Chapter 2.19. Land Use and Soils
19. Land Use and Soils

19.1. Introduction and Scope of Topic

19.1.1. This chapter presents an assessment of the impact of the South Bristol Link (SBL) on agricultural soils, farming and other rural land uses.

19.1.2. The study area, totalling 136 ha, comprises the farms and other rural land parcels affected by the Scheme (see Appendix 19.3) and the scope of the assessment includes:

- Impacts on agricultural land quality, including soils;
- Impacts on individual farm businesses and rural holdings
- The potential to mitigate the impacts

19.1.3. The assessment does not consider the urban areas in which the scheme is to be built.

19.1.4. The assessment is applied to the construction and operational phases of the Scheme.

19.2. Policy Context and Guidelines of Relevance

Agriculture and Soils

19.2.1. NPPF requires that local government seeks to protect and preserve best and most versatile (BMV) agricultural land. Where significant development of agricultural land is demonstrated to be necessary, preference should be given to the use of areas of poorer quality land (paragraph 112).

19.2.2. In December 2012 Natural England published Technical Information Note 049 (TIN049), ‘Agricultural Land Classification: protecting the best and most versatile agricultural land’. This states that for planning applications, specific consultations with Natural England are required under the Development Management Procedure Order in relation to best and most versatile agricultural land. These are for non agricultural development proposals that are not consistent with an adopted local plan and involve the loss of twenty hectares or more of the best and most versatile land.

19.2.3. The North Somerset Replacement Local Plan (2007) covers rural development in Chapter 6. The stated aim is to protect the countryside, allowing only such development as is appropriate to a rural area, applying the tightest restrictions within the Green Belt to prevent urban sprawl.


Recreation and Amenity

19.2.5. In respect of recreational land uses, the NPPF attaches great importance to the maintenance and improvement of high quality open spaces, which are seen to make an important contribution to the health and well being of communities. Paragraph 74 requires existing open space, sports and recreational buildings to be retained unless:
• “an assessment has been undertaken which has clearly shown the open space, buildings or land to be surplus to requirements; or
• the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location; or
• the development is for alternative sports and recreational provision, the needs for which clearly outweigh the loss.

19.2.6. Land uses permanently or temporarily affected by the SBL also include footpaths and cycle routes used for recreational amenity and accessibility purposes. The NPPF requires that:
  • “Planning policies should protect and enhance public rights of way and access. Local authorities should seek opportunities to provide better facilities for users, for example by adding links to existing rights of way networks.”

19.2.7. The amenity of recreational land, arising from the sensory experience and accessibility of it, is subject to policies governing landscape, noise, air quality and movement. These amenity aspects are dealt with in other chapters of the ES.

Local Policy

19.2.8. The adopted Bristol City Council Core Strategy (2011) Policy BCS9 (Green Infrastructure) affords protection to the integrity and connectivity of the strategic green infrastructure network which should, according to this policy, be maintained, protected and enhanced. Saved policies of the Bristol City Council Local Plan (1997) of relevance include:
  • Saved Policy L3 (Greenways: Walking and Cycling) which provides for the protection of a network of Greenways to provide off road routes for walking and cycling;
  • Saved Policy M16 (Cyclists and Pedestrians) which requires development to incorporate measures to take advantage of opportunities to enhance pedestrian and cycle provision;
  • Saved Policy NE1 protects the distribution and variety of open spaces, including those that are designated as open space the adopted Local Plan Proposals Map and undesignated informal spaces

19.2.9. Highridge Common is identified on the adopted Local Plan Proposals Map as ‘important open space’ whereas other green spaces, including the reserved corridor’, are undesignated informal spaces.

19.2.10. Adopted North Somerset Core Strategy (2012) Policy CS9 seeks to protect, improve and enhance the existing and proposed network of green infrastructure, with the aim of ensuring that there is a multi-functional network which promotes healthy lifestyles and improves biodiversity and landscape character.

19.2.11. Within the North Somerset Replacement Local Plan (2007) the following Secretary of State saved policies are of relevance to the assessment of recreational routes and amenity space:
  • Policy T/7 (Rights of Way and Public Access) seeks to protect, develop and improve the rights of way network and other forms of public access. This policy provides the development management criteria against which development proposals involving public rights of way and public access are assessed; and
  • Policy T/8 (Strategic Cycle Routes) requires that development not prejudice the implementation of the strategic cycle network.
19.3. **Assessment Methodology**

**Agriculture**

19.3.1. In respect of agricultural land quality, farm buildings and rural holdings, a site visit was made in May 2012 to view every field affected by the Scheme. Information on the management of specific holdings was gained by meetings with affected farmers and their agents.

19.3.2. This information was supplemented by a desk study of drawings and proposed mitigation measures, national and local policy guidance and published soil, climatic and agricultural maps.

19.3.3. A nationally recognised set of standard assessment criteria for effects on agricultural land and farm and rural businesses does not exist. A bespoke set of criteria has therefore been used for this assessment, which has been developed in the light of relevant national and local policies and guidance.

