The scope of the Landscape and Visual Impact Assessment (LVIA) has been developed in accordance with these topics so as to ensure a coordinated approach to the EIA.

14.1.5. There are a number of short term and adverse landscape and visual impacts that will inevitably occur during construction. These will include site compound areas, vehicle movements through the landscape or a larger construction footprint than the final scheme. The potential temporary construction or long term operation period impacts would result in some form of change in the baseline landscape elements and features or in visual amenity.

14.1.6. Atkins has worked closely with Halcrow, the design engineers, during the design process and inputted into the final Landscape Strategy for the South Bristol Link Scheme. The Strategy includes Landscape Proposal Drawings (CTRAEB/730/LAN/509 to 524), a Photomontage Report and Artistic Impressions. These are submitted as part of this planning application, together with a Design and Access Statement. In addition to the landscape proposals a Visual Identity Guidelines document has been prepared by Bristol City Council City Design Group to help define public perceptions and passenger experience of the scheme (this forms part of the application pack).

14.2. **Policy Context and Guidelines of Relevance**

14.2.1. The proposed scheme crosses two authority boundaries: Bristol City Council and North Somerset Council. A summary of the relevant plans and policies is provided below.
Regional Documents

Regional planning guidance for the south west (RPG10)

14.2.2. RPG10 is no longer part of the development plan, but its evidence base still has some limited weight. For reference, the following policies still have some relevance to the scheme:

Policy EN 1: Landscape and Biodiversity

14.2.3. Local authorities and other agencies in their plans, policies and proposals, should:
- provide for the strong protection and enhancement of the region’s internationally and nationally important landscape areas and nature conservation sites;
- draw up policies for the protection of nature conservation interests of regional and local significance;
- encourage the maintenance and enhancement of the biodiversity resources of the region, having particular regard to the targets set out in tables 3, 4 and 5;
- promote the restoration and expansion of depleted and vulnerable biodiversity resources in order to reverse fragmentation and create continuous viable habitats;
- indicate that the protection and, where possible, enhancement of the landscape and biodiversity should be planned into new development;
- have regard to the significant landscape joint character areas of the region set out in this RPG (Map 4) and aim to conserve and enhance local character;
- take measures to protect the character of the countryside and the environmental features that contribute towards that character, including the minimisation of light pollution.

Policy EN 3: The Historic Environment

14.2.4. Local authorities and other agencies in their plans, policies and proposals should:
- afford the highest level of protection to historic and archaeological areas, sites and monuments of international, national and regional importance;
- indicate that new development should preserve or enhance historic buildings and conservation areas and important archaeological features and their settings, having regard to the advice in PPG15 and PPG16;
- indicate that policies and programmes should work towards rescuing buildings and monuments at risk;
- encourage the restoration and appropriate re-use of buildings of historic and architectural value and take a particularly active role in bringing about their restoration where this would help bring about urban regeneration;
- take account of the landscape context and setting of buildings and settlements; of building materials; and of the patterns of fields, hedgerows and walls that distinguish one area from another.

Bristol City Council Documents

Bristol Core Strategy (Adopted June 2011)

Policy BCS6 – Green Belt

14.2.5. Countryside and other open land around the existing built-up areas of the city will be safeguarded by maintaining the current extent of the Green Belt.

14.2.6. Land within the Green Belt will be protected from inappropriate development as set out in national planning policy.

14.2.7. Proposals for urban extensions in the Green Belt beyond Bristol City Council’s boundaries may emerge through the development plans of neighbouring authorities. If appropriate proposals
come forward the council will continue to work with the adjoining authorities to consider the impact on existing areas, to assess infrastructure requirements and to ensure integrated and well-planned communities are created to the benefit of existing and future residents.

Policy BCS9 – Green Infrastructure

14.2.8. The integrity and connectivity of the strategic green infrastructure network will be maintained, protected and enhanced. Opportunities to extend the coverage and connectivity of the existing strategic green infrastructure network should be taken.

14.2.9. Individual green assets should be retained wherever possible and integrated into new development. Loss of green infrastructure will only be acceptable where it is allowed for as part of an adopted Development Plan Document or is necessary, on balance, to achieve the policy aims of the Core Strategy. Appropriate mitigation of the lost green infrastructure assets will be required.

14.2.10. Development should incorporate new and/or enhanced green infrastructure of an appropriate type, standard and size. Where on-site provision of green infrastructure is not possible, contributions will be sought to make appropriate provision for green infrastructure off site.

Open Space

14.2.11. Open spaces which are important for recreation, leisure and community use, townscape and landscape quality and visual amenity will be protected.

14.2.12. Some areas of open space may be released, through the development plan process, for appropriate development where:
- They are no longer important for recreation, leisure and community use, townscape and landscape quality and visual amenity;
- Development of all or part of an open space would result in improved urban form or an enhancement to existing open space areas.

14.2.13. New development should incorporate, or contribute towards, the provision of an appropriate level and quality of open space.

Biological and Geological Conservation

14.2.14. Internationally important nature conservation sites are subject to statutory protection.

14.2.15. National and local sites of biological and geological conservation importance will be protected having regard to the hierarchy of designations and the potential for appropriate mitigation. The extent to which a development would contribute to the achievement of wider objectives of the Core Strategy will be carefully considered when assessing their impact on biological and geological conservation.

14.2.16. Where development would have an impact on the Bristol Wildlife Network it should ensure that the integrity of the network is maintained or strengthened.
Policy BCS22 – Conservation & the Historic Environment

14.2.17. Development proposals will safeguard or enhance heritage assets and the character and setting of areas of acknowledged importance including:
- Scheduled ancient monuments;
- Historic buildings both nationally and locally listed;
- Historic parks and gardens both nationally and locally listed;
- Conservation areas;
- Archaeological remains

Bristol Local Plan 1997

14.2.18. Relevant saved policies of the Bristol Local Plan still in force following adoption of the Core Strategy:

NE1 (I) – Open Space

14.2.19. The distribution and variety of open spaces throughout the city will be maintained and, where possible, enhanced.
   i. Sites which are important for nature conservation, recreation, historic landscape interest, landscape quality, visual amenity, community or outdoor leisure-related use, or providing setting or relief to the built environment, defined on the Proposals Map, will be protected as open space.
   ii. Development involving an unacceptable loss of important open space (designated in section II and defined on the Proposals Map), or which would have a significant adverse effect on the interest, use, amenity, character or accessibility of such open space, will not be permitted.
   iii. There sites are not defined as open space on the Proposals Map, and are not subject to any other designation or proposal, account will be taken of the need to protect open space interests and uses in determining planning applications. Particular attention will be paid to the amenity and nature conservation value of undefined open space sites

NE2 - Landscape Features

14.2.20. Prominent or strategically important landscape features which make a significant contribution to the landscape character of the city, including green hillsides, promontories, ridges, valleys, gorges and man-made landscapes will be protected.

14.2.21. Development which would have a significant adverse effect on identified features of importance as defined on the Proposals Map will not be permitted

NE3 – Trees & Woodlands

14.2.22. Development involving the loss of or damage to trees or woodlands which are of landscape, amenity or nature conservation value will not be permitted, unless unacceptable harmful effects of the development can be overcome and replacement or additional tree planting of appropriate scale and species, which is sufficient to compensate for the loss, can be achieved within the same site or on an equivalent site nearby.

NE5 – Sites of Nature Conservation Interest

i. Sites of Nature Conservation Interest, set out in the Schedule and defined on the Proposals Map will be protected, having regard to the relative significance of their designation.
ii. Development which is likely to have an adverse effect on the nature conservation objectives or the integrity of a potential or classified Special Protection Area, a candidate or designated Special Area for Conservation or a Ramsar Site will not be permitted.
iii. Development affecting a site of Special Scientific Interest will not be permitted unless it can be made subject to conditions that will prevent damaging impacts on wildlife habitats or important physical features, or if other material factors outweigh the national nature conservation considerations.
iv. Development which would harm the substantive nature conservation value of sites of citywide importance will not be permitted, except where the significance of the site for nature conservation is outweighed by the importance of the development.

NE6 – The Wildlife Network
i. The city’s wildlife network will be protected and, where possible, enhanced.
ii. Development on wildlife network sites, as defined on the Proposals Map, will not be permitted unless:
   1. An open corridor is retained which maintains an effective link in the network;
   2. An open buffer zone which gives effective added protection to any adjoining site of nature conservation interest is retained;
   3. Habitats or features of identified importance to wildlife are retained and protected from any significant adverse effect.
   4. The site is shown not to serve or support any substantive wildlife interest, including the necessary function of the wildlife network, as a result of further detailed site assessment.
   5. Development which maintains the integrity of the wildlife network and includes measures to enhance the nature conservation value of remaining open land, will be permitted.

Policy NE7 Local Nature Reserves
14.2.23. Policy NE7 relates to proposed Local Nature Reserves (LNR) at four locations: Troopers Hill; Stockwood Open Space; Lawrence Weston Moor; and Royate Hill.

NE9 – Historic Landscapes
14.2.24. Historic parks and gardens and other designed landscapes of national and local importance defined on the Proposals Map and described in the Appendix 15.2, Volume 3, will be protected. Development which would adversely affect the character or appearance of historic landscapes and, in the case of nationally important sites, their settings, will not be permitted.

NE11 – New Development; Natural Environment Considerations
14.2.25. In determining planning applications, account will be taken of the retention and protection of existing natural features and habitats, and, where appropriate, the benefits of new landscape treatment which:
   i. Compensates for any unavoidable loss of existing features or habitats;
   ii. Incorporates the greatest possible proportion of appropriate native vegetation (unless special circumstances dictate otherwise);
   iii. Incorporates the maximum possible area of permeable ground surface;
   iv. Includes habitat features attractive to local wildlife species, (both in the design of the buildings and the landscape elements);
   v. Respects the local landscape character;
   vi. Enhances the landscape quality of the site;
   vii. Is included in management plans for the whole site;
   viii. Is well integrated with the buildings and existing landscape features on and surrounding the site.

Bristol CC Site Allocations & Development Management – DRAFT DOCUMENT

Policy DM15: Green Infrastructure Provision
(Note – only relevant part of policy quoted below)

Trees
14.2.26. The provision of additional and enhanced trees will be expected as part of the landscape treatment of new development.
14.2.27. The design, size, species and placement of trees provided as part of the landscape treatment will be expected to take practicable opportunities to:
i. Connect the development site to the Strategic Green Infrastructure Network, and/or Bristol Wildlife Network; and
ii. Assist in reducing or mitigating run-off and flood risk on the development site; and
iii. Assist in providing shade, shelter and contribute to urban cooling; and
iv. Assist in improving or mitigating identified air quality issues associated with the development; and
v. Create a strong framework of street trees to enclose or mitigate the visual impact of a development.

Policy DM17: Development Involving Existing Green Infrastructure
(Note – only relevant part of policy quoted below)

Important Open Spaces

14.2.28. Development on part, or all, of an Important Open Space as designated on the Policies Map will not be permitted unless the development is ancillary to the open space use.

Unidentified Open Spaces

14.2.29. Development which would result in the loss of open space which is locally important for recreation, leisure and community use, townscape and visual amenity will not be permitted.

Urban landscape

14.2.30. Proposals which would harm important features such as green hillsides, promontories, ridges, valleys, gorges, areas of substantial tree cover and distinctive manmade landscapes will not be permitted.

Trees

14.2.31. All new development should integrate important existing trees.

14.2.32. Development which would result in the loss of Ancient Woodland, Aged trees or Veteran trees will not be permitted.

14.2.33. Where tree loss or damage is essential to allow for appropriate development, replacement trees of an appropriate species should be provided.

Policy DM19: Development and Nature Conservation

14.2.34. Development which would be likely to have any impact upon habitat, species or features, which contribute to nature conservation in Bristol will be expected to:
   i. Be informed by an appropriate survey and assessment of impacts; and
   ii. Be designed and sited, in so far as practicably and viably possible, to avoid any harm to identified habitats, species and features of importance; and
   iii. Take opportunities to connect any identified on-site habitats, species or features to nearby corridors in the Wildlife Network.

14.2.35. Where loss of nature conservation value would arise development will be expected to provide mitigation on site and where this is not possible provide mitigation offsite. Development on or adjacent to sites of nature conservation value will be expected to enhance the site’s nature conservation value through the design and placement of any green infrastructure provided.

Sites of Nature Conservation Interest

14.2.36. Development which would have a harmful impact on the nature conservation value of a Site of Nature Conservation Interest will not be permitted.
Wildlife Corridors

14.2.37. Development which would have a harmful impact on the connectivity and function of sites in Wildlife Corridors will only be permitted where:
   i. The loss in connectivity, or function, of an existing Wildlife Corridor is mitigated in line with the following hierarchy:
   ii. Creation of a new wildlife corridor within the development site;
   iii. Enhancement of an existing corridor or creation of a new corridor off-site to maintain the connectivity of the Bristol Wildlife Network.

Policy DM22: Development Adjacent to Waterways

14.2.38. Development which is adjacent to, or contains, waterways will be expected to:
   i. Maintain, enhance or create suitable public connections adjacent to the waterway(s) for walking, cycling and maintenance; and
   ii. Provide suitable public connections from waterway(s) to the public realm network in the vicinity of the development site; and
   iii. Protect, maintain and enhance the nature conservation and sustainable urban drainage functions of the waterway(s) and its banks; and
   iv. Where feasible and viable, open culverted, piped or covered waterway(s); and
   v. Avoid the loss of open waterways through culverting, piping, or enclosure by development; and
   vi. Take opportunities to enhance the recreation and leisure role of onsite waterway(s).

Policy DM26: Local Character and Distinctiveness

General Principles

14.2.39. The design of development proposals will be expected to contribute towards local character and distinctiveness by:
   i. Responding appropriately to and incorporating existing land forms, green infrastructure assets and historic assets and features; and
   ii. Respecting, building upon or restoring the local pattern and grain of development, including the historical development of the area; and
   iii. Responding appropriately to local patterns of movement and the scale, character and function of streets and public spaces; and
   iv. Retaining, enhancing and creating important views into, out of and through the site; and
   v. Making appropriate use of landmarks and focal features, and preserving or enhancing the setting of existing landmarks and focal features; and
   vi. Responding appropriately to the height, scale, massing, shape, form and proportion of existing buildings, building lines and set-backs from the street, skylines and rooftscapes; and
   vii. Reflecting locally characteristic architectural styles, rhythms, patterns, features and themes taking account of their scale and proportion; and
   viii. Reflecting the predominant materials, colours, textures, landscape treatments and boundary treatments in the area.

14.2.40. Development will not be permitted where it would be harmful to local character and distinctiveness or where it would fail to take the opportunities available to improve the character and quality of the area and the way it functions. Development should retain existing buildings and structures that contribute positively to local character and distinctiveness. Where the loss of an existing building or structure is acceptable due to the wider planning benefits of a development proposal, opportunities should be sought to reuse any materials that contribute to local character and distinctiveness.

Policy DM31: Heritage Assets

(Note – only relevant part of policy quoted below)

General principles

14.2.41. Development that has an impact upon a heritage asset will be expected to:
i. Conserve or enhance the asset or its setting; and
ii. Ensure that the significance of the asset is not compromised.

Understanding the asset

14.2.42. Development proposals that would affect the character or setting of heritage assets will be expected to demonstrate, by a thorough understanding of the significance of the asset, how any change proposed would preserve or enhance that significance.

Minimising harm to the asset

14.2.43. Where a proposal involves harm to the special character or historic interest of a heritage asset, including a locally listed heritage asset, or its wider historic setting, the applicant will be expected to:
   i. Demonstrate that all reasonable efforts have been made to sustain the existing use, find new uses, or mitigate the extent of the harm to the significance of the asset; and
   ii. Demonstrate that the works proposed are the minimum required to secure the long term use of the asset; and
   iii. Demonstrate how those features of a heritage asset that contribute to its historical, archaeological, social, artistic or architectural interest will be retained; and
   iv. Demonstrate how the local character of the area will be respected.

Recording the asset

14.2.44. Where a proposal would result in the partial or total loss of a heritage asset or its setting, the applicant will be required to:
   i. Instigate a programme of recording of that asset; and
   ii. Ensure the publication of that record in an appropriate form.

North Somerset Documents

North Somerset Council Core Strategy

14.2.45. As set out in Section 7 of the ES, the Core Strategy was subject to a legal challenge by Bristol University, a judgement on which was made on the 14th February 2013. Policy CS13 (Scale of New Housing) was found to be unlawful by reason of the Core Strategy Inspector’s failure to give ‘adequate or intelligible reasons for his conclusion that the figure made sufficient allowance for latent demand i.e. demand unrelated to the creation of new jobs’. This matter is remitted back to the Planning Inspectorate for re-examination, together with related policies which include CS6 (Green Belt). These policies currently have the status of emerging policy (albeit with significant weight) and are consequently a material planning consideration, but not part of the adopted development plan. Until such time that the policies are adopted the equivalent Local Plan policies form part of the development Plan and should be considered.

