Reading Transport Strategy 2040

Integrated Impact Assessment

Volume 1 – Main Report

On behalf of **Reading Borough Council**

Reading Borough Council
Working better with you

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Registered Office: Buckingham Court Kingsmead Business Park, London Road, High Wycombe, Buckinghamshire, HP11 1JU
Office Address: The Stills, 1st Floor, 80 Turnmill Street, London, United Kingdom, EC1m 5QU
T: +44 (0) 2038 246600 E: London.uk@stantec.com

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	Name	Position	Signature	Date
Prepared by:	Shannon Smart Prudence Wales Kathleen Morrison	Assistant Environmental Planner Associate Health and Social Value Consultant Senior Health and Social Value Consultant	SS PW KM	June 2024
Reviewed by:	Simon Witney	Environmental Planner (Managing Director Witney Futures Group)	SW	June 2024
Approved by:	Elaine Richmond	Director: Environmental Consulting	ER	June 2024
For and on behalf of Stantec UK Limited				

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1 Introduction

1.1 Background

1.1.1 Stantec UK Ltd[1] (Stantec) has been commissioned by Reading Borough Council (RBC), to undertake an Integrated Impact Assessment (IIA) of the Reading Transport Strategy 2040, as the statutory Local Transport Plan (LTP4) for the Borough of Reading. This report documents the findings of the IIA carried out in respect of the Reading Transport Strategy 2040 (hereafter the RTS), with the IIA comprising three linked assessment areas:

- Strategic Environmental Assessment (SEA);
- Equalities Impact Assessment (EqIA); and,
- Health Impact Assessment (HIA).

1.1.2 This introductory section identifies the purpose, objectives and structure of this report. It then outlines core statutory requirements for undertaking an IIA including the above statutory assessments and provides a summary of the content and purpose of the RTS.

1.2 Report Purposes and Objectives

1.2.1 The purpose of this report is to set out the findings of a IIA of the RTS, which has been prepared by RBC. In doing so, this report responds to relevant statutory assessment requirements, considers the evolution of the RTS and presents an assessment of likely effects from the RTS.

1.2.2 As required by statutory SEA requirements, a Non-Technical Summary (NTS) of this IIA has been prepared to summarise the key findings from the SEA, EqIA and HIA work reported in full in this document.

1.2.3 The main objectives of this report are to:

- Fulfil statutory reporting requirements;
- Demonstrate how this IIA has informed and improved the RTS;
- Assess the potential for any significant environmental, equality and health effects likely to arise from the implementation of the RTS; and,
- Identify any further mitigation or enhancement measures which should be incorporated in the final version of the RTS (post consultation) to enhance its effectiveness in tackling key environmental, equalities and health issues.

1.3 Structure of this Report

1.3.1 This report is structured as follows:

- The remainder of this section identifies core statutory requirements for undertaking SEA, EqIA and HIA.
- **Section 2** - explains the background to the development of the RTS and provides a summary of its proposed content and purpose of the RTS.

[1] Formerly Peter Brett Associates LLP (PBA)

- **Section 3** - outlines key information and issues which have informed the IIA, and which should be taken account of in the RTS itself. The section is supported by detailed baseline analysis and a review of other relevant plans and programmes provided in Appendices A and B respectively. These appendices identify key baseline trends, legislative requirements and policy issues which both this IIA and the RTS itself should respond to.

- **Section 4** provides an overview of the IIA process undertaken to date, including setting out the IIA Framework which underpins this IIA process. This section is supported by Appendix C which provides a summary of responses received to the IIA Scoping Report and explains how these have been addressed in undertaking this IIA.

- **Section 5** explains how the IIA process has informed the RTS to date. This focuses on explaining how a suite of independent recommendations arising from the IIA have been incorporated into the RTS.

- **Section 6** - presents the key findings of the IIA of the RTS, with constituent subsections provided to summarise key results of the SEA, EqIA and HIA work undertaken (as reported in detail within Appendices E – G).

- **Section 7** – set out next steps in the IIA process and identifies proposed monitoring arrangements for the RTS.

1.4 Statutory Requirements

1.4.1 The RTS has been prepared by RBC as a statutory local transport authority pursuant to the Transport Act 2000. This legislation requires environmental and equalities issues to be taken account of in the preparation of the RTS. Additionally, the Environmental Assessment of Plans and Programmes Regulations 2004 (hereafter the SEA Regulations) and the Equality Act 2010 set out specific requirements to identify and address likely significant environmental and equalities impacts of plans throughout its development. The implications of these statutory requirements are considered further below.

Local Transport Plans

1.4.2 Part 2 of the Transport Act 2000 (as amended) sets out a statutory requirement for local transport authorities (including RBC) to develop and implement a Local Transport Plan (LTP) for their area, and to keep their LTP under review. The RTS is being developed in part to fulfil this requirement for RBC (acting as a local transport authority).

1.4.3 In producing, implementing and reviewing LTPs, Section 108 of the Act requires local transport authorities to take account of UK Government policies and guidance regarding climate change mitigation and adaptation and more generally relating to "*the protection or improvement of the environment*".

1.4.4 Section 112 of the Act further requires local transport authorities to have regard to the transport needs of disabled persons, the elderly and those with mobility problems when developing and implementing LTPs. The SEA and EqIA processes needed to accord with other relevant legislation (see below) should provide the evidence required to demonstrate compliance with these statutory duties.

Strategic Environmental Assessment

1.4.5 The SEA Regulations require Responsible Authorities, including local transport authorities, to assess the likely significant effects on the environment of implementing relevant plans and programmes, as defined within the SEA regulations. This assessment must also examine the likely significant effects of implementing reasonable alternatives to the plan under consideration (i.e. the RTS). The assessment has been carried out by following a staged process of reporting

known as Strategic Environmental Assessment (SEA) which in the case of the RTS has been incorporated into a wider IIA process.

1.4.6 The RTS is considered to fall within the scope of Regulation 5(2) of the SEA Regulations as requiring a SEA to be carried out. It is a 'relevant' and 'qualifying' plan for SEA purposes as it is required in response to administrative and legislative provisions, is being prepared for transport purposes and will to set the framework for the future consent and delivery of policies and projects. In particular the RTS will play a key role in implementing the spatial strategy and other components of the adopted Reading Local Plan (2019) as well as the delivery of future transport infrastructure schemes (as specified in the RTS). As a relevant and qualifying plan there is no option to exempt the RTS from SEA requirements, meaning that a full SEA has been carried out as part of the IIA process. To date, this has involved:

- **Scoping** (Regulation 12(5): Responsible Authorities must provide the SEA Consultation Bodies with sufficient information to enable them to consider the proposed scope, level of detail and consultation period for an 'Environmental Report' (ER) to accompany the emerging plan or programme (this IIA Report incorporates the requirements of an ER for the purposes of the SEA Regulations). This scoping stage requirement was fulfilled through the submission by RBC of an IIA Scoping Report to the SEA Consultation Bodies (and key RBC officers covering Public Health, Sustainability, Air Quality and Corporate Policy) in November 2018 for a five-week consultation period; and,

- **Assessment Preparation and Consultation** (Regulation 12): Responsible Authorities must prepare an ER to "*identify, describe and evaluate the likely significant effects on the environment of implementing*" the emerging plan and any identified reasonable alternatives. The SEA Regulations require the report to be consulted on in tandem with the plan for the period agreed with the SEA Consultation Authorities through SEA Scoping. As noted above, this IIA Report fulfils the requirements of an ER for the purposes of the SEA Regulations.

1.4.7 Following the consultation on the RTS and this IIA Report, RBC has taken account of all comments received and has prepared the finalised RTS for formal adoption. In parallel, and in accordance with the Sustainability Appraisal/SEA Regulations, RBC must also prepare a separate SEA Statement setting out, amongst other matters, how environmental considerations have been taken into account in the adopted RTS, and how likely significant effects on the environment will be monitored. As the SEA has been undertaken as part of a wider IIA, these post-adoption requirements will be fulfilled through the publication of an IIA Adoption Statement relating to not only environmental but also equalities and health considerations.

Health Impact Assessment

1.4.8 Whilst there are no statutory requirements to undertake a health impact assessment of emerging plans or programmes, the SEA Regulations do require any likely significant effects on human health to be assessed as part of a wider environmental assessment. Any identified likely significant adverse effects on the environment, including in respect of human health, should also be addressed through the implementation of suitable mitigation where appropriate. The assessment of likely health effects is also of direct relevance to the 'public sector equality duty' (PSED), as socio-economic inequalities are recognised to be a key determinant of health.

1.4.9 This IIA therefore incorporates a health impact assessment (HIA), provided in **Appendix G**, in order to demonstrate compliance with SEA and EqIA requirements relating to the assessment of likely health effects from the RTS.

Equalities Impact Assessment

1.4.10 Statutory requirements to avoid discrimination and to assess the likely equalities impacts of emerging policies, programmes and projects are set out in the Equality Act 2010. This legislation was enacted by the UK Parliament to consolidate previous anti-discrimination and to implement

the four major European Union (EU) Equal Treatment Directives[2]. Section 149 of the Act sets out a 'public sector equality duty' (PSED) which requires public authorities, in exercising their functions, to "*have due regard to the need to:*

a. *Eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act;*

b. *Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;*

c. *Foster good relations between persons who share a relevant protected characteristic and persons who do not share it."*

1.4.11 The protected characteristics referenced within this duty are specified within Section 4 of the Act, namely:

- Age;
- Disability;
- Gender reassignment;
- Marriage and civil partnership;
- Pregnancy and maternity;
- Race;
- Religion or belief;
- Sex; and,
- Sexual orientation.

1.4.12 Insofar as transport affects access to services, amenities, economic opportunities and social activities, the implementation of the RTS is likely to result in different impacts on upon different demographic groups and persons with protected characteristics. It may also impact on other policies, organisations or work which could affect equality. The public sector equality duty under Section 149 of the Equality Act 2010 is therefore applicable to the development and implementation of the RTS.

1.4.13 The IIA in respect of the RTS incorporates an EqIA in order to demonstrate compliance with the PSED and related equalities duties within the Transport Act 2000 (see above).

[2] EU Directives 2000/78/EC, 2000/43/EC, 2006/54/EC (all enacted) and proposed Directive COM/2008/0426 final - CNS 2008/0140

2 The Reading Transport Strategy 2040 (RTS)

2.1 Introduction

2.1.1 This section explains the background to the development of the RTS and provides a summary of its proposed content and purpose.

2.2 Background

2.2.1 The previous Reading Local Transport Plan 3 (LTP3) was published in 2011 to set out RBC's transportation policies and proposals at that time and covering the period to 2026, in accordance with the Transport Act 2000 as amended. LTP3 was prepared to align with the then statutory Development Plan for Reading, which comprised the Reading Core Strategy (2008), and it was supported by a suite of Local Action Plans dating back to 2006. In accordance with statutory requirements the LTP3 was accompanied by impact assessments including a SEA and HIA, which were both undertaken by PBA (now Stantec).

2.2.2 Owing to changes since 2011 in transport needs (increased travel demands), problems (rising concerns regarding congestion and air quality), investment priorities and the policy context, as well as the need to accommodate substantial projected population and economic growth, RBC has determined it necessary to review the LTP3 and to prepare a new LTP[3]. The original rationale for the preparation of a new LTP, which now takes the form of the RTS, was outlined within the New Local Transport Plan and Borough-Wide Car Parking & Air Quality Strategy – Report to Policy Committee presented to RBC in July 2018[4]. Since then, the rationale for preparing the RTS has evolved to include:

- The need to support the implementation of the adopted Reading Local Plan (2019), which covers the period to 2036[5]. The RTS is needed to provide updated transport policies and outline new proposals (e.g., infrastructure schemes) to support the delivery of the new spatial strategy and growth targets set by the Local Plan. The RTS and Local Plan therefore need to be closely aligned;

- The need to support the delivery of the longer-term Reading 2050 Vision; and,

- The need to intensify action to decarbonise the transport sector, in the context of the UK having adopted an updated target to achieve net zero carbon emissions by 2050 and RBC having declared a climate emergency.

2.2.3 It is therefore clear that, pursuant to the Transport Act 2000, the LTP3 needs to be replaced by a new LTP for the RBC area. The RTS is thus required and there is no reasonable alternative to its preparation. However, each substantive component of the RTS itself needs to be justified and this IIA report provides evidence in support of this.

2.3 Preparation of the RTS

2.3.1 RBC commenced the development of a new LTP (now the RTS) in Summer 2018 and have since completed the following activities:

[3] The rationale for the preparation of the emerging Reading LTP4 is detailed within New Local Transport Plan and Borough-Wide Car Parking & Air Quality Strategy – Report to Policy Committee, Reading Borough Council (July 2018): http://www.reading.gov.uk/media/9102/Item-12/pdf/item12.pdf

[4] http://www.reading.gov.uk/media/9102/Item-12/pdf/item12.pdf

[5] The Reading Local Plan replaces three previous development plan documents, Reading Core Strategy (2008), Reading Central Area Action Plan (2009) and Reading Sites and Detailed Policies Document (2012, amended 2015), which no longer have status.

- Authorisation to prepare a new LTP (now RTS) by RBC: July 2018;
- IIA Scoping: November – December 2018;
- Visioning consultation on the RTS covering transport priorities and direction of the new strategy for Reading: October – July 2019;
- RTS and IIA: August 2019 – March 2020, including:
- Review of previous consultation responses;
- Initial RTS drafting;
- Critical friend support (provided by Stantec);
- Independent IIA review of initial RTS;
- Consultation with RBC internal departments and committees; and,
- Final preparation of RTS and accompanying IIA Report.

2.3.2 This demonstrates that the preparation of the RTS has been informed by relevant evidence gathering activities and that, in line with best practice, the IIA has been used as a plan making tool. Details of how the IIA has informed the RTS is included in Section 5.

2.4 Form of the RTS

2.4.1 As noted in the RTS, the next LTP for the RBC area (required pursuant to the Transport Act 2000) will comprise two elements:

- The RTS, which provides a strategic framework to address key transport issues and therefore acts as a long-term Strategy Plan; and,
- Implementation Plans – live delivery documents to implement the policies and proposals set out in the RTS.

2.4.2 The Implementation Plans, anticipated to be updated annually by RBC, will support the RTS rather than introducing new policies or proposals. These future plans therefore do not fall within the scope of this IIA and are not themselves likely to result in any new or different significant effects from those identified in this IIA of the RTS. In the event that future Implementation Plans do set out any substantive policies or proposals not already assessed within this IIA, RBC would need to consider the implications of this in relation to relevant statutory impact assessment requirements (i.e., the need to undertake a further SEA and/or EqIA as appropriate).

- The RTS which has been subject to IIA comprise the following substantive components: Executive summary – provides a succinct review of the vision & objectives, context, challenges and opportunities, policies, schemes and monitoring arrangements outlined in subsequent sections of the RTS;
- Introduction – overview of the purpose and approach to preparing the RTS, including the role to date of consultation, engagement and the IIA in informing the RTS;
- Visions and Objectives – setting out a holistic transport vision statement and supporting 5 objectives to underpin the RTS. These objectives are centred on the following themes, each of which is relevant to the IIA:
    - Creating a Clean and Green Reading

- Supporting Healthy Lifestyles
- Enabling Sustainable and Inclusive Growth
- Connecting People and Places
- Embracing Smart Solutions

- About Reading – characterising travel and the transport system in Reading, including with reference to key environmental, equalities and health issues. This section also presents case studies of recent successful transport interventions by RBC and partner organisations;
- Challenges and Opportunities – review of the key transport issues (and associated evidence) which need to be addressed through the RTS. These issues have been grouped into the following seven broad challenges, all of which are relevant to the IIA:
- Adapting to the future (including responding to the climate emergency);
  - Improving air quality
  - Reducing car congestion and the negative effects it causes
  - Providing affordable and accessible travel for all
  - Removing barriers to healthy lifestyles
  - Achieving good accessibility to local facilities and employment
  - Accommodating development and delivering the Local Plan
- Our Policies – sets out a suite of proposed transport policies to support the achievement of the RTS vision & objectives and to address the identified key challenges;
- Our Schemes and Initiatives – sets out a suite of proposed transport schemes (i.e., proposals and initiatives) to support the achievement of the RTS vision & objectives and to address the identified key challenges;
- Funding and Implementation – identification of potential funding mechanisms and timescales for the delivery of the identified schemes and initiatives;
- Partnerships and Stakeholders – outlines the importance of partnership working between RBC and other organisations to deliver the proposed schemes and initiatives and to implement the RTS more widely; and,
- Monitoring and Review – sets out a series of key performance indicators and timescales to monitor and review the RTS.

2.4.3 In accordance with statutory requirements, all substantive components of the RTS have been subject to an IIA incorporating SEA, EqIA and HIA as detailed in this report.

3 Baseline and Policy Context

3.1 Introduction

3.1.1 This section summarises relevant baseline environmental, equality and health characteristics (including environmental challenges and protection objectives), considers the likely evolution of the baseline in the absence of the RTS and notes the relationship between the RTS and other relevant plans and programmes.

3.2 Key Baseline Issues

3.2.1 **Appendix A** presents a review of baseline trends and issues relating to environmental, equalities and health conditions in Reading which have informed both the development of the RTS and the IIA Framework which has been used to underpin the IIA of the RTS. This is supported by a suite of high-level environmental constraints plans provided in **Appendix D**.

3.2.2 With reference to the environmental topics prescribed within Schedule 2 of the SEA Regulations, a summary of the key issues identified in **Appendix A** which need to be addressed within the preparation of the RTS and taken account of in the associated IIA is provided in **Table 3.1** below. This includes multiple issues listed under the 'population', 'human health' and 'material assets' topics which are directly relevant to the HIA and EqIA components of this IIA as well as the SEA. The table of key baseline issues was first presented in the IIA Scoping Report (November 2018) and has since been updated to take account of comments received from the SEA Consultation Authorities (see **Appendix C** for details).

Table 3.1: Key Issues Relevant to the IIA of the RTS

SEA Topic	Key Issues
Biodiversity, Flora & Fauna	The need to conserve and enhance biodiversity interests including sites designated for their ecological importance The need to maintain, restore and expand valued habitats and to safeguard protected species. The need to deliver biodiversity net gain. The need to protect and enhance green infrastructure assets.
Population (including issues of relevance to the EqIA and HIA aspects of this IIA)	The need to support the implementation of the adopted Reading Local Plan (2019), other adopted and emerging statutory Development Plans in neighbouring panning authorities, and relevant national policies. The need to develop an integrated and efficient transport system which meets identified needs and supports projected population growth whilst effectively managing travel demand. The need to unlock key employment sites, support the growth of key economic sectors and facilitate economic growth in Reading. The need to tackle deprivation and severance and to improve access to key amenities, facilities and economic opportunities for all demographic groups and communities. The need to improve access to the transport system for all, including tackling physical barriers and improving affordability, in order to address wider societal inequalities of opportunity and outcome.
Health (including issues of relevance to the EqIA and HIA aspects of this IIA)	The need to use the transport system as a critical enabler of good health and wellbeing through improving access to healthcare and providing opportunities to enhance physical and mental health through active travel. The need to protect the health and wellbeing of resident and workplace populations. The need to promote healthy and active lifestyles and to reduce obesity levels. The need to protect and enhance access to high quality open space provision. The need to protect and enhance access for all to healthcare and leisure facilities.
Soil	The need to prioritise the redevelopment of previously developed (brownfield) land The need to protect sites designated for their geological interest. The need to safeguard soil resources.

SEA Topic	Key Issues
Water	The need to protect and enhance the quality of water sources and the water environment The need to locate new development including transport infrastructure away from areas of flood risk, taking into account the effects of climate change.
Air Quality & Climatic Factors (including issues of relevance to the EqIA and HIA aspects of this IIA)	The need to tackle poor air quality, particularly within the existing Reading Air Quality Management Area (AQMA), and to improve air quality for the benefit of human health and the environment. The need to mitigate climate change including through promoting sustainable land use patterns and the decarbonisation of the transport sector. The need to ensure that new development, including transport infrastructure and facilities, is resilient to adverse weather and adaptable to the effects of climate change.
Material Assets (including issues of relevance to the EqIA and HIA aspects of this IIA)	The need to promote the efficient use of natural resources, including moving towards a low carbon and circular economy. The need to make the best and most efficient use of existing infrastructure and available land. The need to maintain and enhance the security and safety of transport infrastructure.
Cultural Heritage	The need to protect and enhance the significance, special interest and character of cultural heritage assets and their settings.
Landscape	The need to conserve and enhance landscape character and to protect visual amenity.

3.2.3 The key issues listed in **Table 3.1** and summarised in **Appendix A** are evidenced within the 'About Reading' and 'Key Challenges and Opportunities' sections of the RTS itself. In overall terms, this helps the direction of travel for the RTS responds to key issues as identified through the IIA process. However, it is still necessary to examine each substantive component of the RTS individually and in combination to determine their likely significant environmental, equalities and health effects.

3.3 Baseline Evolution

3.3.1 In accordance with the SEA Regulations, **Appendix A** also considers the likely evolution of baseline conditions in the absence of the preparation of a new RTS. This analysis is summarised in **Table 3.2** below. As the Transport Act 2000 requires RBC to have a LTP in place, this essentially considers the possibility of LTP4 remaining in place until its expiry in 2026 rather than being replaced now. There is no alternative scenario whereby there would be no new LTP prepared beyond 2026: such a scenario is not reasonable as it would fall short of meeting current statutory requirements.

Table 3.2: Evolution of the Baseline Scenario in the Absence of the RTS

SEA Topic(s)	Possible Changes without a new LTP (the RTS)
Biodiversity, Flora & Fauna	Without a new LTP and if demand for road transport in Reading increases as projected, there would likely be a requirement for new and significant transport infrastructure above planned levels to cope with this demand. Construction of such infrastructure could put pressure on biodiversity, including the loss and fragmentation of habitats, while increases in traffic and noise could disturb sensitive species.
Population	Without a new LTP, RBC would struggle to implement the new spatial strategy and planned growth set out in the adopted Reading Local Plan (2019), as the previous LTP3 responds to a different planning context and now superseded spatial strategy. Furthermore, if the resident and workplace population of Reading continues to increase in line with projections, demand for transport will outstrip supply, leading to overcrowding of transport facilities. If new schemes to increase sustainable and active travel modal shares (as outlined in the RTS) are not developed and implemented, it is likely that most of the demand for transport will be for road transport, leading to increased congestion and pollution.
Health	Without a new LTP it is likely that demand for, and use of, road transport of transport would increase, whilst opportunities to encourage transport modal shift to walking, cycling and public transport will be lost. Additionally, if a significant switch to healthy and active modes of transport, such as walking and cycling, is not achieved, various health issues, such as obesity, inactivity and poor air quality, will continue to affect the population, causing increases in ill-health and potentially a reduction in life expectancy. Developmental pressures for new transport infrastructure beyond planned levels to cope with the increased demand for road traffic could lead to the loss of areas of open space, reducing opportunities for physical activity.
Soil	Without a new LTP and if demand for road transport in Reading increases as projected, it may be necessary to construct further large-scale transport facilities, such as new roads and bridges, to cope with demand. Construction and use of such facilities could lead to land contamination and soil erosion.

SEA Topic(s)	Possible Changes without a new LTP (the RTS)
Water	Without a new LTP and if demand for road transport in Reading increases as projected, it may be necessary to construct further large-scale transport facilities, such as new roads and bridges, to cope with transport demand. This could contribute to the pollution of the local water environment and to increased flood risk.
Air Quality & Climatic Factors	Without a new LTP it is likely that demand for, and use of, road transport would increase unchecked as physical development occurs across Reading, whilst opportunities to encourage transport modal shift to walking, cycling and public transport will be lost. In the absence of a shift towards the use of electric vehicles and/or reducing vehicle travel, the resulting increase in traffic would increase fossil fuel combustion, carbon emissions and local atmospheric pollution, in particular greater release of particulate matter. This would act against wider policy efforts to decarbonise key economic sectors including transport mitigate climate change. It could also lead to worsening air quality. As a result, Reading Borough Council could fail to meet statutory duties in relation to climate change mitigation and adaptation and could be required to designate further Air Quality Management Areas (AQMAs) to address areas of poor air quality. Continued breaches of European air quality limits could also trigger fines being imposed.
Material Assets	Without a new LTP it is likely that a range of sustainable transport facilities (including walking and cycling routes, cycle parking, public transport hubs) would not be delivered. This would jeopardise RBC's vision of creating an effective and integrated transport system which meets the needs of all those living in, working in and visiting Reading. Furthermore, it would hamper the growth strategies set out in the Local Plan and economic growth strategies for RBC and the wider area.
Cultural Heritage	Without a new LTP and if demand for road transport and parking increases as projected, this could put development pressure on areas of historic and/or archaeological interest and undermine the character or conservation areas.
Landscape	Without a new LTP and if demand for road transport in Reading increases as projected, this would necessitate the construction of new transport facilities beyond planned levels, which could have a significant negative impact on the landscape character of the RBC area, especially if additional new facilities are developed without the urban core.

3.4 Relationship of the RTS with Other Plans and Programmes

3.4.1 In accordance with the SEA Regulations, the following types of plans and programmes were examined for their relevance to the RTS and this IIA:

- International conventions and treaties;
- European Directives and associated legislation;
- Legislation enacted by the UK Parliament; and,
- Policy documents and strategies published at the national, regional and local levels, including by the UK Government and RBC.

3.4.2 The adopted Reading Local Plan (2019) is of particular importance as this sets out a new spatial strategy and policy framework which the RTS must align with and support the delivery of.

3.4.3 A detailed review of the other plans and programmes identified as relevant to the RTS is provided in **Appendix B**. From this review it is clear that the RTS should[6]:

Environmental

- Align with relevant existing and emerging policies and proposals within relevant national, regional and local plans and strategies. In particular, the RTS must support the delivery of the spatial strategy and development on allocated sites within the adopted Reading Local Plan;
- Avoidance of likely significant adverse effects from the implementation of the plan's policies and proposals on sites designated at international and national levels for reasons of biodiversity conservation or ecological importance;
- Minimise and appropriately mitigate likely adverse effects on sites designated at the local level for their ecological importance;
- Minimise the environmental impacts of transport provision and infrastructure, including in terms of reducing carbon and greenhouse gas emissions and using natural resources sustainably;
- Reduce congestion and improve air quality in Reading, including but not limited to implementing the existing Reading Air Quality Action Plan and improving areas with known poor air quality;

Equalities

- Underpin the development of a safe, secure, efficient, reliable and integrated transport system across the whole RBC area;
- Support improvements in journey times and connectivity to and from key destinations, without disadvantaging particular demographic groups or communities;
- Improve the accessibility of the transport system and of amenities, key services, economic opportunities and social activities for people with disabilities;

[6] The subheadings broadly reflect the relevance of identified key policy issues to the SEA, EqIA and HIA components of this IIA respectively, although it should be noted that many relevant policy requirements are cross-cutting and relate to the overall delivery of sustainable development.

- Encourage measures that reduce the need to travel and allow communities in different locations to flourish;
- Support the widespread uptake of active and sustainable modes of transport for all demographic groups and communities;
- Deliver transport which is accessible to all and does not contribute to social exclusion or disadvantage, whether through severance or unaffordability;
- Enable the efficient, effective and sustainable movement of people and freight to increase economic productivity, competitiveness and opportunities for all; and
- Secure economic growth and inward investment by supporting the delivery of new and upgraded transport infrastructure to increase connectivity and improve access to high quality employment and economic opportunities.

Health

- Minimise the amenity impacts of transport, including in terms of reducing noise and vibration and deterioration of noise quality;
- Prevent and avoid unacceptable health impacts from transport, in particular impacts on air quality;
- Support people to make healthy and active lifestyle choices; and,
- Seek to protect enhance the health and wellbeing of the resident and working population, including through facilitating access to healthcare, safeguarding physical health and providing opportunities to enhance mental health and social wellbeing.

3.4.4 As with the key baseline issues (**Table 3.1**), these key policy priorities need to be addressed within the RTS and taken account of in this IIA. This is required to effectively tackle identified transport challenges, support the implementation of other relevant plans and address key baseline issues. Consideration of these priorities also helps the RTS respond to applicable legislative and policy requirements.

4 The IIA Process

4.1 Introduction

4.1.1 This section provides an overview of the IIA process which has been undertaken to date for the RTS. In doing so the section explains the approach which has been adopted to undertake and report the findings of an IIA of the RTS.

4.2 IIA Purpose and Objectives

Overall Purpose

4.2.1 In accordance with relevant statutory requirements, the overall purpose of the IIA is to identify and address the likely significant environmental, equalities and health effects of implementing the emerging RTS.

SEA

4.2.2 In accordance with the SEA Regulations the purpose of SEA is to identify, assess and evaluate the likely significant environmental effects of a qualifying plan, programme or strategy. A key objective is to enhance the environmental and wider sustainability performance of an emerging plan. This is achieved through identifying any likely significant environmental effects from implementation of the plan as drafted, proposing mitigation measures to address any identified significant adverse effects, and identifying enhancement measures to improve the overall performance of the plan. As such, SEA is an integral part of good policy development and should not be viewed as a separate or retrospective activity.

EqIA and HIA

4.2.3 As detailed in **Section 1.5** a key role of the IIA is to assist RBC in demonstrating compliance with the PSED (as set out in the Equality Act 2010) and relevant equalities duties embedded within the Transport Act 2000.

4.2.4 To support the statutory SEA and EqIA processes, a high-level health impact assessment (HIA) has also been undertaken. The purpose of HIA is to consider how a plan, programme or proposal will affect the key factors which can influence people's health and wellbeing. The HIA approach is particularly concerned with the distribution of effects within a population, as different groups are likely to be affected in different ways, and therefore how health and social inequalities might be reduced or widened by particular proposals. Therefore, the cross-cutting nature of HIA with EqIA and SEA should be recognised and has been considered closely within this IIA.

4.3 Approach to IIA

IIA Project Team

4.3.1 The IIA of the RTS has been undertaken independently by Stantec on behalf of RBC. Stantec has also been involved with preparing the RTS through acting in a technical support and critical friend role to assist officers from RBC. However, the IIA has been undertaken by an independent, specialist team within Stantec in order to enable the IIA to be objective and to maximise its ability to positively inform the RTS. As detailed in **Section 5**, the IIA project team undertook an independent review of the initial draft RTS and identified a suite of recommendations to enhance the clarity and effectiveness of the plan, the majority of which have now been incorporated into the RTS.

Previous IIA Reporting – IIA Scoping

4.3.2 An IIA Scoping Report was prepared and consulted on. In accordance with the SEA Regulations, this was prepared by PBA (now Stantec) on behalf of RBC and submitted to the SEA Consultation Bodies in November 2018 for a five-week consultation period. Reflecting the inclusion of equalities and health issues within the IIA, the report was also consulted on internally with key RBC officers related to Public Health, Sustainability, Air Quality and Corporate Policy. Of note, the IIA Scoping Report referred to the preparation of a Local Transport Plan 4 (LTP4), now retitled as the Reading Transport Plan 2036 ('the RTS'), by RBC.

4.3.3 The purpose of the IIA Scoping Report was to provide relevant information to enable the SEA Consultation Bodies (and wider consultees) to form a view on both the proposed IIA consultation period and the scope/level of detail appropriate for inclusion in this IIA Report. **Appendix C** provides a summary of the IIA Scoping responses received to the IIA Scoping Report and explains how they have been addressed in this IIA. A key objective of the IIA Scoping Report was to identify an evidence-based framework ('the IIA Framework') to underpin a systematic assessment of the likely environmental, health and equalities effects from substantive components of the emerging RTS. This IIA Framework, which has since been updated in response to comments from the SEA Consultation Authorities (see Appendix C), comprises a series of 13 IIA Objectives and linked guide questions and criteria related to the identified key environmental, equalities and health issues (**Table 3.1**) and identified key policy issues (**Table 3.2**).

IIA Methodology

4.3.4 The IIA of the RTS has been undertaken in accordance with the approach set out in the IIA Scoping Report (as refined to take account of responses from the SEA Consultation Bodies). For reasons of brevity the full methodology is therefore not reproduced below, rather attention is drawn to key elements which have underpinned the assessment scope and approach.

Reading RTS IIA Framework

4.3.5 From the outset, the IIA Framework was intended to underpin the IIA, incorporating SEA, EqIA and HIA, by providing a holistic assessment tool which considers key environmental, equalities and health issues in tandem. The development of this IIA Framework involved detailed analysis of the baseline environmental and socio-economic conditions affecting RBC and the wider urban area, as well as a review of other plans and policies which will interact with the RTS.

4.3.6 The resulting IIA Framework, has been designed to allow for a co-ordinated and single assessment of likely significant environmental effects and likely equalities and health impacts from the RTS in accordance with all relevant statutory requirements. In particular, the inclusion of 'health' and 'equality and social inclusion' as IIA Headlines provides a basis upon which to assess likely equalities and health effects using the same IIA Framework. The corresponding IIA Objectives and guide questions have been developed to allow for the assessment of wider determinants of health, identification of any disproportionate impacts on persons with protected characteristics (as required by the PSED), and the consideration of any likely barriers or disadvantages to vulnerable demographic groups.

4.3.7 All substantive components of the RTS have been tested against the finalised IIA Framework, as reported in **Section 6** and **Appendices E – G.** This systematic assessment has not only identified any likely significant effects on the environment but also provides evidence to inform supplementary EqIA and HIA reporting, as presented in **Section 6**.

Table 4.1: Reading Transport Strategy 2036 IIA Framework (amended post Scoping)

IIA Objective Title	IIA Objective	Guide Questions – *Will the RTS…*
1. Health	Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	Facilitate and encourage use of public transport, walking and cycling? Improve accessibility to public open spaces, sports facilities, path networks? Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality? Reduce the likelihood of transport-related road accidents and casualties? Improve access to healthcare facilities? Minimise transport induced noise and vibration levels at sensitive locations? Safeguard sensitive environmental receptors to maintain and enhance human health?
2. Safety and Security	Maintain and enhance safety and security (actual and perceived)	Avoid creating opportunities for crime and antisocial behaviour? Create a travel environment that feels safe to all users at all times? Promote the provision of safe pedestrian and cycle access links? Improve perceptions of safety and fear of crime to help remove barriers leading to reduced social isolation? Improve the safety and security of the transport network? Help reduce severance effects of the transport network?
3. Equality and Social Inclusion	Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	Promote a culture of equality, fairness and respect for people and the environment? Result in differential impacts on different demographic groups, persons with protected characteristics (as specified in the Equality Act 2010), or those vulnerable to social exclusion or poverty? Support increased opportunities for education and lifelong learning? Reduce poverty and social exclusion? Support the regeneration of disadvantaged or deprived areas?

IIA Objective Title	IIA Objective	Guide Questions – *Will the RTS…*
		Support the removal of barriers and provision of adequate transport to meet the diverse needs of different demographic groups, people with disabilities and vulnerable members of the community? Protect and enhance access to community facilities, public services and key amenities? Reduce the need to travel? Improve access to healthcare facilities, in particular for those experiencing socio-economic disadvantage or other groups facing structural inequalities? Reduce exposure to air pollution, particularly for the most vulnerable? Promote social cohesion and integration between different demographic groups? Improve disabled people's ability to make seamless door to door journeys?
4. Accessibility	Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	Reduce the need to travel? Increase the accessibility of public services, economic opportunities and markets? Improve the accessibility and integration of the transport network? Enhance or restrict access to walking, cycling routes and public rights of way? Reduce congestion and allow for greater journey time reliability, particularly by more sustainable means of travel? Address changing transport needs resulting from population growth and ageing? Reduce reliance on car travel?
5. Employment and Skills	Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities.	Improve physical access to employment for all demographic groups and communities? Improve access via active travel and public transport options to employment opportunities? Increase and diversify employment opportunities?

IIA Objective Title	IIA Objective	Guide Questions – *Will the RTS…*
		Improve the accessibility of education infrastructure, in particular by active travel and public transport?
6. Material Assets	Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	Support the delivery of the emerging Reading Local Plan spatial strategy? Unlock the delivery of key housing sites? Facilitate the re-development of previously developed land? Support the provision of adequate infrastructure, services and facilities to meet identified needs?
7. Productivity and Competitiveness	Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	Support the sustainable management of infrastructure assets, including parking provision? Promote the co-location of synergistic economic activities, industries and land uses? Support the efficient movement of freight?
8. Air Quality and Amenity	Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	Maintain or enhance air quality? Decrease noise and vibration levels at sensitive locations? Reduce exposure to poor air quality? Prevent and reduce emissions of harmful pollutants?
9. Sustainable Placemaking	Maximise the efficient use of land, enhance urban design quality, protect and enhance the significance, special interest and character of heritage assets and their settings.	Improve the integration of land use and transport? Promote high quality design? Protect valued local views? Maintain and enhance the attractiveness of the public realm? Conserve, protect and enhance the importance, special interest, character and settings of heritage assets (designated and non-designated)? Preserve important archaeological resources?
10. Climate Change Mitigation	Decarbonise the transport sector and support wider efforts to mitigate climate change.	Support a sustainable pattern of development which minimises energy consumption and GHG emissions? Reduce reliance on car travel? Contribute to or challenge the decarbonisation of the transport sector?

IIA Objective Title	IIA Objective	Guide Questions – *Will the RTS…*
		Promote modal shift towards sustainable and active travel? Promote the use of clean fuels and technologies?
11. Biodiversity, Geodiversity and Soil	Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species and habitats and by protecting green infrastructure.	Ensure appropriate safeguards for the integrity and conservation objectives of sites designated at international, national or local levels for reasons of biodiversity or geodiversity value or species protection? Protect and enhance valued species and habitats? Safeguard against habitat loss or fragmentation? Protect and enhance protected trees or important woodland areas? Improve access to nature? Protect and enhance important soil resources? Deliver biodiversity net gain?
12. Water, Flood Risk and Resilience	Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	Improve the quality of waterbodies in accordance with the Water Framework Directive? Maintain or enhance the ecological and chemical status of the water environment in accordance with the Water Framework Directive? Affect the volume of surface water runoff into or abstraction from water bodies? Minimise the risk of flooding to people, property, infrastructure and environmental assets? Manage residual flood risks appropriately and avoid new flood risks? Seek to minimise new development in areas prone to flood risk or mitigate the potential for such risk? Promote the resilience of the transport system to the effects of climate change and adverse weather?
13. Landscape	Protect and enhance the landscape character, townscape character and visual amenity.	Protect and enhance landscape character? Safeguard important landscape and townscape features? Protect visual amenity and valued views? Prevent urban sprawl?

IIA Review of Initial RTS

4.3.8 A key element of the IIA methodology was the undertaking of an independent review of the initial, Draft RTS (2020) prior to the finalisation of the Draft RTS (2023). This review in 2020 allowed for the early identification and resolution of uncertainties and weaknesses, as well as the early development of options to enhance the coverage of key environmental, equalities and health issues before the Draft RTS 2023. This approach minimised abortive assessment work whilst improving the clarity and effectiveness of the Draft RTS in 2023. In particular, taking into account the incorporation of IIA recommendations within the plan. The IIA has been updated for each version of the plan, 2020, 2023 and now the Final RTS in 2024 (see **Section 5**).

Approach to Reasonable Alternatives

4.3.9 The SEA Regulations require the likely significant effects of implementing a plan or programme (i.e., the RTS) and reasonable alternatives to it to be examined, as well as the rationale for identifying reasonable alternatives to be described. To be eligible for consideration in this IIA process (incorporating SEA), reasonable alternatives must be:

- Realistic, in that they are plausible alternatives which could be implemented instead of specific proposals within the RTS and are consistent with relevant national and other policy frameworks;
- Related to the objectives of the RTS; and,
- Within the geographical scope of the RTS, i.e., any reasonable alternatives would need to relate to the Reading urban area.