19.3.4. The significance criteria relate to two issues; impact on the national resource of agricultural land quality and impact on local farm businesses, as set out in Tables 19.1 and 19.2 respectively. These criteria address both magnitude of impact and sensitivity of the resource and have been derived from consideration of the characteristics of the impact and the receptor.

19.3.5. In terms of land quality, the emphasis is on the estimation of loss of best and most versatile land which is defined as Grades 1, 2 and 3a in the MAFF Agricultural Land Classification (ALC) System (1988). Grade 1 is excellent quality agricultural land, Grade 2 is very good quality and Grade 3a is good quality.

19.3.6. Form local farm businesses the assessment covers changes to management and farming systems that might result in loss of income.

19.3.7. For small plots that are not commercially viable in their own right, it is not possible to assess the significance of the impacts according to the significance criteria in Table 19.1. In these cases only the impacts and proposed mitigation are given.

<table>
<thead>
<tr>
<th>Table 19–1</th>
<th>Significance of Effects on Agricultural Land Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effect</strong></td>
<td><strong>Criteria</strong></td>
</tr>
<tr>
<td>Major Adverse</td>
<td>Permanent loss of 20 ha or more of the best and most versatile agricultural land – that is, land classified as grades 1, 2 or 3a under the MAFF ALC system and protected by the NPPF and NE TIN049.</td>
</tr>
<tr>
<td>Moderate Adverse</td>
<td>Permanent loss of 10 to 19 ha of best and most versatile agricultural land - grades 1, 2 or 3a - or 50 ha or more of lower quality agricultural land - grades 3b, 4 and 5 under the MAFF ALC system.</td>
</tr>
<tr>
<td>Minor Adverse</td>
<td>Permanent loss of 5 to 9 ha of best and most versatile agricultural land - grades 1, 2 or 3a - or 10 to 49 ha of lower quality agricultural land - grades 3b, 4 and 5 under the MAFF ALC system.</td>
</tr>
</tbody>
</table>
Very minor\nAdverse

Loss of less than 4 ha of best and most versatile agricultural land - grades 1, 2 or
3a - or less than 10 ha of lower quality agricultural land - grades 3b, 4 and 5 under
the MAFF ALC system.

A threshold of 4 ha more follows the approach of paragraph 6 of the Department of
the Environment Circular 71/71, Development of Agricultural Land

Note: The effects relate entirely to loss of agricultural land relative to the national resource and do not reflect any other inherent
characteristics, such as scenic or habitat value

Table 19–2  Significance of Effect on Local Farm Businesses

<table>
<thead>
<tr>
<th>Effect</th>
<th>Criteria</th>
</tr>
</thead>
</table>
| Major Adverse   | Renders a full-time farm business, including any diversification enterprises,
                  unworkable in its current form, such that it could not continue unchanged; the
                  business would have to change the activities undertaken on the remainder of the
                  holding as well as seeking some form of alternative income.
                  For farms let through short term farm business tenancies, serious loss of rental
                  value (>20%) |
| Moderate Adverse| Changes the workability of a full-time farm business, including any diversification
                  enterprises, but without preventing the business continuing largely as before; there
                  would be reductions in farm income and changes in day-to-day management, such
                  as longer journeys to access severed land parcels.
                  For farms let through short term farm business tenancies, significant loss of rental
                  value (10-20%) |
| Minor Adverse   | Slight impact on the workability of a full-time farm business, including any
                  diversification enterprises, but the business would continue largely as before.
                  There would be a small decline (5-10%) in farm income.
                  For farms let through short term farm business tenancies, small loss of rental value
                  (5-10%) |
| Very minor adverse | Very slight impact on farm business that can often be easily compensated for by
                  modifications to management system
                  For farms let through short term farm business tenancies, very small loss of rental
                  value (<5%) |
| Neutral         | Affects the farm but does not affect the farm business, including any diversification
                  enterprises
                  For farms let through short term farm business tenancies, no loss of rental value |
Recreational Uses

Land in recreational use, including footpaths and cycle ways has been subject to desk study consideration and site visits.

In addition, as a result of consultation, a pedestrian survey was undertaken in the Bishopsworth area, including the reserved corridor of land between Queens Road and Whitland Road. Similarly, informal cycling across the reserved corridor was highlighted and a cycling survey was undertaken to establish the degree of north-south cycle movements across the corridor.

The qualitative criteria in Table 19.3 have been employed in assigning significance to impacts on the recreational resource, based on professional judgement.