CS3: Environmental impacts and flood risk assessment
(Note – only relevant part of policy quoted below)

14.2.46. Development that, on its own or cumulatively, would result in air, water or other environmental pollution or harm to amenity, health or safety will only be permitted if the potential adverse effects would be mitigated to an acceptable level by other control regimes, or by measures included in the proposals, by the imposition of planning conditions or through a planning obligation.

CS4: Nature conservation

14.2.47. North Somerset contains outstanding wildlife habitats and species. These include limestone grasslands, traditional orchards, wetlands, rhynes, commons, hedgerows, ancient woodlands and the Severn Estuary. Key species include rare horseshoe bats, otters, wildfowl and wading birds, slow-worms and water voles.
14.2.48. The biodiversity of North Somerset will be maintained and enhanced by:

1. Seeking to meet local and national Biodiversity Action Plan targets taking account of climate change and the need for habitats and species to adapt to it;
2. Seeking to ensure that new development is designed to maximise benefits to biodiversity, incorporating, safeguarding and enhancing natural habitats and features and adding to them where possible, particularly networks of habitats. A net loss of biodiversity interest should be avoided, and a net gain achieved where possible;
3. seeking to protect, connect and enhance important habitats, particularly designated sites, ancient woodlands and veteran trees;
4. promoting the enhancement of existing and provision of new green infrastructure of value to wildlife;
5. promoting native tree planting and well-targeted woodland creation, and encouraging retention of trees, with a view to enhancing biodiversity

CS5: Landscape and the historic environment
(Note – only relevant part of policy quoted below)

Landscape

14.2.49. The character, distinctiveness, diversity and quality of North Somerset’s landscape and townscape will be protected and enhanced by the careful, sensitive management and design of development. Close regard will be paid to the character of National Character Areas in North Somerset and particularly that of the 11 landscape types and 31 landscape character areas identified in the North Somerset Landscape Character Assessment.

Historic environment

14.2.50. The council will conserve the historic environment of North Somerset, having regard to the significance of heritage assets such as conservation areas, listed buildings, buildings of local significance, scheduled monuments, other archaeological sites, registered and other historic parks and gardens.

CS6: North Somerset’s Green Belt
(Note – only relevant part of policy quoted below)

14.2.51. Within North Somerset the boundaries of the Bristol – Bath Green Belt will remain unchanged during the plan period.

CS9: Green infrastructure
(Note – only relevant part of policy quoted below)

14.2.52. The existing network of green infrastructure will be safeguarded, improved and enhanced by further provision, linking in to existing provision where appropriate, ensuring it is a multifunctional, accessible network which promotes healthy lifestyles, maintains and improves biodiversity and landscape character and contributes to climate change objectives.

14.2.53. Priority will be given to:
- the protection and enhancement of the formal parks and gardens originating from the Victorian era;
- the protection and planting of trees in woodlands and urban areas, particularly native trees, for public amenity and climate change mitigation and benefits to biodiversity, health and recreation;
- the protection and enhancement of biodiversity;
- the connection of disjointed woodlands, particularly ancient and semi-natural woodland, such as those around the Wraxall/Failand ridge;
- the management, maintenance, upgrading and extension of the public rights of way network including improved connectivity to areas of green infrastructure within and outside North Somerset;
- the provision of strategically significant green spaces in association with all areas of development.

**North Somerset Local Plan**

14.2.54. Saved policies with relevance to the scheme include:

**ECH/5 – Historic parks and gardens**

14.2.55. Development likely to affect a Historic Park or Garden identified on the Proposals Map, or its setting, will only be permitted where:
- its historic character and appearance will not be unacceptably harmed; and
- its historic importance will not be unacceptably harmed; and
- the development enables features, landscaping and planting schemes of historic interest to be conserved, enhanced or restored.

**ECH/9 – Forest of Avon**

14.2.56. Within the defined area of the Forest of Avon, landowners and developers will be encouraged to promote its aims and objectives. Where development is permitted, conditions may be imposed or planning obligations sought requiring the design and materials of any buildings, and any related landscaping and planting, to reflect the developing woodland setting, assist in establishing the Forest or otherwise not conflict with community forest projects.

**ECH/11 – Protected species and their habitats**

14.2.57. Development which could harm, directly or indirectly, nationally or internationally protected species of flora or fauna or the habitats used by such species will not be permitted unless that particular harm could be avoided or mitigated and the species protected by the use of planning conditions or planning obligations.

**ECH/13 – Sites of special scientific interest and national nature reserves**

14.2.58. Development within or near a Site of Special Scientific Interest (SSSI) or National Nature Reserve that is likely to have a direct or indirect adverse effect on its biodiversity or geological interest will not be permitted unless other material considerations outweigh the loss of biodiversity or geological value of the site concerned and any broader impact upon the national network of SSSIs.

**ECH/14 – Wildlife and geological sites and local nature reserves**

14.2.59. Planning permission will not be granted for development that would have a significant adverse effect on local biodiversity or geological interests, unless the importance of the development outweighs the value of the substantive interest present.

**T/7 – Protection, development and improvement of the Rights of Way Network and other forms of public access**

14.2.60. Development that would reduce, sever, or adversely affect the use, amenity or safety of public rights of way and other forms of public access, or prejudice the planned development of the network will only be permitted if acceptable provision is made to mitigate those effects, or divert or replace the right of way or other form of access, before the development commences.
14.3. **Assessment Methodology**

**Approach**

14.3.1. The Landscape and Visual assessment methodology follows guidelines contained in the 2nd Edition of the “Guidelines for Landscape and Visual Impact Assessment” – (Institute of Environmental Assessment and the Landscape Institute 2002). Due to the timing of writing this assessment we have followed 2002 version, however with the 3rd edition of Guidelines for Landscape and Visual Impact Assessment being published in April 2013 this chapter has been reviewed against these guidelines. In addition to this the methodology also follows guidance contained in the Design Manual for Roads and Bridges Volume 11 and Landscape Assessment Guidance issued by the Countryside Commission.

14.3.2. The assessment describes and considers all of the potential detrimental and beneficial impacts of the development on both the landscape resources and visual amenity of the area. Current guidelines suggest the assessment of an impact on visual amenity resulting from a particular development should take full account of the landscape (character) impacts as well as the potential visual impacts. Although they are separate, in most cases it is difficult to isolate each category and so both landscape and visual impacts are considered as part of the assessment process.

**Terminology**

14.3.3. The definition of impact terminology is specific to this study and has been developed to ensure that, as far as possible, an objective and consistent assessment is made and to ensure that the terminology used is appropriate to the development and landscape setting. Assessment criteria and terminology is set out in the relevant sections.

14.3.4. Landscape impacts are changes in the fabric, character and/or quality of the landscape as a result of a particular development. They can also be referred to as direct impacts on the landscape. In other words the development may affect landscape resources by physically altering them, introducing new features or removing them completely. Indirect impacts may occur where changes do not directly alter the landscape however result in a perceived change, such as in changes to the setting which alters the overall sense of quality or character. Visual impacts are a subset of landscape and relate solely to the changes to available views of the site and the result of those changes.

14.4. **Desk Study Methodology**

14.4.1. A desk study was carried out involving a review of published texts and maps to develop an understanding of the site in terms of general landscape character, special values and interests, local value and its wider landscape context.

14.4.2. To identify the likely Zone of Theoretical Visibility (ZTV) of the proposed scheme, a Geographic Information System (GIS) was used to produce appropriate mapping data. The methodology involved giving the centre line of the road an elevation value of 2m. Following this, the “Viewshed” tool could be used available in the ESRI (GIS mapping) software, which is used to calculate visibility across the Lidar elevation surface. The Lidar elevation surface was created using the “Mosaic” tool in the ESRI software to combine each individual Lidar tile into a single surface for analysis purposes. As a result of there not being enough coverage of Lidar to do the full area of analysis the missing areas were patched using the Digital Terrain Elevation Data (DTED). Following this was a Boolean analysis: If a point on the elevation surface can be seen from a height of 2m at the centre line of the route then it will be shown as Visible, if not then it will be assigned Not Visible. The analysis was then symbolised and added it into a mapping template for display (for ZTV plans refer to Volume 3, Appendix 14.1, Figures 4.0 - 8.0).
Data Sources

14.4.3. Baseline information on the landscape of the area was collected through a preliminary desktop study of maps, plans and documents. To identify those elements of the landscape which notably contribute to the character of the landscape an assessment of existing landscape features was carried out and analysed.

Documentation used in the desk study included:

14.4.4. Multi-Agency Geographic Information for the Countryside (Magic) web site. This data source provided data showing where there are sensitive national designations that fall within the scheme area such as the Greenbelt.
- County and District Councils’ local designations.
- 1:50 000 Scale Digital Ordnance Survey Maps
- Aerial Photography
- British Listed Buildings web site
- Southwest Region Countryside Character Assessments: 118, Bristol, Avon Valleys and Ridges
- County Character Assessment: North Somerset Landscape Character Assessment SPD (adopted December 2005)
- Additional information gathered as a result of searches of available information concerning the site, its surroundings and the potential impacts of the proposals.

Meetings

14.4.5. A number of meetings have been held over the development of this application with the Statutory Environmental Bodies (SEBs), Local Authority officers with responsibility for environmental areas, planning case officers and with other interested parties. SEBs (Natural England, Environment Agency and English Heritage) have either been consulted as part of a joint Environmental Liaison Group (ELG) or individually. Their comments have been considered in the development of the engineering and environmental scheme and in preparing mitigation proposals.

Baseline Surveys

14.4.6. The desk study was followed by a series of field surveys carried out in January to December 2012 and February 2013. Investigation of the site and surrounding area sought to identify key issues and constraints in respect of the impact of the development on views into the proposed site, effects on the landscape of the site and the relationship between ‘the development and the surrounding landscape to:

14.4.7. Identify key visual receptors;
14.4.8. Validate and qualify the results of the desk study and ZTV study;
14.4.9. Provide a representative photographic record from typical viewpoints; and
14.4.10. Record an assessment of the landscape on both an objective and subjective basis from each of those viewpoints.
14.4.11. A visual and landscape survey was undertaken in 2012. Supplementary site work was undertaken in spring 2013.
Landscape Quality

14.4.12. The relevance of a landscape to the wider character area is rated to include five definable levels; these are excellent, very good, good, ordinary, and poor. Landscape quality definitions are outlined in the table below.

Table 14.1: Landscape Quality (*)

<table>
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<th>Quality</th>
<th>Description</th>
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<tr>
<td>Excellent</td>
<td>Includes areas that exhibit a strong positive character with valued and distinct features that combine to give the experience of unity, richness and harmony. These are landscapes that are considered to be of particular importance to conserve and which may be sensitive or very sensitive to change. Includes nationally recognised areas such as Areas of Outstanding Natural Beauty (AONB’s).</td>
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<tr>
<td>Very Good</td>
<td>Includes areas with a strong landscape structure and a balanced combination of built development, landform and land cover including woodlands, trees, hedgerows and shrubs. Several landscape designations may apply including areas designated for their heritage or landscape value.</td>
</tr>
<tr>
<td>Good</td>
<td>Includes areas that exhibit positive character but which may have evidence of the degradation or erosion of some features, resulting in areas of more mixed character including a balance of developments. There is a reasonable distribution of trees and shrub cover and the overall view of the area is pleasant. It is potentially sensitive to change. In general change may be detrimental if inadvertently dealt with but may require special or particular attention to detail. Landscape designations of cultural and historical value may be present.</td>
</tr>
<tr>
<td>Ordinary</td>
<td>Includes areas with a distinguishable structure often dominated by land use, such as primarily functional development. There are some detracting features although there is scope to improve through management of vegetation. Land may have a local landscape designation.</td>
</tr>
<tr>
<td>Poor</td>
<td>Includes areas generally negative in character with few if any valued features. Mixed land use dominates and the lack of management or intervention has resulted in degradation. There are extensive or detracting features, although there is scope for positive enhancement. No landscape designations apply.</td>
</tr>
</tbody>
</table>

(*) This table was compiled through reference to the Natural England 'Landscape Character Assessment' and GLVIA.

Landscape Sensitivity

14.4.13. The sensitivity of the landscape is an important consideration in the assessment of the significance of an impact and is based on the capacity of a landscape to accommodate change without harm to its character. Landscapes have variable ability to accommodate different forms of development according to the existing landscape character, the nature of the proposed scheme and the type of change being considered.

14.4.14. The capacity of the landscape to accommodate change is not directly linked to the value of the landscape, however in general terms nationally designated landscapes will have a greater sensitivity than those of a local designation due to the importance of their special character and rarity and therefore limited ability to accommodate change without harm. The UK planning system expresses sensitivity in terms of designations. These designations are as follows:

- **International Importance**: Very High Sensitivity (i.e. World Heritage Sites)
- **National Importance**: High Sensitivity (i.e. AONB)
- **Regional Importance**: Moderate sensitivity (i.e. County Landscape Designation)
- **District Importance**: Moderate to Low sensitivity (i.e. District and Local Landscape Designations)
- **Local Importance**: Low Sensitivity (i.e. non-designated landscape).
14.4.15. However, a local non-designated landscape may be of greater importance to a local community and thus be highly sensitive to change. Other factors to consider in the classification of sensitivity of landscape resources include:

- The period of exposure to impacts;
- The degree of exposure to impacts;
- The function of resource; and
- The capacity of the landscape to accommodate change with regards to such factors as existing land use, the pattern and scale of the landscape, the quality of the landscape character and the scope for mitigation.

14.4.16. The determination of sensitivity was based on the evaluation of each key element or characteristic feature of the landscape likely to be affected. This includes such factors as landscape quality, value, contribution to landscape character and the degree to which a particular element or characteristic can be replaced or substituted. The criteria used to assess the landscape sensitivity are derived from the methodology and descriptions in Table 14.2.

<table>
<thead>
<tr>
<th>Sensitivity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Important landscape components or landscapes of particularly distinctive character; likely to be subject to national or regional designations; and vulnerable to relatively minor changes.</td>
</tr>
<tr>
<td>Medium</td>
<td>Moderately important landscape components or landscapes; often with local landscape designations; reasonably tolerant of sensitive change.</td>
</tr>
<tr>
<td>Low</td>
<td>Relatively unimportant immature landscape elements or landscapes; could be damaged or already heavily developed; and tolerant of substantial change.</td>
</tr>
</tbody>
</table>

14.4.17. The Zone of Theoretical Visibility (ZTV) is the extent to which the proposed scheme will be visible from surrounding areas and helps to identify key visual receptors. A receptor is identified as someone or something that will be affected by any potential work carried out in relation to a proposed scheme. For ZTV Plans refer to Volume 3, Appendix 14.1, Figure 4.0 – 8.0.

14.4.18. As a result of topography and intervening vegetation views of the development proposals have been assessed on a 1km radius affecting primarily road and public rights of way users to the northern section with residential properties having views as the route passes through the southern section.

14.4.19. Visual amenity of a landscape is assessed on the consideration of several factors. Visual appearance is judged objectively based upon the visual harmony of the wider area, the site itself and the site within the wider area, taking into consideration visually intrusive features both on and off site and noting features which particularly enhance or detract from the overall appearance. Subjectively visual amenity is judged based upon natural beauty, such as in terms of colour and diversity, as well as the pleasure derived from viewing the site. Visual amenity is rated to include four definable levels of value; these are exceptional, good, moderate and poor as described in Table 14.3.
14.4.20. As with landscape character, visual amenity receptors were also described according to their sensitivity. The sensitivity of the visual receptors is dependent on the location, context and importance of the viewer as well as the type of receptor and the special nature or the rarity of the view. Residential properties are considered to have a high sensitivity due to their nature whilst vehicle travellers are considered to be of low sensitivity due to the degree and period of exposure to a given view.

14.4.21. Other factors to consider in the classification of sensitivity of visual receptors include:
   • The period of exposure to view;
   • The degree of exposure to view;
   • The function of receptor; and
   • The nature of the view and the scope for mitigation.

14.4.22. Designation of receptors, such as a Listed Buildings, increases the sensitivity of the receptor.

14.4.23. The sensitivity of a visual receptor must be assessed on an individual basis specific to the proximity to type of and scale of development proposed. As a general guide the criteria used to assess the sensitivity of visual amenity receptors derived from the methodology are outlined in Table 14.4.

Table 14.3: Visual Amenity

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceptional</td>
<td>Areas of outstanding scenic value, with distinctive features that combine to give the experience of unity, richness and harmony and create a strong sense of place. These are landscapes which may be considered to be of particular importance to conserve on an international or national scale.</td>
</tr>
<tr>
<td>Good</td>
<td>Areas of pleasing scenic value with a strong sense of place, but occasional detracting features. These are landscapes with some distinctive features which may be considered worthy of conservation on a regional or national scale however sensitively planned change is unlikely to be detrimental.</td>
</tr>
<tr>
<td>Moderate</td>
<td>Areas of slight scenic value with a weak sense of place and frequent detracting features. These are landscapes with few distinctive features which may be considered worthy of conservation on a local scale however there is scope for positive enhancement.</td>
</tr>
<tr>
<td>Poor</td>
<td>Areas of no scenic value with dominant detracting features. These are landscapes with significant scope for positive enhancement.</td>
</tr>
</tbody>
</table>

(*) This table was compiled through reference to the Natural England ‘Landscape Character Assessment’ and GLVIA.