4.3.10 Following the approach outlined in the IIA Scoping Report, in line with statutory requirements consideration was given to the need to identify and assess any possible reasonable alternatives to the substantive components of the RTS. However, it is imperative to note that:

- The interventions and policies ultimately included within the RTS were developed following an extensive process (including detailed scenario modelling) and selected specifically to address the transport problems, issues and opportunities evidenced within the RTS.
- The RTS only identifies the outline principles of proposed schemes and initiatives. This means much of the detail of their design and implementation is still to be confirmed, at which point reasonable alternative options regarding siting, routing, technology and detailed design will require to be considered. As these alternative design options are not yet known they cannot be considered within this IIA. For schemes that require planning permission or other consents, in due course consideration will need to be given to whether they fall under the EIA Regs and constitute an EIA Development, which would necessitate the provision of an Environmental Statement (ES). In accordance with the EIA Regulations, any ES required to accompany a consenting application for a proposed scheme would need to consider any reasonable alternatives considered and outline their potential environmental effects.

4.3.11 Taking account of the high-level nature of the RTS, its underpinning by a suite of high level RTS objectives, and on the basis that the inclusion of proposed transport schemes only provides broad policy support rather than setting out detailed design options, no reasonable alternatives (e.g., policies, schemes or designs) were identified as being capable of satisfactorily addressing the transport challenges identified within the RTS. On this basis, it was not possible to identify any fundamentally different reasonable alternative options such that no reasonable alternatives are required to be assessed. However, as detailed in Section 5, the development and incorporation of the IIA recommendations within the RTS itself form reasonable alternatives, as the possible non-incorporation of these recommendations would likely have resulted in different (and sub-optimal) environmental, equalities and health effects being predicted. For the reasons detailed in **Section 3.3**, the evolution of the baseline scenario is also not considered to constitute a reasonable alternative for the purposes of the 2005 Act.

4.4 Preparation of this IIA

4.4.1 Following the consultation on the draft RTS held in autumn 2023, the RTS has been updated to account for consultation feedback and finalised for adoption. Building upon previous IIA reporting, this IIA Report has been prepared to accompany the final RTS. This IIA Report presents the findings of an appraisal carried out to identify, assess and evaluate the likely significant environmental, health and equalities effects of all substantive components contained within the RTS. Each substantive component has been subject to assessment against the 13 IIA Objectives defined within the finalised Reading RTS IIA Framework (**Table 4.1**).

IIA Reporting

4.4.2 The detailed IIA of proposed policies and schemes & initiatives within the RTS is provided in **Appendices E** and **G respectively,** with a summary of key findings provided in Section 6 of this report. A matrix-based assessment of the Vision and RTS Objectives is also provided in **Section 6**.

4.4.3 All components of the RTS were assessed in detail using matrices to identify likely significant effects on each IIA Objectives defined within the IIA Framework (**Table 4.1**). This approach allowed for systematic recording of potential effects and their significance together with any assumptions or uncertainties and any further suggested mitigation or enhancement measures (taking account of the prior incorporation of IIA recommendations as detailed in **Section 5**). The assessment of each component of the RTS was undertaken in early 2019 on a pre-mitigation basis, i.e., assuming full implementation of the RTS, without the provision of additional safeguards or mitigation measures. As noted above, this IIA report has since been fully updated to take account of subsequent changes to the LTP4, including the incorporation of IIA recommendations. (refer to **Section 5**).

4.4.4 The qualitative scoring system shown in **Table 4.2** below was adopted to complete all assessment matrices and, in doing so, to identify any likely significant environmental, equalities and health effects.

Table 4.2: IIA Scoring System to Establish Likely Significant Effects

Score	Description	Symbol
Significant (Major) Positive Effect	The proposed option/policy contributes significantly to the achievement of the IIA Objective.	++
Minor Positive Effect	The proposed option/policy contributes to the achievement of the IIA Objective but not significantly.	+
Neutral Effect	The proposed option/policy is related to but does not have any effect on the achievement of the IIA Objective	0
Minor Negative Effect	The proposed option/policy detracts from the achievement of the IIA Objective but not significantly.	-
Significant (Major) Negative Effect	The proposed option/policy detracts significantly from the achievement of the IIA Objective. Mitigation is therefore required.	- -

Score	Description	Symbol
Uncertain Effect	The proposed option/policy has an uncertain relationship to the IIA Objective, or the relationship is dependent on the way in which the aspect is managed. In addition, insufficient information may be available to enable an assessment to be made.	?
No Clear Relationship	There is no clear relationship between the proposed option/policy and the achievement of the IIA Objective or the relationship is negligible.	~

Approach to Identifying Uncertainties, Assumptions and Mitigation

4.4.5 The identification of any uncertainties is important, as all RTS components need to be unambiguous so that they can be implemented as intended. Where these have been identified as relating to all of the IIA objectives they are identified within **Appendices E and F** as 'core assumptions' and 'core uncertainties'.

4.4.6 In addition, to enable assessment it has been necessary for the assessor to make some assumptions about the implementation of the policy or transport scheme. For instance, where planning permission is required for a transport scheme it is assumed that the final design will accord with all relevant policies.

4.4.7 As noted above, in advance of preparing the finalised version of the RTS an independent IIA review of the initial Draft RTS was undertaken and a suite of IIA recommendations were identified (see **Section 5**). As detailed in **Table 5.1**, the majority of the IIA recommendations have since been addressed through the incorporation of suitable amendments within the finalised RTS and IIA has been updated accordingly. The incorporation of all the recommendations means that, as detailed in **Section 6**, the RTS is assessed in relation to key sustainability, health and equalities issues and no further measures are presently considered to be required to mitigate significant adverse effects (none now predicted).

5 How has the IIA informed the RTS?

5.1 Introduction

5.1.1 This section details the ways in which the IIA undertaken in respect of the RTS has shaped and strengthened the document throughout its development. The IIA of the RTS was split into two broad phases, a pre-assessment phase and an assessment phase, during which different actions were undertaken as detailed below.

5.2 Pre-Assessment Phase

5.2.1 Throughout 2019 the initial Draft RTS evolved in response to new evidence, policy developments (e.g. adoption of the Reading Local Plan), the findings of a major consultation experience conducted by RBC (October – July 2019) and informal testing by both RBC and Stantec so that the plan adequately covers all key transport issues. This included informal testing of emerging plan components in relation to the key environmental, equalities and health issues identified previously through IIA Scoping. Reflecting the early stage of Draft RTS preparation, the informal testing focused on defining the scope of each substantive component (e.g. policy or scheme) and ensuring all components contribute positively to the overall Draft RTS vision and objectives.

5.3 Assessment Phase IIA Recommendations

5.3.1 There are two general methods to improve the quality and mitigate potential adverse or uncertain effects of an emerging plan:

i. Testing, and subsequently amending proposed components (e.g., policies or transport schemes) so that these can be implemented successfully (i.e., as intended) and in a way which maximises their beneficial outcomes (including in relation to key environmental, equalities and health issues); and,

ii. Gap analysis to identify any need for and then develop additional plan components to address any key issues not fully addressed, or to mitigate potential adverse or unforeseen effects from proposed components.

5.3.2 RBC provided a consolidated version of the initial Draft RTS to Stantec in January 2020 to facilitate an independent IIA review to be undertaken, resulting in the development of a suite of IIA recommendations (see **Table 5.1** below). These recommendations were discussed with RBC officers and subsequently incorporated within the Draft RTS. Consequently, the quality of the Draft RTS and its consideration of key environmental, equalities and health issues has been demonstrably improved through this independent review process. A further review was undertaken in 2023, these recommendations and actions are also listed in the below table marked '(further review)'. As noted in Section 4, this final IIA (2024) has since been updated to take account of subsequent changes to the RTS.

5.3.3 Details of the IIA recommendations made in respect of the initial Draft RTS, together with a summary of how each recommendation has been addressed in the final version of the RTS is provided in **Table 5.1** below. This clearly demonstrates that the IIA process has directly informed and positively contributed to the preparation of the Draft RTS.

Table 5.1: Schedule of IIA Recommendations

Reference	Section	Recommendations	Action
1.	Executive Summary – Introduction	Amend the third paragraph to clarify the scope and role of the IIA	Recommendation agreed and implemented
2.	Executive Summary – Our Vision (also applies to main Vision & Objectives section)	Revise the wording of the proposed RTS vision and supporting text to: - More clearly align with the Reading 2050 Vision, including through referencing its 3 core themes and explaining their transport implications; - More clearly link support the delivery of the adopted Reading Local Plan 2036; and, - Simplify the wording of the vision statement by focusing on the intended transformational change and end policy goal (for the transport system), rather than mechanisms to achieve this.	Recommendation agreed and implemented
3.	Executive Summary - Objectives (also applies to main Vision & Objectives section)	Consider recasting the Enabling Inclusive Growth Objective for clarity: - Ensure the objective title and description are fully aligned; - Recast the objective to focus on improving prosperity for all and enhancing communities; - Remove reference to specific implementation mechanisms.	Recommendation agreed and implemented. Enabling Inclusive Growth objective is now 'Enabling Sustainable and Inclusive Growth'. These objective supports connecting communities and economic growth that is more equitable across society.
4.	Introduction	Strengthen the connection between the RTS and the adopted Reading Local Plan. Consider amending this section to state explicitly that the RTS dovetails with and supports the implementation of the Local Plan.	Recommendation agreed and implemented
5.	Introduction – Our Approach	Clarify that the development of this RTS has been informed by the undertaking of an IIA.	Recommendation agreed and implemented
6.	Introduction – Statutory Assessments	Retitle to 'Integrated Impact Assessment' for clarity (HIA is non-statutory) and re-cast the text as follows: *The RTS is supported by an Integrated Impact Assessment (IIA) which has been undertaken in tandem with developing the plan. An IIA Report has been published for consultation in tandem with the RTS.* *The purpose of the IIA is to identify, assess and address likely significant effects on the environment and likely effects on health and equalities from the emerging RTS. In doing so, the IIA has helped to shape the content of the RTS in order to maximise its sustainability and socio-economic performance.* *The IIA incorporates a suite of statutory and non-statutory impact assessments:* • *Strategic Environmental Assessment (SEA)*	Recommendation agreed and implemented

Reference	Section	Recommendations	Action
		• *Equalities Impact Assessment (EqIA)* • *Health Impact Assessment (HIA)* *These impact assessments have been undertaken in a co-ordinated manner to support development of the RTS. The SEA element of the IIA identifies the likely significant effects on the environment, whilst the EQIA and HIA elements identify likely different impacts on demographics groups and persons with protected characteristics (in accordance with the Equality Act 2010) and on health outcomes respectively. The HIA element of the IIA was undertaken on a non-statutory basis to support demonstrating compliance with SEA and EqIA requirements relating to the assessment of likely health effects in an integrated manner.* *In accordance with statutory SEA requirements an IIA Scoping Report was consulted on with the SEA Consultation Authorities (and RBC internal departments) in November 2019. The Scoping Report:* • *Defined an evidence-based suite of key issues which should be addressed in the RTS; and,* • *Defined an integrated assessment framework to underpin the testing, assessment and refinement of all components within the emerging RTS (objectives, schemes, policies, etc).* *Taking account of consultee feedback, the IIA is being undertaken on an iterative basis in tandem with developing the RTS itself. As detailed within the accompanying IIA Report this allowed any uncertainties, issues or mitigation requirements identified during the IIA to be addressed in the RTS. In addition to meeting statutory requirements this iterative process has maximised the sustainability and socio-economic performance of the RTS.*	
7.	Vision and Objectives – Supporting Policies and Guidance	Clarify the relationship between the RTS and other relevant policy documents. The RTS is influenced by and supports the implementation of some policy documents, whilst the RTS is itself supported by others. This relationship should be as collaborative and constructive as possible in order to tackle key transport challenges. Consider adding either a generic reference to neighbouring planning authorities or identifying implications of specific neighbouring local plans and LTPs.	Recommendation agreed and implemented

Reference	Section	Recommendations	Action
		Under national policy and guidance, include a reference to the NPPF.	
8.	About Reading – Reading Borough	Consider adding a paragraph addressing the transport implications of the new Local Plan. In the absence of specific routes or designs having yet been identified for proposed transport schemes (meaning their detailed design and any reasonable alternatives cannot presently be subject to IIA), it is important to: - identify the environmental context which the schemes must take account of, with particular consideration afforded to environmental designations; and, - confirm that the detailed design and consenting of transport schemes will require to be supported by relevant technical assessments. To address this, insert a subsection to provide an overview of the environmental context and constraints across the Reading urban area of relevance to the RTS, the transport system and the future development of transport schemes. This should include constraint maps showing the ecological, heritage and landscape features.	Recommendation agreed and implemented. The RTS now identifies that environmental constraints will need to be considered during the identifications of sites and routes of the proposed physical infrastructure schemes. Four environmental constraints plans are provided with the draft RTS 7- 10) which show the main flood risk, heritage, ecological and landscape constraints. The identification of key environmental constraints at this stage will help reduce potential for adverse effects to environmental receptors.
9.	Challenges and Opportunities - Introduction	Clarify that the evidence base supporting the identified key challenges and opportunities is summarised within this section. Amend para 4.3 to more explicitly explain the evidence base work which has supported the preparation of the RTS. Expand the identified challenge 'Accommodating Development' to explicitly link the RTS with delivery of the Reading Local Plan (2019). This challenge should include a specific reference to the transport implications of implementing the adopted Reading Local Plan.	Recommendation agreed and implemented. The RTS now identifies that the growth proposed within the Reading Local Plan (2019) will result in more trips on the transport network and with that new challenges and issues for the transport network. It notes that the RTS will be important in helping achieve this growth in a sustainable manner and help manage these potential issues.
10.	Challenges and Opportunities – Adapting to the Future	Consider amending the summary box to emphasise the need more positively for transformational change and to note that the RTS sets a framework to underpin this (rather than focusing on uncertainty). Amend text as required to reflect the latest UK Government position regarding the introduction (2035+) and potential wider scope of a petrol and diesel car/van sales ban. Expand the discussion regarding the impacts of vehicular travel to reference the congestion and health impacts of vehicle trips (regardless of fuel source), emphasising the need to reduce vehicular travel.	Recommendation agreed and implemented

Reference	Section	Recommendations	Action
		Consider adding a reference in paras 4.67 – 4.69 to the emerging Thames Valley Berkshire Local Industrial Strategy.	
11.	Challenges and Opportunities – Providing Affordable and Accessible Travel for All	Add an introductory statement before para 4.48 to note that that the RTS is supported by an IIA prepared in accordance with statutory requirements including the Equality Act 2010. Overall, this section would benefit from a focus on reducing the need to travel and to creating liveable and sustainable neighbourhoods, rather than simply relying on improved public transport.	Recommendation agreed and implemented. It notes the importance of walking and cycling links, in addition to public transport, to help create liveable neighbourhoods which has wider benefits for health and equality.
12.	Challenges and Opportunities – Achieving Good Accessibility to Local Facilities	Recast the 'Achieving Good Accessibility to Local Facilities' key challenge to prioritise reducing the need to travel to access services and opportunities (through integration of land use and transport planning). This would strengthen the alignment of the RTS with the Reading Local Plan and enhance accessibility in a way that supports positive environmental, equalities and health outcomes.	Recommendation agreed and implemented.
13.	Challenges and Opportunities – Providing Affordable and Accessible Travel for All: Income Deprivation	Consider adding additional text to address deprivation in a more holistic manner aligned with the Reading 2050 Vision. This could include commenting on the location of the most deprived residential areas relative to employment opportunities/public services and identifying a need to create liveable and sustainable neighbourhoods, as well as addressing public transport provision.	Recommendation agreed and implemented. The RTS acknowledges that those on lower incomes typically rely on public transport and active travel more, so improvements in these services to these areas need to be affordable and accessible.
		Policies	
14.	RTS1	Recast to prioritise increasing sustainable modal shift ahead of reducing road space for private cars and to commit to the delivery of sustainable transport schemes. Consider adding an introductory statement focused on reducing the need to travel, improving the functioning of the transport system, and increasing sustainable modal shift.	Recommendation agreed and implemented
15.	RTS2	2.2 - Reword to be more specific regarding which environmental improvements will be targeted, such as improvements to air quality, public realm, access to nature.	Recommendation agreed and implemented.
16.	RTS3	3.1 - Strengthen the policy wording to commit to tackling action to address barriers caused by physical infrastructure. 3.2 - Clarify the scope and application of this policy in terms of when an EqIA will be required.	Recommendation agreed and implemented. This clarification and strengthening helps support the creation of a more accessible and equitable transport network.

Reference	Section	Recommendations	Action
17.	RTS4	Clarify the proposed safeguarding of land for transport schemes (as the routes and designs of schemes has not yet been confirmed). 4.2 and 4.3 - Strengthen these policy tests by cross-referencing relevant planning policies and acknowledging the limitations of S106 funding. (further review) 4.4 Ensure travel plans are in accordance with RBC's health and wellbeing priorities including enablement of active and sustainable travel to improve mental and physical health outcomes, including monitoring actions. Ensure travel plans consider the needs of disadvantaged groups, such as those with disabilities or of low-mobility, and those on low-income.; travel plans to consider the needs of those with protected characteristics	Recommendation agreed and implemented.
18.	RTS5	5.1 - Expand to include the policy commitment noted in supporting text to update the SMoTS to reflect current priorities. 5.2 Consider strengthening the language regarding encouraging schools to update travel plans annually and confirm monitoring arrangements. (further review) 5.4 Provide a greater level of planning support for disadvantaged schools and workplaces (e.g., schools in deprived areas, SEND schools).	Recommendation agreed and implemented.
19.	RTS6	6.1 – Extend to include a succinct explanation of the benefits/objectives of embracing technological innovation in transport. 6.2 – Clarify that this scope of the technologies referred to relates to reducing business travel. 6.3 – Clarify that "innovative solutions" will be supported to address identified transport challenges. (further review) 6.4 - A system is needed to translate data in remedial action regarding health, equalities and sustainable placemaking impacts.	Recommendation agreed and implemented.
20.	RTS7	7.1 – To foster collaboration, amend to include a reference to the wider Reading urban area rather than solely the RBC boundary.	Recommendation agreed and implemented.
21.	RTS8	8.1 and 8.2 – Amend to clarify the intended policy objectives and scope. Considered splitting up the sentences and expanding each point.	Recommendation agreed and implemented. RBC identifies that subsidies are provided to Readibus to supports community transport.

Reference	Section	Recommendations	Action
		8.3 - Expand to explain how the policy support for community transport will be implemented by RBC and partners.	
22.	RTS9	9.1 – Recast for clarity to focus upfront on the importance Reading station as a national rail hub and enhancing rail connectivity to/from Reading. Then discuss how these policy objectives will be met through partnership working, lobbying, etc.	Recommendation agreed and implemented
23.	RTS10	10.1 – Amend to clarify the intended policy objectives (increased accessibility for all users, convenience, etc).	Recommendation agreed and implemented.
24.	RTS11	(further review) 11.2 Policy to be updated to support "active travel" to access the waterways. Recommend policy refer to ensuring the quality of place adjacent to access modes are not adversely impacted by additional visitors to the waterways. 11.3 policy to consider safety features of water-based vehicles and network	Recommendation agreed and implemented.
25.	RTS13	Amend RTS13 and supporting text to link more closely to relevant Local Plan policies 13.2 – Consider re-ordering the clauses to prioritise sustainable modal shift in the reallocation of road space. (further review) 13.3 policy to support opportunities for social interaction in quiet traffic areas	Recommendation agreed and implemented. The term Quiet Traffic Areas has now been removed from this policy and instead reducing traffic is now included within the Healthy Streets concept.
26.	RTS15	Amend RTS13 and supporting text to link more closely to relevant Local Plan town centre policies. Clarify the spatial transformation or outcomes sought through the RTS for public spaces.	Recommendation agreed and implemented
27.	RTS16	16.1 - Expand to link with relevant Local Plan policies.	Recommendation agreed and implemented
28.	RTS17	17.1 – needs to refer to improving the functioning of the transport system for all and then/therefore the performance of modal specific networks within this: - Consider inserting and explicit commitment to the prioritisation of sustainable transport modes. - State that transport networks will be managed to maximise efficiency, connectivity and accessibility as part of delivering a sustainable transport system to meet identified needs.	Recommendation agreed and implemented.

Reference	Section	Recommendations	Action
		17.3 – Amend for clarity and to confirm the policy objective of increasing monitoring and data use.	
29.	RTS18	18.1 – Recast to include an upfront, overarching commitment to taking action to improve road safety for all and to further reduce fatalities and injuries on the road network. Then discuss vulnerable road users.	Recommendation agreed and implemented. Clarification helps support the objectives of the IIA in relation through improvements to safety, particularly vulnerable road users.
30.	RTS19	(further review) 19.3 - Ensure information provision is done so in an accessible manner/format and includes hard to reach groups such as those with disabilities and those with limited English proficiency.	Recommendation agreed and implemented (through referencing need for accessibility).
31.	RTS20	20.1 – Amend to clarify the intended policy objective. 20.2 - Consider rewording to address implementation.	Recommendation agreed and implemented. This policy has been updated in the Final RTS to consider the potential impact of parking management on the local area.
32.	RTS21	(further review) Include requirement for monitoring and remediation plans regarding enforcement, specifically regarding equalities, safety and sustainable placemaking.	RBC manages enforcement itself internally, and therefore its appeals process provides a mechanism for monitoring the impact of enforcement to inform the implementation of remediation measures where required. Where new enforcement is introduced (e.g. demand management, new Red Routes or other Traffic Regulation Orders, an EqIA will be undertaken prior to implementation. Additionally, a road safety objective is included within the RTS targets.
33.	RTS22	In general, amend for clarity and consistency with the Demand Management transport scheme section. 22.1 – Recast to set out a clearer and stronger commitment to the development of appropriate Demand Management schemes. 22.2 – Recast to set out a clearer and stronger commitment to reinvesting revenue from Demand Management schemes in sustainable transport solutions. (Further review) Recommendation covered under RTS3 - 3.4 (equalities) ensure sustainable travel capacity is designed and delivered to include all groups including those with protected characteristics Recommendation covered under RTS3 - 3.4 18.4 (safety) include monitoring and remediation plans should any incidents occur Recommendation covered under RTS3 - 3.4 19.4 (Sustainable place making) recommend considering high-quality design/design guidance	Recommendation agreed and implemented.

Reference	Section	Recommendations	Action
		for sustainable travel. Recommend measures to protected cultural/heritage assets in construction and uptake of sustainable travel.	
34.	RTS23	23.1 - Clarify the reference to education and training programmes. 23.2 include plans to ensure no adverse impact of parking facilities on urban landscape or cultural/heritage assets.	Recommendation agreed and implemented.
35.	RTS24	24.1 – Strengthen the commitment from "exploring opportunities to work with" to simply "working with.".	Recommendation agreed and implemented.
36.	RTS26	Amend RTS26 and supporting text for clarity, in particular to: - confirm the policy objective and scope (drainage for transport schemes) - link with relevant Local Plan policies	Recommendation agreed and implemented.
37.	RTS28	28.1 - Amend for clarity, including inserting an upfront clear statement in support of the transition to MaaS, including through smart/integrated ticketing and on-demand services. 28.2 - Amend to recognise that the development of an interim MaaS solution will require action by RBC and partners.	Recommendation agreed and implemented.
38.	RTS30	(further review) 30.3 – Recast to support sustainable travel planning. Update policy to include all educational facilities, and not just school, and ensure information and education reaches those who are most disadvantaged.	Recommendation agreed and implemented.
39.	RTS31	31.1 - Recast to widen policy scope and include an upfront general and overarching commitment to consult and engage widely in the design, development and implementation of transport schemes and strategies. 31.2 - Insert a commitment that transport schemes and strategies will be evidence-based and informed by relevant impact assessment processes (e.g., SEA, EIA, HIA, etc.) depending on the scale and nature of the proposal. Such impact assessments need to be consulted on in tandem with any substantive consultations on transport schemes or strategies.	Recommendation agreed and implemented. The provision or relevant evidence bases, and technical assessments can help reduce potential adverse effects to the environment and help appropriately address and incorporate measures to create a more accessible transport network with positive health outcomes.
Schemes			
40.	Demand Management	Insert a clear commitment to take account of and address the impacts on low incomes and/or people who face barriers to public transport use when designing and implementing demand management measures.	Recommendation agreed and implemented. This will help mitigate potential negative impacts to groups which are more vulnerable such as those on lower incomes.
41.	Multi-Modal and Public Transport – infrastructure schemes	Whilst the routing and design of many schemes is still to occur, each scheme should at least refer in general terms to the need to address key environmental constraints and potential environmental impacts	Recommendation agreed and implemented through the inclusion of appropriate text within the RTS which requires the design and consenting of proposed transport schemes to take account of relevant environmental constraints

Reference	Section	Recommendations	Action
		Additionally, each scheme should confirm that detailed design and consenting will to be informed by relevant environmental assessments (e.g., EIA where appropriate). (Further review) MM3 Cross Thames Travel (sustainable placemaking): policy to be amended to include reference to placemaking and healthy streets, considering design impact. (Further review) MM4 Connecting neighbourhoods (Safety): need for strong design of interchanges to ensure safety as a result of multimodal traffic. (Sustainable placemaking): Can policy make reference to considering design and impact of provision of MM interchanges on local place and assets. This links to IIA recommendation 8.	(including through undertaking appropriate technical assessments.
42.	Active Travel Schemes	(further review) AT5 (Shinfield Rd Active Travel Improvements) Provision to be made for driver education/communication programme relating to the changing road priorities. (further review) AT5 (Bath Rd/Castle Hill Active Travel Improvements) Provision to be made for driver education/communication programme relating to the changing road priorities. (further review) AT10 (Play and school street programme): addition to scheme to describe results of street closure trial period. Policy and scheme to support ongoing monitoring of health and education outcomes at participating schools to provide evidence to communities for expansion of programme. (Health) Recommend monitoring any impacts on children and adults with mobility issues/vehicular access requirements to schools and implementing measures in light of these. (Productivity): recommend monitoring of education and teaching outcomes. (Safety): recommend monitoring any road safety at periphery of road closures.	AT5: recommendation covered within RTS30 public consultation and engagement AT10: (health and productivity) recommendation agreed and implemented. AT10: (Safety) recommendation, covered within RTS18
43.	Network and Highways Management	NM1 (Road Safety Schemes): there may be short-term increase in road traffic incidents, which should be mitigated with clear signage for users regarding changes in road layout. NM4 (Electric vehicle charging): addition to scheme re locations of charging points to serve various users, and reference to renewable power sources.	NM1: (Road Safety Schemes) as a general issue that is covered through approaches to communicating changes to public NM4: Recommendation agreed and implemented.

Reference	Section	Recommendations	Action
		(further review) Equalities: include hospitals as a charging location. (further review (Sustainable placemaking): consider EV parking for visitor attractions.	
44.	Mobility as a Service (MaaS)	Consideration should be given to how MaaS can: - benefit older and disabled people - be accessible to all.	Recommendation agreed and implemented. This supports the creation of a more accessible and equitable transport system that benefits a wide range of users.
45.	Park and Ride schemes: Mereoak Expansion Winnersh Triangle Enhancements Park and Ride Mobility Hubs	Consideration should be given to beneficial effects on wider bus and public transport networks. Consider the inclusion of secure cycle parking at P&R locations to allow 'cycle and ride'.	Recommendation agreed and implemented.
46.	Public Transport: Concessionary and Discounted Travel Schemes	Amend to confirm whether, subject to adequate funding from Demand Management measures, RBC has a commitment to expand concessionary travel schemes. This links to IIA recommendation 30.	Recommendation agreed and implemented. Providing concessionary and discount schemes to a wider range of users who are likely to have lower incomes can help increase the accessibility of the transport network and providing better access to local facilities, services, employment and education.
47.	Strategic and Local Pedestrian Routes	Amend to explicitly take account of wheeling and to enhance access for disabled users more generally.	Recommendation agreed and implemented. This will help deliver routes which are accessible to a wider range of users, including those in wheelchairs and with push chairs for children.
48.	Parking Schemes and Management	Amend to require booking/service access methods to be clear and accessible to all	Recommendation agreed and implemented. This will help see that groups who are less able to access or use booking services (e.g., through mobile applications) are not unfairly disadvantaged.

5.4 Summary

5.4.1 This section has demonstrated that through resolving uncertainties and inconsistencies, and by identifying opportunities to improve the clarity and performance of the initial Draft RTS, the IIA process has closely influenced the final content of the RTS. This has resulted in the RTS being more robust and effective in terms of addressing key environmental, equalities and health issues. This means that the RTS is predicted to provide a greater range of beneficial sustainability, equalities and health impacts with no significant adverse effects predicted. The assessment presented in **Section 6** and **Appendices E – G** has been updated to take account of the recommendations which have been incorporated into the RTS.

6 IIA of the Reading Transport Strategy 2040 (RTS)

6.1 Overview

6.1.1 This section provides an overview of the results of the IIA undertaken for each constituent part of the RTS. The following plan components have been subject to assessment and are considered below in turn:

- Vision and Objectives
- Policies
- Proposed Transport Schemes and Initiatives

6.1.2 Each of these substantive components has been subject to two levels of analysis:

- Assessment against the IIA Framework (**Table 4.1**), primarily to identify any likely significant environmental effects in accordance with the SEA Regulations. This assessment is reported as follows:
- Vision and Objectives – **Section 7.2**;
- RTS Transport Schemes and Initiatives - **Section 7.3**, with detailed policy assessment matrices for each policy grouping provided in **Appendix E**; and,
- RTS Policies – **Section 7.4**, with detailed policy assessment matrices for each policy grouping provided in **Appendix F**.
- Drawing on the results from the above, specific assessment against:
- The NHS Healthy Urban Development Unit (HUDU) Rapid HIA Assessment Tool (2019) – summarised in **Section 7.5**, with the detailed assessment provided in **Appendix G**; and,
- The PSED under the Equality Act 2010 (and in relation to relevant equalities duties set out in the Transport Act 2000) as detailed in **Section 7.6**.

6.1.3 As explained in **Section 6**, an early and independent IIA review resulted in recommendations being incorporated into the Draft RTS to address potential uncertainties and strengthen its performance in addressing key environmental, equalities and health issues. Taking account of this, previous working draft assessments have been updated to reflect the final content of the Final RTS in particular, with the incorporation of all IIA recommendations the assessment results are now more positive: a greater number of RTS policies are likely to result in Major Positive (i.e., significant beneficial) effects on environmental, equalities and health issues, with no significant adverse effects now being considered likely.

6.2 IIA of Proposed RTS Vision and Objectives

6.2.1 Informed by the publication of the Reading 2050 Vision, the adopted Reading Local Plan (2019) and a major consultation exercise conducted by RBC in Summer 2019, Section 2 of the RTS sets out a new *Transport Vision for Reading* to underpin the RTS. This Vision comprises a holistic, transport focused vision statement and supporting text:

6.2.2 *"Our vision is to deliver a sustainable transport system in Reading that creates an attractive, green and vibrant town with neighbourhoods that promote healthy choices and wellbeing. Future mobility options will enable everyone in Reading to thrive, enjoy an exceptional quality of life and adapt to meet future challenges and opportunities."*

6.2.3 The proposed RTS Vision is supported by a set of 5 Objectives which indicate how the Vision will be achieved through the implementation of the RTS:

- ***1. Creating a Clean and Green Reading*** *– Provide transport options to* ***enhance quality of life, reduce emissions*** *and* ***improve air quality*** *to create a carbon neutral town*
- ***2. Supporting Healthy Lifestyles*** *– Create* ***healthy*** *streets to encourage active travel and lifestyles, improving connectivity to key destinations and increase personal* ***safety***
- ***3. Enabling Sustainable and Inclusive Growth*** *– Enable* ***sustainable growth*** *and connect communities so that everyone can benefit from Reading's success*
- ***4. Connecting People and Places*** *– Promote the use of sustainable modes of transport by providing attractive alternatives to the private car, helping to provide a transport network that is fast, affordable, connected and resilient*
- ***5. Embracing Smart Solutions*** *– Use technology to manage the network* ***efficiently*** *and allow informed travel choices, whilst enabling Reading to become a* ***smart,*** *connected town of the future.*

6.2.4 An assessment of the compatibility and coverage of the proposed RTS Vision and Objectives against the IIA Framework (**Table 4.1**) is provided in **Table 6.1** below. A common uncertainty applies to the assessment of these RTS components, in that owing to their high-level nature there is necessarily a degree of uncertainty regarding their scope, whilst implementation details are deferred to specific policies and schemes. However, these uncertainties are unavoidable and do not restrict either the assessment of the RTS nor undermine their effectiveness.

Table 6.1: Compatibility of RTS Vision and Objectives with IIA Objectives

IIA Objective	RTS Vision	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Commentary
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	++	+	++	+	+	0	Assessment of Predicted Effects • The proposed RTS vision identifies the need to create a transport network which encourages people who work and live within Reading to lead a healthy lifestyle. This is through encouraging the use of more active forms of travel and therefore greater levels of physical activity. Improvement to transport networks will also have benefits in terms of access to service, with associated health benefits, such as access to health care facilities and sports/physical recreation and through helping reduce social isolation. Objective 2 would have the same effect. • Objective 4 relates to health in the sense that it will help increase the connectivity of people and place, helping reduce social isolation and associated negative mental health issue. Promoting the use of more sustainable modes of transport such as walking and cycling will also have health benefits through increase rates physical activity. • Objective 1 relates to reducing vehicle emissions which can help reduce incidences of health issues associated with poor air quality such as cardiovascular diseases. • Objective 3 has the potential to positively contribute to mental and physical wellbeing through connecting communities and reducing social isolation. • Objective 5 is likely to have a neutral impact on this Health IIA objective. Although many of the policies regarding smart solutions have potential indirect health implications, they are unlikely to have a minor or significant (major) impact in isolation. Mitigation and Enhancement • None required

IIA Objective	RTS Vision	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Commentary
							Assumptions • It is assumed that 'key destinations' includes health services and locations where physical activity, and recreation can be undertaken (e.g., sport centres and parks). Uncertainties • No additional uncertainties identified.
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	0	+	++	0	+	+	Assessment of Predicted Effects • The proposed RTS vision supports mobility improvements that can positively contribute to the safety of the transport network for individuals who have mobility issues, however it has little direct impact on this IIA objective. • Objective 1 supports safety by reducing risks to health associated with poor air quality. • Objective 2 actively promotes delivery of a transport network which increases personal safety. • Objectives 4 and 5 indirectly support safety by promoting a reliable transport network where users are informed about latest travel conditions so that they can make suitable travel arrangements to enable them to reach their destination. • Objective 3 is likely to have a neutral impact on this IIA objective. Increased connections and ability to for multiple residents to use and activate public spaces has implications for actual and perceived security. However, this is considered neutral in isolation as this requires other placemaking elements to also come forward. Mitigation and Enhancement • None required Assumptions • No additional assumption identified.

IIA Objective	RTS Vision	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Commentary
							Uncertainties • No additional uncertainties identified.
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	++	+	+	++	+	+	Assessment of Predicted Effects • The proposed RTS vision and Objective 3 specifically identifies the need for sustainable growth that benefits everyone. This will see that success and benefits are distributed fairly across society and provide opportunities for all, helping reducing inequality. • Objective 2 will indirectly help reduce social exclusion through improving accessibility to key destinations which are currently less accessible to some members of the public (e.g., non-car users). It also promotes safety which can help create a more inclusive transport network though encourage more vulnerable users (such as the elderly or disabled) to travel through reducing safety fears and fear of crime. • People who are more deprived or already suffer from poor health are often more affected by changes to environmental conditions. Through improving air quality, objective 1 can help reduce inequalities experienced by more vulnerable groups. • Objective 5 can help give people better access to travel option (e.g., through reduced waiting times at bus stops due to being provided with up-to-date information and allow people to plan journeys in advance). Mitigation and Enhancement • None required Assumptions • It is assumed that the proposed smart solution and technology would be provided in formats that are accessible to all.

IIA Objective	RTS Vision	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Commentary
							Uncertainties • No additional uncertainties identified.
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	+	+	+	+	+	+	Assessment of Predicted Effects • The proposed RTS vision identifies that future mobility will enable everyone to thrive. This supports the view that transport will be provided that is accessible to all to enable a wider range of users to access services and opportunities. • Objectives 1, 2, 3 and 4 identify the need for a connected network to help improve the accessibility of the area and the need to provide reliable, affordable, carbon-neutral transport. Objective 2 also identifies the need for the network to connect people to other communities, key destinations and services. • Objective 5 will enable travel updates and information to be provided to help improve journey planning and accessibility. • There is no clear relationship between Objective 1 and the IIA objectives. Mitigation and Enhancement • None required Assumptions • It is assumed that the proposed smart solution and technology would be provided in formats that are accessible to all. Uncertainties • No additional uncertainties identified
5. Employment and Skills: Support increased and higher quality employment by enabling investment in key economic sectors, the delivery of key employment sites and by	+	+	+	++	+	+	Assessment of Predicted Effects • The proposed RTS vision supports a transport network that enables everyone to thrive, which is assumed to include business and economic sectors. In addition to this, creating

IIA Objective	RTS Vision	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Commentary
improving access to educational opportunities.							an attractive vibrant town can help attract business and support economic growth. • Objectives 1. 2, 4 and 5 indirectly contribute to investment in key sector by creating a more effective, efficient and accessible transport network which enables people and goods to be moved in and around the Reading. • Objective 3 supports sustainable growth and more long-term economic growth which can be maintained. <u>Mitigation and Enhancement</u> • None required <u>Assumptions</u> • No additional assumption identified <u>Uncertainties</u> • No additional uncertainties identified
6. Material Assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+	+	+	+	+	+	<u>Assessment of Predicted Effects</u> • The proposed RTS vision and Objectives 1 - 5 all support sustainable growth and a move towards using non-car modes of travel which can help reduce the use of natural resources such as fossil fuels. In particular: • Objective 1 promotes reducing emissions and a move to a carbon neutral town which is associated with a reduction in the use of natural resources. • Objective 5 directly supports the more efficient and effective use of resources through utilising technology and smart solutions. <u>Mitigation and Enhancement</u> • None required <u>Assumptions</u>

IIA Objective	RTS Vision	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Commentary
							• No additional assumption identified Uncertainties • No additional uncertainties identified
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	+	+	+	+	+	+	Assessment of Predicted Effects • The proposed RTS vision and Objectives 2 – 5 directly support efficient movement of people and goods through providing a range of modes of sustainable forms of transport to key locations, and a resilient transport network. • Objective 1 indirectly supports the efficient movement of people through providing a safe and pleasant environment for people to travel through improving air quality. Mitigation and Enhancement • None required. Assumptions • No additional assumptions identified. Uncertainties • No additional uncertainties identified.
8. Air Quality and Amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	+	++	+	+	+	+	Assessment of Predicted Effects • The proposed RTS vision and Objectives 2 - 5 will have a direct effect on reducing emissions and improving air quality through encouraging the use of more sustainable forms of transport such as public transport, walking and cycling and increasing the accessibility of key services by a range of transport modes. • Objective 1 will have a direct effect on this IIA objective through reducing emissions, improving air quality and moving towards creating a carbon neutral town.