Table 19–3 Criteria for significance impact on recreational land uses

<table>
<thead>
<tr>
<th>Significance</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beneficial</td>
<td>Positive effect for the recreational users of the land</td>
</tr>
<tr>
<td>Minor beneficial</td>
<td>Slightly positive effect for the recreational users of the land</td>
</tr>
<tr>
<td>Negligible/ Neutral</td>
<td>Little or no effect for the recreational users of the land</td>
</tr>
<tr>
<td>Minor adverse</td>
<td>Slightly negative effect for the recreational users of the land</td>
</tr>
<tr>
<td>Adverse</td>
<td>Negative effect for the recreational users of the land</td>
</tr>
</tbody>
</table>
19.4. Baseline Conditions and Sensitivity

Agriculture

19.4.1. There are two commercial farms (Parsonage Farm and Castle Farm) within the study area. There are five agricultural or semi-agricultural holdings (see Appendix 19.3, Volume 3 and Table 19.4). The latter are small parcels of land, not commercially viable in their own right, that are let to annual grazing tenants, apart from the equestrian holding which is occupied by the owner.

19.4.2. All the agricultural land in the study area is used for livestock and is under grass and fodder crops. One farm (Parsonage Farm) has a dairy herd and this is the holding most sensitive to Scheme impacts. The remainder of the farmland is used for beef and sheep production, or hay and silage making, with the exception of the equestrian holding. Although there are agricultural rights over Highridge Common, there is no evidence of these rights having been exercised by commoners and it is not in active use as agricultural land. Whilst the potential for that use exists in theory, the Common is not considered to be agricultural land for the purposes of this assessment.

Table 19–4 Agricultural and Equestrian Holdings Affected by the Scheme

<table>
<thead>
<tr>
<th>Holding no. (Fig. 16.1)</th>
<th>Name</th>
<th>Size (ha)</th>
<th>Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 1B, 2</td>
<td>Parsonage Farm</td>
<td>76.9</td>
<td>Dairy, beef and sheep. Grass for grazing and silage with some maize production</td>
</tr>
<tr>
<td>13, 15</td>
<td>Castle Farm*</td>
<td>27.2 in the study area, but total farm size is unknown</td>
<td>Grass for beef and sheep</td>
</tr>
<tr>
<td>20</td>
<td>Land owned by Wring</td>
<td>3.5</td>
<td>Hay and silage production and machinery storage</td>
</tr>
<tr>
<td>21</td>
<td>Land owned by Hill</td>
<td>2.2</td>
<td>Grass field rented for grazing</td>
</tr>
<tr>
<td>22</td>
<td>Land owned by Gianetto</td>
<td>6.3</td>
<td>Two grass fields rented for grazing</td>
</tr>
<tr>
<td>37, 40</td>
<td>Land owned by Burnell</td>
<td>18.1</td>
<td>Grass fields rented for grazing</td>
</tr>
<tr>
<td>36</td>
<td>Land owned by Case</td>
<td>1.7</td>
<td>Equestrian</td>
</tr>
</tbody>
</table>

*Note: Information for Castle Farm was not made available
19.5. Soils and Agricultural Land Classification

19.5.1. The northern part of the land affected by the Scheme is underlain by red mudstones and halitestone of the Mercia Mudstone Group, passing southwards to interbedded limestone and mudstone and the Charmouth Mudstone Formation. Head, alluvium and terrace gravels form a patchy overlay [http://maps.bgs.ac.uk/geologyviewer/](http://maps.bgs.ac.uk/geologyviewer/). These clayey rocks produce mainly seasonally waterlogged, heavy clay loam and clay soils of the Evesham, Worcester and Brockhurst association (Soil Survey of England and Wales, 1983). In the very north of the study area there is the Hodnet association of lighter, better drained reddish loamy soils.

19.5.2. The Provisional Agricultural Land Classification (ALC) map on [www.magic.gov.uk](http://www.magic.gov.uk) shows the study area to be Grade 3, but this classification does not subdivide Grade 3 land into 3a and 3b, as distinguished in the MAFF’s 1988 Revised Guidelines for Grading the Quality of Agricultural Land.

19.5.3. A detailed Agricultural Land Classification (ALC) survey exists of the land between the A370 and the railway and is viewable on [www.magic.gov.uk](http://www.magic.gov.uk). This shows the land to be mainly in Grades 4 and 3b, with only small areas of Best and Most Versatile (BMV) land in Grade 3a. There is no detailed survey of the land between the railway and Highridge Common, but the predominance of heavy soils would indicate that the most will also be in Grades 3b and 4. Therefore, little of the agricultural land to be lost to the Scheme is of BMV quality (Grades 1 to 3a). The predominance of non-BMV land means that land quality is an issue of low sensitivity.

19.6. Recreational/Amenity Land Uses

19.6.1. Footpaths and recreational/amenity land uses likely to be affected by the SBL scheme are set out in Table 19.5 below.