Sensitivity of Visual Receptors
Impact Assessment and Significance

14.4.24. For the purposes of both landscape and visual impact assessments, impacts are graded according to their scale or magnitude; this is otherwise referred to as their ‘severity’. Impacts are rated to include three definable levels of severity; these are substantial, moderate and slight. The nature of impacts is assessed on the potential negative (adverse) and positive (beneficial) consequences of the proposals. The significance criteria is summarised in Table 14.5.

Table 14.5: Assessment Criteria (*)

<table>
<thead>
<tr>
<th>Significance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantial beneficial</td>
<td>Where the scheme would cause an obvious improvement in the existing landscape resources/visual amenity.</td>
</tr>
<tr>
<td>Moderate beneficial</td>
<td>Where the scheme would cause a noticeable improvement in the existing landscape resources/visual amenity.</td>
</tr>
<tr>
<td>Slight beneficial</td>
<td>Where the scheme would cause a barely perceptible improvement in the existing landscape resources/visual amenity.</td>
</tr>
<tr>
<td>No change</td>
<td>No discernible deterioration or improvement in the existing landscape resources/visual amenity</td>
</tr>
<tr>
<td>Slight adverse</td>
<td>Where the scheme would cause a barely perceptible deterioration in the existing landscape resources/visual amenity.</td>
</tr>
<tr>
<td>Moderate adverse</td>
<td>Where the scheme would cause a noticeable deterioration in the existing landscape resources/visual amenity.</td>
</tr>
<tr>
<td>Substantial adverse</td>
<td>Where the scheme would cause an obvious deterioration in the existing landscape resources/visual amenity.</td>
</tr>
</tbody>
</table>

(*) T(*) This table was compiled through reference to the Natural England ‘Landscape Character Assessment’ and GLVIA.

14.5. Baseline Conditions & Sensitivity

14.5.1. This section describes the existing situation or baseline conditions, including existing land use and protected landscape designations. These conditions are taken into account in assessing the landscape quality, character and views.
14.5.2. Landscape (including townscape) assessment is the systematic description and analysis of the physical features of the landscape and their values. The features may include landform, field and settlement patterns, building styles, historical and cultural elements, road and transport patterns, vegetation cover and land use, and the potential effect of a proposed development on these elements.

14.5.3. Visual amenity assessment is the description and analysis of the views experienced by receptors from residential properties, public buildings, public open spaces, public rights of way, open access areas, transport corridors and places of work, and the potential effect of the proposed development on the receptors.

14.5.4. The landscape and visual assessment considers elements and features that are included in the wide area of study. The assessment of landscape and visual effects will include the capture, recording and presentation of a selection of representative viewpoints from identified receptors. The assessment will be further informed by reference to existing landscape character studies, relevant landscape designations and also planning policy relevant to landscape matters.

**Spatial Scope**

14.5.5. The study area for the landscape and visual assessment is based on a 1km wide corridor centred on the proposed route of the scheme. This broad area of study is refined to identify the visual envelope of the scheme for the purpose of detailed assessment. In the areas of open countryside to the northern section of the scheme the study area and visual envelope is widened to ensure that important receptors and views are accounted for. However, in the urban context within Highridge, Withywood and Bishopsworth this corridor may be narrowed given the potential reduction in the visual envelope that is created by more extensive built development.

14.5.6. The final study area is defined to enable an understanding of the contextual landscape character and visual receptors in order to establish specific mitigation measures for the design.

14.5.7. In general the components of the scheme are similar along the length of the route and include the engineered composition of carriageway, bus rapid transit, verges, earthworks and shared cycleway/footway. However in the context of the landscape and visual assessment the scheme can be divided into 5 distinct sections. These can broadly be defined as follows:

- Section 1 - A370 to Railway Line (including flood storage lagoons and separate cycleways);
- Section 2 – Railway Line through to Castle Farm and the A38 (Bridgewater Road) (through more open countryside and including rail underpass and crossing of Colliter’s Brook);
- Section 3 - Castle Farm to the edge of Highridge Common;
- Section 4 – Highridge Common to King Georges Road; and
- Section 5 - King Georges Road (residential area with wide central verges) and Queens Road Junction to Hengrove Way (along the existing reserved corridor).

**Landscape Character**

14.5.8. It is character that makes each part of the landscape distinct and gives it a particular sense of place. This section involves the identification of those features or combinations of elements that contribute to the character of the landscape, thereby enabling the special character and qualities of an area to be understood.

14.5.9. Different landscape character assessments are undertaken at different geographical scales: based on the Countryside Agency guidance, existing landscape character is described in a ‘hierarchy’ of assessment.
14.5.10. The assessment starts at a national level which is now under the remit of Natural England to undertake National Character Area (NCA) assessments. These descriptions are broad scale, used as a starting point in understanding landscape character for this assessment. County and district wide assessments are the next tier that were studied and described. The descriptions of these landscape character areas are intended as a design tool for development. They establish whether the proposed development is responding to its context. They also inform the development of appropriate mitigation measures.

National and regional landscape character assessments

14.5.11. Landscape character guidance provides an independent view of the defining characteristics of each an area and contributes to the baseline position for determining the significance of impacts.

14.5.12. Landscape character is considered by reference to existing landscape studies at a national and regional level. These include:


National Countryside Character

14.5.15. The scheme falls with character area 118 – Bristol, Avon Valleys and Ridges. There are a number of broad objectives given for this character area, the relevant ones to this scheme being:

14.5.16. Much of the area falls within the Forest of Avon Trust, a charity established in 2008. The objectives include getting trees planted individually, in gardens, streets, green spaces or as woodlands, with a strong focus on areas of low tree cover; run activities, tailored to needs, to engage all sections of the community in local woodlands and green spaces; provide training to support communities and individuals to plant and manage trees; deliver Forest School/related training to support schools in getting the next generation involved; provide advice to improve the management of woodlands and help safeguard these where they are under threat; lease and acquire local woodlands and promote access to them; campaign for strategic woodland creation, in support of the principles of the Forest of Avon Community Forest.

14.5.17. On agricultural land there are many areas where hedgerow management could be improved for landscape and wildlife benefits.

14.5.18. The continued management of pastures and calcareous grassland is important.

14.5.19. The area has a rich and complex industrial history. The conservation and interpretation of historic features – particularly those associated with the coal industry, rural mills and early factory building – needs to be addressed.

14.5.20. Key characteristics include:
- A landscape of very mixed landform, geology and settlement pattern, strongly influenced by the Avon Valley, Bristol at its centre and by its industrial history;
- Low-lying, shallow valleys which contrast with limestone ridges and scarps;
- Frequent large villages, small towns and major conurbations but also undisturbed rural areas;
- Wooded scarps with ancient woodland and high, open, downland ridges;
- Legacy of coal industry evident in tips, settlement patterns and reclaimed areas;
- Waterside mills and other features of former rural industries; and
- Frequent parks, mansions and manor houses.
Regional Countryside Character

14.5.21. The far northern section of scheme falls within landscape character type B1 – Land Yeo and Ken River Floodplain which forms part of the North Somerset Landscape Character Assessment. The Landscape Character assessment advocates a number of landscape guidelines for this area, the relevant ones as follows:

- Conserve the rural, pastoral character of the area.
- Enhance the hedgerow network (ensuring cyclical hedge cutting and nurturing new and existing hedgerow trees)
- Management of streams and ponds for biodiversity including planting bank side trees for light shade.
- Promote opportunities for creating areas of unimproved grassland and wetland habitats.

14.5.22. Consider opportunities to introduce wet woodland possibly for screening intrusive land uses, urban edge and transport corridors.

14.5.23. The central section of the scheme falls within character area J4 – Colliter’s Brook Rolling Valley Farmland. Relevant landscape guidelines for this area are:

- Promote sensitive, cyclical/rotational management of hedgerows and nurture new and existing hedgerow trees.
- Consider opportunities for grassland, woodland and wetland habitat creation, particularly in areas which are marginal for farming.
- Minimise visual effects of modern settlement along the A roads for instance through careful screening and replanting of hedgerows and or new woodland belts.

14.5.24. Key characteristics include:

- Level lowland based on Alluvium, River Terrace Deposits and Head;
- Strong valley feel varying in width from intimate to wide and open, except south east of Long Ashton where the valley is indistinct;
- Peaceful pastoral landscape with cattle grazing though much of the area, except south east of Long Ashton where the landscape is fragmented and disturbed by the influences of the city fringe, and road and rail traffic;
- Presence of the small rivers, the Kenn and the Land Yeo and their tributaries, plus the Ashton Brook forming part of the Avon catchment to the east;
- Many small open water bodies, pools, fishing ponds and reservoirs;
- Large geometric fields with low hedges and hedgerow trees of oak and ash;
- Broadleaved small woodlands and trees along the lines of rivers and streams;
- Generally little settlement apart from scattered stone farmsteads on rising ground at the edges of the area and some large institutional buildings and installations. The Ashton Brook area to the east adjoins the city fringe;
- Transport corridor with the railway line running through much of the length and the A370 (in cuttings and on embankments) bordering the area to the east; and
- Proximity of Bristol and Long Ashton at eastern end of area felt through views to urban areas and variations in land use.

14.5.25. Current Context and Character of the Scheme

General Context of Surrounding Areas

14.5.26. The village of Dundry is located approximately 1.5km south west of the scheme at approximately 230m AOD at the western end of an exposed 4 mile long ridge, which makes it a notable landmark in North Somerset which is emphasised by a fifteenth century church tower. There are expansive views from Dundry encompassing the River Severn in the area of Chepstow, Newport and Cardiff, also backed by the Black Mountains, Brecon Beacons and the Severn Bridges to the west. Most notable views are of Bristol city which form its immediate backdrop to the north east.
14.5.27. The Mendip Hills lie to the south west of Dundry, approximately 25km from the scheme; these are designated as an Area of Outstanding Natural Beauty. The most prominent land cover includes unimproved limestone grassland, acid dwarf-shrub heath and Ash Woodland. Extensive areas of the Mendips have intensively managed grazing pasture.

14.5.28. The eastern part of the Mendip Hills and southern edge of the Cotswolds merge into a landscape of varied undulations. A predominantly limestone ridge extends from the Yeo Valley towards Thornbury, where

14.5.29. sandstone outcrops are present. It is cut by the spectacular Avon Gorge on the edge of Bristol and to the south forms the distinctive landscape of the Failand Hills. To the west the ridge falls, often steeply, to the levels. To the east is a landscape of clay vales. They are large and broad-scale, around the river Frome and its tributaries, but smaller-scale and more complex around the many minor rivers and streams like the river Cam, Wellow brook and river Chew. At the northern edge of the area there is another, more undulating, type of landscape as the land rises to the Cotswolds.

14.5.30. Ashton Hill is a 148 acre area of mixed woodland with some areas of ancient woodland located at the southern edge of Failand approximately 2.5km west of the scheme within the city of Bristol. The woodland has a trail which is used for walkers and cyclists. Ashton Court, a 17C Grade I listed Mansion with some 850 acres of woodland, pasture and deer park lies to the north west of the scheme. The estate relies for its wider setting on the ‘borrowed landscape’ formed by the agricultural landscape between the park and the mainline railway in particular and in general to the ridgeline of Dundry Hill.

14.5.31. Generally, the existing topography varies with the start of the route until south of the railway passes through relatively level open landscape at approximately 20m AOD. As the route edges away from Colliter’s Brook the levels rise up to approximately 45m AOD approaching the A38. As the route continues between the A38 and Highridge Common there is a gradual incline where it reaches approximately 70m AOD, this then gradually falls away to approximately 40m AOD where the proposed route terminates at Hengrove Way

Section 1 - A370 to Railway Line

Landscape Character

14.5.32. A flat, open landscape with areas of marshy and semi improved neutral grassland separated with mature hedgerows and scattered trees defines the landscape character in this section. The area is crossed by Colliter’s Brook (which runs northwards, partly canalised, from a culvert under the railway line) and Brook (flowing SW to NE and also partly in manmade channel).

14.5.33. The A370 and Bristol to Taunton Railway Line traverses east-west on a high embankment across the southern end of this section. Long Ashton and the eastern fringe of Bristol define much of the settlement, including housing at Ashton Vale and the Brookgate Industrial Estate, which holds a strong visual influence within this section.

Built Environment - Settlement, Infrastructure and Cultural Heritage

14.5.34. The scheme passes through a semi-rural landscape within North Somerset. The A370 and Bristol to Taunton Railway are the main transport corridors that bound the northern and southern extents of this section, with the Long Ashton Park and Ride linking up with the northern end of the scheme.

14.5.35. The area has some historical features in close proximity to the route including listed buildings and monuments within Long Ashton and Ashton Court and its borrowed landscape, which are highly sensitive areas. Urban influences include residential properties and Brookgate Industrial Estate forming the eastern extents of this section.
Natural Environment - Landcover, Pattern and Topography

14.5.36. The scheme environment comprises large fields generally to pasture offering extensive views across the surrounding landscape. Land cover includes predominantly pastural fields with hedgerow boundaries and scattered trees. The scheme passes through an area of flood plain in the northern section which is characterised by marshy and semi improved neutral grassland. Vegetation cover is fairly sparse in this section of the scheme providing minimal screening from residential properties, footpath users and road users.

14.5.37. This section falls within the Greenbelt, which bounds the western edge of Bristol city with Ashton Vale Fields Wildlife Site adjacent to the route, combined with Long Ashton Conservation Area, Ashton Court Site of Special Scientific Interest and Registered Park and Garden within 0.5km of the scheme, these combine to form a highly sensitive landscape. The land is generally very flat at around 18m AOD with only slight undulations. It rises quite steeply north beyond the A370 to Ashton Hill at 128m AOD, and again the land rises south of the railway line.

14.5.38. The area is bounded by the A370 and the urban fringe of Long Ashton, by the mainline railway, on embankment for much of its extent, and by the urban fringe of housing (to Ashton Vale) and the Brookgate Industrial estate development. Within this area the Ashton Court Park + Ride, accessed from the A370, has been built on part of a former landfill site that extends to a point just before the access track to Parsonage Farm.

Baseline Landscape Quality

14.5.39. The overall quality of the landscape within this route is good as a result of the scheme passing through the Greenbelt and adjacent to Ashton Vale Fields Wildlife Site, however the park + ride, historic landfill and Brookgate Industrial Estate are detracting features of the landscape quality. There are other national and locally designated areas within 0.5km to the route. Much of the landscape reflects North Somerset's and Bristol's varied rural and urban fringe character. The landscape is, therefore, sensitive to change and proposals will need to be carefully planned to blend into the surrounding landscape.

Section 2 – Railway Line to A38

Landscape Character

14.5.40. Within this section of the scheme the landscape is defined by rural rolling slopes and steep wooded ridges along Colliter's Brook, one of a number of streams flowing south north and dissecting a prominent ridge line running east west, with an area of ancient woodland (Hanging Hill Wood) located along the stream enclosing this corridor. There are a number of areas within this section which have been tipped in the past, changing the character of the valley. The large landfill site immediately south of the railway, formerly quarry land, is still in the process of final restoration and as such currently detracts from the rural character.

14.5.41. Settlement in this section includes scattered farmsteads. The main transport routes include Bristol to Taunton Railway Line and the A38 which form the northern and southern ends of this section.

Built Environment - Settlement, Infrastructure and Cultural Heritage

14.5.42. The scheme passes through a rural landscape within North Somerset. The Bristol to Taunton railway line crosses through the northern part of the section and the A38 to the south, which are the main transport corridors. As noted above, the Viridor Yanley landfill (and previously the quarry) are notable infrastructure elements with the landscape.

14.5.43. Historical features located adjacent to the route including Hanging Hill Ancient Woodland and mature trees. Settlements include the farmsteads of Yew Tree and listed Castle Farm.
14.5.44. A rural setting dominates this landscape incorporating fields generally to pasture, hedgerows, scattered trees and woodland. The fields are large-scale offering extensive views across the surrounding landscape. Dense vegetation is evident along parts of the route, especially along the watercourse whereby tree belts and woodland offer substantial screening from farmsteads, footpath users and road users.

14.5.45. This section falls within the Greenbelt, which bounds the western edge of Bristol city, in addition to this the route runs parallel to Colliter’s Brook Site of Nature Conservation Importance and South Bank Meadow Yanley Wildlife Site which combine to form a highly sensitive landscape. The section has a much more enclosed feel until approaching the A38 at about 50m AOD where the slope slackens and more open views are offered on the valley sides where the fields become large scale separated with mature hedgerows and scattered trees.

Baseline Landscape Quality

14.5.46. The overall quality of the landscape within this section of the route is very good as a result of the scheme passing through the Greenbelt and adjacent to South Bank Meadow Yanley and Hanging Hill Woodland Wildlife Sites, Colliter’s Brook Site of Nature Conservation Importance and the Ancient Woodland of Hanging Hill. There are other locally designated areas within 0.5km of the route. Much of the landscape reflects North Somerset’s and Bristol’s varied rural and urban fringe character. However, areas of tip land within this section are a detracting feature of this landscape quality. The landscape is, therefore, sensitive to change and proposals will need to be carefully planned to blend into the surrounding landscape.