IIA Objective	RTS Vision	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Commentary
							Mitigation and Enhancement • None required. Assumptions • No additional assumptions identified. Uncertainties • No additional uncertainties identified.
9. Sustainable Placemaking: Maximise the efficient use of land, enhance urban design quality, protect and enhance the significance, special interest and character of heritage assets and their settings.	+	+	+	+	+	+	Assessment of Predicted Effects • The proposed RTS vision and Objectives 1 - 5 all promote sustainable growth and the use of sustainable modes of transport through improvements to the network and the quality of the local environment (e.g., in terms of air quality). In addition to this, the vision also supports the creation of an attractive, green and vibrant town which supports good urban design. Mitigation and Enhancement • None required. Assumptions • It is assumed that any material transport interventions to the local environment (e.g., in terms of new cycle routes or footpath improvements), would be undertaken in accordance with the relevant planning procedures to protect against historic assets being adversely affected. Uncertainties • No additional uncertainties identified.
10. Climate Change Mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	++	++	++	+	++	+	Assessment of Predicted Effects • The proposed RTS vision and Objectives 2 and 4 directly support the use of more sustainable modes of transport such

IIA Objective	RTS Vision	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Commentary
							as walking and cycling through improving infrastructure, technology and the quality of the local environment. • Objective 1 identifies the need to reduce emissions and move towards a carbon neutral town, which will help decarbonise and reduce the transport networks contributions to climate change. • Objectives 3 and 5 indirectly contribute to this IIA objective through encouraging sustainable growth and increasing efficiency (and thus use of energy). <u>Mitigation and Enhancement</u> • None required. <u>Assumptions</u> • It is assumed that the term 'green' within the proposed RTS vision refers to green spaces as well as environmentally friendly 'green' measures. <u>Uncertainties</u> • No additional uncertainties identified.
11.Biodiversity, Geodiversity and Soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites and species, improving green infrastructure provision and safeguarding important soil resources.	+	+	+	0	0	0	<u>Assessment of Predicted Effects</u> • The proposed RTS vision identifies the need to create a green town which may include the provision of quality green spaces that would help to support biodiversity. • Objective 1 can help improve biodiversity by reducing emissions which are harmful to ecosystems such as nitrogen oxides produced by cars with combustion engines. Objective 2 aims to create healthy streets which can incorporate green infrastructure. • There is no direct effect of the other objectives and this IIA objective. However, in general they do aim to promote a move to more sustainable modes of transport which can help combat climate change and the associated negative effects on biodiversity (e.g., due to droughts). This would also help

IIA Objective	RTS Vision	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Commentary
							reduce disturbance on nearby biodiversity assets due to disturbance from air quality and noise. Mitigation and Enhancement • None required. Assumptions • It is assumed that the term 'green' within the proposed RTS vision refers to green spaces as well as environmentally friendly 'green' measures. Uncertainties • No additional uncertainties identified.
12. Water, Flood Risk and Resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	+	~	~	~	+	~	Assessment of Predicted Effects • The proposed RTS vision identifies the need to adapt to meet future challenges and opportunities, which will include resilience to climate change. • Objective 4 can increase societal resilience to the effects of climate change through creating a resilient transport network which is designed to cope with extreme weather events and reduce disruption caused by such events. • There is no clear link between the other objectives and this IIA objective. However, in general they do aim to promote a move to more sustainable modes of transport and reduce emissions which can help combat climate change. Mitigation and Enhancement • None required. Assumptions • No additional assumptions identified.

IIA Objective	RTS Vision	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Commentary
							Uncertainties • No additional uncertainties identified.
13. Landscape: Protect and enhance the landscape character, townscape character and visual amenity.	+	0	+	0	0	0	Assessment of Predicted Effects • The proposed RTS vision supports the creation of an attractive and vibrant town which will have a positive effect on the local character. • Objective 2 promotes healthy streets which relates to providing high quality urban design. • There is no clear impact on the other objectives and the IIA objectives. However generally they do support a transition to more sustainable forms of transport which can have beneficial effects to townscape and landscape character through reductions in traffic and congestion. Mitigation and Enhancement • None required Assumptions • No additional assumption identified Uncertainties • No additional uncertainties identified

6.2.5 **Table 6.1** demonstrates that, whilst the RTS and individual proposed RTS Objectives relate to specific topics, taken together they provide strong coverage of most of the IIA Objectives and there are no complete gaps. Indeed, the wording of some proposed RTS Objectives closely match the IIA Objectives.

6.2.6 Considered as a whole, the proposed Strategic Objectives therefore appropriately respond to identified key environmental, equalities and health issues as well as responding to identified transport challenges. In particular, the holistic RTS Vision and Objectives 1 and 2 have been shown to be particularly important in providing a hook to allow the environmental effects on transport infrastructure and travel behaviours to be considered in future decision making. The proposed RTS Vision and Objectives are therefore considered to provide a relatively strong framework to underpin the policies and proposals within the RTS, and no further modifications are identified as being required (beyond the IIA recommendations in **Table 4.1** which have already been incorporated into the RTS).

6.3 IIA of Proposed Transport Schemes and Initiatives

6.3.1 **Section 6** of the RTS outlines a suite of proposed transport schemes and initiatives to be taken forward by RBC and partner organisations in order to implement the proposed RTS Vision and Objectives.

6.3.2 This section presents the key findings from the IIA of these proposed transport schemes and initiatives. Detailed assessment matrices identifying all likely effects from components of the RTS are provided in **Appendix E**. To enable the assessment to be proportionate and consistent, the following groupings of proposed schemes and initiatives have been subject to IIA together:

- Multi-Modal Transport
- MM1: Transport Corridor Multi-Modal Enhancements
- MM2: Inner Distribution Road (IDR) Multi Modal Enhancements
- MM3: Oxford Road Multi-Modal Enhancements
- MM4: Cross-Thames Travel
- MM5: Connecting Neighbourhoods
- MM6: Demand Management
- Public Transport Schemes – Behaviour Change and Shared Services:
- BC1: Superbus Network
- BC2: Concessionary and Discounted Travel Scheme
- BC3: Community Transport
- BC4: Demand Responsive Transport
- BC5: Mobility as a Service (MaaS)
- Public Transport Schemes - Fast Track Public Transport Corridors and Bus Corridors:
- FT1: South Reading Bus Rapid Transit Corridor
- FT2: Bus Rapid Transit Corridors

- Public Transport Schemes - Park and Ride:
- PR1: Mereoak Park and Ride Expansion
- PR2: Winnersh Triangle Park and Ride Enhancements
- PR3: Park and Ride Mobility Hubs
- Public Transport Schemes - Railway Stations:
- RS1: Reading Station Interchange Enhancements
- RS2: Reading West Station Upgrade
- RS3: Tilehurst Station Upgrade
- Active Travel:
- AT1: Town and Local Centre Public Space Enhancements
- AT2: Strategic Pedestrian Routes
- AT3: Local Pedestrian Routes
- AT4: Strategic and Town Centre Cycle Routes
- AT5: Shinfield Road Active Travel Improvements
- AT6: Bath Road/Castle Hill Active Travel Improvements
- AT7: London Road Active Travel Improvements
- AT8: Local Cycle Routes
- AT9: Sustainable and Safer Travel to School
- AT10: Play and School Street Programme
- AT11: Cycle Parking Hubs and Facilities
- AT12: Micro-Mobility Hire Scheme
- Network and Demand Management:
- NM1: Traffic and Junction Management
- NM2: Parking Schemes and Management
- NM3: Road Safety Schemes
- NM4: Electric Vehicle Charging
- NM5: Car Clubs
- NM6: Intelligent Transport Systems (ITS)

- NM7: Smart City Initiatives
- NM8: Demand Management
- Communication and Engagement
- CE1: Progress Reporting and Public Engagement
- CE2: Marketing and Promotion
- CE3: Travel Information and Advice
- CE4: Training, Education and Initiatives
- CE5: School Travel Accreditation Programme

6.3.3 With reference to the 13 IIA Objectives set out in the IIA Framework (**Table 4.1**) the key findings from the IIA of these proposed transport schemes and initiatives are summarised below.

IIA Objective 1 – Health

6.3.4 The vast majority of the proposed schemes and initiatives are expected to have a beneficial effect on this IIA objective through increasing access to local health care and leisure facilities, reducing isolation and severance. Positive effects are also associated with improvements to public transport, walking and cycling links through reducing reliance on private car travel.

6.3.5 Schemes which support the uptake of public transport and active travel (such as Railway Station, Active Travel, Fast Track Public Transport Corridors and Communication and Engagement schemes) are likely to have the most beneficial impact on this IIA objective through increasing levels of physical activity through active travel and reducing transport related effects on air and noise pollution. This can help reduce incidences of 'lifestyle' diseases (such as coronary disease, cancers and type 2 diabetes) and reduce the harmful effects associated with exposure to poor air quality (such as stroke, heart disease, lung cancer, and both chronic and acute respiratory diseases, including asthma).

6.3.6 In addition to this, schemes such as Community Transport and Demand Responsive Travel can help reduce social isolation of those who are less able bodied or live in remote locations, where public transport services are less accessible, individuals have no access to private cars or may be unable to afford private taxis (such as those on low incomes). This can increase mental health and wellbeing though enabling access to local facilities and enabling social interaction.

6.3.7 No significant negative effects were identified, however there may be some minor negative effects associated with schemes involving temporary construction works and initiatives which increase the capacity of the road network (e.g., Cross-Thames Crossing).

IIA Objective 2 - Safety and Security

6.3.8 The proposed schemes and initiatives generally aim to increase the safety of vulnerable road users when walking, cycling or using public transport. Schemes likely to have the most beneficial effect are those which address identified safety issues, (such as Reading West Station Upgrades and Road Safety Schemes) or education, training and skills to improve the safety and awareness of vulnerable road users (e.g., Training, Education and Initiatives and the School Travel Accreditation Programme). Other schemes also positively contribute to this objective (although to a lesser extent) including through increased awareness of travel services to help them travel safely and improving waiting services at interchanges such as Park and Ride facilities.

6.3.9 The majority of Active Travel measures are anticipated to have significant positive effects with the exception of the Cycle Hire Scheme which may have a minor negative effect as this may increase the number of collisions occurring with vulnerable road users due to increases in the number of inexperienced cyclists on the road and not wearing helmets. No significant negative effects on this IIA objective were identified.

IIA Objective 3 - Equality and Social Inclusion

6.3.10 The proposed Concessionary and Discounted Travel Schemes, Community Transport and Demand Responsive Transport schemes and initiatives all directly target groups who are less likely to be able to access the existing transport network due to mobility issues, costs or availability of services and so are likely to have a significant positive effect. These measures will help create a more equitable and accessible transport service which can help increase the availability of opportunities and services to a wider range of users, which will help contribute to reducing inequality more widely within the local area.

6.3.11 Proposed schemes which provide new or improved public transport services (such as Cross Thames Travel South Reading Fast Track Public Transport Corridors, and Railway Stations) are also anticipated to have significant beneficial effects on this IIA objective as they will benefit a wide range of users in terms of mobility and affordability. Transport schemes are also likely to be located in or target areas where there are relatively high proportions of the population who are elderly, children, disabled/in poor health or income deprived.

6.3.12 Potential for significant negative effects have been identified in relation to Mobility as a Service (Maas) as this has the potential to exclude groups who are less familiar with technology or unable to afford a smart phone to access to mobile app-based services (e.g., the elderly or those on low incomes). Demand Management measures will be subject to an EqIA however they still have the potential to have a minor negative effect through putting financial strain on those on low incomes or ‘just about managing’. Active Travel measures generally have less of an impact on this IIA objective as they are less accessible to those who are less mobile. No significant negative effects on this IIA objective were identified.

IIA Objective 4 - Accessibility

6.3.13 The majority of schemes and initiatives will have a positive effect on this IIA objective but to varying degrees. Those which are most beneficial are: Major Multi-Modal Transport, Fast Track Public Transport Corridors and Bus Corridors, Railway Stations and Active Travel schemes; these will all create new or improved transport facilities to help improve access in and around Reading via a range of transport modes. However general measures will work this can also help reduce reliance on cars and reduce congestion which can benefit accessibility on the road network more generally. This is particularly beneficial given that congestion within and around Reading is a key factor influencing the accessibility of the area and journey times.

6.3.14 No significant negative effects are identified, however there may be minor negative effects associated with the Play and School Street Programme (which could reduce the accessibility of homes and facilities for groups who are less able, albeit it temporary, however this could become a regular issue) and MaaS, for the reasons stated above under objective 3 in that this may be less accessible to certain groups.

IIA Objective 5 - Employment and Skills

6.3.15 The proposed schemes and initiatives will generally help increase the accessibility of Reading and enable better access to education and employment opportunities via all modes of transport, particularly more sustainable modes. The schemes likely to be most beneficial are those which directly increase access to service (e.g., proximity to schools, colleges and employment areas). Although locations are indicative at this stage, it is anticipated that the Cross Thames Travel scheme will increase access to Thames Valley Park from north Caversham. New FTPTC routes and new and improved railway stations will also help connect Reading town centre to economic

areas such as Green Park. Other measures will generally help to increase accessibility through helping reduce traffic congestion and travel by private vehicle with associated benefits for public transport services reliability and decreased journey times.

6.3.16 No negative effects on this IIA objective have been identified.

IIA Objective 6 - Material Assets

6.3.17 All proposed schemes and initiatives will help increase capacity across the transport network (prioritising sustainable modes) to help unlock allocated and potential development sites in Reading and surrounding areas such as south Oxfordshire, Wokingham and Bracknell. In particular, it is anticipated that Cross-Thames Travel and Electric Vehicle Charging will have a significant positive effect on this IIA objective as they will provide new infrastructure and facilities to help meet identified needs. Other measures will provide positive effects through providing improvements to existing networks and reducing reliance on private car use which can help increase capacity on the local road network and opportunities for further development in the area.

6.3.18 No negative effects on this IIA objective have been identified.

IIA Objective 7 - Productivity and Competitiveness

6.3.19 The proposed schemes and initiatives will generally have a positive effect on this IIA objectives. Measures that are anticipated to be most beneficial are Multi-modal Transport, Fast Track Public Transport Corridors as these schemes will directly increase access to key services and employment areas. Most other measures will have a beneficial effect on this IIA objective, largely through promoting the use of more sustainable modes of travel and reducing reliance on private cars. This will help reduce traffic congestion in and around Reading, decreasing journey times and helping increase the efficiency or movement of people and freight.

6.3.20 No negative effects on this IIA objective have been identified.

IIA Objective 8 - Air Quality and Amenity

6.3.21 All proposed schemes and initiatives will either directly or indirectly help reduce reliance on private car travel through encouraging walking, cycling and use of public transport, which will help reduce transport related emissions and the deterioration of air quality in Reading. This will include improvements to air quality along heavily congested routes and the central Air Quality Management Area. Uptake of more sustainable forms of transport, particularly walking and cycling, can also help reduce noise and vibration impacts associated with heavy traffic. The most beneficial schemes which support this IIA objective are anticipated to be those relating to Park & Ride, Railway Stations, Fast Track Public Transport Corridors and Bus Corridors and Active Travel.

6.3.22 There is potential for there to be negative effects to nearby residential receptors associated with noise and dust from during the construction phase of schemes requiring physical construction works. It may also shift air quality and noise issues to new areas where these schemes are proposed, affecting new receptors located nearby, although these can generally be mitigated during both construction and operation stages. No significant negative effects on this IIA objective have been identified.

IIA Objective 9 - Sustainable Placemaking

6.3.23 The effect that the proposed schemes and initiatives have on this IIA objective is varied. Significant positive effects are only anticipated in relation to Town and Local Centre Public Space Enhancements as they will improve the streetscape to help create a more pleasant urban environment. There are also likely to be positive effects associated with upgrades and improvements to infrastructure more generally (e.g., improvements to Reading West, Tilehurst

and Reading Stations and strategic and local walking and cycling links) and through potential reductions in traffic that may have a positive effect of urban quality and the setting of nearby historic assets, however impacts may be more limited and dependent on where schemes are implemented. Improved walking and cycling infrastructure can also help contribute to the attractiveness of an area, particularly where new links reduce severance previously experienced.

6.3.24 While there may be some negative impacts associated with the construction of Cross-Thames Travel and other infrastructure improvement schemes the overall impact on this IIA objective is deemed to be neutral on the balance of placemaking and connectivity benefits that may be available to communities. It has been identified that Park and Ride schemes may have a minor negative impact on placemaking if they are not sensitively designed to suit their locations. Negative effects were identified for PR1: Mereoak Park and Ride expansion which is adjacent to a residential area and open agricultural fields and PR3: Park and Ride Mobility Hubs as no defined locations have been identified for these schemes yet. No significant negative effects on this IIA objective have been identified.

IIA Objective 10 - Climate Change Mitigation

6.3.25 The majority of the proposed schemes will have a minor or major beneficial effect on this IIA Objective. It is anticipated that Fast Track Public Transport Corridors, Railway Station and Active Travel schemes will have significant positive effects through helping support decarbonisation of the transport sector and promoting active travel such as walking and cycling. There are likely be beneficial effect, but to a lesser extent, associated with other schemes and initiatives through promoting the use and increasing the attractiveness of more sustainable modes of transport, therefore helping reduce Green House Gas (GHG) emissions from private car travel.

6.3.26 However, no significant negative effects on this IIA objective have been identified.

IIA Objective 11 - Biodiversity, Geodiversity and Soil

6.3.27 It is not anticipated that there will be any significant positive effects on this IIA objective associated with the proposed schemes. There may be direct minor positive effects associated with provision of green space and planting as part of urban realm improvements (e.g., Transport Corridor and Inner Distribution Road Multi-Modal Enhancements and Town and Local Centre Public Space Enhancements). There may also be indirect positive effects associated with schemes that help reduce reliance on private car travel (e.g., public transport and active travel schemes) which would reduce effects on habitats in proximity to congested highways where there are high levels of air and noise pollution, however effects are likely to be limited in isolation.

6.3.28 Two of the Multi-modal Transport Schemes are likely to have minor negative effects on this IIA objective as they will involve new land and/or restrict access to nature. The Cross-Thames Travel will pass over Thames and Caversham Lakes and so have the potential to have a minor negative effect on this habitat, the construction of the crossing also has the potential to obstruct the Thames Path. The Cross-Thames Travel orbital route could pass in close proximity to Clayfield Copse Local Nature Reserve (LNR) and a number of ancient woodlands including Blackhouse Wood and Chambers Copse and therefore has the potential to have a negative effect, depending on its layout. No significant negative effects on this IIA objective have been identified.

IIA Objective 12 - Water, Flood Risk and Resilience

6.3.29 The vast majority of schemes and initiatives are likely to have a neutral or effect on this IIA objective given that they will involve limited or no land take/ built infrastructure. Where schemes involve built infrastructure but are in areas of low flood risk, not likely to be in proximity to waterbodies or have been granted planning permissions it is also anticipated that they will have a Neutral effect on this IIA objective.

6.3.30 While construction of the Cross-Thames Travel scheme will be close proximity to water bodies there is a potential for construction activities to have a negative effect on water quality in absence of appropriate mitigation. However, it judged that appropriate mitigation measures will be adhered to and implemented through a construction environmental management plan (CEMP), this having a neutral effect overall. No significant negative effects on this IIA objective have been identified.

IIA Objective 13 – Landscape and Townscape

6.3.31 A significant positive effect is anticipated in relation to Town and Local Centre Public Space Enhancements associated with improvements to pedestrian and cycling facilities and amenity areas. There may also be some minor positive effects on landscape and townscape associated with general upgrades and improvements (e.g., local and strategic walking and cycling links, FTPTC and railway station improvements) which can also help reduce traffic, which can have a positive effect on character of the area.

6.3.32 Proposed transport schemes which will involve more extensive built infrastructure or may support further build infrastructure likely to have a greater visual impact all have potential to have minor negative effects on this IIA objective. This includes South West Reading Park and Ride, Cycle Hire, Cycle Parking Hubs and Facilities and Electric Vehicle Charging. The Cross-Thames Travel and associated orbital route interventions are likely to have a minor negative effect as they are located on the rural fringes of Reading and therefore have the potential to impact the local landscape character of the area through the provision of new transport infrastructure and associated traffic. The North Reading Orbital route will also help unlock future development sites to the north, which will have a further impact on the character of the landscape. No significant negative effects on this IIA objective have been identified.

6.4 IIA of Proposed Policies

6.4.1 This section presents key findings from the IIA of the proposed policies set out within the RTS. The summary assessment provided below uses each of the IIA Objectives from the IIA Framework as headings, whilst detailed assessment matrices identifying all likely effects from the policies is provided in **Appendix F**. Whilst this section discusses the key IIA findings for all 32 policies it does not include consideration of the individual transport infrastructure interventions which support these policies, this is instead addressed under **Section 5.3**.

IIA Objective 1 – Health

6.4.2 The proposed policies generally support health and wellbeing and the majority have a beneficial effect on this IIA objective. Beneficial effects are predominantly related to the support of active travel measures and increasing access to local facilities and services (e.g., health care). This will help increase levels of physical activity in children and adults, reducing incidences of lifestyle diseases associated with inactivity and obesity and supporting mental health and wellbeing through increased opportunities for social interaction. Encouraging a shift towards use of more sustainable forms of transport also has beneficial effects on health through helping improve air quality, reducing the negative impact emissions have on the health of residents and visitors. For example, Policy RTS4- Development Control, Policy RTS13 - Healthy Streets and Policy RTS14 - Walking and Cycling are anticipated to have the significant (major) positive impacts on this IIA objective due to direct contributions to health and wellbeing and supporting physical activity.

6.4.3 No negative effects on this IIA objective have been identified.

IIA Objective 2 - Safety and Security

6.4.4 The proposed policies have a mixed relationship on this IIA objective, with many having a neutral or unclear relationship. It is anticipated that Policy RTS5 - Sustainable Modes of Travel to School, Policy RTS14 - Walking and Cycling Policy RTS18 - Road Safety and RTS23 - Motorcycles and Powered Two-Wheelers will have significant (major)positive effects on this IIA

objective through providing infrastructure improvements to improve safety and/or support provision of education and training to help improve the safety of a wider range of road users, including vulnerable users. Generally, through reducing the volumes of traffic on the road network through supporting a transition to more sustainable modes of transport (e.g., bus and rail) this could help reducing potential for road collisions to occur, however the effects of the are uncertain.

6.4.5 No negative effects on this IIA objective have been identified.

IIA Objective 3 - Equality and Social Inclusion

6.4.6 There is a varied relationship between policies and this IIA objective. Policy RTS3 - Equality and Inclusivity, Policy RTS13 - Healthy Streets and Policy RTS15 - High-Quality Public Space are anticipated to have significant (Major) positive effects on this IIA objective. In particular, RTS3 includes specific commitments and EqIA requirements which actively support the removal of barriers to transport, promote equal access for all users and seek to create a transport network that is both physically accessible and financially accessible for all. RTS13 and RTS15 will also support the creation of inclusive spaces, with RTS13 also promoting social interaction through creation of healthy streets. Other measures will similarly improve the accessibility of the transport network for a wide range of users, including the public transport network.

6.4.7 No significant negative effects have been identified, however potential minor negative effects were identified for Policy RTS22 - Demand Management and Policy RTS28 - Mobility Services & Sharing Economy. Although it is noted that an EqIA would be carried out as part of the implementation of any demand management measures, there is still potential for there to be negative effects to those who are 'just about managing' and negatively impacts by costs associated with travelling to or through demand management areas to access services. RTS28 may also be less accessible to certain groups (e.g., the elderly or those on lower incomes) where MaaS services are solely app based. Consideration should be given to providing this service in a range of mediums and languages to allow the widest range of users to access this service and benefits.

IIA Objective 4 - Accessibility

6.4.8 The majority of policies will have a positive effect on this IIA objective given that they will support improvements to the transport network to increase its functioning and accessibility, enabling people to travel more efficiently and access services, facilities, employment and education. In particular, it has been identified that Policy RTS3 - Equality and Inclusivity, Policy RTS7 - Public Transport, Policy RTS8 - Bus and Community Transport, Policy RTS9 – Rail and Policy RTS29 - Travel Information and the Active Travel will have a significant (Major) positive effect on this IIA objective given that they will increase the accessibility of Reading and the surrounding area for a wide range of users.

6.4.9 No significant negative effects on this IIA objective have been identified, however it is noted that demand management measures (RTS22) whilst also helping reduce congestion and therefore improving accessibility, it will restrict and reduce the accessibility of the areas in which the measures are implemented.

IIA Objective 5 - Employment and Skills

6.4.10 The proposed policies will generally support improving the transport network to help increase its capacity. This can help support the delivery of new employment sites and increase potential for delivery of new development sites, in and around Reading. Improved reliability and frequency of transport services can also help reduce economic losses associated with time spent waiting for transport service and journey times (e.g., late buses or freight struck in traffic). No significant positive effects were identified on this IIA objective, however policies relating to public transport, active travel and network management will generally have a minor positive effect in regard to employment.

6.4.11 No negative effects on this IIA objective have been identified.

IIA Objective 6 - Material Assets

6.4.12 The majority of the proposed policies will have a positive effect on this IIA objective through commitments to making improvements to existing transport infrastructure to increase the effectiveness and reliability of the transport network. These improvements are largely through upgrades but also include the implementation of new systems and services (e.g. Mobility as a Service). In addition to this, policies support a move to more sustainable forms of transport, reducing reliance on fossil fuels and the use of natural resources. The policies which have a significant (Major) positive effect on this IIA objective area Policy RTS25 - Highways Asset Management and Policy RTS28 - Mobility Services & Sharing Economy and Policy RTS11 Waterways given they are likely to have a more direct impact on meeting identified need and are in direct relation to Reading's natural resources and existing infrastructure.

6.4.13 No negative effects on this IIA objective have been identified.

IIA Objective 7 - Productivity and Competitiveness

6.4.14 Policies will generally have a positive effect on this IIA objective given that the majority of them support the provision of more effective transport services, which can help free up capacity on the transport network and give people better access to more reliable transport services. Supporting the uptake of more sustainable forms of transport is a key element in supporting this IIA objective to increase capacity of the highway network in particular, which can allow freight to be transported more effectively and reduce the time freight vehicle spend in traffic. It is therefore anticipated that Policy RTS7 - Public Transport, Policy RTS8 - Bus and Community Transport, Policy RTS9 – Rail, Policy RTS24 - Freight and Sustainable Distribution and Policy RTS29 - Travel Information will have a significant (Major) positive effect on this IIA objective.

6.4.15 No negative effects on this IIA objective have been identified.

IIA Objective 8 - Air Quality and Amenity

6.4.16 The majority of these measures will have a positive effect on this IIA objective given that they support the transition to more sustainable forms of transport, reducing reliance on private cars and associated negative effects on air quality. In addition to this, reductions in traffic can also help improve the amenity of an area and reduce disturbance from noise and vibration from vehicles. Those which are anticipated to have a significant (Major) positive effect are Multi Modal and Public Transport related policies, Policy RTS13 - Healthy Streets, Policy RTS22 - Demand Management, Policy RTS24 - Freight and Sustainable Distribution, Policy RTS28 - Mobility Services & Sharing Economy and Policy RTS29 - Travel Information, RTS15 High-Quality Public Space and RTS29 Ultra-Low Emission Vehicles.

6.4.17 No negative effects on this IIA objective have been identified.

IIA Objective 9 - Sustainable Placemaking

6.4.18 Several of the policies directly support urban realm improvements and protection of heritages assets, namely Policy RTS2 - The Environment and Climate, Policy RTS4 – Development Control, Policy RTS13 - Healthy Streets and Policy RTS15 - High-Quality Public Space. The majority of policies support the more efficient and effective use of existing assets and land to by supporting the uptake of more sustainable forms of transport, reducing the reliance of private car travel and the need to build new roads to accommodate increases in users on the transport network. Reducing traffic and congestion can also sever to positively contribute to the setting of local heritage assets. Significant (Major) positive effects are also therefore anticipated for Policy RTS8 - Bus and Community Transport, Policy RTS9 – Rail, Policy RTS24 - Freight and Sustainable Distribution, Policy RTS25 - Highways Asset Management and Policy RTS28 - Mobility Services & Sharing Economy.

6.4.19 A Minor Positive effect was identified in regard to Sustainable Placemaking for Policy RTS11 – Waterways as balance will be needed between encouraging the potential increases in water traffic and placemaking surrounding the River Thames which could impact the setting of heritages assets and environmental baselines in close proximity to proposed routes. No significant negative effects on this IIA objective have been identified.

IIA Objective 10 - Climate Change Mitigation

6.4.20 The majority of policies will have a positive effect on this IIA objective through supporting a transition to more sustainable forms of transport and electric vehicles, helping to reduce carbon emissions associated with private car travel. These policy measures are important in helping RBC meeting their target of a carbon neutral town by 2030 and responding to the climate emergency. Significant (Major) positive effects on this IIA objective are associated with Public Transport and Active Travel policies, Policy RTS1 - Sustainable Transport, Policy RTS2 The Environment and Climate Change, Policy RTS22 - Demand Management, Policy RTS28 - Mobility Services & Sharing Economy and Policy RTS29 - Travel Information.

6.4.21 No negative effects on this IIA objective have been identified.

IIA Objective 11 - Biodiversity, Geodiversity and Soil

6.4.22 The majority of policies will have a limited effect on this IIA objective given that they will generally contribute to reducing traffic which may help reduce disturbance to habitats and species from noise and air pollution, however effects are likely be limited in isolation. Those which are likely to have a positive effect contribute to urban greening and biodiversity improvements. In particular, this includes RTS4 – Development Control which is likely to have a minor positive effect as Biodiversity Net Gain targets will be required to be implemented. RTS2 - The Environment and Climate identifies that transport schemes will deliver biodiversity net gains and will therefore directly contribute to enhancing biodiversity which will have a significant (Major) positive effect. A Neutral effect was identified Policy RTS11 – Waterways as the increase in vessels using Readings waterways may have an impact on ecological features in and around these areas depending on implementation No significant negative effects on this IIA objective have been identified.

IIA Objective 12 - Water, Flood Risk and Resilience

6.4.23 The majority of policies have no clear relationship with this IIA objective. Those which are related have a varying effect. Policy RTS2 - The Environment and Climate and Policy RTS26 - Sustainable Drainage (SUDS) & Surface Water Management are anticipated to have a significant positive effect on this IIA objective through supporting the resilience of transport infrastructure to climate change (e.g., increased flooding) and implementing SUDs measures within transport schemes to help manage surface water runoff more effectively. Policy RTS13 - Healthy Streets may also positively contribute to this IIA objective, but to a lesser extent, through supporting the provision of green infrastructure which can also help manage surface water runoff.

6.4.24 Policy RTS11 – Waterways has the potential to negatively impact the water quality of the rivers through increasing water traffic and potential for fuel leaks and spills although these can be mitigated. There may also be disturbance to water environments through increased turbulence from boat motors. No significant negative effects on this IIA objective have been identified.

IIA Objective 13 – Landscape and Townscape

6.4.25 The majority of policies will positively contribute to this IIA objective through improving urban realm and walking and cycling infrastructure and supporting sustainable modes of transport, reducing traffic and the negative impact that can have on landscape and townscape character. Those which are likely to have a significant positive effect are Public Transport, Active Travel, Community and Engagement and Network Management related policies. In addition to this,

Policy RTS2 - The Environment and Climate is also likely to have a significant (Major) positive effect through improving local environments and protecting heritage assets.

6.4.26 An Uncertain effect was identified Policy RTS11 – Waterways due to the potential for increased boat traffic to negatively impact local character. No significant negative effects on this IIA objective have been identified.

Combined and Cumulative effects

6.4.27 Each scheme and policy are part of a wider strategy that is necessary to provide the infrastructure to deliver the identified growth needed in RBC and the wider Reading area. Individually the schemes and policies will have some benefit in reducing congestion and encouraging the uptake of more sustainable forms of transport. However, these benefits will be cumulative and as more schemes are delivered, and more policies implemented, that support each other so the significance of effects will be increased. For example, implementation of demand management measure and restrictions will disincentivise private car travel to the areas in which these measures are implemented, but to be most effective this need to be support by provision of attractive alternative modes of transport (e.g., bus priority measures, new public transport routes and services or better walking and cycling facilities and links). By doing this these policies and schemes cumulatively they will have a positive significant effect. This includes additional beneficial effects against the majority of IIA objectives.

6.4.28 The effects of the combined LTPs for Reading and its surrounding authorities also is essential in achieving more significant positive effects given the nature of Reading and the number of users that commute into and out of it each day into neighbouring local authority area. It is not the role of this IIA to assess these other plans, however, each plan must be developed to be compatible with one another and to enable an integrated system of transport improvements to be delivered in an around RBC area. This will deliver the benefits needed for the wider Reading urban area – as well as achieving more sustainable and equitable public transport infrastructure.

6.5 Likely Health Effects from the RTS

Overview

6.5.1 The relationships between transport and health are multiple, complex, and linked to social and economic factors. Transport enables access to work, education, social networks, and services that can improve people's opportunities. However, transport contributes significantly to some of today's greatest challenges to public health in England, including road traffic deaths and injuries, physical inactivity, the adverse effect of traffic on social cohesion and the impact of outdoor air and noise pollution. In addition to carbon dioxide, other emissions from petrol and diesel vehicles, such as nitrogen dioxide and particulate matter, contribute to poor air quality which Public Health England identify as the largest environmental risk to public health in the UK[7].

Health Profiles and Strategies

6.5.2 According to the Reading Public Health Profile 2019[8] the health of people in Reading is varied compared with the England average. Reading has a lower proportion of people aged 65 and over compared to the England average and a higher percentage of people aged 20-40. Life expectancy for women is similar to the England average, however life expectancy for men is 1 year less than the England average (79.6) which is significantly worse. Regional life expectancies for both men and women are higher compared with Reading and England averages.

[7] Public Health England (2018) Health matters: air pollution. [Online] Available at: https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution

[8] Public Health England (2019) Reading Local Authority Health Profile. [Online] Available at: https://fingertips.phe.org.uk/profile/health-profiles

6.5.3 There is local inequity in Reading and more deprived areas are characterised by worse health outcomes. Life expectancy is 8.8 years lower for men and 6.3 years lower for women in the most deprived areas of Reading than in the least deprived areas. There has also been an increase in the number of Lower-layer Super Output Areas (LSOA) in Reading which fall into the category of the 10% most deprived areas in England from none in 2010[9], to 2 in 2015[10] and to 5 in 2019[11].

6.5.4 Reading's under 75 mortality rates from all causes, emergency hospital admissions rate for intentional self-harm, diabetes diagnoses rate, GSCE attainment, new sexually transmitted infection diagnoses rate, and tuberculosis incidence rate are all substantially worse than the England average. Reading also scored worse on a range of other factors, including mortality from cardiovascular disease and dementia diagnosis, however this was not significantly different[8].

6.5.5 About 15.7% (4,945) of children in Reading live in low-income families, however this is significantly better than the England average. Reading also scored significantly better than the England average in relation to rates of people killed and seriously injured on England's roads, hospital admission rate for alcohol-related conditions, percentage of adults classified as overweight or obese and hospital admission rate for violence[8].

6.5.6 The Reading Joint Strategic Needs Assessment (JSNA) provides an overview of local health and wellbeing needs and identifies challenges and projected future needs. It identifies that a significant proportion of the population of Reading have a disability with 17% of residents reporting their activities were limited by a disability, however this is similar to the national average[12].

6.5.7 In relation to mental health, the 2018 JSNA Annual Report 'Creating the Right Environment for Health'[13] identified that 5.2% of adults report long-term mental health problems, and 11.1% report suffering from depression or anxiety. In addition to this, 4.47% of over 65s are recorded by their GP to have dementia. It identifies the benefits of the natural environment to both mental and physical health and wellbeing, for individuals and our communities and its role in helping to reduce health inequalities. One of the recommendations of the report is that *"Opportunities to increase active transport should be considered when designing new green spaces and in the improvement of existing space"*

6.5.8 Key health and wellbeing needs for the area have been identified through the JSNA and reported in Readings Health and Wellbeing Strategy[14], these include:

- Life expectancy for men is poor, with significantly worse early death rates from cardiovascular disease, and a 10.2 year difference in life expectancy between our least and most deprived wards;

[9] Ministry of Housing, Communities & Local Government, English Indices of Deprivation 2010, English Indices of Deprivation: Overall

[10] Ministry of Housing, Communities & Local Government, English Indices of Deprivation 2015, File 1: Index of Multiple Deprivation

[11] Ministry of Housing, Communities & Local Government, English Indices of Deprivation 2019, File 1: Index of Multiple Deprivation

[12] Reading Borough Council Joint Strategic Needs Assessment. [Online] Available at: http://www.reading.gov.uk/jsna/common-causes-of-death-disability

[13] Reading Borough Council (2018) Creating the Right Environments for Health, the Annual Report from the Director of Public Health. [Online] Available at: https://www.reading.gov.uk/article/12792/Annual-Public-Health-Reports

[14] Reading Borough Council (2017) Reading's Health and Wellbeing Strategy 2017-2020. [Online] Available at: http://www.reading.gov.uk/media/6822/Health--Wellbeing-Strategy/pdf/Health_and_Wellbeing_Strategy_2017-2020_final.pdf

- Higher levels of homelessness, including families, and higher rates of unemployment. Crime rates are also higher than expected;
- Rates of obesity double during primary school, and significant numbers of children have tooth decay; and
- Higher than expected numbers of young people not in education employment or training.

6.5.9 Reading's Health and Wellbeing Strategy also identifies the following issues which are related to transport and access:

- 61% of adults in Reading are overweight or obese;
- Levels of childhood obesity in Reading in Reception Year children and Year 6 children are consistently above the South East average;
- 40.5-49.6% of residents aren't doing enough physical activity to protect their health;
- Reducing loneliness and social isolation;

6.5.10 In relation to the above, the Health and Wellbeing Strategy has identified health priorities and actions for Reading. Transport and Access can contribute positively to several of these priorities, mainly:

- Support people to make healthy life choices (including reducing obesity and increasing physical activity).
- Promote walking and cycling both for leisure and active travel
- Reducing loneliness and social isolation.
- Improve our understanding of who in our community is most at risk from loneliness and develop a co-ordinated all-age approach to reach those most in need of support to connect or re-connect with their community.
- Improve the quality of people's community connections as well as the wider services which help these relationships to flourish – such as access to transport and digital inclusion.
- Making Reading a place where people can live well with dementia.
- Allow people with dementia to have equal access to health and wellbeing support which is available to everyone.

HIA of RTS

6.5.11 The completed London HUDU Rapid HIA checklist is provided in **Appendix G**. Key findings from this assessment are as follows:

- **Housing Quality and Design** – It is not anticipated that the RTS will have an impact on these criteria given that the document does not directly identify policies or interventions for housing design, although transport improvements can help unlock future sites for delivery of housing.
- **Access to Healthcare Services and other Social Infrastructure** – the RTS will help increase general access in and around Reading through reducing congestion and providing new and improved transport facilities and services which benefit all users. This includes those who are less able bodied or in deprived areas and may require more medical attention

and hospital or GP visits. Specific measures have been identified in the RTS Demand Responsive Transport interventions which can help improve access for such users. Increased access to social infrastructure can also help reduce the prevalence of social isolation and loneliness (e.g., by enabling elderly people to access community centres and groups) and reduce social exclusion. Overall, the HIA identifies a potential positive health impact in regard to access to healthcare services and other social infrastructure.

- **Access to Open Space and Nature** – Overall, the RTS will help increase access in and around Reading which will enable better access to various types of open space and nature. There will also be public realm improvements, which will include provision of green corridors and landscaping. Interventions outlined in the RTS involve spatial land take on greenfield sites on the edge of Reading, however the land take of the interventions is generally limited, and as locations are only indicative at this stage it is not certain what impact interventions will have. There is also potential for there to be some disruption to public paths (such as the Thames Path) during the construction phase of some of the built interventions which may restrict access to natural spaces in this location. Increasing access to open space can also help increase physical activity and reduce obesity by providing people with more convenient opportunities and pleasant spaces to exercise outside, this is particularly beneficial given the incidence of obesity and physical inactivity in Reading. Overall, the HIA identifies a potential positive health impact in regard to access to open space and nature.