<table>
<thead>
<tr>
<th>Chapter 19 ID</th>
<th>Land Use</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS1</td>
<td>Amenity space</td>
<td>Potential Open Space north of the mainline railway line: land identified in exchange for open space lost to the AVTM.</td>
</tr>
<tr>
<td>AS2</td>
<td>Amenity Space</td>
<td>Highridge Common comprises some 6.5ha of open grassland used for informal recreation on the south western boundary of the Bristol urban area.</td>
</tr>
<tr>
<td>AS3</td>
<td>Amenity space</td>
<td>The reserved corridor is located within the Hartcliffe area of Bristol (BCC administrative area). The corridor is made up of two parcels of informal amenity space, Gatehouse Avenue and Whitland Road. Gatehouse Avenue is located between King Georges Road and Grange Road and consists of unmanaged scrub and open grassland with scattered trees. Whitland Road is located to the east of Gatehouse Avenue, between Whitland Road, Hareclive Road and Whitchurch Lane and is a large grassed area which is open and featureless with little tree cover. Both areas are held by Bristol City Council as ancillary housing land.</td>
</tr>
<tr>
<td>PROW1</td>
<td>Adopted PROW footpath</td>
<td>PROW from the P&amp;R site to the west of the industrial units on Brookgate</td>
</tr>
<tr>
<td>-------</td>
<td>------------------------</td>
<td>-----------------------------------------------------------------------</td>
</tr>
<tr>
<td>PROW2</td>
<td>Adopted PROW footpath</td>
<td>PROW crossing the SBL road link connecting Brookgate to the new A370 junction</td>
</tr>
<tr>
<td>PROW3</td>
<td>Adopted PROW footpath</td>
<td>PROW from the railway line to the Colliter’s Brook</td>
</tr>
<tr>
<td>PROW4</td>
<td>Adopted PROW footpath</td>
<td>PROW running from Colliters Brook to Yanley</td>
</tr>
<tr>
<td>PROW5</td>
<td>Adopted PROW footpath</td>
<td>PROW running from A38 to Highridge Common</td>
</tr>
<tr>
<td>PROW6</td>
<td>Adopted PROW footpath</td>
<td>PROW in the vicinity of Gullon Walk to King Georges Road</td>
</tr>
<tr>
<td>IF7</td>
<td>Informal footpaths</td>
<td>Informal footpaths in the reserved corridor</td>
</tr>
<tr>
<td>ICR1</td>
<td>Informal cycling routes</td>
<td>Reserved corridor informal cycling routes</td>
</tr>
</tbody>
</table>
19.7. **Identification and Assessment of Likely Significant Effects**

**Land Loss / Alteration of characteristics**

**Agricultural Land**

19.7.1. A total of 15 ha of the 136 ha of agricultural land in the study area would be lost to the engineering and landscaping footprint of the Scheme. Less than 1.5 ha (10% of the land take) is estimated to be of BMV quality. As regards the local land resource, the quality of land taken is typical of the wider pattern of soils and land quality in this part of North Somerset where heavy soils predominate, and so no land of special local value would be lost.

19.7.2. A further 2.5 ha of agricultural land, currently used for grazing a dairy herd and forage production on Parsonage Farm, would be lowered for flood compensation. Such land would then be only suitable for rough grazing and hay production.

19.7.3. Further land would be required for temporary engineering use during the construction phase, but would be restored to farming and so not have a permanent effect.

19.7.4. A further 2.6 ha of the Burnell’s land would be taken out of regular farming to provide the Highridge Common Exchange Land. Whilst grazing rights are not currently exercised, the exchange land will be available to those with grazing rights on Highridge Common. This represents a loss to the affected holding but not a loss to the national and local land resource.

**Recreational/Amenity Uses**

19.7.5. Some 4700sq m of Open Space north of the mainline railway is required for the SBL. However, as part of the Scheme it is proposed to provide some 11,400 sq m of land in exchange for the land occupied by SBL adjacent to the railway line amounting to 2.5 times more land being provided than needed for the scheme.

19.7.6. Highridge Common is approximately 6.5ha in total site area, it comprises open grassland used for informal recreation with some small patches of scrub/trees, individual parkland trees and dense hedgerows. The Common is considered to be a valuable wildflower rich meadow. As a result of its rich biodiversity, the site is designated as a SNCI.

19.7.7. The extent of the registered Common that would be lost to the SBL is approximately 0.7ha in the north eastern section bounded by Highridge Green but does result in some minor severance of its parts. Adjacent land of some 2.5ha has been identified in exchange for the Common land; 3.5 times the area lost to the SBL proposals.

19.7.8. The reserved corridor is made up of two parcels of land, Gatehouse Avenue and Whitland Road, some 2.6 ha and 1.1 ha respectively. Approximately 0.9ha of this “safeguarded” land, presently used for amenity purposes, will be lost as a result of the SBL. The remaining land will be adopted as formal open space for the use of the local community.

19.7.9. In the vicinity of the reserved corridor the SBL route will intersect several informal footways which are not adopted footpaths. These connect the adjoining cul-de-sacs together via the
A grassed reserved corridor. Some of these routes merely comprise sections on worn grass, whilst others are surfaced. Two informal footways are surfaced and are ancillary to the adjacent residential development. A key finding of the pedestrian survey was the use of the reserved corridor by pedestrians as a walking route to work, shopping and to undertake recreational activities. The cycling survey found that there is potential for the severance of existing north-south cycle movements by SBL at this location.