Section 3 – A38 to Highridge Common

Landscape Character

14.5.47. The landscape is described as being gently undulating with large, open fields that are separated with mature hedgerows and some scattered trees. The landscape is lightly dissected by streams running south from Dundry Hill and rises gently between the A38 to where the route meets Highridge Common.

14.5.48. The influence of Bristol is felt with views to the east, setting the landscape within the urban fringe. There are residential properties to the eastern fringe of Bristol and the village of Dundry located to the west on higher ground at around 230m AOD.

Built Environment - Settlement, Infrastructure and Cultural Heritage

14.5.49. The scheme passes through a rural/urban fringe landscape within North Somerset. The A38 is the main transport corridor that forms the northern extents of this section.

14.5.50. The area has some historical features including the known presence of three non-designated Lime kiln heritage assets brought to attention through a letter from Avon Industrial Buildings Trust in 1986. These have been accurately surveyed by the Ordnance Survey, which are a critical issue for planning at the proposed A38 road junction, and as a result will need to be situated in the middle of the roundabout to avoid them being demolished. Settlements in the immediate vicinity are sparse; however residential properties on the eastern fringe of Bristol within 0.5km of the route form an urban influence in this area.

Natural Environment - Landcover, Pattern and Topography

14.5.51. The scheme environment comprises open, large scale fields offering extensive views across the surrounding landscape. Land cover includes predominantly pastural fields with hedgerow boundaries and scattered trees. Vegetation cover is fairly sparse providing minimal screening from residential properties, footpath users and road users.
14.5.52. This section falls within the Greenbelt, which bounds the western edge of Bristol city. The topography rises gently from around 50m AOD at the A38 to around 70m AOD where the route meets Highridge Common.

Baseline Landscape Quality

14.5.53. The overall quality of the landscape within this section of the route is good as a result of the scheme passing through the Greenbelt. There are other locally designated areas within 0.5km of the route. Much of the landscape reflects a balance between North Somerset’s varied rural character and the urban fringe of Bristol. The landscape is, therefore, sensitive to changes and proposals will need to be carefully planned to blend into the surrounding landscape.

Section 4 – Highridge Common to King Georges Road

Landscape Character

14.5.54. Highridge Common is considered a valuable area of wildflower rich meadow with local SNCI designation. The western boundary of Highridge Common with its hedgerow and associated small fields have a very strong historic landscape character and the wide hedge/ditch system creates a substantial landscape structure, strengthened by the similar hedge and ditch running on the western side of the small fields. The common land rises from around 65m AOD in the north to just over 80m AOD at its southern end. The designated common land itself has an unusual form with long fingers of designated grassland extending down Highridge Green and Highridge Road, the former being within the common land designation.

14.5.55. Residential development defines the southern and eastern boundary of the Common. The narrow sections of Common land retained outside the main triangle of Common land, along Highridge Green and Highridge Road, are now dissected by numerous side roads with the associated urban and streetscape development.

Built Environment - Settlement, Infrastructure and Cultural Heritage

14.5.56. The scheme passes through a suburban landscape within Bristol City. Highridge Road and Highridge Green bound the southern and eastern sections of the Common and are the main transport links in this area.

14.5.57. The Common is enclosed to the southern and eastern boundary by residential development on the south west edge of Bristol. The townscape to the north east and west is characterised by two storey residential properties, generally detached or semi-detached, but with some short terrace runs, with good sized front and rear gardens and with pockets of greenspace. Isolated commercial/residential properties are located to the south along Highridge Road. Whilst some properties date from the 1800’s, the majority of development dates from the post war expansion of Bristol.

14.5.58. The common has been subject to works to improve drainage with a major pipeline laid across it from the end of King Georges Road to a point south of Grove House in recent years.

Natural Environment - Landcover, Pattern and Topography

14.5.59. Highridge Common is predominantly open grassland used for informal recreation, with some small patches of scrub/trees and individual parkland trees, enclosed on all sides by dense hedgerows. The Common is considered a valuable area of wildflower rich meadow. The wide hedge/ditch system to the western boundary creates a substantial landscape structure, strengthened by the similar hedge and ditch running on the western side of the small fields. Vegetation is fairly sparse along this section of route offering minimal screening from residential properties, footpath users and road users.

14.5.60. The common is designated as a Site of Nature Conservation Importance due to its rich biodiversity. The topography is relatively flat in this area at approximately 70m AOD.
Baseline Landscape Quality

14.5.61. The overall quality of the landscape within this section of the route is excellent as a result of the scheme passing through the Greenbelt and Highridge Common Site of Nature Conservation Importance. There are other locally designated areas within 0.5km of the route. The landscape is, therefore, very sensitive to change and proposals will need to be carefully planned to blend into the surrounding landscape.

Section 5 – King Georges Road to Hengrove Way

Landscape Character

14.5.62. The route passes through a residential streetscape character (King Georges Road) with wide amenity grass frontages to properties and remnant mature avenue trees. As the route passes through the reserved corridor the landscape forms a green corridor used for informal recreation and connections between housing estates in a parkland setting. The landcover is predominantly unmanaged scrub and open grassland with scattered trees.

14.5.63. Residential developments enclose the northern and southern extents of the reserved corridor with direct views into this landscape. As the route runs along Whitchurch Road the urban character becomes a mix of residential, retail and industry with the main transport corridor of Hengrove Way connecting the end of the route.

Built Environment - Settlement, Infrastructure and Cultural Heritage

14.5.64. The scheme passes through an urban landscape within South Bristol. King Georges Road, Queens Road and Whitchurch Road are the main transport links in this section of the scheme.

14.5.65. The townscape along King Georges Road is characterised by two storey residential properties dating from the 1950’s, generally detached or semi-detached, with good sized front and rear gardens and with pockets of greenspace. More recent residential properties enclose the southern and northern sections of the reserved corridor which are generally 2 storey detached and semi-detached properties with some 3 storey apartments. As the route passes along Whitchurch Road a mix of 2 storey semi-detached properties, retail and industry characterise this most easterly section of the scheme.

Natural Environment - Landcover, Pattern and Topography

14.5.66. Wide frontages to properties and some mature trees characterises the route passing through King Georges Road. Where the scheme runs through the reserved corridor the landscape forms a green corridor used for informal recreation in a parkland setting. The landcover is predominantly unmanaged scrub and open grassland with scattered trees. Vegetation is fairly sparse along this section of route offer minimal screening from residential properties, footpath users and road users in close proximity to the scheme.

14.5.67. The topography is relatively flat in this area at approximately 45m AOD.

Baseline Landscape Quality

14.5.68. The overall quality of the landscape within this section of the route is ordinary as a result of the scheme passing through as an area which inhibits a residential and functional character with evidence that the reserved corridor and leading into Whitchurch Lane has suffered some degradation with areas of tipping. There are scattered trees with scrub and shrub cover. The landscape is, therefore potentially sensitive to change and proposals should seek to provide landscape improvements where possible.
Landscape designations and visual receptors

14.5.69. The following national and local designations are located within each section of the scheme and are relevant to the assessment of landscape and visual effects (for Environmental Constraints Plan refer to Volume 3, Appendix 14.1, Figure 2.0):

Section 1 – A370 to Railway Line

- Ashton Court Site of Special Scientific Interest;
- Ashton Court Grade II* Registered Park and Garden and the parks ‘borrowed landscape’ formed by the agricultural landscape between the park and the mainline railway in particular and in general to the ridgeline of Dundry Hill;
- All Saints Grade II Church at Long Ashton
- Long Ashton Conservation Area;
- Community Forest Path;
- Ashton Vale Fields Wildlife Site (WS); and
- Green Belt
- Land south of A370 characterised as post-medieval (15th-17th C) organised enclosure of anciently reclaimed inland moors. (Refer to Heritage Chapter 15).

Section 2 – Railway Line to A38

- Green Belt;
- Colliter’s Brook Site of Nature Conservation Importance (SNCI);
- South Bank Meadow Yanley Wildlife Site (WS);
- Hanging Hill Wood Ancient Woodland AND Wildlife Site (WS). This woodland has been protected by North Somerset Council, and as a result been given a Tree Preservation Order (TPO), therefore any works within this area need to ensure this is retained and managed. A Tree Survey and Arboricultural Implications Assessment has been produced by Halcrow which identifies this TPO area and highlights other trees to be of high quality (for South Bristol Link Road Tree Survey and Arboricultural Implications Assessment JSL2121_770_A refer to Volume 3, Appendix 13.2.2);
- Community Forest Path; and
- Castle Farm Grade II listed property
- Land south of Hanging Hill Wood and north of Castle Farm characterised as post-medieval and modern field adjusted from earlier enclosures (Refer to Historic Environment Chapter 15).

Section 3 – A38 to Highridge Common

- Lime Kiln Heritage Assets;
- Community Forest Path; and
- Monarchs Way Long Distance Route
- Historic landscape characterisation which shows potential for pre-enclosure fields including land adjacent to Highridge Common to the west is characterised as late medieval enclosed open fields created by local arrangement and exchange (Refer to Heritage Chapter 15).

Section 4 – Highridge Common to King Georges Road

- Greenbelt
- Highridge Common Site of Nature Conservation Importance.

Section 5 – King Georges Road to Hengrove Way

- No known national or local designations in this section of the scheme
Public Rights of Way (PROWs) and Footpaths

14.5.70. In addition to designations, it is important to consider the potential impacts on the users of public footpaths within the immediate area. There are several public rights of way and National Trails such as Monarchs Way and the Community Forest Path within the study area (for Environmental Constraints Plan refer to Volume 3, Appendix 14.1, Figure 2.0.), some of which run parallel and cross the route in places which have potential to be affected by the scheme. The potential impacts on PROWs and footpaths has been reviewed through public consultation, discussion with focus groups and technical review. A number of design changes have been made which include:

- Provision of combined footway and cycle way on the same side of the SBL for its length
- Junction design revised to better provide for pedestrian and cyclist crossings
- Provision of controlled crossings or central refuge islands
- Diversion of footpaths and PROWs to make use of safe under bridge crossings south of the A370 and south of the railway
- Coordination of cycleway/footway with the AVTM provision

14.5.71. Changes to the vertical alignment since the public consultation, increasing the extent of at or near at grade roadway, have decreased the number of major ramp and step locations to accommodate highway cuttings. As such it is considered that, in landscape and visual terms, the impact on PROWs and footways is adequately mitigated. Further consideration is given in the Amenity and Recreation Land chapter.

Visual Amenity

Baseline Visual Analysis

14.5.72. Visual amenity of a landscape is assessed on the consideration of several factors. Visual appearance is judged objectively based upon the visual harmony of the wider area, the site itself and the site within the wider area, taking into consideration visually intrusive features both on and off site and noting features which particularly enhance or detract from the overall appearance. Subjectively visual amenity is judged based upon natural beauty, such as in terms of colour and diversity, as well as the pleasure derived from viewing the site. Visual amenity is rated to include four definable levels of value; these are exceptional, good, moderate and poor (refer to table 2.14.3).

14.5.73. The wider area’s baseline visual amenity can be described as being of good visual amenity between the urban context of Bishopsworth, Withywood and Highridge Common within Bristol City Council and villages of Dundry, Long Ashton and wider rural landscape within North Somerset Council, with the occasional detracting features such as pylons. There is a pleasing scenic quality due the relatively unspoilt surroundings with mature hedgerows and trees making up much of the views.

Scheme Specific Visual Analysis

Section 1 – A370 to Railway Line

14.5.74. The route itself is an incongruous feature in this rural landscape in South Bristol. The vegetation cover in this section is limited to hedgerow bounded fields with scattered trees, therefore existing screening is minimal with localised and long distance receptors overlooking the site, therefore the scheme causes moderate detraction from the appreciation of the surrounding visual amenity. The route passes through Greenbelt which comprises a rich visual pattern of fields divided up with hedgerows. Incongruous features within this section include Brookgate Industrial Estate, areas of tipping, railway line and Long Ashton Park and Ride. As a result of this, the site can be described as being of good visual amenity.
Section 2 – Railway Line to A38

14.5.75. The route itself is an incongruous feature in this rural landscape in South Bristol. However, due to the existing level of woodland and hedgerow screening and predominantly contained receptors overlooking the route, the scheme causes slight detraction from the appreciation of the surrounding visual amenity. The route passes through Greenbelt which comprises a visual pattern of hedgerows, fields and woodland, in addition to this it runs parallel to the Ancient Woodland, SNCI’s and WS’s. As a result of this, the site can be described as being of Exceptional visual amenity.

Section 3 – A38 to Highridge Common

14.5.76. The route itself is an incongruous feature in this rural landscape in South Bristol. The vegetation cover in the section is limited to hedgerow bounded fields with scattered trees, therefore existing screening is minimal with localised and long distance receptors overlooking the site, as a result the scheme causes moderate detraction from the appreciation of the surrounding visual amenity. The route passes through Greenbelt which comprises a visual pattern of fields divided up with hedgerows. As a result of this, the site can be described as being of good visual amenity.

Section 4 – Highridge Common to King Georges Road

14.5.77. The route itself is an incongruous feature in this urban fringe landscape in South Bristol. Vegetation is fairly sparse along this section of route offering minimal screening; as a result the scheme causes moderate detraction from the appreciation of the surrounding visual amenity. The route passes through Highridge Common SNCI which comprises an open grassland area for informal recreation, providing visual amenity for surrounding residents. As a result of this, the site can be described as being of good visual amenity.

Section 5 – King Georges Road to Hengrove Way

14.5.78. The route itself is an incongruous feature in this urban landscape in South Bristol; however the route utilises existing road corridors. Vegetation is fairly sparse along this section of route offering minimal screening to residents and road users along this route; as a result the scheme causes moderate detraction from the appreciation of the surrounding visual amenity. As a result of this, the site can be described as being of moderate visual amenity.

Key Views and Zone of Theoretical Visibility (ZTV)

14.5.79. The ZTV forms an irregular shaped band around the route at a 1km radius, defined by the topography, existing hedgerows, vegetation and residential properties at Bishopsworth, Dundry, Long Ashton and Ashton Court (for ZTV Plans refer to Volume 3, Appendix 14.1, Figures 4.0 - 8.0).

14.5.80. The visual assessment identifies the key visual receptors within the visual envelope of the study area including users of roads, public rights of way and residential properties of the proposed scheme based on changes to views from these receptors. It describes the quality of the existing views from these receptors, their sensitivity and whether the proposed scheme is likely to have a significant temporary or long term effect.

14.5.81. The sensitivity of visual receptors is an important issue in the assessment of the significance of an impact. This is based on the type of receptor, as well as the special nature or the rarity of the view. Residential properties are considered to have a high sensitivity due to their nature. Additional factors to consider in the classification of sensitivity of visual receptors include:

- The period of exposure to view (short, medium or long term);
- The degree of exposure to view;
- The function of receptor (resident, visitor or worker); and
- The nature of the view and the scope for mitigation.
14.5.82. Receptors that will be sensitive to visual change within this area include (listed in order of sensitivity):

- Castle Farm residents;
- Residential Properties in Long Ashton Conservation Area;
- Public Right of Way users of Ashton Court Estate;
- Public Right of Way users at All Saints Church in Long Ashton
- Residential properties in Ashton Vale, Dundry, Highridge, Withywood and individual properties in the area of open countryside;
- Users of rights of way, Monarchs Way and Community Forest Path in open countryside between Long Ashton and Highridge (and adjacent areas);
- Users of Highridge Common (and other open spaces located in the more urban areas toward Whitchurch Lane);
- Public amenities (including schools and Community Centre); and
- Motorists using the A370 and A38;
- Users of the urban road system within the areas of Bishopsworth and Withywood.

14.5.83. A winter photographic appraisal of the site and its visual envelope is shown in Appendix 14.1 Figure 3.0, and Figure 9.0. These photographs were taken in February 2013. In addition to this a few summer photos have been used, which were taken in early spring 2012. All viewpoints were captured using a fixed 35mm focal length digital SLR camera. According to the ‘Photography and Photomontage in Landscape and Visual Impact Assessment Landscape Institute Advice Note 01/11’, the use of a fixed focal length lens ensures that the image parameters of every photograph are the same, simplifies the construction of panoramas, and ensures compatibility of photography for all viewpoints. The objective of photography for visual and landscape impact assessment is to produce printed images of a size and resolution sufficient to match the perspective and, as far as possible, the detail in the same view in the field and which can also serve as an accurate aide-memoire once the observer has left the field.

Views of the proposed route at Ashton Court (Figure 9.0 – Viewpoints 1-3)

14.5.84. Long distance views are offered to users of Ashton Court Park and Estate; however these are limited by intervening mature trees, hedgerows and undulating topography. As a result of the intervening sensitive landscape features, in particular the borrowed landscape, ancient trees and copses within historical parkland setting, combined with glimpsed views of Brookgate Industrial Estate, Long Ashton Park and Ride and areas of tipping these offer good visual amenity. Refer to Landscape Strategy and Photomontage Report produced by Halcrow.