- **Air Quality, Noise and Neighbourhood Amenity** – The RTS aims to encourage the use of more sustainable forms of transport and reduce reliance on private car travel. This includes providing new and improved public transport services, cycling and walking facilities and increase provision of electric vehicle charging points. These measures can help reduce emissions of nitrogen oxides and particulate matter from road transport and improve air quality in and around Reading as well as reduce noise pollution. Policies and interventions include commitments to improving air quality within Reading. In regard to noise pollution overall, the RTS reduce reliance on the private car through provision of both new and improved public transport, cycling and pedestrian infrastructure, as well as electric charging infrastructure. However, there may be some negative impacts associated with air quality and noise impacts measures that will increase capacity on specific areas of the road network or new rail routes (e.g., through provision of the Cross Thames Travel scheme). Individual projects will need to be assessed. Improvements to air quality and noise impacts have the potential to increase physical activity through creating more pleasant environments and encourage people to get outdoors for to exercise, commute or for leisure. Overall, the HIA identifies a potential positive health impact in regard to air quality, noise, and neighbourhood amenity.

- **Accessibility and Active Travel** – the RTS aims to increase the accessibility of Reading through providing new and improved infrastructure and services, helping increase the capacity of the transport network. It identifies policies and measures to help improve transport services in and around Reading, including between RBC and neighbouring local authority areas such Wokingham. Measures will be implemented to deter people from traveling by private car through provision of Clean Air Zones, Road User Charging and continued parking enforcement whilst active travel will be promoted through public realm improvements and the provision of new and improved local and strategic cycling networks and facilities. The Healthy Streets policy also helps promote a more pleasant and safer environment for cyclist and pedestrians. Promoting active travel can help improve rates of exercise undertaken by the population of Reading by making it a part of their daily routines through cycling to work or walking from home to the bus stop. This is also likely to impact obesity rates, particularly the uptake of active travel in children in increased. Accessibility will also be improved for all users as Reading has outlined their commitment to equal access for disabled people using the transport system and includes measures to improve access for less able-bodied users including Demand Responsive Travel and upgrades to Reading West railway station. The RTS commits to EqIA being undertaken as part of proposed new schemes and policies for compliance with the PSED and in doing so that people with individual protected characteristics are not inequitably affected, including restriction to

accessing facilities and services. Overall, the HIA identifies a potential positive health impact in regard to accessibility and active travel.

- **Crime Reduction and Community Safety –** the RTS includes policies and measures to help increase feelings of safety through maintaining functioning of street lighting in Reading through the Highways Management Policy and increasing natural surveillance at transport interchanges such as Reading West. It is also proposed that secure cycle facilities are provided at transport interchanges to help reduce incidences of bike theft and supports the creation of healthy streets, which includes creating spaces in which people feel safe. Overall, the HIA identifies a potential positive health impact in regard to crime reduction and community safety.

- **Access to Healthy Foods** – It is not anticipated that the RTS will have an impact on these criteria given that it is a strategic transport planning document and does not relate to the provision of food (e.g., allotments or hot food takeaways). However, it is acknowledged that transport services may influence how and what foods people are able to access.

- **Access to Work and Training –** The RTS identifies measures and policies to help increase the access of employment areas via a range of transport modes to suite a range of user needs. This includes increasing capacity on the current highway network as well as providing new facilities and services such as new/ upgraded railway stations, improved cycle routes and use of automated vehicles. These measures and policies can therefore help reduce barriers associated with access to employment and education for a wide range of users and help reduce journey times associated with accessing these opportunities. Overall, the HIA identifies a potential positive health impact in regard to access to work and training.

- **Social Cohesion and Lifetime Neighbourhoods** –The RTS identifies a number of measures to help reduce severance between existing communities (e.g., North Caversham and Woodley through the provision of Cross-Thames Travel and bridge gaps between existing links, increasing connectivity between areas. It also supports access at a strategic level through support of non-private car modes of transport which are more accessible to a wider range of users. This includes improvements to existing transport hubs (such as Reading West Station) to increase accessibility and provision of Community Transport services. Consultation with local stakeholders and communities has been undertaken as part of the development of the RTS further consultation and public engagement is proposed as part of the development of future schemes and initiatives to see that these bests meet the needs of communities which will help increase uptake in their use. Overall, the HIA identifies a potential positive health impact in regard to social cohesion and lifetime neighbourhoods.

- **Minimising the Use of Resources** – the RTS identifies a range of improvements to be made to existing services and facilities including to rail stations, bus routes, junctions and urban realm to increase capacity of the transport network. The RTS identifies measures to be provided on the outskirts of Reading which are likely to require land take however given the nature of the interventions land take is likely to be limited. Proposed policies also support improved use of existing infrastructure and assets, such as waterways, to help transport people around Reading and reduce congestion. The RTS supports the transition to more sustainable forms of transport and shared services which will help minimise the use of resources. The RTS commits to bringing forward projects that are in line with the embodied carbon hierarchy. Overall, the HIA identifies a potential positive health impact in regard to minimising the use of resources.

- **Climate Change** – The RTS supports the decarbonisation of the transport sector by promoting a shift to more sustainable forms of transport and increase in the use of electric vehicles and rail transport (which could ultimately be powered by renewable energy). The RTS provide exact location for where proposed interventions may be provided so it is uncertain what exact impact there will be on biodiversity, it does commit to delivering

biodiversity net gain. Generally, improvements to air quality and noise through reduce private car travel may have positive impact to local habitats and species. Some of the intervention measures my help create capacity on the road network through providing alternative routes and infrastructure i.e., Cross-Thames Travel which could lead to a level of induced private car usage and affect potential reductions in GHG's and associated climate change commitments. The HIA identifies a potential neutral and positive health impact in regard to climate change.

6.6 Likely Equalities Impacts from the RTS

Overview

6.6.1 In accordance with the PSED, the central question which underpins any EqIA is to identify (and where appropriate work to resolve) any likely different or disproportionate impacts on persons with protected characteristics (one or more) resulting from actions undertaken by public bodies. In this case, the question was whether the publication and subsequent implementation of the RTS by RBC would be likely to result in any likely different or disproportionate impacts on persons with protected characteristics or on any vulnerable groups.

6.6.2 The specific assessment of likely equalities impacts draws upon the higher-level assessment of the RTS against relevant IIA Objectives within the IIA Framework (**Table 4.1**), in particular:

- Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.
- Safety and Security: Maintain and enhance safety and security (actual and perceived)
- Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion
- Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.
- Employment and Skills: Support increased and better quality employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities.
- Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.

6.6.3 In assessing likely effects on equality consideration has been given to vulnerable groups as identified and defined by the Equality Act 2010 and Transport Act 2000.

EqIA of the RTS

6.6.4 In relation to the RTS, of the vulnerable groups identified, those who are particularly affected by the interventions are those with mobility issues such as the elderly, disabled or pregnant. These interventions are likely to have a more limited effect on demographic groups with protected characteristics related to gender reassignment, marriage, race, religion, sex or sexual orientation as the identified transport related measures are less likely to disproportionately or differentially affect people within these groups. In addition to this, the interventions can benefit people who are on lower incomes by providing improved affordable transport options, namely bus services, walking and cycling facilities.

6.6.5 The RTS vision supports the implementation of sustainable travel, which is more accessible to a wider range of users (e.g., public transport) which can help increase the accessibility of the transport network, including to those who are less mobile. In addition to this supporting this

transition will also free up capacity on the highway network to enable those users who do need to travel by car (such as those with more severe disabilities), to be able to travel more quickly and efficiently in and around Reading. It also identifies that it will enable 'everyone' in Reading to thrive, further supporting the creation of a transport network which benefits all, regardless of their characteristics.

6.6.6 The objectives also support the uptake of more sustainable transport and will have a similar effect. In particular 'Enabling Sustainable and Inclusive Growth' supports the view that benefits of economic growth need to be felt by the wider community and not at the expense of certain groups of individuals. 'Embracing Smart Solutions' supports the increasing use of technology to manage and access the transport network which may be less accessible to certain users. However, it has been assumed that technologies to be used by travellers will be provided in a range of mediums and languages and that support services will also be provided to see that the benefits of technology will be available to as wide a range of users as possible and will not exclude users from accessing the transport network.

6.6.7 Many of the policies support the provision of transport infrastructure that is accessible to all and will not have an inequitable impact on any group with protected characteristics. In particular, Policy RTS3 – Equality and Inclusivity makes a clear commitment to removing existing barriers to access that currently exist within the transport network and undertaking EqIA as part of the development of new schemes and policies which will help see that no new barriers are introduced. Additionally, Policy RTS14 – Walking and Cycling, specifically makes a commitment to reflect the latest national and local guidance for walking and cycling infrastructure design, and to design the network to accommodate all users where feasible, including wheelchair users, adapted cycles, those who are visually impaired and cycles with trailers. Creating an accessible and affordable transport network will help support the creation of a more equitable community and see that there is more equal access to opportunities and services for all. RTS7 Public Transport includes provisions to collaborate with operators to reduce fares, which may also benefit more vulnerable groups.

6.6.8 It is anticipated that the vast majority of the proposed transport interventions will contribute positively to equality as they will provide upgrades to existing facilities which are currently less accessible and provide new transport facilities and services which will be designed to cater for all users (e.g., Reading West Upgrade providing lifts and ramp access). This will not only help improve new services and infrastructure, but actively look to remove barriers previously created.

6.6.9 Overall, the proposed interventions will help reduce congestion in the Reading urban area, helping improve access of community services, employment and education for all. Interventions which are anticipated to have the greatest positive effect on equality primarily relate to multi-modal transport and public transport, notably Community Transport and Demand Responsive Transport as these will target groups who have more restricted access to the transport and make specific improvements to remove this barrier. Demand management measures such as the Clean Air Zone, Road User Charging and Workplace Levy may a have potential negative effect on equality by increasing the costs of private car use. This would have a disproportionate effect on those who are unable to travel by alternative modes of transport and are on lower incomes or 'just about manging'.

6.6.10 The RTS supports the uptake and increasing use of technology within the transport network through its vision, objectives, policies and schemes to help increase the efficiency and effectiveness of transport services. The increasing use and support of technology (such as SAVs or MaaS) has the potential to positively impacts groups who are less mobile or on low incomes and provide alternatives to private car use, however new technology can also potentially be more difficult for users such as the elderly, those with learning disabilities or those on low income (through access to smart phones) to access. Care needs to be taken when developing new systems such as apps to see that these are provided in formats which are accessible and clear to use so that the potential advantages brought about by these improvements in technology are realised and do not disadvantage particular groups. Where possible, traditional forms payment and access should be retained for services (e.g., cash/card systems and non app-based access) and support provided (e.g., physical ticket/support office

and telephone help line). In addition to this, information should also be made available in a range of languages so that non-English speakers can access travel information and services more easily.

Mobility (Age – Elderly, Disabled, Pregnant)

6.6.11 The RTS will help improve accessibility and safety of travel in and around the Reading Urban area. Accessibility will be improved in terms of provision of services to reach a wider range of destinations but also through provision of facilities which are better suited to meet the needs of people who are less able bodied (e.g., ramped access or lift facilities in stations). Safety will be improved through reducing potential for traffic collisions with pedestrians and cyclists to occur and through reduction incidences of crime and fear of crime through increased security and natural surveillance. This can help people who feel vulnerable when traveling feel more comfortable and confident, to help them to feel more able to make journeys independently.

6.6.12 The RTS vision and objectives do not specifically target improvements to these groups, but generally support improvements to increase the accessibility and mobility of the transport system for all users which will positively benefit those with more restricted mobility. Policy interventions similarly promote the provision of a more accessible transport network for all (e.g., Policy RTS3 – Equality and Inclusivity) which will positively impact users with mobility issues. Policy that will directly positively impact these groups are Policy RTS20 – Parking Policy RTS21 – Enforcement as these measures support the provision of disabled spaces and policing of parking to see that these spaces are not misused and are available for those who need them. One age group which is specifically targeted through RTS5 – Sustainable Modes of Travel to School is expected to have positive impacts to this age group to increase opportunities for physical activity for children which can have long term health implications.

6.6.13 Interventions which provide better access to public transport are more beneficial to people with mobility issues whereas walking and cycling facilities are typically less accessible, particularly for travelling longer distances. The Cross-Thames Travel scheme and Bus Rapid Transit Schemes have the potential to provide new or priority bus services to make bus travel more reliable and reduce journey times. Quality Bus Corridors and new and upgraded railway stations (principally Reading West) will also help improve the quality and accessibility of bus stops and rail stations. Extensions to proposed concessional and discount schemes may also help make travel more affordable (e.g., by providing discounted travel for older groups at peak times). The proposed multimodal interventions and mass rapid transit schemes are also likely to be provided in proximity to areas with high proportions of elderly residents and so will be particularly beneficial to this group.

6.6.14 Where people are unable to use public transport (e.g., due to not being able to travel from their home to the stop/station), Demand Responsive Travel, Community Transport and the use of SAVs can provide door-to-door transport services to reduce reliance on private taxi use (which can be expensive) or car use. This can help increase the accessibility of surrounding amenities and services to such groups and help reduce feelings of isolation and loneliness.

6.6.15 Less mobile groups on the other hand may be adversely affected by interventions such as Clean Air Zones, Road User Charging and Workplace Levy as it will increase the cost of travelling to groups who may be reliant on private car travel due to lack of reasonable alternative transport options. However, it is noted that an EqIA would be undertaken prior to implementation of any demand measures to identify and mitigate any potential negative effects (e.g., through exemptions for charges).

Income Deprivation and Poverty

6.6.16 As with less mobile users, improved public transport services supported by the RTS will be beneficial to those on lower incomes who are unable to afford private cars. Improvements to walking and cycling facilities will also benefit people within this group by providing alternative, affordable travel options.

6.6.17 As noted above, the proposed RTS generally supports increased mobility and access of the transport system. RTS7 - RTS7 Public Transport includes a provision to collaborate with operators to reduce fares, which may also benefit more vulnerable groups. The supporting objectives do identify the need for sustainable growth that everyone benefits from, supporting economic success that is not at the expense of others and will widen income inequality within Reading. The objectives also acknowledge that in order to connect people and places transport needs to be affordable.

6.6.18 Public transport improvements, particularly those related to buses such as the multi-modal interventions and mass rapid transit scheme will have similar beneficial effects on this group as those who are less mobile by increasing the range of locations and facilities which are accessible by bus.

6.6.19 Transport interventions that reduce severance and/or improve walking facilities and are likely to have beneficial effects including Cross-Thames Travel, local and strategic pedestrian and cycle routes. These interventions will help improve access to local facilities and services, education and employment opportunities.

6.6.20 Improvements to cycling infrastructure in itself may not be that beneficial to people on lower incomes as bikes can be expensive and in Britain, the proportion of cyclist increases with household income, meaning that those who are on lower income, never worked or long term unemployed are typically less likely to cycle[15]. The expansion of cycle hire facilities however may be beneficial to such groups as travel is relatively cheap (e.g., £1 per hour of use) and therefore can support the uptake of cycling within this demographic. Cycle hire schemes sometimes require the use of mobile applications (e.g., YoBike[16]) which may be less accessible as this requires the use of a smart phone. Other cycle hire schemes can be accessed via a bank or contactless card (e.g., Santander Cycles[17]) which may be more accessible. The policies and interventions also support provision of training and initiatives, which is likely to include Bikeability cycle training. This would positively benefit those on lower incomes and potentially increase the uptake and use of cycling as a means of transport within these groups. Consideration should be given to see that these schemes are advertised as widely as possible and offered in more deprived areas to help increase the effectiveness of these policies and schemes in helping achieve the objectives set out within the RTS.

6.6.21 Discounted and concessionary schemes could be beneficial to people within these groups should the scheme cover for example school children, under 18's or those on lower incomes as it will help reduce the proportion of income that is spent on travel. It also provides an alternative means to walking which may be more favourable and safer where people are for example traveling longer distances or during adverse weather conditions.

6.6.22 There may also be negative impacts on this group relating to demand management measures as it will increase the cost to users who need to travel by private car within areas with these restrictions. This will mainly affect people who are able to afford a car and require it to travel but are 'just about managing' and could potentially push individuals or families into a worse state of income deprivation. As part of further EqIAs to be undertaken during the implementation of demand management measures, consideration should be given to this group also to see that inequality is not worsened within Reading and appropriate discounts and exemptions are provided to these groups also.

[15] Cycling UK (2018) Cycling UK's Cycling Statistics. [Online] Available at: https://www.cyclinguk.org/statistics

[16] https://yobike.com/

[17] https://tfl.gov.uk/modes/cycling/santander-cycles

7 IIA Recommendations and Monitoring

7.1 Recommendations

7.1.1 There are several methods which can be used to improve the quality and mitigate potential adverse or uncertain effects of an emerging plan:

- Testing and subsequently amending proposed components (policies or specific transport schemes) so that these can be implemented successfully and in a way which maximises their beneficial outcomes (including in relation to key environmental, equalities and health issues).

- Monitoring the implementation of the plan to identify whether any significant emerging issues require to be addressed if they affect any elements of the IIA; for example, if there is a need mitigate potential adverse or unforeseen environmental, social or health effects from the implementation of the policies or transport schemes.

7.1.2 As detailed in **Section 6**, the initial RTS was subject to an independent IIA review which identified recommendations to address uncertainties and to strengthen the alignment of the plan with the IIA Framework (**Table 4.1**). These recommendations were addressed by RBC and incorporated into the finalised RTS s then subject to final, formal assessment in the IIA.

7.1.3 The adoption of the IIA recommendations by RBC means that all substantive components of the RTS have been fully assessed as considered to be capable of performing well against the IIA Framework. Beneficial effects were also identified in relation to many of the IIA Objectives, including specifically in relation to health, accessibility, productivity and competitiveness, air quality, townscape enhancement and climate change.

7.1.4 This critical, complementary and iterative review of the plan components supported the promotion of more sustainable forms of transport as set out in detail in the RTS, including improvements and provision of new bus and rail infrastructure to help increase the coverage and reliability of such services to help benefit a wider range of users both in terms of physical and financial accessibility and environmental conditions.

7.1.5 Improvements to walking and cycling infrastructure and provision of education and training opportunities and initiatives to help improve the confidence and knowledge of vulnerable road users (such as cyclists) also has the potential to help increase the capacity of the transport network through increasing the uptake of walking and cycling. Encouraging active travel will also help address local health issues such as obesity and inactivity, reducing the incidences of lifestyle diseases such as coronary disease and type 2 diabetes. Promotion of public transport, walking and cycling is also key in helping decarbonise the transport sectors to help Reading reach its target of being carbon neutral by 2050 and improve local air quality.

7.1.6 No significant adverse environmental, health or equalities effects are predicted. In consequence it was not necessary to develop specific further IIA recommendations for mitigation through the assessment process. However, the assessment did identify a small number of likely adverse or uncertain effects depending on the future implementation of individual components of the RTS, including Policy RTS22 - Demand Management, Policy RTS11 – Waterways, Policy RTS28 - Mobility Services & Sharing Economy and proposed transport schemes involving land take. To address this, it will be important for the existing components of the RTS to provide environmental, health and equalities safeguards to be implemented as intended.

7.1.7 In order to appropriately assess the benefits likely to be achieved (outlined in paragraph 7.1.5) and any likely adverse effects needed to be mitigated (outlined in paragraph 7.1.6) any further updates to both policies and schemes, as well as sub-strategies related to the RTS, will need to undergo a further Integrated Impact Assessment.

7.1.8 Safeguards include:

- Application of environmental constraints maps (as included in the RTS and provided in **Appendix D**) in the development, design and consenting of transport schemes; and,
- Application of EqIA processes where relevant under Policy RTS3 - Equality and Inclusivity.

7.2 Monitoring

7.2.1 The SEA Regulations require Environmental Reports to provide a "*description of the measures envisaged concerning monitoring*" after the adoption of a relevant and qualifying plan – in this case the RTS. As the prospective IIA effects of the RTS have been assessed as being primarily positive, the proposed approach to monitoring the predicted likely significant environmental, equalities and health effects of the RTS will be subject to refinement as required once the policies and schemes set out in RTS begin to be implemented. This requires the approach to monitoring to be both flexible, depending on changes to schemes mainly, and positive, with any mitigation or enhancements oriented to provide physical, social and economic benefits.

7.2.2 As outlined in Section 2.4, the LTP will be supported by Implementation Plans which serve as 'live' delivery documents to implement the policies and proposals set out in the RTS. In the event that future Implementation Plans set out any substantive policies or proposals not already assessed in the IIA, RBC would need to consider the implications of this in relation to relevant statutory impact assessment requirements (i.e. the need to undertake a further SEA and/or EqIA or wider IIA as appropriate), including additional monitoring requirements which are specific to the Implementation Plan.

7.2.3 Successful monitoring of the RTS requires the development of an appropriate framework. Specifically, the RTS must identify indicators for monitoring that are specific, manageable and targeted towards measuring the implementation of the plan. This also applies to the ongoing monitoring of the IIA and environmental, equalities and health measures contained within the IIA Report, clearly linking each policy and transport scheme in the RTS to the condition of specific environmental receptors. Monitoring indicators must be relevant to the RTS and should also only address matters required through policy, rather than with reference to quantified targets that exceed policy expectations or relate to protection of environmental assets not addressed in the RTS.

7.2.4 The IIA Framework set out in **Table 4.1** provides a good starting point for developing targets and indicators for monitoring the effects predicted through this IIA. In addition, the RTS itself sets out a proposed monitoring framework to monitor performance against the RTS Objectives (and thus the overall RTS Vision), as detailed in **Table 7.1** below.

Table 7.1 Proposed Monitoring Framework within RTS

No.	Performance Indicator	Data Source	Baseline	Target by 2040	Monitoring Frequency
Multi-Modal Indicators					
1	Car trips to, from and through the town centre	Annual cordon count (Reading Borough Council)	24% mode share (2023)	10% mode share	Annual
2	Transport carbon emissions within Local Authority scope	Carbon Dioxide Emissions Statistics (Department for Business, Energy & Industrial Strategy)	108.5 kt CO_2emissions (2021)	54 kt CO_2 emissions per year (less if possible)	Annual
Public Transport Indicators					
3	Bus usage in the Borough	Bus Statistics (Department for Transport)	17.5million trips (2023)	30 million passengers	Annual
4	Annual bus use per head of population	Bus Statistics (Department for Transport)	101.1 trips per head (2023)	160 trips per head	Annual
5	Park and Ride usage	Bus ticketing data (Reading Buses)	106,000 per year (203)	1 million trips per year	Annual
6	Rail usage – entries and exits for all stations	Office of Rail & Road	13million trips (203)	26 million trips per year	Annual
7	Public transport trips to the town centre	Annual cordon count (Reading Borough Council)	42% mode share (2023)	50% mode share	Annual
8	Public satisfaction with local bus services	National Highways & Transport Public Satisfaction Surveys	71% (2023)	90% satisfaction	Annual
Active Travel Indicators					

No.	Performance Indicator	Data Source	Baseline	Target by 2040	Monitoring Frequency
9	Proportion of adults walking at least 3 times per week for main journey purpose	Walking and Cycling Statistics (Department for Transport)	41% (2022)	66% of adults	Annual
10	Proportion of adults cycling at least 3 times per week for main journey purpose	Walking and Cycling Statistics (Department for Transport)	10.5% (2021/22)	20% of adults	Annual
11	Active travel trips to, from and through the town centre	Annual cordon count (Reading Borough Council)	34% mode share (2023)	40% mode share	Annual
Network Management Indicators					
12	All people killed or seriously injured on the highway network in the Borough	Road Safety Statistics (Department for Transport)	39 per year (2020-22 average)	Reduce by at least 50% (ideally zero KSI)	Annual
13	Public satisfaction with highway maintenance (including roads, footways and street lighting)	National Highways & Transport Public Satisfaction Survey	47% satisfied (2022)	75% satisfaction	Annual
Communication and Engagement Indicators					
14	School travel planning Modeshift STARS accreditation	Modeshift STARS data (Reading Borough Council)	4 schools achieved accreditation (2023)	All schools	Annual

Appendix A Baseline Analysis

Appendix A Baseline Review

A.1 Introduction

A.1.1 This Appendix supports **Section 3** of the Integrated Impact Assessment (IIA) Report prepared to accompany the Consultation Draft Reading Transport Strategy 2036 ('the Draft RTS') by providing a review of key baseline conditions pertaining to environmental, equalities and health issues which are likely to be affected by the RTS. In doing so, this baseline review:

- Identifies relevant aspects and characteristics of the environment, including those likely to be significantly affected by the emerging RTS. 'The environment' is defined in accordance with the aspects prescribed within Schedule 2 of the SEA Regulations and therefore includes population, human health and material assets, all of which also relate to equalities and health considerations;
- Identifies relevant sites designated at international or national levels for reasons of biodiversity conservation, geological importance, heritage or landscape value which have the potential to be affected by the implementation of the emerging RTS;
- Identifies relevant socio-economic trends and baseline conditions, again focusing on matters likely to be significantly affected by the emerging RTS; and,
- Outlines how the identified characteristics, baseline conditions, issues and problems pertaining to should be addressed within the emerging RTS and considered within this IIA. The terms "*must*" and "*should*" are used to differentiate between statutory requirements to consider particular issues and non-statutory considerations, for example evidence from the baseline analysis which indicates a need to improve environmental quality.

A.1.2 This appendix is supported by a suite of high-level environmental constraints plans provided in Appendix D.

A.1.3 Taken together, this evidence is then used to:

- Outline the expected evolution of baseline conditions (with reference to the environmental topics prescribed in Schedule 2 of the SEA Regulations) in the absence of the RTS; and,
- Define a suite of key issues which will need to be addressed within the emerging RTS and which should be considered throughout this IIA process.

A.1.4 The purpose of this baseline review is therefore to inform both the emerging RTS and underpin the IIA Framework (presented in Table 4.1 of the IIA Report) which has been used at this stage to assess all substantive components of the Draft RTS.

A.2 Overview of Relevant Sites

A.2.1 **Table A.1** identifies sites designated at international, national or local level (included relevant non-designated assets) for reasons of biodiversity conservation, geological importance, heritage or landscape value which are considered to have the potential to be affected by the RTS. The site-specific context of these designated sites needs to be considered current baseline conditions pertaining to environmental, health and equalities issues of relevance to the emerging RTS, as detailed in **Section A.3**.

Table A.1: Relevant Sites

Relevant Sites	Designation Type	Implications for RTS	Implications for IIA
Biodiversity			
International/European			
There are no Natura 2000 or Ramsar sites within the Reading Borough Council administrative area; however, 8 European Sites are present within 20km radius: - Hartslock Wood SAC (5.5km) - Thames Basin Heaths SPA (6km) - Chilterns Beechwoods SAC (12.5km) - Kennet and Lambourn Floodplains SAC (16.1km) - Windsor Forest and Great Park SAC (17.2km) - Aston Rowant SAC (17.7km) - River Lambourn SAC (18km) - Little Wittenham SAC (19.2km)	Special Protection Area (SPA) and Special Areas of Conservation (SAC)	The RTS must support the management of all internationally designated sites (including possible or proposed new European Sites) in pursuit of their defined conservation objectives.	Relevant IIA Objectives must afford adequate protection to international designations, taking account of their site-specific characteristics and qualifying features.
National			
There are no SSSIs or NNRs within the RBC area.	Site of Special Scientific Interest (SSSI) National Nature Reserve (NNR)	N/A	N/A
Local			
Kennet Valley East, West Reading Woodlands, Clayfield Copse, Blundells Copse, Lousehill Copse, McIlroy Park, Round Copse LNRs are fully or partially located within the RBC area.	Local Nature Reserve (LNR)	The RTS should provide an appropriate level of protection and enhancement opportunities for nature reserves designated at the local level.	Relevant IIA Objectives must afford an appropriate level of protection for all designated sites, commensurate with their status and purpose.
Geological			
National			

Relevant Sites	Designation Type	Implications for RTS	Implications for IIA
	Site of Special Scientific Interest (SSSI)	The RTS must support the management of all nationally designated sites to maintain or improve their current condition.	Relevant IIA Objectives must afford adequate protection to national designations, taking account of their site-specific characteristics and qualifying interests.
Cultural Heritage			
National			
The RBC area hosts 2 Scheduled Monuments (Reading Abbey and Reading High Bridge) and 510 entries for Listed Buildings on the National Heritage List for England (however it is noted that entries may relate to more than one building).	Scheduled Monuments and Listed Buildings	The RTS must contribute to the protection and enhancement of all nationally designated heritage assets, including their setting. The identified heritage assets benefit from statutory protection which must be taken account of within policies, proposals and guidance within the replacement LDP.	Relevant IIA Objectives must afford adequate protection to nationally designated heritage assets, taking account of site-specific characteristics and the relevance of heritage assets to the Reading Borough Council area.
The RBC area hosts 15 Conservation Areas: - Alexandra Road - Christchurch - Downshire Square - Eldon Square - Horncastle - Kendrick - Market Place - Redlands - Routh Lane - Russell Street / Castle Street - South Park - St Mary Butts / Castle Road - St Peters - Surley Row (Caversham) - The Mount	Conservation Areas		
RBC hosts five Grade II Registered Parks and Gardens: - Caversham Park - Caversham Court - The Forbury Garden - Prospect Park - Reading Cemetery	Registered Parks and Gardens		

Relevant Sites	Designation Type	Implications for RTS	Implications for IIA
Local			
RBC has identified 15 Locally Important Buildings and Structures: - 114 Kendrick Road - Oaklands Hall, Bath Road - Rotherfield Grange, Bath Road - Former Granby, 120 London Road - 3 Craven Road - Pearson's Court, St Patrick's Hall - Rising Sun Public House, 18 Forbury Road - SSE Entrance Building, 55 Vastern Road - Arthur Hill Pool, 221 – 225 Kings Road - 24 and 24A Southcote Road - Whitley Library, 205 Northumberland Avenue - Grovelands Church, 553 Oxford Road - Red brick front building of Gillette 452 Basingstoke Road - King Edward Buildings, 1 Station Road/22 Friar Street - Former Drew's Site, 71-73 Caversham Road, 1 Northfield Road and the Malthouse Building, Northfield Road.	Locally Important Buildings and Structures	Whilst Locally Important Buildings and Structures do not benefit from statutory protection, their protection and enhancement will be treated as an important material consideration by RBC. The RTS should therefore protect and where possible enhance these buildings, including their settings.	Relevant IIA Objectives must afford an appropriate level of protection for all designated sites and assets, commensurate with their status and purpose.
Landscape			
National			
There are no Areas of Outstanding Natural Beauty (AONB) within the RBC area. However, there are two in relatively close proximity: - The Chilterns AONB - The North Wessex Downs AONB	Area of Outstanding Natural Beauty (AONB)	The RTS should provide an appropriate level of protection for the setting and landscape character and for the special qualities of designated AONBs	Relevant IIA Objectives must afford an appropriate level of protection for all designated sites, commensurate with their status and purpose.
Local			

Relevant Sites	Designation Type	Implications for RTS	Implications for IIA
The adopted Reading Local Plan (2019) has designated 5 Major Landscape Features: - The Thames Valley; - The Kennet and Holy Brook Meadows; - The West Reading wooded ridgeline; - The East Reading wooded ridgeline; and, - The North Reading dry valleys and Chilterns Escarpment	Local Landscape Areas .	The RTS should provide an appropriate level of protection and enhancement opportunities for landscapes designated at the local level.	Relevant IIA Objectives must afford an appropriate level of protection for all designated sites, commensurate with their status and purpose.

A.3 Environmental and Socio-economic Baseline Conditions

A.3.1 Informed by **Table A.1**, **Table A.2** below outlines the current environmental and socio-economic conditions within the area likely to be affected by the emerging RTS, in particular (but not exclusively) the RBC area. This review also identifies associated existing environmental, equalities and health issues which should be addressed by the RTS and taken account of in the IIA.

Table A.2: Review of Relevant Environmental and Socio-economic Baseline Conditions

SEA Topic	Baseline Key Characteristics	Relevant Objectives, Issues and Problems	RTS Implications	IIA Implications
1. Biodiversity, Fauna and Flora	**Designated sites:** As detailed in Table A.1, there are no European, international or national designated sites within the RBC administrative boundary however there are a within the wider region area. In addition to this, there are also 7 Local Nature Reserves (LNR) fully or partially within the RBC boundary. **Priority and other notable habitats**: Recorded area of Reading Borough Council (RBC) Biodiversity Action Plan priority habitats are as follows; • 2012-13 – 499.4 ha • 2009 – 446.4 ha • 2008 – 186.6 ha Differences in figures are generally a result of more detailed mapping than any changes on the ground. The 2008 figures are significantly lower because coastal and floodplain grazing marsh (over 250 ha) was first mapped in 2009[1]. Data for the number and percentage of Local Wildlife Sites in positive conservation management in the RBC area is as follows; • 2013 – 15 (71%) • 2012 – 13 (54%) • 2011 – 14 (58%) • 2010 – 3 (13%) Since 2010/11, RBC has entered into a number of agreements to manage and protect local wildlife sites which accounts for the rise in sites within conservation management observed.	All identified sites are designated for specific reasons of ecological important or biodiversity conservation and have conservation objectives related to these. There is a need to safeguard the qualifying features of designated sites from adverse effects, protect the integrity of designated sites and work towards the achievement of defined conservation objectives.	Any new transport infrastructure proposals could adversely impact designated sites and biodiversity through a range of direct and indirect effects, potentially including loss of roosting, foraging and other habitats, physical or noise disturbance, abstraction of river water, discharge of effluent, contamination and air pollution. As such, all proposals and policies within the RTS must take account of relevant ecological sensitivities. This includes the need to support the management of all designated sites in relation to their status and in pursuit of their defined conservation objectives. The RTS must also provide an appropriate level of protection for protected species and non-designated ecological interests.	The IIA Framework must include objectives relating to the appropriate conservation, protection and enhancement of statutorily and non-statutorily designated sites.
2. Population (including socio-economic conditions of relevance to the assessment of equalities and health effects) Cont'd overleaf	**Governance and Statistical Geographical Units**: RBC is the local authority for the Borough of Reading. There are currently 16 council wards which comprise Reading Borough Council. Reading is 37 miles (60km) west of London and 24 miles (39km) south of Oxford. The population density of Reading BC is approx. 4,036/km^2 (10,450/sq. mi). The settlement hierarchy within the RBC area is as follows **Regional Centre:** Reading Centre **District Centres:** Caversham, Cemetery Junction, Emmer Green, Meadway, Oxford Road West, Shinfield Road, Tilehurst Triangle, Whitley **Major Local Centres:** Whitley Street, Wokingham Road **Local Centres:** Basingstoke Road North, Christchurch Road, Coronation Square, Erleigh Road, Dee Park, Northumberland Avenue North, Wensley Road, Whitley Wood[2] The central area of Reading is on a low ridge between River Kennet and the River Thames close to their confluence resulting in dense riverside development. There are approximately 97 LSOAs in the RBC area. England has approximately 32,844 LSOAs.	RBC is bordered by South Oxfordshire District to the north, West Berkshire District to the south-west and Wokingham Borough to the south-east. It is located in the county of Berkshire and is a unitary authority; with the powers of a district council and non-metropolitan county combined. Berkshire exists as a ceremonial county with no administrative responsibilities. RBC lies within the Thames Valley Berkshire Local Enterprise Partnership (TVBLEP) area which contributes over £37bn in GVA to the national economy[3].	The RTS will need to respond to the geographical context of the RBC area and its established relationship with the Berkshire sub-region. In particular, it will be important to ensure alignment between the RTS and the adopted Reading Local Plan (2019). Acting together, both documents should provide a coherent framework for delivering sustainable development and meeting population needs.	The IIA Framework should include appropriate objectives to assess potential effects on habitats and species from proposals (including cumulative development) within the emerging RTS. This should include consideration of impacts such as habitat loss, recreational impacts, water abstraction, pollution and disturbance effects.

[1] RBC Biodiversity Action Plan http://www.reading.gov.uk/media/5972/Reading-Biodiversity-Action-Plan/pdf/Reading_BAP_February_062.pdf

[2] Reading Borough Local Development Framework – Core Strategy

[3] Thames Valley Berkshire Local Enterprise Partnership http://www.thamesvalleyberkshire.co.uk/about.htm

SEA Topic	Baseline Key Characteristics	Relevant Objectives, Issues and Problems	RTS Implications	IIA Implications
	Demographics: Reading has an estimated population of 163,100 people (2017)[4]. The estimated population of the RBC area in the 2011 Census was 155,700 up from 144,400 in 2001[5]. The 2011 Census demonstrated a significant rise in the 0-19 age groups and particularly the 0-14s. 2018 based population projections suggest that the population of the RBC area shall be 179,443 by 2038[6] representing a 10% increase. The median age of residents in the RBC area is 33.9[7]. The proportion of the RBC population 65+ is expected to rise by 55% to 2038 (30,426).	Projected increases in population of the RBC area to 2038 will result in additional strain on local and regional transport infrastructure. In addition to this, the significant increase of residents aged 50+ may place strain on a range of capacity of public services and result in increased reliance on public transport. Projected population growth and ageing are key demographic challenges which will increase pressure on transport infrastructure and public services.	The RTS must take into account the characteristics of the resident and working populations of the RBC area, particularly with regard to current and future predicted labour supplies, employment needs, skill levels and socio-economic factors (as detailed below).	The IIA Framework should include appropriate objectives to assess the ability of the draft replacement LDP to meet existing and predicted future population needs, in particular with regards to the accessibility and provision of public services.
	Housing: The Berkshire Strategic Housing Market Assessment 2016 (BSHMA) estimated that the household growth from 2013-2036 in Reading shall equate to 11,875 homes over the plan period or 516 households per annum[8]. There is estimated total need of 970 affordable housing units per annum in Reading with an available existing supply of 564 and a shortfall of 406 (BSHMA, 2016). The RBC area falls within the West Berkshire HMA covering Bracknell Forest, Wokingham Borough, Reading Borough and West Berkshire. During the plan period, the WBHMA has a need for 2,293 homes per year. Based on the requirements outlined by the RBC Core Strategy covering the period 2006-2026, a total of 2,378 dwellings for a 5-year period is required from 2017/18-2021/22. Upcoming estimated site-specific supply over the 5-year period from 2018/19-2022/23 is approx. 3,913 units which represents an 8.23 year supply[9]. Across the Western Berkshire HMA, 29% of homes are detached, 19% are flats, semi-detached houses comprise 27% of the dwelling stock, whilst terraced houses make up 23%[10].In Reading, the housing types are as follows; • Detached: 12% • Semi-Detached: 25% • Terraced: 30% • Flat: 32% • Caravan: 0% The Strategic Housing Market Assessment for Berkshire (SHMA 2016) identified a need of 699 new homes per year in Reading up to 2036. Measured against objectively assessed need, the SHMA demonstrates a need for 3,741 homes for the five-year period from 2018/19-2022/23 and a supply of 3,913 units over the same period representing a 5.23 year supply of housing. House prices and rents are high in the RBC area with an average increase of 43% since 2008[11].	Measured against Core Strategy housing targets, there is a very healthy land supply in the RBC area. This reflects the high level of dwellings under construction (>1,000 in 2016/17) and some expected to start soon. Measures should be put in place to ensure that adequate transport infrastructure is improved or implemented to cope with growth in the local population as a result of upcoming new housing developments. At present the overall level of demand for affordable housing is not being met across the RBC area. Moreover, the current shortfall of affordable housing within the RBC area is unlikely to be addressed through the planning system to meet identified needs.	The RTS must support the delivery of housing to meet identified needs within the RBC area.	The IIA Framework should include objectives relating to the delivery of the spatial strategy within the Reading Local Plan and the role of transport in delivering housing in appropriated locations.

