BANWELL BYPASS

Environmental Statement

HIF Banwell Bypass and Highways Improvements Project

Environmental Statement Chapter 7 - Landscape

BNWLBP-TACP-EGN-XXXX-RP-LE-000005

P05 | S4

01/07/22

Document Verification

Project Title	HIF Banwell Bypass and Highways Improvements Project
Document Title	Environmental Statement Chapter 7 - Landscape
Document Reference	BNWLBP-TACP-EGN-XXXX-RP-LE-000005
Project Stage	1B
Document Status	**P05 | S4 - FOR PLANNING APPLICATION**

Approvals

Revision	Status	Role	Name	Date
P05	**S4**	**Author**	Luci Clark	30/06/22
		Checker	Jo Wall	01/07/22
		Approver	Tom Edwards	01/07/22
		Authoriser	Mark Jenkins	01/07/22

Revision History

Revision	Date	Description	Author
P05	30/06/22	ISSUE FOR PLANNIGN SUBMISSION	LC
P04	30/05/22	REVISION TO TABLE 7.9.1	LC
P02	04/04/22	SECOND ISSUE FOLLOWING COMMENTS	SD
P01	22/01/22	FIRST DRAFT	SD

Contents

7 Landscape

7.1 Introduction

7.1.1 The purpose of this landscape character and visual impact assessment is to assess the potential effects of the Scheme on the landscape and visual amenity of the surrounding area. It describes the methods used to establish the study area of the assessment and the baseline landscape and visual resources found within it. This baseline has been used to assess the potential direct and indirect effects of the Scheme considering the sensitivity of the landscape and visual amenity. Where adverse effects have been identified, mitigation measures to prevent, reduce or offset these effects have been considered together with relevant planning policy requirements. The Scheme is shown within the local setting on Environmental Statement (ES) Volume 2 Figure 7.1 – Landscape Constraints.

7.1.2 As an infrastructure project, the impact assessment methodology used in the preparation of this chapter follows the guidance set out in (DMRB) LA 107 Landscape and Visual Effects Revision 2, Landscape Effects (February 2020) and (DMRB) LA 104 Environmental Assessment and Monitoring Revision 1 (August 2020). These have been further developed from the previous 'DMRB Interim Advice Note (IAN) 135/10 Landscape and Visual Effects Assessment (November 2010) and draws from Guidelines for Landscape and Visual Impact Assessment (GLVIA); Third Edition Landscape LI and IEMA 2013.

7.1.3 This Chapter (and its associated figures) are not intended to be read as a standalone assessment, reference should be made to both ES Volume 1- Chapter 6 - Cultural Heritage and Chapter 8: Biodiversity of this ES, with which this landscape and visual assessment is closely linked. The Landscape Effects chapter has also taken account of the mitigation measures required as part of other disciplines included within the EIA, most notably those include ES Volume 1 - Chapter 11 - Noise and Vibration, Chapter 13: Road Drainage and the Water Environment and should be read in conjunction with ES Volume 1 - Chapter 16 - Environmental Management. The mitigation is shown on the Planning Documents - Environmental Masterplans.

7.1.4 This chapter complies with the Environmental Impact Assessment – Combined Screening and Scoping Report (July 2021), refer to ES Volume 1 - Chapter 1 Section 1.8. and ES Volume 3 - Appendix 1.C - NSC Local Planning Authority Scoping Opinion Report and ES Volume 3 - Appendix 1.D - EIA Combined Screening and Scoping Consultation. It has been updated and revised in accordance with the latest site surveys and construction information as of June 2022.

7.1.5 The purpose of this chapter is to identify likely significant landscape and visual issues which would result from the Scheme at both construction and post construction stages. This chapter focuses on the landscape and visual receptors and viewpoints considered most likely to be affected by the Scheme.

7.1.6 The chapter is set out under the following headings:

a) **Methodology** – a brief summary of the methodology is included here and sets out how the assessment was undertaken and any limitations, constraints encountered, and assumptions made. The full methodology can be found in ES Volume 3 - Appendix 7.1 - LVIA Methodology.

b) **Baseline Conditions: Study Area** - this section describes how the study area has been determined, its description in terms of landscape elements and form and character areas, designations within or close to the Scheme and the results of the scoping of the Landscape and Visual Impact Assessment (LVIA).

c) **Predicted Environmental Effects** – this section provides a description of the proposals and sets out the potential landscape and visual impacts and their significance arising from the construction and operational phases. It then assesses the cumulative impacts without mitigation.

d) **Proposed Mitigation** – this section sets out the general approach to the development of the design and the adopted mitigation measures incorporated into both the construction and operational phases.

e) **Residual Environmental Effects** – this section sets out the potential residual landscape and visual effects and their significance following mitigation at both construction and operational phases.

f) **Monitoring and Maintenance** – this section addresses the monitoring and maintenance recommendations for the future management of the Scheme.

g) **Summary and Conclusions** – this section provides a summary of the above sections.

7.1.7 The chapter should be read in conjunction with the Figures 7.1 to 7.10 and Appendices 7.A, 7.B, 7.C and 7.D:

Table 7 - 1 Landscape Figures and Appendices

Figure No.	Title
7.1	Landscape Constraints
7.2	Environmental Constraints
7.3	Landscape Topography
7.4	Scheme Landscape Character Areas
7.5	Zone of Visual Influence / Study Area
7.6	Existing Vegetation Framework
7.7	Visual Effects Drawings (Properties)
7.8	Photographic Viewpoints: Locations
7.9	Photographic Viewpoints: Summer and Winter
7.10	Landscape Mitigation: Illustrative Sections
Appendix No.	**Title**
7.A	LVIA Methodology
7.B	Landscape Strategy
7.C	Visual Effects Schedules
7.D	Arboricultural Impact Assessment and Method Statement

Scheme Overview

7.1.8 The following section provides a brief description and overview of the Banwell Bypass and Highways Improvements Project.

7.1.9 The Scheme comprises the following distinct elements:

a) a bypass of the village of Banwell (referred to as the “Banwell Bypass”);

b) a route connecting the A371 at Castle Hill and the A368 at East Street (referred to as the “Southern Link”); and

c) Mitigation and enhancement measures, which broadly consist of the following:

- Environmental mitigation and enhancement measures in connection with the Banwell Bypass and the Southern Link, examples of which include (but are not limited to) flood compensation areas, planting and habitat creation, attenuation basins etc.

- Placemaking improvements within Banwell, comprising mitigation and enhancement measures to the public realm; and

- Traffic mitigation in connection with the Banwell Bypass and the Southern Link, including Improvements to the wider local road

network.

7.1.10 Together, these elements comprise the “Scheme”. Each element as listed is described in more detail below.

Banwell Bypass

7.1.11 The Banwell Bypass would be located within the administrative area of North Somerset. The village of Banwell is located approximately 8km east of Weston-super-Mare. The Banwell Bypass would primarily consist of:

d) signalisation and capacity improvements to the Summer Lane/ Wells Lane junctions on the A371;

e) a 40mph single carriageway Banwell Bypass, connecting the existing A371 (east of Summer Lane) to A368 (west of Towerhead Farm);

f) a 3 metre wide shared use path provided along the majority of the Banwell Bypass providing a link from Weston-super-Mare to Sandford;

g) Banwell West Junction - a three arm roundabout located east of Knightcott Industrial Estate at the western end of Banwell;

h) Wolvershill Road Junction – a traffic signalised junction, providing access for all users to the west, east, and north. Access to the south would be restricted to public transport and walking, cycling and horse-riders, and limited agricultural access only;

i) Banwell River Bridge – an overbridge across Riverside and the River Banwell. There would not be a direct connection between Riverside and the Banwell Bypass;

j) Moor Road to Riverside Link - a side road connection between Riverside and Moor Road; and

k) Banwell East Junction - A three-arm traffic signalised junction, with dedicated turning lanes from the bypass towards the Southern Link.

Southern Link Road

7.1.12 The Southern Link will provide the new primary route south to Winscombe, as Castle Hill and Dark Lane are proposed to be stopped up. The Southern Link would be a 30mph single carriageway, connecting the A368 (East Street) to the A371 at Castle Hill. The Southern Link would be located within the Mendip Hills AONB. The Southern Link would link into the Banwell Bypass at the Banwell East Junction. A T-junction

located along the Southern Link would provide access into the east of Banwell (at East Street).

Mitigation Measures

Environmental mitigation and enhancement measures in connection with the Banwell Bypass and the Southern Link.

7.1.13 The Scheme would include mitigation measures which are provided to offset the impact of the Banwell Bypass proposal. These include (but are not limited to):

a) flood mitigation to ensure that the Banwell Bypass does not increase flood risk for third-party properties;

b) land for essential mitigation, such as ecology and landscape mitigation;

c) sustainable urban drainage systems (e.g. attenuation basins and swales), and additional groundwater mitigation, to prevent adverse water quality impacts (including the Source Protection Zone); and

d) replacement land to mitigate the impact of the scheme on Banwell Football Club.

Placemaking improvements within Banwell

7.1.14 As a result of the Banwell Bypass, there would be a reduction in traffic through Banwell. The reduction in traffic (and resulting reduction in congestion) through the village could result in higher traffic speeds without mitigation.

7.1.15 A reduced 20mph speed limit through Banwell would discourage vehicles from travelling at higher speeds, whilst also discouraging the use of the road as a through route (instead of the Banwell Bypass).

7.1.16 The reduction of traffic through Banwell due to the provision of the Banwell Bypass provides the opportunity to make improvements to the existing road and public spaces within Banwell to enhance the historic and urban setting of the village. These improvements would include, but are not limited to:

a) Alteration to the road and footways including resurfacing, widening, and narrowing (which would encourage drivers to comply with the posted 20mph speed limit);

b) Incorporation of active travel measures;

c) Soft landscaping and ecological improvements; and

d) Street signage improvements.

Improvements to the wider local road network

7.1.17 Improvements to the local road network and junctions including the surrounding villages of Churchill, Sandford and Winscombe are proposed to mitigate increases in traffic as a result of the Banwell Bypass and Southern Link. These mitigation measures would consist of:

a) Lowered speed limits:
   - 20mph: A368 through Churchill, A368 through Sandford, A371 through Winscombe.
   - 30mph: A368 between Churchill and Sandford Villages.

b) Gateway Features when entering and exiting the villages of Sandford, Churchill and Winscombe;

c) Non-physical traffic calming measures through and between villages (e.g. road markings and speed signage);

d) Capacity improvements to the Churchill Junction (A38/ A371);

e) Provision of new/ improvements to existing pedestrian and cycling crossings;

f) Active travel measures along the A368, with improved footway/ cycleway access from Churchill and Langford to Churchill Academy;

g) Improvements to footways, shared pedestrian, and cycleway; and

h) Soft landscaping, native planting, rewilding, and ecological enhancements.

Context

7.1.18 North Somerset Council's (NSC) Housing Infrastructure Fund (HIF) proposal supports potential housing sites (subject to the emerging Local Plan 2038).

7.1.19 A business case was submitted to Homes England to secure funding for a package of infrastructure improvements in February 2019 and a successful funding announcement was made at the end of October 2019.

7.1.20 The Banwell Bypass would provide a highway connection to enable potential housing sites that may be allocated in the emerging Local Plan and alleviate the anticipated impact of further traffic growth upon the already congested Banwell village.

7.1.21 NSC appointed Alun Griffiths (Contractors) Ltd, with Arup and TACP (the

'AGC Team') as their technical and environmental advisors, to develop a solution including optioneering, design and planning support of the proposed HIF Banwell Bypass and Highways Improvements Project Stage 1 (the "Scheme"). Stage 1 of the project includes: optioneering; preliminary design; Environmental Impact Assessment (EIA); planning permission; Statutory Processes. Stage 2 of the project is the detailed design and construction phase, following planning determination and land acquisition.

Environmental Context

7.1.22 The Scheme crosses the North Somerset Levels which are characterised by flat open landscape of arable land divided by hedgelined ditches and rhynes. These have been inhabited and exploited for thousands of years. Much of the area lies within a designated flood zone.

7.1.23 Banwell lies to the immediate north of the Mendip Hills Area of Outstanding Natural Beauty (AONB). The Southern Link lies within the boundary of the AONB and within a groundwater Source Protection Zone. Whilst the Mendip Hills AONB is not a designated International Dark Sky Reserve (IDSR), it is well known for its dark sky environment.

7.1.24 There are five Scheduled Monuments in the vicinity of the Scheme, the closest of which is a Romano-British villa. There are numerous Grade I, II* and II listed buildings within Banwell and its vicinity. The centre and east of Banwell is designated as a Conservation Area.

7.1.25 The North Somerset and Mendip Bats Special Area of Conservation (SAC), which includes ancient woodland, lies adjacent to the A368 and the eastern junction of the Scheme. The Banwell Ochre Caves and Banwell Caves Sites of Special Scientific Interest (SSSI) are designated for their geology and overlap with the North Somerset and Mendip Bats SAC, providing hibernation sites for Greater Horseshoe bats. The wider area provides habitat for a variety of protected and notable species including dormouse, grass snakes, otter, badger, kingfisher and several species of bat.

7.1.26 The Scheme is dissected by the River Banwell which flows northwards along Riverside. It is classified as a main river and is the source of the River Banwell Estuary.

7.1.27 There is an extensive Public Right of Way (PRoW) network in and around Banwell which includes well-used bridleways. To the east of Banwell,

north of the A368 (Towerhead Road) lies a 7.2 MW photovoltaic power station (Banwell Solar Farm).

Scheme objectives

7.1.28 NSC's overall objectives for the Scheme are to deliver, within cost, quality, and programme targets:

a) Improve the local road network to deal with existing congestion issues.

b) Improve and enhance Banwell's public spaces by reducing traffic severance and improving the public realm.

c) Provide the opportunity to increase active and sustainable travel between local villages and Weston-super-Mare.

d) Deliver infrastructure that enables housing development (subject to Local Plan).

e) Ensure the development respects the local area and minimises visual impact upon the surrounding countryside and Mendip Hills Area of Outstanding Natural Beauty (AONB).

f) Innovative and efficient in reducing and offsetting carbon from the design and construction of the infrastructure.

g) Ensure the development provides the opportunity to increase Biodiversity Net Gain by at least 10%.

h) Proactively engage with stakeholders in a way that is both clear and transparent.

7.2 Competent Expert Evidence

7.2.1 The LVIA for this Landscape Effects Chapter has been undertaken by Luci Clark BA Dip LA (Hons) a Chartered Landscape Architect (CMLI) with over 23 years of professional expertise in landscape and environmental impact assessments.

7.3 Legislation and Policy Framework

7.3.1 Legislation framework: The European Landscape Convention (2000) (ELC) provides a basis for closer co-operation on landscape issues across Europe. It was ratified in the UK on the 21st November 2006 and became binding on 1st March 2007. The ELC highlights the need to recognise landscape in law, to develop landscape policies dedicated to

the protection, management and creation of landscapes, and to establish procedures for the participation of the general public and other stakeholders in the creation and implementation of landscape policies. It also encourages the integration of landscape into all relevant areas of policy, including cultural, economic and social policies.

7.3.2 The ELC defines landscape as '*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors'*. It recognises that landscape has important cultural, ecological, environmental and social dimensions and is a key element of achieving sustainable development.

7.3.3 The UK is recognised as already putting many of the principles of the ELC into practice. The importance of landscapes in contributing to local identity and in reflecting local cultural influences and ecological diversity is shown through the Joint Character Area Map of England (former Countryside Commission and English Nature, 1996) through the use of Landscape Character Assessments and to inform Planning Policy.

7.3.4 The ELC is a convention of the Council of Europe (CoE) and not the European Union (EU), Therefore, the withdrawal of the United Kingdom from the EU, does not affect the status of this convention as the UK remains a signatory to the CoE.

National Planning Policy Framework

7.3.5 The National Planning Policy Framework (NPPF) which was updated in July 2021, sets out the Government's planning policies for England. The NPPF is a material consideration in determining a planning application.

7.3.6 The NPPF provides a commitment to the achievement of sustainable development through appropriate planning, with paragraph 7 explicitly stating: '*The purpose of the planning system is to contribute to the achievement of sustainable development.'*

7.3.7 Paragraph 8 of the NPPF sets out three overarching objectives to achieving sustainable development through the planning system; economic, social and environmental. Paragraph 8 c) of the NPPF states the environmental objective is"'… to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.' Paragraph 11 of the NPPF

requires that regional and local planning policy should have "… a presumption in favour of sustainable development".

7.3.8 Of relevance in relation to landscape and visual effects is **Section 12: Achieving well-designed places**, notably paragraph 126 which states that, '*Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities*.' Whilst these statements are principally aimed at the built and architectural environment, they are also applicable to infrastructure development.

7.3.9 Paragraph 130 of the NPPF states that Developments should ensure that they;

a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;

b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;

c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);

d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;

7.3.10 The NPPF, paragraph 131, also goes on to recognise the importance contribution trees and ecological habitats make to the character and quality of urban (and infrastructure) environment and their role in mitigation and adaption to climate change.

7.3.11 The preservation and enhancement of the environment is further reinforced in **Section 15: Conserving and enhancing the natural environment.** Specifically, paragraph 174 which states;

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

d) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.'

7.3.12 In relation to heritage assets and townscape, the Government's objective is for Local Authorities to create policies that set out a positive strategy for the conservation and enjoyment of the historic environment, taking into account, *'the desirability of new development making a positive contribution to local character and distinctiveness; and opportunities to draw on the contribution made by the historic environment to the character of a place'.* (paragraph 190 NPPF).

7.3.13 Of further relevance to this chapter and the Scheme assessment is **Section 14: Meeting the challenge of climate change, flooding and coastal change**, paragraph 153, which states, '*Plans should take a proactive approach to mitigating and adapting to climate change, taking into the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures.'*

7.3.14 New developments should be planned to, '…avoid increased vulnerability to the range of impacts arising from climate change' and that, '… care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure.' (paragraph 154 NPPF).

Local Planning Policy Framework
North Somerset Council: Core Planning Strategy

7.3.15 The Scheme falls within the unitary planning authority of North Somerset Council (NSC). The Core Strategy (NSC CS) (Planning Policy and Research Development and Environment, North Somerset Council[1], 2017) is the main planning document which guides development choices and decisions in North Somerset. The strategy was adopted in January 2017.

7.3.16 The policies of NSC including those within the NSC CS and The Development Management Policies with relevance to the natural environment and specifically to the landscape setting, design and implementation of the Scheme are listed Table 7 - 2 below;

Table 7 - 2 Planning Policy

Policy		Relevant Details of Policy	Pg. no.
North Somerset Council Core Strategy Policies			
CS3	Environmental impacts and Flood Risk Management	Recognises that much of North Somerset is low lying and therefore susceptible to flood risk and climate change and looks to accommodate and future proof development 'Sustainable drainage systems (SuDS) are the preferred approach to dealing with surface water run-off. Planning for major developments should explore 32 possibilities for SuDS, especially as part of multi-functional green infrastructure.'	32
CS4	Nature Conservation	Recognises that North Somerset contains some outstanding wildlife habitats and species and that the enhancement, retention and protection of these habitats are an important consideration of new development and therefore of its landscape treatment and understanding. Stating that the biodiversity of North Somerset will be maintained by, '…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; seeking to protect, connect and enhance important habitats, particularly designated sites, ancient woodlands and veteran trees; promoting the enhancement of existing and provision of new green infrastructure of value to wildlife; promoting native tree planting and well targeted woodland creation, and encouraging retention of trees, with a view to enhancing biodiversity.' It further states the importance of allied strategies and for the retention and protection of existing trees habitats and species, 'The policy reflects the importance of strategies very relevant to biodiversity, including the emerging Green Infrastructure Strategy. Green infrastructure includes linear green space which can provide valuable wildlife corridors. 3.68 The policy reflects the importance of trees for biodiversity, and regard must be had to the Biodiversity and Trees SPD, which includes guidance for developers on planning for biodiversity; e.g. screening for the presence of biodiversity, undertaking tree and ecological surveys and planning to protect, retain and manage existing trees, habitats and species.'	36 38

Policy		Relevant Details of Policy	Pg. no.
CS5	Landscape and the Historic Environment	Recognises the importance of North Somerset's landscape, and the need to protect and enhance its diversity, distinctiveness, and quality: '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. The Mendip Hills AONB will be protected by ensuring that development proposals conserve and enhance its natural beauty and respect its character, taking into account the economic and social well-being of the area'.	40
CS9	Green Infrastructure	This policy recognises the importance and opportunities provided by the inclusion of green infrastructure in new development for the biodiversity, social and health and wellbeing aspects of the landscape. It stipulates that the, '…existing network of green infrastructure will be safeguarded, improved and enhanced by further provision, linking into existing provision where appropriate, ensuring it is a multi-functional, accessible network which promotes healthy lifestyles, maintains and improves biodiversity and landscape character and contributes to climate change objectives.' Of specific relevance to this assessment are the following, '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 promotion of the north slopes of the Mendip Hills AONB as sub-regional corridors for biodiversity, recreation and landscape retention; the promotion of the Congresbury Yeo, River Banwell, North Somerset Levels and Moors, and Grumblepill Rhyne as local corridors for biodiversity and landscape enhancement;' and, 'the continued development of a network of green spaces, water bodies, paths and cycleways and bridleways in and around the urban areas, recognising the value of sustainable drainage systems for green infrastructure.'	52
CS10	Transportation and Movement	Identifies Banwell Bypass as one of the key infrastructure projects for the plan period, stating that, with relevance to landscape issues they should,	55

Policy		Relevant Details of Policy	Pg. no.
		'enhance the facilities for pedestrians, including those with reduced mobility, and other users such as cyclists;' and, 'improve road and personal safety and environmental conditions; reduce the adverse environmental impacts of transport and contribute towards carbon reduction.'	
CS12	Achieving High Quality Design and Place Making	This policy recognises that, 'North Somerset Council is committed to achieving high quality buildings and places across all of North Somerset,' as part of the design process projects should,'…generate solutions that have clearly considered the existing context, and contribute to social, economic and environmental sustainability. As part of a comprehensive place-making strategy new development should function well, supporting sustainable land uses and seek to improve the image of the area.'	61
Development Management Policies: Site and Policies Plan			
DM9	Trees and Woodlands	Aims to, 'Incorporate existing trees and wooded areas into design proposals where practical. Ensure the planting of new trees is properly designed and adequately maintained in the longer term and recognise the place-making quality of trees.' Stating that, the development should, 'Include, where practical, the introduction of appropriate new tree planting and woodland creation as an integral part of the design and landscaping of new developments, using native species of local origin wherever possible,' and, 'provide a plan for the management of wooded areas that balances the protection and enhancement of biodiversity with increased opportunities for recreation and play.'	25
DM10	Landscape	Aims to, "protect and enhance the diversity, quality and distinctive qualities of the landscape of North Somerset, as identified in the North Somerset Landscape Character Assessment. Protect dark skies from light pollution and areas of greatest tranquillity from development." Stating that, the development should:	28

Policy		Relevant Details of Policy	Pg. no.
		a) Not have an unacceptable adverse impact on the designated landscape character of the district as defined in the Landscape Character Assessment Supplementary Planning Document (2005) and respond to the distinctive qualities of the landscape…' b) Be carefully integrated into the natural, built and historic environment, aiming to establish a strong sense of place, respond to local character, and reflect the identity of local surroundings, whilst minimising landscape impact.' c) Respect the tranquillity of an area. d) Include appropriate landscaping and boundary treatments in the Scheme. e) Conserve and enhance natural or semi-natural vegetation characteristic of the area. f) Respect the character of the historic landscape including features such as field patterns, watercourses, drainage ditches, stone walls and hedgerows. g) Where outdoor lighting is proposed adopt a lighting scheme which minimises obtrusive light and where dark skies are an important feature of the area.'	
DM11	Mendip Hills AONB	This policy aims, 'To ensure that development would not harm the natural beauty of the AONB and that the priority consideration for all proposed development impacting on the AONB is the conservation, protection and, where possible, enhancement of its natural beauty. To meet the economic and social needs of the local communities and the demand for recreation so far as this is consistent with the conservation of the natural beauty of the area and to protect views to and from the AONB.'	30
DM19	Green Infrastructure	Aims, 'To ensure new development contributes to the safeguarding, improvement and further provision of North Somerset's green infrastructure and that the provision of multi-functional, inter-connected and adaptable green infrastructure is taken into account in the design and layout of new development proposals.'.	52

Policy		Relevant Details of Policy	Pg. no.
		Of specific landscape relevance is that the development should be, 'designed to promote and enhance local diversity and distinctiveness.' The policy goes on to note that GI,' can enhance the townscape and visual amenity, promote a sense of place and community identity, and improve the health and sense of well-being of people' and that, 'Trees are important elements, contributing to the value of green infrastructure, notably regarding landscape and in combating climate change. Attenuation basins and other sustainable drainage systems are other elements, often having ecological, landscape, recreational and educational benefit.'	
DM20	Major Transport Schemes	Includes Banwell Bypass and aims to: "protect proposed major transport schemes from inappropriate development and show the safeguarded areas on the Policies Map."	54
Supplementary Planning Guidance			
SPG	North Somerset Council Landscape Character Assessment – Supplementary Planning Guidance, (Wardell Armstrong, 2018[2])	Adopted as Supplementary Planning Guidance in September 2018 the assessment provides a refinement of National Character Areas (NCA) on a more regional/local scale. The Landscape Character Areas affected by the Scheme are discussed in more detail within the Landscape Baseline.	
Supplementary Planning Document			
SPD	Creating Sustainable Buildings and Places in North Somerset (2021)	Adopted initially in 2015 and revised in 2021 in response to the declared Climate Emergency (2019) the SPD reinforces NSC policies relating to Climate change and adaptation requiring developers to demonstrate how they would achieve sustainability, climate resilience as part of the design (CS1: Addressing Climate change and Carbon Reduction). It also refers to CS9: relating to Green Infrastructure and to rewilding.	
SPD	Biodiversity and Trees (2005)	The SPD aims to encourage developers, "…*to consider the potential of their development in making a contribution to the biodiversity objectives and targets for particular types of habitat and species found in North Somerset. In this way the aim of no net loss of biodiversity within North Somerset should be achieved*." It is also closely allied with the Landscape Character Assessment, the North Somerset Waste Plan, Mineral Working Plan and Regional Planning Guidance. It seeks to further the actions of the national, regional and local Biodiversity Action Plans. Habitat Action Plans of particular relevance to the Scheme are as follows:	

Policy		Relevant Details of Policy	Pg. no.
		a) Woodlands b) Field boundaries and linear features c) Species rich grasslands d) Fen, marsh and swamp e) Standing open water f) Rivers and Streams g) Urban h) Traditional Orchards With species of relevance including. a) Otter b) Water vole c) Greater horseshoe bat d) Water shrew Trees in particular are highlighted as important amenity features in both urban and rural settings with key principles in considering trees within development as follows. a) Protect, retain and manage b) Enhance – all existing habitats c) Manage – to maintain integrity d) Monitor – important species and features e) Mitigate – to reduce adverse effects f) Compensate – where damage is unavoidable g) Comply – with all conditions or obligations	

North Somerset Council: Green Infrastructure Strategy (2021)

7.3.17 NSC issued a draft Green Infrastructure (GI) Strategy (January 2021) covering the period up to 2030. The document sets out a strategic framework for improving the, "*connectivity, quality, and overall provision of GI, in order to maximise environmental, social and economic benefits and address diverse policy requirements including health and wellbeing, biodiversity and climate change*." Throughout the county. It states that, *'Well planned and managed, functioning green infrastructure is crucial for people, places and nature and is a key component in tackling the nature and climate emergency.*'

7.3.18 The Strategy recommends that all new development, whether identified as part of the strategic GI network or not, should demonstrate how the provision, or quality improvements of GI, are delivered. It is further underpinned by adopted Core Policy and Development Management Policies at a strategic level. This runs in parallel with the wider regional co-ordinated strategy, the West of England Joint Green Infrastructure Strategy 2020-2030. This includes the authority areas of North Somerset, Bath and North East Somerset, Bristol and South Gloucestershire.

Banwell Conservation Area Appraisal and Management Plan (2021)

7.3.19 The Planning (Listed Buildings and Conservation Areas) Act 1990) requires local authorities to periodically review their existing conservation areas. It also requires NSC to publish proposals for the preservation and enhancement of conservation areas. This document has been particularly relevant to the development of the Banwell Placemaking proposals and in consideration of the wider mitigation measures associated with the Scheme.

7.3.20 Issues affecting Banwell Conservation Area of particular relevance to the Scheme identified include,

a) Walls and boundary treatments
b) Improving street furniture
c) Highway and utility maintenance
d) Traffic issues
e) Improving the historic interpretation of the village

Consultation

7.3.21 For full consultation refer to ES Volume 1 - Chapter 1 - Section 1.7. Landscape specific meetings and consultation have been held as follows.

Table 7-3 Consultation

Consultee	Date	Form of consultation	Main issues
Mendip Hills AONB, NSC, Statutory bodies	03 November 2021	Environmental Liaison Group Meeting	Review of environmental topics, progress on design and assessment.
Mendip Hills AONB, NSC, Statutory bodies	02 February 2022	Environmental Liaison Group Meeting	Review of environmental topics – with specific reference to AONB and landscape impacts.
NSC Officers	24 February 2022	Meeting	Outline review of requirements for noise mitigation on Scheme.
Mendip Hills AONB, Landscape Officer	10 March 2022	Telephone conversation	Review of initial landscape proposals, strategy and treatments and consideration of noise mitigation within the AONB, treatment of structures and constraints/opportunities for habitat creation and plant species.
NSC Landscape and Cultural Heritage officers	06 April 2022	Meeting	Review of visual impacts for noise mitigation on eastern, northern and southern Scheme. Particular reference to noise mitigation within the AONB.
Mendip Hills AONB, NSC, Statutory bodies	04 May 2022	Environmental Liaison Group Meeting	Review of environmental topics – with specific reference to AONB and landscape impacts.
NSC	11 May 2022	Meeting	Initial full review of Landscape chapter and summary of LVIA
NSC Officers Section 106	21 June 2022	Meeting/ review of documents	Landscape chapter review. Confirmation on Landscape Strategy method statements and detail design requirements
NSC Tree Officer	22 June 2022	Meeting	Landscape chapter review. Discussion on black poplar – whether hybrid or not to be confirmed and confirm requirement for detailed Method Statements for propagation and

Consultee	Date	Form of consultation	Main issues
			potential to translocate mature tree specimens if required. Further detail was also requested to provide method statements for translocation of existing hedgerow/woody vegetation. Clarify a 50m buffer zone to Banwell Woods Ancient woodland
Mendip Hills AONB	23 June 2022	Written consultation/ review of documents	Landscape chapter review. Clarification of lighting requirements for NSC – use of dimmable lighting and warm white to minimise visual impacts on nocturnal species. Clarification of use of Yellow rattle within species rich seeding mixes, verges and roundabouts. Potential opportunities to remove noise barrier on maturity of the landscape mitigation. Confirmation of Black poplar status – native/hybrid and replacements within the Scheme and as close to original location as possible.

7.4 Assessment Method

7.4.1 The impact assessment methodology used in the preparation of this assessment follows the guidance set out in (DMRB) LA 107 Landscape and Visual effects Revision 2 Landscape Effects (February 2020) and (DMRB) LA 104 Environmental Assessment and Monitoring Revision 1 (August 2020). These have been further developed from the previous 'DMRB Interim Advice Note (IAN) 135/10 Landscape and Visual Effects Assessment (November 2010) and draws from Guidelines for Landscape and Visual Impact Assessment (GLVIA); Third Edition Landscape LI and IEMA 2013.

7.4.2 Landscape effects and visual effects are separate but related topics. Assessment of landscape effects relate to the character and individual features that contribute to local and regional distinctiveness and the extent to which the proposals would alter the character and quality of landscape as a resource. For the landscape assessment, the landscape

itself is the resource, regardless of who can see the changes. Assessment of visual effects relates to the potential change in view from particular locations, as perceived by receptors.

7.4.3 The assessment of cumulative effects of this chapter topic both in-combination with other technical assessments on specific receptors and with other relevant developments have been assessed and are reported in the Cumulative Effects chapter, ES Volume 1 Chapter 15.

Landscape Character Assessment Methodology

7.4.4 Landscape is characterised by dividing the study area into geographical areas which have readily identifiable characteristics in common. These characteristics may include topography; other natural characteristics such as waterways; patterns of land use; urban grain; and building form.

7.4.5 Landscape effects can be described as the changes in the fabric, character, and quality of the landscape as a result of a development through:

a) Direct effects upon specific landscape elements;

b) Subtler effects upon the overall patterns of elements that give rise to landscape character and regional and local distinctiveness;

c) Effect upon special interests or values such as designated landscapes, conservation sites and cultural associations; and,

d) The capacity of the landscape to accept change of the Scheme proposed.

Visual Assessment Methodology

7.4.6 The process of Visual Assessment is undertaken through analysis of the site and changes to the site as an element in the view from representative viewpoints. This is done by determining the geographical area from which the site is visible, known as the Zone of Visual Influence (ZVI), Visual Envelope (VE) or Zone of Theoretical Visibility (ZTV). Once determined, a series of key representative viewpoints are chosen i.e., places within the VE from where it may be possible to see an aspect of the Scheme from publicly accessible viewpoints, such as roads, PRoW, residential receptors and areas of public open space. These would also include Valued Views i.e. views noted as valued by the public, such as known viewpoints, visitor attractions and popular leisure destinations – of specific relevance to this would be the visibility of all or any part of the

Scheme from within the Mendip Hills AONB.