Views of the proposed route at Long Ashton (Figure 9.0 – Viewpoints 4-7)

14.5.85. Road users of Theynes Croft and residents in this area of Long Ashton will experience glimpsed views (Viewpoint 4) as a result of intervening mature tree and hedgerow cover and distance from the proposed route. Public Right of Way users at All Saints Churchyard in Long Ashton will have short distance views (Viewpoints 5 and 6) of the proposed route; however this is limited as a result of the undulating topography and intervening tree and shrub belt. Long Ashton Park and Ride users will experience short distance views (Viewpoint 7) of the route; however they are partially screened by existing boundary vegetation cover and scattered mature trees. However views of Brookgate Industrial Estate, Long Ashton Park and Ride and areas of tipping would result in minimal change in these views as a result of the intervening landscape features.

Views of the proposed route between A370 and Railway Line (Figure 9.0 – Viewpoints 8-11)

14.5.86. Public Right of Way and Community Forest Path users between the A370 and the Railway Line will experience short and medium distance views of the proposed route. As a result of the relatively flat topography and minimal screening in the form of hedgerow boundaries combined with the visual appearance of the proposed road being on embankment the views of the route in this area will be prominent, in addition to this, views of Brookgate Industrial Estate, Long Ashton Park and Ride and areas of tipping detract away from the pleasing scenic quality. As a result of the proximity to the scheme any change in these views due to the scheme will be moderate.
Views of the proposed route between the Railway Line and A38 (Figure 9.0 – Viewpoints 12-21)

14.5.87. Public Right of Way and Community Forest Path users, residents of Castle Farm and A38 users between the railway line and A38 will experience short and medium distance views of the proposed route. As a result of the undulating topography characterised by the watercourse stream and the dense ancient woodland along this corridor many views in this area will be limited (Viewpoints 12, 15, 16 and 18) as such these views would experience slight change due to the scheme. Key landscape features in this area include Hanging Hill Ancient Woodland and Colliter’s Brook which offer good visual amenity; therefore the highly sensitive receptors such as Castle Farm will experience deterioration in the visual amenity. Residents of Castle Farm, Public Right of Way users and A38 users will experience increased visual intrusion due to the reduced vegetation screening in these areas and proximity to the route (Viewpoints 13, 14, 17, 20, 21 and 22) as a result any change in these views as a result of the scheme will experience substantial change.

Views of the proposed route between the A38 and Highridge Common (Figure 9 – Viewpoints 22-27 and 30)

14.5.88. Public Right of Way and Community Forest Path users, residents at Highridge Common, Bristol fringe and road users between the A38 and Highridge Common will experience short to long distance views of the proposed route. As a result of the fairly flat topography in this area and minimal screening in the form of hedgerow boundaries and scattered trees (Viewpoints 23-26) these views would experience slight change due to the scheme. Where the proposed route passes along Highridge Common into the urban context the receptors in this area (Viewpoints 27, 28 and 31) will be substantially affected due to the proximity to the route and exposed landscape with few hedgerows and scattered trees, as a result any change in these views due to the scheme will be substantial.

Views of the proposed route from Dundry (Figure 9 – Viewpoints 28 and 29)

14.5.89. Monarchs Way users and residents at Dundry will experience long distance views of the proposed route. As a result of the topography and mature tree and shrub belts these views will be glimpsed from this distance and any change in these views due to the scheme will be minimal.

Views of the proposed route between Highridge Common and Hengrove (Figure 9 – Viewpoints 31-44)

14.5.90. Road users and residents along this proposed corridor will experience short distance views of the proposed route. As a result of the fairly flat topography in this area, sparse vegetation cover and proximity to the scheme, any change in these views due to the scheme will be moderate in areas where the existing road will be utilised (Viewpoints 32-35 and 45) and substantial change where the route passes through the existing reserved corridor (Viewpoints 36-44).

14.6. Identification and Assessment of Likely Significant Effects

14.6.1. This section of the report will assess the landscape effects and visual impacts by way of describing potential changes to specific landscape features and to the character, landform, landcover and pattern of the local and wider landscape, as well as visual impacts by describing changes in the visual amenity of the available views from the visual receptors, against the sensitivity of those visual receptors.

14.6.2. Due to the importance of lighting impact, the proposed lighting layout drawings are taken into consideration (Volume 3, Appendix 14.2). The proposals have sought to provide 10 and 12 meter high aluminium conical columns. As such, the potential visual impacts on daytime views associated with lighting are considered to be slight adverse. Further information can be found in the Obtrusive Light Survey Report which provides a complete picture of the current conditions on site with regard to ambient night time environmental conditions and current levels of obtrusive light.
14.6.3. The following sets out the significant landscape and visual impact issues to be considered. Potential impacts are assessed for both construction and operational phases of the scheme (refer to table 2.14.4 for Assessment Criteria). A Photomontage Report has been produced by Halcrow, which shows an effective visualisation of the scheme proposals in respect of the existing rural and urban settings. A total of 17 locations were identified and are shown on the Photomontage Location Plan within the report. These have been included as part of assessment of likely significant effects.

14.6.4. To provide a background to the assessment the description of the scheme proposals is as follows (refer to Landscape Strategy produced by Halcrow):

Section 1 – A370 to Railway Line

14.6.5. The first section of the proposals include a new highway and bus only link which then integrates into a 4 lane bus and road highway on embankment linking up with Long Ashton Park & Ride, A370 and Brookgate including a proposed underbridge for cattle access and shared footway/cycleway. Landscape proposals in this section include reinforcing existing vegetation alongside the A370, providing native trees and shrub belts, native hedgerow, small groups of native trees on embankments, highway grass verge, embankments seeded with a species rich and wet grass, drainage basins, part of which is intended to be permanently wet. Drainage attenuation ponds are designed to be part of the landscape, rather than a purely engineering feature, and designed to provide biodiversity enhancement. Vehicle access and hard standings will be provided for maintenance of these features and of the two watercourses crossing the site.

14.6.6. A new underbridge under the railway line will be constructed to take the road and motorised vehicles (refer to Network Rail Drawings, 5115617-ATK-DRG-CV-001100 to 1102 and 5115617-ATK-DRG-CV-002050 to 2054). A new 3m wide unlit shared cycleway and footway runs on the north side of the new road linking to the Ashton Vale Park & Ride, to the Brookgate estate via South Liberty Lane, and to link into the newly opened Festival Way cycle route north of the A370. At the railway, non-motorised users will make use of the existing railway underpass.

14.6.7. The scheme will be lit at the A370 and at the traffic light controlled Brookgate Junctions and within the underbridge. Agricultural fencing will be provided to the highway extents until it meets with Highridge Common with new at-grade field access points (generally combined to access two fields off a single access where possible) will be provided off the SBL (refer to Scheme Layout drawings).

14.6.8. Two new rapid transit stops will be constructed at the start of the bus only section of highway at the Brookgate Junction. This will comprise a simple, clean and modern structure with hard standing, bus canopy, mast and flag and other features as required for its use. A separate Visual Identity Guide has been produced to support this application, providing details of this and other stops on the scheme.

Section 2 – Railway Line to A38

14.6.9. This section of the proposals includes a 4 lane bus and road highway on embankment and in cutting linking up with the A38 with a shared footway/cycleway on the north/east side of the road. The scheme will not be lit along this section other than the A38 junction and the bus stops immediately to the north of the junction. Landscape proposals in this section include providing native woodland belts to reinforce existing woodland, provide essential mitigation for the loss of area within Hanging Hill Wood and to provide informal recreation, native tree and shrub belts to both ends of this section and a small group of native trees on embankment to the A38 approach. Large sections of the highway will be on embankment and smaller sections in cutting. The area south of Hanging Hill Wood will have topsoil stripped from areas of semi-improved grassland and the re use of brash and felled lumber will be used to enhance the biodiversity of the local area.

14.6.10. A new at-grade agricultural crossing is provided just to the south of the roundabout to provide connectivity between Castle Farm and its fields to the east. The Avon Forest path will be diverted across the road, with a central refuge island, to run on the west side through the new woodland planting.
14.6.11. Retaining walls will be provided along the section through Hanging Hill Wood to reduce the land take of the carriageway embankments and minimise the impact on the existing woodland.

14.6.12. Existing Lime Kiln Heritage Assets are to be retained on the A38, these will be located in the middle of the roundabout on raised ground to become a heritage feature.

14.6.13. Two new rapid transit stops will be constructed at the approach of the new roundabout approaching the A38. This will comprise a simple, clean and modern structure with hard standing, bus canopy, mast and flag and other features as required for its use. A separate Visual Identity Guide has been produced to support this application, providing details of this and other stops on the scheme.

Section 3 – A38 to Highridge Common

14.6.14. This section of the proposals includes a new lit and signalised roundabout linking with A38 and provision of a 2 lane highway on embankment and at-grade as it approaches Highridge Common, including a 3m wide tarmac shared footway/cycleway. Landscape proposals in this section include reinforcing existing screening vegetation between Castle Farm and the roundabout, native tree and shrub belts and tree lined native hedgerows. Just before the road enters Highridge Common a ‘Gateway’ is proposed involving the creation of semi-formal arrangement of trees and feature which is yet to be developed in consultation with key stakeholders. Boundaries to agricultural fields will be fenced with stock proof timber post and rail fencing with mesh. New at-grade field accesses will be created.

14.6.15. An area of some 2,5957m² comprising an existing large field and smaller field immediately north of the common will be acquired as essential mitigation providing exchange land for the area of designated common lost to the road. Part of this area will be used to provide a receptor site for species rich turf translocated from the common and all will be managed to bring it to a quality that is similar to the existing common.

Section 4 – Highridge Common to King Georges Road

14.6.16. This section of the proposals includes the provision of a 2 lane highway at grade as it passes through Highridge Common, including a shared footway/cycleway. Landscape proposals in this section include shallow, grassed, linear depressions to aid the drainage of the Common parallel with the road and groups individual native trees. In addition to this a reinforced grass ‘kerb’ is proposed to visually soften the road through the Common. The overall aim of the engineering and landscape design will be to visually integrate the scheme into the common land.

14.6.17. A new junction with Highridge Green will be formed together with revised access to Highridge Cottage and to the residential and business properties forming the eastern boundary of the common.

14.6.18. Lighting will be provided along the SBL where it follows the alignment of Highridge Green Road. Two new rapid transit stops will be provided at the Highridge Road junction, staggered across the junction. This junction will be signalised.

Section 5 – King Georges Road to Hengrove Way

14.6.19. This section of the proposals includes the provision of a 2 lane highway utilising King Georges Road, including a shared footway/cycleway. The road then passes through the reserved corridor where the road splits to reduce the intensity of this on surrounding properties. It then links up with, and utilises Whitchurch Lane where it terminates and connects with Hengrove Way. Landscape proposals in this section have the overarching aim to create a green corridor using locally appropriate species. This includes retaining existing vegetation where possible, individual tree planting, formal arrangements of planting, amenity grassland, hedgerows to reinforce boundaries and drainage basins to form a key landscape feature and enhance biodiversity. Streetscape enhancements include new street furniture.

14.6.20. Five new rapid transit stops will be constructed along this section. This will comprise a simple, clean and modern structure with hard standing, bus canopy, mast and flag and other features as
Potential Effects on Landscape Resources

14.6.21. Landscape effects may result from operations throughout construction phases, including construction plant operations and traffic movements, facility installation and post construction phases. There are three potential landscape resources on which the proposal may cause changes. These are site vegetation and land cover, the landscape character of the area and the existing site use. In addition to the physical changes that the proposals may cause are changes to the visual amenity of the area and on the views from the identified visual receptors.

14.6.22. The proposed South Bristol Link (SBL) will provide a 4.5km transport link between the A370 Long Ashton bypass within North Somerset and Hengrove Park within the Hartcliffe area of south Bristol. This will incorporate new and upgraded highway between the A370, the A38 and the Cater Road roundabout, including a continuous shared cycleway and footway along the route corridor.

14.6.23. The route includes the construction of new junctions with the A370, Brookgate, A38, Highridge Green/Highridge Road, Queens Road and Hareclive Road. New bridges will be constructed to cross Longmoor Brook, Colliter’s Brook and to pass under the Bristol to Taunton Railway Line. The route corridor will incorporate a bus-only link to connect with the Ashton Vale to Temple Meads (AVTM) guided bus route, which will lead into the Long Ashton Park and Ride site. Dedicated bus lanes will be provided between the railway and the new A38 roundabout junction. New bus stops and shelters, and a continuous shared cycleway and footway will be provided along the route corridor. Associated proposals include drainage facilities, landscaping and planting.

14.6.24. The proposed scheme comprises the construction of the South Bristol Link through south Bristol and North Somerset. The key points of the scheme are described above. In addition to the scheme itself, land will be required for the construction of the scheme, for site compounds and for wider drainage and services connections. As such the proposals have the potential to affect the setting of the surrounding landscape character in particular the Greenbelt.

Sensitivity of Landscape Resources

14.6.25. The sensitivity of the landscape is an important consideration in the assessment of the significance of an effect and is based on the capacity of a landscape to accommodate change due to a scheme without harm to its character. Landscapes have variable ability to accommodate different forms of development according to the existing landscape character, the nature of the proposed scheme and the type of change being considered.

14.6.26. The capacity of the landscape to accommodate change is not directly linked to the value of the landscape, however in general terms nationally designated landscapes will have a greater sensitivity than those of a local designation due to the importance of their special character and rarity and therefore limited ability to accommodate change without harm. The UK planning system expresses sensitivity in terms of designations. These designations are as follows:

- International Importance: Very High Sensitivity (i.e. World Heritage Sites)
- National Importance: High Sensitivity (i.e. AONB)
- Regional Importance: Moderate sensitivity (i.e. County Landscape Designation)
- District Importance: Moderate to Low sensitivity (i.e. District and Local Landscape Designations);

Local Importance: Low Sensitivity (i.e. non-designated landscape).

14.6.27. However, a local non-designated landscape may be of greater importance to a local community and thus be highly sensitive to change. Other factors to consider in the classification of sensitivity of landscape resources include:

- The period of exposure to effects
• The degree of exposure to effects
• The function of resource

14.6.28. The capacity of the landscape to accommodate change with regards to such factors as existing land use, the pattern and scale of the landscape, the quality of the landscape character and the scope for mitigation.

14.6.29. The sensitivity of Landscape Resources is classified into three levels low, medium and high and is summarised in table 2.14.2.

**Sensitivity of the Site**

14.6.30. A large part of the site is within a nationally designated Greenbelt and there are several designated landscapes within the wider area (<1km from and within the scheme) including Ancient Woodland, Site of Special Scientific Interest, Conservation Area, Registered Park and Garden, Wildlife Site, Site of Nature Conservation Importance, Sites of Special Scientific Interest, and listed monuments (for Environmental Constraints Plan refer to Figure 2.0 Appendix 14.1, Volume 3). The proposals have the potential to result in direct and indirect physical effects on these areas during construction and operation and should be considered as a contributor to their setting.

14.6.31. The landscape in which the route passes through is a good example of the local landscape character due to the nature of its current use. The site contains some features of high value to the local area including areas of nature conservation importance, ancient woodland, mature trees and hedgerow planting. The proposals will significantly alter the landscape in terms of land use and pattern in the rural setting. It would be possible to help mitigate such effects on the surrounding landscape by providing new hedgerow, tree and woodland planting to help screen out the proposals and integrate into the surrounding landscape.

14.6.32. In respect of development involving existing green infrastructure (Bristol CC Site Allocations & Development Management – see section 14.4) no Important Open Space as designated on the Policies Map is affected by the SBL scheme nor will the development result in the loss of open space which is locally important for recreation, leisure and community use, townscape or visual amenity (Note: the public use of the ‘reserve corridor’ is ancillary to its designation as housing land).

**Scheme specific sensitivity**

**Section 1 – A370 to Railway Line**

14.6.33. Due to the existing condition of the rural landscape in which the route passes through, already containing several notable features of national and local importance including the Greenbelt and adjacent to Ashton Vale Fields Wildlife Site, the scheme would moderately alter the landscape character of the immediate or wider area. In addition this landscape forms the greater part of the ‘borrowed landscape’ setting of Ashton Court. As a result of this, the proposed scheme area can be said to have a high sensitivity with a medium to low ability to accommodate change without harm.

**Section 2 – Railway Line to A38**

14.6.34. Due to the existing condition of the rural landscape in which the route passes through, already containing several notable features of national and local importance, including the Greenbelt, Colliter’s Brook Site of Nature Conservation Importance and South Bank Meadow Yanley Wildlife Sites, combined with detracting areas of tipping the scheme would moderately alter the landscape character of the immediate or wider area. As a result of this, the proposed scheme area can be said to have a high sensitivity with a low ability to accommodate change without harm.
Section 3 – A38 to Highridge Common

14.6.35. Due to the existing condition of the rural landscape in which the route passes through, already containing several notable features of national and local importance, including the Greenbelt the scheme would moderately alter the landscape character of the immediate or wider area and more significantly as it crosses Hanging Hill Wood and Colliter’s Brook. As a result of this, the proposed scheme area can be said to have a **high** sensitivity with a **medium** ability to accommodate change without harm.