[4] ONS Population estimates - local authority based by five-year age band
[5] ONS – Census 2011
[6] NOMIS- Population projections - Local Authority based by single year of age (2018)
[7] Office for National Statistics- Median age for local authorities in the UK mid-2015 estimates
[8] Berkshire Strategic Housing Market Assessment (2016) http://www.reading.gov.uk/media/2959/Housing-Market-Assessment/pdf/Berkshire_Strategic_Housing_Market_Assessment_Feb_2016.pdf
[9] Reading Borough Council Annual Monitoring Report 2017 http://www.reading.gov.uk/media/8135/Annual-Monitoring--Report-2017/pdf/Annual_Monitoring_Report_2016-17.pdf
[10] Berkshire Strategic Housing Market Assessment (2016) http://www.reading.gov.uk/media/2959/Housing-Market-Assessment/pdf/Berkshire_Strategic_Housing_Market_Assessment_Feb_2016.pdf
[11] Reading Borough Council- Corporate Plan (2018-2021) http://www.reading.gov.uk/media/4621/Shaping-Readings-Future----Our-Corporate-Plan-2018-21/pdf/FINALCorporate_Plan_2018_21webpub.pdf

SEA Topic	Baseline Key Characteristics	Relevant Objectives, Issues and Problems	RTS Implications	IIA Implications
	Education & Public Services *Education Infrastructure* Within the RBC area, there are a total of primary and 10 secondary schools[12]. Surplus capacity within primary and secondary schools in the RBC area is limited with primary schools under particular strain. Approx. 10% of primary pupils and 38% of secondary pupils attend schools across the RBC boundary in surrounding authorities. Pressure for primary school places extends in the east, the town centre and along the Oxford Road corridor. The Infrastructure Delivery Plan indicated that increased pressure on primary schools in addition to future development within the RBC area shall place additional strain on secondary schools which are already under pressure. Further education institutions present in the RBC area are; • University of Reading, • Reading College, • UTC Reading, • University of West London: Berkshire Institute for Health. Each year, the RBC area attracts 4,000 international students from 145 countries[13]. The Children and Young People's Plan (2015-2018)[14] sets out key priorities for educational services within the borough. Although the plans do not have implications for infrastructure provision, they include plans for close proximity of services within secondary school sites such as co-location of children and health services. *Educational Attainment/Qualifications* Approx. 48% of working age residents in the RBC area possess qualifications at NVQ4 and Above; higher than the South East (41.4%) and across Great Britain (38.6%). Working-age residents within the RBC area who hold qualifications at NVQ3 or Above equate to 63.8% of the population also higher than the South East (61.1%) and Great Britain (57.2%). Working-age residents within the RBC who hold qualifications at NVQ2 and Above is approximately 78.0% slightly lower than the South East (78.6%) but higher than the average across Great Britain (74.7%). Working-age residents in the RBC area who hold qualifications at NVQ1 and Above is approximately 87.2%, slightly lower than the South East (89.5%) but higher than across Great Britain (85.4%). The proportion of the working age population in Reading which have no qualifications (5.7%) is slightly higher than the South East (5.2%) but higher across the rest of Great Britain (7.7%)[15]. *Deprivation of Education, Skills and Training* The English Index of Multiple Deprivation (2019) indicates that the RBC area has 9 LSOAs ranked within the 10% most deprived in the country for Education, Skills and Training. The RBC area has an additional 10 LSOAs within the 20% most deprived in the	Additional pressure on school places also puts pressure on local transport provision and infrastructure. Consequently, secondary school capacity is expected to come under future pressure. If this need is not met this may result in larger proportions of pupils requiring transport to neighbouring authorities in addition to the 38% of secondary pupils unable to gain school places in the RBC area. Efficient transport provision and any required infrastructure improvements to meet the needs of educational institutions in the RBC area is essential. With other community facilities in the RBC area operating at capacity, measures should be taken to ensure fair access for all via a variety of transport options.	The RTS should identify accessibility needs of residents and workers across the RBC area and seek to provide adequate transport provision to meet existing and projected future population needs in a sustainable manner, including with respect to the accessibility of education infrastructure.	The IIA Framework should include appropriate objectives to assess the ability of the RTS to meet existing and predicted future population needs, with regards to accessibility of a wide variety of transport options and forward planning of infrastructure improvements.

[12] Reading Infrastructure Delivery Plan – 2017 http://www.reading.gov.uk/media/7157/Infrastructure-Delivery-Plan-May-2017/pdf/Infrastructure_Delivery_Plan_May_2017.pdf

[13] The Cultural Partnership- Readings Culture & Heritage Strategy 2015-2030 http://www.reading.gov.uk/media/4807/Culture--Heritage-Strategy-2015-2030/pdf/CultureandHeritageStrategy2015f.pdf

[14] The Children and Young People's Plan (2015-2018) http://www.rcvys.org.uk/download/reading-children-and-young-peoples-plan-2015-2018/

[15] NOMIS Labour Market Profile – Reading https://www.nomisweb.co.uk/reports/lmp/la/1946157285/report.aspx

SEA Topic	Baseline Key Characteristics	Relevant Objectives, Issues and Problems	RTS Implications	IIA Implications
	country. For this indicator, much of the LSOAs ranked 10% or 20% most deprived lie within the South and South-West of the borough[16]. *Libraries/museums/council services* The Hexagon theatre provides the main arts performance venue in the RBC area. However, a review in 2007 of the performance arts provision in the area found the Hexagon theatre to be at capacity and outdated. There are seven libraries within the RBC area, with the central library of regional significance as it was previously the reference library for Berkshire[17].. Levels of demand for both libraries and other cultural services are high and expected to increase. Research by Community Sense & CRE Libraries have shown that library services are full to capacity, with the central library having experienced a significant rise in user numbers in recent years. Future growth in the RBC area shall place additional pressure on these services. The Infrastructure delivery plan highlighted a number of options to improve the cultural services in the area including the renovation of the Hexagon Theatre including aspirations for significant investment and renovation of the Town Hall & Museum.			
	Employment: Approx. 67.1% or 109,500 residents in the RBC are aged between 16-64. Of these, 80.1% or 91,500 people are economically active[18]. Within the RBC area, approximately 19.9% of the population are economically inactive, higher than the South East (18.7%) but lower than Great Britain (21.6%). Approximately 12.5% of the households in the RBC area are workless. In terms of employment in the RBC area, the highest proportion of resident's occupations were professional occupations (26.8%) and associate professional and technical occupations (21.6%). Approximately 57.5% of RBC residents in employment work within the following three occupation types; • Managers, Directors and Senior Officials • Professional Occupations • Associate Professional & Technical Gross Weekly pay is higher in the RBC area (£604.70) than across the South East (£596.80) or Great Britain (£552.70). Job density within the RBC area is substantially higher (1.09) than the South East (0.88) or Great Britain (0.84). The proportion of RBC residents who work full time is 71.8%, higher than both the South East (67.3%) or Great Britain (67.8%). The RBC area has a smaller proportion of part time employees (28.2%) than the South East (32.7%) or Great Britain (32.2%). Approximately 3.7% of economically active residents in the RBC area are unemployed, higher than the South East (3.4%) but lower than the average across Great Britain (4.3%). The proportion of benefit claimants in the RBC area (2.1%) is higher than the South East (1.4%) but similar to Great Britain	High job density and gross weekly pay compared with the South East and the rest of Great Britain displays a positive outlook for the RBC area. A significant proportion of resident workers in Reading work within the same local authority area demonstrating a need for a robust and efficient local transport network. Access to public transport for those on low/no incomes is important to maintain access to employment opportunities where possible.	The RTS should set out policies and proposals (including transport interventions) which support the delivery of a broad range of new employment opportunities and key employment sites, whilst also supporting the growth of key economic sector.	The IIA Framework should include objectives relating to economic growth and the delivery of key employment sites.

[16] English Indices Of Deprivation 2019 https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019
[17] Reading Infrastructure Delivery Plan – 2017 http://www.reading.gov.uk/media/7157/Infrastructure-Delivery-Plan-May-2017/pdf/Infrastructure_Delivery_Plan_May_2017.pdf
[18] NOMIS Labour Market Profile – Reading https://www.nomisweb.co.uk/reports/lmp/la/1946157285/report.aspx

SEA Topic	Baseline Key Characteristics	Relevant Objectives, Issues and Problems	RTS Implications	IIA Implications
	(2.2%). Benefit claimants aged 50+ is substantially higher (2.9%) than the South East (1.3%) and Great Britain (1.9%). The functional labour market areas across Berkshire have been examined by assessing travel-to-work patterns[19](TTWAs). The Reading TTWA incorporates the whole of Reading and Wokingham Boroughs including the majority of Bracknell Forest and parts of South Oxfordshire, Windsor & Maidenhead, Hart and West Berkshire. Key commuting indicators shows that West Berkshire, Reading and Wokingham accommodate the largest resident workforce in Berkshire. A significant proportion (51.2%) of resident workers in Reading work within the same local authority area. The top out-commuting destinations for residents of the RBC area are Wokingham, West Berkshire and South Oxfordshire. The top in-commuting destinations for employees in the RBC are also Wokingham, West Berkshire and South Oxfordshire. The proximity of the Berkshire sub-region to London has an effect on commuter levels with 18% of workers commuting to London. The BFEMAS describes Readings local travel to work area as generally focused east to west along the M4 corridor and taking in the key centres of Wokingham to the south east and Newbury to the west. The most significant travel-to-work flows to and from the RBC area operate between the adjoining authorities of West Berkshire and Wokingham, with more marginal flows associated with Bracknell Forest, South Oxfordshire and Basingstoke and Deane.			

	Inequality, Social Exclusion and Deprivation:
	One of the key themes of the RBC Core Strategy is to reduce disadvantage and inequality. A number of key priorities are also set out in the Reading Health & Wellbeing Strategy 2017-20[20] including;
	
	• Supporting people to make healthy lifestyle choices – dental care, reducing obesity, increasing physical activity, reducing smoking
	  • Reducing Loneliness and Social Isolation and;
	  • promoting positive mental health and wellbeing in children and young people
	
	The English Index of Multiple Deprivation (2019) ranks Reading 141 out of 317 Local Authorities. There are 5 LSOA's ranked within the 10% most deprived in the country and 10 LSOAs ranked within the 20% most deprived. The RBC area also has 9 LSOA's ranked within the 20% most deprived in the country for the "Health Deprivation and Disability Domain".
		Measures should be taken to reduce deprivation in the 10 LSOAs ranked within the most 10% and 20% most deprived in the country. Of the LSOAs ranked in the 'health deprivation and disability domain' efforts must be made to increase accessibility of local transport options while also promoting active travel options.	A holistic strategy is needed to address multiple deprivation within parts of the RBC area, including but not limited to the creation of affordable and accessible, high quality transport provision.
			
			The RTS should set out clear policies and proposals to support access to educational and employment opportunities across the Borough.
				The IIA Framework should include appropriate transport objectives relating to equality, social inclusion, access to public services, employment opportunities, access to healthcare, access to open spaces and exposure to pollution (air, water, soil, etc.).

3. Human Health Cont'd overleaf	**Life expectancy:** Healthy life expectancy at birth for males is 79.1 and 83.1 for females in RBC. Compared with the South East, males in the RBC area have a shorter healthy life expectancy (80.7 years) as do females (84.1 years). In comparison with England, healthy life expectancy for males and females is slightly shorter than the England at 76.6 and 83.2 respectively. In the RBC area, life expectancy is 8.0 years lower for men and 7.2 years lower for women in the most deprived areas of Reading than in the least deprived areas[21].	There are significant gaps in life expectancy between the most and least deprived parts of the RBC area. Measures should be put in place to tackle inequality of access to healthcare to ensure those living in more deprived areas have access to affordable public transport options.	The RTS should take into consideration the considerable differences between healthy life expectancies for males and females living within the RBC area and attempt to reduce inequalities in transport provision. It should also take note of the positive health indicators reported by the RBC area's resident population compared with regional and national averages. It should set out guidance to encourage uptake of active travel for all residents of the RBC area.	The IIA Framework should include objectives relating to the consideration of accessibility, affordability and capability of transport networks within the RBC area to improve quality of life, health outcomes, physical health, mental health, wellbeing and safety and security of RBC residents.

[19] Berkshire Functional Economic Market Area Study: Thames Valley Berkshire Local Enterprise Partnership 2016

[20] Reading Health and Wellbeing Strategy 2017-20 http://www.reading.gov.uk/media/6823/Reading-Health-and-Wellbeing-Strategy-2017-20---Action-Plan/pdf/Healthy__Wellbeing_Action_Plan_V1_-_agreed_27.01.17.pdf

[21] Public Health England, Local Authority Health Profiles (2019) https://fingertips.phe.org.uk/profile/health-profiles

SEA Topic	Baseline Key Characteristics	Relevant Objectives, Issues and Problems	RTS Implications	IIA Implications
	Physical Health/Lifestyle Choices: *Census Health Indicators*: The proportion of RBC residents who reported themselves to have a limiting long-term illness was 13% (2011 Census), lower than the English average (17.6%). Approximately, 85.5% of RBC residents reported themselves to be in good health in the 2011 Census, an increase of 13% since the 2001 Census. The proportion of RBC residents who reported their health as not good has declined from 6.5% (2001 Census) to 3.7% (2011 Census) in comparison with England (5.4%). *Lifestyle Choices* Approximately 61% of adults in Reading are overweight or obese, slightly lower than the England average (64.6%)[22]. In addition, levels of childhood obesity in Reading in Reception Year children and Year 6 children are consistently above the South East Average. Approximately 50.4-59.5% of residents meet government targets for overall physical activity[23]. Conversely, 40.5-49.6% of RBC residents are not doing enough physical activity to protect their health. In 2014, RBC estimated that approximately 21,000 (17%) of RBC residents are smokers. In addition to this, rates of premature deaths of RBC residents from breast, bowel or cervical cancer is highest in wards with very high areas of deprivation; Abbey, Norcot and Whitley.			
	Mental Health and Wellbeing: The Reading Borough Council Health and Wellbeing Strategy 2017-2020 identifies the promotion of mental health and wellbeing as a priority. In 2013, 1,902 children aged 5-16 (9.1% of the total) were estimated to have a mental health disorder[24]. There was a 22% increase in suicides across Berkshire between 2014-2015. Residents of the RBC area aged 18-64 predicted to have a mental health problem is expected to continually increase to 2030[25]	Measures should be put in place to ensure the continuation of the good health indicators from many of the RBC residents and the promotion of healthy lifestyle choices through active modes of travel.		The IIA Framework should include objectives relating to the consideration of accessibility, affordability and capability of transport networks within the RBC area to improve quality of life, health outcomes, physical health, mental health, wellbeing and safety and security of RBC residents.
	Health Infrastructure: Health infrastructure within the RBC area falls within the remit of the Reading Clinical Commissioning Group Profiles (North & West Reading CCG and South Reading CCG). North & West Reading CCG has 10 GP practises serving approx. 110,008 people (2016)[26]. The South Reading CCG has 20 GP surgeries serving approx. 139,894 people (2016). The main hospital in the RBC area is the Royal Berkshire Hospital. *Open Space* There is approximately 356 ha (approx. 9% of Borough) of open recreational space within the RBC area[27]. No major loss of recreational public open space to development has occurred since the Strategy.	In line with the Reading Borough Council Health and Wellbeing Strategy (2017-2020), there is a need to improve all aspects of the health and wellbeing of the resident population of the RBC area, including physical heath, mental health and social wellbeing.		The IIA Framework should include objectives relating to the promotion of Active Travel and accessibility to a wider variety of transport options for the promotion of positive mental health and access to community facilities.

[22] Reading Borough Council Health and Wellbeing Strategy 2017-2020 http://www.reading.gov.uk/media/6822/Health--Wellbeing-Strategy/pdf/Health_and_Wellbeing_Strategy_2017-2020_final.pdf

[23] Active People Survey 2014

[24] Reading Borough Council Health and Wellbeing Strategy 2017-2020 http://www.reading.gov.uk/media/6822/Health--Wellbeing-Strategy/pdf/Health_and_Wellbeing_Strategy_2017-2020_final.pdf

[25] Reading Borough Council JSNA http://www.reading.gov.uk/jsna/mental-health

[26] North & West Reading CCG locality profile http://www.reading.gov.uk/media/6000/North--West-Reading-CCG-Locality-Profile-2015/pdf/North___West_Reading_CCG_Profile_2016_FINAL.pdf

[27] Reading Borough Council SA Scoping Report http://www.reading.gov.uk/media/1052/Sustainability-Appraisal-Scoping-Report-Revised-September-2014/pdf/Sustainability-Appraisal-Scoping-Report-Sep14.pdf

SEA Topic	Baseline Key Characteristics	Relevant Objectives, Issues and Problems	RTS Implications	IIA Implications
4. Soil and Land	**Geological and Ground Conditions:** Reading Borough Council maintains a register of contaminated land. Currently all land has since been remediated[28]. *Geology* *Superficial Deposits (Quaternary Age)* **Alluvium:** Alongside the River Thames and the River Kennet and their tributaries **Head Deposits:** Locally present on the higher ground in the northeast, southeast and west parts of the Borough **Langley Silt:** Locally present in floor of the River Thames valley **River Terrace deposits:** Present in a several terraces across the Borough from the higher ground in the Chiltern Hills to the floor of the river valleys *Solid Geology* **London Clay Formation (Eocene Age):** Present throughout the south-eastern part of the Borough, and on the higher ground in the northern and western parts of the Borough **Lambeth Group (Palaeocene Age):** Present to the south of the River Kennet, and on the higher ground in the northern and western parts of the Borough **White Chalk Subgroup (Cretaceous Age):** Outcrop in the northern part of the Borough and along the valley of the River Kennet **Land Use** The main district centres within the RBC area are Caversham, Cemetery Junction, Emmer Green, Meadway, Oxford Road West, Shinfield Road, Tilehurst Triangle and Whitley. According to the RBC Core Strategy, district centres are considered to be capable as acting as alternatives to the centre of Reading and are accessible to a large proportion of the local population. The Major Local Centres within the RBC area are Whitley Street, Wokingham Road and are considered within the Core Strategy as centres where a greater scale of development will be appropriate. Finally, local centres providing a smaller concentration of shops and services are Basingstoke Road North, Christchurch Road, Coronation Square, Erleigh Road, Dee Park, Northumberland Avenue North, Wensley Road, Whitley Wood. The RBC Sites and Detailed Policies (RBCSDP) document outlines the consideration which must be given to transport works within the dense urban area of Reading with significant issues such as creation or alteration of accessways, and generation of additional trips in the borough. It acknowledges that care must be taken that development does not compromise safety, reduce accessibility and interfere with the operation of the transport network.	New transport infrastructure must be appropriately sited and designed to reflect the geological and soil characteristics of the RBC area.	The RTS should set out appropriate proposals and policies to safeguard important geological characteristics and soil resources within the RBC area during the development and operation of transport infrastructure.	The IIA Framework should include transport related objectives in respect of soil quality and pollution to ground receptors. Consequential human health and ecological risks and impacts should also be considered in a holistic manner.
5. Water Cont'd Overleaf	**Waterbodies**: Both the River Thames and River Kennet flow through the RBC area. The main river watercourses of the Holy Brook, the Foudry Brook, the Berry Brook and the Gos Brook also flow through the Borough. In addition, the Kennet and Avon Canal also flows	Waterbodies across the RBC area vary in quality, ecological value and present condition. Transport infrastructure close to waterbodies must take this into account.	The RTS should set out objectives and policies to protect and enhance the water environment and water resources during the construction and operation of transport infrastructure. This should include measures to eliminate transport-based contamination sources which harm the water environment and to regulate pollution discharges from new developments into receiving watercourses.	The IIA Framework should include objectives relating to the protection of the quality of the water environment and water resources, as well as to mitigate the effects of disruption and damage to transport infrastructure from the effects of flooding.

[28] RBC Contaminated Land Register http://www.reading.gov.uk/media/1287/Contaminated-Land-Register/pdf/Contaminated-Land-Register.pdf

SEA Topic	Baseline Key Characteristics	Relevant Objectives, Issues and Problems	RTS Implications	IIA Implications
	through the borough along the River Kennet channel to its eastern limit at the confluence with the River Thames at Kennet Mouth[29].			
	Flood risks Significant parts of the RBC area are potentially at risk of fluvial (river) flooding from the River Thames and River Kennet (and tributaries)[30]. Development pressures have resulted in encroachment into the natural fluvial floodplain throughout centre of Reading and parts of Caversham. These areas have consequently been impacted by severe flooding. RBC was ranked 16th out of 77 local authorities considered most at risk from surface water (pluvial) flooding by DEFRA. During the widespread flood events in 2007, the areas most affected by surface water flooding in Reading were: London Road at junction with Liverpool Road, and surrounding streets; London Road between Cemetery junction and Hospital; Elmstone Drive; Glenrosa Road; Norcot Road; Stone Street and Ivydene Road; Kingsley Close; Harness Close; and Cow Lane. It is understood that all of these issues were reported to be related to the surcharging of the sewer (drainage) system following heavy rain. The Strategic Flood Risk Assessment for Reading has identified the following surface water flood risks: • North Reading - There are a number of areas in north Reading susceptible to surface water flooding due to topography. This includes an area from Hemdean Bottom and into the centre of Caversham • Central Reading – There is generally low probability from surface water flooding in this area, however there are some concentrated areas on localized low depressions on the highways network at greater risk, including along the Inner Distribution Road. • Reading South/East – There are several areas at risk of flooding in the northern part of this area, primarily along highways running north-south including Southampton Street, Redlands Road, Eastern Avenue and the A329 Wokingham Road Reading West – There are several areas at risk of flooding in the area, typified as narrow corridors of land at risk of flooding which follow the route of a highway or natural depression through the area.	Flood risk is an ongoing issue within the RBC area due to the setting of the local authority, with its main centre adjacent to the River Thames. Transport infrastructure developments should be restricted where possible from development on flood plains and incorporate relevant surface water drainage measures as appropriate.	The RTS should seek to manage flood risks in a sustainable manner, including by directing transport infrastructure development away from known flood risk areas and incorporate relevant surface water drainage measures as appropriate.	The IIA Framework should set out objectives relating to the management of flood risks in a sustainable manner, including by directing transport infrastructure and associated development away from known flood risk areas where possible and incorporate relevant surface water drainage measures as appropriate to help manage local surface water runoff.
6. Air and Climatic Factors Cont'd overleaf	**Air Quality Management Areas (AQMAs) and Poor Air Quality:** Source apportionment studies identified road traffic as the major source in the Nitrogen Dioxide (NO2) hotspots in the RBC area. An AQMA has been declared along all the main arterial roads in and out of the centre of Reading. Many areas close to congested roads exceed safe NO_2 air quality levels where levels of particulates are elevated. NO_2 is the only pollutant exceeding a national objective, but PM10 and PM2.5 are also pollutants of concern due to their effects on health even at low concentrations.	Continued monitoring of air quality within RBC will be required, in particular the main arterial roads in the centre of Reading. Additional traffic on these roads caused by new development should be monitored.	The RTS should set out objectives, policies and proposals (including transport interventions) to tackle known areas of poor air quality and the likely impacts of new development on air quality, including from traffic. The RTS should seek to reduce local air pollution through setting out policies and proposals to promote sustainable and active travel modes.	The IIA Framework should include objectives relating to managing local air quality and associated health impacts. The IIA Framework should also recognise that changes to air quality can have an impact on ecosystem services which affect biodiversity and other environmental assets.

[29] Reading Borough Council Strategic Flood Risk Assessment http://www.reading.gov.uk/media/7330/Main-report/pdf/SFRA_main_June_17.pdf

[30] Reading Borough Council Strategic Flood risk Assessment http://www.reading.gov.uk/media/7330/Main-report/pdf/SFRA_main_June_17.pdf

SEA Topic	Baseline Key Characteristics	Relevant Objectives, Issues and Problems	RTS Implications	IIA Implications
	Monitoring undertaken within RBC indicates that in general, levels of NO2 are falling . However, Caversham Road is the one monitoring station that did not follow this trend[31].			
	Noise Levels: Noise levels surrounding arterial roads within the RBC area are highest to the south of the RBC area amounting to levels exceeding 75dB and over surrounding the M4 and the A33[32].	Continued monitoring of noise levels across the RBC area shall be required. Infrastructure improvements must ensure they comply with any Environmental Noise (England) Regulations 2006 (as amended).	The RTS should set out objectives, policies and proposals (including transport interventions) to tackle known areas of poor air quality and the likely impacts of new development on air quality, including from traffic. It should also set out policies and proposals to reduce noise levels caused by traffic and to promote sustainable modal shifts.	The IIA Framework should include objectives relating to managing traffic noise levels and mitigating associated health impacts.
	Greenhouse Gas Emissions: Reading Borough Council's 'Carbon Plan 2015-2020' aims to reduce the carbon footprint of the RBC area by 50% by 2020, aiming for 100% by 2050 against 2008/09 levels[33]. In order to meet 2020 targets, RBC aims to reduce energy and water use within the RBC area by 7% while increasing the use of renewable/low carbon energy by 35% per year. Further to this, in 2019 RBC declared a climate emergency and resolved to take action to accelerate a carbon neutral Reading to 2030[34]. RBC's absolute (gross) corporate carbon emissions for 2015/16 were down 10.8% from 12,485tCO2 to 10,973tCO2 against 2014/15 levels[35]. Of the wider influence of the council, gross emissions decreased in 2015/16 by 9.5% compared to 2014/15 levels.	Measures must be put in place to continually monitor and mitigate greenhouse gas emissions in the RBC area in relation to increased traffic arising from projected population increases and works to transport infrastructure.	The RTS should set out objectives, policies and proposals (including transport interventions) to support a low carbon economy in conjunction with traffic management and transport infrastructure improvements. The RTS should also include guidance to encourage low carbon design and should set out a sustainable transport strategy which capitalises on existing rail and port infrastructure to contribute to the decarbonisation of the transport sector.	The IIA Framework should include objectives relating to energy use, resource efficiency, sustainable transport, GHG emissions and climate change mitigation.
	Climate Change Impacts: Climate change research predicts an increase in the severity and frequency of severe weather and climate events including higher rainfall events. Across England as a whole, land temperature in the decade 2005 - 2014 was 1.0°C warmer than 1961 - 1990[36]. The latest set of UK climate projection data (2009) estimated that summer mean temperatures are expected to increase by 0.9-5.2% by the 2050s[37].	Predicted impacts from climate change up to 2050 will place significant strain on infrastructure and available resources across the UK, including within the RBC area.	The RTS should set out objectives, policies and proposals (including transport interventions) to support a low carbon economy in conjunction with traffic management and transport infrastructure improvements to help support the commitment to a carbon neutral Reading by 2030. The RTS should also include guidance to encourage low carbon design and should set out a sustainable transport strategy which supports electrification of the transport network and capitalises on existing rail and port infrastructure to contribute to the decarbonisation of the transport sector.	The IIA Framework should include objectives relating to climate change adaptation and the resilience of transport infrastructure within the RBC area.
	Atmospheric Conditions: Atmospheric conditions have many effects on the punctuality and reliability of transport infrastructure. One of the main providers of rail travel within the RBC area is Great Western Rail (GWR)/. GWR's 12 month moving annual average from August 2017 reports a 76.3% punctuality rate, falling short of its 89% target[38]. It also falls slightly short on reliability of services with a 97.7%	Poor atmospheric conditions causing delays/or cancellations to public transport in addition to service provision issues can contribute to loss of productivity and economic output for the RBC area.	The RTS should set out objectives, policies and proposals (including transport interventions) which respond to productivity loss caused by issues with public transport provision within the RBC area while also mitigating the effects of extreme high or low temperatures.	The IIA Framework should include objectives relating to the resilience and ability of local transport infrastructure to respond to inclement weather within the RBC area.

[31] Reading Borough Council http://www.reading.gov.uk/article/9439/Air-Quality
[32] Noise Map http://www.extrium.co.uk/noiseviewer.html
[33] Reading Borough Council Carbon Plan 2015-2020 http://www.reading.gov.uk/media/3516/item08a-Carbon-PlanJUN15/pdf/item08a_Carbon_Plan_JUN15.pdf
[34] Reading Borough Council Climate Emergency Report (2019) https://democracy.reading.gov.uk/documents/s7609/Climate%20Emergency.pdf
[35] Reading Borough Council 2015/16 Greenhouse Gas Emissions Report http://www.reading.gov.uk/media/6351/Item10x1-Greenhouse-Gas-Emissions-report-2015-16/pdf/Item10x1_Greenhouse_Gas_Emissions_report_2015-16.pdf
[36] UK Climate Change Risk Assessment Report 2017 https://www.theccc.org.uk/wp-content/uploads/2016/07/UK-CCRA-2017-England-National-Summary-1.pdf
[37] UK Climate Change Risk Assessment Report 2017 https://www.theccc.org.uk/wp-content/uploads/2016/07/UK-CCRA-2017-England-National-Summary-1.pdf
[38] Great Western Rail Performance https://www.gwr.com/about-us/performance

SEA Topic	Baseline Key Characteristics	Relevant Objectives, Issues and Problems	RTS Implications	IIA Implications
	reliability rate, short of the 98% target on London- Thames Valley Services. Data for the week commencing 10th September 2018 demonstrates a range of between 12.8% or 18.9% of Great Western Rail services to the Reading & Oxford Suburban area were late[39].			
7. Material Assets	**Transport infrastructure:** *Road Network* The roads connecting the Reading borough and beyond include the M4 Motorway inc. Junctions 10-12. Other main roads serving Reading include the A33, A327, A329, A4074 and the A4155. Within Reading there is also the Inner Distribution Road which encircles the town centre and is linked to the M4 by the A33 relief road. The main core roads connect local populated areas, adjoining with B-road networks within the RBC area. *Rail Network* The Great Western Main Line railway runs east to west through Reading with regular services to London and provides a gateway to the West, Wales, South West, Midlands and North of England. 2016/17 entries and exits in Reading (Main) train station were approximately 17,122,000 up from 16,755,984 in 2015/16[40]. Reading (West) railway station recorded approx. 434,612 entries and exits in 2016/17 up from 412,642 entries and exits in 2015/16. The arrival of Crossrail to Reading is anticipated to extend Reading's competitive rail advantage over nearby locations such as Bracknell[41]. *Public Transport* Bus operators within the RBC area include Reading Buses, First, Arriva South East, Stagecoach and Thames Travel. Readibus provides an on-demand bus service for residents with restricted mobility in the RBC area. *Active Travel* The Reading LTP3 identified a need to develop inclusive active travel opportunities for residents including through cycle training and school planning projects[42]. The LTP3 also identified a number of objective to encourage Active Travel uptake in the RBC area; • To improve the condition of footways, pedestrian crossing locations and public space to make these facilities safer and more attractive through specific and multi-targeted schemes as appropriate; • To give priority to addressing the needs of pedestrians in Neighbourhood Enhancement studies; • To implement road safety measures that reduce conflicts with other road users; • To support the planning process to protect and wherever possible increase the space available for pedestrians, in particular in retail areas; • To enhance the security of the public realm through lighting, design or other measures;	There is an ongoing need to ensure transport accessibility within the RBC area There is also a need to provide suitable land uses to meet identified needs while providing adequate transport infrastructure to support it. At present, parts of the highway network in the RBC area experience severe congestion especially at peak times (M4 and the IDR). Improvements to transport infrastructure with minimum disruption within the RBC area will bring a step-change in public transport connectivity which should be used to catalyse economic growth and improve access to employment and public services within the RBC area. Efficiency of public transport services must be improved where possible to mitigate severe road congestion.	The RTS should help support and promote the efficient and appropriate use of material assets. It should set out a strategy to improve existing transport infrastructure and optimise the use of and safeguard existing transport infrastructure within the RBC area. Current resident uptake of active travel modes within the RBC area should be evaluated and with improvement measures implemented if necessary.	The IIA Framework should include objectives relating to infrastructure efficiency, respond to expected population increases, climate change mitigation, connectivity and accessibility of the RBC area.

[39] Trains IM (Great Western Railway 2018) http://trains.im/ppmhistorical/GW/43

[40] Office of Road and Rail – Estimates of Station Usage (latest data) http://orr.gov.uk/statistics/published-stats/station-usage-estimates

[41] Berkshire Functional Economic Market Area Study: Thames Valley Berkshire Local Enterprise Partnership 2016

[42] Reading Borough Council Local Transport Plan 2011-26 http://www.reading.gov.uk/media/2421/Local-Transport-Plan-2011-26/pdf/Local_Transport_Plan_2011-26.pdf

SEA Topic	Baseline Key Characteristics	Relevant Objectives, Issues and Problems	RTS Implications	IIA Implications
	• To encourage walking to school; and; • To promote walking as a healthy, low-cost and environmentally friendly mode of travel. The RBC Local Transport Plan Cycling Strategy identifies a number of objective to encourage uptake of active travel modes including; • new and improved cycle infrastructure that will aim to bridge gaps between existing barriers, including the railway and River Thames; • cycle hire will give people that do not currently have access to a bicycle the opportunity to cycle to key destinations; • increased cycle parking facilities to enable to people to park closer to more key destinations; and, • positively promoting the benefits of cycling in a compact urban area such as Reading. For example: being able to cycle from east to west Reading in around 25 minutes and north to south in around 45 minutes. • The ReadyBike[43] scheme operating in conjunction with Reading Borough Council provides bikes for low-cost hire at 27 docking stations across the RBC area.			
8. Cultural Heritage	**Historic assets**[44]: There are c. 510 listings entries on the National Heritage List for England (NHLE) within the RBC area and three heritage assets on the 'Heritage at Risk Register'; Chazey Farm Barn (Grade I), Russell Street / Castle Hill Conservation Area and Reading Abbey (Scheduled Ancient Monument). This does not include any Grade II listed churches that may be at risk as detail is not available. The NHLE also has five Grade II Registered Parks and Gardens in the Borough: Caversham Park, Caversham Court, The Forbury Garden, Prospect Park and Reading Cemetery. **Relevant sites:** The RBC area has a varied and extensive cultural and heritage-based tourism offering. There are many attractions including the Reading Museum/Town Hall, Reading Concert Hall and Reading Abbey. Approximately 18,000 local school children visit Reading Museum per annum. Visitors to Reading Museum have increased by 35% between 2010 and 2015 while the Abbey Quarter project secured a Heritage Lottery Fund grant of £1.77m with community and Historic England support. There are also a variety of festivals year-round in the RBC area. In collaboration with Heritage Lottery Fund in 2015, Reading was found to be in the top 16% overall for heritage assets including how actively residents and visitors are involved with the local heritage of the area. The Culture and Heritage Strategy identifies a number of strategic priorities over the plan period 2015-2030.	The Borough hosts a range of designated heritage assets, each of which need to be appropriately protected from effects on their integrity and setting from development of new or improved transport infrastructure within the RBC area. Their contribution to the RBC area should be preserved, protected and promoted with any works to transport infrastructure complimentary to their character.	The RTS should set out objectives, policies and proposals (including transport interventions) which protect and enhance heritage assets across the RBC area, including in terms of impacts on the setting of such assets and upon unknown archaeological resources from transport infrastructure. Heritage assets should also be highly accessible to visitors or residents within the RBC area.	The IIA Framework should include objectives relating to the preservation, conservation, protection and enhancement of the historic environment from harmful effects of traffic or transport infrastructure development.
9. Landscape Cont'd Overleaf	**Landscape fabric, character and capacity:** There are no Areas of Outstanding Natural Beauty (AONB) within the RBC area. However, there are two in relatively close proximity; • The Chilterns AONB • The North Wessex Downs AONB	There is a need to provide appropriate protection for designated landscapes, important landscape features, sensitive landscape character areas within the RBC area. There is also a need to protect key views and safeguard visual amenity. The range of sensitivities and capacities of landscapes across the RBC area to	The RTS should set out objectives, policies and proposals (including transport interventions) which protect key landscape features from detrimental effects caused by the development of new or improved transport	The IIA Framework should include objectives relating to landscape features, landscape character and visual impacts of transport-based development. The IIA should assess the impacts

[43] ReadyBike https://www.readybike.co.uk/

[44] Reading Borough Council Local Plan Sustainability Appraisal Scoping Report http://www.reading.gov.uk/media/1052/Sustainability-Appraisal-Scoping-Report-Revised-September-2014/pdf/Sustainability-Appraisal-Scoping-Report-Sep14.pdf

SEA Topic	Baseline Key Characteristics	Relevant Objectives, Issues and Problems	RTS Implications	IIA Implications
	While AONBs are not present within the RBC boundary, the Chilterns AONB runs along part of the RBC boundary, while the North Wessex Downs AONB at its closest point is 200m west of the borough boundary at Tilehurst. The Reading Local Plan identifies a need for any new development close to these areas must take into account any impact on these AONBs and preserve the urban-rural fringe is managed to ensure that development does not impact any of the characteristics of the AONB[45].	accommodate new transport infrastructure should be taken account of within the Local Transport Plan 4.	infrastructure, which is sensitive to relevant visual receptors and encourage local distinctiveness.	of potential changes to the transport network within the RBC area.
	Visual amenity: Within the adopted Reading Local Plan, the following views merit special protection[46]; • View from McIlroy Park towards Chazey Barn Farm, the Thames Meadow and the Chilterns escarpment • View northwards down Southampton St from Whitley St towards St Giles Church, St Mary's Church and Greyfriars Church • View upstream from Caversham Bridge • View northwards down Russell St towards the Church of the Holy Trinity • View over Alexandra Road Conservation Area toward the Chilterns escarpment • View southwards down St Annes Rd towards Downshire Square • View of St Annes Church Tower from the west • View towards Caversham Park House from the A329(M), railway and surrounding streets • View southwards along tree-lined Coley Avenue			

[45] RBC Local Plan (2019) https://www.reading.gov.uk/media/10410/Reading-Borough-Council-Local-Plan/pdf/Local_Plan_Adopted_November_2019.pdf
[46] RBC Local Plan (2019) https://www.reading.gov.uk/media/10410/Reading-Borough-Council-Local-Plan/pdf/Local_Plan_Adopted_November_2019.pdf

A.4 Likely Evolution of Baseline Conditions

A.4.1 Taking account of the environmental information provided in **Section 3** and **Appendices A.1 – A.3** above, as well as the proposed form and content of the draft RTS (**Section 2**), **Table A.3** below outlines the expected evolution of the baseline position in the absence of the implementation of the RTS (i.e., with LTP3 remaining in place). This information is provided in response to requirements within the SEA Regulations.

Table A.3: Evolution of the Baseline Scenario in the Absence of the RTS

SEA Topic(s)	Likely evolution without a new LTP (the emerging RTS)
Biodiversity, Flora & Fauna	Without a new LTP and if demand for road transport in Reading increases as projected, there would likely be a requirement for new and significant transport infrastructure above planned levels to cope with this demand. Construction of such infrastructure could put pressure on biodiversity, including the loss and fragmentation of habitats, while increases in traffic and noise could disturb sensitive species.
Population	Without a new LTP and if the resident and workplace population of Reading continues to increase in line with projections, demand for transport will outstrip supply, leading to overcrowding of transport facilities. If improvements are not made to the walking, cycling and public transport environments, it is likely that most of the demand for transport will be for road transport, leading to increased congestion and pollution.
Health	Without a new LTP it is likely that demand for, and use of, road transport of transport would increase, whilst opportunities to encourage transport modal shift to walking, cycling and public transport will be lost. Additionally, if a significant switch to healthy and active modes of transport, such as walking and cycling, is not achieved, various health issues, such as obesity, inactivity and poor air quality, will continue to affect the population, causing increases in ill-health and potentially a reduction in life expectancy. Developmental pressures for new transport infrastructure beyond planned levels to cope with the increased demand for road traffic could lead to the loss of areas of open space, reducing opportunities for physical activity.
Soil	Without a new LTP and if demand for road transport in Reading increases as projected, it may be necessary to construct further large-scale transport facilities, such as new roads and bridges, to cope with demand. Construction and use of such facilities could lead to land contamination and soil erosion.
Water	Without a new LTP and if demand for road transport in Reading increases as projected, it may be necessary to construct further large-scale transport facilities, such as new roads and bridges, to cope with transport demand. This could contribute to the pollution of the local water environment.
Air Quality & Climatic Factors	Without a new LTP it is likely that demand for, and use of, road transport would increase unchecked as physical development occurs across Reading, whilst opportunities to encourage transport modal shift to walking, cycling and public transport will be lost. In the absence of a shift towards the use of electric vehicles, the resulting increase in traffic would increase fossil fuel combustion, carbon emissions and local atmospheric pollution, in particular greater release of particulate matter. This would

SEA Topic(s)	Likely evolution without a new LTP (the emerging RTS)
	act against wider policy efforts to decarbonise key economic sectors including transport mitigate climate change. It could also lead to worsening air quality. As a result, Reading Borough Council could fail to meet statutory duties in relation to climate change mitigation and adaptation and could be required to designate further Air Quality Management Areas (AQMAs) to address areas of poor air quality. Continued breaches of European air quality limits could also trigger fines being imposed.
Material Assets	Without a new LTP it is likely that a range of sustainable transport facilities (including walking and cycling routes, cycle parking, public transport hubs) would not be delivered. This would jeopardise Reading Borough Council's vision of creating an effective and integrated transport system which meets the needs of all those living in, working in and visiting Reading.
Cultural Heritage	Without a new LTP and if demand for road transport and parking increases as projected, this could put development pressure on areas of historic and/or archaeological interest and undermine the character or conservation areas.
Landscape	Without a new LTP and if demand for road transport in Reading increases as projected, this would necessitate the construction of new transport facilities beyond planned levels, which could have a significant negative impact on the landscape character of the Reading Borough Council area, especially if additional new facilities are developed outwith the urban core.