7.4.7 The visual analysis aims to determine from which points the site can be seen in the surrounding landscape primarily up to 1km away, but potentially extending up to 3km away. Visual effects relate solely to changes in available views of the landscape and the effect of those changes on people, including:

a) The direct effects of the development upon views of the landscape through intrusion or obstruction;

b) The overall effect on visual amenity, be it degradation or enhancement; and

c) The reaction of viewers who may be affected.

7.4.8 A list of selected view locations was determined with the aim of providing a broad range of viewpoints from all points of the compass. Their locations are illustrated on ES Volume 2 - Figure 7.8 with Winter and Summer views at each location illustrated on ES Volume 2 - Figures 7.9 Photo sheet 1 to Photo sheet 25. Three broad categories of viewing location are considered for establishing viewpoints, that they should display or be representative of;

a) Typical landscape location, taken from north, south, east and west and in locations where the Scheme will be visible;

b) Locations of particular sensitivity, including those viewpoints in which the Scheme may affect the setting of the Mendip Hills AONB or essential settings of listed buildings, scheduled sites or structures and Banwell Conservation Area;

c) Locations where there is extensive open space between the viewer and the Scheme so that it will be prominent rather than obscured by foreground buildings or vegetation.

d) Views from Residential receptors have been included from adjacent publicly accessible viewpoints, where relevant this has been identified in the assessment text.

7.4.9 The GLVIA stipulates that the significance of any effect should be evaluated both during the construction phase and following completion of the development. The significance is determined by assessing the sensitivity and susceptibility of the receptor to the magnitude of change that will occur.

7.4.10 The assessment process aims to be objective and to quantify effects as

far as possible. However, Landscape Institute (LI) and Institute of Environmental Management and Assessment (IEMA) guidance recognise that subjective judgement is appropriate, if it is based upon, *'professional expertise supported by clear evidence, reasoned argument and informed opinion'.* Whilst changes to a view can be factually defined, the evaluation of landscape character and visual effects does require qualitative judgements to be made. The conclusions of this assessment therefore combine objective measurement with subjective professional interpretation. Changes can result in adverse or beneficial effects or can be perceived as a change to the environment without resulting in a significant effect. Effects for both Landscape and Visual impacts are categorised as Very Large, Large, Moderate, Slight and Neutral.

a) Very Large and Large (adverse) significance of effects are considered to be material in the decision-making process.

b) Moderate adverse effects can be considered to be material decision-making factors.

c) Slight adverse are not considered to be material in the decision making process, whilst

d) Neutral effects are categorised as having No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

7.4.11 In borderline conditions cross category assessments between Slight/Moderate are identified. For visual impacts these often apply to locations where receptors of varying sensitivity generate a wider significance of effect. This is identified within the assessment text and a description given to clarify the significance.

7.5 Assessment Assumptions and Limitations

7.5.1 The LVIA site assessment was undertaken in September 2021, based on the Winter viewpoints identified as part of the Combined Screening and Scoping Report (refer to ES Volume 3 - Appendix 1.B - WSP EIA Combined Screening and Scoping Report) and agreed with NSC.

7.6 Baseline Conditions

7.6.1 A number of site visits and surveys have been made in the course of undertaking this assessment, these comprised:

a) Walkover site visit undertaken by Chartered Landscape Architect and Environmental Co-ordinator 8th April 2021

b) Site visit undertaken on 29th and 30th September 2021 by the Chartered Landscape Architect undertaking the Landscape Effects assessment

7.6.2 Weather conditions for all visits were generally fair, clear and bright turning more blustery and inclement towards the afternoon on the 30th September 2022.

7.6.3 The site visits included a site-specific character analysis;

a) consideration of landform, vegetation pattern and landscape framework, human influence (built form and culture), activity (traffic, pedestrian, cyclist) and tranquillity,

b) outline assessment of known construction stage impacts, although these were only very outline at the time of visits

c) confirming agreed receptor locations; and

d) identifying visual and landscape receptors and confirming viewpoints.

Landscape Baseline

7.6.4 Desktop assessment and field surveys have been undertaken to identify and provide an overview of the study area for the Scheme. The following data sources have been used to establish the landscape baseline conditions:

a) Natural England National Character Area profiles http://publications.naturalengland.org.uk/file/5814513316134912 http://publications.naturalengland.org.uk/file/5754064333701120

b) North Somerset Landscape Character Assessment 2018 (SPG)

c) NSC Planning Policy map (http://map.n-somerset.gov.uk/dande.html)

d) MAGIC Map (www.magic.gov.uk)

7.6.5 For the purposes of this Chapter the following search areas have been used:

a) World Heritage Sites, National Parks and AONBs – 5km radius from the centre line of the Scheme;

b) Scheduled Monuments (SM) and Conservation Areas (CA) – 1km radius from the nearest Scheme boundary;

c) Listed Buildings: Grade I and II* – 1km radius from the centre line of the Scheme

d) Listed Buildings: Grade II – 0.5km radius from the centre line of the Scheme

e) Statutory nature conservation and wildlife Sites (Sites of Special Scientific Importance [SSSIs]; National Nature Reserves [NNRs] and similar) and Ancient Woodland - 1km radius from the centre line of the Scheme; and

f) Registered parks and gardens, National Parks or similar - 2km radius from the centre line of the Scheme.

7.6.6 The study area for the landscape character assessment considers National Character Area (NCA) profiles assessments developed by Natural England (NE) and regional character assessments and local landscape type assessments developed by the county planning authority (NSC). This hierarchy of assessment scales (national, regional and local) allows the character of the site to be placed in its wider context and helps to establish an understanding of the importance of the various features both locally and at a wider scale.

7.6.7 The Environmental Constraints are illustrated on Figure 7.2 with the Landscape topography illustrated on Figure 7.3.

Visual Envelope: The Study Area

7.6.8 In order to establish the study area for the Scheme and to identify receptors, a ZTV at a 3km offset from the Scheme has been generated using GIS to identify potential long-range views from surrounding areas. This was generated using a digital terrain model (2m gridded raster) and based on major proposed contours. Three levels of visibility have been generated;

a) The centre line of the Scheme taken from the 3D generated engineering model

b) An elevation taken at 4.2m above carriageway level to replicate HGV height

c) An elevation taken at 8 to 10m above carriageway level to replicate lighting column height

7.6.9 The ZTV assumes a viewer eye level height of 1.5m (as set out in GLVIA guidance). It does not take into account intervening vegetation, structures

or buildings and the visual screening they may afford.

7.6.10 The surrounding topography of the Scheme provides an initial indication of the VE that is refined by onsite assessment.

7.6.11 Following onsite visual assessments in September 2021, a more detailed VE has been developed that determines the short-range (0 to 1.5km) and medium-range (1.5 to 2.0km) visibility of the Scheme. The most likely affected visual receptors and their various sensitivities have been identified and grouped where they have a broadly common view.

7.6.12 The resulting VE has been taken forward as the study area for this landscape assessment. It encompasses the Scheme area itself together with the surrounding countryside as indicated on Figure 7.5.

7.6.13 The visual envelop defines the area over which it is reasonable to anticipate visual impacts occurring and includes the viewpoints assessed as part of the visual impact assessment. Consultation with Mendip Hills AONB and NSC has been ongoing since the early stages of project inception in 2018. As a result, representative view locations have been agreed in consultation with NSC S106 Officer and Mendip Hills AONB Landscape Officer. This has included a number of longer-range views taken from within the Mendip Hills AONB which lie outside the ZVI but have been included in this LVIA due to the sensitivity of this nationally designated area of landscape. These have further been reviewed to ensure full account is taken of the final route alignment option.

Landscape Designations

7.6.14 The Scheme and its associated study area has varying degrees of landscape protection both at the statutory and local level. These are illustrated on Figure 7.2 Environmental Constraints and 7.4 Scheme Landscape Character Areas and in

7.6.15 Table 7 - 3. They are then discussed in the following sections with the most significant being Mendip Hills AONB.

Table 7 - 3 Landscape Designations

Designation	Type/Scale	Description
Mendip Hills AONB	Statutory; National	The northern extent of the Mendip Hills AONB lies directly to the south of the Scheme extents with the Southern Link between the A368 and A371 entering into the AONB to the southeast of Banwell around Banwell Castle. The AONB

Designation	Type/Scale	Description
		Management plan sets out themes Objectives to achieve over the five year course of the plan.
AONB policies of specific relevance to the Scheme are listed under the heading of Development and Transport; **D1:** Working with the local planning authorities, ensure that development in the AONB and its setting is of a nature, scale, location and design that meets community need without compromising the special qualities of the Mendip Hills AONB. **D2:** Working with the local highways authorities, ensure that the special qualities of the AONB are fully respected in the planning, design, provision and management of all types of transport and associated infrastructure. **D5:** The impact of development on the protected landscape and the special qualities of the Mendip Hills AONB would need to be carefully considered, and where supported would require appropriate and acceptable mitigation measures.		
Cheddar Valley Railway Walk LNR	Statutory; Local	This follows the course of the former rail line known as the Strawberry Line. Much of the former trackbed has been redeveloped as a shared use recreational path including the NCN 26
Community Forest: Forest of Avon	Non-statutory; National	One of twelve community forest areas in England, covering around 57,0000 ha over South Gloucestershire, Bristol, Bath and North East Somerset with 14,920ha lying within North Somerset. The community forest aims to contribute to sustainable development and play an active role in promoting a viable economy linked to the natural environment. It promotes tree planting of indigenous species, recreational and shared use path, provision of interpretation and protection and enhancement of habitats and environmental resources.

Mendip Hills Area of Outstanding Natural Beauty

7.6.16 The Mendip Hills AONB lies to the south of the Scheme and within the southern section of the Study Area. The Mendip Hills AONB Management Plan (Mendip Hills AONB, 2019**Error! Bookmark not defined.**[3]) covering the period 2019 to 2024 highlights the tranquillity and remoteness of the area, and the need to protect the unique characteristics of the landscape from development pressures which might bring the urban fringe closer to the AONB boundary. Special qualities that define the landscape of the AONB include;

a) dark skies, tranquillity, sense of remoteness, naturalness of the area.

b) distinctive limestone ridges and scarp slopes, rising from the Somerset Levels and Moors, and windswept plateau

c) views towards the Mendip Hills and the distinctive hill line and far-reaching views and panoramas out over the adjacent levels and Severn Estuary.

7.6.17 Mendip Hills AONB Management Plan is a ‘material’ consideration in

determining planning applications and at appeals. It identifies what is considered necessary to conserve and enhance the designated landscape following eight principal themes: -

a) Landscape Quality
b) Biodiversity and Geodiversity
c) Historic Environment and Cultural Heritage
d) Recreation, Access and Tourism
e) Natural Resources
f) Land management
g) Development and Tourism
h) Participation

7.6.18 Of key relevance to this assessment is consideration of Landscape quality which recognises that the Mendip Hills is an, "…area of distinct character, created over time by the interaction of people and nature. It's ecological, biological, cultural and scenic value [should be] conserved and enhanced."

7.6.19 Other designation of relevance to the landscape assessment include;

Table 7 - 4 Ecological Designations

Designation	Type/ Scale	Description
North Somerset and Mendip Bats SAC	Statutory; National	Lying approximately 100m to the east of the eastern tie in of the Scheme to the A371. Principally designated for Habitats: Semi-natural dry grasslands and scrubland on calcareous substrates. Tilio-Acerion forests of slopes, screes and ravines with Fraxinus excelsior, Small leaved Lime, Yew and Elm present, many coppiced or pollarded and a species rich ground flora. Species: Lesser horseshoe and Greater horseshoe bats.
Banwell Ochre Caves SSSI	Statutory; National	Overlapping the SAC, the principal reason for notification is geological. The five caves contain the most extensive and accessible yellow ochre workings in the Mendip area.
Banwell Caves SSSI	Statutory; National	Located approximately 500m to the south of the western tie in of the Scheme at the eastern extent of Banwell Hill. This SSSI consists of two caves of national importance for understanding mineralisation processes in the Mendip Hills and for its rich Pleistocene bone assemblage which has considerable potential for future research. The caves are also used as a hibernation site (hibernacula) by greater horseshoe bats.
Puxton Moor SSSI	Statutory; National	Located approximately 1.1km to the north east of the Scheme at its nearest point. The SSSI contains an extensive area of low lying

Designation	Type/ Scale	Description
		agricultural land typified by a historic water management system of rhynes and ditches. The area supports aquatic communities of great nature conservation interest.
Yanal Bog SSSI	Statutory; National	Located approximately 2.4km to the east of the Scheme. Yanal Bog is a calcicolous lowland mire supporting nationally rare plant communities associated with the peat surface.
River Banwell SNCI	Non-Statutory; Local	Covering the River Banwell to the north of Banwell Conservation Area
Banwell Woods SNCI	Non-Statutory; Local	Covering the woods to the east of the A371 adjacent to Banwell Castle
Banwell Hill SNCI	Non-Statutory; Local	Covering the upper reaches and crest of Banwell Hill to the east of Banwell Caves SSSI
Towerhead Brook SNCI	Non-Statutory; Local	Covering the southerly extent of Towerhead Brook and a network of wet grassland field parcels to the east of Riverside

Table 7 - 5 Cultural Heritage Designations

Designation	Type/ Scale	Description
Listed Buildings	Statutory; National	Grade I: Parish Church of St Andrew, 573m Grade II* Banwell Abbey, The Cloisters, 520m Gatehouse, stables and flanking walls at Banwell Castle, 335m Coach house at Banwell Castle, 363m West garden walls with towers at Banwell Castle, 363m Banwell Castle, terraces and courtyard walls, 363m Terrace and dairy at Banwell Castle, 363m Grade II**:** 32 within 1km of the Scheme **Wider mitigation**: Grade I: Church of St. John the Baptist, Churchill (LSB1101) Grade II: Churchill Court (LSB154) and Gatepiers and Gates (LSB1102)
Scheduled Monuments	Statutory; National	Romano-British villa, Banwell, 607m A Roman Camp in Banwell Woods, 480m Banwell Camp: a large multivallate hillfort on Banwell Plain, 464m Roman settlement and associated industrial remains and field system north-east of Winthill Farm, 770m Deserted medieval farmstead 420m south of Gout House Farm, 1146m
Banwell Conservation Area	Non statutory; Local	Covering the centre and eastern extent of Banwell centred on the built environment around the East Street, West Street, A371 Castle Hill and High Street junction and extending south along Dark Lane towards Banwell Castle. The southern extent lies

Designation	Type/ Scale	Description
		approximately 150m west of the Southern Link and includes the Scheme tie into the A371
Churchill Conservation Area	Non statutory; local	Covering the centre and northern extent of Churchill with the main focus following Front Street and Churchill Green. It also includes a small number of properties lying to the south of the A371 Dinghurst Road to the west of Hilliers Lane. The western extent follows Churchill Green and Church Lane both of which would be subject to wider mitigation enhancements for improved shared use paths/active travel. The Conservation Area includes 11 Listed Buildings or structures the closest of which is approximately 250m east of the wider mitigation measures proposed along Church Lane

Table 7 - 6 Public Rights of Way (PRoW)

Designation	Type/Scale	Description
PRoW	Non-statutory; Local	There are numerous public rights of way within the study area that may be influenced by the Scheme. Bridleway; AX3/24/10 Restricted Byway; AX3/3/10, Footpaths; AX3/5/10, AX3/6/10, AX3/9/10, AX3/11/10, AX3/12/10, AX3/13/10, AX3/15/10, AX3/18/10, AX3/22/10, AX3 23/10, AX3/25/10, AX3/46/10, AX3/50/10, AX3/1/20, AX3/47/20, AX3/23/20, AX3/25/20, AX3/38/20, AX3/25/30, AX3/4/10, AX3/1/10, AX3/21/10 **Wider mitigation:** AX29/51/10 – Churchill Academy (West) shared use path AX14/36/30 – Churchill Academy (East) shared use path
NCR 26	Non-statutory; National	The National Cycle Route (NCR) 26 runs along the course of the former Railway line known as the Strawberry Line approximately 1.35km to the east of the Scheme. There will be no direct impacts on this asset as a result of the Scheme, but it forms an important shared use path in the wider environment.
Long Distance Walking Route: West Mendip Way	Non-statutory; National	A 30 mile stretch of the Mendip Way following the ridge line of Wavering Down approximately 2.5km to the south of Banwell. There are no direct impacts upon this trail.

Table 7- 6 Planning Designations

Designation	Type/Scale	Description
Tree Preservation Orders (TPO)	Statutory; Local	A number of individual and group tree TPOs are found within Banwell and within the historic road network through the village.

Designation	Type/Scale	Description
		TPO 92 comprises a group of 8 trees lies along East Street (A368) around Corner House TPO 975 The Old Police House, Towerhead Road TPO 114 Banwell Castle Estate, including a number of trees within the castle grounds TPO 1073 Banwell Woods TPO 534 a number of individual trees along Wolvershill Road TPO 1038 Tree group at the junction of Moor Road and Riverside TPO 242 Tree group at Banwell Caves **Wider mitigation:** TPO 105 Ilexmead, Front Street, Churchill immediately south of the junction of Churchill Green and Church Lane TPO 624 Ilex House, Churchill TPO 819 Churchill Primary School a tree group adjacent to the A38 footway improvements
Priority Habitat inventory: Traditional Orchard	Countryside Stewardship	An area of traditional orchard planting lies directly along the Scheme immediately to the north of Riverside
Valued Landscape Area (West of Banwell Village)	Non- statutory; local	Established in an appeal decision where an application for 155 dwellings was previously refused (reference 15/P/0248/O). Future development may still be permitted at this location, but it would need to show evidence of sustainable design, considered to have acceptable effects on the character and appearance of 'Valued Landscape'

7.6.20 All of the above landscape and planning designations are shown on Figure 7.2 Environmental Constraints and should be cross referred with ES Volume 1 - Chapter 6 - Cultural Heritage and ES Volume 1 - Chapter 8 - Biodiversity.

Landscape Character Baseline

7.6.21 The landscape baseline has been determined through consideration of landscape character at national, regional, local and site-specific scales. These are illustrated on Figure 7.4 identifying National Character Areas and Local landscape types and character areas as defined by North Somerset Landscape Assessment Supplementary Planning Guidance (SPG) (2018).

National Character Area (NCA)

7.6.22 The Scheme and its associated study area is contained within two principal National Character Areas, NCA 142: Somerset Levels and Moors and NCA 141: Mendip Hills, Severn and Avon Vales. A smaller proportion of the wider study area is also covered by NCA 118: Bristol, Avon Valleys and Ridges to the east of the Scheme. These are illustrated on Figure 7.4.

7.6.23 The Scheme itself is contained within **NCA 142: Somerset Levels and Moors.** Covering a large area in the western part of the county wrapping around the western extent of the Mendip Hills including Weston-super-Mare and extending to the east to the edges of Nailsea and Congresbury. It is a landscape of rivers and wetlands, artificially drained, irrigated and modified to allow productive farming. The main transport corridor formed by the north/south course of the M5, A38 and A370 bisects the northern extent of the NCA and creates a distinct western boundary to the study area. With the Mendip Hills a prominent feature to the south.

7.6.24 The NCA is predominantly a flat landscape much influenced by historic water management and subsequent agricultural use. Views tend to be expansive over the surrounding low-lying landscape punctuated by intervening hedgerow boundaries and tree lines often associated with the ditch and rhyne system. The surrounding often wooded higher ground acts as a backdrop and contain and far-reaching views.

Plate 7.6.1 NCA 142: Somerset Levels and Moors
Ref: National Character Area Profile: Natural England 2014

7.6.25 The NCA is described as an, '…open, often treeless, landscape' with a, '…pattern of rectilinear fields, ditches, rhynes, drains and engineered rivers, and roads. Water is an ever present element within the NCA with seasonal flooding a frequent characteristic.'

7.6.26 Outside the settlements and transports corridors of the western extent most of this NCA is a deeply rural, pastoral landscape. Key characteristics of relevance to this assessment include:

a) '… a flat open landscape of wet pasture, arable and wetland divided by ditches and rhynes, often forming a chequer-board pattern, that clearly illustrate the reclaimed, planned nature of the landscape.'

b) 'The landscape is surrounded, divided and punctuated by a diverse geology of hills, ridges and islands, such as the Mendip and Polden hills…..which form distinctive skylines.'

c) ‘The centres of individual moors are often treeless, with a gradation to an increasingly ‘bushy’ appearance towards their edges created by occasional hedgerows and lines of pollard willows associated with ditches and rhynes.’

d) ‘Semi-natural unimproved grasslands, wet meadows, fen, mire and reedbeds underline the area’s wetland character...’

e) ‘There is a strong planned aspect to some towns and villages, with buildings running along single streets…..Buildings on the open Levels and Moors are scarce, with a few farmsteads…’

f) ‘Reflecting the history of reclamation, roads on the Levels are often sinuous, following the line of rhynes that were once salt marsh creeks; others are straight droves, causeways and flood embankments, slightly raised and related to the drainage channels…’

g) ‘The M5 motorway and railway lines run north–south, linking several of the larger towns, including Weston-super-Mare and Bridgwater. Incremental development and industrialisation from the towns is evident, especially on the western side of the motorway.’

7.6.27 Current trends and forces for change within the NCA have been identified within the full NCA profile. Those of relevance to this assessment have been identified as follows:

a) …take up of management measures, especially on ancient woodland sites has been high, as well as agri-environment schemes including willow pollarding and shelter belt re-creation.

b) …a positive change in ditch (‘wet hedge’) and hedgerow management; the introduction of fencing to protect hedges and watercourses from livestock; hedge and tree planting; and general restoration.

c) Agricultural character has changed in recent years with a slight reduction in the rate of permanent grassland loss, fluctuations in dairy cattle numbers and the growing of maize as a fodder crop.

7.6.28 For the purpose of this assessment the NCA 142: Somerset Levels and Moors is considered to be;

NCA 142: Somerset Levels and Moors	
Landscape Quality	Good
Landscape Sensitivity	Moderate

7.6.29 **NCA 141: Mendip Hills** lies immediately to the south of NCA 142 and contains the Southern Link extending south from the Scheme at its eastern tie in to the A368 to the continuation of the A371 around Banwell Castle**.**

7.6.30 This NCA covers the extent of the Mendip Hills a striking landform that rises abruptly from the open flat landscape of the Somerset Levels. It is a predominantly rural area with only 2% of land classified as urban. Just over half of the area lies within the Mendip Hills AONB and it includes four Special Areas of Conservation (SAC) and two National Nature Reserves (NNR). The NCA also includes twenty nine geological and mixed interest Sites of Special Scientific Interest (SSSI). The degree of national designation within this relatively small NCA highlights its significance in landscape, biodiversity and geological terms. The area is renowned for its tranquillity which tends to be more constant within the AONB to the east which affords far reaching and expansive views both to the north and south over Somerset and towards Dorset.

7.6.31 Light pollution from development has been noted as an issue for the integrity of the NCA in terms the extent of dark skies. With development not in character, also noted as a risk to the essential nature of the area. However, as with tranquillity, these tends to be factors of greater significance to the eastern extent of the NCA.

7.6.32 Calcareous grassland and semi natural habitats on the limestone slopes are generally of high nature conservation interest and contrasts abruptly with heathland formed on the sandstone peaks. At the foot of the south-western slopes, from Axbridge to Rodney Stoke, lies the 'Strawberry Belt'. This is an area of high-quality agricultural land. Historically used for intensive horticulture it has significantly declined since before the loss of the railway in the 1960s. To the west of the plateau, the land breaks up into groups of individual hills such as Bleadon and Crook Peak which still retain much of the character of 18th-century open sheepwalks. Crook Peak and Wavering Down remain open downland in contrast to the small, hedged fields at their foot.

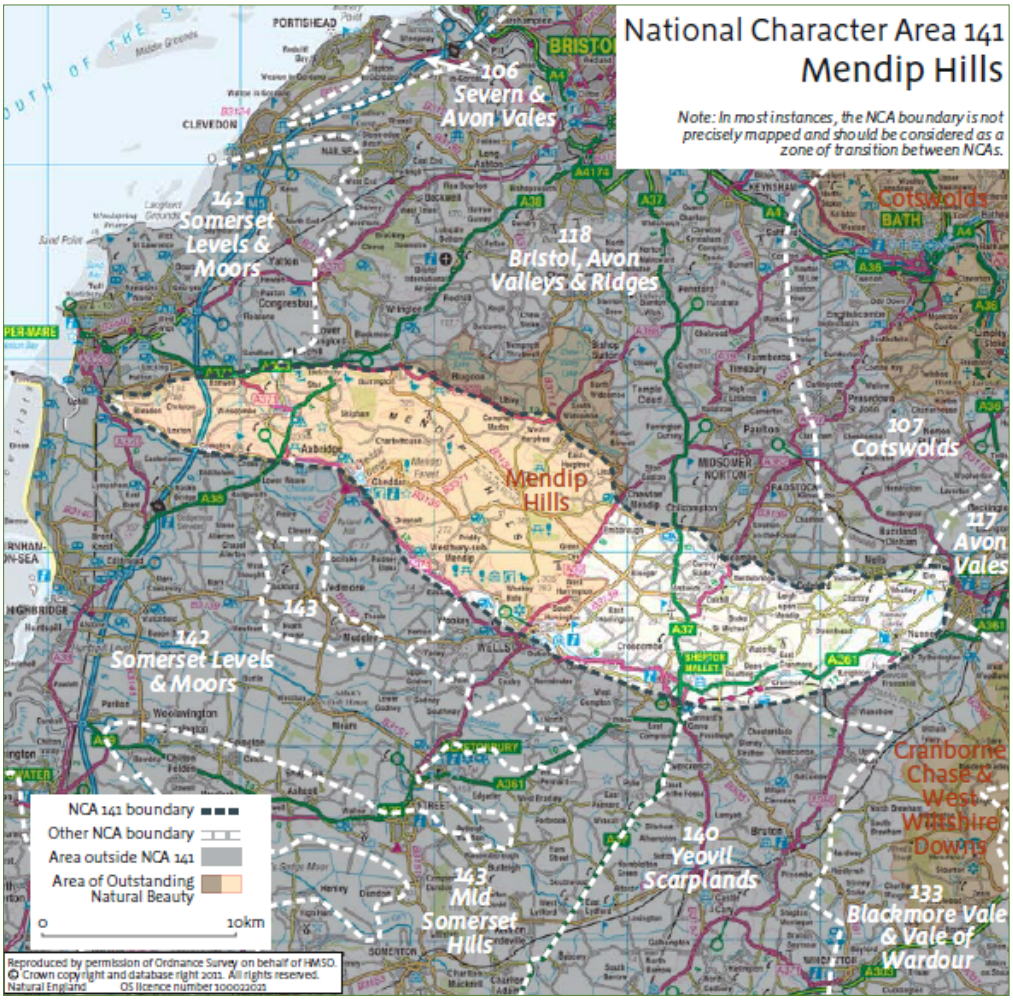

Plate 7.6.2 NCA 141: Mendip Hills

Ref: National Character Area Profile: Natural England 2014

7.6.33 NCA 141 provides an important visual role for the setting and backdrop of the adjacent NCA 142 and whilst views out from the area are significant and far reaching and NCA description states that, '*Equally important are the views of the Mendip Hills from the surrounding land, particularly the rapid ascent of the southern scarp from the Levels and Moors.*'

7.6.34 Key characteristics of relevance to this assessment include:

a) 'A chain of prominent limestone hills, cored by Devonian and Silurian rocks, extending inland from the coast and rising up sharply from the surrounding lowlands.', which, 'To the west… land breaks into individual hills.'

b) 'The plateau and hill tops are largely treeless, except for a few old ash pollards, wind-shaped shelterbelts and conifer plantations. The slopes and valleys surrounding the plateau have a wide range of woodlands forming an attractive mosaic with calcareous grassland and agriculture.'

c) ‘Variable enclosure patterns with larger, rectangular 18th-century field patterns bounded by drystone walls on the plateau and smaller, irregular fields with hedgerows on the scarp slopes…’

d) ‘The centre and west of the area is characterised by unimproved neutral meadows or calcareous grassland on the plateau, contrasting with acid heathland on the sandstone hill tops…’

e) ‘The caves, woodland, hedgerows and grazed fields provide excellent conditions for greater horseshoe bats which are recognised in two Special Area of Conservation (SAC) designations.’

f) ‘Many industrial archaeological sites, reflecting the past lead, coal and cloth industries. The plateau has an outstanding assemblage of heritage assets from prehistoric features, such as burial mounds and hillforts, through to Second World War remains.’

g) ‘Roman roads cross the hills contrasting with narrow sunken lanes which negotiate the scarp slopes. Major transport routes such as the M5 and A38 cut through the area using natural valleys. The A37 and A39 cut across the centre.’

7.6.35 For the purpose of this assessment the NCA 141: Mendip Hills is considered to be:

NCA 141: Mendip Hills	
Landscape Quality	Very Good
Landscape Sensitivity	High

7.6.36 The further eastern extent of the study area is included within **NCA 118: Bristol, Avon Valleys and Ridges**. This NCA is centred on the City of Bristol and the surrounding rolling lowland Whilst there is no physical impact resulting from the Scheme within NCA 118 it is included within this assessment due to the potential intervisibility between the adjacent NCAs. There is a strong visual link with NCA 141: Mendip Hills which follows much of the southern border of the area. However, NCA 118 has a distinctly different landscape from that exhibited in NCA 142: Somerset Levels and Moors with a more rolling and undulating landscape with higher pastures and deeper river valleys. This NCA is also more heavily developed with the expansion of the former mining communities in the south east as commuter towns for Bath and Bristol. This NCA is also notably different from its adjacent character areas in its degree of change over time, with the NCA description noting, ‘*The growth of settlement has probably been the main influence on the rural landscape. The decline and greening over of the coal industry, the construction of major reservoirs and the loss of substantial tree cover as a result of Dutch elm disease*

have also been significant.'

7.6.37 Key characteristics of relevance to this assessment include:

a) Agriculture is predominantly livestock rearing… Valleys and steeper slopes in the south-east tend to have irregular fields and overgrown, species-rich hedges.

b) A diverse landscape important for greater and lesser horseshoe bats. Grasslands of high nature conservation interest remain on the wetter valley bottoms and dry downland slopes.

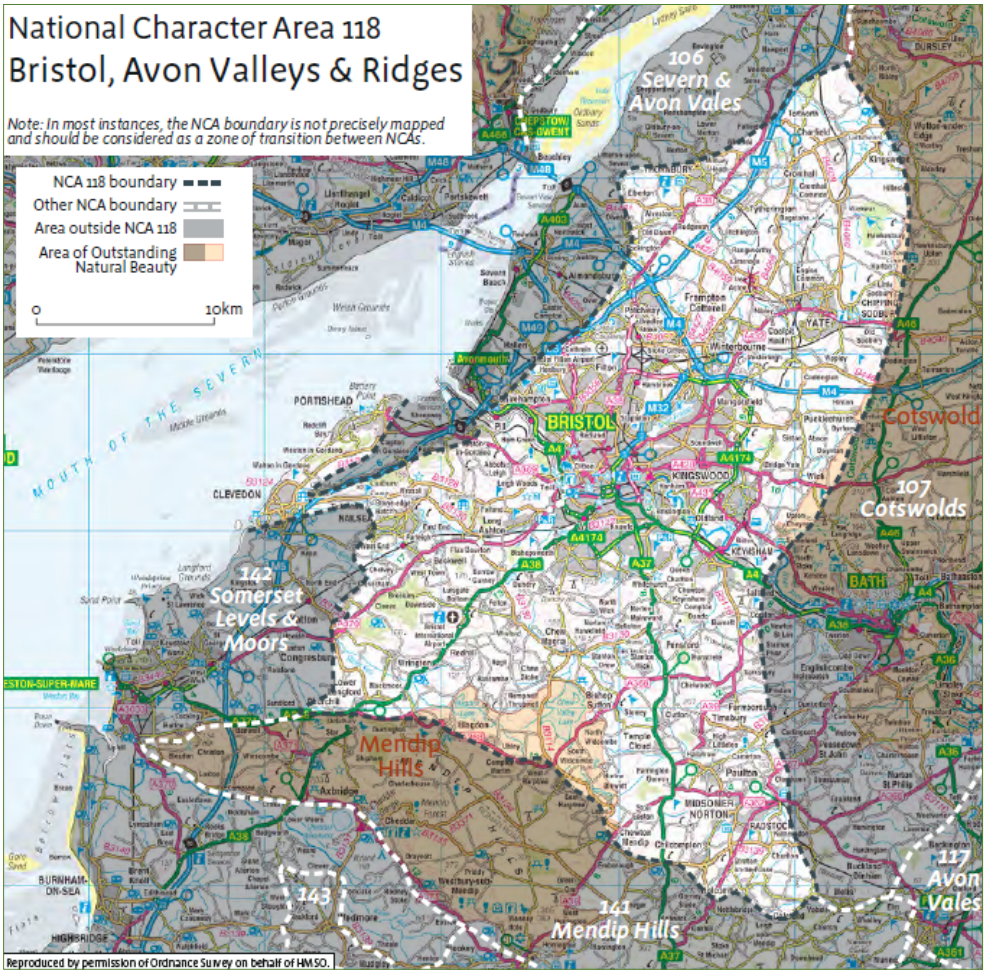

Plate 7.6.3 NCA 118: Bristol, Avon Valleys and Ridges

Ref: National Character Area Profile: Natural England 2014

7.6.38 For the purpose of this assessment the NCA 118: Bristol, Avon Valleys and Ridges is considered to be:

NCA 118: Bristol, Avon Valleys and Ridges	
Landscape Quality	Good

NCA 118: Bristol, Avon Valleys and Ridges	
Landscape Sensitivity	Low

Local Landscape Character Areas

7.6.39 The key Local Landscape Character assessment document for the area is NSC's *Landscape Character Assessment* (Wardell Armstrong, 2018**Error! Bookmark not defined.**).This first classified the county into 11 landscape types and then further refined the landscape types into 31 landscape character areas.