Section 4 – Highridge Common to King Georges Road

14.6.36. Due to the existing condition of Highridge Common being an area of local ecological importance and providing green space for informal recreation, the scheme would moderately alter the landscape character of the immediate area. As a result of this, the proposed scheme area can be said to have a **high** sensitivity with a **medium to low** ability to accommodate change without harm.

Section 5 – King Georges Road to Hengrove Way

14.6.37. Due to the existing condition of the urban landscape in which the route passes through, containing no notable features of national and local importance with some existing roads being utilised, it would not noticeably alter the landscape but in some areas enhance the setting through providing landscape improvements. As a result of this, the proposed scheme area can be said to have a **low** sensitivity with **medium** ability to accommodate change without harm in the urban setting.

### 14.7. Mitigation Measures

14.7.1. The Landscape Institute Guidelines for Landscape and Visual Impact Assessment states: “The purpose of mitigation is to avoid, reduce and where possible remedy or offset any significant negative (adverse) effects on the environment arising from the proposed development”

14.7.2. Mitigation measures fall into two categories:

1. Primary measures that intrinsically comprise part of the development design process; and
2. Secondary measures designed to specifically address the remaining (residual) negative (adverse) impacts of the final development proposals.

14.7.3. The design proposals have considered primary mitigation through layout and location of proposals and infrastructure and access. There will be further mitigation through the detailed design of the route.

14.7.4. Secondary mitigation measures will specifically offset residual negative impacts of the final development proposals. These may include off-site mitigation such as habitat restoration or planting, however it is important for these to be effective to demonstrate that long-term control and management is secured.

### Primary and Secondary Mitigation

14.7.5. The planning of the proposed South Bristol Link Scheme has sought to achieve two landscape and visual objectives, first to minimise the visual prominence of the proposals and second to enhance the natural environment.

### Construction Phase Mitigation

14.7.6. Generally there are a number of mitigation measures common to the South Bristol Link construction. These can be considered as:

- Minimise construction access routes, working areas and number and size of site compounds (refer to Red Line Boundary drawings, Volume 3, Appendix 1.2);
• Ensure Site access routes are carefully selected to minimise adverse visual and landscape impacts on communities, residential receptors and on existing roadside landscape. In some instances this will have to balance landscape impacts with length of route i.e. sustainability considerations;
• Ensure construction sites are kept clean and tidy and consider a requirement for CEEQUAL;
• Ensure landscape and visual impacts are considered in work method statements;
• Minimise loss of existing hedgerows and trees through local minor alignment changes and use of sequential mitigation approach to include standard width working area, narrowed working area.
• Ensure appropriate soil management and, as far as possible, minimise the need to import or take materials off site. As far a possible cut and fill should balance;
• Avoid night time working in remote locations where visual impact of static and moving lights is enhanced;
• Ensure mitigation planting uses local provenance nursery stock and seed with mixes and species adjusted to local vegetation types;
• Ensure temporary stopping up or diversion of PRoWs is minimised in both extent and duration and is well advertised;
• Where possible hedgerows and grassland sward to be translocated to suitable receptor sites;
• As identified by the ecological assessment, where translocation is not a viable option, soils from species rich grassland, hedgerows and woodland to be carefully stripped, stored and placed separately from more general soils to provide appropriate seedbank material;
• All hedge and tree arisings not suitable for use for timber to be chipped and reused as mulch for new planting;
• Embankment slopes to be appropriate to maintenance and to visually integrate into the landscape – sharp, engineered slopes to be avoided. Slopes to be seeded with mix appropriate for maximising biodiversity potential; and
• Early construction of Rail Bridge to facilitate surface construction of road and reduce site traffic movements on public highway.

Site Specific Mitigation

Primary Mitigation

14.7.7. Mitigation strategies for the scheme have been separated into five areas which exhibit different landscape characters.

14.7.8. Section 1 - A370 to the Railway Line, mitigation as follows:
• Ensure the protection of existing hedgerows and mature trees where route crosses through agricultural land as essential landscape mitigation and provide, where possible, tree, shrub and hedgerow reinstatement and in sensitive locations consider translocation.
• Native tree and shrub belts, individual trees and proposed hedgerow will take place along the route in this section to help integrate into the open landscape and retain existing hedgerow and agricultural field pattern, especially as the route is on embankment in this area, so to reduce the impact of the proposed scheme on the surrounding landscape and users of A370.
• Potential for planting on the railway embankments to be in the form of a spray applied seed mix to include indigenous small shrubs, flowers and grass which would provide good ground cover and would also offer improved ‘screening’ results in this section.
• Bus route linking up with Long Ashton Park & Ride to tuck in as close to field boundary as possible to screen bus lane from Brookgate Industrial Estate and residential properties.
• In order to provide access for dairy cattle an under bridge is proposed in place of the original option of an over bridge to reduce the visual impact.
• Proposed landscape treatment to be provided to reduce visual appearance of the agricultural under bridge.
• Species rich grass proposed to enhance habitat creation.
• The integration of wet grassland and attenuation to provide biodiversity functions, landscape integration and visual interest.
• Compensation Flood Storage Area to be returned to agricultural use.
• Informal recreation areas integrated into the scheme at Brook Gate Junction.
• Shared footway/cycleway to be provided along the southbound of the route to promote sustainably transport and enhance accessibility. Footpath/cycleway to be unlit and surfaced with tarmac which will contain the pathway to a 3m width and discourage spread that would impact on the immediate landscape.
• Bus stops to be simple, clean, modern structures that will have minimal impact.
• Existing Public Right of Ways and Community Forest Path to be stopped up in sections where they cross the proposed route, which will result in the creation of new diverted routes to minimise the impact on landscape resources.
• Ensuring landforms do not appear too regular and engineered, thus allowing integration into existing landform.

14.7.9. Section 2 - Railway Line to A38, mitigation as follows:
• Best and Final option of road alignment originally ran along east of Colliter’s Brook and involved loss of woodland which would had adverse visual impact, the new alignments passes along the west of Colliter’s Brook which is more easily mitigated against with less impact.
• Ensure the protection of existing hedgerows and mature trees as essential landscape mitigation and provide, where possible, tree and shrub reinstatement and in sensitive locations consider translocation.
• Ensure Hanging Hill Ancient Woodland with its Tree Preservation Order is protected during construction.
• Where the route crosses into the woodland stream setting proposed woodland and tree and shrub belts will be incorporated to retain and enhance the setting whilst providing a visual screen to the individual properties and Public Right of Way users.
• Options discussed for Rail Bridge, now retaining existing bridge for non motorised access and a new bridge constructed with materials and finishes to reflect existing bridge such as weathered steel to replicate historical context. Refer to Network Rail Drawings and Document for under bridge details.
• Proposed landscape treatment to be provided to reduce visual appearance of the bridges.
• Ensure the new development does not impact on the existing adjacent trees and allow for protection of Ancient Woodland and protected trees.
• Species rich grass proposed to enhance habitat creation.
• Translocated soil stripped from Hanging Hill Wood area and laid to areas of proposed woodland. Careful handling of soil strip and replacement to route construction.
• Translocated soil from semi-improved neutral grassland areas to be utilised along the embankment through Hanging Hill Wood.
• Shared footway/cycleway to be provided along the route to promote sustainable transport and enhance accessibility. Footpath/cycleway to be unlit and surfaced with tarmac which will contain the pathway to a 3m width and discourage spread that would impact on the immediate landscape.
• Bus stops to be simple, clean, modern structures that will have minimal impact.
• One section of Community Forest Path to be stopped up along the southbound where it crosses the proposed route, which will result in the creation of a new diverted route to run along parallel to the route.
• Design accommodates Community Forest Path, so new woodland area allows for informal recreation.
• Ensuring landforms do not appear too regular and engineered, thus allowing integration into existing landform.
• Weighbridge land to be taken out and returned to woodland.
14.7.10.  Section 3 - A38 to Highridge Common, mitigation as follows:

- Roundabout moved away from A38 following application scheme to reduce visual impact on Castle Farm.
- Ensure the protection of existing hedgerows and mature trees as essential landscape mitigation and provide, where possible, tree and shrub reinstatement and in sensitive locations consider translocation.
- Native tree and shrub belts, individual trees and proposed hedgerow will take place along the route in this section to help integrate into the open landscape and retain existing hedgerow and agricultural field pattern to reduce the impact of the proposed scheme on the surrounding landscape.
- The integration of wet grassland and attenuation pond to provide biodiversity functions, landscape integration and visual interest.
- Existing Lime Kiln heritage assets to be retained on the A38, these will be located in the middle of the proposed roundabout on raised ground to become heritage feature. In addition to this provision of information board by cycle path on north side of roundabout where Kilns can be seen.
- Shared footway/cycleway to be provided along the route to promote sustainable transport and enhance accessibility. Footpath/cycleway to be unlit and surfaced with tarmac which will contain the pathway to a 3m width and discourage spread that would impact on the immediate landscape.
- One section of Public Right of Way to be stopped up where it crosses the proposed route, which will result in the creation of a new diverted route to cross over and run along parallel to the northbound of the route.
- Ensuring landforms do not appear too regular and engineered, thus allowing integration into existing landform.
- Allow for agricultural treatment in this area to minimise loss of land.
- Exchange land provided north west of Highridge Common where turfs from the common will be translocated to the species poor area of the field.

14.7.11.  Section 4 - Highridge Common to King Georges Road, mitigation as follows:

- As a result of the route cutting through the northern section of Highridge Common this will result in significant landscape effects and visual impacts due to the local importance of this area as it is considered a valuable area of wildflower rich meadow. The Common has not been ploughed up, reseeded or undergone herbicide treatment in the past, which means that it has retained (or has the potential for) a rich array of wildflowers. There are also numerous residential properties that directly overlook the common therefore visual impact will be significant in this area. As a result of this, mitigation will be in the form of providing exchange land for common land directly west of Highridge Common.
- Ensure the protection of existing hedgerows and mature trees as essential landscape mitigation and in sensitive locations consider translocation.
- Shared footway/cycleway to be provided along the route to promote sustainable transport and enhance accessibility. Footpath/cycleway to be unlit and surfaced with tarmac which will contain the pathway to a 3m width and discourage spread that would impact on the immediate landscape.
- Bus stops to be simple, clean, modern structures that will have minimal impact.

14.7.12.  Section 5 – King Georges Road to Hengrove Way, mitigation as follows:

- Improvements to public transport through providing 6 new bus stops.
- Visual improvements through providing new street furniture; however ensure it visually ties in with surrounding landscape.
- Individual trees, sections of hedgerow and ornamental planting will be integrated along this section and retaining vegetation where possible to minimise landscape and visual impact especially concentrated along the reserved corridor to help integrate into the townscape.
character, provide an enhancement to the existing visual amenity setting and to offset the impact of the proposed scheme on the surrounding landscape.

- Since best and final bid an enhanced scheme has been developed along the reserved corridor whereby greener parkland area has been proposed and road split to reduce the traffic intensity.
- Species rich grass proposed to enhance habitat creation.
- The integration of attenuation ponds to provide biodiversity functions, landscape integration and visual interest.
- Existing footpaths along the green corridor will be retained and crossing points provided to maintain links through residential areas and community centre.
- Shared footway/cycleway to be provided along the southbound of the route to promote sustainable transport and enhance accessibility. Footpath/cycleway to be unlit and surfaced with tarmac which will contain the pathway to a 3m width and discourage spread that would impact on the immediate landscape.
- Bus stops to be simple, clean, modern structures that will have minimal impact.

Secondary Mitigation

14.7.13. Environmental enhancements for the purpose of improving habitats and enhance the surrounding environment within the scheme, involving close liaison with Ecologists to ensure landscape and ecology are aligned.

14.7.14. Preparation and implementation of appropriate aftercare landscape management and maintenance measures to ensure primary mitigation achieves its full potential.

General Operational Impact Mitigation

14.7.15. For all sections of the route access should be carefully controlled during operational phases to ensure as much vegetation as possible is protected. In addition to this, there should appropriate timing of operational activity and hours to avoid affecting day to day activities within the area.

14.7.16. For proposed planting, a positive landscape management plan should be implemented to ensure retention. In addition to this, all planting should be maintained and managed for long-term screening of the scheme with visual intrusion.

14.7.17. The extent and operational use of lighting should be minimised. Motion sensitive lighting should be designed not to be triggered by single movements or wildlife movements. Lighting generally should be mounted on structures, to avoid daylight visual impact of posts.

14.7.18. Sites should be kept clean, well maintained and ground level clutter minimised and/or screened.

Potential Effects on Landscape Resources with Mitigation

Table 14.6: Summary of potential effects on landscape resources: Section 1 – A370 to Railway Line

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Wider Landscape Character</td>
<td>Medium</td>
<td>Substantial Adverse</td>
<td>Moderate Adverse</td>
</tr>
<tr>
<td></td>
<td>Due to the Greenbelt designation and Ashton Vale Fields Wildlife Site being of local importance. Ashton Court &amp; borrowed landscape of Ashton Court,</td>
<td>Intensification of activity related to construction within the sensitive landscape setting and nationally designated</td>
<td>The scheme will permanently alter the landscape character; however mitigation proposals maintain and enhance existing screening</td>
</tr>
</tbody>
</table>
a 17C Grade I listed Mansion with some 850 acres of woodland, pasture and deer park lies to the north west of the scheme. The estate relies for its wider setting on the ‘borrowed landscape’ formed by the agricultural landscape between the park and the mainline railway in particular and in general to the ridgeline of Dundry Hill which are highly sensitive areas. Impacts on setting of Ashton Court Estate, Long Ashton Conservation Area, All Saints Church, WS and Greenbelt. whilst blending the scheme into the wider landscape character. The mitigation proposals have been developed in consultation with English Heritage and County heritage officers to minimise and mitigate impact on the Ashton Court borrowed landscape.

<table>
<thead>
<tr>
<th>Site vegetation/land cover</th>
<th>Medium</th>
<th>Moderate adverse</th>
<th>Slight Adverse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing vegetation within this section is characterised by agricultural field patterns defined by hedgerows and scattered trees.</td>
<td>Proposed vegetation clearance to hedgerows and trees in selective areas, these are to be carefully managed to prevent loss of important habitats. On-site physical damage to existing vegetation. Damage to soils. Loss of agricultural soils. Construction work for the road severs agricultural parcel at A370 junction impacts on agricultural land with a 4 lane highway width of approximately 17m including cycleway/footway. Impacts of construction compound set up and operation. Loss of existing grassland.</td>
<td>Proposed new and replacement planting of native, locally appropriate tree and shrub belts, individual trees with grass for highway verge, species rich and wet grassland and attenuation ponds which will improve the biodiversity and contribution to local character. Potential for planting on the railway embankments to be in the form of a spray applied seed mix to include indigenous small shrubs, flowers and grass which would provide good ground cover. The agricultural under bridge will provide mitigation where the SBL severs agricultural parcel at A370.</td>
<td></td>
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<table>
<thead>
<tr>
<th>Existing Site Land Use</th>
<th>Medium</th>
<th>Moderate Adverse</th>
<th>Moderate to Slight Adverse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current land use is primarily agricultural and informal recreation with Community Forest Path being a significant route.</td>
<td>Intensification of activity related to construction. Existing footpaths and Community Forest Path will be diverted in some areas.</td>
<td>The agricultural and recreational land use will be permanently altered post construction with an overall reduction in agricultural land. New attenuation ponds, woodland and roadside planting will balance agricultural use with provision of essential mitigation and informal recreation areas.</td>
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<td>-------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Wider Landscape Character</td>
<td>High</td>
<td>Intensification of activity related to construction within the sensitive landscape setting and nationally designated areas. Impacts on setting of Greenbelt, local WS, SNCI and Castle Farm.</td>
<td>The scheme will permanently alter the landscape character; however mitigation proposals maintain and enhance existing screening whilst blending the scheme into the wider landscape character. Horizontal and vertical realignment undertaken following public consultation will significantly mitigate this</td>
</tr>
<tr>
<td>Site vegetation/land cover</td>
<td>Medium</td>
<td>Proposed vegetation clearance to hedgerows, trees and woodland in selective areas, these are to be carefully managed to prevent loss of important habitats. On-site physical damage to existing vegetation. Damage to soils. Loss of agricultural soils. Loss of vegetation and landcover through Hanging Hill Wood and Colliter’s Brook, also impacts on agricultural land with a 4 lane carriageway width of approximately 17m including cycleway/footway. Impacts of construction compound set up and operation. Potential damage to landscape at watercourse crossings. Loss of existing grassland.</td>
<td>New and replacement planting of native, locally appropriate tree and shrub belts, individual trees, woodland with grass for highway verge species rich and wet grassland and attenuation ponds improving the biodiversity and contribution to local character. Essential mitigation land for replacement of woodland lot in Hanging Hill wood and as receptor for woodland soils. Use of retaining walls will minimise direct landscape loss whilst visual impact is contained by landform.</td>
</tr>
</tbody>
</table>
**Existing Site Land Use**

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<tr>
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</thead>
<tbody>
<tr>
<td>Wider Landscape Character</td>
<td>High</td>
<td>Intensification of activity related to construction within the sensitive landscape setting and nationally designated area. Impacts on setting of Greenbelt, Lime Kilns and Castle Farm.</td>
<td>Slight Adverse</td>
</tr>
<tr>
<td>Site vegetation/land cover</td>
<td>Medium</td>
<td>Proposed vegetation clearance to hedgerows and trees in selective areas, these are to be carefully managed to prevent loss of important habitats. On-site physical damage to existing vegetation. Damage to soils. Loss of agricultural soils. Impacts on agricultural land with a 2 lane highway width of approximately 11m including cycleway/footway. Impacts of construction compound set up and operation. Loss of existing grassland.</td>
<td>Slight Adverse</td>
</tr>
<tr>
<td>Existing Site Land Use</td>
<td>Medium</td>
<td>Intensification of activity related to construction. A</td>
<td>Slight Adverse</td>
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</table>
informal recreation with Community Forest Path being a significant route.

section of existing footpath will be diverted.

be permanently altered post construction. However the proposed attenuation pond will provide an informal recreation area.