Appendix B Review of Plans and Programmes

Appendix B: Review of Plans and Programmes

B.1 Introduction

B.1.1. This Appendix supports **Section 3** of the Integrated Impact Assessment (IIA) Report prepared to accompany the Consultation Draft Reading Transport Strategy 2036 ('the Draft RTS') by providing a review of relevant qualifying plans, programmes and strategies of relevance to the draft RTS. The main purpose of this review is to identify relevant environmental protection objectives and policy requirements within the identified policy documents which should be taken account of within (or otherwise inform) the RTS, and this associated IIA process.

B.1 Review of Relevant Plans and Programmes

B.2.1 **Table B1.1** below sets out a review of other plans and programmes of relevance to the RTS and the associated IIA process. Of note, Table B1.1 does not consider the implications of national and local planning policy documents for the emerging RTS, as these are addressed separately within **Table B.2.**

Table B.1: Review of Other Relevant Plans and Programmes

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
International				
Population (including relevant socio-economic issues)	United Nations (1989) UN Convention on the Rights of the Child 1989, United Nations (2016) Committee on the Rights of the Child Recommendations Report, United Nations (2016) Habitat III (Quinto), United Nations Economic Commission for Europe (1998) The Aarhus Convention	These documents provide an international framework for promoting sustainable development within all decision making. In particular: ▪ UN Habitat III Directive focuses on sustainable urban development across all communities around the world at a localised level in the aim of achieving collective sustainability; and, ▪ The Aarhus convention implements the rights of the public with regards to the environment.	The RTS should set out policies and proposals (including transport interventions) which furthers the delivery of sustainable development and safeguards transparency in decision making. The development of the RTS itself must also be objective, transparent, evidence based and conducted fairly.	Applied as a whole, the IIA Framework should provide a holistic suite of assessment criteria to determine the contribution of the RTS to the delivery of sustainable development.
Human Health	World Health Organization (1999) Guidelines for Community Noise, World Health Organisation (2004) Children's Environment and Health Action Plan for Europe	These documents provide an international framework which recognises the importance of the protection and improvement of human health.	The RTS should set out policies and proposals (including transport interventions) to support the protection and improvement of human health in line with international obligations.	The IIA Framework should include objectives relating to the protection and improvement of human health.
Biodiversity, Flora & Fauna	**Designated Sites** The Ramsar Convention on Wetlands (1971), Biodiversity Strategy - Our Life Insurance, Our Nature Capital: An EU Biodiversity Strategy (2011), AEWA (1995) **Priority and other notable habitats** EU Convention on the Agreement on the Conservation of African – Eurasian Migratory Waterbirds (2006) (The Bonn Convention),	These documents provide an international framework to protect sites designated at the international level for reasons of biodiversity conservation and important species from harm. In particular: ▪ The Rio Convention on Biodiversity is an international agreement on the protection of biological diversity, sustainable use and encourages sharing the commercial use of genetic resources.	The RTS must set out policies and proposals (including transport interventions) which protect and where appropriate enhance sites designated at the international level for reasons of biodiversity conservation or ecological importance.	The IIA Framework must include objectives relating to the appropriate conservation, protection and enhancement of designated sites.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	UNESCO (1973) Convention on International Trade in Endangered Species of Wild Fauna and Flora, United Nations (1992) The Rio Convention on Biodiversity.			
Soil & Land	N/a	N/A	N/A	N/A
Water	N/A	N/A	N/A	N/A
Air	WHO Air Quality Guidelines, United Nations (1979) Geneva Convention on Long Range Transboundary Air Pollution	These guidelines provide a scientific assessment of the health impacts of Air Pollution and provides guidelines applicable worldwide for various pollutants.	The RTS should set out policies and proposals (including transport interventions) to tackle poor air quality and improve air quality for all communities.	The IIA Framework should include objectives relating to air quality and associated health impacts.
Climatic Factors	Kyoto Protocol to the UN Convention on Climate Change (2005), The United Nations Framework Convention on Climate Change (1992), United Nations (2009) The Copenhagen Accord, United Nations (2010) Cancun Adaptation Framework, United Nations (2016) Paris Agreement.	These documents provide an international framework which identifies the need for climate change mitigation and adaptation action. In particular: ▪ The Paris Agreement at COP 21 agreed to reduce global greenhouse gas emissions with the long-term goal of withholding a temperature increase by no more than 2%. The agreement strengthens global climate change mitigation and adaptation.	The RTS should set out policies and proposals (including transport interventions) to decarbonise the transport sector and more generally help to mitigate climate change, as well as policies and proposals which increase resilience to adverse weather and the effects of climate change.	The IIA Framework should include objectives relating to climate change mitigation and adaptation, including the decarbonisation of transport and climate resilience.
Material Assets	N/A	N/A	N/A	N/A
Cultural Heritage	World Cities Culture Report 2015 – measures and cultural assets, UNESCO (1972) Convention Concerning the Protection of the World Cultural and Natural	These documents provide an international framework to identify and protect cultural heritage assets. They aim to ensure the cultural heritage assets have a function in	The RTS should set out policies and proposals (including transport interventions) to preserve, protect and where appropriate enhance	The IIA Framework should include objectives relating to the preservation, protection and

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	Heritage, UNESCO (2001) Convention on the Protection of Underwater Cultural Heritage	the community and are integrated into various planning programmes.	cultural heritage assets and their setting.	enhancement of the historic environment.
Landscape	N/A	N/A	N/A	N/A
Interrelated Effects	Johannesburg Declaration on Sustainable Development, Communication COM (2005) 666: Taking Sustainable use of resources forward, United Nations (1992) The Rio Declaration on Environment and Development, United Nations (2002) The World Summit on Sustainable Development	Commits the sustainable use of resources and promotes sustainable development.	The RTS should set out policies and proposals (including transport interventions) which support the delivery of sustainable development.	The IIA Framework should provide a holistic suite of objectives which, when applied together, support the delivery of sustainable development.
European – all legislative and policy frameworks are informed by relevant higher-level international frameworks				
Population (including relevant socio-economic issues)	**Governance and Statistical Geographical Units** European Commission (2003) Public Sector Information Directive (PSI) 2003/98/EC, **Demographics, Inequality, social exclusion and deprivation** European Commission (2013) Towards Social Investment for Growth and Cohesion 2014-2020 European Commission (2010) Europe 2020: A strategy for smart, sustainable and inclusive growth	These documents provide a European framework to further social cohesion, freedom of information, economic growth and inclusion.	The RTS should set out policies and proposals (including transport interventions) to meet population needs, facilitate economic growth, enhance community cohesion, address inequalities in society and tackle social exclusion.	The IIA Framework should include objectives relating to economic growth, community cohesion and social inclusion.
Human Health	European Commission (2002) Environmental Noise Directive (END) 2002/49/EC, European	These documents provide a European framework to reduce noise pollution and	The RTS should set out policies and proposals (including transport interventions) for the improvement	The IIA Framework should include objectives relating to air quality,

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	Commission (2007) Together for Health - A Strategic Approach for the EU 2008-2013	promote a strategic vision for improving health standards. In particular: ▪ The EU Noise directive underpins overarching environmental policies such as monitoring noise pollution by drawing up strategic noise maps, holding consultations over noise exposure and addressing local issues through action plans.	of health and wellbeing, including in relation to reducing air, noise and vibration pollution.	noise, vibration and safety in order to protect human health.
Biodiversity, Flora & Fauna	**Designated Sites** Council of Europe (1981) Convention on the Conservation of European Wildlife and Natural Habitats - The Bern Convention, EU Biodiversity Strategy - Our Life Insurance, Our Nature Capital: An EU Biodiversity Strategy (2011), European Commission (2004) European Commission (2008) Environmental Quality Standards Directive 2008/105/EC **Priority and other notable habitats** EU Birds Directive (Directive 2009/147/EC/ on the conservation of wild birds), EU Habitats Directive (EU Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (As amended by 97/62/EC)	These documents provide a European framework to protect sites designated at the European level for reasons of biodiversity conservation and important species from harm.	The RTS should set out policies and proposals (including transport interventions) to protect and enhance biodiversity interests, including European Sites and Protected Species.	The IIA Framework should include appropriate objectives relating to the protection and enhancement of biodiversity interest, including with respect to the integrity and conservation objectives of designated sites and protected species.
Soil & Land	**Geological & Ground Conditions:** European Thematic Strategy on Soil Protection European Commission (2006),	These documents provide a European framework to promote the sustainable use of soil resources, soil restoration and the prevention of land degradation.	The emerging RTS should set out policies and proposals (including transport interventions) for the sustainable and efficient use of soil and land resources.	The IIA Framework should include objectives relating to the protection of soil resources and the avoidance of land degradation.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	Environmental Liability Directive 2004/35/EC			
Water	**Flood Risks** EU Floods Directive (Directive 2007/60/EC) EU Water Framework Directive (Directive 2000/60/EC), European Commission Groundwater Directive 2006/118/EC, European Commission (1991) The Urban Waste Water Directive 91/271/EEC, **Waterbodies** European Commission: The Drinking Water Directive 98/83/EC, European Commission: The Bathing Waters Directive 2006/7/EC, European Commission Marine Strategy Framework Directive 2008/56/EC	These documents provide a European framework which seek to protect the quality of the water environment, including through ensuring safe levels for bathing and drinking water and by promoting sustainable urban drainage.	The RTS should set out policies and proposals (including transport interventions) to minimise flood risks and promote sustainable flood risk management. It should also set out policies and proposals which protect and where appropriate enhance waterbodies, the water environment and utilities infrastructure.	The IIA Framework should include objectives relating to the quality of the water environment and water resources, as well as to manage flood risks.
Air	Industrial Emissions Directive (Directive 2010/75/EU), EU Air Quality Directive (Directive 2008/50/EC on ambient air quality and cleaner air for Europe), European Commission (1991) The Nitrates Directive 91/676/EEC, European Commission (2001) The Clean Air for Europe Programme (CAFÉ), European Commission (2005) EU Thematic Strategy on Air Quality, European Commission (2008) Ambient Air Quality and Cleaner Air for Europe Directive 2008/50/EC and Air Quality Framework Fourth Daughter Directive 2004/107/EC	These documents provide a European framework to protect and enhance air quality. A number of key measures include: ▪ Limit values and alert thresholds for a number of air pollutants, including nitrogen dioxide and particular matter; and, ▪ Mandatory monitoring/reporting of air quality and the production of action plans where limits are exceeded.	The RTS should set out policies and proposals (including transport interventions) to tackle poor air quality and improve air quality in accordance with European legislation.	The IIA Framework should include objectives relating to air quality and associated health impacts.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
Climatic Factors	**Greenhouse Gas Emissions** EU (2009) Renewable Energy Directive (2009/28/EC), A Resource Efficient Europe, United Nations (1994), EU (2009) Renewable Energy Directive (2009/28/EC,), European Commission (2001) National Emissions Ceiling Directive 2001/81/EC, European Commission (2007) The Integrated Climate and Energy Package, European Commission (2010) Energy 2020 - A Strategy for Competitive, Sustainable and Secure Energy, European Commission (2011) A Roadmap for Moving to a Competitive Low Carbon Economy in 2050, European Commission (2012) Energy Efficiency Directive (2012/27/EU) **Climate Change Impacts** European Council (2013) Seventh EU Environmental Action Plan (EAP) (2013-2020, European Commission (2013) Strategy on Adaptation to Climate Change, European Commission (2013) Seventh Environmental Action Programme to 2020 'Living well, within the limits of our planet', European Commission (2014) 2030 Policy Framework for Climate and Energy, European Union (2005) Emissions Trading Scheme (EU ETS)	These documents provide a European framework to respond to the global challenge of climate change. Primarily, the minimisation of future climate change through mitigation and the implementation of adaptation measures are key themes. Key targets include: ▪ Each Member State has a target calculated according to the share of energy from renewable sources in its gross final consumption for 2020. The UK is required to source 15% of energy needs from renewable sources, including biomass, hydro, wind and solar power by 2020; and, ▪ From 1 January 2017, biofuels and bioliquids share in emissions savings should be increased to 50%.	The RTS should set out policies and proposals (including transport interventions) to decarbonise the transport sector and more generally help to mitigate climate change, as well as policies and proposals which increase resilience to adverse weather and the effects of climate change.	The IIA Framework should include objectives relating to climate change mitigation and adaptation, including the decarbonisation of transport and climate resilience.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
Material Assets	**Infrastructure** European Commission (2011) Roadmap to a Single European Transport Area	This document promotes measures to create a competitive and resource efficient transport system across Europe.	The RTS should set out policies and proposals (including transport interventions) which align with the Roadmap	The IIA Framework should include objectives relating to resource efficiency, connectivity and accessibility.
Cultural Heritage	**Historic Assets** European Convention on the Protection of Archaeological Heritage (1992) Convention for the Protection of the Architectural Heritage of Europe (Granada Convention)	This document provides a European framework for the protection of designated cultural and archaeological heritage sites in accordance with European legislation.	The RTS should set out policies and proposals (including transport interventions) to preserve, protect and where appropriate enhance cultural heritage assets and their setting.	The IIA Framework should include objectives relating to the preservation, protection and enhancement of the historic environment.
Landscape	European Landscape Convention (The Florence Convention, 2000)	This document provides a European framework to define and protect important landscapes which contribute to cultural and social heritage and quality of life.	The RTS should set out policies and proposals (including transport interventions) to protect and enhance landscape character and visual amenity.	The IIA Framework should include objectives relating to landscape features, landscape character and visual impacts.
Interrelated Effects	European Spatial Development Perspective, EU Strategic Environmental Assessment (SEA) Directive (Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment), EU Environmental Action Programme: Living Well, Within the Limits of Our Planet, European Sustainable Development Strategy 2001 (Renewed 2006, Reviewed 2009), European Commission (1999) European Spatial Development Perspective (ESDP) (97/150/EC), European Commission (2009) Review of the EU Sustainable Development Strategy European Commission, European Union	These documents provide an overarching European framework to support the delivery of sustainable development, including through spatial planning systems. In particular: ▪ The revised EIA Directive requires all member states to carry out mandatory EIAs of certain projects deemed likely to have a significant impact on the environment.	The RTS should set out policies and proposals (including transport interventions) which support the delivery of sustainable development.	The IIA Framework should provide a holistic suite of objectives which, when applied together, support the delivery of sustainable development.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	(2001) SEA Directive (2001/42/EC), European Union (2014) Environmental Impact Assessment Directive 2014/52/EU amending Directive 2011/92/EU, McKinsey Centre for Business and Environment (2015) Growth within: A Circular Economy Vision for a Competitive Europe.			
National - legislative and policy frameworks are informed by relevant higher level European and international frameworks				
Population (including relevant socio-economic issues)	**Governance and Statistical Geographical Units** The Enterprise and Regulatory Reform Act (2013), The Plan for Growth (BIS, 2011), Equality Act (2010), Local Growth: Realising every Place's potential (BIS, 2010) **Demographics, Inequality, social exclusion and deprivation** Equality Act (2010)	These documents provide a framework at the UK level to support economic growth and to tackle inequalities in society.	The RTS should set out policies and proposals (including transport interventions) to facilitate economic growth, in particular the growth of key economic sectors, and to tackle inequality. The implications of the Equality Act 2010 for the Draft RTS are detailed in the IIA Report.	The IIA Framework should include objectives relating to economic growth, social inclusion and the achievement of greater equality in society. The implications of the Equality Act 2010 for this IIA are detailed in the IIA Report.
Human Health	National Design Guide (2019), The Marmot Review (2010) Fair Society, Healthy Lives, The Health and Social Care Act (2012), Child Obesity Plan (2016), Health Protection Agency (2007) Children's Environment and Health Action Plan, Health Protection Agency (2008) Health Effects of Climate Change in the UK 2008 - An update of the department of Health report 2001/2002, Health Protection Agency (2009) Health Strategy for	These documents provide a framework at the UK level to reduce health inequalities and make improvements to public health while promoting active lifestyles – encouraging a sustainable approach to health and lifestyles.	The RTS should set out policies and proposals (including transport interventions) to improve access for all demographic groups and communities to healthcare infrastructure which meets their needs.	The IIA Framework should include objectives relating to the protection and improvement of all aspects of health and social wellbeing.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	the United Kingdom 2, Health and Safety Executive (2009) The Health and Safety of Great Britain: Be Part of the Solution, Sustainable Development Commission (2010) Sustainable Development: The Key to Tackling Health Inequalities.			
Biodiversity, Flora & Fauna	**Designated Sites** The UK Post 2010 Biodiversity Framework (JNCC, 2012), The Natural Environment White Paper (DEFRA, 2012), Natural Environment and Rural Communities Act (2006), 25 Year Environment Plan (UK Government, 2018), Defra (2007) Conserving Biodiversity the UK Approach 2007, Wildlife and Countryside Act (1981), Environmental Protection Act (1990), HM Government (2010) Conservation of Habitats & Species Regulations 2010 (as amended 2011), HM Government (2010) Environmental Permitting (England and Wales) Regulations, Joint Nature Conservation Committee and Defra (2012) UK Post-2010 Biodiversity Framework, Strategic Plan for Biodiversity 2011-2020 (2010), UK National Ecosystem Assessment (2011) UK National Ecosystem Assessment: Understanding Nature's Value to Society	These documents provide a framework at the UK level to provide protection for protected species and habitats. In particular: ▪ The UK National Ecosystem Assessment provides an analysis of the state of the UK's natural environment and the benefits it provides for society and continued economic prosperity.	The RTS should set out policies and proposals (including transport interventions) to protect and enhance biodiversity interests, including sites designated at the national level.	The IIA Framework should include appropriate objectives relating to the protection and enhancement of biodiversity interest, including with respect to the integrity and conservation objectives of designated sites and protected species.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	Priority and other notable habitats The Conservation of Habitats and Species Regulations (The Conservation of Habitats and Species Regulations (2010) as amended, The Protection of Badgers Act 1992, The Invasive and Non-Native Species Framework Strategy for Great Britain			
Soil & Land				
Water	**Flood Risks** The Pitt Review: Learning Lessons from the 2007 Floods (2008), Flood and Water Management Act (2010), HM Government (2009) Flood Risk Regulations. **Waterbodies** Defra (2005) Safeguarding Sea Life, Defra (2009) Our Seas – a Shared Resource: High Level Marine Objectives, Defra (2010) Adapting to Coastal Change: Developing a Policy Framework, Defra (2012) Marine Strategy Part 1: UK Initial Assessment and Good Environmental Status, DECC (2010) Marine Energy Action Plan, Department for Transport (2007) Ports Policy Review Interim Report, Department for Transport (2011) National Policy Statement for Ports, Environment Agency (2005) Cleaner Coasts. Healthier	These documents provide a framework at the UK level regarding flood risk management and the protection of water and coastal environments.	The RTS should set out policies and proposals (including transport interventions) to minimise flood risks and promote sustainable flood risk management. It should also set out policies and proposals which protect and where appropriate enhance waterbodies, the water environment and utilities infrastructure.	The IIA Framework should include objectives relating to the quality of the water environment and water resources, as well as to manage flood risks.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	Seas: EA Marine Strategy, Environment Agency (2013).Groundwater Protection Policy and Practice (GP3), HM Government (2003) The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017, HM Government (2007) Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended 2010), The Marine and Coastal Access Act (2009), HM Government (2010) Marine Strategy Framework Directive - putting in place the legal framework for implementation, Department for Environment, Food & Rural Affairs (2011) UK Marine Policy Statement, Inshore Fisheries and Conservation Authorities Bylaws (various), Natural England and JNCC (2011) Marine Conservation Zone (MCZ) Project, NERC (2010) Marine Environmental Mapping Programme (MAREMAP), UK Marine Monitoring and Assessment Strategy (2010) Charting Progress 2: The State of UK Seas			
Air	Department of Environment, Food & Rural Affairs: The Air Quality Standards Regulations (2010) as amended, Air Quality Strategy for England, Scotland, Wales and Northern Ireland, UK's Air Quality Action Plan (Defra, revised January 2016), The Environment Act (1995), Defra (2010) Air	These documents provide a framework at the UK level to implement objectives for the reduction of air pollution.	The RTS should set out policies and proposals (including transport interventions) to tackle poor air quality and improve air quality.	The IIA Framework should include objectives relating to air quality and associated health impacts.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	Pollution: Action in a Changing Climate, Defra (2011) Air Quality Plans for the Achievement of EU Air Quality Limit Values for Nitrogen Dioxide (NO2) in the UK: List of UK and National Measures			
Climatic Factors	**Greenhouse Gas Emissions** Building a Low-Carbon Economy - the UK's Contribution to Tackling Climate (2008), DECC (2009) UK Ports for the Offshore Wind Industry: Time to Act, DECC (2011) Carbon Plan: Delivering our Low Carbon Future, DECC (2009) Framework for the Development of Clean Coal, DECC (2011) National Policy Statements for Energy Infrastructure, DECC (2011) UK Renewable Energy Roadmap, DECC (2014) UK National Energy Efficiency Action Plan, Petroleum Act (1998), The Energy Act (2008), HM Government (2015) Ozone-Depleting Substances Regulations, Climate Change Act 2008 (2050 Target Amendment) Order 2019. **Climate Change Impacts** The Carbon Plan (DECC, 2011), Environment Agency (2010) Managing the Environment in a Changing Climate, Department for Environment, Food & Rural Affairs (2018) The National Adaptation Programme and the Third Strategy for Climate Adaptation Reporting, HM Government	These documents provide a framework at the UK level regarding the need to mitigate and adapt to climate change. In particular, the Climate Change Act 2008 sets a legally binding target of reducing the UK's GHG emissions by 80% by 2050 compared with 1990 and requires a programme of rolling carbon budgets to be set to achieve this.	The RTS should set out policies and proposals (including transport interventions) to decarbonise the transport sector and more generally help to mitigate climate change, as well as policies and proposals which increase resilience to adverse weather and the effects of climate change.	The IIA Framework should include objectives relating to climate change mitigation and adaptation, including the decarbonisation of transport and climate resilience.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	(2017) UK Climate Change Risk Assessment 2017			
Material Assets	**Land Use** HM Treasury (2014) National Infrastructure Plan. **Infrastructure** Better planning, better transport, better places (2019), National Design Guide (2019), The UK's Industrial Strategy (2016), DECC (2007) Meeting the Energy Challenge: A White Paper on Energy, The UK Renewable Energy Strategy (HM Government (2009), Environment Act (1995).	These documents provide a framework at the UK level regarding infrastructure development, environmental permitting and energy generation.	The RTS should set out policies and proposals (including transport interventions) to facilitate the efficient use of material assets including infrastructure to meet identified needs and to support the deployment of renewable and low carbon technologies.	The IIA Framework should include objectives relating to infrastructure capacity, resource efficiency, land use, energy efficiency, connectivity and accessibility.
Cultural Heritage	The Ancient Monuments and Archaeological Areas Act (1979), Protection of Military Remains Act (1986), The Planning (Listed Buildings and Conservation Areas) Act (1990), The Treasure Act (1996).	These documents provide a framework at the UK level regarding the protection and conservation of cultural and heritage assets, including listed buildings, ancient monuments and archaeological resources.	The RTS should set out policies and proposals (including transport interventions) to preserve, protect and where appropriate enhance cultural heritage assets and their setting.	The IIA Framework should include objectives relating to the preservation, protection and enhancement of the historic environment.
Landscape	Natural Environment and Rural Communities Act (2006), National Parks and Access to the Countryside Act (1949), Forestry Act (1967), Countryside and Rights of Way Act (2000), Commons Act (2006).	These documents provide a framework at the UK level regarding the protection of national parks, countryside and rural communities including rights of way and the protection of forests.	The RTS should set out policies and proposals (including transport interventions) to protect and enhance public access to land.	The IIA Framework should include objectives relating to public access.
Interrelated Effects	HM Government (2005) The UK Sustainable Development Strategy, Defra (2011) Mainstreaming Sustainable Development, Department for Transport (2008) Delivering a Sustainable Transport System,	These documents provide a framework at the UK level to promote sustainable development and sustainable transport initiatives.	The RTS should set out policies and proposals (including transport interventions) which support the delivery of sustainable development.	The IIA Framework should provide a holistic suite of objectives which, when applied together, support the delivery of sustainable development.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	Transport Act (2000), Royal Town Planning Institute (2017) Digital Economy and Town Planning, HM Government (2005) One Future – Different Paths. Shared Framework for Sustainable Development.			
Regional				
Population	Thames Valley Berkshire Strategic Economic Plan, 2015/16 – 2020/21	Thames Valley Berkshire Strategic Economic Plan, 2015/16 – 2020/21 set out a vision, objectives and four relates programmes to support economic development of the region. This document also identifies strategic infrastructure requirements for the region.	The RTS should set out policies and proposals (including transport interventions) which align with the Thames Valley Berkshire Strategic Economic Plan, 2015/16 – 2020/21	The IIA Framework should include guidelines pertaining to achieving economic growth and infrastructure improvements.
Water	**Flood Risk** Department for Environment & Rural Affairs (2016) Thames Catchment Flood Management Plan, **Waterbodies**: Environment Agency (2009) Thames River Basin District Management Plan	Seeks to achieve the protection, improvement and sustainable use of the water environment in the Thames Basin area including Reading.	The RTS should set out policies and proposals (including transport interventions) relating to the management of flood risks and the protection of the water environment within the RBC area.	The IIA Framework should include objectives relating to the quality of the water environment and water resources, as well as to manage flood risks.
Material Assets	**Infrastructure** Reading Borough Council (2011) Local Transport Plan 3: Strategy 2011-2026, West of Berkshire Spatial Planning Framework (2016) **Natural Resources** Joint Minerals and Waste Plan; Minerals & Waste Development Scheme 2016-2020 (2016)	Once adopted, the Joint Minerals & Waste Plan will cover the period 2020-2036 and will replace or 'supersede' the currently adopted minerals and waste local plans for the relevant Berkshire authorities. The West Berkshire Spatial Planning Framework (2016) outlines a framework of how the four local authorities (Bracknell Forest, Reading, West Berkshire and Wokingham) will work together to identify	The emerging RTS will be the successor to the Reading LTP3. The RTS should set out policies and proposals (including transport interventions) which align with the West of Berkshire Spatial Planning Framework and the identified transport infrastructure needs within this.	The IIA Framework should include objectives relating to resource efficiency, land use, waste management, energy, connectivity and accessibility.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	Central & Eastern Berkshire Authorities	large scale opportunities to meet identified future development needs in the area.		
Local (Reading & Neighbouring Local Authorities) - all legislative and policy frameworks are informed by relevant higher-level UK, European and international frameworks				
Population (including relevant socio-economic issues)	**Housing** Reading Borough Council: Firm Foundations: Housing Strategy 2009-2014, **Demographics, Inequality, Social Exclusion, Deprivation and Community Infrastructure:** Reading Borough Council (2011) Sustainable Community Strategy, Community Cohesion Framework, Reading Borough Council (2015) Community Infrastructure Charging Schedule, Reading Borough Council Neighbourhood Strategy,	Local policies regarding socio-economic issues broadly address the following themes: ▪ Improving quality of life for all; ▪ Protecting and enhancing the environment; ▪ Increasing prosperity; ▪ Delivering safer and more inclusive communities; ▪ Achieving a healthier council area; and, ▪ Ensure good quality housing and housing for all.	The RTS should set out policies and proposals (including transport interventions) to facilitate economic growth, to provide infrastructure (including housing) and services which meet population needs, and to tackle inequality.	The IIA Framework should include objectives relating to economic growth, the provision of infrastructure and services to meet identified needs, social inclusion and the achievement of greater equality in society.
Human Health	Reading Health and Well-being Strategy 2017-2020, Reading Borough Council (2018) Creating the Right Environments for Health	The Reading Health and Well-being Strategy 2017-2020 seeks to address issues encompassing social inclusion, lifestyle and health and social care. The strategy includes four main goals; • Promote and protect the health of all communities particularly those disadvantaged. • Increase the focus on early years and the whole family to help reduce health inequalities.	The RTS should include policies, proposals and interventions to improve all aspects of health and wellbeing for the resident and workplace population. In doing so, it should: • Recognise that the role of transport and active travel as integral to the delivery of national and local objectives to improve physical and mental health through increasing physical activity;	The IIA Framework should include objectives to improve human mental and physical health and reduce health inequalities, including through increased physical activity, improved access to healthcare and opportunities to be active, improved road safety, improved air quality, reduced adverse impacts of transport-related noise, and contributing to the creation of high-quality places. The IIA Framework should allow for an assessment of

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
		• Reduce the impact of long-term conditions with approaches focused on specific groups. • Promote health-enabling behaviours and lifestyle tailored to the differing needs of communities. Creating the Right Environments for Health (2018) was published in July 2018 for the Public Health Directors of the six unitary authorities within Berkshire to identify the role of the environment as a key determinant of health. The report presents an overview of physical and mental health baseline characteristics across the Berkshire authorities, provides related case studies and explores how observed health trends relate to environmental factors.	• Seek to increase cycling and walking, both in overall and modal share terms; • Recognise the adverse effects of roads accidents on human health and seek to improve road safety for all users including pedestrians and cyclists through a range of actions; • Recognise the harmful impacts of transport on human health from transport-related noise and vibration and seek to reduce harmful impacts through a range of actions; • Recognise the role of transport in improving human health through facilitating access to healthcare facilities and services and should seek to improve accessibility especially for more vulnerable and at-risk populations; • Recognise the relationships between transport systems and high-quality places that support improved health and wellbeing; and, • Support the implementation of relevant planning and design policies to create high quality and welcoming	likely significant effects from the draft Reading LTP in relation to: • Increasing walking and cycling and improving access to opportunities to be active; • Improving access to healthcare facilities and services; • Improving road safety for all users. • Reducing impacts of transport-related air pollutants on human health. • Reducing the impacts of transport-related noise on human health; and, • Creating high quality places and local environments which support improved health outcomes.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
			environments which support better health outcomes. including reducing speeds, improving the quality of infrastructure including more attractive and safe walking and cycling routes, avoiding severance and improving local air quality.	
Biodiversity, Flora & Fauna	Reading Borough Council (2006) Biodiversity Action Plan	The Local Biodiversity Action Plan (LBAP) aims to map/quantify biodiversity and identify its importance for Reading.	The RTS should set out policies and proposals (including transport interventions) to protect and enhance biodiversity interests, including sites and species identified at the local level within the LBAP.	The IIA Framework should include appropriate objectives relating to the protection and enhancement of biodiversity interest, including with respect to the integrity and conservation objectives of designated sites and protected species.
Soil & Land	N/A	N/A	N/A	N/A
Water	**Flood Risk**: Reading Borough Council (2011) Preliminary Flood Risk Assessment, Reading Borough Council (2009) Strategic Flood Risk Assessment, Reading Borough Council (2017) Surface Water Management Plan	The local flood risk assessment and management strategies aim to set out various mitigation and adaptation across the county to lessen the effects of severe flood event.	The RTS should provide policies and proposals (including transport interventions) relating flood risks, the protection of the water environment.	The IIA Framework should include objectives relating to the quality of the water environment and water resources, as well as to manage flood risks.
Air	Reading Borough Council Air Quality Action Plan (2009) updated (2015)	The Air Quality Action Plan for Reading identifies a number of issues to address air quality issues including promoting sustainable transport, reducing emissions of existing travel movements, working with specific groups to address major 48 identified sources of air pollution, using the planning process to ensure development does not further reduce air quality, seeking Section 106 contributions to air quality	The RTS should provide policies and proposals (including transport interventions) to tackle poor air quality, implement the Reading AQAP and avoid further deterioration of air quality.	The IIA Framework should include objectives relating to air quality and amenity.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
		monitoring and measures, and improving communication with the public about air quality issues. The updated Air Quality Action Plan identifies that that vehicle emissions are the main source of air pollution in Reading. It includes a range of interventions to improve air quality, many of which relate to transport schemes and interventions.		
Climatic Factors	Reading Climate Change Strategy 2013-2020	The Climate Change Strategy for the RBC area responds to the need for RBC to contribute to climate change mitigation and the decarbonisation of key economic sectors. The strategy includes consideration of the role of renewable energy in climate change mitigation and aims to work to reduce the carbon footprint of the borough by 34% by 2020. Further to this, RBC declared a Climate Emergency in 2019 and have increased their ambitions and targets to achieving carbon neutral by 2030. This was enacted through the Climate Change Act 2008 (2050 Target Amendment) Order 2019.	The RTS should set out policies and proposals (including transport interventions) to decarbonise the transport sector and more generally help to mitigate climate change, as well as policies and proposals which increase resilience to adverse weather and the effects of climate change.	The IIA Framework should include objectives relating to climate change mitigation and adaptation, including the decarbonisation of transport and climate resilience.
Material Assets	**Transport Infrastructure** Reading Borough Council (2017) Highway Asset Management Policy, Reading Borough Council (2010) Station Area Framework, Reading Borough Council (2011) Local Transport Plan 2011-2026 inc. sub-strategies; • Cycling Strategy • Parking Policy	Existing policies at the local level regarding road safety, parking, the management of the transport network and the promotion of active travel. The Reading Council Replacement Minerals Local Plan 2001-2006 has been retained and has been replaced by a Joint Minerals & Waste Plan prepared by Central & Eastern Berkshire Authorities.	The RTS should set out policies and proposals (including transport interventions) to facilitate the efficient use of material assets including infrastructure to meet identified needs and to support the deployment of renewable and low carbon technologies.	The IIA Framework should include objectives relating to infrastructure capacity, resource efficiency, land use, energy efficiency, connectivity and accessibility.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Implications for RTS	Implications for IIA
	• Public Transport Strategy • Road Safety Strategy Local Cycling and Walking Infrastructure Plan (2019) **Natural Resources** Reading Council Replacement Minerals Local Plan 2001-2006			
Cultural Heritage	**Historic Assets;** Reading's Culture & Heritage Strategy 2015-2030	Reading's Culture & Heritage Strategy sets out the cultural ambitions for Reading and identifies objectives for culture and heritage including ensuring that culture plays a full role in making Reading a vibrant and tolerant place to live.	The RTS should provide policies and proposals (including transport interventions) to protect and enhance the economic, environmental and social wellbeing of the RBC area.	The IIA Framework should include objectives relating to the preservation of cultural heritage assets.
Landscape	N/A	N/A	N/A	N/A
Interrelated Effects	Reading Local Plan (2019), Reading Economic Development Strategy, Reading Local Plan (2019), Reading Borough Council (2019) Corporate Plan 2018-2021, Reading Borough Council Sustainable Community Strategy (2011), Reading Borough Council (2007) Open Space Strategy, Thames Parks Plan, Reading Borough Council (2011) Local Development Framework; Open Space and Green Network, Reading Borough Council (2007) Capital Strategy and Asset Management Plan	These documents identify a wide-ranging set of socio-economic challenges affecting residents within the Reading Council area and identify objectives, sustainability strategy and associated measures to address these. In addition to this,	The RTS should set out policies and proposals (including transport interventions) which support the delivery of sustainable development.	The IIA Framework should provide a holistic suite of objectives which, when applied together, support the delivery of sustainable development.

B.3. Review of Relevant Planning Policy Requirements

B.3.1. Relevant national and local plan policies are provided within the National Planning Policy Framework (NPPF) and the statutory Development Plan for Reading, which at present comprises the Reading Local Plan 2019 and associated documents. The RTS must also align with the recently adopted Reading Local Plan (2019) which guides development within the Reading Borough Council area up to 2036. One of the main objectives of the Local Plan is to "*improve and develop excellent transport systems to improve accessibility within Reading and for the wider area by sustainable modes of transport, including walking and cycling*". Policy TR2 Major Transport Projects notes that priority will be given to (and land safeguarded for) the implementation of major transport projects identified in the Local Transport Plan and other identified major transport projects. Major projects identified include:

- Mass Rapid Transit
- Park and Ride sites
- Green Park station and interchange
- Reading West station upgrade
- Cow Lane bridges
- Crossing of the River Thames
- National Cycle Network Route 422
- Development of high-quality bus services

B.3.2 **Table B.2** provides a review of the relationship between the emerging RTS and relevant planning policy documents (principally the NPPF and Reading Local Plan).