7.6.40 Within this, the Scheme is located within the following Landscape types and Local Landscape Character Areas (LCAs):

Table 7 - 7 Landscape Types and LCA

Landscape Types	
A Moors	This landscape type occupies a broad sweep of low-lying reclaimed wetland on the west side of North Somerset, with outlying areas to north and south separated from the rest of the type by limestone ridges
E Limestone Ridges and Combes	This landscape type forms the backbone and highest part of the area based on the outcrops of carboniferous limestone. The upstanding landform and woodland cover make this a very visually prominent landscape type.
J Rolling Valley Farmland	This landscape type covers a large area of transitional, undulating topography, from 10m to 135m AOD, formed predominantly on underlying Mercia Mudstone with Head.
Landscape Character Areas	
A4	Locking and Banwell Moors
A1	Kingston Seymour and Puxton Moors
E1	Mendip Ridges and Combes
J1	Lox Yeo Rolling Valley Farmland
J2	River Yeo Rolling Valley Farmland

7.6.41 The key characteristics of these areas of relevance to this assessment are outlined below:

A1 Kingston Seymour and Puxton Moors

7.6.42 This LCA lies to the north of the wider study area. Whilst the EIA Combined Screening and Scoping Report scoped this area out of further assessment, there is a strong intervisibility between the adjacent LCAs.

It is also likely that there are some further reaching views of the Scheme from within this area.

a) Lowland area predominantly of beach and tidal flat deposits with small areas of gravel, peat, Mercia Mudstone and Lias.
b) Flat landform largely at between 5m and 10m AOD.
c) Strong sense of remoteness, ruralness and unity.
d) Pastoral landscape with cattle grazing.
e) Network of waterways with winding rivers which are embanked, and rhynes and ditches which support a rich diversity of aquatic plants and invertebrates.
f) Hedgerows intermittent with a proportion formed by regenerated scrub grown up over ditches and rhynes.
g) Frequent hedgerow trees, oaks and pollard willows.
h) Medium scale fields are sinuous and irregular in the core of the area and more geometric elsewhere, but this contrast is not easily perceived due to the fragmented hedgerows and large number of hedgerow trees.
i) Semi-enclosed landscape with trees and hedgerows framing views to the wooded limestone ridges.
j) Small orchards close to older settlements and farmsteads.

7.6.43 The LCA is considered to be of a Strong overall character, with a landscape condition considered to be Good. For the purpose of this assessment LCA A1 is considered to be:

LCA: A1 Kingston Seymour and Puxton Moors	
Landscape Quality	Good
Landscape Sensitivity	Moderate

A4 - Locking and Banwell Moors:

7.6.44 This LCA contains approximately half of the Scheme alignment from Moor Road, over the River Banwell and heading south passed Towerhead Solar Farm. It is characterised by:

a) Low lying (less than 10m AOD) land founded on beach and tidal flat deposits.
b) Landform generally flat contrasting with the slopes of the Mendip Ridge to the south.
c) Rural and predominantly pastoral landscape with some orchard remnants and small farm woods.
d) Regular geometric field patterns bounded by hedgerow and reed-filled drainage ditches/rhynes.

e) Numerous hedgerow/ditch line trees, particularly pollarded willow and some poplar shelterbelts.

f) Historic landscape dominated by medieval enclosure

7.6.45 The LCA is considered to be of a Moderate overall character, with a landscape condition considered to be Declining. For the purpose of this assessment LCA A4 is considered to be:

LCA: A4 Locking and Banwell Moors	
Landscape Quality	Good
Landscape Sensitivity	Moderate

J1 Lox Yeo Rolling Valley Farmland.

7.6.46 This LCA lies to the south of LCA E1 and as such is approximately 250m from the Southern Link tie in and 800m from the southern extent of the Scheme extents. There are no direct physical impacts on the LCA and visual impacts are likely to be limited to the furthest northern extents adjacent to the boundary with LCA E1. The EIA Combined Screening and Scoping Report scoped this area out of further assessment. It is characterised by:

a) Small to medium scale peaceful landscape, with a feeling of partial enclosure from the surrounding ridges.

b) Rolling landform formed by the Lox Yeo River.

c) Pastoral landscape with (northerly) view(s) to wooded Mendip Ridges and Combes.

d) Fields bounded by thick hedges with hedgerow trees.

e) Occasional belts and clumps of wet woodland.

7.6.47 The LCA is considered to be of a Moderate overall character, with a landscape condition considered to be Good. For the purpose of this assessment LCA J1 is considered to be:

LCA: J1 Lox Yeo Rolling Valley Farmland	
Landscape Quality	Good
Landscape Sensitivity	Moderate

J2 - River Yeo Rolling Valley Farmland

7.6.48 This LCA flanks LCA A4 and contains the eastern and western tie in of the Scheme. It also forms much of the northern boundary of Banwell settlement boundary and provides an important landscape setting for the village. Key characteristics include;

a) Transitional area at 5m to 60m AOD with gentle rolling landform.
b) Strong valley feel particularly to the east of the area with enclosure given by the rising wooded limestone ridges to north and south.
c) Rural pastoral landscape with sheep, cattle and horses grazing.
d) Irregular medium sized fields of medieval enclosure along the river and on the hillsides.
e) Full hedgerows and frequent hedgerow trees.
f) Riverside trees of willow and oak.
g) Scattered farmsteads plus large villages on higher ground at the base of the ridges and along major routes.
h) Network of A roads, minor roads and winding rural lanes.

7.6.49 The LCA is considered to be of a Strong overall character, with a landscape condition considered to be Good. For the purpose of this assessment LCA J2 is considered to be:

LCA: J2 River Yeo Rolling Valley Farmland	
Landscape Quality	Good
Landscape Sensitivity	Moderate

E1 – Mendip Ridges and Combes

7.6.50 This LCA covers the southern slopes of the Mendip Hills AONB and includes the extent of Banwell Hill to the south and east of Banwell. This LCA will contain the Southern Link of the bypass. It is typified by:

a) High ridges of Carboniferous Limestone with gentler lower slopes of Mercia Mudstone.
b) Steep scarp slopes clothed in broad leaved and mixed woodland forming distinctive backdrop to the surrounding low-lying areas.
c) Dramatic combes form routes of winding rural roads often with exposed geology of grey Limestone.
d) Lower slopes under pasture in fields bounded by hedgerows.
e) Open grassland plateau with large rectangular fields of post medieval enclosure.
f) Disused quarries with exposures of Limestone.
g) Considerable ecological value with unimproved calcareous grassland, semi-natural broad-leaved woodland, much of which is ancient, and limestone heath.
h) Sparse settlement with a few scattered stone farmsteads on the plateau and lower ridges, villages centred on historic stone churches on the lower slopes following the lines of roads.

a) 20th century infill and ribbon development around some villages and rising up Bleadon Hill to the west with associated conifer shelter belts.

b) Rich heritage of historic landscape features particularly on the tops of the ridges notably the Bronze Age hillfort on Banwell Hill.

7.6.51 The LCA is considered to be of a Strong overall character, with a landscape condition considered to be Good. For the purpose of this assessment and due to its location within the Mendip Hills AONB, LCA E1 is considered to be:

LCA: E1 Mendip Ridges and Coombes	
Landscape Quality	Very Good/Good
Landscape Sensitivity	High/Moderate

Historic Landscape Classification

7.6.52 The Avon Historic Landscape Characterisation (AHLC) (North Somerset Council, Bath and North East Somerset Council and South Gloucestershire Council, 2014[4]) sits alongside and is complimentary to the North Somerset Landscape Character Assessment. It is helpful in understanding the landscape evolution over time and helping to identify legible time-depth in the existing landscape through the documentation of inherited character. The wider Study area is covered by the following Historic Landscape Character Areas (HLCA).

a) **A1** Medieval or earlier landscapes of shared field systems often associated with nucleated settlements, specifically a, *Late medieval enclosed open fields created by local arrangement and exchange*;

b) **E1** Recreational landscapes, specifically, Post medieval fields created from enclosure of medieval parkland;

c) **E2** - Post medieval designed ornamental landscapes;

d) **F2** Woodland, underwood and woodland pasture, specifically, '*Post 18th century woodland plantation and forestry'*;

e) **G4** Landscapes derived from enclosure of wetlands and coastal 'levels', specifically, *Post medieval (15th - 17th C) organised enclosure of anciently reclaimed inland moors*; and

f) **G5** - Post medieval (18th - 19th C) parliamentary enclosure or reclamation of inland peat moors and common saltmarshes.

7.6.53 The western half of the route crosses fields characterised as **A1** *Late Medieval enclosed open fields.* A small part of the central section of the route and the eastern extent lies on land classified as **E1** *Post Medieval Fields.* Whilst the north-eastern section of the route crosses fields characterised as **G4** *Post Medieval organised enclosure*.

7.6.54 In terms of the wider historic landscape the Scheme would insert a long sinuous road into a landscape of broadly rectilinear fields. In such a context it would be a demonstrably modern intervention in landscape of fields and roads that was finally established by the late 18th century and where elements are considerably older. This can be considered to be an adverse impact but is assessed alongside modern day land use and characterisation within this chapter.

Site Landscape Character

7.6.55 The study area character has been determined through site survey to identify the character in relation to the aspects of:

a) landcover, pattern and texture;

b) scale and appearance;

c) tranquillity; cultural; and

d) human interaction.

Landcover, pattern and texture

7.6.56 The Scheme traverses the two LCAs to the north of Banwell. Some variation in topography occurs at the eastern and western extents but for the most part it sits within a low lying flat 'levels' landscape.

7.6.57 The landscape of the wider study area is largely rural in nature with the southerly extent forming the settlement boundary with the village of Banwell. Outside Banwell itself the area is sparsely populated with few scattered farmsteads and residential properties. The main visual detractors in the area are the existing transport infrastructure and its associated moving traffic.

7.6.58 There is a distinct variation in field boundary types and form across the northern section of the study area corresponding with the LCA J2 and A4 (Figure 7.4). Fields are typically semi-improved grassland grazed by cattle and sheep and follow a broadly rectilinear pattern, although this

becomes more distinct and defined in character within LCA A4 where it is associated with the ditch and rhyne system. The low lying open pastoral landscape of the northern study area is in sharp contrast with the more wooded and rolling landscape of the flanks of the Mendip Hills to the south.

7.6.59 The majority of the fields have established field margins often with mature hedgerows associated with ditches and hedgerows with trees. Hedgerow trees in the lower lying levels landscape are frequently willow and alder, many of which have been historically pollarded although this form of management is not as prevalent as it once was.

7.6.60 A number of Tree Preservation Orders (TPO) are found within the area, usually associated with dwellings and within the settlement boundary of Banwell. Of those surveyed as part of the Arboricultural Assessment and within <50m of the Scheme the following trees and tree groups are covered by a TPO. Details found in ES Volume 3 - Appendix 7.D – Arboricultural Impact Assessment and Method Statement.

Table 7 - 8 Tree Preservation Orders

Ref	Species	Category
T59	Acer pseudoplatanus (Sycamore)	B1 Moderate quality
T60	Carpinus betulus (Hornbeam)	B1 Moderate quality
T61	Carpinus betulus (Hornbeam)	B1 Moderate quality
T62	Carpinus betulus (Hornbeam)	B1 Moderate quality
G18	Tree group including lime, oak, sycamore, maple hazel, hawthorn, ash, beech and goat willow	A2 High quality: trees, groups or woodlands of particular visual importance as landscape features
G25	Tree group including Hazel, goat willow, oak, hawthorn	C2: Low quality: Trees offering only short term landscape benefits

7.6.61 Species commonly found include, Black Poplar (British native), White poplar, Crack Willow, Alder, English and Sessile Oak, Hawthorn, Hazel, Crab apple, Apple (domestic), Elm, Lime, Hornbeam as well as other locally prevalent native species.

7.6.62 A group of six hybrid Black poplar (Populus nigra var betulifolia) (T10 – T15) are located within the Scheme extents to the east of Moor Road with another single specimen located to the north of the Scheme east of Riverside (T36). Three (T10,11 and 12) are categorised as A1: High quality (notably fine specimens; rare or unusual specimens; essential component trees within groups, semi – formal or formal plantings) giving them the highest

level of quality and recommending retention or safeguarding wherever possible. The remaining, including T36 are categorised as B1.

7.6.63 The stand of six Black poplars appears purposely planted as they sit along the roadside at regular intervals and are all of a similar size and age, as such it is likely that these are hybrid rather than true native Black poplars. In order to determine the trees' origins, samples have been obtained and are undergoing DNA finger printing to assess whether they are hybrid or native specimens. However, it is noted that Black poplars are a regionally and nationally scarce species and should be offered protection wherever possible.

7.6.64 Localised Scheme earthworks design has been modified to safeguard retention of tree T15 and T36. This would be further informed by a detailed method statement developed during detailed design to ensure appropriate construction methods are employed. A further detailed arboricultural survey is proposed for early July 2022 which would inform the working method statements and detail a proposal for the advanced propagation of further plant stock from the existing trees. It is currently proposed that cutting would be taken in the autumn/winter 2022/2023 for propagation at specialist nursery.

7.6.65 Roads within the area other than the main A371, are commonly associated with watercourses, the rhyne system or the River Banwell. These all have a broadly north /south orientation and tend to be straight and narrow lanes either bounded by hedges or in the levels often open on the rhyne/watercourse side.

7.6.66 Small tree groups or copses are a feature in field corners and path/field/road junctions and provide good short distance focal points and punctuations in the wider landscape. Views tend to be long low and wide although the intervening mature field boundaries and hedgerow trees provide filtering and break up clear direct views.

Scale and appearance

7.6.67 Banwell and the transport corridor created by the A371 occupy a slightly elevated topographic 'bench' sitting at the heart of the study area and forming a transition between the two underlying landforms that make up the rest of the study area.

7.6.68 The area lying to the north of Banwell is defined by its underlying physical form as a lowland 'level', including the River Banwell, its floodplain and hinterland. As such the scale of this part of the study area is broad and

expansive. The large, rectilinear field pattern, derived from historic water and land management practices, and predominant land use of pasture/grazing, further contributes to the areas' scale and appearance.

7.6.69 To the south of Banwell the Mendip Hills rise sharply up from the lower lying levels and provide a distinct physical boundary to the study area. Much of the slopes are clothed in broadleaf and mixed woodland providing a distinctive backdrop and setting for the village of Banwell as well as a clear focus and containment for longer distance views from within the levels. The scale and appearance of this part of the study area is more intimate and varied. Although the higher elevation afforded by the lower Mendip slopes provide longer distance northerly views these are often curtailed or filtered through intervening vegetation and have greater depth of field throughout the view i.e foreground, middle and far distance, creating a more domestic scale to the area. Frequently the views from mid slope are closely associated with the settlement of Banwell itself.

7.6.70 Built settlement within the study area is largely focussed on Banwell, the heart of which is designated as a Conservation Area. This underlines the variety and age of architecture, much of which is attractive stone-built buildings of a domestic cottage/terraced scale. The few larger scale buildings tend to provide local landmarks such as St Andrew's Church. Newer housing development forms the western approach along the A371 and infills much of the gently rising land between Knightcott Road and the High Street. Further modern housing recently completed at Taylor's Fields infills along Wolvershill Road with future expansion potential eastwards towards Riverside adjacent to Goding Lane. Further housing development has been granted planning permission for 54 houses on a parcel of land to the west of Wolvershill Road running to the north of housing at Knightcott Park. This would provide an infill between Banwell and the more dispersed settlement form to the north at Stonebridge and provide a new settlement boundary for the north west of Banwell.

7.6.71 The 20th century housing style and architecture along Knightcott Road tends to be unremarkable with limited reference to the scale, layout or materials of the older parts of the village. This is less apparent in the recent housing which has adopted some local vernacular both in design and materials. An outlying crescent of housing at Riverside facing onto the River Banwell provides the furthest extent of the settlement. boundary.

Tranquillity

7.6.72 Tranquillity is the quality or state of being tranquil or calm. This

experience can be affected by changes in the landscape and will also contribute to the perceived character and quality of a landscape or view. Tranquillity can be affected visually and aurally by changes in the built environment and noise levels altered by new development. Artificial lighting can also impact on the experience of the view or landscape character.

7.6.73 Noise levels fluctuate within the study area, generally being higher where associated with existing roads, particularly the background noise generated by the A371 and M5. The sense of tranquillity increases with distance from roads and settlements, with a general trend of being lowest in the centre and west of the study area and increasing toward the east, particularly within the fields east of Wolvershill Road, and above the main Levels on the higher Mendip slopes.

7.6.74 The sense of tranquillity, along with dark skies, are special qualities of the Mendip Hills AONB. Night-time illumination sources include low intensity lighting within Banwell and higher intensity lighting on many of the roads, including major highways such as the M5 motorway and a number of A roads. Movement of traffic and head/tail lights provides further visual disturbance.

7.6.75 Sources of artificial light although noticeable and a constant within the study area tend to be filtered and fleeting due to the mature vegetated field margins and consistent low-level topography. The presence of the larger conurbation of Weston-super-Mare and the M5 corridor provide a constant and significant further distance light source when viewed from the AONB with the Levels to the north of Banwell notable in the lack of intense light sources.

7.6.76 A nationwide assessment of tranquillity as an experiential quality of the landscape was undertaken on behalf of the CPRE map of Tranquillity (2006). This assessed a range of aural and visual factors on 500x500m grid squares across the whole of England to provide a score for Relative Tranquillity and was recorded at a regional scale within the NCA profiles.

7.6.77 The study does states that, ‘The figure for each individual cell is subjective and should not be taken and interpreted out of context for two clear reasons:

a) A cell with the same value can have different combinations of the 44 option choices resulting in the same figure – raw scores of tranquillity.

b) The value is produced using extremes in the raw data for national

datasets, a maximum and minimum range of noise levels for hearing or seeing each of the option choices identified. This therefore allows a comparison of tranquillity relative to anywhere else in England only – relative tranquillity.'

7.6.78 It is anticipated that the patterns of tranquillity are broadly similar to those indicated at the time of the original assessment, i.e., the further away from transport corridors and settlements the observer is placed the higher the tranquillity levels. However, it is acknowledged that values are likely to have altered over the intervening period since the initial assessment was undertaken in 2006. The findings of the study is provided in summary below for each NCA.

7.6.79 **NCA 141: Mendip Hills**; much of the area is relatively tranquil. Weston-super-Mare and the M5 affect tranquillity to the west of the area, as does the most active area of quarrying around cheddar and at Whately and Torr Works, the A39 and the A367 to the east.

7.6.80 The NCA profiles states that whilst, 'tranquillity remains an important feature of the area – 'undisturbed' areas have decreased from 89 per cent in the 1960s to 55 per cent in 2007.'

7.6.81 It notes that, 'The largest area of 'undisturbed' land occurs within the centre of the NCA, away from the main settlements in the south and the M5 in the west. A sense of tranquillity is most likely to be associated with the undeveloped limestone plateau area, as well as within the more intimate valleys to the east, away from the settlements and major road corridors.'

7.6.82 Opportunities should seek to preserve, 'The undeveloped character of the area….' and that, '…intrusion into the most rural areas avoided. Light pollution from any new development should be prevented or minimised.'

7.6.83 Tranquillity values for this NCA are indicated in the table below:

Tranquillity	Score
Highest value within NCA 141	33
Lowest value within NCA 141	-58
Mean value within NCA 141	-3
Sources: CPRE (2006)	

7.6.84 **NCA 142: Somerset Levels and Moors**; the levels of highest tranquillity are located to the east of the NCA away from the M5 corridor and Weston-super-Mare and Bridgwater.

7.6.85 According to CPRE Intrusion Mapping only 39 per cent of the area remains 'undisturbed'. There are, however, substantial areas where intrusion and disturbance have not occurred, and large parts of the area remain sparsely settled and populated and uncluttered by modern infrastructure.

7.6.86 The close association with waterbodies and watercourses further accentuates the sense of tranquillity. The majority of intrusion into perceived tranquillity occurs along the M5 motorway corridor.

7.6.87 Opportunities should seek to conserve remaining areas of tranquillity, the open uncluttered views and skylines and the strong pastoral character particularly along the Axe, Brue and Parrett valleys and around the fringes of Bridgwater Bay.

7.6.88 Tranquillity values for this NCA are indicated in the table below:

Tranquillity	Score
Highest value within NCA 142	46
Lowest value within NCA 142	-75
Mean value within NCA 142	3
Sources: CPRE (2006)	

7.6.89 **NCA 118: Bristol, Avon Valleys and Ridges**; much of the NCA is heavily disturbed particularly around Bristol and its environs. Although little of the NCA is truly tranquil the area to the south of Bristol around the Chew and Yeo Valleys show some of the least disturbance.

7.6.90 The NCA profile states that, 'Tranquillity has declined fairly significantly in the past fifty years, with 'undisturbed' areas falling from 53 per cent in the 1960s to 21 per cent by 2007… with the only real 'undisturbed' areas remaining in the Yeo and Chew Valleys in the south and the rural landscapes to the north of Yate.'

7.6.91 Opportunities should seek to, 'Ensure that adequate green infrastructure provision is integral to all development planning in order to expand areas of relative tranquillity particularly within the urban environment.', and that,

'There are opportunities to retain the remaining sense of tranquillity on downland and parklands, undeveloped valleys, woodland and agricultural land by protecting them from inappropriate development.'

7.6.92 Tranquillity values for this NCA are indicated in the table below:

Tranquillity	Score
Highest value within NCA 118	28
Lowest value within NCA 118	-86
Mean value within NCA 118	19
Sources: CPRE (2006)	

Cultural

7.6.93 There are a number of important features from a cultural perspective within the study area, these are illustrated on Figure 7.2: Environmental Constraints.

7.6.94 The area has numerous Scheduled Monuments and Listed Buildings listings, typically clustered within settlements in or adjacent to the AONB, including at Sandford; Towerhead; Banwell Hill, and the southern extent of Locking. Numerous listed buildings are also contained within the Banwell Conservation Area. Of note is a Scheduled Monument lying to the south east of Riverside, which is an excavated Romano-British villa.

7.6.95 Banwell Conservation Area is located centrally in the southern part of the Study Area (Figure 7.2). Whilst the Scheme alignment does not directly impact upon the Conservation area the Southern Link lies in close proximity to the southeast extent of it along Dark Lane and will directly affect the most southerly portion of the Conservation Area at Scheme tie in adjacent to Banwell Castle. The construction of the Scheme will have an indirect impact during the construction phase in terms of potential traffic congestion and direct impacts during the implementation of any placemaking improvements within Banwell as well as the works associated with the southerly Scheme tie in. The Conservation Area and the numerous listed buildings within it are important factors contributing to the areas character.

7.6.96 Culturally the greatest contribution to the area's landscape character is the historic water and land management that has created the levels

landscape of rhynes and ditches. This not only creates the field pattern but has also dictated the road and footpath network within the northerly part of the study area which are typically long and straight directing uninterrupted views along their length.

7.6.97 The Mendip Hills AONB is a constant and distinctive landform within the wider area forming a direct focus and distinct skyline when viewed from within the study area.

7.6.98 The main visual detractors in the area are the existing transport infrastructure and its associated moving traffic – particularly the M5 corridor and the westerly extent of the A371.

Human Interaction

7.6.99 The study area has a mix of uses and human interaction is present in a number of forms. The dominant human interaction within the study area comes in the form of the M5 and A371 as a transportation corridor and the settlement of Banwell and its outlying expansion. Further infrastructure is limited in the wider landscape with few telegraph and telephone wires. Traffic movement in the wider landscape is infrequent and tends to peak at key commuter/work hours when the narrow roads of Wolvershill Road and Riverside can become congested.

7.6.100 Land uses surrounding the road are predominantly agricultural with livestock grazing, horsiculture and some areas of arable cultivation. Two sites of traditional orchard also remain in the vicinity of Riverside. A larger neglected but still functional orchard lies immediately south of the Scheme and a smaller, largely cleared area lying just to the north at The Paddocks.

7.6.101 The area is well used recreationally with anecdotally good usage of the PRoW network. A more formal recreational route is found to the east of the Study Area in the form of the former ‘Strawberry Line’ now both a LNR and carrying NCR 26 and shared use path.

7.6.102 Renewable energy provision is also a recent variation from traditional land use with a solar farm at Towerbrook Farm immediately adjacent to the eastern extent of the Scheme. Another solar farm is present at some distance to the north indicating the potential future trend in change of land use diversifying away from traditional agricultural practices.

7.6.103 A number of leisure facilities and tourist attractions are located within the wider study area. These include;

a) Stonebridge Caravan Park, Wolvershill Road

b) Court Farm Country Park, Wolvershill Road

c) Summer Lane Park Homes, Summer Lane

d) Moorland Farm Caravan and Motorhome Site, Old Yeo Rhyne

e) Banwell Football Club, Riverside Road

7.6.104 The low-lying landform of the floodplain and levels together with the scattered built form in the wider study area, are central in terms of creating an extensive, sparsely settled and yet productive landscape of an attractive nature.

Visual Baseline

7.6.105 ES Volume 2 - Figure 7.5 Zone of Visual Influence illustrates the approximate area from which the Scheme is visible. This has been developed from a viewshed analysis and field study to identify extent of visibility from agreed locations within the study area.

7.6.106 The study area has a moderate visibility due to the largely level and low-lying landscape that the Scheme sits within. Hedgerows, hedgerow trees and pollards and field corners tree groups/copses often act to filter or partially screen long distance and low level views. Direct and longer distance views over the study area are more frequently found from the open field parcels and gaps within woodland on the rising slopes above Banwell. Here, occasional oblique views are visible from PRoW amongst housing on the south side of the village and leading up onto Banwell Hill.

7.6.107 To the west the study area is sharply defined by the course of the M5 corridor, whilst some limited views may be available from points to the west of the M5, these are frequently screened by intervening vegetation and built environment. They are also at such a distance and with a relatively noisy/busy foreground generated by the M5 and local road network that visual effects are limited if not negligible in the wider view.

7.6.108 Within the study area to the east of the M5 the rising land around Woolvers Hill provides some glimpsed longer distance views over the Scheme but these are intermittent and generally screened by the mature hedgerows that line both sides of the lanes.

7.6.109 To the north and west of the study area the low lying levels landscape

predominates and whilst low level views are filtered by intervening field boundary vegetation there are longer, wide angle views towards landmarks on higher ground within Banwell such as St Andrews Church and onto the wooded backdrop of Banwell Hill and the lower Mendip slopes. Little infrastructure or built element rises above the field boundaries making this a tranquil and settled landscape with little visual intrusion.

7.6.110 The landscape and visual receptors that have been identified during the study have been recorded in Table 7 - 7 together with the sensitivity of each receptor to the changes proposed.

7.6.111 From this, and previous agreement with NSC officers, a number of key views have been selected as representative of typical or important views for sensitive receptors within the study area. These are used as a baseline against which to assess the potential visual impact of the Scheme.

Value (Sensitivity) of Resource

7.6.112 The GLVIA states that when assessing the significance of effects, the LVIA must first establish the susceptibility of each receptor to the specific change resulting from the proposals and the value attached to the receptor. This will give an indication of the sensitivity of the receptor. Secondly, the magnitude of the change needs to be established by considering the size and scale of the effect, its geographical extent, the duration and reversibility of effect. Knowing the sensitivity of the receptor and magnitude of change will provide a comprehensive assessment of the significance of the effects of the proposals.

Sensitivity of Landscape Receptors

7.6.113 The following table summarises the sensitivities of each of the receptors to the changes proposed.

Table 7 - 7 Landscape Receptors

	Scale	Sensitivity to the Scheme
Landscape Element		
Topography	Local	Medium

	Scale	Sensitivity to the Scheme
Hedgerow vegetation, hedgerow trees and woodland blocks	Local	Medium/High
Tree Preservation Orders	Local	Medium/High
Traditional Orchard	Local	High
Rhynes, drainage and landscape pattern	Local	Medium/High
Semi-improved neutral grassland	Local	Medium
Improved grassland	Local	Low
PRoW including footpaths and bridleways & restricted byways	Local	Medium
River Banwell (Wildlife Site)	Local	High
Banwell Conservation Area	Local	Medium
Banwell Settlement Edge	Local	Medium/High
Scheduled Monuments – Romano British Villa	Local	Low
Listed Buildings No 17 Bowmans Batch and LCB70 Wolvershill Road	Local	Low
Landscape Character Areas		
NCA 118: Bristol and Avon Valleys and Ridges	National	Low
NCA 141: Mendip Hills	National	High
NCA 142: Somerset Levels and Moors	National	Medium
Mendip Hills AONB	National	High
LCA A1: Kingston Seymour and Puxton Moors	Regional	Medium
LCA A4: Locking and Banwell Moors	Regional	Medium
LCA E1: Mendip Ridges and Combes	Regional	High/Medium
LCA J1: Lox Yeo Rolling Valley Farmland	Regional	Medium
LCA J2: River Yeo Rolling Valley Farmland	Regional	Medium
Study Area Landscape Character	Local	Medium

Sensitivity of Visual Receptors

7.6.114 Visual receptors identified during the site assessments and following consultation are included in Table 7 - 8. It explains the type of view that each receptor has and its sensitivity to the visibility of the proposals. The sensitivity of the receptors was determined using the definition set out in ES Volume 3 - Appendix 7.A - LVIA Methodology - Table A6

Table 7 - 8 Visual Receptors

Visual Receptor Type and Description	Sensitivity
Residential properties. Views by users of Public Rights of Way or other recreational trails (e.g. National Trails, National Cycle Network, footpaths, bridleways etc.) Views by users of public open space for the enjoyment of the countryside (e.g. Country Parks, National Trust or other access land etc.) Static views from dense residential areas, longer transient views from designated public open space, recreational areas such as; a) Riverside Recreation Ground; b) Children's play area at Riverside; c) Views from and of rare, designated areas of national importance. i.e. Mendip Hills AONB Of specific relevance for the Scheme including; a) Summer Lane Park Homes which is located approximately 50m to the west; b) Court Farm Country Park c) Moorland Farm Caravan and Motorhome Site; d) Stonebridge Farm Caravan Park; e) Myrtle Farm Holidays (campsite and holiday barn); f) Properties within Banwell Village (approximately 300m to the south) with a direct view of the Scheme, g) The hamlets of Stonebridge and Wolvers Hill; h) Isolated farmsteads throughout the northern section of the Study Area within the Somerset Levels. i) An area of new housing (54 homes) has been identified and received Planning permission on land to the west of Wolvershill Road/ north of Knightcott Park. Whilst this development has not yet been started it is likely that it would either be under construction or be in partial/complete occupation once the Scheme construction commences.	High
Static views from less populated residential areas, schools and other institutional buildings and their outdoors areas; a) Views by outdoor workers; b) Transient views from local/regional areas such as public open space, scenic roads, railways, or waterways. c) Users of local/regional designated tourist routes of moderate importance; d) Views from and of landscapes of regional importance; These include views from leisure and tourist attractions whose principal role is not the direct enjoyment of the landscape or that	Moderate

Visual Receptor Type and Description	Sensitivity
have transient/short term views of the Scheme, including; a) Banwell Caves and Follies (including Banwell Tower); and b) Heritage Assets including Banwell Village itself.	
Views by users of main roads or passengers in public transport on main arterial routes. These include; a) A368 b) A371 Knightcott Road c) Summer Lane d) Wolvershill Road e) Cooks Lane f) Riverside g) Moor Road h) Castle Hill i) East Street and j) Eastermead Lane. Views by indoor workers; Views by users of recreational/formal sports facilities where the landscape is secondary to enjoyment of the sport (e.g sports facilities) Views by users of local public open spaces of limited importance with limited variety or distinctiveness. These include: a) Banwell Equestrian Centre b) Banwell Recreational Ground/Playground (Knightcott Road and Westfield Crescent) c) Banwell Football Club d) Banwell Bowls Club	Low

Key Views - Baseline

7.6.115 A number of key views have been selected as representative typical of, or as being important views within, the study area. Theses have been used as a baseline against which to assess the potential visual impact of the Scheme. They have been chosen to reflect the following;

a) Those identified as having a clear view towards the Scheme and providing a representative selection across the ZVI. Notable viewpoints have been defined as those viewed from PRoW, residential properties and sensitive receptor locations with a clear view of the Scheme.

b) A proportion must be close to the Scheme (i.e., development within foreground/middle ground.

c) A similar proportion must provide distant views of the Scheme (i.e., development within middle ground / background)

7.6.116 GLVIA guidance states that visual effects should, "… consider the area from which the proposed development will potentially be visible. The emphasis must be on a reasonable approach which is proportional to the scale and nature of the proposed development.".

7.6.117 Two long distance views have also been included that are taken from high point within the Mendip Hills AONB. These lie between 3 and 4km away from the Scheme and would normally be considered as being too far distant for the viewer to discern any notable change in the view. However, as they lie within the Mendip Hills AONB they have been included for consideration as part of this assessment as recommended by the GLVIA guidance as, "…*Specific viewpoints, chosen because they are key and sometimes promoted viewpoints within the landscape, including for example specific local visitor attractions.*"

7.6.118 Viewpoints are illustrated on ES Volume 2 - Figure 7.8, and the photographs are shown on ES Volume 2 - Figures 7.9 Photo sheets 1 - 13 .