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<tbody>
<tr>
<td>Wider Landscape Character</td>
<td>High</td>
<td>Moderate Adverse</td>
<td>Slight Adverse</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intensification of activity related to construction within the sensitive landscape setting and nationally designated areas. Impacts on setting of Greenbelt and SNCI.</td>
<td>The scheme will permanently alter the landscape character; however the route will pass through a relatively contained area in this section with the proposal to provide exchange common land. Design changes since public consultation move the alignment more closely to overlay that of Highridge Green.</td>
</tr>
</tbody>
</table>

| Site vegetation/land cover | High | Moderate adverse | Slight Adverse |
|                           |    | Proposed vegetation clearance to hedgerows and trees in selective areas, these are to be carefully managed to prevent loss of important habitats. Loss of green infrastructure in the suburban context. On-site physical damage to existing vegetation. Loss of existing trees, shrubs and grassland with a 2 lane highway width of approximately 13m including cycleway/footway. | Proposed green drainage ditches. Translocation of grassland to the exchange land area and subsequent management for grassland quality, matching the existing common. |

| Existing Site Land Use | High | Significant Adverse | Slight Adverse |
|                       |    | Intensification of activity related to construction. Loss of common land so provision of exchange land for common land. | The common land will be permanently altered post construction; however an appropriate location and quality of landscape for exchange land is proposed which exceeds the quantum of common land lost. |

Table 14.9: Summary of potential effects on landscape resources: Section 4 – Highridge Common to King Georges Road
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Wider Landscape Character</td>
<td>Low</td>
<td>Slight Adverse</td>
<td>No Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intensification of activity related to construction within the urban setting.</td>
<td></td>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Site vegetation/land cover</td>
<td>Medium</td>
<td>Moderate adverse</td>
<td>Moderate Beneficial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proposed vegetation clearance to hedgerows and trees in selective areas, these are to be carefully managed to prevent loss of important habitats.</td>
<td>The vegetation/land cover will be permanently altered post construction; however proposed new and replacement planting of native, locally appropriate tree and shrub species with amenity and species rich grassland will provide biodiversity enhancements and contribute to local character. Proposals include creating a parkland area with replacement of existing trees along the reserved corridor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damage to soils. Loss of existing grassland with a 2 lane highway width of approximately 13m including cycleway/footway</td>
<td></td>
</tr>
<tr>
<td>Existing Site Land Use</td>
<td>Medium</td>
<td>Slight/Moderate Adverse</td>
<td>Slight Adverse/Slight beneficial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intensification of activity related to construction. Existing footpaths directly affected by the scheme will be stopped up and permanently diverted in some areas.</td>
<td>Proposed bus stops, street furniture and landscape enhancements will potentially offset this and in some areas provide improvements.</td>
</tr>
</tbody>
</table>
Summary of Landscape Effects

Construction Stage Effects

14.7.19. During construction there will be physical landscape impacts of loss of hedgerows and trees, also changes in amenity through diversion of Public Rights of Way, including beneficial impacts of new links. The 4 lane highway width through sections 1 and 2 until it meets the A38, is approximately 5-6m wider than through section 3, 4 and 5 where it reduces to a 2 lane carriageway, therefore the impact on the landscape will be more significant through these areas, especially where it crosses Colliter’s Brook through Hanging Hill Wood. Setting of historic assets and designations such as Ashton Court Estate, Ancient Woodland, Listed Buildings and Lime Kilns, in addition national and local landscape designations such as Greenbelt, WS’s, SNCI and Long Ashton Conservation Area will be adversely affected during construction. Residents and Public Right of Way users may experience temporary adverse landscape effects due to the intensification of activity associated with the construction. This will be most apparent to residents and Public Right of Way users within close proximity of the working area and users of A370, A38 and road system within the areas of Highridge, Bishopsworth and Withywood.

14.7.20. The significance of the effects will be further dependent on the type of construction activity taking place, such as operations requiring large plant machinery and movement. It is anticipated that for brief periods the magnitude of the effects may increase, and similarly decrease during finishes of works which would be undertaken by a limited number of operatives without substantial heavy plant machinery requirements.

14.7.21. This is anticipated to result in an overall substantial adverse effect on the landscape resources in consideration to the rural landscape setting and sensitivity of the designated areas and slight adverse effect on landscape resources in the urban context. The anticipated result on land cover and vegetation will have a moderate adverse effect within the rural setting and slight adverse effect on the urban settings during construction.

Post Construction Stage Effects

14.7.22. The scheme area has a high sensitivity and medium ability to accommodate change within the rural landscape due to the national and local important features within this area and medium sensitivity and medium ability to accommodate change within the urban landscape setting due to its enclosed nature. The scheme proposals have been sensitively developed to blend into the local landscape and offset any adverse impacts and as a result post construction the scheme will not notably detract from the wider landscape character and with appropriate mitigation measures land cover and land use will be minimally affected and in some cases improved. Landscape enhancements have also been proposed to create informal recreational areas and the new woodland planting, in addition to this a new parkland area is proposed along the reserved corridor.

14.7.23. This is anticipated to result in an overall potential effect of slight adverse to slight beneficial where there is landscape enhancement post construction on the landscape resources of the surrounding area in consideration to the sensitivity of the wider landscape character.

Potential Impacts on Visual Amenity

Identification of Visual Receptors

14.7.24. Visual impacts result from operations throughout construction phases, including construction plant operations and traffic movements, facility installation and at post construction phases.

14.7.25. There are likely to be potential visual impacts on receptors within direct proximity of the site, including neighbouring properties and residential properties in the urban areas of Bishopsworth, Highridge and Withywood. More distant impacts on residential properties in Dundry, Highridge, and individual properties in the area of open countryside, with few visual impacts on residents at Long Ashton, also including motorists using the A370 and A38 and Public Right of Way users.
14.7.26. Due to the sensitivity of Ashton Court Estate a Landscape Strategy and Photomontage Report has been produced by Halcrow.

14.7.27. The prominence of the scheme proposals will be dependent upon a combination of land use and topographic factors relative to the position of the visual receptor. Visual receptors have been identified for the entire Zone of Theoretical Visibility (ZTV - see section 12.4.4), however it is noted below where they do not have direct views of the proposed scheme area. The potential visual receptors identified in the study from the ZTV (see Volume 3, Appendix 14.1. Figures 4.0 – 8.0) and confirmed by a visual check on site were (for representative viewpoints refer to Figure 3.0):

Views from Ashton Court, including:

14.7.28. Users of Ashton Court Estate - Long and medium distance views which are partially obstructed by mature trees and hedgerows and intervening undulating topography (Viewpoints 1 and 3).

14.7.29. Ashton Court Estate – Long distance views which are partially obstructed by intervening vegetation cover (Viewpoint 2).

Views from Long Ashton, including:

14.7.30. Users of Theynes Croft in Long Ashton – medium distance views are limited in this area due to intervening vegetation cover (Viewpoint 4).

14.7.31. Public Right of Way users at All Saints Churchyard - short distance views area limited as a result of the undulating topography and intervening vegetation cover (Viewpoints 5 and 6).

14.7.32. Long Ashton Park and Ride users - short distance views which are partially screened by existing boundary vegetation (Viewpoint 7).

Views between A370 and Railway Line, including:

14.7.33. Public Right of Way and Community Forest Path users, rail users, housing in Ashton Vale and Brookgate Industrial Estate between the A370 and the Railway Line - short and medium distance views are quite prominent as a result of the relatively flat topography and minimal screening (Viewpoints 8-11).

Views between the Railway Line and A38, including:

14.7.34. Public Right of Way and Community Forest Path users – short and medium distance views are partially screened in these areas as a result of dense woodland and undulating topography with exception to where footpath crosses proposed route (Viewpoints 12-19).

14.7.35. Residents of Castle Farm – short distance views are quite prominent due to limited vegetation screening and proximity to the route (Viewpoint 21).

14.7.36. A38 users - short distance views are quite prominent due to relatively flat topography, limited vegetation cover and proximity to the route (Viewpoint 20).

Views between the A38 and Highridge Common, including:

14.7.37. Public Right of Way and Community Forest Path users – short and medium distance views are quite prominent as a result of the relatively flat topography and limited vegetation cover (Viewpoints 22-24). Long distance view is offered from Community Forest Path which is glimpsed due to the distance from the route and intervening hedge and tree belts (Viewpoint 25).

14.7.38. Residents at Highridge Common – short and medium distance views will experience significant visual intrusion as a result of the open setting and proximity to the route (Viewpoints 26, 27 and 30).
Views from Dundry, including:

14.7.39. Monarchs Way users – long distance views of the route are glimpsed due to the proximity to the site; however as a result of the rising topography in this area views will be partially visible (Viewpoint 28 and 29).

14.7.40. Residents and Monarchs Way users on Hill Road - long distance views of the route is glimpsed due to the proximity to the site; however as a result of the rising topography in this area views will be partially visible (Viewpoint 29).

Views between Highridge Common and Bishopsworth, including:

14.7.41. Road users and residents on Highridge Road, Elmtree Drive, King Georges Road, Queens Road, Heggard Close, Gatehouse Way, Gatehouse Close, Hareclive Road and Whitland Road – short distance views will experience significant intrusion as a result of the proximity to the route and limited vegetation cover especially in areas where the route passes through recreational land (Viewpoints 31-36, 39, 40, 42 and 43).

14.7.42. Public footpath users – short distance views will experience significant intrusion as a result of the proximity to the route and limited vegetation cover especially in areas where the route passes through recreational land (Viewpoints 37, 38, 41 and 44).

Sensitivity of Visual Receptors

14.7.43. The sensitivity of visual receptors is an important consideration in the assessment of the significance of an impact. This sensitivity is based on the type of receptor, as well as the special nature or the rarity of the view. Residential properties are considered to have a high sensitivity due to their nature whilst vehicle travellers are considered to be of low sensitivity due to the degree and period of exposure to a given view.

14.7.44. Additional factors to consider in the classification of sensitivity of visual receptors include:

- The period of exposure to view;
- The degree of exposure to view;
- The function of receptor; and
- The nature of the view and the scope for mitigation.
## Impacts on Visual Amenity

**Table 14.11: Summary of impacts on visual amenity**

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<thead>
<tr>
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<tbody>
<tr>
<td><strong>Visual receptors from Ashton Court</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Users of Ashton Court Estate Park</td>
<td>Medium</td>
<td>Slight Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes)</td>
<td>Slight Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes)</td>
</tr>
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<td></td>
<td></td>
<td>The scheme will have a permanent adverse impact on the visual amenity for users of Ashton Court as a result of the route traversing through rural/urban fringe, ‘borrowed’ landscape. As the highway approaches the railway it becomes a two lane plus 2 bus lane highway at the approach to the railway where it becomes approximately 13m wide on embankment until it meets the A38, compared to 7m wide 2 lane highway at the start of the scheme and south of A38. Proposed bus stop and lighting structures will be a prominent feature. However views from Ashton Court are glimpsed views through gaps in the existing vegetation and these will reduce over time as proposed tree and shrub belts, individual trees and hedgerows mature to provide year round cover, as shown in the Photomontage Report.</td>
</tr>
<tr>
<td>Ashton Court Estate</td>
<td>Medium</td>
<td>Moderate Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes)</td>
<td>Slight Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The scheme will have a permanent adverse impact on the visual amenity for Ashton Court Estate as a result of the route traversing through rural/urban fringe landscape and with a two lane plus 2 bus lane highway at the approach to the railway where it becomes approximately 13m wide on embankment until it meets the A38, compared to 7m wide 2 lane highway at the start of the scheme and south of A38. Proposed bus stop and lighting structures, will be a prominent feature. However views through gaps in vegetation will reduce over time as proposed tree and shrub belts, individual trees and hedgerows mature to provide year round cover, as shown in the Photomontage Report. The obtrusive lighting report shows that during night time, whilst there will be a slight increase in obtrusive lighting along the new highway this will be mitigated by being of limited extent, linked to existing lighting of the A370, P+R, sports pitches and industrial estate and set against the wider light spillage from Bristol.</td>
</tr>
</tbody>
</table>
Landscape proposals will aim to minimise the impact on borrowed landscape by reflecting its character and setting.

<table>
<thead>
<tr>
<th>Visual receptors from Long Ashton</th>
<th>Road users on Theynes Croft</th>
<th>Low</th>
<th>Moderate Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes).</th>
<th>Slight Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents on Theynes Croft and within Long Ashton</td>
<td>High</td>
<td>Moderate Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes).</td>
<td>Slight Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes).</td>
<td></td>
</tr>
<tr>
<td>Public Right of Way users at All Saints Churchyard</td>
<td>High</td>
<td>Slight Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes).</td>
<td>Slight Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes).</td>
<td></td>
</tr>
<tr>
<td>Users of Long Ashton Park &amp; Ride</td>
<td>Low</td>
<td>Moderate Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptor.</td>
<td>Slight Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptor.</td>
<td></td>
</tr>
</tbody>
</table>
on embankment until it meets the A38, compared to 7m wide 2 lane highway at the start of the scheme and south of A38. Proposed bus stop and lighting structures will be a prominent feature; however views through gaps in vegetation will reduce over time as proposed tree and shrub belts, individual trees and hedgerows mature to provide year round cover.

<table>
<thead>
<tr>
<th>Visual receptors between A370 and Railway Line</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Right of Way and Community Forest Path users</td>
<td>Medium</td>
<td>Substantial Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptors with limited vegetation cover to provide screening.</td>
</tr>
<tr>
<td>Residents at Ashton Vale</td>
<td>High</td>
<td>Substantial Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptors with limited vegetation cover to provide screening.</td>
</tr>
<tr>
<td>Brookgate Industrial Estate</td>
<td>Low</td>
<td>Substantial Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes)</td>
</tr>
</tbody>
</table>

- **Moderate Adverse**
  - The scheme will have a permanent adverse impact on the visual amenity of the PRoW users as a result of there being a two lane plus 2 bus lane highway at the approach to the railway where it becomes approximately 13m wide on embankment until it meets the A38, compared to 7m wide 2 lane highway at the start of the scheme and south of A38. Proposed stop and lighting structures will be a prominent feature in this section and in close proximity to the receptors; however proposed tree and shrub belts, hedgerows and individual trees will mature to provide significant year round cover. Potential for seed mix to be adapted on the railway embankment to include a higher percentage of small shrubs to provide for improved ‘screening’ results.
  - Rail Bridge has been designed to reflect the use of appropriate modern materials whilst respecting the built form and materials of the existing underpass.

- **Moderate Adverse**
  - The scheme will have a permanent adverse impact on the visual amenity of the residents as a result of there being a two lane plus 2 bus lane highway at the approach to the railway where it becomes approximately 13m wide on embankment until it meets the A38, compared to 7m wide 2 lane highway at the start of the scheme and south of A38. Proposed lighting structures will be prominent feature in this section and in close proximity to the receptors; however proposed tree and shrub belts, hedgerows and individual trees will mature to provide significant year round cover. Potential for seed mix to be adapted on the railway embankment to include a higher percentage of small shrubs to provide for improved ‘screening’ results.