19.7.10. With reference to the other identified footpaths, there will be some minor realignments and diversions but with the proposed new cycle/footpath provision, there will be no net loss in adopted PROW footpaths, informal footpaths or informal cycle routes permanently available as a result of the SBL. The SBL is, therefore, regarded as neutral in its overall effects on the provision of walking and cycling routes.

Severance

19.7.11. The SBL passes through both Parsonage Farm and Castle Farm. The Scheme also severs very small amounts of land belonging to Hill, Gianetto, Burnell and Case (see Tables 19.3 and 19.4). On the A38 field gateways to land belonging to Wring, Hill and Burnell would be lost to the new roundabout.

19.7.12. The SBL passes through both Parsonage Farm and Castle Farm. The Scheme also severs very small amounts of land belonging to Hill, Gianetto, Burnell and Case (see Tables 19.3 and 19.4). On the A38 field gateways to land belonging to Wring, Hill and Burnell would be lost to the new roundabout.

19.7.13. Where PROWs, informal footpaths and informal cycle paths are required to be diverted as a result of the SBL they are re-provided to locally connect with the wider recreational route network and cross the SBL route with minimal impact upon existing journey times.

19.7.14. The scheme incorporates the following design measures to overcome severance:

- At Longmoor Brook underbridge, the opportunity is taken to widen the span of the bridge by 2m in order to accommodate a diverted PROW route which in turn connects to retained sections of the PROW to the south of SBL together with Bridge Farm;
- Similarly, at Colliter’s Brook a PROW will be locally diverted to a new underpass beneath the SBL alignment;
- Traffic signal controlled junction is proposed at Brookgate junction;
- To the north of Castle Farm, an existing PROW running north-south will be crossed by the SBL; a crossing point with a 2m median island and dropped kerbs is proposed in order to accommodate movements across the carriageway.

19.7.15. The following design measures are proposed in order to address potential severance at the reserved corridor, including existing north-south cycle movements and walking patterns to nearby destinations including Whitchurch Lane, Whiteland Road and Harecliffe Road:

- A series of non-signalised pedestrian along the reserved corridor and its junction with all major existing highways that is Queens Road/Grange Road, Harecliffe Road and Whitchurch Lane;
- A shared use cycleway/footway through the park on the northern side of the SBL route between Goulston Road and Gatehouse Avenue, and a footway on the southern side,
- A toucan crossing connecting Goulston Road and Gatehouse Avenue via Comleaze and Gatehouse Way,
- Uncontrolled crossings linking Heggard Close with Innox Gardens, Selley Walk with Gatehouse Close and Acresbush Close with Gatehouse Court.
• A shared use cycleway / footway through the park on the northern side of the SBL route between Goulston Road and Gatehouse Avenue;
• A footway on the southern side of the SBL route;

19.7.16. The scheme’s approach to the potential severance of identified amenity land is as follows.

19.7.17. **Possible open space north of the mainline railway line:** At present, the land is in private ownership and forms part of a tenanted dairy farming unit grazed by cattle from a neighbouring farm. There are two public footpaths which provide access to the land in the north and from the south. From site inspections it is apparent the land is used by local residents for recreational purposes, in particular dog walking. It is part of a circular walking route between the communities at Long Ashton and Ashton Vale and is an access route to the Ashton Vale Town and Village Green.

19.7.18. As part of the SBL proposals, the land will be accessible via the new shared cycleway and footway, from existing footpaths that link into this, from the re-diverted public footpath which passes to the west of the exchange land and also from the Brookgate Junction. In terms of functionality, this will ensure that the exchange land could be used for similar recreational purposes as the open space in terms of dog walking and general walking by the local community.

19.7.19. **Highridge Common:** At Highridge Common, the SBL scheme proposals connect with an existing highway in order to minimise land take and avoid severance of north-south connectivity. At this location, existing pedestrian movements lead from residential properties to the north of the public highway to the Common Land in the south. As part of the SBL scheme proposals two uncontrolled crossing points comprising pedestrian refuges are provided in order to ensure that movements are, in terms of functionality, equally advantageous to the public. Landscape mitigation planting, including reinstating vegetated field boundaries with tree lined hedgerows and semi formal arrangements of trees and mounding, will reinforce the existing landscape character at this section of the Common.

19.7.20. The exchange land for the common is located to the north west of the existing common land and consists of pasture with hedgerow and hedgerow trees to the perimeters of the two fields. The land is pasture comprising species rich un-improved grassland but with areas of semi-improved grassland on the western side suitable for biodiversity enhancement and/or to receive translocated sward from the common. The land presents a similar physical and visual relationship between the existing highway and the Common as does the present common land. It is capable of making direct connection to the existing Common and existing highways and rights of way. Additionally it provides a much greater level of passive security relative to alternatives options for the provision of exchange common land.

19.7.21. The exchange land is 3.5 times greater than the area lost to the SBL proposals, presents connectivity and supports similar recreational activities, inherent in a natural green space with ecological features.