7.6.119 A number of factors may have an effect on a given view of the Scheme. These include: -

a) *Proximity*: objects within the foreground will potentially have a greater visual impact than those viewed in the background.

b) *Aspect*: The Scheme is located on a raised embankment for much of its length to elevate it from the River Banwell floodplain this would introduce a new built element into an otherwise lightly developed landscape and create an obvious change to the environment within the wider landscape. Similarly, the River Banwell and Riverside Road crossing will have shorter range, focussed visual and physical impacts on the central part of the Scheme. A viewpoint from a higher and more

distant point will be less significant as the Scheme will lie against a varied wider panorama and the viewer will be less likely to register it.

c) *Context*: development viewed against a similar background will often appear less noticeable within the landscape.

d) *Screening*: total or intermittent screening may block or partially screen views of the Scheme. Built form, topography and vegetation may provide screening for each viewpoint.

e) *Activity*: movement of vehicles and light reflection changing with movement, draw the eye, increasing impact. Sympathetic form and neutral colouration diminish adverse impact. Night-time activity and lighting would also create an added visual impact.

7.6.120 For the purpose of this assessment where viewpoints include receptors from more than one category all receptors have been listed and their respective sensitivity noted. The highest sensitivity rating is then taken forward for the impact assessment to ensure that all potential sensitivities are captured. Where a spread of receptors is present this is noted within the visual impact assessment text.

7.6.121 On the basis of receptor sensitivity, site assessment and consultation undertaken with NSC, Mendip Hills AONB and WSP the following viewpoint locations have been agreed for assessment during the LVIA. These are shown on 7.6.10: Viewpoint Locations;

Table 7 - 9 Viewpoint Locations

Viewpoint ID	Description	Distance from Scheme	Receptors	Sensitivity
VP1	**High Street, Banwell. Overlooking 'Valued Landscape' in immediate setting of the Mendip Hills AONB** Identified as an area of Valued Landscape as a result of Planning application Appeal Notice APP/D0121/W/15/3138816. This view looks in a north easterly direction over agricultural fields from an elevated position above A371 Knightcott Road. Whilst the view itself is sharply channelled between high and mature field boundary hedgerows there are clear and panoramic views over the lower lying Somerset Levels and Moors LCA. The view is one of a settled and agricultural landscape with a diverse mosaic of well vegetated field boundaries and tree blocks and scattered farmsteads. The field pattern in the middle ground of the view around Stonebridge Caravan Park is open and clearly visible in Winter views. Vehicle traffic noise is evident from the A371 which lies directly to the north at the foot of the sloping ground with views of traffic moving along the A371 Knightcott Road to the east of the view. Close proximity views onto A371 and the immediate surroundings are limited in summer dependant of field crops grown and their age. Winter views are clear and far distant with Clevedon visible on the northerly horizon.	370m	Residential occupants – 117 High Street Banwell Recreational users – PRoW AX3/12/10	High
			Outdoor workers – agricultural workers	Moderate
			Vehicle users of High Street, although these are likely to be fleeting and transient as the vehicle passes gaps/gateways	Low
VP2	**View from PRoW Footpath AX3/11/10 off Summer Lane** This view is an open short distance view over open pasture land. Further middle and far distance views to the east are truncated by mature hedgerow and hedgerow tree vegetation. Views to the southeast include properties along A371 Knightcott Road and are framed by the wooded backdrop of Banwell Hill. Traffic noise from the A371 and to a lesser extent along Summer Lane are evident along with traffic movement along the A371. The view is one of a rural pastoral settlement edge with development clearly defined along the A371. Summer Lane Park Homes lies immediately to the north with properties to the eastern corner of the site afforded filtered views over the boundary hedge and fence line	340m	Residential occupants – Summer Park Homes and properties along A371 Knightcott Road Recreational users – PRoW AX3/11/10	High
			Outdoor workers – agricultural workers	Moderate
			Vehicle users of A371 Knightcott Road and Summer Lane	Low

Viewpoint ID	Description	Distance from Scheme	Receptors	Sensitivity
VP3	**View from PRoW Footpath AX3/25/10 leading to Whitecross Lane** This view comprises a broad and open view over agricultural fields predominantly pasture. The immediate foreground and field is level with well managed hedgerow boundaries at the relatively low level. Beyond the immediate hedgerow the land gently rises up towards Wolvers Hill with Park Farm clearly evident and at far distance to the north west higher parts of Weston-super-Mare. There is limited traffic noise from A371 and M5 to the west but the overall view is one of settled rural farmland, there is limited development with transient caravan development and infrastructure to the north east at Stonebridge Caravan Park	85m	Recreational Users – ProW AX3/25/10 Tourist/holiday use – Stonebridge Caravan Park Residential occupants – Park Farm	High
			Outdoor workers – agricultural workers	Moderate
VP4	**View from PRoW Footpath AX3/5/10 off Wolvershill Road** This northerly view provides wide angled views over open pasture. Mature and well-managed hedgerow boundaries filter low level views in the foreground. The land gently rises to the north with a more frequent incidence of hedgerow trees and small tree groups found along residential property boundaries and within the extents of Court Farm Country Park. Wolvershill Road marked by well managed hedgerows lies to the north east with properties at Summer Court and Stonebridge Caravan Park partially screened by intermittent tree cover.	175m	Recreational Users – PRoW AX3/5/10 Tourist/holiday use – Stonebridge Caravan Park, Court Farm Country Park Residential occupants – Summer Court, Stonebridge Cottage and Court Farm	High
			Outdoor workers – agricultural workers	Moderate
VP5	**View from PRoW Footpath AX3/6/10 Cook's Lane to Moor Lane** An easterly view over open pasture in the foreground middle and far ground views are sharply curtailed by mature tree and hedgerow vegetation with field corner and hedgerow trees in greater number across this section of the study area. Hedgerows where present are overgrown and often associated with open ditches/rhynes. The topography is level and low lying with views to the south and west framed by the wooded skyline of Banwell Hill, Banwell Woods and Hillfort forming part of the northerly extent of the Mendip Hills AONB. The Conservation Area core of old Banwell is visible to the south with the vernacular red pantile roofing evident on older and modern housing on the outskirts. The Church and tower of St Andrew's Church provide a clear and distinct landmark set against the wooded backdrop. A settled pastoral and tranquil view with harmonious landscape and no detractive elements.	Adjacent <50m	Recreational Users – PRoW AX3/6/10, with clear and attractive views over an undisturbed harmonious landscape Residential occupants; Whitecross Cottage, Little Vaust, Halcyon and Elmcroft Farm, Cook's Lane Rear of properties along Wolvershill Road	High
			Outdoor workers – agricultural workers	Moderate

Viewpoint ID	Description	Distance from Scheme	Receptors	Sensitivity
VP6	**View from Moor Road junction** An open and attractive rural view looking south towards the Mendip Hills AONB. The hill slopes form a distinct skyline and provides a distant focus for the viewer. Banwell is clearly evident rising up slope onto Banwell Hill, with the tower of St Andrew's Church a clear landmark set against the wooded back drop. Foreground and middle ground are open and pastoral in nature with mature tree groups along the course of the Old Yeo Rhyne and grouped along other field ditches and rhynes. The view is harmonious with no detractive elements or infrastructure	78m	Recreational users – PRoW AX3/6/10	High
			Outdoor workers; agricultural workers, horse owners/riders Users of scenic roads (Moor Road); accessing property and land	Moderate
VP7	**View from Riverside (North)** This southerly looking view is sharply directed along the Riverside Road with the River Banwell lying to the right of the road. Long direct and unimpeded views are afforded along the length of the road with the wooded back drop of Banwell Hill and Woods visible in the distance and culminating the view. Large mature willows with signs of historic pollarding line much of the road and are a frequent and highly distinctive element and characteristic of the levels.	80m	Users of scenic roads (Riverside) to and from Banwell, accessing residential properties.	Moderate
VP8	**View from Nye Drove PRoW Bridleway AX3/59/10** A far reaching and panoramic view over open farmland/pasture. The ridges and northerly slopes of the Mendip Hills AONB form a clear and distinctive skyline and focus for this southerly view. Sandford Hill, Fry's Hill and Banwell Hill are all clearly visible with Banwell hillfort providing the main visual focus directly to the south. The topography is flat and expansive with no significant development other than scattered farmsteads/residential properties set amongst mature tree and overgrown hedgerow vegetation. Intervening field boundary vegetation filters low level views. A balanced view with no detractive elements.	820m	Recreational users – PRoW AX3/59/10 Bridleway	High
VP9a	**Riverside junction with PRoW Bridleway AX3/24/10 (Looking north)** An attractive riverside view to the north along the River Banwell. The western extent is filtered through semi mature will ow and alder planting along the river channel with the river itself contained within a straight stone walled channel. Views along the road are direct and unimpeded.	350m	Residential occupiers; housing at Riverside crescent Recreational users – PRoW AX3/24/10 Bridleway	High

Viewpoint ID	Description	Distance from Scheme	Receptors	Sensitivity
	Housing at Riverside is set back to the east with a large open green amenity space lying between the road and houses. Traffic noise is muted to the south through Banwell, and traffic flows tend to be highest around peak commuter hours when Riverside becomes a busy local side road.		Users of scenic roads (Riverside) to and from Banwell, accessing residential properties.	Moderate
VP9b	**Riverside junction with PRoW Bridleway AX3/24/10 (Looking south)** An attractive well wooded view onto the settlement edge of Banwell with the tower of St. Andrew's Church (LB) a prominent feature in the middleground where it lies directly along the line of the road. Banwell Woods is clearly visible through a gaps in the vegetation to the south east of the view with the Banwell Hillfort (SM) at the crest. The winter view affords clear and direct views over the site of the Romano-British villa (SM) to the settlement edge and conservation area of central Banwell.	540m	Residential occupiers; housing at Riverside crescent Recreational users – PRoW AX3/24/10 Bridleway	High
			Users of scenic roads (Riverside) to and from Banwell, accessing residential properties.	Moderate
VP10	**View from junction of PRoW footpath AX3/9/10 and Eastermead Lane** This view looks over level land gently rising towards the slopes of Banwell Woods and Hillfort. It is a agricultural pastured landscape of fields defined by well managed hedgerows and intermittent hedgerow trees. The slopes of Banwell hillfort are well wooded with a mixed deciduous broadleaf cover. Eastermead Lane runs to the northeast with a strongly vegetated overgrown hedgerow running along its southerly extent. Banwell Football Club occupies the field to the rear of the view. Towerhead Solar Farm is visible in the Winter view directly to the east. Traffic noise is muted but evident from the A368 Towerhead Road.	60m	Recreational users – PRoW AX3/9/10 and Eastermead Lane	High
			Outdoor workers – agricultural workers	Moderate
			Users of recreational facilities – Banwell Football Club	Low
VP11	**View from A368 East Street (Looking southwest)** This view looks directly along the A368 Towerhead Road towards Banwell. High hedgerows line both sides of the busy road and views out over the surrounding landscape are fleeting for the vehicle traveller. A number of residential properties occupy the northerly side of the road corridor. The wooded slopes of Banwell Hill are visible at a higher elevation above the road corridor to the west. A TPO lies in the garden of The Old Police House and a group of 7 trees at The Corner House. The A368 forms the northern boundary of the Mendip Hills AONB	Adjacent < 50m	Mendip Hills AONB Residential occupiers; The Old Police House, Eastermead Farm on Towerhead Road and Corner House on East Street	High
			Vehicle users of the A368, these are likely to be fleeting and transient as the vehicle passes gaps/gateways	Low

Viewpoint ID	Description	Distance from Scheme	Receptors	Sensitivity
VP12	**View from PRoW Footpath AX3/47/10 off Wint Hill** A heavily wooded and sharply enclosed view along the stone walled property boundaries on Wint Hill. This is a domestic and intimate view downhill along the lane culminating at the stone boundary wall of Banwell Castle (Grade II*). The southerly side of the lane is heavily wooded with traditional stone walling forming the opposite side. Banwell Woods and Hillfort are a strong and dominant feature of the view. Traffic noise along the A371 is evident and a constant background feature. The area sits within Banwell Conservation Area with Banwell Woods a TPO	<50m	Mendip Hills AONB, Banwell Conservation Area, Banwell Caste (LB) Recreational users – PRoW AX3/47/10 and users of Wint Hill. Residential occupiers;	High
			Vehicle users of the A371, these are likely to be fleeting and transient as the vehicle passes gaps/gateways	Low
VP13	**View from PRoW Restricted Byway AX3/23/10** This view looks in the north westerly direction from higher ground above the A368 Towerhead Road. The A368 is well screened with mature hedgerow and tree vegetation which also serves to filter views over the lower lying farmland to the north. Winter views are clearer with glimpsed views of Towerhead Solar Farm in the middle distance. Banwell Woods (Tree Preservation Order) forms the field boundary lying to the south. The viewpoint is within the Mendip Hills AONB	360m	Mendip Hills AONB Recreational users – PRoW AX3/23/10 Residential occupiers; Oak Lodge, Towerhead Farm	High
			Outdoor workers – agricultural workers	Moderate
			Vehicle users of the A368, these are likely to be fleeting and transient as the vehicle passes gaps/gateways	Low
VP14	**View from junction of PRoW footpaths AX3/18/10, AX3/19/10, AX3/47/10 and AX3/47/20 on Banwell Hill** A far reaching, elevated view over the North Somerset Levels afforded from the top of Banwell Hill. The tree tops of the upper wooded slopes of the hill above Banwell serve to frame and screen views of much of Banwell and the nearer extent of the levels. Views are more evident in winter but are still filtered. Far distant views are afforded of Towerhead Solar Farm to the east and towards Bristol/Avonmouth to the north and Weston-super-Mare and Worle to the west. The viewpoint is within the Mendip Hills AONB	1.13km	Mendip Hills AONB Recreational users – PRoW AX3/18/10, AX3/19/10, AX3/47/10 and AX3/47/20	High
VP15	**View from Road/Byway AX3/23/30 used as PRoW south of Towerhead** This view looks in the north westerly direction elevated ground above Towerhead over a well wooded attractive rural agricultural landscape. The A368 runs along the break in slope before dropping down into the lower lying land and is well screened with mature hedgerow and tree vegetation which also serves	1.28km	Mendip Hills AONB Recreational users – PRoW AX3/23/20	High
			Outdoor workers – agricultural workers	Moderate

Viewpoint ID	Description	Distance from Scheme	Receptors	Sensitivity
	to filter views. Views of Towerhead Solar Farm are visible in the middle distance to the west of the view. Banwell Woods (TPO) forms the field boundary lying to the south. The viewpoint is within the Mendip Hills AONB		Vehicle users of the A368, these are likely to be fleeting and transient as the vehicle passes gaps/gateways	Low
VP16	**View from the Strawberry Line NCR 26 PRoW AX29/41/20, between Winscombe and Sandford** An intimate view with short distance views over adjacent farmland with well wooded and vegetated field boundaries that are mature and totally curtail distant views in summer. Winter views are heavily filtered. The former rail line is quiet with regular usage by cyclists, pedestrians and dog walkers	1.13km	Recreational users – PRoW AX29/41/20, NCR 26 and LNR Cheddar Railway Walk	High
VP17	**View from junction of PRoW on Sandford Hill** A short distance view over an apple orchard towards Sandford Station Retirement Village. Views are totally screened by orchard vegetation and the built development	1.5km	Recreational users – PRoW AX29/41/20 and AX29/78/20	High
VP18	**View from Hillfort on Dolebury Warren (Mendip Hills AONB3)** A highly attractive rolling wooded landscape providing wide and far-reaching views over a varied undulating and well vegetated landscape. Brean Down and Knoll Wood are prominent in the foreground and effectively screen views beyond although the distant view contains Weston-super-Mare	>5.5km	Mendip Hills AONB SNCI – Mendip Lodge Wood, SM Dolebury Warren earthworks Recreational users – PRoW	High
VP19	**View from the lower slopes of Dolebury Warren (Mendip Hills AONB3)** As with VP18 – a wide panoramic view over a highly attractive wooded landscape. Views to the south and west include the ridge of Wavering Down and Crook Peak. Knoll Wood is prominent in the foreground and effectively screen views of Banwell and its environs	>5km	Mendip Hills AONB SNCI – Mendip Lodge Wood, SM Dolebury Warren earthworks Recreational users – PRoW	High
VP20	**View from junction of Towerhead Road & Catworthy Lane** This view looks directly along the A368 Towerhead Road with Banwell Woods (TPO, SNCI) and Banwell Ochre Caves (SAC) forming the southerly boundary of the road. The aspect is of a well wooded green corridor with field gates and low hedges providing occasional views to the north over the lower lying levels and moors. Road traffic – movement and noise are a constant although this decreases rapidly as one descends down Catworthy Lane.	150m	Mendip Hills AONB (setting) Banwell Woods (TPO, SNCI) and Banwell Ochre Caves (SAC) - setting	High
			Vehicle users of the A368, these are likely to be fleeting and transient as the vehicle passes gaps/gateways	Low

Viewpoint ID	Description	Distance from Scheme	Receptors	Sensitivity
VP21	**View from Field gate off Summer Lane near to Laurel Farm** This south easterly view from Summer Lane is a wide angled view taking in a foreground of open pasture with well defined and mature hedgerow boundaries. Hedgerow trees frequent the field corners and provide good intervening vegetation cover filtering distant low level views. The higher ground of the Mendip Hills is clearly visible above the lower lying landscape with Sandford Hill and Banwell hillfort clearly visible to the south east. Banwell itself is visible to the south sitting on the slightly higher topography at the lower edge of Banwell Hill.	600m	Residential occupiers; Laurel Farm and Summer Barn	High
			Users of scenic roads (Summer Lane) accessing residential properties. Outdoor workers – agricultural workers	Moderate
VP22	**View from Entrance to Court Farm Country Park off Wolvershill Road** This view looks in a southeasterly direction along Wolvershill Road towards Stonebridge. The aspect is of a well wooded green corridor containing views from passing vehicles. Field gates provide occasional views to the east and west, although these for the most part are not until Stonebridge Farm is reached. Road traffic movement and noise are a low level constant peaking at commuter hours	300m	Tourist/holiday use; Court Farm Country Park Residential occupants; Summer Court, Stonebridge Cottage and Court Farm	High
			Users of scenic roads (Wolvershill road) accessing residential properties. Outdoor workers – agricultural workers	Moderate
VP23	**View from Taylor's Field Housing development, off Wolvershill Road** This recently completed housing development occupies a infill development site on the eastern side of Wolvershill Road. It lies in close proximity to the Romano-British Villa SM with PRoW AX3/24/10 following its northern boundary. The development has largely been located within the existing field pattern and strongly vegetated boundaries follow its northern extent providing good screening	500m	Residential occupiers along the northern and eastern extent of the development Recreational users PRoW AX3/24/10	High
VP24	**View from West Mendip Way at Wavering Down (Mendip Hills AONB3)** A highly attractive distant view affording good panoramic and far reaching views to the north over the Somerset Levels and towards the Bristol Channel. Views of the study area are far distant and form part of the wider landscape panorama. The landscape is varied rolling and well vegetated providing a good degree of screening at this distance.	> 2.7km	Mendip Hills AONB, Recreational Users - West Mendip Way long distance path	High
VP25*	**Proposed Housing development, Land to the West of Wolvershill Road** This is an area of proposed housing comprising the construction of 54no. dwellings including 16no. affordable housing units along with the provision of informal public open space and associated works. Whilst the development has	421m *(from western extent)*	Potential residential occupiers confined to the northern and western extent of the development	High

Viewpoint ID	Description	Distance from Scheme	Receptors	Sensitivity
	not yet been started it is likely that it would be either under construction or partially/completely occupied by the start of Scheme construction. The view currently is over open farmland with the settlement edge of Banwell at Knightcott park providing a defined edge to the south. The proposed development would occupy two field parcels within the existing field pattern with strongly vegetated boundaries to the west providing good screening. Existing garden vegetation at Meadow Court and field boundary vegetation provides good containment to the north. ** This viewpoint has been described from existing site knowledge and appraisal but does not have an illustrated viewpoint photograph*			

7.6.122 A number of further considerations have been made when assessing the viewpoint locations;

7.6.123 Mendip Hills AONB: Whilst the Scheme only directly impacts on a small section of the AONB in the siting of the Southern Link, the setting and perceived tranquillity as special experiential qualities of the AONB was highlighted by NSC and Mendip Hills AONB. As a result, consideration of the landscape and visual impact of the Scheme proposed and their context within the wider AONB setting has been taken account of in this visual impact assessment.

7.6.124 Banwell Conservation Area and Listed Buildings at or within the settlement edge: Consideration of these will be assessed in full detail in the Cultural Heritage Chapter of this ES. However, consideration has also been made of visual impacts on the essential setting of the listed buildings and Scheduled Monuments by both the Scheme and structures.

7.6.125 The current visual assessment, including a Summer photographic survey was undertaken in September 2021. This followed the initial photographic survey and assessment made as part of the Screening and Scoping process by WSP in March 2021. The Winter views provide a baseline for consideration for the most extensive and open views within the Study area.

7.7 Predicted Environmental Effects

7.7.1 The Scheme description is provided in full in ES Volume 1 - Chapter 2 - Section 2.5. The construction programme is subject to successful completion of the statutory procedures. However, it is currently anticipated that construction would begin in 2023 and road opening would be in late 2024. This would be followed by a five-year aftercare period. It is anticipated that the Scheme would then be handed over to the Maintaining Authority, in this case NSC. As part of the ongoing environmental management of the Scheme a Maintenance Environmental Management Plan (MEMP) would be produced that would include longer term (up to 25 years post establishment) management of the landscape mitigation measures to ensure their Environmental Functions would be achieved. For further details of these measures, refer to ES Volume 1 - Chapter 16 - Environmental Management.

7.7.2 In conducting this assessment, a number of assumptions have been made in terms of construction methods which may be implemented,

these are based on best practice working methodology as proposed by the contractor.

7.7.3 The construction of the new road, bridges and planted earthworks would require the use of machinery, cranes, plant, storage of material, flood lighting on construction areas and scaffolding, as well as temporary land take for site compounds and haul routes. There would be removal of established existing tree and hedgerow vegetation, which would result in the loss of a landscape feature and disruption of the existing landscape pattern and framework. Fields under the footprint would be stripped of topsoil and subsoil to the required depths with stockpiling occurring close to the original site of strip in order to ensure soils are maintained in their original locations. Soils would be stripped and stored in accordance with working method statements developed with reference to the British Standard for Topsoil BS3882:2015 and the Model Contract Document for Highway Works (MCDHW) series 600 Earthworks appendices .

7.7.4 Considering the descriptors of magnitude of effects in ES Volume 3 - Appendix 7.A - LVIA Methodology, Table A3 and the summary of landscape sensitivity in Table A2 this section describes the likely significance of the effects of the Scheme at Construction stage, winter of Opening year (Year 1) and at Winter and Summer in Year 15. With the impacts assessed against the LCAs to provide a Landscape Impact Assessment and then against the Viewpoint and Receptor assessment to provide a Visual Impact Assessment for each phase of the Scheme. An assessment has been made of the cumulative impacts anticipated which is described in ES Volume 1 - Chapter 15 - Cumulative Effects.

Construction impacts

7.7.5 Through consideration of the above landscape elements, the overall effects of the construction of the Scheme on the site landscape character would be significant, due the introduction of new large-scale infrastructure into a settled and undisturbed farmland landscape currently largely devoid of visual detractors. The introduction of the river crossing over the River Banwell will further emphasise the works as it creates a new built element at some height over the low-lying levels and moors landscape. Further effects entail the removal of vegetation including hedgerow and mature trees of landscape value.

7.7.6 The key issues include:

a) introduction of a large-scale infrastructure development into an

otherwise settled and tranquil landscape;

b) The introduction of a new structure within an otherwise undeveloped open field system at odds with the existing landscape pattern in the form of the River Banwell crossing;

c) land take within the Mendip Hills AONB;

d) loss of established hedgerow and mature tree vegetation opening;

e) permanent lighting and potential impacts on Mendip Hills AONB and experiential qualities of tranquillity; and

f) temporary lighting and introduction of heavy machinery into a pastoral landscape generally devoid of built development.

Construction Phase: Landscape Impact Assessment

7.7.7 **NCA 118: Bristol, Avon Valleys and Ridges**: There would be no direct effects in relation to the introduction of construction features and the loss of vegetation on the NCA 118 Bristol, Avon Valleys and Ridges due to the scale of the proposals in relation to the wider context of the character area.

7.7.8 The landscape impact at the national scale is considered to be;

Landscape Sensitivity: Low

Magnitude of Effect: No change

Significance of Effect: **Neutral**

7.7.9 **NCA 141: Mendip Hills:** The Southern Link from the A368 to the A371 near to Banwell Castle is within this NCA and there would direct physical impacts in terms of vegetation removal, construction of new infrastructure; realigned and improvements to junctions and limited lighting to tie into existing provision. The construction activities of the road would introduce temporary uncharacteristic features such as heavy machinery and temporary lighting, resulting in a localised adverse effect on the settled, wooded rural/settlement edge of the southeast of Banwell. The construction activities would only be visible in the immediate vicinity of the works given the topography.

7.7.10 The main Scheme alignment lies outside this NCA. Whilst there would be no direct physical impacts on NCA 141 the construction activities for this section of the works would be visible in the wider landscape setting and from the elevated position of the northern slopes of the Mendip Hills. These however, would only be clearly visible at a relatively short distance (< 1.5km) and would not have an impact on the wider NCA.

7.7.11 The landscape impact at the national scale is considered to be;

Landscape Sensitivity:	High
Magnitude of Effect:	Negligible adverse
Significance of Effect:	**Slight adverse**

7.7.12 NCA 142: Somerset Levels and Moors: The Scheme alignment is contained within this NCA although this is the most northerly part of the NCA with the majority of it lying to the south and west beyond the Mendip Hills. With a key characteristic noted as The NCA is described as: '…open, often treeless, landscape' with a, '…pattern of rectilinear fields, ditches, rhynes, drains and engineered rivers, and roads. The NCA has a history of human manipulation of a long period of time. The Scheme construction activities would introduce temporary uncharacteristic features such as heavy machinery and temporary lighting, resulting in an adverse effect on a largely unsettled, rural part of this landscape at a regional and local level.

7.7.13 The construction activities would be visible in the wider landscape setting due to the open and flat topography, albeit screened by field boundary and rhyne vegetation, built form and low lying landform in some locations. There would also be locally sensitive landscape features lost which contribute to the wider landscape character such as disruption to the landscape pattern at odds with the ditch and rhyne system.

7.7.14 The landscape impact at the national scale is considered to be:

Landscape Sensitivity:	Medium
Magnitude of Effect:	Minor adverse
Significance of Effect:	**Slight adverse**

7.7.15 **Mendip Hills AONB**: The Scheme lies adjacent to the north-western extent of the AONB with the local topography sharply rising from the low lying levels thus screening middle and longer distance views from within

the AONB. Visual impacts on the AONB are more likely to be incurred as a result of lighting site working areas over winter and during any night-time working and are fairly localised in terms of area of impact.

7.7.16 The Southern Link lies within the AONB leaving the existing A368 on the outskirts of Banwell and following a natural break in the landform between Banwell Hill and Banwell Woods. This section of the Scheme is relatively self-contained within an enclosed landscape unit truncating any further long distance views from within the AONB.

7.7.17 The landscape impact at the national and regional scale is considered to be:

Landscape Sensitivity:	High
Magnitude of Effect:	Negligible adverse
Significance of Effect:	**Slight adverse**

7.7.18 **LCA A1 Kingston and Puxton Moors**: The southern most extent of this LCA lies approximately 800m to the north of the study area and will not incur any direct physical impacts from the Scheme. However, there is an intervisibility between this low lying open levels landscape and the adjacent LCA A4 which would accommodate the majority of the construction works and permanent Scheme. The construction activities of the road would introduce views for a relatively small area of the southern extent of the LCA of temporary uncharacteristic features such as heavy machinery and temporary lighting, resulting in minor adverse effect on a settled, rural landscape area. The construction activities would be visible at a short distance i.e.500-800m in the wider landscape setting due to the relatively flat topography. However, these would for the most part be screened by field boundary vegetation. The Moors landscape type is not particularly wooded, with tree cover limited to rhynes and watercourses. Key to this would be the construction of the Scheme embankments and their increasing height achieve sufficient height to cross the River Banwell. Which would result in the introduction of a new form of a large scale at odds with the current landscape character. However, these impacts are only considered to be applicable to a relatively localised area of a few field parcels south of East Rolstone.

7.7.19 The landscape impact at the regional scale is considered to be:

Landscape Sensitivity:	Medium
Magnitude of Effect:	Negligible adverse

Significance of Effect: **Neutral/Slight adverse**

7.7.20 **LCA A4 Locking and Banwell Moors**: A relatively localised LCA in terms of relationship to the Scheme. There would be direct effects in relation to construction stage impacts loss of vegetation and disruption to the landscape pattern and framework on the local landscape character of Locking and Banwell Moors. These would result in partial and noticeable damage to the existing character of the area. The construction activities of the road would introduce temporary uncharacteristic features such as heavy machinery and temporary lighting, resulting in adverse effect on a settled, rural landscape. As with the adjacent LCA A1 the area is not heavily wooded, however hedgerow and tree cover associated with the rhynes and ditch system provides low level filtering of views. Key to direct impacts on this LCA would be the construction of the embankment and cutting carrying the Scheme and their increasing height around the River Banwell crossing alongside the associated infrastructure of the offline Moor Road link and new junction at Woolvershill Road. This would result in the introduction of a new large scale built form at odds with the current landscape character.

7.7.21 The landscape impact at the regional scale is considered to be:

Landscape Sensitivity: Medium

Magnitude of Effect: Moderate adverse

Significance of Effect: **Moderate adverse**

7.7.22 **LCA E1 Mendip Ridges and Coombes**: The Scheme would be visible from the middle and upper slopes of Banwell Hill which together with Sandford Hill forms the central part of this LCA. There is a high degree of intervisibility between this part of LCA E1 and the adjacent LCAs of J2 and A4. The elevated position would provide views set within a wider landscape setting of the construction activities associated with the Scheme. These activities would increase the extent of the human activity in the wider landscape and introduce uncharacteristic features such as heavy machinery and temporary lighting.

7.7.23 To the east of Banwell Hill construction activities associated with the Southern Link would directly impact upon this LCA where the Scheme ties back into the southbound A371. There would be some locally sensitive landscape features lost along the edge of Banwell Woods which contribute to the wider landscape character and introduction of a new, larger scale infrastructure link together with the associated works

required to accommodate drainage features, embankments and temporary siting of works compounds. These would result in partial temporary damage to the existing character of the area to the south of Banwell during construction and the addition of new infrastructure elements and features.

7.7.24 The landscape impact at the regional scale is considered to be:

Landscape Sensitivity:	High/Medium
Magnitude of Effect:	Minor adverse
Significance of Effect:	**Slight/Moderate adverse**

7.7.25 **LCA J1 Lox Yeo Rolling Valley Farmland**: Whilst this LCA shares intervisibility with LCA E1 along the southern extent of Banwell Hill there are unlikely to be any direct physical impacts upon the area. There maybe limited views of construction activities associated with the tie in of the Southern Link but these would be at a very small scale in the wider landscape setting.

7.7.26 The landscape impact at the regional scale is considered to be:

Landscape Sensitivity:	Medium
Magnitude of Effect:	No change
Significance of Effect:	**Neutral**

7.7.27 **LCA J2 River Yeo Rolling Valley Farmland**; This LCA flanks LCA A4 on both east and west sides with the area around near Knightcott containing the western tie in. There would be direct effects in relation to construction stage impacts and loss of vegetation on the local landscape character of the area. The construction activities of the road would introduce a temporary increase in uncharacteristic features such as site compounds, heavy machinery and temporary lighting, although traffic movements within this area are already present in the form of the A371 and M5 corridor. Construction activities would proliferate human and machinery activity further into a relatively settled pastoral landscape and would be visible in the wider landscape setting due to the relatively flat topography, albeit screened by field boundary vegetation.

7.7.28 There would be some locally sensitive landscape features lost which contribute to the wider landscape character such as hedgerow field boundaries and incidental mature hedgerow trees. The formation of earth

embankments and cutting would cut across the natural grain of the landscape pattern and introduce an elevated and uncharacteristic feature into the wider landscape at odds with the current situation fragmenting the visual unity of the area.

7.7.29 The landscape impact at the regional scale is considered to be:

Landscape Sensitivity: Medium

Magnitude of Effect: Moderate adverse

Significance of Effect: **Moderate adverse**

7.7.30 In terms of the **Study Area** site character, the construction activities of the road would introduce temporary uncharacteristic features. During the construction phase, there would be areas of the construction site that would include site compounds with localised stockpiles of materials, topsoil stockpiles, construction site offices, construction traffic, traffic control, fencing, flood lighting and hoarding. These are visually intrusive 'urban' features and at odds with the wide open, settled and farmland of the levels and rhyne character.

7.7.31 The extensive curving linear form of the construction site and haul route would cut across the rectilinear field pattern, disrupting the current landscape framework. Site compounds and temporary working areas would further introduce proportionally large areas of activity and built elements within the existing field pattern but in sharp contrast with the existing landuse. This, alongside potential introduction of flood lighting in association with the site compound and for Winter or night-time working into a currently dark corridor would have an impact on sense of remoteness and tranquillity.

7.7.32 There would also be permanent effects on the landscape features of the site including changes to the topography in the creation of highway embankments and cutting slopes and loss of established field boundary vegetation. The Scheme would create a linear infrastructure at a considerably larger scale than is currently found within the area.

7.7.33 The landscape impact at the local scale is considered to be:

Landscape Sensitivity: Medium

Magnitude of Effect: Moderate adverse

Significance of Effect: **Moderate adverse**

Construction Phase: Visual Impact Assessment

7.7.34 Views descriptions and assessment of visual impacts are assessed on the basis of the wintertime view. The summertime views would generally have a less significant assessment due to tree canopy foliage and intervening crops.