- **Moderate Adverse**
  - The scheme will have a permanent adverse impact on the visual amenity of the Industrial Estate through the highway having a two lane plus 2 bus lane highway...
being in close proximity to receptors with limited vegetation cover to provide screening.

at the approach to the railway where it becomes approximately 13m wide on embankment until it meets the A38, compared to 7m wide 2 lane highway at the start of the scheme and south of A38. Proposed bus stop and lighting structures will be prominent feature in this section and in close proximity to the receptors; however proposed hedgerows and individual trees will mature to provide significant year round cover. Potential for seed mix to be adapted on the railway embankment to include a higher percentage of small shrubs to provide for improved ‘screening’ results.

| Rail users | Low | Substantial Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptors with limited vegetation cover to provide screening. | Moderate Adverse The scheme will have a permanent adverse impact on the visual amenity of rail users as a result of there being a two lane plus 2 bus lane highway at the approach to the railway where it becomes approximately 13m wide on embankment until it meets the A38, compared to 7m wide 2 lane highway at the start of the scheme and south of A38. Proposed bus stop and lighting structures will be a prominent feature and in close proximity to the receptors; however proposed hedgerows and individual trees will mature to provide significant year round cover. Potential for seed mix to be adapted on the railway embankment to include a higher percentage of small shrubs to provide for improved ‘screening’ results. |
| Visual receptors between the Railway Line and A38 | | |
| Users of Public Right of Way and Community Forest Path | High | Moderate Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptors. | Slight Adverse The scheme will have a permanent adverse impact on the visual amenity of PRoW users in this section being in close proximity to the receptors combined with it being approximately 13m wide 2 lane with 2 bus lane highway; however being located along the stream corridor and partially screened by existing and proposed woodland as well as proposed tree and shrub belts, this will mature to provide significant year round cover. Visual impact of retaining structures will be mitigated by increased retention of existing vegetation and the enclosed, steep valley. |
| Residents of Castle Farm | High | Moderate Adverse Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptor. | Slight Adverse The scheme will have a permanent adverse impact on the visual amenity of Castle farm residents as a result of being in close proximity to the scheme combined with it being approximately 13m wide 2 lane with 2 bus lane highway with proposed bus stops, the new roundabout and lighting structures, being the most |
prominent features; however the proposed roundabout is now located south of the A38 and east of the farm buildings, reducing visual impacts on these residents combined with existing woodland and proposed tree and shrub belts, which will mature to provide significant year round cover. Retention of the lime kilns will provide a visually interesting feature within the roundabout and potentially important visual marker on the two routes.

**Users of A38**

| Medium | Moderate Adverse | Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptor with limited vegetation cover to provide screening. | Slight Adverse | The scheme will have a permanent adverse impact on the visual amenity of A38 users as a result of being in close proximity to the scheme combined with it being approximately 13m wide 2 lane with 2 bus lane highway with proposed bus stop and lighting structures, of which being the most prominent feature; however visual impacts will be reduced by providing tree and shrub belts combined with existing vegetation cover, which will mature to provide significant year round cover. Retention of the lime kilns will provide a visually interesting feature within the roundabout and potentially important visual marker on the two routes. |

**Visual receptors between A38 and Highridge Common**

| Public Right of Way and Community Forest Path users | Medium | Moderate Adverse | Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptors. | Slight Adverse | The scheme will have a permanent adverse impact on the visual amenity of PRoW users as a result of being in close proximity to the scheme and the open nature of the landscape setting combined with proposed lighting structures, of which being the most prominent feature; however visual impacts will be reduced as a result of the route being in cutting through this section combined with providing tree and shrub belts, individual trees and hedgerows, which will mature to provide significant year round cover. |

| Community Forest Path users | Medium | Slight Adverse | Due to construction activity and larger construction vehicles and plant (i.e. cranes). | No Change | Due to the distance from the route, existing vegetation cover and proposed tree and shrub belts, individual trees and hedgerows, which will mature to provide significant year round cover, as such the visual impact will potentially be removed. |

| Residents at Highridge Common | High | Substantial Adverse | Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptors | Moderate Adverse | The scheme will have a permanent adverse impact on the visual amenity of residents at Highridge Common as a result of being in close proximity to the scheme combined with proposed lighting structures; however visual impacts will be|
with limited vegetation cover to provide screening. reduced as the route will integrate into the existing road network. Proposed woodland, hedgerow and individual tree planting will mature to provide significant year round cover. Setting the new road at or just below the level of the common will in large part retain the existing Highridge Green road visual context.

### Visual receptors from Dundry

<table>
<thead>
<tr>
<th>Location</th>
<th>Impact</th>
<th>Reason</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monarchs Way users at viewing point</td>
<td>Slight Adverse</td>
<td>Due to construction activity and larger construction vehicles and plant (i.e. cranes).</td>
<td>No Change Due to the distance from the route, existing vegetation cover and proposed tree and shrub belts, individual trees and hedgerows, which will mature to provide significant year round cover, as such the visual impact will potentially be removed.</td>
</tr>
<tr>
<td>Residents on Hill Road</td>
<td>Slight Adverse</td>
<td>Due to construction activity and larger construction vehicles and plant (i.e. cranes).</td>
<td>No Change Due to the distance from the route, existing vegetation cover and proposed tree and shrub belts, individual trees and hedgerows, which will mature to provide significant year round cover, as such the visual impact will potentially be removed.</td>
</tr>
<tr>
<td>Monarchs Way users on Hill Road</td>
<td>Slight Adverse</td>
<td>Due to construction activity and larger construction vehicles and plant (i.e. cranes).</td>
<td>No Change Due to the distance from the route, existing vegetation cover and proposed tree and shrub belts, individual trees and hedgerows, which will mature to provide significant year round cover, as such the visual impact will potentially be removed.</td>
</tr>
</tbody>
</table>

### Visual receptors between Highridge Common and Bishopsworth

<table>
<thead>
<tr>
<th>Location</th>
<th>Impact</th>
<th>Reason</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users of Highridge Road and Highridge Green</td>
<td>Substantial Adverse</td>
<td>Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptors.</td>
<td>Moderate Adverse The scheme will have a permanent adverse impact on the visual amenity of road users along this road as a result of being in close proximity to the scheme combined with proposed bus stops; however visual impacts will be reduced due to route integrating into the existing road network and providing landscape enhancements.</td>
</tr>
<tr>
<td>Residents on King Georges and Queens Road</td>
<td>Substantial Adverse</td>
<td>Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptors. And loss of existing semi-mature trees to facilitate the scheme.</td>
<td>Moderate Adverse The scheme will have a permanent adverse impact on the visual amenity of residents along this road as a result of being in close proximity to the scheme combined with proposed bus stops and loss of existing trees; however visual impacts will be reduced due to route integrating into the existing road network, new avenue planting and landscape enhancements as part of the essential mitigation.</td>
</tr>
<tr>
<td>Residents Elmtree Drive, Heggard Close, Gatehouse</td>
<td>Substantial Adverse</td>
<td>Due to construction activity and larger</td>
<td>Moderate Adverse The scheme will have a permanent adverse impact on the visual amenity of</td>
</tr>
</tbody>
</table>
Way, Gatehouse Close, Hareclive Road and Whitland Road

construction vehicles and plant (i.e. cranes) being in close proximity to receptors.

residents along this reserved corridor as a result of being in close proximity to the scheme combined with proposed bus stops and lighting; however visual impacts will be reduced through providing landscape enhancements, through the provision of a parkland area and through the creation of a landscaped, planted central reserve within the road, to reducing the visual intensity.

Footpath users along reserved corridor.

High

Substantial Adverse

Due to construction activity and larger construction vehicles and plant (i.e. cranes) being in close proximity to receptors.

Moderate Adverse

The scheme will have a permanent adverse impact on the visual amenity of footpath users along this reserved corridor as a result of being in close proximity to the scheme combined with proposed bus stops and lighting; however visual impacts will be reduced through providing landscape through the provision of a parkland area and through the creation of a landscaped, planted central reserve within the road, to reducing the visual intensity.

Summary of Potential Visual Impacts

Construction Stage Impacts

14.7.45. During construction residents and users within the area may experience temporary adverse visual impacts due to the disruption of tranquillity and visual intrusion of the construction activity. This will be most apparent to residents and Public Right of Way Users within close proximity of the site, in particular Public Right of Way users between the A370 and Railway Line, between the A38 and Highridge Common that are in close proximity to the route and residents and footpath users in the areas of Bishopsworth, Highridge and Withywood. The use of taller plant, such as cranes may result in a greater number of visual receptors across a wider area, as may any works undertaken under artificial lighting after sundown. All of these impacts will be of a temporary nature and are considered in the context. This is anticipated to result in an overall potential **moderate adverse visual impact** during the 2 year construction period.

14.7.46. In terms of views in the wider ZTV, the visual impact of the scheme during construction is predicted to have **slight adverse visual impact** during the construction period. This is due to the undulating topography and intervening vegetation between potential visual receptors and the site, and the distance from which the site will be viewed; however due to the extents of the scheme and taller plant and construction vehicles, this may be temporarily visible. The existing vegetation cover, specifically the woodland belt, will likely provide a substantial amount of screening; however some plant machinery movement and site activity may be perceptible.

Post Construction Stage Impacts

14.7.47. The South Bristol Link Bus Rapid Transit Network will have a permanent adverse impact on the visual amenity due to it being an incongruous feature in the rural landscape, especially between the A370 and the A38 where the highway is 4 lanes and on embankment between the A370 and the railway. This is an extra 4-6m in width compared to the 2 lane highway from the A38 until Hengrove Way combined with the proposed permanent lighting columns and bus stop structures, therefore within these areas it will visually be more prominent in the landscape therefore there is a need to ensure the visual impact of the proposed scheme on the landscape setting, Long Ashton and Ashton Court as well as footpath users, residents and users of A370 is reduced. However through providing simple, clean and modern bus stops and landscaping designed to visually integrate well into the landscape by planting native tree and shrub belts, individual trees, hedgerows and woodland, these will mature to provide year round cover in the long term and therefore be a less intrusive feature in the landscape. The proposed under bridge for cattle access will significantly reduce visual impact in comparison with the over bridge previously
proposed. As the scheme traverses through the woodland watercourse setting the visual impact is reduced as a result of existing woodland screening combined with proposed woodland and tree and shrub belts. The relocation of the proposed junction at the A38 will result in reduced visual impact on the residents of Castle farm and as the route crosses towards Highridge Common it will be in cutting therefore combined with proposed tree and shrub belts this will reduce the visual impact on the landscape setting and receptors in this area. As the route passes through the urban context it will be at grade utilising existing roads and providing landscape enhancements to help reduce visual impact on adjoining properties.

14.7.48. As a result the landscape setting and visual receptors within the localised site area will experience visual intrusion of the new route, which will result in a slight adverse overall visual impact.

14.7.49. In views from within the wider visual envelope, the visual impact of the scheme during the post construction stage is to be most significant as a result of the proposed lighting columns through sections 1, 2 and 3 and is overall predicted to have no change to slight adverse; however the intervening topography, vegetation and distance of the visual receptors from the site will reduce and in some areas screen out these impacts.

Summary of Potential Effects and Impacts

14.7.50. It is predicted that there will be slight to moderate adverse impacts on the landscape and visual amenity of the area during the construction phase of the works; however these impacts will be temporary and will likely affect the localised area with visual receptors limited to those in close proximity to the scheme in accordance with the anticipated ZTV.

14.7.51. Once completed, the proposals will initially have a moderate adverse impact on the landscape resources and visual amenity of the area due to the change in views and the new route traversing through the agricultural fields and in the transitional landscape on the fringe of the settlement; cutting through sections of existing vegetation, especially as the highway crosses Colliter’s Brook through Hanging Hill Wood. However, in the medium to long term the proposed extensive new woodland and tree, hedgerow, shrub planting and species rich grassland will mature, providing screening of the proposals, provide planting reinstatement with landscape and biodiversity improvements/ benefits along the urban corridor thereby resulting in an overall slight adverse impact of the site and surrounding landscape. There will be slight beneficial impact in selected areas, for example to the exchange land and to Castle Farm where there will be overall landscape and visual benefit as a result of scheme alignment and landscape enhancements.

14.8. Residual Effects

Construction

14.8.1. Through careful and sensitive site planning and design the proposed South Bristol Link scheme has been developed to have minimal impact on the wider landscape context with minimal detraction from the visual amenity of the area, especially with special attention paid towards sections of the route within sensitive locations. As such, through the incorporation of appropriate mitigation and landscape enhancement, the overall predicted potential effects on landscape resources and impacts on visual amenity is expected to be moderate to slight adverse during the construction phase.

Operation

14.8.2. The majority of transitory and permanent impacts will occur during the construction phase. As such, through the incorporation of appropriate mitigation and landscape enhancements, the overall predicted potential effects on landscape resources and impacts on visual amenity is expected to be slight adverse to slight beneficial during the operational phase.
14.9. Consideration of Likely Cumulative Effects

14.9.1. The main known schemes likely to give rise to potential cumulative impacts are, to the north the Ashton Vale Temple Meads (AVTM) bus rapid transit scheme and to the south the North Fringe to Hengrove Park (NFHP) scheme. Both have been or will be subject to their own formal Environmental Impact Assessment. NFHP will have no direct cumulative impacts. AVTM will have direct linkage to the SBL but this only in terms of the physical linkage at the P+R and some of the buses on the AVTM continuing along the SBL. It is considered that the latter will not alter the assessment of the effects of the scheme.

14.10. Summary and Conclusions

14.10.1. The scheme would involve land take of approximately 5.8ha of agricultural land, largely comprising permanent pasture land, woodland and other non-agricultural land lost to the engineering and landscaping footprint of the scheme.

14.10.2. The majority of the proposed scheme is located in an area of good quality rural landscape and therefore any proposed planting has been designed to integrate the scheme into the surrounding landscape with the primary requirement to reflect the character of the adjacent landscape. The main landscape impacts include some loss of hedgerows and trees through the rural area, permanent diversion of Public Rights of way, loss of common land and green infrastructure and impacts on setting of historic assets, specifically Ashton Court Estate, Long Ashton Church and Castle Farm. These impacts will be mitigated, so within the agricultural field setting the boundary treatments are hedgerows and tree and shrub belts, while the section passing through the woodland stream setting will consist of some tree and shrub belts and woodland to integrate into this setting. As the scheme enters the urban context the primary result has been to retain the residential character and provide a parkland landscape through the reserved corridor with proposed landscape enhancements. Overall, the scheme is likely to create a more strongly defined edge to south west Bristol than the current context in relation to engineered form and vegetation structure and will provide landscape and biodiversity enhancements, mitigating impacts on the rural landscape and landscape resources.

14.10.3. The proposed scheme would result in visual impacts on the setting of designated areas and individual properties in the open countryside; Public Right of Way users and residents in localised proximity to the route in the urban context. However in the long term proposed landscaping will reduce or remove these impacts and provide areas with landscape improvements providing visual interest.

14.10.4. The proposed scheme will have some permanent adverse effects on the visual amenity and landscape setting most significantly in sensitive locations; however with careful handling and high quality detailed design it will reduce these impacts overall to Slight Adverse whilst also providing enhancements through landscape amenity, biodiversity functions, landscape integration and visual interest which is compliant with the aims of landscape policy and protection of the countryside.
14.11. References and Sources

References include:


14.11.2. Design Manual for Roads and Bridges Volume 11

14.11.3. Countryside Commission

14.11.4. Photography and Photomontage in Landscape and Visual Impact Assessment Landscape Institute Advice Note 01/11

14.11.5. Visual Identity Guidelines; South Bristol Link Route Corridor Guidelines produced by Bristol City Council City Design Group –

14.11.6. Design and Access Statement – CTRAEB/730/DOC500

14.11.7. Obtrusive Light Survey Report


14.11.9. Landscape Strategy produced by Halcrow

14.11.10. Landscape Proposals produced by Halcrow - Drawings CTRAEB/730/LAN/509 to 524

14.11.11. Cross Sections produced by Halcrow - Drawings CTRAEB/730/HIG/135 to 139

14.11.12. South Bristol Link Road Tree Survey and Arboricultural Implications Assessment JSL2121_770_A – Appendix 13.2.12

14.11.13. Lighting Layout Drawings CTRAEB_730_LIG_200, 201 and 202 for North Somerset section and PL_ST_SBL_LD_1 to LD_2 for the Bristol section – Appendix 14.4

14.11.14. Planning Red Line Boundary Whole Scheme 001-006 Drawing 5103087_L_P_320 – Appendix 1.2

14.11.15. Scheme Section Plan - Figure 1.0 Appendix 14.1

14.11.16. Environmental Constraints Plan – Figure 2.0 Appendix14.1

14.11.17. Viewpoint Location Plan – Figure 3.0 Appendix 14.1

14.11.18. Zone of Theoretical Visibility Plan – Figures 4.0 – 8.0 Appendix 14.1

14.11.19. Existing Photographic Viewpoints – Figure 9.0 Appendix 14.1

14.11.20. Photomontage Report produced by Halcrow

Sources include:

14.11.21. Regional planning guidance for the south west (RPG10)

14.11.22. Bristol Core Strategy

14.11.23. Bristol Local Plan 1997
14.11.24. Bristol CC Site Allocations & Development Management – DRAFT DOCUMENT

14.11.25. North Somerset Council Core Plan

14.11.26. North Somerset Supplementary Planning Guidance:

14.11.27. Multi-Agency Geographic Information for the Countryside (Magic) web site. This data source provided data showing where there are sensitive national designations that fall within the scheme area such as the Greenbelt.

14.11.28. County and District Councils' local designations.

14.11.29. 1:50 000 Scale Digital Ordnance Survey Maps

14.11.30. Aerial Photography

14.11.31. British Listed Buildings web site

14.11.32. Southwest Region Countryside Character Assessments: 118, Bristol, Avon Valleys and Ridges

14.11.33. County Character Assessment: North Somerset Landscape Character Assessment SPD (adopted December 2005)

14.11.34. Additional information gathered as a result of searches of available information concerning the site, its surroundings and the potential impacts of the proposals.