19.7.22. **The reserved corridor:** the reserved corridor, comprising Gatehouse Avenue and Whitland Road, is considered to represent low recreational value with some good quality elements which are potentially sensitive to change. Its key present function is the provision of green relief for the surrounding built environment and as a greenway to support informal connectivity within the wider area. As set out in IF7 and ICR1 above, informal connectivity and recreational movements are maintained by the scheme proposals. In addition to the
promotion of connectivity along the route a detailed programme of design landscape mitigation is proposed within both amenity spaces – detailed in the Landscape Chapter of the ES.

**Drainage**

19.7.23. Most affected soils are seasonally waterlogged and require ditches and field pipe drainage. These would be disturbed by the Scheme, potentially resulting in increased localised waterlogging. This effect is not considered for recreational land uses.

**Water Supply**

19.7.24. Some water troughs and pipes are in the footprint of the Scheme and would be disturbed but temporary provision would be made during construction and new water supplies provided to all fields at opening. This effect is not considered for recreational land uses.

**Accessibility**

19.7.25. The SBL scheme takes the opportunity to provide a number of enhancements to the existing PROW and cycle path network. Central to this is the provision a new cycleway/footway will be provided on the eastern side of the carriageway between the A370 (connecting to Festival Way cycle track) and South Bristol consisting of a single high-quality recreational route that will link the rural areas of Long Ashton and Brookgate to the urban areas of South Bristol, including Bishopsworth and Withywood.

19.7.26. This addresses existing network shortfalls in urban and rural connectivity by providing an orbital pedestrian and cycle route, which significantly reduces journey times between these locations. At present a cycle trip between the Long Ashton Park and Ride site and the junction of Queens Road / King Georges Road is 6.5km and would take approximately 26 minutes. With the provision of the new SBL cycle route, the overall distance will be reduced to approximately 3.75km, with an overall cycle time of 15 minutes.

19.7.27. Where existing routes are cut by the SBL but access is maintained in the finished scheme there will be adverse impact from the time for users to make the road crossing.

**Amenity**

19.7.28. The amenity value of recreation land is a factor of the overall sensory experience of those areas and results, inter alia, from the interactive effects upon users from local environmental conditions. The amenity impacts are summarised as follows.

- The scheme will have a significant adverse visual impact on PROW users between the A370 and the railway line together with users of the possible open space north of the mainline railway line. This is combined with significant noise effects within 30m of the route alignment on opening year and 40m of the route alignment at design year, the effects of which will decrease as distance from the scheme increases.
- The scheme will have a significant adverse visual impact on PROW users between the railway line and A38. This is combined with significant noise effects within 30m of the route alignment on opening year and 40m of the route alignment at design year, the effects of which will decrease as distance from the scheme increases.
- The scheme will have a significant adverse visual impact on PROW users between the A38 and Highridge Common. This is combined with significant noise effects (above 63dB L_{Aeq,16hr} - this being an outdoor measurement) within 25m of the route alignment.
on opening year and 30m of the route alignment at design year, the effects of which will decrease as distance from the scheme increases.

- Highridge Common will have a moderate adverse visual impact. In respect of noise, adverse significant effects would be felt along the scheme alignment as it crosses the Common Land, with these impacts decreasing as distance from the scheme increases. The majority of this area would experience adverse moderate long term impacts, again, decreasing in impact with increases distance from the scheme. Users of the section of the existing Common north of Highridge Green would experience short and long term decreases in noise impact;

- PROWs adjoining King Georges Road will experience a moderate adverse visual impact where there is a direct view of the site. In respect of noise, significant effects (above 63dB $L_{Aeq, 16hr}$ measured outdoors) will be experienced on opening year within 15m of a direct view of the route alignment and within 20m of a direct view of the route alignment at design year, the effects of which will decrease as distance from the scheme increases;

- Users of the reserved corridor for informal recreation as an amenity space, walking or cycling will experience a moderate adverse visual effect combined with an adverse noise effect, which will be experienced on opening and design years within 15m of the route alignment, the effects of which will decrease as distance from the route increases.

**Construction Impacts**

**Agricultural Land and Soils**

19.7.29. Additional agricultural land would be required on a temporary basis for working areas and access during the construction phase. This land will be required for a short period, and will be reinstated upon cessation of use for the SBL.

**Construction Impacts on Recreation**

19.7.30. In respect of recreational land, there is likely be general disturbance and loss of amenity throughout the construction period making these areas less attractive to use. Additional amenity spaces land would be required on a temporary basis for working areas and access during the construction phase. Construction work will be phased across the scheme to minimise the period of disruption to users. The temporary working space land will be reinstated upon cessation of use for the SBL.

19.7.31. Additionally, the contractor will prepare a programme for the temporary and permanent closure of PROWs and opening of diversions where required to serve existing walking and cycling networks. These will be capped to the minimum necessary to balance public safety during construction and continued public use of rights of way which cross the scheme. These can be summarised as:

- Direct Impacts
  - Requirement to permanently or temporarily stop up or divert a PROW that crosses the line of the SBL.
  - Where crossings are maintained through the working trace, short periods where the crossing is closed; for example to allow machinery to cross.