7.7.35 **VP1: High Street, Banwell**. Overlooking 'Valued Landscape' in immediate setting of the Mendip Hills AONB. (For a description of the viewpoint location and receptors refer to Table 7-10)

7.7.36 Views of the construction of the Banwell West roundabout, main site compound would be at a lower level and largely screened by the slope dropping away to the north and intervening built form at Knightcott and Ian Studley Cars. However, a clear and far-reaching view along the western extent of the Scheme as it passes north and curves to the east between Stonebridge Caravan Park and Court Farm Country Park would be evident. This would comprise clearance of existing field boundary vegetation, topsoil strip and storage followed by construction of the Scheme embankment. Haul routes and movement of construction traffic would be a constant in the view introducing a new activity and movement into the middle ground of the view. Park Farm is clearly evident overlooking the area from the north.

7.7.37 As the Scheme construction curves to the east between Stonebridge Caravan Park and Cooks Lane views would become more oblique with the works creating a new linear form in the landscape view. Construction activity would be apparent along its length becoming less evident as it passes behind intervening built development along Cooks Lane and Wolvershill Road before crossing Moor Road.

7.7.38 The eastern Scheme extents become less clear as distance increases and the existing field boundary vegetation filters direct views. The River Banwell bridge crossing would create a new higher level built element in the current level landscape.

7.7.39 The view sits on the edge of the Mendip Hills AONB additionally cited as a 'Valued Landscape'.

Receptor sensitivity:	High
Magnitude of Effect:	Moderate adverse
Visual Impact Significance:	Moderate/Large adverse

7.7.40 **VP2: View from PRoW Footpath AX3/11/10 off Summer Lane**: (For a description of the viewpoint location and receptors refer to Table 7-10). It provides a close distance view over the western tie in of the Scheme (25m AOD). The construction works would be contained within the field parcels two fields to the east of the viewpoint. Traffic movement and noise are both a constant along the A371 with night-time lighting impacts from headlights also evident.

7.7.41 Views of the construction of the Banwell West roundabout would be visible through the intervening field boundary vegetation although partially moderated by the sloping topography.

7.7.42 The main site compound would occupy the field immediately to the east of this viewpoint and would be evident over the adjacent hedgerow vegetation becoming the main point of focus for the construction. The siting of the works compound at a relative close proximity, would create a new and more intensive source of vehicular and construction traffic movements and noise during working hours with the added increased visual impact from lighting of the works compound especially over Winter period and during any night-time working.

7.7.43 The Scheme would also necessitate improvements to the local road network with upgrades to the junction of Summer Lane and the A371 and Well Lane. This would require the removal of some of the existing roadside vegetation bordering Knightcott Road in order to accommodate the junction improvements, resulting in a greater view of moving traffic travelling along the A371.

7.7.44 The construction phase haul route and construction of the Scheme embankments running away from the view and to the north would be largely screened by intervening low level field boundary vegetation and mature tree vegetation sitting within the adjacent field to the east and should not be evident in the view.

Receptor sensitivity: High

Magnitude of Effect: Moderate adverse

Visual Impact Significance: Moderate/Large adverse

7.7.45 **VP3: View from PRoW Footpath AX3/25/10 leading to Whitecross Lane**: (For a description of the viewpoint location and receptors refer to Table 7-10). It provides a close distance view over the Scheme as it runs to the north before sweeping round to the east and cutting the corner of

the caravan park in the adjacent field.

7.7.46 Clear views of the construction of the Scheme embankments at an elevated height approximately 3-5m above the existing ground level would be at a close proximity and form the dominant focus of the view. Works would comprise clearance of existing field boundary vegetation, topsoil strip and storage followed by construction of the Scheme embankment. Haul routes and movement of construction traffic would be a constant in the view introducing a new activity and movement at close proximity. There would be an additional visual impact from any lighting of the works especially over Winter periods and during any night-time working if necessary.

7.7.47 Trees are infrequent in this view with most vegetation cover provided by low level well managed hedgerows which provide little screening to development above 1-2m height. The eastern edge of Summer Lane Park Homes is evident to the west, Stonebridge Farm caravan park to the north east with Park Farm is clearly evident overlooking the area from the north.

Receptor sensitivity: High

Magnitude of Effect: Moderate adverse

Visual Impact Significance: **Moderate/Large adverse**

7.7.48 **VP4: View from PRoW Footpath AX3/5/10 off Wolvershill Road.** (For a description of the viewpoint location and receptors refer to Table 7-10). Well managed hedgerows border the adjacent fields with mature trees on higher ground.

7.7.49 The Scheme would occupy a cutting approximately 230m north of the viewpoint. Works would comprise clearance of existing field boundary vegetation within the Scheme extents, topsoil strip and storage followed by construction of the Scheme cutting. Initially construction traffic, haul routes and movement of heavy machinery would be a constant in the view whilst the cutting was being excavated. This would introduce a new activity and movement in the middle distance that is uncharacteristic for this area.

7.7.50 Construction works further to the west beyond Wolvershill Road would largely be screened by intervening roadside and field vegetation. Construction activity to undertake the Wolvershill junction improvements would be evident and would necessitate the removal of some of the

existing roadside vegetation, resulting in a greater view of traffic travelling along Wolvershill Road and opening up limited and channelled views of construction activity at the junction.

7.7.51 The Scheme would transition out of cutting approximately 200m to the northeast. Construction activity would be evident in the clearance stripping and storage of topsoil and materials and in the construction of the embankments carrying the Scheme further east.

Receptor sensitivity: High

Magnitude of Effect: Moderate adverse

Visual Impact Significance: **Moderate/Large adverse**

7.7.52 **VP5: View from PRoW Footpath AX3/6/10 Cook's Lane to Moor Lane**: (For a description of the viewpoint location and receptors refer to Table 7-10). Currently an open attractive pastoral scene with distant views to Banwell and wooded hills beyond.

7.7.53 Construction works would be extremely apparent and form the main focus of the view with high levels of construction activity commencing with the vegetation clearance and soil strip and storage required to facilitate the works. Scheme working area would be temporarily fenced and haul routes and vehicular and construction traffic would be clearly evident. Once initial clearance operations had taken place there would be systematic construction and raising of the Scheme embankments.

7.7.54 Construction activity, temporary lighting, fencing and the creation of the earthworks would introduce a new starkly uncharacteristic element into a previously settled pastoral scene creating a disunity in the current aspect.

Receptor sensitivity: High

Magnitude of Effect: Major adverse

Visual Impact Significance: **Large/Very Large adverse**

7.7.55 **VP6: View from Moor Road.** (For a description of the viewpoint location and receptors refer to Table 7-10). This open an attractive pastoral scene is focussed upon the setting of Banwell against the wooded back drop of Banwell Hill and Woods. The foreground is distinguished by the low lying levels and clearly characterised by the rhyne network with open water reflecting the skies and open aspect. Mature tree vegetation lines the eastern side of Moor Road curtailing

further views in this direction.

7.7.56 The Scheme would run on embankment approximately 350m south of the current viewpoint emerging from low level screening vegetation to the west and forming a distinct new built element in the middle ground of the view. Construction works would comprise the initial site clearance of vegetation, stripping and storage of topsoil and materials prior to the commencement of the embankment construction raising the Scheme approximately 3-5m above the existing ground level. This would introduce a new and discordant element in an otherwise settled pastoral view. The raising of the earth embankments would create a visual barrier across the view and effectively terminate the southerly view screening views of Banwell and the prominent tower of St Andrews Church.

7.7.57 Further construction activity would be generated in close proximity to the viewpoint by the construction of a new side road link approximately 300m north of the Scheme linking Moor Road and Riverside. This would entail loss of a short stretch of roadside vegetation on Moor Road, construction of a single carriageway on a 1.0m height embankment running in an easterly direction across the adjacent field, before bridging the River Banwell and adjacent rhyne and connecting into Riverside Road. The side road would reflect the existing rectilinear field and drainage patterns Scheme. Views would be evident along the remaining stopped up section of Moor Road of the Scheme beyond the existing southerly patchy field boundary. Views to the east are screened by existing mature tree vegetation running along Moor Road which curtail views of the embankments rising to meet the River Banwell Bridge. However, the construction of the new side road link would punctuate this vegetation providing new side long views towards the River Banwell bridge crossing.

Receptor sensitivity: High

Magnitude of Effect: Major adverse

Visual Impact Significance: **Large/Very Large adverse**

7.7.58 **VP7: View from Riverside (North)**: (For a description of the viewpoint location and receptors refer to Table 7-10). This southerly view along Riverside is markedly contained within the road corridor by roadside and riverside vegetation creating a distinctive and characteristic channelled view focussing at road level and terminating at the wooded slopes above Banwell.

7.7.59 The Scheme would be carried across the River Banwell and Riverside on

a bridge creating a new and evident infrastructure element directly in the line of sight if at some distance. Construction phase impacts would include the removal of mature vegetation on either side of Riverside at the Scheme crossing point and subsequent construction of the new embankment and structures crossing the river. These views are in the middle/far distance and whilst not forming a significant portion of the existing view, they do create a new focus and disturbance to the existing view at odds with the current scene.

7.7.60 Further construction activity would be generated in close proximity to the viewpoint by the construction of a new side road link approximately 300m north of the Scheme linking Moor Road and Riverside. This would entail loss of a short stretch of roadside vegetation on Riverside and the bridging of both the River Banwell and the adjacent unnamed rhyne. The river crossing would be provided via a simple bridge deck structure with a swept bellmouth accommodating the connection onto Riverside. Solid wall parapets to the bellmouth and bridge would be stone clad to match the main River Banwell crossing and to reflect the local vernacular style of boundary stone walling as seen at Riverside and on the approach to Banwell.

7.7.61 The side road would comprise a single carriageway carried on a low embankment approximately 1.0m above the adjacent field level. In terms of its form and alignment the side road would reflect the existing rectilinear field and drainage patterns of the wider landscape.

7.7.62 Construction traffic would be evident and would be traversing the Scheme in an easterly/westerly direction creating a horizontal movement across the view rather than along it. There may also be an increased visual impact from lighting of the works especially over Winter period and during any night-time working. The construction of the Moor Road/Riverside link would also necessitate a temporary works area adjacent to the side road for lay down and storage of materials resulting in a more dispersed area of activity spread over a larger area than just the main Scheme extents.

7.7.63 There would be a significant new infrastructure element at height creating an adverse alteration in the current situation. However, the retention of existing road and riverside vegetation would go some way to filtering views and reducing visual impacts.

Receptor sensitivity: Moderate

Magnitude of Effect: Major adverse

Visual Impact Significance: **Moderate/Large adverse**

7.7.64 **VP8: View from Nye Drove PRoW Bridleway AX3/59/10**: (For a description of the viewpoint location and receptors refer to Table 7-10). This view lies approximately 820m to the north of the Scheme with an open level aspect to the south and clear views of Banwell Woods and Hillfort and Banwell Hill to the south west. No development is evident other than a few residential properties along A368 Towerhead Road and East Street.

7.7.65 The Scheme would be evident crossing the low lying land to the south and west of the view in the far distance. Construction activity would be evident in the movement of heavy machinery and construction traffic utilising the haul routes and constructing the embankments. The embankment construction would create a new if far distant element following the existing grain of the landscape pattern in a southerly direction before joining the A368 near Eastermead Farm.

Receptor sensitivity: High

Magnitude of Effect: Minor adverse

Visual Impact Significance: **Slight/Moderate adverse**

7.7.66 **VP9a: Riverside junction with PRoW Bridleway AX3/24/10 (Looking north)**: (For a description of the viewpoint location and receptors refer to Table 7-10). This north facing view adjacent to housing at Riverside looks directly along Riverside Road and the course of the River Banwell. The edge of new housing at Taylor's Field is evident over riverside vegetation to the west. Whilst to the north the view is tightly constrained to the road/river corridor and framed by mature riverside vegetation.

7.7.67 Intervening built form to the west of Riverside and existing mature vegetation along the River Banwell and to the north of housing at Riverside contain the northerly view and would screen views of the Scheme as it crosses the River Banwell. Some limited views may be visible of construction activity associated with the bridge crossing works compound including some distant filtered views of machinery movement, but these are likely to be fleeting and infrequent.

Receptor sensitivity: High

Magnitude of Effect: Negligible

Visual Impact Significance: **Slight adverse**

7.7.68 **VP9b: Riverside junction with PRoW Bridleway AX3/24/10 (Looking south)**: (For a description of the viewpoint location and receptors refer to Table 7-10). This view looks out over the southerly extent of Banwell with the tower and Church of St Andrew a prominent landmark in the main view.

7.7.69 The Scheme would not be visible form this location as boundary vegetation and properties along the eastern side of Riverside completely screen views. An oblique narrow view is afforded over the fields to the southeast of Banwell. Occasional and distant views of construction traffic forming the new Southern Link would be visible. However, this would largely be screened by properties and vegetation along Eastermead Lane.

Receptor sensitivity: High

Magnitude of Effect: No Change/Negligible

Visual Impact Significance: **Neutral/Slight adverse**

7.7.70 **VP10: View from junction of PRoW footpath AX3/9/10 and Eastermead Lane**; (For a description of the viewpoint location and receptors refer to Table 7-10). This east facing view from the intersection of PRoW and Eastermead Lane is sharply divided by the established mature vegetation that runs along the southern extent of the lane. To the right, the low lying panels of Towerhead Solar Farm are just visible through gaps in field boundaries. Further south the flank of Banwell Woods and Hillfort make an obvious and distinct landmark with the route of A368 Towerhead Road marked by the glimpses of moving traffic.

7.7.71 The Scheme would run on embankment across the further half of the field parcel in the foreground of this view blocking views of the solar farm beyond. Construction activity would include the loss of landscape features in the form of hedgerow and hedgerow trees where it crosses field parcels. It would also include the stripping and storage of topsoil and materials prior to the commencement of the embankment construction. The raising of the earth embankment approximately 2-3m above the existing ground level would introduce a new and built infrastructure element into a relatively settled view.

7.7.72 During construction, heavy machinery and vehicular traffic would be evident running along the Scheme extents to the east and south of the view with construction activity also evident on the lower edges of field parcels below Banwell Woods where the construction of the Southern

Link would follow the slope beyond The Old Police House on the A368.

7.7.73 The siting of the eastern satellite works compound would occupy the field immediately to the north of The Old Police House and would be evident over the adjacent hedgerow vegetation. The siting of the works compound at a relative close proximity, would create a new and more intensive source of vehicular and construction traffic movements and noise during working hours with the added increased visual impact from lighting of the works compound especially over Winter period and during any night-time working. Traffic movement and noise are a background constant along the A368 with night-time lighting impacts from headlights more evident than in other areas of the study area.

7.7.74 Banwell Football Club pitches lie to the rear (east) of housing at Riverside crescent. An area of practice pitches lie immediately to the north of Eastermead Rhyne. This would be directly impacted upon by the Scheme alignment with the loss of approximately half of the practice play area. A compensation land parcel would be provided immediately to the north of Eastermead Lane. No further facilities are anticipated for use of the compensation area, with access being gained from the existing club pitches and pavilion.

7.7.75 A range of receptors would be present at this viewpoint generating a range of impact significance dependant on category.

Receptor sensitivity:	High/Moderate/Low
Magnitude of Effect:	Major adverse
Visual Impact Significance:	Large/Very Large to Slight adverse

7.7.76 **VP11: View from A368 East Street (Looking southwest**): (For a description of the viewpoint location and receptors refer to Table 7-10). This westerly facing view looks directly along the A368 and is closely confined by the roadside hedgerows and trees and vegetation within the garden of Eastermead Farm.

7.7.77 This viewpoint lies directly within the footprint of the Southern Link. Construction activities would result in the permanent loss of a number of landscape features including the loss of the roadside hedgerow to the left of the road opening up views to the south. The construction of the Southern Link would introduce an extensive area of activity of heavy machinery and movement of construction traffic. Further disruption would be evident in the formation of an attenuation basin area to the south of

the new link road. Construction activity and the formation of the new link road would significantly alter the existing landscape character and constitute a permanent change to the area.

7.7.78 A satellite compound located to the north and west of the viewpoint, would create an additional source of vehicular and construction traffic movements in an area previously open and settled farmland. Temporary lighting of the works compound especially over Winter period and during any night-time working would further increase visual impacts.

Receptor sensitivity: High/Low

Magnitude of Effect: Major adverse

Visual Impact Significance: Large/Very Large to Slight adverse

7.7.79 **VP12: View from PRoW Footpath AX3/47/10 off Wint Hill**: (For a description of the viewpoint location and receptors refer to Table 7-10). An enclosed view densely wooded on the southern extent and following the rear stone wall property boundaries to the north. Views along the lane are focussed on the junction with The Rhodyate and boundaries of Banwell Castle. Fleeting views of vehicles passing along the A371 are visible through the vegetation at the entrance to Banwell Castle.

7.7.80 This view lies at the southern tie in of the Southern Link and A371. Construction activity would require localised road improvements to the alignment of the existing road potentially requiring some limited vegetation removal along the main road, minor alterations to boundary treatments and regrading of verges.

7.7.81 Construction activities are likely to be of a relatively short timescale at this point with the main impacts occurring on the A371 itself. The existing vegetation at the viewpoint will continue to filter or obscure direct views. However, the proximity to the works means that potential for interrupted traffic flows due to traffic management may result in increased queuing of traffic at peaks hours potentially raising traffic noise and perceived access issues to residencies on Wint Hill. Views from beyond the viewpoint are tightly constrained by the surrounding topography.

Receptor sensitivity: High / Low

Magnitude of Effect: Minor adverse

Visual Impact Significance: Slight / Moderate adverse to Neutral

7.7.82 **VP13: View from PRoW Restricted Byway AX3/23/10**: (For a description of the viewpoint location and receptors refer to Table 7-10). Views to the west are completely obscured by the rising ground and woodland of the hillfort. Oblique views to the north west are visible over Towerhead Solar Farm.

7.7.83 Oblique views of the eastern extent of the Scheme as it travels to the west of Towerhead Solar Farm would be visible. However, these would be highly filtered by intervening vegetation along the A368 and only visible in Winter months.

Receptor sensitivity: High/ Moderate/ Low

Magnitude of Effect: No change

Visual Impact Significance: **Neutral**

7.7.84 **VP14: View from junction of PRoW footpaths AX3/18/10, AX3/19/10, AX3/47/10 and AX3/47/20 on Banwell Hill**: (For a description of the viewpoint location and receptors refer to Table 7-10). This elevated viewpoint provides a far-reaching panoramic view over the North Somerset Levels.

7.7.85 Channelled and distant views of the Scheme would be visible through gaps in the mature tree top vegetation as it skirts the edge of Banwell to the west. Limited and distant views of construction traffic, including heavy machinery moving along the Scheme mainline would be evident but these would be oblique and at a distance in the wider panorama and would not form a major or discordant component of the view.

7.7.86 To the east a similar situation occurs where heavily filtered views of the Scheme would be partially visible as it turns to the south and passes to the west of Towerhead Solar Farm. Construction phase activities would be distant and largely screened by intervening vegetation within the lower lying field pattern.

7.7.87 Summertime views would be completely obscured by existing vegetation lying along the southern slopes of Banwell Hill.

Receptor sensitivity: High

Magnitude of Effect: Negligible

Visual Impact Significance: **Slight adverse**

7.7.88 **VP15: View from Road/Byway AX3/23/30 used as PRoW south of Towerhead**: (For a description of the viewpoint location and receptors refer to Table 7-10). A very similar view to that of Viewpoint 13 but at a more elevated position slightly upslope of the previous location.

7.7.89 The extreme eastern extent of the Scheme would be visible to the far left of the view. The edge of Banwell Wood effectively screens further views to the west. Construction activities would be limited to some oblique views on the edge of the view and would only form an insignificant element in the wider panorama.

Receptor sensitivity: High/ Moderate /Low

Magnitude of Effect: Negligible

Visual Impact Significance: **Slight adverse**

7.7.90 **VP16: View from the Strawberry Line NCR 26 PRoW AX29/41/20, between Winscombe and Sandford**: (For a description of the viewpoint location and receptors refer to Table 7-10). This westerly facing view overlooks a well wooded series of field pasture to the west of Sandford.

7.7.91 The Scheme would not be visible from this location in either Summer or Winter months.

Receptor sensitivity: High

Magnitude of Effect: No change

Visual Impact Significance: **Neutral**

7.7.92 **VP17: View from junction of PRoW on Sandford Hill;** (For a description of the viewpoint location and receptors refer to Table 7-10). This view over orchards and bult development on the western edge of Sandford lies at approximately 1.5km distance from the Scheme. Views are obscured by intervening vegetation and built development.

7.7.93 The Scheme would not be visible from this location in either Summer or Winter months.

Receptor sensitivity: High

Magnitude of Effect: No change

Visual Impact Significance: **Neutral**

7.7.94 **VP18: View from Hillfort on Dolebury Warren (Mendip Hills AONB3);** (For a description of the viewpoint location and receptors refer to Table 7-10). This far reaching and attractive view affords panoramic views over the North Somerset Levels. The intervening hills to the west of Brean Down and mature vegetation on Dolebury Warren itself effectively screen views of the Scheme.

7.7.95 The Scheme would not be visible from this location in either Summer or Winter months.

Receptor sensitivity: High

Magnitude of Effect: No change

Visual Impact Significance: **Neutral**

7.7.96 **VP19: View from the lower slopes of Dolebury Warren (Mendip Hills AONB3);** (For a description of the viewpoint location and receptors refer to Table 7-10). At a lower level than the view afforded at Viewpoint 18. However, this view is more open than that at the peak with hillslope vegetation dipping further downslope allowing views to become more extensive to the north and west.

7.7.97 The Scheme would be visible in the far distance although filtered by both intervening fields boundary vegetation at the lower lying levels and diminished by distance thus reducing its visual impact. Construction activity would be barely visible at this distance and would only form an insignificant element of the wider panorama.

Receptor sensitivity: High

Magnitude of Effect: No change

Visual Impact Significance: **Neutral**

7.7.98 **VP20: View from junction of Towerhead Road & Catworthy Lane**: (For a description of the viewpoint location and receptors refer to Table 7-10). This view lies at the extreme eastern end of the Scheme extents. The A368 gently rises to a shallow crest and serves to obscure further views along the road. Fleeting views are afforded through the adjacent field gate towards Towerhead Solar Farm over a field currently turned over to the cultivation of Christmas trees.

7.7.99 Construction activities are unlikely to be evident at this point with existing vegetation obscuring views over the adjacent hedges. However, the

proximity to the works means that potential for interrupted traffic flows due to traffic management may result in increased queuing of traffic at peaks hours.

Receptor sensitivity: High /Low

Magnitude of Effect: No Change

Visual Impact Significance: **Neutral**

7.7.100 **VP21: View from Field gate off Summer Lane near to Laurel Farm**: (For a description of the viewpoint location and receptors refer to Table 7-10). This view lies at a slightly elevated position (20m AOD) overlooking open farmland in a south-easterly direction towards the Mendip Hills. Banwell is visible to the south with the view itself looking directly at Banwell hillfort.

7.7.101 The Scheme would traverse the farmland a couple of fields below the current viewpoint with the existing mature field hedgerows providing intervening screening vegetation. The western tie in and construction of Banwell West roundabout would be visible in winter views on the gently sloping land dropping down from the A371 Knightcott Road. This would introduce an additional element of construction traffic and heavy machinery activity in a previously pastoral field system.

7.7.102 Some limited and heavily filtered views of construction activity may be visible through hedgerow gaps and field gates of construction traffic following the line of the Scheme as it sweeps to the east around Stonebridge Caravan Park.

Receptor sensitivity: High

Magnitude of Effect: Minor adverse

Visual Impact Significance: **Slight/ Moderate adverse**

7.7.103 **VP22: View from Entrance to Court Farm Country Park off Wolvershill Road**: (For a description of the viewpoint location and receptors refer to Table 7-10). This view in a southerly direction along Wolvershill Road is tightly enclosed by mature hedgerow vegetation on both sides of the road containing views to the west. Views to the east are completely contained by the established tree vegetation within Court Farm Park. It is noted that the containment of views is totally dependent on the continued retention of the roadside hedgerows.

7.7.104 The Scheme would transition from embankment to cutting approximately 300m south of the current viewpoint as it crosses Wolvershill Road. Construction works would comprise the initial site clearance of vegetation, stripping and storage of topsoil and materials prior to the commencement of the Scheme construction. Some roadside vegetation would require removal in order to construct the junction improvement at the Scheme/Wolvershill road intersection. The loss of this landscape feature would create a noticeable change in the current view, but this would be at some distance reducing its overall impact. The construction works would also require a temporary closure and rerouting of local traffic.

Receptor sensitivity: High/ Moderate

Magnitude of Effect: Minor adverse

Visual Impact Significance: **Slight/ Moderate adverse**

7.7.105 **VP23: View from New housing/Construction site off Wolvershill Road (Taylor's Fields**): (For a description of the viewpoint location and receptors refer to Table 7-10). This view is orientated in an easterly direction over the field parcel lying between the rear of the new housing development and Riverside.

7.7.106 The Scheme would be completely obscured by built development at Riverside and the mature tree vegetation lying along the adjacent field boundaries.

Receptor sensitivity: High

Magnitude of Effect: No change

Visual Impact Significance: **Neutral**

7.7.107 **VP24: View from West Mendip Way at Wavering Down (Mendip Hills AONB3)**: (For a description of the viewpoint location and receptors refer to Table 7-10). This is a far distant view (>2.7km) from the rising crest of Wavering Down. The aspect is open and far reaching with views stretching as far as the Bristol Channel to the north. Views are distant and obscured by intervening hill slopes of Banwell, and Sandford Hills. Where distant views are available onto the North Somerset levels any development is at such a distance so as to form an insignificant part of a wide and expansive panorama. The Scheme itself would not be distinguishable from its surroundings at this distance.

Receptor sensitivity: High

Magnitude of Effect: No Change

Visual Impact Significance: **Neutral**

7.7.108 **VP25: View from Proposed Housing development, Land to the West of Wolvershill Road**: (For a description of the viewpoint location and receptors refer to Table 7-10). Proposed housing at this view would potentially provide oblique middle distance views over the Scheme from the furthest two or three properties only as it runs to the north before sweeping round to the east beyond Stonebridge Caravan Park.

7.7.109 Views of the construction of the Scheme embankments at an elevated height approximately 3-5m above the existing ground level would be visible to the west but would not form the dominant focus of the view as they would be at an oblique angle and filtered through existing boundary vegetation. Works would comprise clearance of existing field boundary vegetation, topsoil strip and storage followed by construction of the Scheme embankment. Haul routes and movement of construction traffic would be an additional activity and movement in the middle distance. But these would for the most part be screened or filtered by existing boundary vegetation. The majority of the proposed housing development would have no direct or indirect views of the Scheme.

Receptor sensitivity: High

Magnitude of Effect: Moderate adverse

Visual Impact Significance: **Moderate/Large adverse**

Table 7 – 10 Summary Landscape and Visual Construction stage impacts

	Significance of Effect
Landscape Impact	
NCA 118: Bristol, Avon Valleys and Ridges	Neutral
NCA 141: Mendip Hills	Slight adverse
NCA 142: Somerset Levels and Moors	Slight adverse

	Significance of Effect
Mendip Hills AONB	Slight adverse
LCA A1 Kingston and Puxton Moors	Neutral/Slight adverse
LCA A4 Locking and Banwell Moors	Moderate adverse
LCA E1 Mendip Ridges and Coombes	Slight/Moderate adverse
LCA J1 Lox Yeo Rolling Valley Farmland	Neutral
LCA J2 River Yeo Rolling Valley Farmland	Moderate adverse
Study Area	Moderate adverse
Visual Impact	
VP1: High Street, Banwell. Overlooking 'Valued Landscape' in immediate setting of the Mendip Hills AONB	Moderate/Large adverse
VP2: View from ProW Footpath AX3/11/10 off Summer Lane	Moderate/Large adverse
VP3: View from ProW Footpath AX3/25/10 leading to Whitecross Lane	Moderate/Large adverse
VP4: View from ProW Footpath AX3/5/10 off Wolvershill Road	Moderate/Large adverse
VP5: View from ProW Footpath AX3/6/10 Cook's Lane to Moor Lane	Large/Very Large adverse
VP6: View from Moor Road	Large/Very Large adverse
VP7: View from Riverside (North)	Moderate/Large Adverse
VP8: View from Nye Drove ProW Bridleway	Slight/Moderate adverse

	Significance of Effect
AX3/59/10	
VP9a: Riverside junction with ProW Bridleway AX3/24/10 (Looking north)	Slight adverse
VP9b: Riverside junction with ProW Bridleway AX3/24/10 (Looking south)	Neutral/Slight adverse
VP10: View from junction of ProW footpath AX3/9/10 and Eastermead Lane	Large/ Very Large to Slight adverse
VP11: View from A368 East Street (Looking southwest)	Large/Very Large to Slight adverse
VP12: View from ProW Footpath AX3/47/10 off Wint Hill	Slight / Moderate to Neutral
VP13: View from ProW Restricted Byway AX3/23/10	Neutral
VP14: View from junction of ProW footpaths AX3/18/10, AX3/19/10, AX3/47/10 and AX3/47/20 on Banwell Hill	Slight adverse
VP15: View from Road/Byway AX3/23/30 used as ProW south of Towerhead	Slight adverse
VP16: View from the Strawberry Line NCR 26 ProW AX29/41/20, between Winscombe and Sandford	Neutral
VP17: View from junction of ProW on Sandford Hill	Neutral
VP18: View from Hillfort on Dolebury Warren (Mendip Hills AONB3)	Neutral
VP19: View from the lower slopes of Dolebury Warren (Mendip Hills AONB3)	Neutral
VP20: View from junction of Towerhead Road &	Neutral

	Significance of Effect
Catworthy Lane	
VP21: View from Field gate off Summer Lane near to Laurel Farm	Slight/ Moderate adverse
VP22: View from Entrance to Court Farm Country Park off Wolvershill Road	Slight/ Moderate adverse
VP23: View from New housing/Construction site off Wolvershill Road (Taylor's Fields)	Neutral
VP24: View from West Mendip Way at Wavering Down (Mendip Hills AONB3)	Neutral
VP25: View from Proposed Housing development, Land to the West of Wolvershill Road	Moderate/ Large adverse

Operational Impacts

7.7.110 The operational phase impacts, those that occur during and as a result of the opening of the Scheme, have been considered below and are assessed in terms of Landscape impacts and Visual impacts. These impacts have already been assessed without mitigation during construction in section 7.7.2 onwards. The following section assesses landscape and then visual impacts with mitigation at Year 1 after opening and Year 15 when vegetation is considered to be at a size to reach its landscape function, be that visual screening or landscape integration.

7.7.111 During construction, mitigation measures would be provided to remove or reduce adverse landscape and visual effects arising during the operational phase, from the Scheme itself, associated earthworks and structures, traffic movement and lighting. Landscape mitigation objectives are set out in greater detail in the Landscape Strategy, which can be found in ES Volume 3 - Appendix 7.B - Landscape Strategy.

7.7.112 This strategy also sets out the potential range of landscape mitigation elements including the planting of a series of plant communities including native and predominantly broadleaf woodland, woodland edge mixes, scrub, native mixed-species hedgerows, individual trees, species-rich

and amenity grassland. Treatment of earthworks including embankments, cuttings, attenuation basins and flood compensation areas and finishes treatments to structures. Consideration is also made for the reuse of existing seed bank, hydroseeding with locally herb or shrub species, and allowing natural regeneration where appropriate.

7.7.113 The retention of existing trees, woodland and hedgerows would be a key component of mitigating adverse impacts. Opportunities for the early translocation of vegetation would also be sought, particularly with those species appropriate for coppicing, such as hazel, hawthorn, blackthorn and willow, and where suitable receptor sites can be identified.

7.7.114 Embankment slopes would aim to avoid geometric or overly engineered profiles wherever possible and be no greater than 1:3. Where possible variation of slope profile would be employed to better integrate the embankment form of the Scheme into the surrounding landscape and to facilitate more practical planting and maintenance operations. The exception to this would be where locally steepened slopes are adopted to minimise impacts on retained vegetation including to the south of the Banwell River Bridge, adjacent to the area of traditional orchard. This, alongside appropriate arboricultural working method statements and a review of the embankment construction techniques would also enable the retention of two hybrid Black poplar trees (T15 and T36) in the vicinity of Moor Road/Riverside.

7.7.115 The Banwell River Bridge (Ch. 1940) lies approximately 0.4km from Banwell Conservation Area with views clearly available to the south along Riverside towards the tower of St. Andrews Church. Stone is a common material used frequently in vernacular detailing of Banwell both as a building material and boundary feature in the form of stone walling. Whilst the height and extent of the Riverside Bridge is of a greater scale than commonly found in the study area, the use of stone cladding on the visible portion of the bridge abutment and wing walls would provide some visual connectivity and reinforce local sense of character and place. A similar approach would be adopted for the smaller river and watercourse crossing for the Moor Road to Riverside Bridge (Ch. 1930) where the bridge parapets would be realigned to more closely follow the road bellmouth and clad to reflect local vernacular detailing. This would provide a better visual continuity with other existing structures and traditional building styles.

7.7.116 Careful consideration of design of the structures on the Scheme has been undertaken. Ensuring they create a form with associated earth works that

blends into adjacent topography avoiding overly engineered slope gradient and shape and that maximises planted mitigation. The Banwell River Bridge has been designed to maintain a relatively open structure over the watercourse to maintain visual connectivity along Riverside and towards Banwell whilst also maintaining biodiversity connectivity. To reduce the visible extent of structure and reduce visual impacts, the north and south facing slopes of the bridge abutments would be steepened locally to 1:2.