Table B.2: Review of Relevant Planning Policy Requirements

SEA Topics	Relevant Policies and Provisions
	NPPF 2019
Population (including relevant socio-economic issues)	**Housing** Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 5 Delivering a sufficient supply of homes of the Revised NPPF (2018). This chapter sets out requirements regarding housing delivery to meet identified needs. **Educational Attainment/Qualifications** Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 6 Building a strong, competitive economy of the NPPF (2019). This chapter sets out policies to support economic growth, new employment and to safeguard the vitality of town centres. **Inequality, Exclusion, Deprivation and Community Infrastructure** Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 8 Promoting healthy and safe communities of the NPPF (2019). This chapter sets out requirements for the creation and maintenance of healthy, inclusive and safe communities, as well as for the provision and accessibility of quality community infrastructure.
Human Health	Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 8 Promoting healthy and safe communities of the NPPF (2019). This chapter sets out requirements for the creation of well-designed places and the promotion of active lifestyles, as well as for the provision and accessibility of community infrastructure including healthcare facilities.
Biodiversity, Flora & Fauna,	Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 15 Conserving and enhancing the natural environment of the NPPF (2019). This chapter sets out requirements of the conservation, protection and enhancement of designated sites, protected species, priority habitats, and green infrastructure.
Soil & Land	Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 13 Protecting Green Belt land and Chapter 15 Conserving and enhancing the natural environment of the NPPF (2019). These set out requirements for the protection of Green Belt land, the maintenance of environmental quality and the protection of soil resources.
Water	Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 14 Meeting the challenge of climate change, flooding and coastal change and Chapter 15 Conserving and enhancing the natural environment of the NPPF (2019). These chapters set out requirements for the mitigation of flood risk through sustainable development, with consideration and mitigation of climate change effects, as well as requirements for the protection and enhancement of the water environment.
Air	Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 9 Promoting sustainable transport, Chapter 11 Making effective use of land and Chapter 15 Conserving and enhancing the natural environment of the

SEA Topics	Relevant Policies and Provisions
	NPPF (2019). These chapters set out requirements for the protection and improvement of air quality, in particular the need to reduce poor air quality arising from pollution from motor vehicles.
Climatic Factors	Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 2 Achieving sustainable development and Chapter 14 Meeting the challenge of climate change, flooding and coastal change of the NPPF (2019). These chapters set out requirements for climate change mitigation and adaptation.
Material Assets	**Infrastructure** Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 9 Promoting sustainable transport and Chapter 10 Supporting high quality communications of the NPPF (2019). These chapters set out requirements for sustainable transport provision and high-quality communications infrastructure. **Natural Resources** Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 15 Conserving and enhancing the natural environment and Chapter 17 Facilitating the sustainable use of minerals of the NPPF (2019). These chapters set out requirements for the protection of the natural environment and the sustainable use of minerals resources.
Cultural Heritage	Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 16 Conserving and enhancing the historic environment of the NPPF (2019). This chapter sets out requirements for the preservation, protection and enhancement of heritage assets and their settings.
Landscape	Policies and provisions relating to this topic and of relevance to the draft RTS are detailed within Chapter 13 Protecting Green Belt land and Chapter 15 Conserving and enhancing the natural environment of the NPPF (2019). These chapters set out requirements for the protection of landscape character, visual amenity and settlement structure.
Interrelated Effects	Read as a whole, the NPPF (2019) sets out a range of provisions seeking to deliver sustainable development. The document's vision in this regard is set out in Chapter 2 Achieving sustainable development, with establishes a presumption in favour of sustainable development.
Statutory Development Plan for Reading	
Population (including relevant socio-economic issues)	Policies from the Reading Borough Local Plan (2019) relevant to the RTS have been listed under the sub-topics below. The Reading Local Plan identifies that a total of 15,847 homes (689 per annum average) are to be provided in Reading during the plan period. Of this total approximately 7,600 dwelling are to be within Central Reading, with heavy reliance for housing provision put on the redevelopment of existing land. The Reading Local Plan also notes that up to 34,900 sqm retail, leisure and cultural floor space, 53,000 – 112,000 sqm of office floor space and 148,000 sqm of Industrial and warehouse floorspace is to be delivered in Reading by 2036. **Housing** Adopted planning policies relating to this topic and of relevance to the RTS are: Policy CC2: Sustainable Construction and Design Policy CC6: Accessibility and The Intensity of Development

SEA Topics	Relevant Policies and Provisions
	Policy CC7: Design and the Public Realm Policy CC8 Safeguarding Amenity Policy CC9 Securing Infrastructure Policy H1 Provision of Housing - Policy H2 Density and Mix Policy H5 Standards for New Housing Policy H6 Accommodation for Vulnerable People Policy H13 Provision for Gypsies and Travellers Policy H14 Suburban Renewal and Regeneration These policies set out requirements for local housing delivery to meet identified needs, and their implication will have a range of transport implications. **Inequality, Exclusion, Deprivation and Community Infrastructure** Adopted planning policies relating to this topic and of relevance to the RTS are: Policy CC7: Design and the Public Realm Policy CC9 Securing Infrastructure Policy EN9: Provision of Open Space Policy H5 Standards for New Housing Policy H6: Accommodation for Vulnerable People Policy TR1: Achieving the Transport Strategy These policies set out requirements for the provision and protection of community infrastructure in order to enhance equality, inclusion and community cohesion.
Human Health	Adopted planning policies relating to this topic and of relevance to the RTS are: Policy CC6: Accessibility and The Intensity of Development Policy CC9 Securing Infrastructure Policy EN15 Air Quality Policy EN16: Pollution and Water Resources Policy EN17: Noise Generating Equipment Policy RL6: Protection of Leisure Facilities and Public Houses Policy OU1: New and Existing Community Facilities Policy OU2: Hazardous Installations

SEA Topics	Relevant Policies and Provisions
	These policies set out provisions for the protection of amenity and community facilities and promote inclusion.
Biodiversity, Flora & Fauna	Adopted planning policies relating to this topic and of relevance to the RTS are: Policy EN1: Protection and Enhancement of The Historic Environment Policy EN7 Local Green Space and Public Open Space Policy EN12 Biodiversity and the Green Network Policy EN14 Trees, Hedges and Woodlands These policies set out provisions for the protection and enhancement of biodiversity and geodiversity interests.
Soil & Land	Adopted planning policies relating to this topic and of relevance to the RTS are: Policy EN8 Undesignated Open Space Policy EN9 Provision of Open Space Policy EN10 Access to Open Space Policy EN16: Pollution and Water Resources These policies set out requirement for the protection and enhancement of designated sites, avoidance of pollution and the protection of open space.
Water	Adopted planning policies relating to this topic and of relevance to the RTS are: EN11 Waterspaces EN16 Pollution and Water Resources EN18 Flooding and Drainage These policies set out requirements for the minimisation of flood risks, pollution prevention and to protect and enhance the water environment.
Air	Adopted planning policies relating to this topic and of relevance to the RTS are: EN15 Air Quality These policies out requirements for pollution prevention and to protect air quality.
Climatic Factors	Adopted planning policies relating to this topic and of relevance to the RTS are: Policy CC2: Sustainable Construction and Design Policy CC3 Adaption to Climate Change Policy CC4 Decentralised Energy Policy N18 Flooding and Drainage These policies set out requirements relating to climate change mitigation and adaptation
Material Assets	Adopted planning policies relating to this topic and of relevance to the RTS are: Policy CC6 Accessibility and the Intensity of Development

SEA Topics	Relevant Policies and Provisions
	Policy CC7 Design and The Public Realm Policy CC9 Securing Infrastructure Policy EM1: Provision of Employment Policy EM2: Location of New Employment Development Policy TR1 Achieving the Transport Strategy Policy TR2 Major Transport Projects Policy TR3 Access, Traffic and Highway-Related Matters Policy TR4 Cycle Routes and Facilities Policy TR5 Car and Cycle Parking and Electric Vehicle Charging Policy OU1 New and Existing Community Facilities These policies set out requirements to maintain and improve the accessibility, capacity and performance of the transport system, as well as to manage the transport impacts of development
Cultural Heritage	Adopted planning policies relating to this topic and of relevance to the RTS are: Policy CC7 Design and The Public Realm Policy EN1: Protection and Enhancement of The Historic Environment Policy EN2 Areas of Archaeological Significance Policy EN3 Enhancement of Conservation Areas Policy EN4 Locally Important Heritage Assets Policy EN6 New Development in a Historic Context These policies set out requirements to preserve, protect and enhance heritage assets, their setting and the wider historic environment.
Landscape	Adopted planning policies relating to this topic and of relevance to the RTS are: CC7 Design and The Public Realm EN4 Locally Important Heritage Assets EN5 Protection of Significant Views with Heritage Interest EN7 Local Green Space and Public Open Space EN13 Major Landscape Features and Areas of Outstanding Natural Beauty EN14 Trees, Hedges and Woodlands These policies set out requirements to protect and enhance landscape character, landscape designations townscape character and visual amenity.

SEA Topics	Relevant Policies and Provisions
Interrelated Effects	Read as a whole, the Local Plan for Reading set out a range of policies seeking to deliver sustainable development. It includes the following Major Opportunity Areas and strategic sites: CR11 Station/River Major Opportunity Area CR11a Friar Street & Station Road CR11c Station Hill & Friars Walk CR11e North of Station CR11g Riverside CR11h Napier Road Junction CR11i Napier Court CR12 West Side Major Opportunity Area CR13 East Side Major Opportunity Area CR13b Forbury Retail Park CR13c Kenavon Drive & Forbury Business Park SR1 Island Road Major Opportunity Area SR1c Island Road A33 Frontage SR2 Land North of Manor Farm Road Major Opportunity Area SR3 South of Elgar Road Major Opportunity Area SR4 Other Sites for Development in South Reading SR4e Part of Former Berkshire Brewery Site WR1 Dee Park WR3 Other Sites for Development in West Reading and Tilehurst WR3o The Meadway Centre, Honey End Lane WR3s Land at Kentwood Hill WR3t Land at Armour Hill WR4 Potential Traveller Transit Site at Cow Lane CA1 Sites for Development and Change of use in Caversham and Emmer Green CA1b Part of Reading Golf Course, Kidmore End Road ER1 Sites for Development in East Reading ER1f Hamilton Centre, Bulmershe Road ER1i 261-275 London Road

SEA Topics	Relevant Policies and Provisions
	ER1j Palmer Park Stadium Area ER2 Whiteknights Campus, University of Reading ER3 Royal Berkshire Hospital

Appendix C Review of IIA Scoping Responses

Appendix C: Review of IIA Scoping Responses

C.1 Introduction

C.1.1. This Appendix supports **Section 4** of the Integrated Impact Assessment (IIA) Report prepared to accompany the Consultation Draft Reading Transport Strategy 2036 ('the Draft RTS') by providing a summary of responses received to the IIA Scoping Report and explaining how they have been addressed in undertaking the IIA. A review of all responses received in relation to the IIA Scoping Report is provided in **Table C.1** below.

Table C.1: Review of IIA Scoping Responses

REF	Respondent	Comment	IIA Project Team Response
SC1	Natural England	No comment	Noted
SC2	Reading Environmental Health	Scoping refers to the previous Air Quality Management Plan – this should be amended to reflect the 2015 update.	To be updated.
SC3	Historic England	General advice on Sustainability Appraisal and the historic environment is set out in Historic England's Advice Note 8 "Sustainability Appraisal and Strategic Environmental Assessment": https://www.historicengland.org.uk/images-books/publications/sustainability-appraisal-and-strategic-environmental-assessment-advice-note-8/. We also have the following detailed comments.	Noted
SC4	Historic England	In Table 3.1, we are pleased to see Cultural Heritage scoped in as a SEA Topic, although we consider that the Key Issue should be "*The need to protect and enhance the significance, special interest and character of cultural heritage assets and their settings*."	Text updated
SC5	Historic England	In Tables 4.2 and 4.3, we would normally prefer to see "Heritage" or "Historic Environment" as a IIA Headline in its own right rather than subsumed into "Sustainable Placemaking," but for Reading, this Headline is appropriate. However, we do consider that the IIA Objective should be "*protect and enhance the significance, special interest and character of heritage assets and their settings*."	Noted – table updated accordingly
SC6	Historic England	In Table 4.4, following on from the comments above, we consider that the Guide Question for the Sustainable Placemaking IIA Objective should be "*Conserve, protect and enhance the significance, special interest, character and settings of heritage assets?*" The corresponding criterion should therefore be "*Proximity to and potential effects on the significance, special interest and character of heritage assets, including their setting*." We welcome the Guide Question "*Preserve important archaeological resources?"*.	Text updated
SC7	Historic England	In Table A.1, the National Heritage List for England (the only official, up to date, register of all nationally protected historic buildings and sites in England) identifies 511 listing entries for Reading Borough, although it is possible that one or more of these entries are for more than one building. The NHLE also has five Grade II Registered Parks and Gardens in the Borough: Caversham Park, Caversham Court, The Forbury Garden, Prospect Park, and Reading Cemetery.	Table updated.

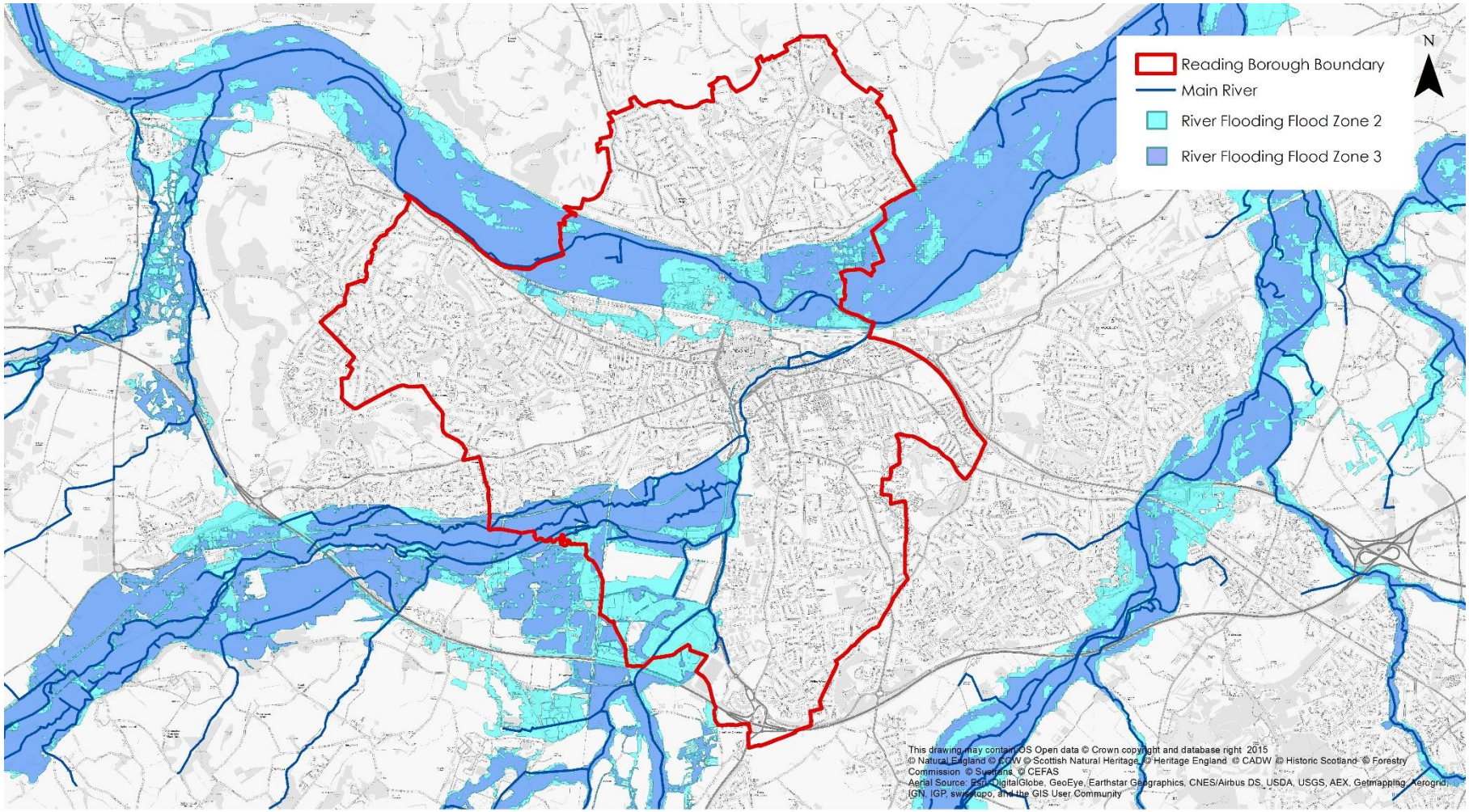
REF	Respondent	Comment	IIA Project Team Response
SC8	Historic England	Whilst we welcome the recognition of locally important buildings and structures, these are non-designated assets. **Table A.1** should therefore be retitled "Relevant Sites." Are there are any Parks and Gardens on a Reading or Berkshire local register?	Text updated. Park and Gardens updated as in SC7
SC9	Historic England	In **Table A.2,** we are not sure why Topic 8 Cultural heritage refers to "*c.855 listed buildings within the RBC area*". As noted above, the National Heritage List for England identifies 511 listing entries for Reading Borough. The Historic England Heritage at Risk Register does not include Grade II listed secular buildings outside London. Has the Borough Council undertaken or commissioned a survey of the Grade II listed buildings in the Borough? If not, then this should be identified as a gap in the baseline.	Text updated to correct the number of listings and refer to lack of information available on churches.
SC10	Historic England	We agree, in principle, the identified relevant Objectives, Issues and Problems, Implications for Reading LTP4 and Implications for IIA Framework for Topic 8, although the Objectives, Issues and Problems should include non-designated assets, and both designated and non-designated assets should be protected from adverse effects on their significance, special interest and character (not just integrity).	Text updated.
SC11	Environment Agency	Broadly, we are satisfied with the scope of the IIA. However, we do raise some issues with the proposed scope and objectives of the 'biodiversity' sections of the IIA. In particular, we are concerned that the proposed biodiversity objectives, guiding questions, and criteria fail to properly account for the principles of biodiversity net gain, as set out in the government's 25 Year Environment Plan (which has been included in the list of relevant plans in **Appendix B**).	Text updated to incorporate biodiversity net gain.
SC12	Environment Agency	For example, the biodiversity objectives, guiding questions, and criteria on page 36 of the report refers only to enhancement of "valued species and habitats" and "protected trees or important woodland areas". This is not strong enough – biodiversity net gain needs to be delivered by the LTP's transport policies and projects. It is not enough to only propose enhancements for protected species or habitats.	Text updated.
SC13	Environment Agency	Similarly, **Appendix A - Table A.2** (Baseline Conditions) (page 53) states for biodiversity that: "The IIA Framework must include objectives relating to the appropriate conservation, protection and enhancement of statutorily and non-statutorily designated sites.". Again, this needs to be wider than just protected sites; enhancement is expected for all policies and projects.	Text updated.

REF	Respondent	Comment	IIA Project Team Response
SC14	Environment Agency	Also, in **Appendix A** - Table A.2 (Baseline Conditions) (page 69) - flood risk only mentions fluvial flooding. It is not clear why other forms of flood risk (especially surface water flooding) have not been included. This needs to be addressed in future submissions.	Text updated.
SC15	Environment Agency	Finally, as a general comment on **Appendix A - Table A.2,** there is fairly limited details provided for the environmental baseline. It appears that there is significantly more detail included for non-environmental matters, such as population statistics etc. We would expect to see more details about the environmental baseline conditions in any future submissions.	Table A.2 reviewed and updated to include more detailed coverage of relevant environmental issues (whilst respecting that Table A.2 summarises environmental, equalities and health baseline conditions).

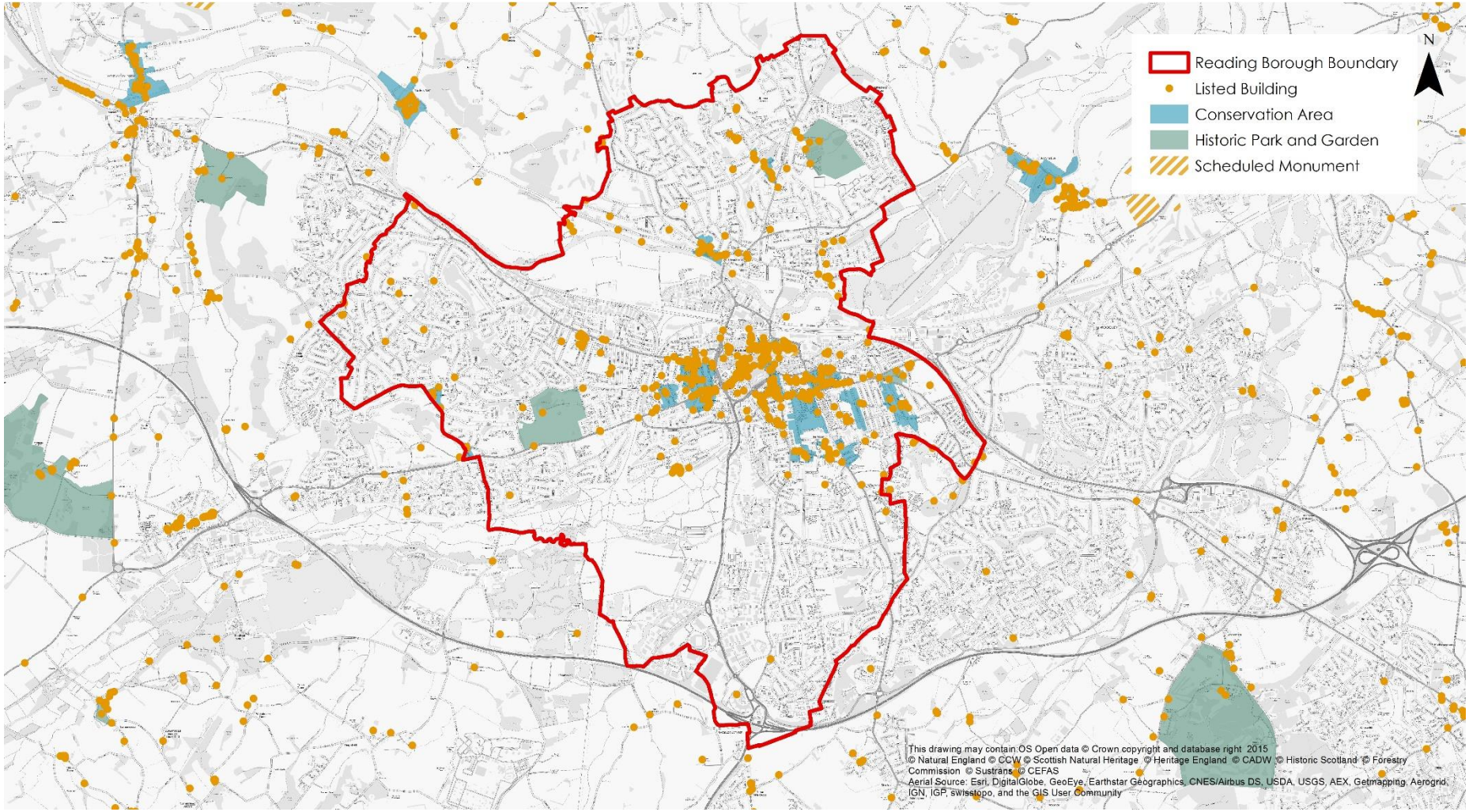
Appendix D Environmental Constraints Maps

Appendix D Environmental Constraints

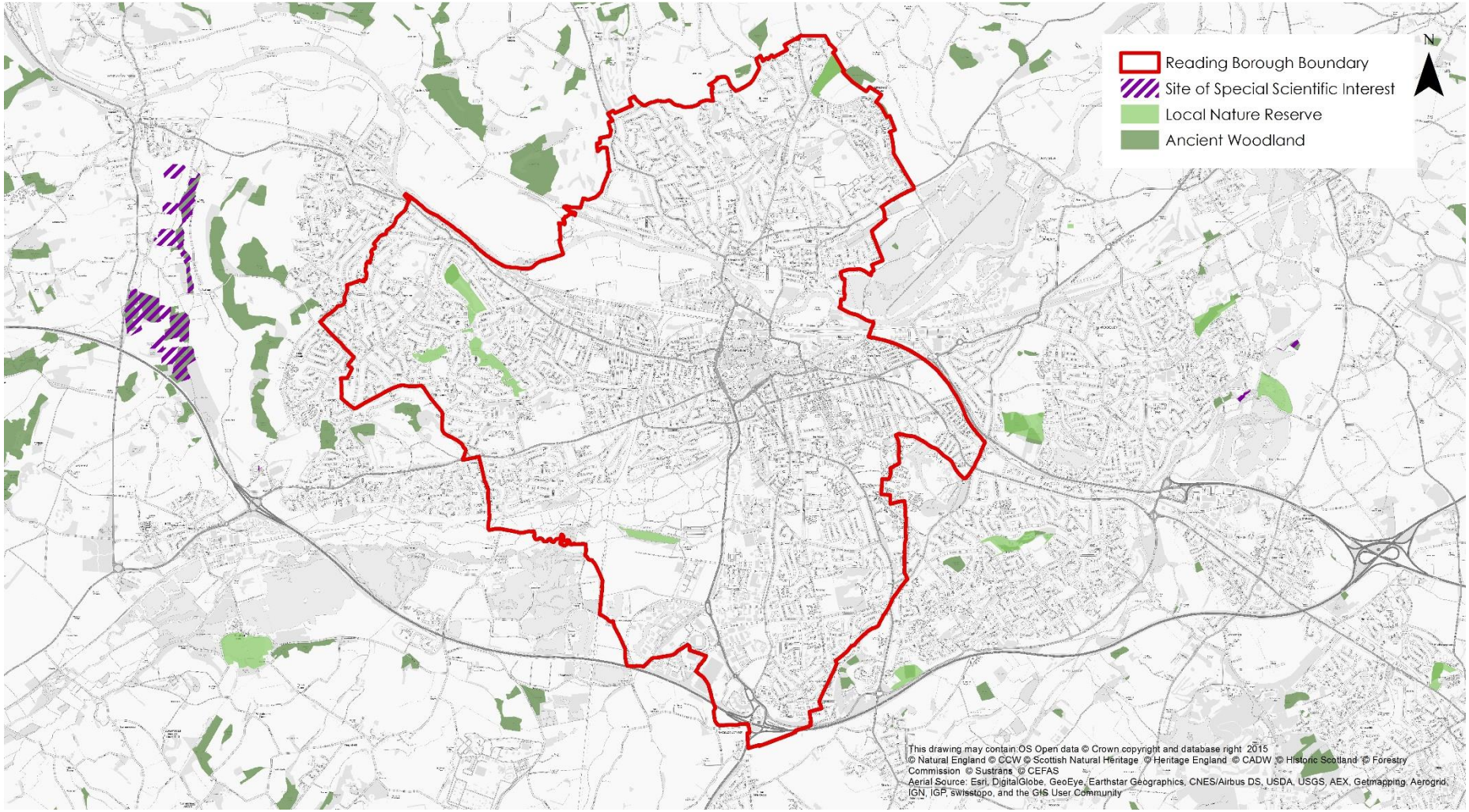
D.1 Environmental Constraints – Flood Risk



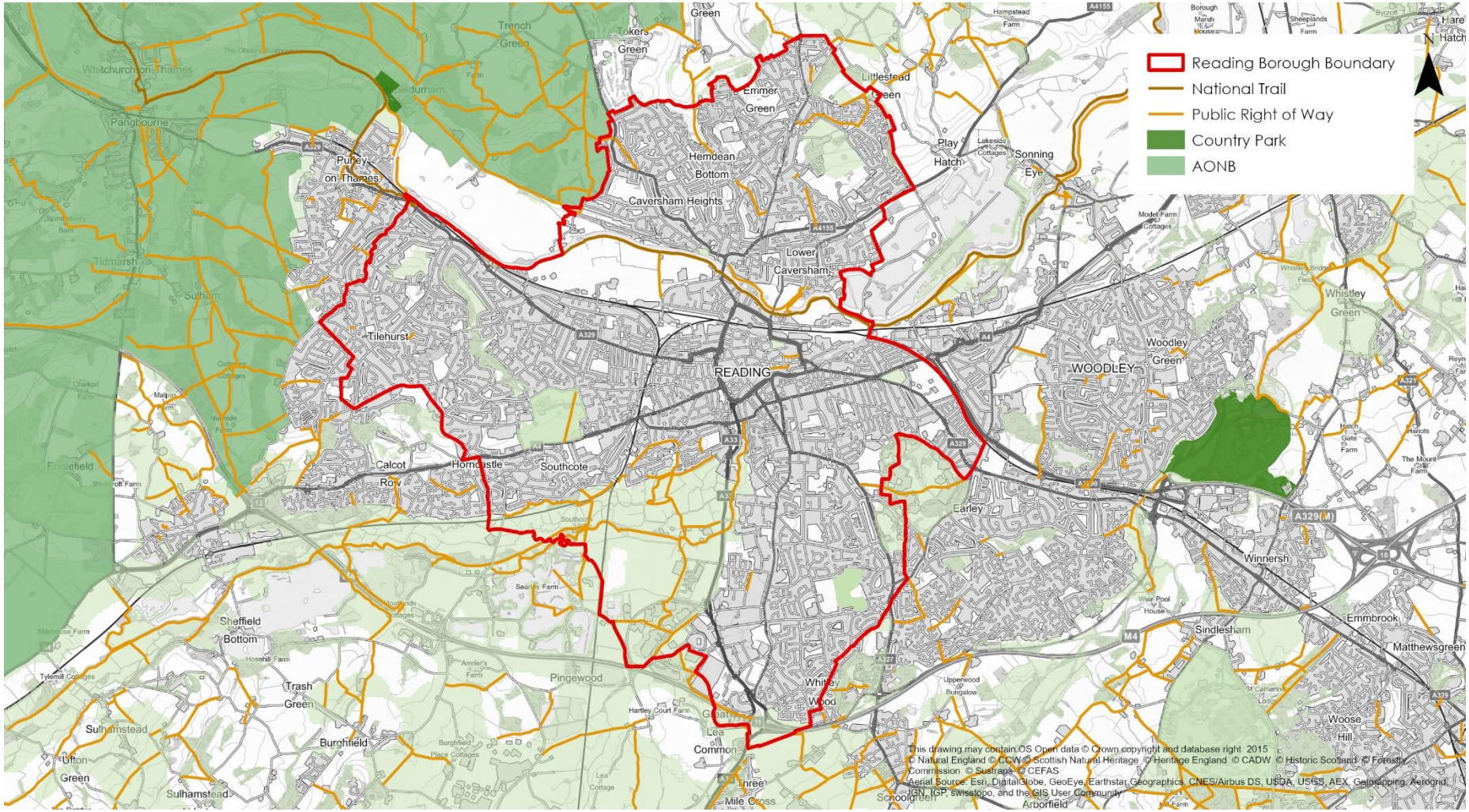
D.2 Environmental Constraints – Heritage



D.3 Environmental Constraints – Ecology



D.4 Environmental Constraints – Landscape



Appendix E IIA of Transport Schemes and Initiatives

IIA of Transport Schemes and Initiatives

E.1 Overview

E.1.1 This Appendix provides a detailed assessment of the transport schemes and initiatives identified in **Chapter 6** of the RTS. For reasons of proportionality the assessment has been undertaken on a grouped basis for related schemes, with these groupings reflecting the characteristics of each scheme rather than necessarily their order as presented in the RTS. Each scheme is also described at the start of each sub-section of this Appendix. The assessments are provided in **Tables E.3 to E.19**. The symbols and scoring system shown in **Table E.1 of the IIA Report** is used throughout this IIA.

Table E.1: IIA Scoring System to Establish Likely Significant Effects

Score	Description	Symbol
Significant (Major) Positive Effect	The option/policy contributes significantly to the achievement of the IIA objective.	++
Minor Positive Effect	The option/policy contributes to the achievement of the IIA objective but not significantly.	+
Neutral Effect	The option/policy is related to but does not have any effect on the achievement of the IIA objective	0
Minor Negative Effect	The option/policy detracts from the achievement of the IIA objective but not significantly.	-
Significant (Major) Negative Effect	The option/policy detracts significantly from the achievement of the objective. Mitigation is therefore required.	- -
Uncertain Effect	The option/policy has an uncertain relationship to the IIA objective, or the relationship is dependent on the way in which the aspect is managed. In addition, insufficient information may be available to enable an assessment to be made.	?
No Clear Relationship	There is no clear relationship between the option/policy and the achievement of the IIA objective or the relationship is negligible.	~

E.1.2 **Table E.2** shows of the transport schemes and initiatives identified in the 'Our Schemes and Initiatives' section of the RTS. These fall into several different groups:

- Schemes that would require additional land take where the location can be broadly geographically defined;
- Schemes that fall entirely or largely within the Reading Borough and schemes beyond the Borough; and
- Schemes where the RTS does not set out any land take requirements or where the scheme is entirely policy based.

E.1.3 The transport schemes in the RTS are not geographically described, and only indicative information is available in terms of their location. However, when assessing schemes, that when delivered, would require some land-take or hard infrastructure, consideration is given to potential environmental or other sensitives that may have implications for their routing/delivery. Where possible, appraisal matrices based on mapped opportunities and constraints aim to identify the potential for direct effects and specific mitigation or avoidance measures that will need to be considered when implementing schemes.

E.1.4 For schemes that fall outside the Borough, some assessment has been made of the potential effects. It is recognised that effects based on schemes in adjacent local authorities may have secondary, cross-boundary effects within RBC's administrative area, however due to uncertainties it is harder to define what these effects may be. It should be noted that the mitigation of any impact of the schemes will be outside RBC's control and any planning applications for these will be determined by the relevant local planning authority and covered by that authority's planning policy (e.g., South West Reading Park and Ride).

E.1.5 The RTS Transport Schemes and Initiatives are:

- **Multi-Modal Transport**:
  - MM1: Transport Corridor Multi-Modal Enhancements
  - MM2: Inner Distribution Road (IDR) Multi Modal Improvements
  - MM3: Oxford Road Multi-Modal Enhancements
  - MM4: Cross Thames Travel
  - MM5: Connecting Neighbourhoods
  - MM6: Demand Management
- **Public Transport Schemes – Behaviour Change and Shared Services**
  - BC1: Superbus Network
  - BC2: Concessionary and Discounted Travel
  - BC3: Community Transport
  - BC4: Demand Responsive Transport
  - BC5: Mobility as a Service (MaaS)
- **Public Transport Schemes - Fast Track Public Transport Corridors and Bus Corridors**
  - FT1: South Reading Bus Rapid Transit
  - FT2: Bus Rapid Transit Corridors
- **Public Transport Schemes - Park and Ride**
  - PR1: Mereoak Park and Ride Mobility Hub Expansion
  - PR2: Winnersh Triangle Park and Ride Mobility Hub Enhancements
  - PR3: Park and Ride Mobility Hubs
- **Public Transport Schemes - Railway Stations**:
  - RS1: Reading Station Interchange Enhancements
  - RS2: Reading West Station Upgrade
  - RS3: Tilehurst Station Upgrade
- **Active Travel:**
  - AT1: Town and Local Centre Public Space Enhancements
  - AT2: Strategic Pedestrian Routes
  - AT3: Local Pedestrian Routes
  - AT4: Strategic and Town Centre Cycle Routes
  - AT5: Shinfield Road Active Travel Improvements
  - AT6: Bath Road/Castle Hill Active Travel Improvements
  - AT7: London Road Active Travel Improvements
  - AT8: Local Cycle Routes
  - AT9: Sustainable and Safer Travel to School
  - AT10: Play and School Street Programme
  - AT11: Cycle Parking Hubs and Facilities
  - AT12: Micro-Mobility Hire Scheme
- **Network and Demand Management:**
  - NM1: Neighbourhood and Highways Management
  - NM2: Parking Schemes and Management
  - NM3: Road Safety Schemes
  - NM4: Electric Vehicle Charging
  - NM5: Car Clubs
  - NM6: Intelligent Transport Systems (ITS) – Managing Travel on the Roads
  - NM7: Intelligent Transport Systems (ITS) – Improving Maintenance
  - NM8: Smart City Initiatives

- **Communication and Engagement**
  - CE1: Progress Reporting and Public Engagement
  - CE2: Marketing and Promotion
  - CE3: Travel Information and Advice
  - CE4: Training, Education, and Initiatives
  - CE5: School Travel Accreditation Programme

Table E.2 Schedule of Transport Schemes

Scheme Name	Spatial Scheme involving Land Take	In / Out of RBC boundary	IIA Transport Scheme Reference
Multi-Modal Transport			
Transport Corridor Multi-modal Enhancements	No	In & Out	MM1
Inner Distributor Road (IDR) Multi Modal Improvements	Yes (indicative)	In	MM2
Oxford Road Multi-Modal Enhancements	Yes (indicative)	In	MM3
Cross Thames Travel	Yes (indicative)	Out	MM4
Connecting Neighbourhoods	Yes (indicative)	In/Out	MM5
Demand Management	No	In/Out	MM6
Public Transport Schemes – Behaviour Change and Shared Services			
Superbus Network	No	In/Out	BC1
Concessionary and Discounted Travel Scheme	No	In/Out	BC2
Community Transport	No	In	BC3
Demand Responsive Transport	No	In	BC4
Mobility as a Service (MaaS)	No	In/Out	BC5
Public Transport Schemes - Fast Track Public Transport Corridors and Bus Corridors			
South Reading Bus Rapid Transit	Yes (indicative)	In/Out	FT1
Bus Rapid Transit Corridors	Yes	In/Out	FT2
Public Transport Schemes - Park and Ride			
Mereoak Park and Ride Mobility Hub Expansion	Yes	Out	PR1
Winnersh Triangle Park and Ride Mobility Hub Enhancements	Yes (indicative)	Out	PR2
Park and Ride Mobility Hubs	Yes	In/Out	PR3
Public Transport Schemes - Railway Stations			
Reading Station Interchange Enhancements	Yes	In	RS1
Reading West Station Upgrade	Yes	In	RS2
Tilehurst Station Upgrade	Yes	In	RS3

Scheme Name	Spatial Scheme involving Land Take	In / Out of RBC boundary	IIA Transport Scheme Reference
Active Travel			
Town and Local Centre Public Space Enhancements	No	In	AT1
Strategic Pedestrian Routes	No	In/Out	AT2
Local Pedestrian Routes	No	In	AT3
Strategic and Town Centre Cycle Routes	No	In/Out	AT4
Shinfield Road Active Travel Improvements	No	In	AT5
Bath Road/Castle Hill Active Travel Improvements	No	In	AT6
London Road Active Travel Improvements	No	In	AT7
Local Cycle Routes	No	In	AT8
Sustainable and Safer Travel to School	No	In	AT9
Play and School Street Programme	No	In	AT10
Cycle Parking Hubs and Facilities	No	In/Out	AT11
Micro-Mobility Hire Scheme	No	In/Out	AT12
Network and Demand Management			
Neighbourhood and Highways Management	No	In	NM1
Parking Schemes and Management	No	In	NM2
Road Safety Schemes	No	In	NM3
Electric Vehicle Charging	No	In	NM4
Car Clubs	No	In	NM5
Intelligent Transport Systems (ITS) – Managing Travel on the Roads	No	In	NM6
Intelligent Transport Systems (ITS) – Improving Maintenance	No	In	NM7
Smart City Initiatives	No	In/Out	NM8
Communication and Engagement			
Progress Reporting and Public Engagement	No	In	CE5
Marketing and Promotion	No	In	CE1
Travel Information and Advice	No	In/Out	CE2
Training, Education, and Initiatives	No	In	CE3
School Travel Accreditation Programme	No	In	CE4

E.1.6 In order to undertake the assessment, certain assumptions had to be made regarding how schemes would be implemented. In addition, there are uncertainties in the implementation or likely effectiveness of schemes that must be acknowledged to be transparent on the basis of the assessment. Table E.2 sets out a common set of 'core' assumptions and uncertainties considered throughout this IIA. Within each assessment sub-section, a table of additional scheme specific assumptions and uncertainties are provided.

Table E.3 Core Assumptions & Uncertainties

Measures	Justification	Core Assumptions and Uncertainties
Schemes outside the RBC boundary	A consideration of cross boundary issues and transport needs is required to support growth in the area and provide a transport network which meets the needs of all users. Reading Borough cannot be viewed in isolation from its wider context. The Borough itself forms the core, but not the whole, of the urban area that is generally considered to constitute Reading. The urban area centred on Reading extends beyond the Borough boundaries into West Berkshire and Wokingham. Parts of these neighbouring areas, such as Calcot, Purley-on-Thames and Tilehurst in West Berkshire, and Woodley and Earley in Wokingham in a wider sense, the Reading urban area in many ways functions as a single 'city region' with the nearby towns of Wokingham and Bracknell. The relationship to South Oxfordshire is different, in that the Borough boundary currently forms the edge of the urban area.	The assumption is made that where a scheme is partially, or entirely, outside the Reading Borough boundary it has the support of the relevant local authority.
Transport Interventions (Rail, Road, and Active Travel Infrastructure)	Each of the transport infrastructure interventions is required for a specific purpose, as detailed within the RTS. In some instances, this may require relevant Local Plans to safeguard land for the delivery of allocation (this includes the plans of neighbouring local authority areas, including Wokingham and West Berkshire). However, specific assessment or mitigation requirements have not been identified to date. The rationale for the proposed interventions includes increased highways capacity and improvements at key road to accommodate existing and future demand, this includes provision of capacity that would be necessary to make the residential and economic growth objectives of the Borough acceptable in planning terms. Other interventions are proposed in order to support sustainable modal shifts and the uptake of active travel. All of the justifications for individual proposed transport interventions are consistent with the aims, objectives, and policy requirements of the National Planning Policy Framework (2019) and the Reading Borough Local Plan (2019).	It is assumed that the inclusion of each proposed infrastructure scheme within the RTS indicates the support of RBC for its delivery to achieve specific transport objectives. However, it does not necessarily indicate a funded commitment to deliver each measure according to a fixed design, although it is assumed that funding could be realistically secured. At this stage there are varying degrees of uncertainty regarding the proposed alignment, land take, physical characteristics, and delivery mechanisms of each proposed infrastructure intervention. Therefore, it is assumed that it will be possible to secure any land take for these schemes, and that it is realistic and reasonable for them to be included in the RTS. Each of the proposed interventions therefore has been assessed in the IIA in high level policy terms rather than detailed design terms (which would be done at a later stage through the consenting process for each intervention and may in some instances include Environmental Impact Assessment under the EIA Regulations 2017 (as amended)).
Public Transport - Buses	Not relevant.	**Air quality** It is uncertain what emission standards the buses on the schemes would comply with. However, it is assumed that there would also be a continued improvement in bus emissions with movements towards electric and hydrogen buses, and that the existing fleet already performs well in this respect. It is noted that the Reading bus fleet has high environmental standards with 72% of the fleet hybrid or gas powered, or meeting Euro IV emissions standards. The assessment assumes similar lower emissions vehicles would operate on the bus schemes identified in the RTS in and outside the Borough boundaries. **Affordability** No indication is given as to how affordable bus travel will be to those on lower incomes. However, is assumed it is more affordable that owning a private car and therefore provision of these services would provide greater equity of access. It is assumed also that free bus travel for pensioners would continue at least in the medium term, and that other fare structures remain in place i.e., reduce fares for under 18s and those on JobSeekers allowance.
Construction Effects	Some schemes would require new built infrastructure and therefore construction effects are likely.	For each of the proposed interventions that would require new built infrastructure that appropriate measures would be put in place to manage construction stage effect, for example through a Construction Environmental Management plan or similar, relevant to the scale of the construction proposed.