- Indirect Impacts
  - Users of PROWs directly physically affected and those using PROWs in the area that are not stopped up or temporarily diverted may experience adverse impacts arising from noise, smell and from the visual intrusion into the landscape of the construction works and of construction traffic.
19.8. Mitigation Measures

Land Loss

19.8.1. Where possible the Scheme has been routed to minimise the loss of agricultural land, such as the alignment through Colliters Brook. In terms of the loss of 15 ha of agricultural land relative to the national resource (Table 19.1), only around 1.5 ha of which is of BMV quality, the effect is very minor adverse. As regards the local land resource, the quality of land taken is typical of the wider pattern of soils and land quality in this part of North Somerset, where heavy soils predominate, and so no land of special local value would be lost. The extent of additional land required during the construction period will be minimised.

19.8.2. In respect of recreational land uses, construction mitigation measures will follow industry best practice and are expected to include:

- Advance notice of temporary closures and diversions
- Appropriate information to the public on phasing of the works
- As set out in the ES chapters, appropriate general mitigation of potential impacts that potentially might affect PROW users
- Minimise period of temporary closures
- Appropriate signing of new routes and other changes

19.8.3. There is a adverse effect through land loss at Highridge Common, however this is mitigated by replacement with more than 3 times the amount of exchange land and by providing appropriate access to this land. The exchange land will be managed to bring it to a similar state to the common land lost.

Severance

19.8.4. On Parsonage Farm a gated crossing for farm vehicles will be provided on the SBL for farm vehicles. Additionally, access for Parsonage Farm will be retained by the provision of an underbridge at Longmoor Brook.

19.8.5. Castle Farm’s vehicles and livestock will cross the SBL to the adjacent easterly field (north of the A38) by means of an accommodation track and gated crossing.

19.8.6. Existing field gateways on the A38 leading to land owned by Wring and Burnell, will be relocated.

19.8.7. South of the A38, the main parcels of land owned by Hill, Gianetto and Burnell would be accessed by gateways off the SBL.

19.8.8. Very small, unusable parcels of severed land owned by Hill, Gianetto, Burnell and Case would not be provided with access and used instead for landscaping.

19.8.9. The scheme design gives rise to a slight adverse severance effect at Highridge Common through the effective widening of Highridge Green and an adverse severance effect at the Reserved Corridor and some rural PROWs through the creation of a new road source. Where existing routes now require to cross the SBL mitigation includes the use of under bridges, central safety reservations and signal controlled pedestrian and cycle crossings.
Drainage

19.8.10. Ditches and field drains affected by the Scheme would be diverted or restored, as necessary. Mitigation ensures no worsening of existing conditions and betterment where possible.

Water Supply

19.8.11. Water troughs and water supplies would be re-provided, as necessary. Mitigation ensures all existing practices can continue and betterment is achieved where possible.

Accessibility

19.8.12. The scheme design gives rise to positive beneficial effects in terms of accessibility through the provision of a new orbital route which addresses network shortfalls in rural and urban connectivity. No additional mitigation is required.

Amenity

19.8.13. The further mitigation of impacts having a detrimental effect on amenity is variously covered in the other chapters of this ES and relate in particular to construction. Mitigation of such impacts would be incorporated in a suitable Construction Environmental Management Plan for the Scheme.

Construction Impacts

19.8.14. The extent of land required for construction works may be slightly greater than that shown in column 3 of Table 19.4 but it is not possible to confirm the exact extent of the land needed for construction at this stage. All land needed for construction purposes will be within the red line boundary as shown on the application plans. The quality and quantity of soil on site would be maintained by implementing appropriate techniques for stripping, storing and re-use. This approach would be adopted in a Soil Handling and Management Strategy (SHMS), which will form part of the Construction Environmental Management Plan (CEMP).

19.8.15. Where possible, loss of agricultural and recreational land has been minimised by careful engineering design to include sensitive landscape works and restoration of disturbed land. Agricultural land required on a temporary basis will be reinstated once works are complete. Additionally, the contractor will be required to agree a programme for the temporary and permanent closure of PROWs and opening of diversions where required to serve existing walking and cycling networks. These will be capped to the minimum necessary to balance public safety during construction and continued public use of rights of way which cross the scheme.
Residual Effects

19.8.16. Impacts, proposed mitigation and residual effects for the affected holdings are summarised in Appendix 19.1 (Volume 3). There are two commercial farms (Parsonage and Castle) for which it is possible to assess the significance of effect according to the significance criteria in Table 19.1. The remaining holdings are small and not commercially viable, in their own right and are let on annual grazing tenancies or used for equestrian purposes. It is not possible to assess the significance of the effects according to those significance criteria. In these cases only the impacts and proposed mitigation are given.

19.8.17. The residual effect of the Scheme is assessed as moderate adverse on Parsonage Farm. An assessment of whether dairying would be viable on the reduced grazing area will depend on the specific financial circumstances of the farm and will be the subject of further discussion with the stakeholders. This issue is beyond the scope of the EIA, and the impact on the farm is assessed only on the basis of landtake and mitigation to overcome severance.