7.7.117 Nine culverts would be provided along the Scheme, eight of these carry existing watercourses/rhynes and would also include mammal ledges to facilitate continuity of cross Scheme foraging/migratory routes. The final pipe at Ch. 1120 would be provided specifically to carry out an ecological function. Planted mitigation would be provided to aid navigation and encourage use by mammals and protected species.

Operational: Landscape Impact Assessment

7.7.118 The following table brings together the landscape impacts assessment for construction on the landscape character areas identified in section 7.7.6 and then compares that with a reassessment at Year 1 and Year 15 Winter and Summer taking account of any mitigation.

Table 7 – 11 Magnitude of Landscape Impacts

Landscape Character Area	Landscape Sensitivity	Landscape Impacts				Comments
		During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
NCA 118: Bristol and Avon Valleys and Ridges	Low	Neutral	Neutral	Neutral	Neutral	There would be no direct effects in relation to the Scheme on the National Character Area 118 Bristol and Avon Valleys and Ridges due to the scale of the proposals in relation to the wider context of the character area. Night-time visual impacts at the national scale would remain unchanged.
NCA 141: Mendip Hills	High	Slight adverse	Slight adverse	Neutral	Neutral	There would be direct effects in relation to the Scheme in the vicinity of the Southern Link road and to the southwest of Banwell on the National Character Area 141 Mendip Hills. The scale of the proposals in relation to the wider context of the character area result in very localised construction stage and Year 1 changes to the landscape framework. There would be increased visibility of traffic travelling along the A371 as a result of vegetation removal to construct the Southern Link road and alterations to the local landscape setting. These however would be contained within the dip in topography between Banwell Hill and Banwell hillfort and would be short term during the construction phase. With the establishment of mitigation planting, restoration, and enhancement of the landscape framework by Year 15 this is expected to revert to Neutral. Night-time visual impacts at the national scale would remain unchanged
NCA 142: Somerset Levels and Moors	Medium	Slight adverse	Slight adverse	Neutral	Neutral	There would be direct effects in relation to the Scheme on the National Character Area 142 Somerset Levels and Moors with the Scheme alignment contained within the northern part of the NCA. However, due to the scale of the proposals in relation to the wider context of the character area any impacts are considered to moderate by Design Year 15 to Neutral Night-time visual impacts at the national scale would remain unchanged.

Landscape Character Area	Landscape Sensitivity	Landscape Impacts				Comments
		During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
Mendip Hills AONB	High	Slight adverse	Slight adverse	Neutral	Neutral	As with NCA 141, there would be direct effects in relation to the Scheme in the vicinity of the Southern Link road and to the southwest of Banwell on the Mendip Hills AONB. The scale of the proposals in relation to the wider context of the AONB result in very localised construction stage and Year 1 changes to the landscape framework. There would be increased visibility of traffic travelling along the A371 as a result of vegetation removal to construct the Southern Link road and alterations to the local landscape setting. These however would be contained within the dip in topography between Banwell Hill and Banwell hillfort and would be short term during the construction phase. With the establishment of mitigation planting, restoration, and enhancement of the landscape framework by Year 15 this is expected to revert to Neutral. Night-time visual impacts at the national scale would remain unchanged
LCA A1: Kingston Seymour and Puxton Moors	Medium	Neutral/ Slight adverse	Neutral/ Slight adverse	Neutral	Neutral	In relation to the rural landscape of the Kingston Seymour and Puxton Moors the Scheme would not suffer from any direct physical impacts and is at some distance from the Scheme. Some filtered views through intervening field boundary vegetation would be visible of the north and eastern extent of the Scheme with the Riverside Bridge and adjacent embankments creating a new built element at an elevated height into a rural agricultural landscape with only low level, infrequent built development. This would be evident at a local scale within from within field parcel to the south of East Rolston during construction and at Year 1 and for the short term before features become weathered. Replacement planting and the extended mitigation established within severed field parcels to the north of the Scheme would serve to provide an improved integration for the Scheme into the wider landscape reducing the landscape impacts to Neutral by Year 15.

Landscape Character Area	Landscape Sensitivity	Landscape Impacts				Comments
		During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
LCA A4: Locking and Banwell Moors	Medium	Moderate adverse	Moderate adverse	Slight adverse	Slight/ Neutral adverse	In relation to the rural landscape of the Locking and Banwell Moors the Scheme would introduce a new infrastructure element into an ostensibly rural agricultural landscape with only low level, infrequent built development. There would be direct construction stage impacts through the loss of field boundary vegetation and disruption to the existing field pattern. The Scheme's location within a floodplain necessitates the use of embankments thus creating a visual break for longer distance views over the relatively flat topography. This would be particularly intensified in the vicinity of the Riverside Bridge where the Scheme would be elevated to approximately 6.5m above the surrounding land. These would be particularly evident during construction and at Year 1 and for the short term before features become weathered. The landscape character is not particularly wooded, with tree cover limited to rhynes, watercourses and field boundaries. This provides a relatively narrow and linear form punctuated with small woodland blocks and creating interleaving layers of screening at ground level. Planted mitigation would to some extent mimic and intensify this pattern of vegetation when viewed in the wider landscape. Whilst this would go some way to provide landscape integration it would not completely screen the Scheme or structures. However, this would be offset by biodiversity enhancements and the opportunity to re-establish traditional landscape features and characteristics into the wider landscape.

Landscape Character Area	Landscape Sensitivity	Landscape Impacts				Comments
		During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
LCA E1: Mendip Ridges and Combes	High/ Medium	Slight/ Moderate adverse	Slight/ Moderate adverse	Slight adverse	Slight / Neutral adverse	There would be direct and indirect effects in relation to the Scheme on the Mendip Ridges and Combes LCA. The southern section of the Scheme linking the mainline via the A368 and to the continuation of the A371 would occupy a narrow corridor lying between the eastern extent of Banwell and the rising slopes of Banwell hillfort. There would be loss of characteristic landscape elements such as established hedgerow and tree vegetation and the introduction of a new infrastructure element through the fields and rising ground to the east of Banwell creating a permanent impact on the landscape structure and framework of the area. This would be particularly evident during construction phase and the early years following opening, with noise fencing adding a further built element within a previously undeveloped aspect. Planted mitigation designed to provide a succession of habitat types and canopy layers would diminish the overall impacts aiming to improve landscape integration between the link road and wider landscape especially when viewed from the east against the wooded hill slopes beyond.
LCA J1: Lox Yeo Rolling Valley Farmland	Medium	Slight adverse	Neutral	Neutral	Neutral	Direct impacts would be minimal and tightly confined to the northern extent of this LCA during construction phase. Reestablishment of roadside planting and integration with the existing field boundaries would rapidly diminish landscape impacts to Neutral on completion of construction with no change over the 15 year design period.
LCA J2: River Yeo Rolling Valley Farmland	Medium	Moderate adverse	Moderate adverse	Slight adverse	Slight / Neutral adverse	In relation to the rural/village fringe landscape of the River Yeo Rolling Valley Farmland the Scheme would introduce a new infrastructure element into an ostensibly rural agricultural landscape with only scattered built development. There would be direct construction stage impacts through the loss of field boundary vegetation and disruption to the existing field pattern. The Scheme's location within a floodplain necessitates the use of embankments with the curving alignment of the Scheme at odds with the rectilinear field pattern. This would create an element of visual discord within

Landscape Character Area	Landscape Sensitivity	Landscape Impacts				Comments
		During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
						the overall landscape pattern especially at construction stage where construction activity, site compounds and the loss of established landscape elements would be particularly evident and in the short term before mitigation becomes established. The landscape character is not particularly wooded, with tree cover limited to field boundaries and watercourses punctuated with field corner tree groups creating interleaving layers of screening at ground level. Planted mitigation located within severed field parcels would reinforce this pattern of vegetation when viewed in the wider landscape. Whilst this would go some way to provide landscape integration it would not completely screen the Scheme or structures. However, this would be offset by biodiversity enhancements and the opportunity to re-establish traditional landscape features and characteristics into the wider landscape.
Study Area Landscape Character	Medium	Major adverse	Major adverse	Moderate/ Slight adverse	Slight adverse	The study area has the Scheme as its focus and therefore any changes would be noticeable within the ZVI. The Scheme would introduce a low value infrastructure feature in a generally undeveloped, settled pastoral landscape area. Loss of landscape elements such as established hedgerow and tree vegetation and the introduction of a new infrastructure element on an elevated embankment through this low lying landscape of open rectilinear field pattern would create a significant and lasting impact on the landscape structure and framework of the area. This would be particularly evident during construction phase and the early years following opening but would be alleviated over time by establishing vegetation and mitigation and would be offset by biodiversity enhancements and the opportunity to re-establish traditional landscape features and characteristics into the wider landscape.

7.7.119 The landscape impacts considered at the local scale for the Study area are described below.

7.7.120 There would be an initial impact following completion of the construction phase and opening of the road to traffic.

i) reinstatement of site compounds within previously agricultural/ pastured fields.

j) The Scheme, on embankment above the surrounding farmland would provide clear views of moving traffic from within the wider landscape. This would not only introduce a new built element and activity into a previously settled landscape but also increase localised night-time lighting impacts in terms of headlight movements.

k) In Year 1 planted mitigation would be insignificant in terms of establishment or structure but would be evident, especially if requiring shelters/guarding.

l) The infrastructure associated with the Scheme would create an additional urbanising element within the rural landscape. Highway boundary fencing in the form of wooden post and wire fencing would create a new boundary type/feature with only limited connectivity into the existing hedgerow field boundaries.

7.7.121 Through consideration of the above landscape features, the overall effects of the Scheme on the site landscape character and its landscape features at construction phase is likely to be significant, due the introduction of a new infrastructure element at an elevated height through a currently settled, relatively undeveloped pastoral landscape.

7.7.122 Overall, the significance of this is considered to be:

Year 1: Major adverse. (This would be the same for both Winter and Summer views) and would see a reduction to **Moderate/Slight adverse** by Year 15 as mitigation matures and the landscape integration of the Scheme is established. There are anticipated improvements regarding the vegetation structure and biodiversity value of creating more diverse habitats which would also improve landscape integration highlighted by the assessment at **Year 15 Summer** being **Slight adverse**.

7.7.123 The key issues include:

a) Introduction of a new infrastructure feature at height in a generally undeveloped level landscape. The Scheme's alignment and form would further fragment the current landscape framework and pattern creating an engineered form of an elevated and curving alignment into a landscape generally exhibiting rectilinear field patterns and straight ditch/rhyne road arrangements.

b) loss of hedgerow and mature tree vegetation, including pollarded tree specimens characteristic of the landscape type, would result in the creation of views into and out of the Scheme corridor and impact the settled rural pastoral character, particularly within the Rolling Farmland and Moors LCAs to the north of Banwell;

c) introduction of a new built structure in the form of the River Banwell crossing – an elevated bridge structure;

d) highway junction improvements resulting in the creation of views onto the new road Scheme and loss of existing roadside habitats.

e) potential impacts upon the landscape setting of the Mendip Hills AONB in the vicinity of Banwell Castle and the Southern Link.

Visual Impact Assessment

7.7.124 The permanent changes to the landscape features such as change to topography through the introduction of embankments and cutting creating a new visual barrier across the Study Area, construction of new infrastructure element and structures, in the form of the western Banwell Roundabout and the River Banwell bridge crossing and loss of existing vegetation would occur during the construction phase and remain a constant throughout the operational phase. There would be some limited moderation of these impacts as the planted mitigation matures and provides landscape integration along the Scheme extents and at junctions.

7.7.125 Lighting would be implemented at the western end of the Scheme at Banwell West Junction where approximately 90m of lighting would be provided to cover the roundabout, tie in to the A371 and links to Knightcott Road and onto the Scheme. Additional lighting would be implemented at Wolvershill Road Junction to minimise conflicts between road users and the shared use crossing. This would cover approximately 100m of road to the north of the junction along Wolvershill Road and east and west of the junction, column height would be 8m and the junction itself would be signalised.

7.7.126 The lighting would remain as the existing situation at the tie-ins to the A371 Banwell Castle and between the Banwell Village Junction and A368. The lighting strategy would replicate the existing situation with the remainder of the Scheme remaining unlit to minimise environmental, landscape and carbon impacts. It is not anticipated that this would create additional impacts for most receptors and viewpoints during the operational phase other than those already identified at construction stage.

7.7.127 Noise mitigation would be provided along the southern link for affected properties along Dark Lane and Castle Hill. It would run for approximately 343m starting at the Banwell Village junction and following the western side of the road approximately 3m back from the kerb, finishing at a point approximate to the original tie into Dark Lane. The barrier would be 2m in height and constructed of natural materials i.e., wood panelled, with the start and end of the barrier gradually reducing in height to avoid an abrupt end to the structure. Planted mitigation in the form of woodland and woodland edge planting would run up to the rear of the barrier providing a visual softening of the barrier.

7.7.128 The visual impacts have been assessed against the following criteria;

a) *Scale of change*; This change can be in the form of the addition of new features into the view or the removal of existing features (such as trees, woodland or buildings).

b) *Nature of change*; the extent to which a given change is out of character with the existing view can influence the effects which it would produce.

c) *Duration of change*; this is categorised as being short term (i.e. up to 1 year or during construction if the construction period exceeds one year), short/medium term (i.e. 1 to 5 years, during which time new planting would have little significant effect in most cases), medium/long term (5 to 15 years, when planted mitigation would begin to take increasing effect) or long term (i.e. lasting beyond 15 years).

d) *Distance*; the magnitude of any change would generally decrease with distance from its source, until a point is reached where there is no discernible change.

e) *Screening*; intervening features may block the view completely (in which case there would be no change), or there may be a partial screen, in which case the magnitude of change would decrease. Intervening vegetation where present has been highlighted as this often filters views. The degree to which this filter or screens a view would change with the seasons, and this has been noted where applicable.

f) *The direction and focus of the view*; if the change occurs in the part of the landscape which is the principal area of existing visual interest, the effects are likely to be perceived to be greater than if the proposed change occurs away from the main area of visual interest. This is especially relevant in the context of views from within houses (which are effectively framed by their windows), or from gardens (where views are often restricted by vegetation), and from promoted or locally valued viewpoints.

g) *Removal of past mitigation or existing vegetation;* has been given consideration as part of the visual assessment.

Table 7 – 12 Magnitude of Visual Impacts

			Visual Impacts				Comments
			Without mitigation		With mitigation		
VP	Name	Landscape Sensitivity	During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
VP1	**High Street, Banwell. Overlooking 'Valued Landscape' in immediate setting of the Mendip Hills AONB**	High	Moderate / Large adverse	Moderate / Large adverse	Slight /Moderate adverse	Slight /Moderate adverse	**Year 1:** The main site compound would be reinstated and returned to agriculture re-establishing existing landscape framework. However, the new roundabout and main carriageway alignment heading away to the north would remain visible from this viewpoint. With traffic movement clearly visible. This would be a permanent change resulting from the introduction of a new infrastructure element into a previously rural agricultural landscape with the view at this point looking directly along the course of the new carriageway. The scale and nature of change is considered to be moderate adverse. **Year 15:** The planting within the severed field parcel to the immediate south of the Banwell Roundabout together with the replacement of roadside hedgerows with trees would provide an integrated boundary that would mature to provide greater landscape integration for the southern extent of the Scheme and along Knightcott Road. The setting for the Banwell Roundabout would similarly be on the way to maturity and provide a good level of integration with the surrounding landscape. Traffic movements around the roundabout and heading north along the Scheme would still be evident although filtered by intervening mitigation The scale and nature of the change at this point is considered to be of a slight to moderate adverse impact.
VP2	**View from ProW Footpath AX3/11/10 off Summer Lane**	High	Moderate / Large adverse	Slight/ Moderate Adverse	Slight adverse	Slight adverse	**Year 1:** Reinstatement of the main site compound would be largely completed with highway improvements on the junction of Summer Lane and the A371 also dominant in close proximity with replacement hedgerow planting in place. The view would be more open with mitigation

			Visual Impacts				Comments
			Without mitigation		With mitigation		
VP	Name	Landscape Sensitivity	During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
							planting yet to establish. Views would be visible of the new road embankments and of passing traffic with some filtering/softening from retained existing vegetation. There would be an extended provision of street lighting along the A371 and visible at some distance around the new Banwell Roundabout. **Year 15:** Visual impacts should decrease over the medium to long term as regeneration of intervening vegetation and establishment of mitigation planting along the field boundaries (A371) and within mitigation plots to the west of Banwell Roundabout and the Scheme carriageway establish. Filtered views of passing traffic along the raised embankments would be visible but would diminish as mitigation matures – these would be more readily visible in winter months with leaf fall.
VP3	**View from ProW Footpath AX3/25/10 leading to Whitecross Lane**	High	Moderate / Large adverse	Moderate/ Large adverse	Slight/ Moderate adverse	Slight/ Moderate adverse	**Year 1:** The Scheme would cross almost the entire width of this view on an embankment form. Direct views of passing traffic along the Scheme would be visible. There would be limited screening of the lower part of the embankment by intervening hedgerow boundaries. The Scheme alignment would also block views to the rising ground at Wolvers Hill and to the north changing the landscape character from a settled agricultural scene to a one with traffic activity and night-time lighting movements. **Year 15:** Mitigation hedgerow boundary and woodland planting on the embankment sides would eventually diffuse views of traffic, particularly during summer months. However, there would remain a permanent change to the view and landscape character. Views to the north along the alignment would become more settled as mitigation planting matured providing a more

			Visual Impacts				Comments
			Without mitigation		With mitigation		
VP	Name	Landscape Sensitivity	During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
							considered and integrated setting with establishing woodland blocks along field margins and hedgerow trees
VP4	**View from ProW Footpath AX3/5/10 off Wolvershill Road**	High	Moderate / Large adverse	Slight/ Moderate Adverse	Slight adverse	Slight adverse	**Year 1:** The Scheme would pass to the north of this view for the most part contained within a shallow cutting leading to a good degree of moderation of construction impacts. Where the Scheme transitions onto embankment to the east (Ch.1070) views would be increasingly visible of moving traffic with filtering of views heavily dependant on hedgerow boundary vegetation. **Year 15:** Establishing hedgerow and hedgerow tree boundaries would integrate the edge of cutting to the north re-establishing field boundaries and negating visual impacts. To the east blocks of woodland and woodland edge planting on the embankment would screen and filter views of traffic with hedgerow planting with trees re-establishing field boundary connections.
VP5	**View from ProW Footpath AX3/6/10 Cook's Lane to Moor Lane**	High	Large / Very Large adverse	Large/ Very Large adverse	Large/ Very Large adverse	Large/ Very Large adverse	**Year 1:** The Scheme would cross the entire view on embankment, resulting in the diversion of the ProW. The Scheme would be in stark contrast with the existing pastoral landscape. Highway boundary would be delineated with new hedgerow and hedgerow tree planting with open views out from and into the road corridor clearly evident. The Scheme at this location would cut across the existing grain of the landscape at odds with the existing field pattern.

			Visual Impacts				Comments
			Without mitigation		With mitigation		
VP	Name	Landscape Sensitivity	During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
							Boundaries. **Year 15:** There would be a very large change in the character of the view with the introduction of a significant built element at an elevated height above the low lying, flat surrounding landscape. Mitigation would do little to reduce the visual impact but would serve to provide landscape integration and enhanced biodiversity through the establishment of roadside habitat areas. The introduction of locally characteristic tree species and in pollard form would reinforce landscape character and provide longer term visual containment and interest for both vehicle traveller, pedestrian and cyclists
VP6	**View from Moor Road junction**	High	Large / Very Large adverse	Large/ Very large adverse	Moderate/ Large adverse	Slight / Moderate adverse	**Year 1:** The view south at this point would comprise the Scheme running on embankment crossing the view in the middle distance on embankment gradually rising to cross the River Banwell and Riverside Road with the Moor Road/Riverside Road side road link occupying the foreground of the view to the east. Southerly views would be severed losing the distant views of Banwell and disrupting the rural setting of the village. Fields directly to the south would be accommodate attenuation basin and flood compensation areas (FCA) supplemented with woodland and woodland edge. The bridge embankments would be planted with woodland blocks breaking up the overall form of the embankment. **Year 15**: Planted mitigation would be establishing and maturing to provide a good degree of landscape integration. Mitigation surrounding the attenuation basin and FCA would provide good lower level screening for the Scheme from Moor Road. Views of passing traffic would be glimpsed between planting but would eventually filter and partially screen traffic, particularly

			Visual Impacts				Comments
			Without mitigation		With mitigation		
VP	Name	Landscape Sensitivity	During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
							during summer months. However, the change in the view would be permanent. There would be wider landscape benefits in terms of creation of an enhanced green infrastructure and improved fit in the wider landscape context.
VP7	**View from Riverside (North)**	Moderate	Moderate/ Large adverse	Moderate/ Large adverse	Slight/ Moderate adverse	Slight / Moderate adverse	**Year 1:** The Scheme in this view would consist of a major bridge structure crossing the road in direct line of sight. During construction the impact would be at its greatest, with high cranes and construction plant. Whilst the clear span of the main River Banwell bridge crossing would enable some retention of distant view connecting to Banwell they would be enclosed by the structure with the adjacent embankments form a significant feature in the view that would curtail southerly views. Further local visual impacts would be generated by the construction of the Moor Road/Riverside link road. Construction activity and temporary working/lay down areas adjacent to the works would create a localised visual impact. On completion in Year 1 the new link road and watercourse crossing would create a new extension of infrastructure but one that reflects the existing form and alignment of the local landscape. **Year 15:** Planted mitigation would soften the embankment and provide a good degree of landscape integration. The cladding of the bridge abutments with local stone would also provide continuity with the local building vernacular. However, the effect of the bridge would not be significantly reduced over time as mitigation would be limited to re-establishing the woodland setting to abutment areas. There would, however, be wider landscape benefits in terms of creation of an enhanced green infrastructure and improved fit in the wider landscape context. Planted

			Visual Impacts				Comments
			Without mitigation		With mitigation		
VP	Name	Landscape Sensitivity	During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
							mitigation alongside the Moor Road/Riverside link would establish and closely reflect the existing landscape framework and pattern. The watercourse/river crossing would be clad in a similar style to the main River Banwell crossing and reflect local stone wall boundary detailing.
VP8	**View from Nye Drove ProW Bridleway AX3/59/10**	High	Slight/ Moderate Adverse	Slight Adverse	Neutral	Neutral	**Year 1:** Visual impacts of the Scheme would reduce rapidly on completion of the construction phase due to the removal of higher level cranes and vehicle and plant movement construction the Scheme embankments. Intervening vegetation would provide an immediate and good degree of screening making the overall visual impacts only slight. **Year 15:** Any visual impacts would rapidly decrease over the medium to long term as regeneration of intervening vegetation and establishment of mitigation planting along the Scheme embankments would screen passing traffic and provide good landscape integration into the surrounding landscape framework
VP9a	**Riverside junction with ProW Bridleway AX3/24/10 (Looking north)**	High	Slight Adverse	Slight Adverse	Neutral	Neutral	**Year 1:** Visual impacts of the Scheme would reduce rapidly on completion of the construction phase due to the removal of higher level cranes and vehicle and plant movement construction the Scheme embankments. Intervening vegetation would provide an immediate and good degree of screening making the overall visual impacts only slight. **Year 15:** Visual impacts would be greatly moderated by design year 15 with mitigation planting establishing and no direct views towards the Scheme.
VP9b	**Riverside junction with ProW Bridleway AX3/24/10 (Looking south)**	High	Neutral	Neutral	Neutral	Neutral	**Year 1:** The newly formed Southern Link road would only be partially visible via indirect, oblique views framed by existing vegetation and screened for the most part by built form and vegetation along East Street.

			Visual Impacts				Comments
			Without mitigation		With mitigation		
VP	Name	Landscape Sensitivity	During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
							Year 15: Mitigation woodland planting on the lower slopes of Banwell Hillfort would mature providing an enhance landscape setting against the wooded slopes and screening traffic movements.
VP10	**View from junction of ProW footpath AX3/9/10 and Eastermead Lane**	High	Large/ Very Large	Slight/ Moderate Adverse	Slight adverse	Slight adverse	**Year 1:** On completion of the Scheme and at opening the satellite site compound would be reinstated and heavy plant/construction traffic would cease reducing the extent of activity in the wider view. However, passing traffic using the new Scheme would be visible running above existing field boundaries, albeit in the middle distance of the view. Existing hedgerow trees in field boundaries would be an important resource in ameliorating immediate visual impacts. **Year 15**: Woodland planting and additional mitigation planting in the severed field parcels on both sided of the Scheme would screen traffic movements and provide a good degree of landscape integration and additional habitat and biodiversity enhancement for the Scheme. The use of pollarding as management for hedgerow and Rhyneside trees would strengthen the existing landscape character providing some beneficial improvements in the wider landscape context.
VP11	**View from A368 East Street (Looking southwest)**	High	Large/ Very large	Moderate/ Large Adverse	Slight/ Moderate adverse	Slight / Moderate adverse	**Year 1:** Establishment of the new road junction at a distance from the existing properties along the former A368 would provide slight beneficial impacts in creating new residential accesses and an improved landscape setting for the properties. At opening however, these would be limited given the open nature of the improvement and early stage of mitigation establishment. Additionally, the scale and setting of the road would be more urbanised given the requirement for attenuation basins on both sides of the new junction, requirement for noise mitigation along the western side

			Visual Impacts				Comments
			Without mitigation		With mitigation		
VP	Name	Landscape Sensitivity	During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
							of the road and the extension of the existing lighting provision increasing the extent of night-time lighting impacts albeit at a very local scale. The creation of a new infrastructure link along the eastern side of Banwell would be a permanent change to the landscape character. **Year 15:** Establishment of roadside hedgerows, woodland and woodland edge planting on detrunked extents of the former road and alongside the Southern Link road would provide an enhanced setting and gateway to Banwell. Noise mitigation would continue to provide an urbanised hard element along the road corridor containing views for the vehicle travellers. There would, however, be wider landscape benefits in terms of creation of an enhanced green infrastructure and improved fit in the wider landscape context.
VP12	**View from ProW Footpath AX3/47/10 off Wint Hill**	High	Slight / Moderate Adverse	Slight Adverse	Neutral	Neutral	**Year 1:** Re-establishment of roadside boundaries and reinstatement of verges and works areas would restore much of the character and landscape structure for the area, rapidly moderating any construction stage impacts **Year 15:** Mitigation, both hard and soft landscape elements, would moderate any early year visual impacts replicating the current situation in medium to long term.
VP13	**View from ProW Restricted Byway AX3/23/10**	High/ Moderate/ Low	Neutral	Neutral	Neutral	Neutral	**Year 1 and 15**: The Scheme would have no discernible impact at the distance and orientation of view.
VP14	**View from junction of ProW footpaths AX3/18/10, AX3/19/10, AX3/47/10 and AX3/47/20 on Banwell Hill**	High	Slight Adverse	Slight Adverse	Neutral	Neutral	**Year 1:** On opening of the Scheme distant views of passing traffic along the Scheme would be evident to the east. These oblique views of the Scheme's eastern extents would form a minor element in the wider panoramic view. **Year 15:** As mitigation vegetation matures over the medium to long term the Scheme would become less

			Visual Impacts				Comments
			Without mitigation		With mitigation		
VP	Name	Landscape Sensitivity	During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
							apparent to a stage that would replicate the existing situation.
VP15	**View from Road/Byway AX3/23/30 used as ProW south of Towerhead**	High/ Moderate/ Low	Slight Adverse	Slight Adverse	Neutral	Neutral	**Year 1 and 15:** Given the distance, direction and focus of view there would be no change from the existing situation
VP16	**View from the Strawberry Line NCR 26 ProW AX29/41/20, between Winscombe and Sandford**	High	Neutral	Neutral	Neutral	Neutral	**Year 1 and 15:** Given the distance, direction and focus of view there would be no change from the existing situation
VP17	**View from junction of ProW on Sandford Hill**	High	Neutral	Neutral	Neutral	Neutral	**Year 1 and 15:** Given the distance, direction and focus of view there would be no change from the existing situation
VP18	**View from Hillfort on Dolebury Warren (Mendip Hills AONB3)**	High	Neutral	Neutral	Neutral	Neutral	**Year 1:** The Scheme forms an insignificant element within a far-reaching and expansive 360-degree panoramic view. Some night-time impacts may be visible from vehicle traffic passing along the eastern extent of the Scheme, but these would not be an increase from the existing situation. **Year 15:** Given the distance, direction and focus of view there would be no change from the existing situation
VP19	**View from the lower slopes of Dolebury Warren (Mendip Hills AONB3)**	High	Neutral	Neutral	Neutral	Neutral	**Year 1:** The Scheme forms an insignificant element within a far-reaching and expansive 360-degree panoramic view. Some night-time impacts may be visible from vehicle traffic passing along the eastern extent of the Scheme, but these would not be an increase from the existing situation. **Year 15:** Given the distance, direction and focus of view there would be no change from the existing situation
VP20	**View from junction of Towerhead Road & Catworthy Lane**	High	Neutral	Neutral	Neutral	Neutral	**Year 1:** On completion of construction minimal impacts would be evident at this point with existing vegetation obscuring views over the adjacent hedges.

			Visual Impacts				Comments
			Without mitigation		With mitigation		
VP	Name	Landscape Sensitivity	During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
							Year 15: Given the distance, direction and focus of view there would be no change from the existing situation
VP21	**View from Field gate off Summer Lane near to Laurel Farm**	High	Slight/ Moderate Adverse	Slight/ Moderate Adverse	Slight adverse	Neutral	**Year 1:** In opening year with the mitigation yet to provide screening or softening of the embankment form some middle distance views of passing traffic would be visible over interning hedgerow especially during winter months. These would be moderated by the distance of the view. **Year 15:** Establishment of mitigation with woodland and woodland edge planting and hedgerow boundaries with trees would provide screening for distant views moderating any visual impacts.
VP22	**View from Entrance to Court Farm Country Park off Wolvershill Road**	High/ Moderate	Slight / Moderate Adverse	Slight/ Moderate Adverse	Slight adverse	Slight adverse	**Year 1:** Loss of roadside hedgerow boundaries and localised widening of Wolvershill Road to accommodate the junction's improvements as well as introduction of signalised crossing would disrupt the current rural road character introducing a more urbanised element. **Year 15:** Reinstatement of roadside hedgerows and the establishment mitigation planting over the medium to long term ensure that the Scheme would become less apparent to a stage that would replicate the existing situation.
VP23	**View from Taylor's Field Housing development, off Wolvershill Road**	High	Neutral	Neutral	Neutral	Neutral	**Year 1:** On completion of construction minimal impacts would be evident at this point with existing vegetation obscuring views over the adjacent hedges. **Year 15:** Given the distance, direction and focus of view there would be no change from the existing situation
VP24	**View from West Mendip Way at Wavering Down (Mendip Hills AONB3)**	High	Neutral	Neutral	Neutral	Neutral	**Year 1:** The Scheme forms an insignificant element within a far-reaching and expansive 360-degree panoramic view. Some night-time impacts may be visible from lighting at the western end, but these would not be an increase from the existing situation.

			Visual Impacts				Comments
			Without mitigation		With mitigation		
VP	Name	Landscape Sensitivity	During Construction	Year 1	Year 15 (Winter)	Year 15 (Summer)	
							Year 15: Given the distance, direction and focus of view there would be no change from the existing situation
VP25	**View from Proposed Housing development, Land to the West of Wolvershill Road**	High	Moderate / Large adverse	Slight/ Moderate adverse	Slight adverse	Slight adverse	**Year 1:** On completion of construction minimal impacts would be evident at this point with existing vegetation obscuring views over the adjacent hedges. The visual impacts would be limited to the three properties at the western extent of the development with the majority of the proposed housing development having no direct or indirect views of the Scheme. **Year 15:** Establishment of mitigation with woodland and woodland edge planting and hedgerow boundaries with trees would provide screening for distant views moderating any visual impacts.

7.8 Proposed Mitigation and Enhancement Measures

Proposed Essential Mitigation Measures

7.8.1 The following measures are proposed to mitigate the landscape and visual effects both during construction and operational phases of development.

Construction Mitigation

7.8.2 During construction operations landscape and visual impacts would arise from both changes to the landscape and the impact of particular activities. Whilst it would not be possible to fully mitigate the effect of moving and operating site vehicles there are a number of other measures which could reduce adverse effects.

7.8.3 The tops of the cranes and scaffolding would be higher than the top of the proposed road surface and structures, so generally would be more visible than the finished structures. These, together with hoarding, stockpiles, and vehicle activity are temporary uncharacteristic features and are a common, albeit temporary consequence of construction works.

7.8.4 However, the following mitigation measures may help to slightly reduce the negative effects of site preparation and construction on the identified local landscape and visual receptors:

a) Careful siting of site offices, compounds and car parks, with screen bunds around sensitive perimeters, grass seeded to provide appropriate screening.

b) Sensitive design and placing of site signage, in order to provide the required information whilst limiting wider landscape and visual impacts.

c) Tidy site management would reduce the uncharacteristic visual clutter associated with building works;

d) Consideration of material and colours for temporary fencing etc, whilst taking account of safety requirements.

e) Consideration of colouration and extent of any hoarding or scaffolding covers should be given, to minimise the visual intrusion of the construction works on local views and character. The inclusion of decorative artwork/murals in appropriate locations would also provide the opportunity for the involvement of local community groups and schools in their design and implementation. Uniformity of hoarding and fencing is also desirable to provide consistency in views;

f) Consideration of construction phase interpretation – this would be particularly effective in the restoration or excavation of any historic, cultural heritage or landscape features and biodiversity mitigation or temporary translocation undertaken during the construction phase.

g) Limiting the length of time that cranes are in use;

h) Maintain access to public footpaths and provide clear information to the users on any diversions and how long these are likely to affect the path use;

i) Minimise light spill and glare from temporary lighting;

j) Programme planning to ensure exposed earthworks are re-vegetated as soon as possible to accelerate landscape integration.

k) Temporary seeding of topsoil and subsoil storage heaps.

l) Retention existing trees and woodland where proposals allow;

m) Protect existing trees and woodland to BS5837:2012 standards and in accordance with a detailed arboricultural working method statement;

n) Consideration of location of storage stockpiles, use of screen bunding, compounds, temporary offices, haul routes and similar to minimise impact on landscape character, landscape elements and views from high sensitivity receptors.

Operational Mitigation

7.8.5 During construction mitigation measures would be provided to remove or reduce adverse landscape and visual effects arising during the operational phase, from the highway itself, associated earthworks and structures, traffic movement and lighting.

7.8.6 The Scheme mitigation would prioritise the retention of boundary vegetation and mature trees and incorporate replacement hedgerow including individual/ hedgerow trees, species rich and flush/wetland meadow, scrub planting, to retain and enhance the local character. These would take account of opportunities to integrate the new road into the surrounding landscape, mitigate visual impacts and improve biodiversity value and net gain with regards to habitat creation and appropriate species selection. The approach to landscape mitigation is set out in greater detail in the Landscape Strategy, in ES Volume 3 - Appendix 7.B - Landscape Strategy.

7.8.7 Mitigation planting would avoid dense blanket planting within the highway boundary as this serves to overemphasise the engineering embankment form rather than integrate it into the wider surroundings. Planting mitigation has been designed to provide a more diffuse ‘feathered’ edge and mosaic coverage with diverse habitat areas of species rich grassland, scrub and woodland edge reinforcing field boundaries. The opportunity for lower

density planting towards the middle and lower slopes would be adopted in areas to recreate a varied vegetation structure and provide a range of habitats and better landscape integration.

7.8.8 A planting strategy would be implemented that promotes a wider planting density (2.0-2.5m centres) across the mitigation plots where screening is not the principal environmental function. This would enable better development of plant stock with the objective of reducing long term maintenance operations that result from thinning of more densely planted Schemes. The planting density should also be varied across the plot to provide a range of densities and habitats and differing degrees of screening to aid landscape integration.

7.8.9 A detailed Landscape and Ecological Management Plan (LEMP) would be developed to support the five year aftercare period, with the Maintenance Environmental Management Plan (MEMP) covering the long term post establishment 25 year period for the mitigation planting, habitat creation and enhancement. This would include an appropriate management regime to reduce failures during the establishment maintenance period. Refer to ES Volume 3 - Appendix 16.A - Outline CEMP and Appendix 16.C - Pre-construction LEMP.

7.8.10 The Scheme would run along the northern boundary of the traditional orchard at Riverside with further commercial orchards existing in the wider study area. Inclusion of heritage apple and pear varieties within plant mixes would be adopted with establishment of traditional orchard planting on severed land parcels in the vicinity of Riverside. The use of fruiting and flowering species within the wider Scheme planting would form an important visual contrast and component of interest for both the vehicle and pedestrian traveller and cyclist using the shared use path.

7.8.11 The sustainability of the roadside landscape, the cost and ease of maintenance and vegetation management have been considered. The greatest costs are grass cutting, hedge cutting and the thinning of established highway soft estate. Measures included in this Scheme would aim to reduce the cost of maintenance by:

a) reducing the frequency of grass cutting by using low fertility soils and introduce species such as Yellow Rattle to reduce vigour of established grass in verge areas;

b) include access to vegetated roadside areas to reducing the need for traffic management and lane closures on the Scheme;

c) avoid, where possible, areas of vegetation that require intensive maintenance, difficult access or costly tasks;

d) conservation grazing of large areas of grass where conditions allow this to be achieved safely within secure parcels of land;

e) provision of easements for access to maintain fences and walls.

f) provision of vehicular access to balancing basins and flood compensation areas for routine inspection, maintenance and removal of debris.

7.8.12 Further consideration would be made at detailed design stage of the planting stock size and density to ensure longer term management is effective. With this in mind, it is recommended that stock size should be a mix of cell grown and transplant stock to ensure successful establishment on embankment slopes and where screening is a requirement, it should contain a higher incidence of feathered trees. The use of standard trees as tree groups within grassland and hedgerow trees is an important component to provide a varied vegetation structure that better integrates with the surrounding landscape pattern.

7.8.13 A species mix would be developed based on the existing native species present in the locality with reference to the existing species present and with a view to long term species viability in the face of climate change. The majority of this species mix would be of British native origin, species proposed are as follows:

Table 7 - 13 Mitigation: Plant Species selection

Latin Name	Common Name
Acer campestre	Field maple
Acer pseudoplatanus	Sycamore
Alnus glutinosa	Common alder
Carpinus betulus	Hornbeam [1]
Cornus sanguinea	Common dogwood
Corylus avellana	Common hazel
Crataegus monogyna	Hawthorn
Euonymus europaeus	Spindle
Ilex aquifolium	Common holly
Lonicera periclymenum	Honeysuckle
Malus sylvestris	Crab apple
Prunus avium	Wild cherry
Prunus padus	Bird cherry
Populus nigra subsp. betulifolia	Black poplar (Native) [2]
Populus alba	White poplar
Quercus robur	Common oak
Rosa arvensis	Field rose
Rosa canina	Dog rose
Salix caprea, S.cinerea, S.fragilis	Goat willow, grey willow, crack willow

Latin Name	Common Name
Sambucus nigra	Elder
Sorbus aucuparia	Rowan
Sorbus torminalis	Service tree
Syringea vulgaris	Wild Damson
Tilia cordata	Large leaved Lime
Ulmus procera/ U. 'New Horizon' or U. dodoens	Elm [3]

NOTES:

[1] *Carpinus betulus* to be used in formal gateway approach and in areas of urban/rural transition

[2] *Populus nigra subs betulifolia*: Black Poplar, sourced from either existing local stock (T10, 11, 12, 13, 14 and 15 and T36, if confirmed as true native) via cuttings or from nurseries recommended via UK Black poplar Conservation Group

[3] Planting of Elm recommended as part of a hedgerow mix utilising Dutch Elm Disease resistant varieties

7.8.14 A group of six mature hybrid Black Poplars (*Populus nigra subsp. betulifolia*), (potentially hybrids), are located along the eastern side of Moor Road directly within the Scheme extents, these would be used to propagate further specimens for use within the wider Scheme area. The use of hybrid Black Poplars is proposed to further protect and enhance this species distribution in the wider landscape but also for a proportion of them to be managed as pollarded specimens re-establishing a characteristic landscape feature along stream courses and rhynes. New pollards can be created when the girth of a young sapling reaches about 150-200mm. The tree is cut at around 2-4m above ground level resulting in the characteristic multiple branched form of the pollard. It is important to gain long term management commitment when creating pollards as these require re-pollarding on a 10year cycle. During establishment this may be reduced to every 3-5 years.

7.8.15 An initial range of grass seed mixes is proposed to enhance landscape integration and promote biodiversity, this is discussed further in Chapter 8: Nature Conservation and Biodiversity. These would be based on habitat communities found in the locality as well as those practical for the maintenance on a highways network. They would take account of different aspects and ground conditions and would be further developed at detail design stage.

7.8.16 Wetland / Water Meadow (MG8 Grassland): Flood Compensation Areas

and wider mitigation areas in lower lying areas and within the floodplain. This mixture is suitable for use in water meadow areas, seasonally flooded lowlands and is designed to enhance biodiversity benefits.

Table 7 - 14 Mitigation: Seeding Mix 1

Species Rich Grassland: Meadow Mixture Wetland and Flood Compensation Areas		
Wildflowers		
%	Latin name	Common name
0.1	*Achillea millefolium*	Yarrow
1.5	*Betonica officinalis - (Stachys officinalis)*	Betony
4	*Centaurea nigra*	Common Knapweed
1.5	*Filipendula ulmaria*	Meadowsweet
0.5	*Galium verum*	Lady's Bedstraw
0.1	*Leontodon hispidus*	Rough Hawkbit
0.5	*Leucanthemum vulgare*	Oxeye Daisy
2	*Lotus corniculatus*	Birdsfoot Trefoil
2.5	*Plantago lanceolata*	Ribwort Plantain
0.5	*Primula veris*	Cowslip
0.2	*Prunella vulgaris*	Selfheal
0.9	*Ranunculus acris*	Meadow Buttercup
0.1	*Rumex acetosa*	Common Sorrel
0.2	*Silaum silaus*	Pepper Saxifrage
0.2	*Succisa pratensis*	Devil's-bit Scabious
0.1	*Taraxacum officinale*	Dandelion
0.1	*Tragopogon pratensis*	Goat's-beard
5	*Vicia cracca*	Tufted Vetch
20		
Grasses		
%	Latin name	Common name
10	*Agrostis capillaris*	Common Bent
3	*Alopecurus pratensis*	Meadow Foxtail (w)
3	*Anthoxanthum odoratum*	Sweet Vernal-grass (w)
3	*Briza media*	Quaking Grass (w)
24	*Cynosurus cristatus*	Crested Dogstail
2	*Deschampsia cespitosa*	Tufted Hair-grass (w)
32	*Festuca rubra*	Red Fescue
3	*Hordeum secalinum*	Meadow Barley (w)
80		
Sowing Rate: 40kg/ha 4g/m2		

7.8.17 Species Rich meadow: These mixtures combine 20% wild flora species with 80% ornamental grasses to produce an attractive flowering grassland meadow mixture. According to the prevailing soil types, conditions and environmental functions different types would be proposed for use.

Table 7 - 15 Mitigation Seeding Mix 2

Species Rich Grassland: Pond and ditch areas with biodiversity function		
Wildflowers		
%	Latin name	Common name
1	*Achillea millefolium*	Yarrow
0.2	*Agrimonia eupatoria*	Agrimony
0.2	*Angelica sylvestris*	Wild Angelica
2	*Centaurea nigra*	Common Knapweed
0.3	*Chaerophyllum temulum*	Rough Chervil
3	*Cruciata laevipes*	Crosswort
2	*Dipsacus fullonum*	Wild Teasel
5	*Filipendula ulmaria*	Meadowsweet
2.6	*Galium album - (Galium mollugo)*	Hedge Bedstraw
1	*Galium verum*	Lady's Bedstraw
2	*Leucanthemum vulgare*	Oxeye Daisy - (Moon Daisy)
0.2	*Lythrum salicaria*	Purple Loosestrife
0.2	*Malva moschata*	Musk Mallow
0.1	*Plantago lanceolata*	Ribwort Plantain
0.1	*Rumex acetosa*	Common Sorrel
0.1	*Silaum silaus*	Pepper Saxifrage
20		
Grasses		
%	Latin name	Common name
10	*Agrostis capillaris*	Common Bent
3	*Anthoxanthum odoratum*	Sweet Vernal-grass (w)
6	*Briza media*	Quaking Grass (w)
26	*Cynosurus cristatus*	Crested Dogstail
2	*Deschampsia cespitosa*	Tufted Hair-grass (w)
28	*Festuca rubra*	Red Fescue
5	*Schedonorus pratensis (Festuca pratensis)*	Meadow Fescue
80		
Sowing Rate: 40kg/ha 4g/m2		

Table 7 - 16 Mitigation: Seeding Mix 3

Species Rich grassland: Meadow mixture for Chalk/Calacareous Soils		
Southern Link		
Wildflowers		
%	Latin name	Common Name
0.1	*Achillea millefolium*	Yarrow
1.5	*Agrimonia eupatoria*	Agrimony
3	*Anthyllis vulneraria*	Kidney Vetch
1.4	*Betonica officinalis - (Stachys officinalis)*	Betony
3	*Centaurea nigra*	Common knapweed
0.2	*Centaurea scabiosa*	Greater knapweed
0.2	*Filipendula vulgaris*	Dropwort
0.5	*Galium album - (Galium mollugo)*	Hedge Bedstraw
0.5	*Galium verum*	Lady's Bedstraw
0.1	*Hippocrepis comosa*	Horseshoe Vetch
0.2	*Leontodon hispidus*	Rough Hawkbit
1	*Leucanthemum vulgare*	Oxeye Daisy
1	*Lotus corniculatus*	Birdsfoot Trefoil
0.2	*Origanum vulgare*	Wild Majoram
1.5	*Plantago lanceolata*	Ribwort Plantain
0.2	*Poterium sanguisorba - (Sanguisorba minor)*	Salad Burnet
0.3	*Primula veris*	Cowslip
0.2	*Prunella vulgaris*	Selfheal
1	*Ranunculus acris*	Meadow Buttercup
0.2	*Rumex acetosa*	Common Sorrel
0.5	*Scabiosa columbaria*	Small Scabious
0.2	*Silene vulgaris*	Bladder Campion
3	*Vicia cracca*	Tufted Vetch
20		
Grasses		
%	Latin name	Common Name
4	Briza media	Quaking grass
2	Carex flacca	Glaucous sedge
24	Cynosurus cristatus	Crested Dogstail
24	Festuca ovina	Sheep's Fescue
20	Festuca rubra	Red Fescue
2	Koeleria macrantha	Crested Hair grass
2	Phleum bertolonii	Smaller Cats Tail
2	Trisetum flavescens	Yellow Oat grass
80		
Sowing Rate: 40kg/ha 4g/m2		

7.8.18 Road Verge and Embankment – for use on the Scheme. This mix is designed for use in highway verges, embankments, roundabouts and areas within visibility splays that require regular cutting. The mixture establishes quickly on a range of soils types and provides rapid ground cover to prevent gully erosion and loss of soil onto road surfaces. Potential to include a wildflower component, such as Yellow Rattle (Rhinanthus minor) in this mix would further promote biodiversity and would be developed in conjunction with the maintaining authority/NSC at design stage.

Table 7 - 17 Mitigation Seeding Mix 4

Road Verges, Roundabouts and Embankments		
Grasses		
%	**Latin name**	**Common name**
40	*Festuca rubra rubra*	Strong Creeping Red Fescue
20	*Poa pratensis*	Smooth Stalked Meadow Grass
22.5	*Lolium perenne*	Perennial Ryegrass
10	*Festuca rubra commutata*	Chewings Fescue
5	*Agrostis castellana*	Highland Browntop Bent
2.5	*Trifolium repens*	White Clover
100		
Sowing Rate: 350kg/ha 35g/m2		

7.8.19 At this stage the seed mixes have been selected from standardly available mixes but may be further developed to site specific mixes at detail design stage. The use of Yellow Rattle (*Rhinanathus minor)* within the mitigation seed mixes would be employed where appropriate. Additionally, consideration would be made of using a species diverse wildflower mix on the road verges and roundabouts over a subsoil/low fertility topsoil, enabling suitable conditions for a more diverse grassland habitat establishment.

7.8.20 Scheme drainage, flood compensation and attenuation basins would be designed to achieve both required storage capacities and incorporate mitigation planting to improve local biodiversity, Biodiversity Net Gain, green infrastructure, and landscape integration.

7.8.21 The Flood Compensation Areas (FCA) included in the Scheme design would be designed to maximise biodiversity and landscape benefits. Whilst the design for these areas has not been fully finalised it is intended the following design and mitigation principles should be followed at detailed design stage;

a) Pond/basin profiles and depths should be designed to provide a variation in depths and gradual pond/basin side profiles to enable a variety of

wetland and open water habitats to develop including damp/wetland scrapes and flush meadow habitat;

b) planting mitigation should provide 'green corridor' linkages with any existing hedgerows or group trees in the vicinity to reinforce existing vegetation structure;

c) planting should be carried out using British native trees and shrubs ensuring that it is kept back from the south and western facing sides of open water areas to avoid shading;

d) grassland requiring reseeding or reinstatement should be of a species mix suitable to enhance the existing biodiversity including wildflower species and grasses appropriate to the species present and identified as a result of any ecological survey findings. These should also seek to enhance LBAP targets and Biodiversity Net Gain if possible.

7.8.22 Lighting design would be limited to the Banwell Western Roundabout, junction improvement between the A371 and the Southern Link at East Street and would tie into the existing provision. There would also be lighting associated with the Wolvershill Road junction which would be signalised necessitating street lighting to comply with highway standards. This would be low level and employ full cut off lanterns to avoid excessive light spill. No lighting is required for the Moor Road/Riverside Road link.

7.8.23 Noise mitigation would be limited to a 343m length along the western side of the Southern Link. A noise attenuation barrier would be installed consisting of vertical posts set into the ground carrying solid panels up to the required height of 3m. A representation of the form and context of the noise barrier is illustrated on Section E-E on Figure 7.10. It would be located towards the back of verge approximately 2m back from edge of carriageway. Start and end of fencing runs would be designed to taper into adjacent ground level thus avoiding abrupt vertical elements in the roadside corridor. Wherever possible the barrier would be of natural material finish, with potential for low earth bunding on the western (Banwell facing side) of the barrier to minimise the visible extent of the barrier in the initial years post construction until the landscape mitigation planting is established.

7.8.24 The landscape mitigation planting would take up to 5 years for vegetation to have grown sufficiently to reduce the visual impact of the embankment slopes and noise barrier, although installation of a noise barrier along the Southern Link, would provide around 2 metres of visual screening for passing traffic in the short term. Planting would need 15 years (design year) to achieve effective visual screening of the road, traffic and noise barrier.

7.8.25 Advanced planting of the wider mitigation areas unaffected by direct construction activities would be undertaken to provide a greater diversity in age structure and form of planting and to maximise establishment of screening during construction and operational phases.

Scheme Mitigation

7.8.26 The proposed landscape mitigation measures which would be provided are described below, moving along the Scheme from west to east, and are illustrated in the Planning Documents - Environmental Masterplans (Sheet 1 to 5).

7.8.27 **A371 Western tie-in to Banwell West Junction Chainage 0:** On approaching the roundabout from the west along the existing A371, the Scheme would leave Knightcott Road approximately 100m east of Summer Lane junction to bear north on embankment approximately 5m above the existing ground level. Field boundaries would be reinstated with native species hedgerows with hedgerow trees on both sides of the road tying into the existing roadside and field boundaries at the Summer Lane junction. The remnant field and associated boundary hedgerows lying between the existing Knightcott Road, and the new roundabout would be retained to accommodate broadleaf woodland planting to screen views from properties along the south side of Knightcott Road. The new roundabout itself would have a designed landscape treatment, with standard trees marking its function as a western gateway to Banwell. Junction improvements at Summer Lane would similarly receive replacement native species hedgerow boundaries. An active travel link in the form of a 3m wide shared use cycle/pedestrian path runs along the northern side of the road connecting the existing footway into the Scheme. For this section the shared use path lies at the back of kerb.

7.8.28 **A371 Eastern tie-in to Banwell West Junction Chainage 0**: On approaching the roundabout travelling east along the existing Knightcott Road a short spur would link the existing road to the new roundabout. A new side road would be provided utilising the former A371 to provide residential access to properties south of Knightcott Road. The existing hedgerow boundary would be retained to the south of Knightcott road and a new hedgerow provide on the northern side to replace the existing and restore connectivity.

7.8.29 **Banwell West Junction Chainage 0 – 100**: The Banwell West roundabout would sit within a single field parcel the entirety of which is retained within the Scheme extents. Existing hedgerow boundary vegetation would be

retained along the original field boundaries, where this is gappy or in poor condition they would be replanted with a native hedgerow mix with trees. This would be further supplemented with broadleaf woodland parcels in the remnant field corners and woodland edge within species rich grassland. The shared use path diverges away from the roundabout to follow the toe of embankment. With woodland edge and intermittent tree planting providing enclosure to the north. The retention of the entire field parcel within the Scheme extents serves to reinforce the existing field pattern and provide a setting for the new roundabout.

7.8.30 **Chainage 100-300**: Travelling north from the A371 Banwell roundabout the carriageway is carried on embankment at a level of between 3m and 5m above the existing ground level. The shared use path continues along the western side of the road with an open swale sitting at the top of embankment. The embankment slopes on both sides of the carriageway would be planted with a mosaic habitat of woodland and woodland edge set within species rich grassland providing a softening of the embankment form transitioning into open grassland between the toe of embankment and highway boundary. A new native hedgerow with intermittent trees follows the highway boundary providing connectivity with existing field boundaries.

7.8.31 **Chainage 300-700:** The Scheme remains upon embankment at around 2 to 3m above the adjacent fields, gradually decreasing in height as the existing ground level rises before the at grade tie in at Wolvershill Road (Ch.750). To the west of the carriageway remnant field parcels are retained within the Scheme extents and planted with mosaic woodland edge and scrub habitats retaining and enhancing hedgerow boundaries and screening easterly views from Summer Land Caravan Park.

7.8.32 Between Ch.500 and 600 the Scheme passes through fields forming the westerly part of Stonebridge Farm Caravan and Campsite. The Wallymead Rhyne also crosses the Scheme contained within a culvert and accommodating mammal ledges with mitigation planting placed to direct and encourage use of the crossing. Here remnant field parcels on both sides of the road are retained to accommodate flood compensation and attenuation basins for the Scheme. The field to the west would be remodelled to create a flood compensation area comprising a series of seasonally wet lower lying areas with associated wet/flush meadow and peripheral scrub and woodland edge mosaic. The fields to the east accommodate two attenuation basins which would be set within species rich grassland and woodland edge with scattered tree planting providing a good degree of landscape integration. A belt of broadleaf woodland planting running along the easterly side of the Scheme between Ch.600 and 750 provides further screening for views and filtering of night-time lighting

impacts from vehicle headlights for properties at Stonebridge Farm and along Wolvershill Road. The highway boundary would be delineated by native species hedgerows, which would tie into the prevailing field pattern.

7.8.33 **Chainage 700-800**: The Scheme lies at grade at this point where it ties into the existing Wolvershill Road forming a new road junction. Junction improvements would require the realignment of the existing road for approximately 100m to the northwest and 40m to the southeast of the mainline resulting in the partial loss of roadside hedgerows. These would be replaced to reinstate landscape and habitat connectivity. The junction would be signalised to enable safe and free flow of traffic.

7.8.34 **Chainage 800-1300**: From the Wolvershill Road junction the Scheme sweeps round to the east and runs into a shallow cutting for around 250m. This provides an enhanced degree of screening for Court Farm and properties to the south and east of Wolvershill Road. Native species hedgerows with hedgerow trees would delineate the highway boundary and tie into and reinforce the prevailing field pattern. A mammal pipe crosses under the Scheme at Ch. 1120 providing connectivity on both sides of the Scheme. Planted mitigation would connect into existing retained vegetation and reinforce foraging routes providing guidance alongside protected species fencing to encourage use.

7.8.35 Continuing east, at around Ch. 1170, the Scheme would change from being in cutting to running on embankment approximately 2m above ground level. The remnant field parcels on both sides of the carriageway are retained within the Scheme extents to create sizeable mitigation areas both north and south of the road. These would be planted with woodland planting and native hedgerows along the highway boundary with woodland edge and native scrub within species rich grassland creating mosaic habitats on the lower lying land at existing ground level. Woodland edge and native woodland would run up to the top of the embankment providing a good degree of landscape integration at the transition between cutting and embankment.

7.8.36 **Chainage 1300-1700**: Cooks Lane Drain passes under the Scheme at Ch.1400 with PRoW AX3/6/10 diverted along the southern embankment to cross the Scheme at grade at Ch.1500. The southerly highway boundary would be delineated by native species hedgerow with hedgerow trees, which would provide connectivity into and reinforce the existing field pattern. Two further flood compensation areas are required one to the north at Ch.1540 and one to the south at Ch.1730 these would be remodelled to provide sufficient capacity to offset for the Scheme footprint. Remodelling would lower the overall area between 0.5m and 1m, creating a series of

seasonally wet lower lying areas with associated wet/flush meadow and peripheral scrub and woodland edge mosaic. An attenuation basin would sit in the field to the east within species rich grassland with woodland edge planting filtering and screening views from the north. The southerly access along Moor Road is closed off with a new northerly access provided at Ch.1700. Woodland planting to the east of the new junction would provide enclosure and replacement hedgerows follow the highway boundary to tie into existing retained vegetation.

7.8.37 **Chainage 1700-2150**: From Moor Road the horizontal alignment, joined by the shared use path on its northern side, gradually rises in elevation, crossing the Old Yeo Rhyne contained within a culvert, to pass over the River Banwell and Riverside Road on a 32m clear span bridge at around 6.5m above ground level (Ch.1940). Embankment slopes are maintained at a 1:3 slope with localised steepening to 1:2 at the bridge wing walls to reduce the extent of visible structure. Planting either side of the bridge structure would soften the embankment form and perceived opening therefore reducing the visual impact of these structures on the approaches and from wider views. Masonry cladding to the wing walls would assist in integrating the structure into the landscape.

7.8.38 The existing pond to the north of the Riverside Bridge at Ch.1900 would be lost under the embankment footprint with an equivalent replacement pond created on the west side of Moor Road. The remaining wetland scrub would be partially retained and extended to diversify roadside habitats. Further woodland edge and hedgerow boundary planting would provide low level screening and filtering of views from adjacent properties to the north of the Scheme along Riverside. Five of a group of six hybrid Black Poplars on the eastern side of Moor Road would also be lost to the Scheme footprint. Prior to works commencing these would undergo detailed survey and pruned to provide cutting material for future propagation of stock for both Scheme mitigation and use in the wider area. To compensate for the loss of these trees a line of five hybrid Black poplars would be replanted on the western side of Moor Road within the existing field parcel. These would provide a greater visual integration for the Scheme and reinstate a characteristic landscape feature.

7.8.39 The bridge embankment slopes would be planted with woodland, areas of woodland edge and open grass containing scattered trees. This would provide a variety of habitat types and structure delivering a good degree of landscape integration and better fit with the adjacent field pattern.

7.8.40 To the south of the bridge and east of Riverside Road lies an extensive area of traditional orchard, currently in a relatively degraded state. Embankment slopes would be locally steepened to minimise impacts on the

existing planting. Planted mitigation on the severed land parcel to the east and within the Scheme extents adjacent to the orchard would include heritage fruit varieties. Further opportunity would be taken to include fruiting apple and pear varieties within the planting mixes for the wider mitigation planting.

7.8.41 **Chainage 2150-2800:** Between Ch. 2150 and 2800 the Scheme continues on embankment, gradually sweeping round to the south between Towerhead Solar Farm and Banwell Football Club and playing fields. Two attenuation basins are located either side of the Scheme at Ch 2300 set within species rich grassland with woodland edge planting and native species hedgerows reinforcing the highway boundary. The shared use path also leaves the Scheme (Ch.2300) heading east from the mainline to create a link into the wider PRoW and to Sandford. Semi formal tree planting along the shared use path would provide a distinctive designed landscape treatment and focus.

7.8.42 Field parcels retained within the Scheme extents would be planted with small to medium sized mixed broadleaf woodland blocks and scattered trees within species rich grassland. These would provide extensive areas of mitigation enabling landscape integration for the Scheme when viewed from Banwell as well as screening for properties along Riverside Crescent. They would also provide a good degree of habitat enhancement on both sides of the road. Where the highway boundary intersects with or follow open drains or rhynes, intermittent tree planting would be provided with the intention of managing appropriate species as pollards.

7.8.43 **Chainage 2800-3100 Eastern tie in with A368 and Southern Link junction**: To the east of the junction the Scheme would be on embankment, with the side slopes planted with woodland with open area containing scattered trees within grass. The lower lying field parcels on both sides of the Scheme would be retained and planted with mosaic woodland edge and scrub habitats whilst the highway boundary would be delineated with native species hedgerow with intermittent hedgerow trees. Where appropriate to the local landscape character and soil conditions these would be species suitable for long term management such as pollards. As the Scheme approaches the easterly tie in, hedgerow boundaries would be reinstated tying into the existing field pattern and A368 boundary.

7.8.44 The junction with the Southern Link takes the form of a T junction on the southern side of the Scheme at Ch. 2900. Hedgerow boundaries follow the toe of embankment with woodland edge planting beyond to enclose and contain the junction. The line of the former A368 East Street to the south of the new junction would be broken out and native broadleaf woodland

planted to strengthen visual connectivity with the wooded slopes of Banwell hillfort and further anchor the landscape setting of the junction.

7.8.45 **Southern Link Chainage 0-100**: This section of the Scheme lies within the Mendip Hills AONB. As the Southern link leaves the Scheme extents it swings south and to the west briefly following the line of the existing A368. The Southern link at this point is at grade. Hedgerows would line the road corridor providing a degree of screening of the road and its traffic and tying into the existing field pattern and road corridor.

7.8.46 A new road junction and short spur links the Southern Link with the eastern approach to Banwell along the A368. This section would have a landscape treatment of individual trees within hedgerow boundary planting in a semi-formal arrangement in order to create a gateway character. A length of the existing East Street would be retained to provide residential access for properties at Corner House and Eastermead Farm. The defunct length of road would receive a designed landscape treatment with grass and individual trees delineated with a hedgerow boundary subject to visibility requirements.

7.8.47 Two attenuation basins would be required in this area to facilitate off road drainage. The first would lie opposite the junction and to the east of the Scheme, it would be enclosed by hedgerows and integrated with woodland planting. The second, would lie within the mitigation plot/retained field parcel to the east of properties along Dark Lane and would be set within woodland planting with open areas of grassland. The junction would be lit to comply with highway standards with lighting tying into the existing provision along East Street.

7.8.48 From Ch. 500 the Southern Link would rise as it follows the lower flank of Banwell Woods. Noise fencing is proposed along the western side of the road providing mitigation for properties along Dark Lane. This would be set back as far as practicable to facilitate forward visibility but would introduce a further unfamiliar infrastructure element into the road corridor. Hedgerow planting to both sides of the road would provide visual containment and reduce the perceived scale of the Southern Link. Field parcels to both sides of the road would be retained within the Scheme extents. These would be planted with extensive areas of native broadleaf woodland which would be further strengthened with woodland edge and scattered standard trees set within species rich grassland creating a parkland feel. The succession of habitat and canopy height when viewed from Banwell would create a layered transition and good degree of landscape integration with the slopes of Banwell Woods and a suitable landscape treatment for the approach into the AONB.

7.8.49 From Ch. 150 to the tie in with the A371 the road corridor narrows to join the existing road corridor. Access to Banwell via Dark Lane and Castle Hill would be closed off with two turning heads provided with a grassed landscape treatment delineated with maintained hedgerow planting.

7.8.50 The Southern Link boundary would be delineated with a mixture of native species hedgerow and stone boundary walling to match and tie into the existing road treatment. This would be further reinforced with woodland block planting on the eastern extent providing a good degree of landscape integration with the Banwell Woods beyond and screening for properties at Wint Hill/The Rhodyate and Castle Hill.

7.8.51 The value of the study area at a national, regional and local scale has been recognised as part of this ES both in terms of landscape, cultural heritage and biodiversity interest and has been further highlighted during consultations with NSC and Mendip Hills AONB.

7.8.52 Whilst the majority of the Scheme would not be publicly accessible there is the opportunity to enhance public understanding and provide a wider understanding of the context and setting for the Scheme. The shared use path and a permissive right of way created to allow public access to the open grassland and 'parkland' to the west of the Southern link both provide interpretation opportunities. This would be of particular relevance to the setting of the Mendip Hills AONB, local cultural and heritage features such as Banwell Castle, Hillfort and Banwell Conservation Area and biodiversity features including the Ancient Woodlands, SAC and SSSI within Banwell Woods. Consideration of this would be undertaken during detail design through the development and implementation of an interpretation strategy.

Placemaking and Wider Mitigation and Enhancements

7.8.53 As a part of the overall consideration for the Scheme the impacts on both the changes to traffic flows with consideration for the opportunities for enhancement within Banwell village, and the wider implications on traffic movements on the adjacent road network and communities of Winscombe, Churchill and Sandford have been evaluated. These are considered as a separate, although related issue to the Scheme and Southern Link impacts and have undergone a parallel development and consultation process.

7.8.54 For Banwell village the following list outlines some of the placemaking opportunities that would be considered. These are not assessed as part of the Scheme and Wider mitigation enhancements but are included here for reference. A range of measures would be selected and developed based

upon how well they positively impact placemaking, value for money and feedback from the consultation.

a) Gateway features at either end of village with signage and landscaping;
b) A narrowing of additional sections of the road to encourage slower traffic speeds and facilitate better use of space;
c) A priority system through the narrow/single lane sections and junction layouts within the village;
d) Green infrastructure (such as avenue planting raised planters and wildflower planting);
e) Enhanced biodiversity using wildflowers and other planting;
f) Improved shared use paths and facilities – such as cycleways and footways, additional road crossing points and shared spaces including links back to Weston-super-Mare;
g) Traffic enforcement – such as banning Heavy Goods Vehicles (HGVs) except for access/deliveries;
h) Physical traffic calming – such as road markings, traffic tables, shared space;
i) Reduced speed limits to 20mph to improve safety (as informed by the Speed Limit Assessment Report);
j) Improve active and sustainable travel on Wolvershill Road;
k) Improvements to public transport infrastructure such as bus stop locations; and
l) Rationalising road signage where possible to enhance the conservation area.

7.8.55 Many of the same issues have been raised for consideration with respect to the wider mitigation measures for Winscombe, Churchill and Sandford. The following wider mitigation measures would be taken forward in tandem with the Scheme development.