19.8.18. The effect of the Scheme on Castle farm is assessed as minor adverse.

19.8.19. If the affected holdings remain in farming for some years following the Scheme’s completion, some of the adverse effects may have diminished, while none would have increased.

19.8.20. The effects of land take and severance may become less significant if farms are reorganised or alternative land is acquired. However, this would depend on there being land available locally to buy or rent and the affected landowners being able to acquire it. Bristol is a region where land for sale or rent is currently in short supply and much of what is for sale is in small lots for pony paddocks.

19.8.21. The residual significance of effects from the SBL on recreational land are summarised as follows and in further detail at Appendix 19.2 (Volume 3):

- **Loss**
  - Recreational routes: SBL does not result in the loss of recreational routes for walking or cycling across the entire route corridor. Footpaths which are intersected by SBL are subject to localised diversions and will be re-provided at their point of intersection with the scheme. This gives rise to an overall neutral effect;
  - Amenity spaces: SBL provides an overall net increase in amenity spaces, across three sites that is Open Space North of the Railway Line, Highridge Common and the Reserved Corridor, whilst acknowledging that this includes the loss of some land at the reserved corridor. This gives rise to an overall beneficial effect.

- **Severance**:
  - Recreational routes: SBL does not result in any the severance of recreational routes for walking or cycling across the route corridor with the exception of at the reserved corridor. Footpaths which are intersected by SBL are subject to localised diversions and will be re-provided at their point of intersection with the scheme. This gives rise to an overall adverse effect;
  - Amenity spaces: The SBL scheme proposals promote connectivity throughout each of the affected amenity spaces in a manner which is similar to their present functionality. The effects of the scheme at the reserved corridor cannot be fully mitigated, however, and as a result this gives rise to an overall adverse effect;

- **Accessibility**: The scheme gives rise to the beneficial effect of providing a new orbital recreational and cycle route, which addresses existing shortfalls in rural and urban connectivity and significantly reduce journey times. Existing adopted PROWs and informal footpaths which are intersected by the SBL route corridor are diverted at point
of intersection and integrated into the existing footpath network and, in most cases, into
this recreational route. This gives rise to an overall beneficial effect;

- **Amenity:** Recreational land, PROWs and informal footpaths which are
  intersected/otherwise affected by the SBL are subject to significant adverse amenity
  effects by virtue of their proximity to a new source of traffic road noise and associated
  visual impacts of the new highway structures. **This gives rise to an overall adverse
  effect.**

### 19.9. Consideration of Likely Cumulative Effects

19.9.1. It is not considered that there are any known developments that would give rise to
cumulative effects on the land holdings within the scheme area.

19.9.2. The sum of the works necessary to divert the PROW that runs adjacent to Colliters Brook
northwards will be undertaken as part of the AVTM construction. This will add to impacts
arising from temporary closure/diversion of the PROW resulting from the SBL proposals.
No buses will use the SBL bus only link until the AVTM link into the P&R site is open.
Once AVTM is complete there will be limited cumulative effects from AVTM bus traffic that
also uses SBL.
19.10. Summary and Conclusions

19.10.1. The South Bristol Link passes through agricultural land, mostly used for grazing. A total of 15 ha of agricultural land is permanently required for the Scheme. Less than 10% of this is estimated to be of BMV quality.

19.10.2. The significance of this loss of 15 ha is assessed as only very minor adverse in terms of the national and local land resource.

19.10.3. Land will be acquired from two commercial farms, one equestrian establishment, and four small parcels let on annual grazing tenancies. With mitigation the residual effect is overall assessed as moderate adverse on Parsonage Farm and minor adverse on Castle Farm. The four smaller agricultural holdings are not commercially viable in their own right due to their size, irrespective of the Scheme. The equestrian unit will lose a small amount of land but could still continue to function. Were Parsonage Farm to cease dairy farming, the land remains suitable for other agricultural land uses.

19.10.4. In respect of recreational land, SBL will not result in the loss or severance of recreational routes for walking and cycling. Though there will be some minor effect from the implementation of the necessary diversions. Where these are longer than the existing route it may be considered that there is some minor adverse impact that cannot be mitigated. The scheme gives rise to an overall net increase in recreational land available to affected amenity spaces and, whilst the effects of the scheme on severance cannot be fully mitigated, the scheme includes detailed proposals for the promotion of connectivity throughout each of the amenity spaces in a manner which is similar to their present functionality.

19.10.5. Significant amenity effects exist as a result of the proximity of the recreational land uses to a new source of road traffic noise and associated visual impacts of the new highway structures. These should be considered in light of enhancements to recreational accessibility provided through the proposed new orbital recreational and cycle route, which promotes urban and rural connectivity, significantly reduces journey times and integrates a wide number of existing PROWs.
19.11. References

- [http://maps.bgs.ac.uk/geologyviewer/](http://maps.bgs.ac.uk/geologyviewer/)
- [http://www.magic.gov.uk](http://www.magic.gov.uk)