7.8.56 **Shared use path provisions**: three main routes would be considered to improve connectivity for walking, cycling and equestrians to mitigate increase traffic movements along the Scheme and adjacent local road network.

a) Banwell to Sandford; this would comprise a 3m wide shared use path leaving the Scheme at Ch. 2,570 following the continuation of Eastermead Lane through Towerhead Solar Farm, crossing the end of Catworthy Lane and then following the south side of Towerhead Brook before rejoining the A368 on the outskirts of Sandford. A cut off drain follows the southerly extent of the shared use path taking any path drainage away from Towerhead Brook.

b) Access to Churchill Academy (West); this would comprise an upgrade of the existing PRoW (AX29/51/10) between the A368 and Churchill Green to create a 3m wide shared use path for improved links to the school and sixth form. This would be combined with localised pavement build outs, reinstated and widened verges and a new footway, approximately 90m in length, providing an improved link to an existing bus stop on Dinghurst Road. The full length of the route would be lit.

c) Access to Churchill Academy (East); this would comprise a similar upgrade to an existing PRoW (AX14/36/30) to the north of Churchill Academy crossing open fields on an already metalled surface path before meeting Ladymead Lane and Broadoak Road in Churchill. This would be accompanied by localised improvements to provide traffic calming through road markings.

7.8.57 The visual impact for construction and operational phases is considered to be:

Visual Impacts	
Receptor Sensitivity	Low
Magnitude of Effect	Minor
Construction Phase: Visual Impact Significance	Neutral/ Slight adverse
Operational Phase: Visual Impact Significance	Neutral/ Slight beneficial

7.8.58 **Footway Improvements and Crossings**; Nine improved crossing provisions would be provided in the wider area at Winscombe, Sandford, Churchill, Langford and Locking. These comprise;

a) Five controlled crossings, (2 Zebra, 2 Puffin and 1 Toucan) and a further four uncontrolled crossings provided by build outs to the existing provision.

7.8.59 A number of minor footway improvements to widen existing provision or construct new lengths would also be carried out at a further five locations. These would all be accommodated within the existing verge or carriageway.

b) A368 Station Road, Sandford widening of an existing shared use path to 3m width and crossover point to improve access to the Strawberry Line, part of the Cheddar Valley Railway Walk Local Nature Reserve.

c) A368 Station Road, Sandford, West of Orchard Drive, provision of a new 35m section of footway on the north side of the A368 with a further 35m

length of widened footway on the opposite side of the road.

d) Church Lane, Churchill, covering localised footway improvements associated with the Churchill Academy (East) shared use path.

e) A368 Dinghurst Road, Churchill provision of a new footway (90m) on the north side of the road providing an improved link with the existing bus stop.

f) Church Road, Winscombe, a short 30m section of existing one way road to be retained for cycle and pedestrian use but closed to vehicle traffic.

7.8.60 The visual impact for construction and operational phases is considered to be:

Visual Impacts	
Receptor Sensitivity	Low
Magnitude of Effect	Minor
Construction Phase: Visual Impact Significance	Neutral/ Slight adverse
Operational Phase: Visual Impact Significance	Neutral/Slight beneficial

7.8.61 **Junction improvements** would be undertaken at two locations associated with the Scheme. These would be carried out at;

a) A368/A38 Churchill Junction; This includes some limited widening on the western arm of the junction, and a rearrangement of the existing lanes to improve traffic flow. A widened central island on the western arm would also be provided to upgrade the crossing for pedestrians and cyclists and link with a proposed shared use path to the north provided by others.

b) A371 Banwell Road West of M5; this would include traffic signals and a signal-controlled crossing on the A371 directly west of Banwell Road for pedestrians and cyclists. All proposals would be contained within the existing road corridor.

7.8.62 The visual impact for construction and operational phases is considered to be:

Visual Impacts	
Receptor Sensitivity	Low
Magnitude of Effect	Minor

Visual Impacts	
Construction Phase: Visual Impact Significance	Neutral/ Slight adverse
Operational Phase: Visual Impact Significance	Neutral

7.8.63 Due to their small scale and containment within an already urbanised environment, these are considered to be of limited impact in terms of visual or landscape effect. They would contribute to some local improvements in townscape setting by reducing traffic speeds and reinstating verges or footways and would provide a beneficial enhancement for non-vehicular users, creating a safer environment.

7.8.64 An assessment of the wider mitigation measures is included within Table 7-19: Summary of Construction and Operational Impacts in Relation to Landscape and Visual Effects.

7.9 Residual Environmental Effects (following mitigation)

7.9.1 The GLVIA states that in order to determine the magnitude of landscape effects:

"Each effect on the landscape receptors need to be assessed in terms of its size or scale, the geographical extent of the area influenced, and its duration and reversibility."

7.9.2 The following Table 7 - 18 details these effects and reassess those impacts after mitigation to establish the residual effects of the Scheme. These should also be read in conjunction with the ES Volume 3 - Appendix 7.C Visual Effects Schedules which are further illustrated on ES Volume 2 - Figure 7.7 - Visual Effects Drawings.

Construction and Operational Impacts

Year 1 provides magnitude and significance of impact prior to mitigation,
Year 15 (Summer) provides magnitude and significance following mitigation

Table 7 - 18 Summary of Construction and Operational Impacts in Relation to Landscape and Visual Effects

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	Significance (prior to mitigation)		Magnitude (following mitigation)	Significance (following mitigation)
Landscape							
1	**NCA 118: Bristol and Avon Valleys and Ridges**	National: No discernible impact	No change	Neutral	Reinstatement of landscape planting and retention of existing vegetation wherever possible would replicate the existing situation and would be barely discernible at the National scale	No change	Neutral
2	**NCA 141: Mendip Hills**	National: Very localised and contained impact	Negligible	Slight adverse	Reinstatement of landscape planting and retention of existing vegetation wherever possible would replicate the existing situation and would be barely discernible at the National scale	No change	Neutral
3	**NCA 142: Somerset Levels and Moors**	National: Localised impact	Minor	Slight adverse	Reinstatement of landscape planting and retention of existing vegetation wherever possible would replicate the existing situation and would be barely discernible at the National scale	No change	Neutral
4	**Mendip Hills AONB**	National: Very localised and contained impact	Negligible	Slight adverse	Reinstatement of landscape planting together with further extended mitigation and retention of existing vegetation wherever possible would reinforce the existing landscape framework. The Southern Link would sit within mitigation providing a good degree of integration	Minor/ Negligible	Slight adverse

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
					with the adjacent wooded hill slopes. The nature and scale of the changes are small in comparison to the existing development and size of the AONB. The Scheme has slight adverse potential to affect the character or special qualities of the AONB in the early years of the Scheme, but these would reduce as mitigation planting matures and creates a good level of landscape integration with the surrounding settlement edge and wooded hill slopes at Banwell hillfort. Magnitude following completion is considered to be Minor at the local scale ranging to Negligible at the AONB regional scale		
5	**LCA A1: Kingston Seymour and Puxton Moors**	Regional: Localised impact	Negligible	Neutral/ Slight adverse	Vegetation cover and landscape structure would be reinstated through mitigation planting along the Scheme extents reinforcing the local landscape character and replicating the existing situation. Further local enhancements would be created through the treatment/mitigation of the flood compensation and attenuation features associated with the drainage design with the retention of severed field parcels an important component for the Scheme landscape setting and which would enhance opportunities for biodiversity and Biodiversity Net Gain	Neutral	Neutral

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
6	**LCA A4: Locking and Banwell Moors**	Regional: Localised impact	Moderate	Moderate adverse	Vegetation cover and landscape structure would be reinstated through mitigation planting along the widened embankment closely replicating the existing situation. Further local enhancements would be created through the treatment/mitigation of the flood compensation and attenuation basins associated with the drainage design which would enhance opportunities for both biodiversity and landscape integration.	Slight adverse	Neutral/ Slight adverse
7	**LCA E1: Mendip Ridges and Coombes**	Regional: Localised impact	Minor	Slight / Moderate adverse	As with the impacts assessed for Mendip Hills AONB Reinstatement of landscape planting together with further extended mitigation and retention of existing vegetation wherever possible would reinforce the existing landscape framework. The Southern Link road would sit within mitigation providing a good degree of integration with the adjacent wooded hill slopes.	Minor/ Negligible	Slight
8	**LCA J1: Lox Yeo Rolling Valley Farmland**	Regional: No discernible impact	No change	Neutral	Regional: No discernible impact	No change	Neutral
9	**LCA J2: River Yeo Rolling Valley Farmland**	Regional: some locally sensitive landscape features lost which contribute to the wider landscape character. The formation of earth embankments and cutting would cut across the natural grain of the landscape	Moderate	Moderate adverse	Reinstatement of landscape planting together with further extended mitigation and retention of existing vegetation wherever possible would reinforce the existing landscape framework and provide opportunity to enhance landscape characteristic and elements previously under threat in terms of field	Minor	Slight/ Moderate adverse

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
					boundaries, locally and nationally rare features such as pollards and the rhyne network. However, the presence of a new infrastructure element within a previously settled rural/agricultural landscape is a permanent change to the landscape character and framework albeit at a slightly wider scale than for the immediate Scheme Study Area		
10	**Study Area Landscape Character**	Local: some locally sensitive landscape features lost which contribute to the wider landscape character. The formation of earth embankments and cutting would cut across the natural grain of the landscape	Moderate	Moderate adverse	Reinstatement of landscape planting together with further extended mitigation and retention of existing vegetation wherever possible would reinforce the existing landscape framework and provide opportunity to enhance landscape characteristic and elements previously under threat in terms of field boundaries, locally and nationally rare features such as pollards and the rhyne network. However, the presence of a new infrastructure element within a previously settled rural/agricultural landscape is a permanent change to the landscape character and framework	Moderate	Moderate adverse
Visual							
1	**High Street, Banwell. Overlooking 'Valued Landscape' in**	Local: Direct / indirect impact. Moderate disturbance of view in the lower middle ground due to loss of vegetation and introduction of uncharacteristic construction traffic, haul routes and	Moderate	Moderate / Large adverse	Planted mitigation would re-establish and reinforce the landscape structure. The planting within the severed field parcel to the immediate south of the Banwell Roundabout together with the replacement of roadside hedgerows with trees would provide an integrated boundary that would mature to provide	Minor / Moderate	Moderate adverse

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
	immediate setting of the Mendip Hills AONB	construction of the Banwell roundabout and main carriageway alignment during construction.			greater landscape integration for the southern extent of the Scheme and along Knightcott Road. However, the scale of the new infrastructure including roundabout, extended lighting and creation of the new carriageway alignment into the wider landscape would be a permanent change		
2	**View from PRoW Footpath AX3/11/10 off Summer Lane**	Local: Direct impact. The aspect from the adjacent PRoW and side roads would be more open with mitigation planting yet to establish. Scale and extent of the Scheme would be evident with the new road embankments and passing traffic visible through exiting retained field boundary vegetation. There would be an extended provision of street lighting along the A371 and visible at some distance around the new Banwell	Moderate	Moderate / Large adverse	Planted mitigation would establish to reinforce the landscape structure, providing a good landscape setting for the Scheme and mitigating views for both external observer and vehicle traveller. The creation of the Scheme would introduce a permanent change in the landscape with traffic movements and background noise a low level but permanent element in the wider landscape	Minor	Slight adverse
3	**View from PRoW Footpath AX3/25/10 leading to**	Local: Direct impact. The construction of the Scheme on an embankment form would create a permanent and evident change to the landscape character. Direct views of passing traffic along the Scheme would be visible.	Moderate	Moderate / Large adverse	Planted mitigation would establish to reinforce the landscape structure providing a more diverse, considered and integrated setting with establishing woodland blocks along field margins and hedgerow trees	Minor / Moderate	Moderate adverse

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
	Whitecross Lane	There would be limited screening of the lower part of the embankment by intervening hedgerow boundaries.					
4	**View from PRoW Footpath AX3/5/10 off Wolvershill Road**	Local: Indirect impact. The Scheme for the most part would be contained within shallow cutting minimising visual impacts on the wider landscape. Views of high sided vehicles would be partially visible highlighting the Scheme location. From (Ch.1070) views would be increasingly visible of moving traffic with filtering of views heavily dependent on hedgerow boundary vegetation.	Moderate	Moderate / Large adverse	Planted mitigation would establish and reinforce the landscape structure, providing a good landscape setting for the Scheme and mitigating views for both external observer and vehicle traveller. The creation of the Scheme would introduce a permanent change in the landscape with traffic movements and background noise a low level but permanent element in the wider landscape	Negligible	Slight adverse
5	**View from PRoW Footpath AX3/6/10 Cook's Lane to Moor Lane**	Local: Direct impact and at close proximity. The construction of the Scheme on an embankment form would create a permanent and evident change to the landscape character. Significant landscape and visual impacts would be generated by the Scheme with the PRoW requiring diversion. The Scheme would be a dominant feature in stark	Major	Large / Very Large adverse	Roadside mitigation in the form of hedgerow and hedgerow trees would establish to form visual containment of the Scheme and reinforce local landscape character with the reintroduction of characteristic pollard tree forms and species but would do little to reduce the direct physical impacts and changes to the local landscape character. but would serve to provide landscape integration and enhanced biodiversity through the establishment of roadside habitat areas.	Moderate / Major	Large adverse

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	Significance (prior to mitigation)		Magnitude (following mitigation)	Significance (following mitigation)
		contrast with the adjacent pastoral landscape.					
6	**View from Moor Road**	Local: Indirect impact The Scheme on embankment crosses the view in the middle distance gradually rising to cross the River Banwell and Riverside Road. Southerly views would be severed losing the distant views of Banwell and disrupting the rural setting of the village.	Major	Large / Very Large adverse	Planted mitigation in the form of woodland and woodland edge blocks would break up the overall form of the embankment. With planting establishing around the FCA and attenuation basins to the north of the Scheme creating a more established landscape setting. Introduction of locally prevalent tree species (Black poplar and Willow) including a proportion managed in characteristic pollard form reinforces landscape character. However, the changes to the visual setting are a permanent and significant change	Minor / Moderate	Moderate adverse
7	**View from Riverside (North)**	Local: Direct and indirect impacts The Scheme would consist of a major bridge structure crossing the road in direct line of sight and at an elevated level in stark contrast with the existing landform and scale. The clear span of the bridge would enable some retention of distant views connecting to Banwell these would be sharply contained by the structure and Scheme embankments forming a significant large scale feature	Moderate	Moderate adverse	Planted mitigation would establish to soften the embankment and provide a good degree of landscape integration. However, the effect of the bridge would not be significantly reduced over time as mitigation would be limited to reinforcing the landscape pattern and structure. Wider winter views would be permanently altered with the Scheme creating a barrier to southerly views in the adjacent field systems	Minor / Moderate	Moderate adverse

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
8	**View from Nye Drove PRoW Bridleway AX3/59/10**	Local: Indirect and distant Intervening vegetation would provide an immediate and good degree of screening making the overall visual impacts only slight.	Minor	Slight / Moderate adverse	Planted mitigation would establish to minimise visual impacts over the medium to long term. Existing intervening vegetation together with mitigation planting along the Scheme embankments would screen passing traffic and provide good landscape integration into the surrounding landscape framework	No change	Neutral
9a	**Riverside junction with PRoW Bridleway AX3/24/10 (Looking north)**	Local: Indirect and distant. Main visual impacts would be confined to directed views through intervening built form and vegetation of the construction. Intervening vegetation would provide an immediate and good degree of screening making the overall visual impacts only slight.	Negligible	Slight adverse	Visual impacts would be greatly moderated by design year 15 with mitigation planting establishing and no direct views towards the Scheme.	No change	Neutral
9b	**Riverside junction with PRoW Bridleway AX3/24/10 (Looking south)**	Local: Indirect and distant. The Scheme would not be visible from this point and only indirect, oblique views framed by existing vegetation and built form would be available of the Southern Link road.	No Change / Negligible	Neutral / Slight adverse	Mitigation planting on the lower slopes of Banwell Woods would establish providing an enhanced landscape setting against the wooded slopes and screening traffic movements.	No change	Neutral

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
10	**View from junction of PRoW footpath AX3/9/10 and Eastermead Lane**	Local: Direct and at close proximity. Completion of construction would reduce short term impacts. However, reinstatement of site working compounds would be an ongoing if temporary impact. Passing traffic using the new Scheme would be visible running above existing field boundaries, albeit in the middle distance of the view	Major	Very Large / Moderate adverse	Mitigation planting along the embankments and planting in the severed field parcels on both sides of the Scheme would mitigate traffic movements and provide a good degree of landscape integration further reinforcing local landscape character with the reintroduction of characteristic pollard tree forms and species and diversity of habitats and vegetation structure.	Negligible	Slight adverse
11	**View from A368 East Street (Looking southwest)**	Local: Direct and at close proximity. The introduction of a new road junction and the Southern Link spar is a direct and permanent change to the local landscape character. Existing properties along East Street would have some slight beneficial impacts as the traffic is moved further to the south away from the front of the properties. However, the scale and setting of the road would be more urbanised given the requirement for the new road, junction and noise	Major	Very large / Large to Slight /Moderate adverse	Mitigation planting on detrunked extents of the former road and alongside the Southern Link road would provide an enhanced setting and gateway to Banwell. However, the creation of a new infrastructure element into an otherwise green settlement edge setting is a permanent change to the landscape character.	Minor / Moderate	Moderate adverse

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
		mitigation fencing along the Southern Link					
12	**View from PRoW Footpath AX3/47/10 off Wint Hill**	Re-establishment of roadside boundaries and reinstatement of verges and works areas would restore much of the character and landscape structure for the area, rapidly moderating any construction stage impacts	Minor	Slight / Moderate to Neutral / Slight adverse	Mitigation would replicating the current situation in medium to long term.	No change	Neutral
13	**View from PRoW Restricted Byway AX3/23/10**	No discernible impact	No Change	Neutral	Given the distance, direction and focus of view there would be no change from the existing situation.	No change	Neutral
14	**View from junction of PRoW footpaths AX3/18/10, AX3/19/10, AX3/47/10 and AX3/47/20 on Banwell Hill**	On opening of the Scheme distant views of passing traffic along the Scheme would be evident to the east. These oblique views of the Scheme's eastern extents would form a minor element in the wider panoramic view.	Negligible	Slight adverse	Mitigation planting would establish to reinforce landscape structure. However, the Scheme is at such a distance from the observer that there would be no discernible impact from this viewpoint	No change	Neutral

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
15	**View from Road/Byway AX3/23/30 used as PRoW south of Towerhead**	No discernible impact	Negligible	Slight adverse	Given the distance, direction and focus of view there would be no change from the existing situation.	No change	Neutral
16	**View from the Strawberry Line NCR 26 PRoW AX29/41/20, between Winscombe and Sandford**	No discernible impact	No Change	Neutral	Given the distance, direction and focus of view there would be no change from the existing situation.	No change	Neutral
17	**View from junction of PRoW on Sandford Hill**	No discernible impact	No Change	Neutral	Given the distance, direction and focus of view there would be no change from the existing situation.	No change	Neutral
18	**View from Hillfort on**	No discernible impact	No Change	Neutral	Mitigation planting would establish to reinforce landscape structure. However, the Scheme is at such a distance from	No change	Neutral

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	Significance (prior to mitigation)		Magnitude (following mitigation)	Significance (following mitigation)
	Dolebury Warren (Mendip Hills AONB3)				the observer that there would be no discernible impact from this viewpoint		
19	**View from the lower slopes of Dolebury Warren (Mendip Hills AONB3)**	No discernible impact	No Change	Neutral	Mitigation planting would establish to reinforce landscape structure. However, the Scheme is at such a distance from the observer that there would be no discernible impact from this viewpoint	No change	Neutral
20	**View from junction of Towerhead Road & Catworthy Lane**	No discernible impact	No Change	Neutral	No discernible impact from this viewpoint.	No change	Neutral
21	**View from Field gate off Summer Lane near to Laurel**	Views from this location are at a distance with existing field boundary vegetation providing some immediate	Minor	Slight / Moderate adverse	Planted mitigation would establish and reinforce the landscape structure, providing a good landscape setting for the Scheme and screening for distant views moderating any visual impacts.	No change	Neutral

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
	Farm	filtering of views. However, the views of passing traffic would be visible over intervening hedgerow especially during winter months.					
22	**View from Entrance to Court Farm Country Park off Wolvershill Road**	The main visual impacts would be in the form of changes to roadside boundaries, realignment of the highway geometry and introduction of signalised access onto the new Scheme. These would not be of a significant scale but would contribute to an overall change to the rural minor road character of Wolvershill Road	Minor	Slight / Moderate adverse	Reinstatement of roadside hedgerows and the establishment mitigation planting over the medium to long term ensure that the Scheme would become less apparent to a stage that would replicate the existing situation.	Negligible	Slight adverse

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
23	**View from Taylor's Field Housing development, off Wolvershill Road**	On completion of construction minimal impacts would be evident at this point with existing vegetation obscuring views over the adjacent hedges. No discernible impact	No Change	Neutral	No discernible impact from this viewpoint.	No change	Neutral
24	**View from West Mendip Way at Wavering Down (Mendip Hills AONB3)**	No discernible impact	No Change	Neutral	Mitigation planting would re-establish landscape structure. However, the Scheme is at such a distance from the observer that there would be no discernible impact from this viewpoint	No change	Neutral
25	**View from Proposed Housing development, Land to the West of Wolvershill Road**	Views from this location are at a distance with existing field boundary vegetation providing some immediate filtering of views. Any visual impacts would only be felt by the properties at the western end of the proposed development.	Minor	Slight/ Moderate adverse	The establishment mitigation planting over the medium to long term ensure that the Scheme would become less apparent to a stage that would replicate the existing situation.	Negligible	Slight adverse

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
Wider Mitigation and Enhancements							
Shared use path provisions							
a)	**Banwell to Sandford**	A 3m linear feature in the wider landscape constructed utilising the existing Eastermead Lane for the first part and then as a new construction following the Towerhead Brook. Construction impacts would be confined to a narrow corridor following existing landscape features and be of a small overall scale. Views of construction would be filtered by intervening field boundary vegetation and at distance from adjacent properties and roads. On completion of construction minimal impacts would be evident from adjacent areas. These would not be of a significant scale but would contribute to a minor change to the rural character of the wider field system.	Minor	Neutral/ Slight adverse	Mitigation planting comprising a boundary hedgerow on the south side of the route across the open fields would provide screening and an improved landscape setting for the shared use path.	Minor	Neutral/ Slight beneficial
b)	**Access to**	Construction impacts would be limited and short terms to provide local scale upgrades	Minor	Neutral/ Slight adverse	Minor upgrades to an existing PRoW. Visual impacts would rapidly moderate to a situation closely matching pre-	Minor	Neutral/ Slight beneficial

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
	Churchill Academy (West)	and improvements to the existing PRoW (AX14/36/30). The upgraded path would create a more formal element within the agricultural field system with associated fencing and gated access to segregate users and livestock. These would not be of a significant scale but would contribute to a minor change to the rural character of the wider field system.			construction but would provide local improvements for PRoW users.		
c)	**Access to Churchill Academy (East)**	Construction impacts would be limited and short terms to provide local scale upgrades and improvements to the existing PRoW (AX14/21/20). The upgraded path would create a formal element within the existing field system and then follow an existing access through the Nursery. Construction would result in some vegetation/hedgerow loss to provide the widened path and connections from the A368 and Church Green. On completion of construction minimal impacts would be evident from adjacent areas with	Moderate	Slight adverse	Mitigation planting comprising a boundary hedgerow on the west side of the route across the open fields would provide an improved landscape setting for the shared use path.	Minor	Neutral/ Slight beneficial

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
		existing vegetation containing views from the east. Boundary fencing on the westerly side would introduce a further urbanised element into the field structure.					
Footway improvements and crossings							
a)	**9no.Improved crossing provisions**	Some disruption at construction phase to provide the improved crossings. Construction would be contained within the existing road corridor and would be of a scale to have minimal impact on the adjacent townscape. Visual impacts would rapidly decrease on completion.	Minor	Neutral/ Slight adverse	Due to their local scale and containment within the existing road corridor, the works would have limited impact in terms of visual or landscape effect. Provision of the new footways/ crossings would provide a beneficial enhancement for non-vehicular users, creating a safer environment.	Negligible	Neutral/ Slight adverse
b)	**A368 Station Road, Sandford**	Some disruption at construction phase to provide the improved crossings and shared use path to the north of the crossing. Construction would be contained within the existing road corridor and would be of a scale to have minimal impact on the adjacent townscape.	Negligible	Neutral/ Slight adverse	Due to their local scale and containment within the existing road corridor, the works would have limited impact in terms of visual or landscape effect. Visual impacts would rapidly decrease on completion.	No Change	Neutral
c)	**A368 Station**	Some disruption at construction phase to provide the new footway to	Minor	Neutral/ Slight adverse	Due to their local scale and containment within the existing road corridor, the works would have limited impact in	No Change	Neutral

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
	Road, Sandford, West of Orchard Drive	the north of the A368 with loss of a length of existing verge and short stretch of hedgerow on the boundary of the Railway Inn. Construction would be contained within the existing road corridor and would be of a scale to have minimal impact on the adjacent townscape.			terms of visual or landscape effect. Visual impacts would rapidly decrease on completion.		
d)	**Church Lane, Churchill**	Works along Church Lane would generate some temporary disruption but would be contained within the existing road corridor They are not anticipated to have any physical or visual impact on the setting of Churchill Conservation Area.	Minor	Neutral/ Slight adverse	Small scale improvements to Church Lane would be contained within the existing road corridor and are not considered to be greater than a neutral visual impact. Visual impacts would rapidly decrease on completion.	No Change	Neutral
e)	**A368 Dinghurst Road, Churchill**	Some disruption at construction phase to provide the extended footway. Construction would result in the loss of a roadside verge and resulting minor increase in urbanisation of the road corridor. However, impacts would rapidly decrease on completion	Minor	Neutral/ Slight adverse	Due to their local scale and containment within the existing road corridor, the works would have limited impact in terms of visual or landscape effect. Retention of the roadside hedgerow would provide visual containment of the footway. Provision of the new footway would provide a beneficial enhancement for non-vehicular users, creating a safer environment.	Negligible	Neutral/ Slight adverse
f)	**Church Road,**	Small scale improvements resulting from closure of an existing junction spur. No	No change	Neutral	Placement of planters to prevent vehicular access would provide	No change	Neutral

Receptor		Description of effect (Including size/scale and extent)	Year 1		Mitigation	Year 15	
			Magnitude (prior to mitigation)	**Significance** (prior to mitigation)		**Magnitude** (following mitigation)	**Significance** (following mitigation)
	Winscombe	discernible construction impacts.			additional greening opportunity for the townscape.		
Junction Improvements							
a)	**A368/A38 Churchill Junction**	Construction phase impacts would result in some disruption of traffic flows and visual impacts generated by normal construction activity. Additionally, some roadside vegetation would be lost to accommodate widened shared use path for he A371. This would rapidly decrease on completion to return to a situation closely matching pre-construction.	Minor	Neutral/ Slight adverse	Due to their local scale and containment within the existing road corridor, these are considered to be of limited impact in terms of visual or landscape effect. They would contribute to some local improvements in townscape setting by reducing traffic speeds and reinstating verges or footways and would provide a beneficial enhancement for non-vehicular users, creating a safer environment.	No change	Neutral
b)	**A371 Banwell Road west of M5**						

7.10 Monitoring

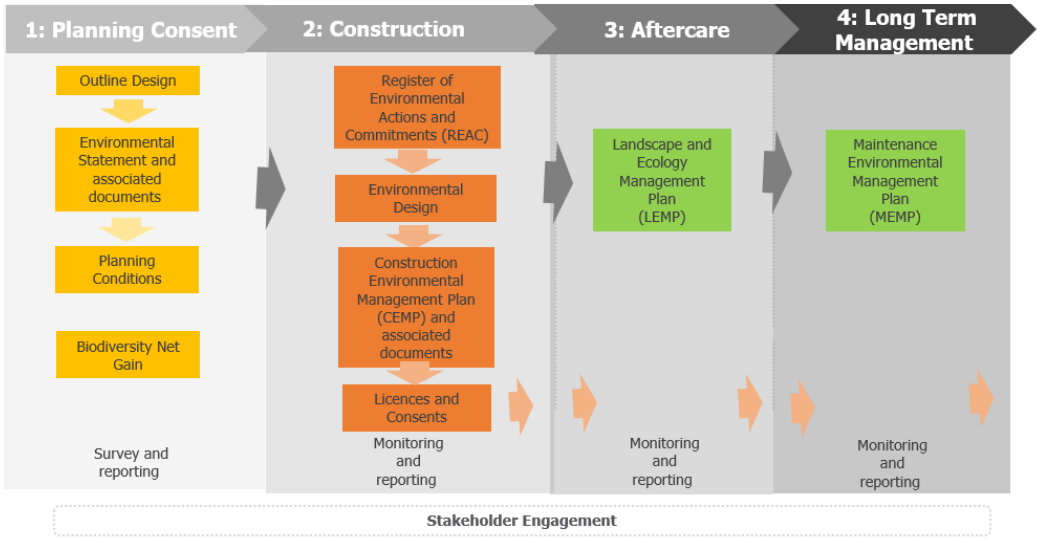

Image 7 - 1 Overview of monitoring and reporting process

7.10.1 Landscape management and monitoring requirements are detailed within ES Volume 1 - Chapter 16 - Environmental Management. In summary specific landscape management and monitoring would be detailed as part of the contract documents for the Scheme initially detailed in the Model Contract Document for Highway Works (MCDHW) Series 3000 specification and accompanying appendices covering construction stage. An outline Landscape and Ecology Management Plan (LEMP) is included as part of the ES Volume 3 - Appendix 16.C - Pre-Construction Landscape and Ecological Management Plan. This would be formulated in more detail as part of the detail design stage to cover the post construction 5 year aftercare period.

7.10.2 The LEMP together with the Register of Environmental Actions and Commitments (REAC) (ES Volume 3 - Appendix 16.B - Register of Environmental Actions and Commitments) and Construction Environmental Management Plan (CEMP) (ES Volume 3 - Appendix 16.A - Outline CEMP) would then form the basis for the Maintenance Environmental Management Plan (MEMP) which would cover the long-term maintenance, management and monitoring commitments for the 25 year post aftercare period.

7.11 Summary and Conclusions

7.11.1 The landscape of the area around Banwell is generally an attractive one, characterised by its rural nature, distinctive landscape framework and proximity to the Mendip Hills AONB

7.11.2 None of the landscape character areas defined are of less than Medium Quality or Sensitivity with the AONB representing a landscape of national significance.

7.11.3 It is those landscape character areas which would have direct physical effects resulting from the Scheme where long-lasting significant impacts would occur. These would result from the introduction of engineered forms into a rural landscape context and the associated changes in landform.

7.11.4 The impact on views within the study area would be quite variable, influenced by a range of factors. However, there would be residual effects on a number of representative views, particularly those that would be in close proximity to elevated bridge structure and those where the affected view is of a previously unspoilt rural scene.

7.11.5 The Visual Effects Schedules (VES) ES Volume 3 Appendix 7.C - Visual Affects Schedule and Visual Effects Drawing (VED) in ES Volume 2 - Figures 7.7, illustrate that the Scheme would have a relatively short distance zone of influence i.e. within 1km of the Scheme. The most significantly affected properties being those closest to the proposed route or where local topography and vegetation cover would provide more open, direct, views to the Scheme. In general, the proposed mitigation measures would reduce the visual impact over time, although the assessment illustrates that this would be less effective where visible structures would be provided, such as at Riverside Bridge or where the Banwell roundabout and other junctions and infrastructure would be introduced.

7.11.6 As shown in Table 7.12.1 the visual impacts decrease from 50 properties with a Substantial adverse impact at construction stage to 3 by Year 15 with established mitigation. Those three properties would have close distance views or would be directly impacted by the Scheme.

7.11.7 Moderate adverse impacts show a slight decrease over the

course of the project but remain relatively stable throughout the Construction and 15 year design period. This reflects the distinction that the Scheme creates a new infrastructure development within a rural pastoral landscape with little, large scale, or extensive development.

Table 7 - 19 Visual Effects Schedule Summary

Visual Impact	Construction	Year 1 (Opening)	Year 15 (Summer)
Moderate beneficial	0	0	1
Slight beneficial	1	7	7
No Change	72	88	104
Negligible	2	22	25
Slight	42	36	36
Moderate	32	24	23
Substantial	50	22	3

7.11.8 The proposed mitigation measures would enhance the integration of the Scheme into the landscape through manipulation of the landform and the provision of extensive planting. However significant changes in the landscape and its appearance would be unavoidable and therefore in many cases the mitigation would achieve a reduction in adverse effects rather than their removal.

7.11.9 The Scheme would result in adverse effects on both the landscape and visual amenity, although the scale and significance of these changes would be reduced through the proposed mitigation measures.

7.11.10 The NPPF together with relevant NSC policies identified at Section 7.3.1 identify key concerns in terms of meeting the challenges of climate change and flood risk and resilience as well

as promoting good design and creating sustainable places for all.

7.11.11 The mitigation and adoption of adjacent severed land parcels on both sides of the Scheme would enable the development of an extended and well considered design approach for both landscape and biodiversity mitigation. Resilience in terms of species choice, habitat type and land management over significant areas of mitigation would enable a more diverse range of habitats to be established providing benefits in terms of landscape integration as well as providing a valuable green infrastructure resource for the local and wider community.

7.11.12 The Scheme is compliant with all relevant legislation and policy for Landscape. In conclusion the Scheme would not have an impact on the Policies and Plans identified in Section 7.3.1 and would fulfil their principles and requirements.

7.12 References

7.1.1 [1] Planning Policy and Research Development and Environment, North Somerset Council. (2017). *North Somerset Council Core Strategy.*

7.1.2 [2] Wardell Armstrong. (2018). *North Somerset Council Landscape Character Assessment.*

7.1.3 [3] Mendip Hills AONB. (2019). *Mendip Hills Area of Outstanding Natural Beauty (AONB) Management Plan 2019-2024.*

7.1.4 [4] North Somerset Council, Bath and North East Somerset Council and South Gloucestershire Council. (2014). Avon Historic Landscape Characterisation.