E.2 Multi-Modal Transport

E.2.1 This subsection provides an assessment of the component of the transport schemes that relate to multi-modal schemes. These are:

- MM1: Transport Corridor Multi-Modal Enhancements;
- MM2: Inner Distribution Road (IDR) Multi Modal Improvements;
- MM3: Oxford Road Multi-Modal Enhancements
- MM4: Cross Thames Travel;
- MM5: Connecting Neighbourhoods; and
- MM6: Demand Management.

E.2.2 The schemes are identified in **Table E.4**, together with any identified reasonable alternatives. The assessment is provided in **Table E.5.**

E.2.3 The core assumptions and uncertainties listed in **Table E.4** have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix **(Table E.5).**

Table E.4: Multi-modal Transport Interventions – Assumptions and Uncertainties

Transport Scheme	Justification	Core Assumptions and Uncertainties
MM1: Transport Corridor Multi-Modal Enhancements	A range of multimodal enhancements to major transport corridors is to be provided which may include reallocation of road space to walking and cycling, improved public transport and enhanced pedestrian and cycling provision including seating, wider and more accessible routes and upgraded crossings, traffic signals and public realm improvements. These improvements would help reduce congestion and improve public transport, walking and cycling infrastructure to reduce private car travel reliance and increase the uptake of more sustainable forms of transport.	No details are given on the location for the implementation of each enhancement measures, therefore specific effects cannot be identified in the assessment.
MM2: IDR Multi Modal Improvements	Multi-modal improvements to the IDR to reduce severance and reconnect communities may include reallocation of road space to walking and cycling, improved public transport and pedestrian and cycling provision, increasing capacity at vehicle pinch points, upgrading traffic signals and public realm improvements. The IDR carries significant levels of traffic providing access to the town centre or carrying traffic around the town centre to and from the radial routes it connects. Facilities for other modes, such as public transport, walk and cycles are limited. Enhancement is therefore needed to improve the experience and safety for cyclists and pedestrians, particularly crossing the IDR.	The specific location of each of the improvement measures is not currently known, therefore specific location-based effects cannot be identified in the assessment.
MM3: Oxford Road Multi-Modal Enhancements	Multi-modal improvements to the Oxford Road, Portman Road and Cow Lane corridor aim to create a safer less traffic dominated environment on the Oxford Road which may include reallocation of road space for walking, cycling and public transport, improved pedestrian and cycling provision, improved public transport provision, enhancements to the local centre and interchange facilities at Reading West Station, potential re-routing of freight traffic onto more suitable routes, traffic signal upgrades, safety enhancements, removal of excessive street furniture and increased landscaping and vegetation.	The specific location of each of the improvement measures is not currently known, therefore specific location-based effects cannot be identified in the assessment.
MM4: Cross-Thames Travel	The focus of the Cross-Thames Travel scheme will be on promoting sustainable travel and addressing the issues resulting from the limited existing river crossings in Caversham, Sonning and Henley, which cause significant congestion during peak times. The scheme will include enhancing existing public transport, walking and cycle routes across the river It will also fundamentally review new options including the potential need for an additional river crossing and provision of an associated orbital route around the north of Caversham to link a new crossing with the A4074. The scheme intends to deliver significant benefits including reduced journey times, more reliable journeys, congestion relief, air quality improvements, network resilience and reduced carbon emissions. By reducing traffic and congestion the scheme aims to enable the reallocation of road space to sustainable travel modes and increase the attractiveness of public transport and cycling between South Oxfordshire, Caversham, Reading and Wokingham.	No detail is given to the exact infrastructure requirements, land take, routing or associated physical environmental effects of the proposed Cross-Thames Travel Scheme. Therefore, specific effects cannot be identified in the assessment. It is assumed that any future planning application for the proposed development would be accompanied by necessary environmental reporting, assessment, and mitigation, including EIA, as necessary. Recommendations from this process will include management of effects during construction as well as the mitigation of permanent effects of the Crossing once built.
MM5: Connecting Neighbourhoods	Improvements to infrastructure and services for walking, cycling, and public transport, linking key transport hubs, residential areas, and employment areas. These improvements aim to reduce the need to travel into central Reading in order to access destinations and services that lie outside the centre.	Detail is not given for suggested routes and connections, as well as key neighbourhoods receiving or affected by the scheme. Whilst general infrastructure improvements and implementations are stated, they are not specified in detail, therefore specific effects cannot be identified in assessment.
MM6: Demand Management	Demand management measures can be used to reduce or limit car travel, whilst enabling investment in sustainable travel alternatives to provide increased options for travel around the town. This may include a workplace parking levy, road users	Any demand management scheme would be subject to an EqIA, so that any negative impacts on particular groups of people can be understood and mitigated.

Transport Scheme	Justification	Core Assumptions and Uncertainties
	charging, clean air zone and emission-based charging. Such measures will help reduce traffic, leading to reduced congestion, increased capacity and improved air quality.	

Table E.5: IIA of Multi-modal Transport Interventions – Assessment Matrix

	Multi-modal						
IIA Objective	MM1	MM2	MM3	MM4	MM5	MM6	Commentary
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	+	+	+	+	+	<u>Assessment of Predicted Effects</u> • Intervention MM4 and MM5 will provide new waking and cycling routes in Reading and MM1 and MM2 will provide walking and cycling infrastructure improvements and increased capacity along transport corridors to the north, east, south, and west. This can have beneficial effects on the health and wellbeing of local residents by promoting the use of more active forms of travel. • The provision of these schemes (MM4 and MM5) can potentially relieve traffic congestion in the city centre by providing alternative transport routes. This can help reduce poor air quality experienced by human receptors in these areas, particularly along the Caversham and Reading bridges. • MM1-MM3 will similarly help improve air quality in the town centre through helping increase the attractiveness and reliability of public transport, encourage a mode shift away from private car use which will help reduce congestion and pollution. The availability of live air quality information will assist in encouraging mode shift in a flexible but continual manner. • MM4 will provide a more direct route between Caversham, Woodley and Thames Valley Park, helping to reduce severance and increase uptake of walking and cycling between these areas. This can have both physical and mental benefits for residents from connectivity and reducing isolation. It is also likely that this link would pass through the Thames Path National Trail route, but it is assumed that this link will be maintained both at construction and operation. Should this link be disrupted there may be a negative impact on health in wellbeing through impacting access to nature and open space. There would also be temporary environmental impacts during construction, although these would be mitigated by appropriate construction environmental management plans. • MM5 will also provide new bus, walking and cycling routes in northern Reading which can help encourage the uptake of more active forms of travel, as well as access to leisure centres and sports clubs located in this area. • MM6 (Demand Management) has been relocated under Multi-Modal schemes. This scheme presents potential benefits for human respiratory health through the improvement in air quality as a result of road space reallocation, road user charging and green parking tariffs on carbon emissions. Residents may be encouraged into more active and sustainable modes of transport, which will improve overall long-term physical health of the population. • Overall, the interventions are anticipated to have a long term Minor Positive effect on this IIA objective, however there may be minor negative effects associated with MM4 and MM5 due to potential impacts on the health of local residents in proximity to the scheme's due to potential increases in air and noise pollution. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • It is assumed that new roads, pedestrian, and cycle routes will be appropriately illuminated and sign-posted to help avoid risk of accidents and improve safety. • Roads will be designed to the relevant safety standards and safety audits will be completed, as necessary. • Demand management will be implemented for areas of high traffic/congestion. Demand management will result in increased uptake of active/sustainable travel.

IIA Objective	Multi-modal						Commentary
	MM1	MM2	MM3	MM4	MM5	MM6	
							Uncertainties • The exact alignment of the routes for MM4 and locations for specific interventions for MM1 and MM2 is not known. • New routes (MM4 and MM5) could result in additional accidents involving vulnerable road users.
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	+	+	+	+	+	+	Assessment of Predicted Effects • MM1-MM3 will include provision of safety improvements and new pedestrian and cycling facilities (including crossings) along key transport corridors, the IDR and Oxford Road. It is therefore anticipated that these interventions will have a positive impact on vulnerable road users. • MM4 and MM5 are likely to have a Minor Positive effect on this IIA objective. The areas in which the interventions are proposed are on the outskirts of Reading in a semi-rural area where crime rates are relatively low. There is also no pattern of fatal or serious collisions in the area, however by providing alternative transport routes and helping relieve city centre congestion these interventions could potentially help reduce the likelihood of collisions with vulnerable road users occurring in the centre of Reading. • MM6 is likely to have a Minor Positive effect on this IIA objective. The measures could reduce the number of vehicles on the road, particularly in areas of congestion, and thus reduce the risk of mortality and morbidity by traffic incidents, as well as improve respiratory health. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Where appropriate, segregated cycle lane should be provided as opposed to highway cycle lane to reduce potential for collisions between vehicles and cyclist. • Where shared paths are provided for pedestrians and cyclists clear signage should be provided to reduce potential for collision between users. Assumptions • It is assumed that new roads, pedestrian, and cycle routes will be appropriately illuminated and sign-posted to help avoid risk of accidents and improve safety • Roads will be designed to the relevant safety standards and safety audits will be completed, as necessary. Uncertainties • It is uncertain to what extent the intervention measures will reduce accidents involving vulnerable road users in the centre. • It is unclear what specific 'safety enhancement' will be provided as part of MM1 and MM2.
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	+	+	+	++	++	+	Assessment of Predicted Effects • The areas in which MM4 is likely to be provided are relatively affluent areas (with the exception of lower Caversham) with residents experiencing low levels of income deprivation and low rates of poor health and disability. • The provision of new bus, walking and cycling routes will be beneficial for those who are on lower incomes and are unable to afford a car. Implementation of bus priority lanes along these routes will also help reduce journey times (both along this route and in other areas by reducing congestion in the city centre) and make bus travel a more reliable and therefore attractive option. By providing increased bus services alongside new walking and cycle routes this will enable the vast majority of residents to benefit from these interventions as active travel (such as walking and cycling) is generally not accessible to those with mobility difficulties including the elderly. This is particularly relevant to MM4 and MM5 as the areas where the interventions are have high proportions of residents aged 66 and over. • MM4 will increase access from Caversham to employment areas south of the River Thames such as Thames Valley Park. MM5 will help increase access to facilities in the north Caversham area including schools and leisure centres. This will provide better access to jobs and services. • MM1-MM3 will help improve walking, cycling and bus service infrastructure including new crossing points

IIA Objective	Multi-modal						Commentary
	MM1	MM2	MM3	MM4	MM5	MM6	
							and stopping facilities. This will help improve the connectivity of facilities and services by other means of travel than private car which may not be accessible to those on lower incomes or with a disability. • There are pockets of deprivation and areas with high health deprivation and disability scores in and around the IDR, as such the MM2 scheme will be particularly beneficial in improving connectivity to these groups. • Overall, it is considered that MM4 and MM5 are likely to have Significant (Major) Positive effect on this IIA objective given the characteristics of the local population and inclusiveness of the interventions. MM1 and MM2 are likely to have a Minor Positive effect as they will help improve public transport services across the wider area of the Borough. The effect of MM6 on this IIA objective is anticipated to be a minor Positive one, assuming that the results of the EqIA are considered, and groups who may be disadvantaged by Demand Management measures are accommodated for. • It is not anticipated that groups with protected characteristics will be inequitably affected by these schemes given that there will be improvements to the road network, bus services and walking and cycling facilities, however it is acknowledged that those with severe disabilities or special needs will need support to use these services. <u>Mitigation and Enhancement</u> • No Significant Negative effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table E.3.** <u>Uncertainties</u> • Pricing of the services along the MM4 and MM5 routes will impact how accessible this mode of transport is to those on lower incomes. • It is not currently known where the location of the bus stops for the new bus services will be. This will impact how much of an effect the interventions have on this IIA objective will be more beneficial if they are located in proximity to community facilities such as schools or local centres.
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	++	++	++	++	++	++	<u>Assessment of Predicted Effects</u> • MM4 will help reduce congestion experienced on the current Reading and Caversham bridges over the Thames by providing an alternative route outside of the city centre where there is currently a lack of crossing points. This will reduce severance between Caversham and Woodley and provide better access to Thames Valley Park. The new cycle routes will also help link current cycle routes in Caversham and in east Reading. This is likely to have a Significant (Major) Positive effect on this IIA objective. • Roads in Caversham are particularly congested and unable to accommodate such high traffic flows. MM5 would provide an alternative route around Reading which would help limit through traffic moving through the centre, helping reduce congestion and decreased journey times and delays. The indicative MM5 route is also in close proximity to a number of community services such as schools and leisure centres, the new route can help improve the accessibility of these services to local residents. This is likely to have a Significant (Major) Positive effect on this IIA objective. • MM6 will include measures such as Clean Air Zone and Road User Charging that may disadvantage the health of those who are already under financial strain and have health issues through potentially impacting their ability to use private cars to access key health care services. However, it is noted that an EqIA, would be undertaken as part of the implementation of any demand management measure. Overall, it is anticipated that MM6 will have a Major (Significant) Positive effect on this IIA objective which are largely associated with the implementation of a Clean Air Zone and associated beneficial effects on health. • MM1 and MM2 will help increase accessibility in and around Reading, by providing new pedestrian, cycling and public transport infrastructure, including seating and upgraded crossings along key transport routes, the town centre around the IDR, and the Oxford Road, Portman Road, and Cow Lane corridor. In addition to this, providing such infrastructure alongside traffic signal upgrades and improvements to capacity at vehicle pinch points will help reduce private car travel and levels of congestion. Measures such as the implementation of Healthy Streets will also be supported. This is likely to have a Significant (Major) Positive effect on this IIA objective. <u>Mitigation and Enhancement</u>

IIA Objective	Multi-modal						Commentary
	MM1	MM2	MM3	MM4	MM5	MM6	
							• No Significant effects have been identified and so no mitigation measures are required. • There will be a greater impact if MM4 and MM5 are both provided alongside the Bus Rapid Transport Corridors (FT2) and Park and Ride Mobility Hubs (PR3) <u>Assumptions</u> • See core assumptions outlined in **Table E.3** <u>Uncertainties</u> • Pricing of the new bus services will impact how accessible this mode of transport is to those on lower incomes. • It is not currently known where the location of the bus stops for the new bus services will be. This will impact how much of an effect the interventions have on this IIA objective, for example, effects will be more beneficial if they are located in proximity to community facilities such as schools or local centres.
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	+	+	+	++	+	<u>++</u>	<u>Assessment of Predicted Effects</u> • MM3 will create new direct walking, cycle and bus links to Thames Valley Park from Caversham which will increase access to this employment area. This new link will also provide alternative transport routes, helping reduce congestion in the town centre particularly along the central bridges in Reading (B3345 and A4155) and key routes such as London Road. There is employment development allocated in central Reading, and MM3 can provide an alternative route to access this area from the east, helping alleviate potential future increases in traffic on the current Thames bridges. It is anticipated that MM4 will have a Significant (Major) Positive effect on this IIA objective. • As with MM4, MM5 will also help improve congestion in central Reading by providing alternative routes around Reading, reducing traffic travelling through the centre, helping reduce delays and journey times to central education and employment areas. MM5 will provide dedicated bus services, walking and cycling routes which will pass close to schools in north Caversham, increasing connectivity to educational services for local residents. It is anticipated that MM5 will have a Minor Positive effect on this IIA objective. • MM1-MM2 will both help increase the connectivity of Reading via bus, cycling and walking helping improve access to education and employment. These schemes will also help improve congestion on key transport corridors and the IDR both through direct interventions (e.g., traffic signal upgrades and increasing capacity at pinch points) and indirectly through encouraging a move away from private car use through providing attractive alternatives. It is anticipated that MM1 and MM2 will have a Minor Positive effect on this IIA objective. • MM6 can help reduce congestion and therefore enable people to access employment and education more easily. It is anticipated that MM6 will have a Major Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No Significant Negative effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table E.3** <u>Uncertainties</u> • It is not currently known where the location of the bus stops for the new bus services will be. This will impact how much of an effect the interventions have on this IIA objective, for example, effects will be more beneficial if they are located in proximity to schools and local employment areas.
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+	+	+	++	++	+	<u>Assessment of Predicted Effects</u> • MM4 and MM5 are both needed to help deliver the growth objectives of RBC and surrounding local authorities, and therefore are essential to meeting this objective. • MM4 will provide a new Thames crossing where need has been established. It has been identified that the most appropriate location for the crossing to the east of Reading town centre. This will provide a new route from north Reading to the town centre, increase connectivity and provide walking and cycling routes where there are currently missing links and connections. There is currently a low frequency of bus services in this area which will be increased by MM4. MM4 will also help decrease journey times through the provision of bus priority lanes. The implementation of the scheme would encourage regeneration and

IIA Objective	Multi-modal						Commentary
	MM1	MM2	MM3	MM4	MM5	MM6	
							developments within Reading and regionally in Wokingham, Bracknell, and Oxfordshire. It is therefore anticipated that MM3 would have a Significant (Major) Positive effect on this IIA objective. • MM5 would provide a route around Caversham, reducing through traffic on what is currently a heavily congested road. This would help unlock potential development sites in north Reading and south Oxfordshire and can help meet local housing needs. It is therefore anticipated that MM5 would have a Significant (Major) Positive effect on this IIA objective. • MM1-MM3 will increase the efficiency and effectiveness of travel on key transport corridors and the IDR through improving infrastructure and reducing congestion. This will help create additional capacity on the network and facilitate development in and around Reading. It is therefore anticipated that MM1 and MM2 would have a Minor Positive effect on this IIA objective. • MM6 will help to manage infrastructure demand via options to reduce dependency on carbon intensive transport. Demand management measures will provide revenue to enable investment in sustainable transport alternatives to private car use locally. Exact demand management measures are unknown at this stage; however, it is anticipated that this intervention will have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • To ensure benefits are maximised, the proposed FTPTC and Park and Rides should be implemented, in particular the delivery of Bus Rapid Transit Corridor (FT2) and Park and Ride Mobility Hubs (PR3) would maximise benefits created by MM4 and MM5. <u>Assumptions</u> • See core assumptions outlined in **Table E.3** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.3**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	++	++	++	++	++	±	<u>Assessment of Predicted Effects</u> • MM1-MM3 will help reduce congestion and increase capacity on key transport corridors and the IDR which are essential routes that enable people to access the strategic transport network and the centre of Reading by vehicle. These measures will also provide improvements to walking and cycling infrastructure, making these modes of transport more attractive and viable for people traveling around Reading. Such measures will have economic benefits through improving journey time and reliability of transport. • MM4 will help ease congestion in the centre and increase links to Thames Valley Park. This can help aid economic growth by improving the efficiency of the movement of people and freight through Reading. Decreased journey times on buses through provision of bus priority lanes on the new link will also help improve the movement of people between north and east Reading as will the provision of new bus services. It should be noted that in the short-term, there may be disruption during improvement works, which will hinder productivity to an extent. However, it is anticipated that MM4 will have a Significant (Major) Positive effect on this IIA objective overall. • As with MM4, MM5 will also help ease congestion in the town centre and provide alternative routes around norther Reading, reducing through traffic. This will help decrease journey times and improve the efficiency of movement of people and freight in and around Reading. It is anticipated that MM5 will have a Significant (Major) Positive effect on this IIA objective • MM6 will manage vehicles on the road network, which is anticipated to reduce congestion and create greater efficiency. It is therefore anticipated that MM6 will have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • To ensure benefits are maximised, the proposed FTPTC and Park and Rides should be implemented, in particular the delivery of Bus Rapid Transit Corridor (FT2) and Park and Ride Mobility Hubs (PR3) would maximise benefits created by MM4 and MM5. <u>Assumptions</u> • See core assumptions outlined in **Table E.3** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.3**

IIA Objective	Multi-modal						Commentary
	MM1	MM2	MM3	MM4	MM5	MM6	
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	++	++	++	+	+	+	Assessment of Predicted Effects • MM1-MM3 will reallocate roads space to walking, cycling and public transport and improve infrastructure for these modes of transport along key corridors and the IDR which are currently congested and suffer from poor air quality. The availability of live air quality information specifically will assist in encouraging mode shift in an accessible, flexible but continual manner. Taken together these measures will help to encourage a mode shift to more sustainable forms of transport, which will help reduce emissions and impacts on local air quality. Provision of landscaping and vegetation can also help remove pollutants from air by deposition. It is therefore anticipated that MM1 and MM2 will have a Significant (Major) Positive effect on this IIA objective. • MM4 and MM5 will provide new walking and cycling routes which will help reduce reliance on motorised forms of transport, reducing vehicle emissions and the associated impact on air quality. Provision of an alternative route between Caversham and Woodley/ Thames Valley Park could reduce traffic and congestion in Reading city centre, helping improve air quality within the central Air Quality Management Area (AQMA). The provision of the new orbital route and new crossing could however lead to a level of induced traffic through increased capacity for private vehicles, which would limit the potential improvements to air quality in the longer-term as well as introducing potential air pollution effects into a new greenfield area. Consequently, there may be benefits of the scheme reducing congestion in some areas, although it may introduce some congestion in other areas in the longer term. During the construction phase there may also be negative effects experienced by local residents relating to dust, noise and vibration to nearby receptors. Despite this, and when considered in the context of Reading as a whole, there may be Minor Positive effect on air quality in those areas currently experiencing higher levels of air pollution. • MM6 will help to manage infrastructure demand via options to reduce dependency on carbon intensive transport and to encourage use of more sustainable options. Demand management measures will provide revenue to enable investment in sustainable transport alternatives to private car use locally which would lead to air quality enhancements and a reduction in exposure to other pollutants, including noise and vibration impacts. Exact demand management measures are unknown at this stage. However, it is anticipated that this intervention will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • To ensure benefits are maximised, the proposed FTPTC and Park and Rides should be implemented, in particular the delivery of East Reading FTPTC (FT2) and North Reading Park and Rides (PR4) would maximise benefits created by MM4 and MM5. • Appropriate mitigation measures should be put in place during construction to protect local human receptors from impact due to creation of dust, noise, and vibration. Assumptions • See core assumptions outlined in **Table E.3** Uncertainties • It is uncertain what emission standards the buses on the schemes would comply with. This would affect the extent to which there would be beneficial impact on air quality. However, it is noted that the Reading bus fleet has high environmental standards with 72% being hybrid or gas-powered, or meeting Euro IV emissions standards. It is assumed that these buses would also run on the MM4 and MM5 routes, despite being beyond the Borough boundaries.
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.	+	+	+	0	0	+	Assessment of Predicted Effects • MM1-MM3 will include upgrade and improvements to transport infrastructure in and around Reading. This will include improvements to public realm areas such as removal of street furniture, introduction of rest areas and new planting and landscaping which will help improve urban design and conservation of heritage assets including listed buildings and Conservation Areas. In addition to this, through helping promote a change to more sustainable forms of transport, and provision of digital roads, these schemes will help reduce congestion within the town which will help improve the urban character. It is acknowledged that there will be some negative effects during the construction phase whilst such improvements are being undertaken, however this will be minor and temporary in nature. It is therefore anticipated that MM1 and MM2 will have a Minor Positive effect on this IIA objective. • Potential routes of MM4 and MM5 are in proximity to a range of listed buildings present in Sonning and in the countryside to the north of Reading. There are also both located within relatively rural areas on the

IIA Objective	Multi-modal						Commentary
	MM1	MM2	MM3	MM4	MM5	MM6	
							outskirts of Reading with MM4 being proposed to cross over the River Thames, Caversham Lakes, and the Thames Path, all of which are essential components of the character and setting of the urban area. There is a need to consider the heritage and amenity quality of these assets during and after development. However, MM4 and MM5 have potential to bring communities together and foster shared culture and connection. It is therefore considered that MM4 and MM5 will have a Neutral effect on this IIA objective. • MM5 will contribute to this IIA objective due to the potential reduction of congestion resulting from management strategies for private, highly polluting vehicles. Road space, and therefore the urban landscape, may become more attractive and usable for residents, contributing to the overall townscape value of Reading, particularly in areas of heritage significance. • MM6 will lead to investments into sustainable transport options and may involve initiatives that enhance placemaking such as clean air zones and emissions-based charging. It is therefore considered that MM6 will have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. • MM4 and MM5 should be designed to be sensitive to their surroundings and in such a way that would limit the potential effect on nearby built and natural heritage assets including impact on Significant Views and the River Thames. The river crossing would need to be of exemplary quality to complement and enhance the river setting. • Similarly, MM1 and MM2 will involve implementation of measures in, or in close proximity to, protected areas such as Conservation Areas. The design and implementation of improvements and upgrades as part of these schemes should be sensitive to their settings. • MM6 will include the provision of revenue from demand management to invest in sustainable and attractive transport options. Similarly, to the points above, design and implementation of these sustainable transport options should be sensitive to their settings and optimise opportunities for townscape enhancements which contribute to other environmental objectives such as biodiversity and water management. <u>Assumptions</u> • See core assumptions outlined in **Table E.3.** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.3.**
10. Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	+	+	+	+	+	+	<u>Assessment of Predicted Effects</u> • MM1-MM5 would help promote the use of more sustainable modes of transport by providing new and improved walking, cycling and bus routes and services to the north and east of Reading. This can help reduce emissions associated with single person car use by providing safe routes for active travel and more reliable bus services with the implementation of bus priority lanes. It is anticipated that these schemes will have Minor Positive effect on this IIA objective through the promotion and prioritisation of more sustainable forms of transport (e.g. reallocating road space away from private vehicles to public transport, walking and cycling.) • MM6 will help to manage infrastructure demand via options to reduce dependency on carbon intensive transport and to encourage use of more sustainable options. Demand management measures will provide revenue to enable investment in sustainable transport alternatives to private car use locally which would lead to a reduction in emissions. Exact demand management measures are unknown at this stage; however, it is anticipated that this intervention will have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table E.3** <u>Uncertainties</u> • It is uncertain what emission standards the buses on the schemes would comply with. This would affect the extent to which there would be beneficial impact on CO_2 emissions and climate change. However, it is

IIA Objective	Multi-modal						Commentary
	MM1	MM2	MM3	MM4	MM5	MM6	
							noted that the Reading bus fleet has high environmental standards with almost 72% being hybrid or gas-powered, or meeting Euro IV emissions standards. It is assumed that these buses would also run on the MM4 and MM5 routes, despite being beyond the Borough boundaries.
11. Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	+	+	+	-	-	0	<u>Assessment of Predicted Effects</u> • MM1-MM3 and MM6 involve limited land take as they will primarily involve the upgrading and reallocation of current infrastructure. These measures will help decrease air pollution through promoting a move to more sustainable forms of transport, thus reducing associated negative effects of nitrogen, particulate and other air-borne deposition on nearby habitats and vegetation. In addition to this, these measures will also include provision of landscaping and vegetation which could have positive effects on biodiversity. MM1-MM3 may therefore have a Minor Positive effect on this IIA objective. MM6 will have a Neutral impact on this IIA objective • MM4 would provide a new crossing over the Thames and Caversham Lakes, this could potentially have negative impact on these waterbodies associated with runoff during construction. The exact location of the bridge is not known and therefore it is uncertain what impact there would be on local habitats, however there are no statutory or non-statutory designated habitats within the nearby area. Associated planting could bring about longer-term benefits within this IIA objective. However, without mitigation the implementation of MM4 could result in a Minor Negative effect on this IIA objective. • Depending on the exact location of MM5, the scheme could pass in close proximity to the Clayfield Copse Local Nature Reserve (LNR) and a number of ancient woodlands including Blackhouse Wood and Chambers Copse. Without mitigation the implementation of MM5 could result in a Minor Negative Effect on this IIA objective, however there is some uncertainty with this given the limited information known on the layout of the route. <u>Mitigation and Enhancement</u> • Appropriate diversions should be implemented where construction or operational works result in severance to the Thames path. • Appropriate mitigation measures should be put in place during construction to protect environmental receptors from impacts associated with runoff of pollution into local waterbodies. • MM5 should avoid cutting through or coming into close proximity with protected habitats such as the LNR and ancient woodland <u>Assumptions</u> • See core assumptions outlined in **Table E.3** <u>Uncertainties</u> • The exact location of the schemes is not currently known and therefore identified potential effects on habitat loss etc. carry a degree of uncertainty.
12. Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	0	0	0	0	0	0	<u>Assessment of Predicted Effects</u> • MM5 is located north of Caversham Lakes within Flood Zone 1, this has the lowest probability of river or sea flooding. It is not located in close proximity to a water body and therefore is likely to have a Neutral effect on this IIA objective. • MM1-MM3 will involve the upgrades and improvements to existing infrastructure and so will involve limited land take or impact on the water environment. The exact location of upgrades is not currently known, where these take place in proximity to water body, runoff from activities without mitigation has the potential to negatively affect water quality. However, upgrades will be relatively minor. MM1-MM3 are therefore likely to have a Neutral effect on this IIA objective. • MM6 will not involve any land take and will have a minimal impact on this IIA objective, it is therefore rated as Neutral. MM4 will cross the River Thames and Caversham Lakes and largely lies in Flood Zone 3 which carriers the greatest risk from river or sea flooding. However, this scheme is providing a bridge which would be raised above the waterbodies and therefore is unlikely to be impacted by flooding. During construction there is potential for pollution to the lakes and River Thames to occur which could result in deterioration in water quality. It is therefore considered that with appropriate mitigation in place (e.g., CEMP) this will have a Neutral effect on this IIA objective.

IIA Objective	Multi-modal						Commentary
	MM1	MM2	MM3	MM4	MM5	MM6	
							Mitigation and Enhancement • Appropriate mitigation measures should be put in place during construction to protect environmental receptors from impacts associated with runoff of pollution into local waterbodies, including appropriate measures implemented as part of a CEMP. Assumptions • It is assumed that the MM4 crossing would be appropriately designed to ensure that it is not at risk from current or future flooding (including increased flood risk associated with climate change). Uncertainties • See core uncertainties outlined in **Table E.3**
13. Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	+	+	+	-	-	0	Assessment of Predicted Effects • MM1-MM3 will involve upgrades and improvements to existing infrastructure and so will involve limited land take and provision of built development. These schemes will provide improvements to public realm areas, including removal of street clutter, landscaping and vegetation and provision of rest areas which will help enhance the townscape area and visual amenity. In addition to this, these measures will help reduce traffic and congestion which will have a positive effect on the character of the townscape. It is therefore anticipated that MM1-MM3 will have a Minor Positive effect on this IIA objective. • MM4 and MM5 are located on the rural fringes of Reading and therefore have the potential to impact the local landscape character of the area through the provision of new transport infrastructure and associated traffic. In addition to this, MM5 is proposed as part of unlocking future development site to the north of Reading, the combined effect of this urbanisation is likely to have further impact the local landscape character and amenity through the loss of greenfield land. It is therefore considered MM4 and MM5 may have a Minor Negative effect on this IIA objective. • MM6 will lead to investments into sustainable transport options and may involve initiatives that may enhance landscape and townscape character by minimising negative visual impacts associated with high levels of vehicle-based traffic. It is therefore considered that MM6 will have a Neutral effect on this IIA objective. Mitigation and Enhancement • MM4 and MM5 should be designed to minimise the land take of open space and integrate the schemes into the surrounding area, taking into account natural landform and protecting key landscape features and buffers. They should be designed to be sensitive to their surroundings and in such a way that would limit the potential effect on the landscape character and visual amenity including impact on Significant Views and the River Thames. The river crossing would need to be of exemplary quality to complement and enhance the river setting. Assumptions • See core assumptions outlined in **Table E.3** Uncertainties • See core assumptions outlined in **Table E.3**

[1] Reading Borough Council, Local Plan (2019), Policy EN5: Protection of Significant Views with Heritage Interest.

E.3 Public Transport Schemes – Behaviour Change and Shared Services

E.3.1 This subsection provides an assessment of the component of the transport schemes that relate to some type of behavioural change. These schemes appear in different sections of the RTS, however, are grouped due their similar aspirations related to altering how people choose to travel. The schemes are:

- BC1: Superbus Network;
- BC2: Concessionary and Discounted Travel Scheme;
- BC3: Community Transport;
- BC4: Demand Responsive Transport; and
- BC5: Mobility as a Service (MaaS).

E.3.2 The schemes are identified in Table E.6 The assessment is provided in **Table E.7.**

E.3.3 The core assumptions and uncertainties listed in **Table E.6** have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix **(Table E.7).**

Table E.6: Behavioural Change and Shared Services – Assumptions and Uncertainties

Transport Scheme	Justification	Core Assumptions and Uncertainties
BC1: Superbus Network (previously titled 'Quality Bus Corridors')	High quality branded bus routes and infrastructure (bus shelters, real time information, accessible buses, Wi-Fi, and USB charging on buses etc.). Bus priority (potentially involving the reallocation of road space) should be further delivered to enable the bus services to avoid the impacts of car commuter congestion. Additionally, the expansion of the red route scheme along high frequency routes to improve traffic flow. Cyclists, motorcyclists, and taxis will generally be permitted to use bus priority infrastructure provided to support the Quality Bus Corridors. Enhanced evening, night-time and weekend service frequencies will encourage bus travel outside peak periods. Car congestion is the single biggest factor limiting the delivery of quality reliable bus services as the bus services are hindered by congestion. This leads to increased journey times, reduced reliability and results in increased operating costs and limited attractiveness of using bus services.	See common assumption (Table E.3) related to bus emissions. General outlines of the Superbus Network routes are provided in the RTS, however the interventions to be provided in each area and the exact route are not currently known. Therefore, the IIA has include a high-level assessment of likely spatial effects in these generally area assuming all interventions are provided in each area. Additional scheme information is included in the Bus Service Improvement Plan.
BC2: Concessionary and Discount Travel Scheme	Provide statutory concessions in accordance with national legislation. These concessions allow older and disabled people (and their carers) to travel on buses for free during off-peak times. Concessions could include discounted or free travel for various population sectors, trip times or trip types, such as: school travel, off-peak travel, travel for under 18s, or travel for those on low incomes. Latest strategy reflects a 'touch in, touch out' system with daily fares cap, and simpler fare structures. Expansion of the concessionary fares scheme would provide a financial incentive encouraging bus travel in Reading and leading to a mode shift away from the private car or taxi.	A range of examples of potential groups which may benefit from discounted schemes has been identified however no certainty has been provided that these discounts will be implemented. For the purposes of the assessment, it has been assumed that all groups identified would benefit from discounted travel. It is uncertain what reductions in fare cost would be applied to each group. However, it has been assumed that this is affordable and accessible to the targeted groups.
BC3: Community Transport	Reading is served by ReadiBus – a specialist transport service for people with restricted mobility. RBC will continue to support ReadiBus services, and investment in the scheme to enable more flexibility in booking. People with mobility impairments will be more able to travel freely, affording them greater independence and flexibility. The scheme will reduce the likelihood of isolation and associated health impacts.	None.
BC4: Demand Responsive Transport	Introduction of demand responsive travel services, primarily in areas not otherwise serviced by public transport. Supporting technology would be implemented, which could include a mobile app, website and/or phone system, to facilitate the operation of the scheme. This allows provision of flexible bus access at times when it is difficult or expensive to provide frequent fixed route bus services.	Measures would cover the functional urban area of Reading as necessary, therefore extending in some instances to neighbouring local authorities.
BC5: Mobility as a Service (MaaS)	Establish a sustainable MaaS scheme, covering the Berkshire/Thames Valley area, allowing residents, commuters, and visitors to simply plan, pay for and undertake multimodal journeys through an easy-to-use app linked to a single payment platform. MaaS can be set up as a pay as you go or as a monthly subscription for services. The availability of a sustainable MaaS scheme will offer improved mobility and access to services whilst reducing the use and consumption of transport resources.	It is uncertain what the costs of the use of such services will be, however it is assumed that this would be set at a price that is generally affordable and accessible.

Table E.7: IIA of Public Transport – Behaviour Change and Shared Services – Assessment Matrix

	Public Transport – Behaviour Change and Shared Services					
IIA Objective	**BC1**	**BC2**	**BC3**	**BC4**	**BC5**	**Commentary**
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	+	++	++	+	Assessment of Predicted Effects • Interventions BC1-BC5 will work to help reduce reliance on private vehicles and encourage the uptake of more sustainable forms of travel and more active travel. Enhanced bus service frequencies during evening, night-time and weekend period will support increased bus use outside of peak periods supporting uptake in sustainable travel options. This can help reduce emissions from cars which can have beneficial health impacts through associated improvements to air quality. • BC3 and BC4 will help increase the connectivity to local health services and services more generally for those who are less able bodied, located in more remote locations away from public transport services or are out of work/ low incomes. As well as physical health benefits associated with access to health services, this may have positive mental health benefits through reducing social isolation, which is identified as an issue in Readings Health and Wellbeing Strategy[2]. It is therefore considered that BC3 and BC4 may have a Significant (Major) Positive effect on this IIA objective. • BC1, BC2 and BC5 may help encourage then uptake travel by bus and rail, helping increase levels of physical activity by requiring people to walk or cycle as part of their journeys to reach stations or bus stops. Despite the probable increase in induced traffic itis anticipated that BC1, BC2 and BC5 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.6** Uncertainties See core uncertainties outlined in **Table E.6**
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	?	?	?	?	?	Assessment of Predicted Effects • BC1-5 will generally help reduce reliance on private vehicle travel, reducing congestion on roads and potentially reducing traffic collisions, however the effectiveness of these measures in improving road safety in Uncertain. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.6** Uncertainties See core uncertainties outlined in **Table E.6**
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	++	++	++	++	-	Assessment of Predicted Effects • BC1-2 will provide discounted rates of travel for groups who may be less able to afford it such as the elderly, disabled, those out of work or of school age. This will help increase the accessibility of facilities and services to these groups, helping reduce social exclusion and inequality. It is therefore anticipated that BC1-2 will have a Significant (Major) Positive effect on this IIA objective. • BC1 includes enhanced evening, night time and weekend service frequencies to encourage bus travel outside peak periods. This will support a number of people who do not have access to private car use or other forms of transport to meet their daily needs outside of peak hours. This will particularly benefit people on low incomes who may be more reliant on public

IIA Objective	Public Transport – Behaviour Change and Shared Services					Commentary
	BC1	BC2	BC3	BC4	BC5	
						transport and people who may be in employment that includes shift pattern working or working hours that do not align with typical commuting periods. • BC3 and BC4 will help increase the accessibility of local facilities and services for those who are less able bodied, located in more remote locations away from public transport services or are out of work/ low incomes which will help reduce social exclusion. It is therefore anticipated that BC3 and BC4 may have a Significant (Major) Positive effect on this IIA objective. • BC5 will involve the use of an app to access the service and so may be inaccessible to those who are less familiar with technology (e.g., the elderly) or those who do not have access to smart phones (e.g., those on low incomes). Cost savings may be provided by using this service as opposed to paying for single journeys which would not be accessible to the above groups. There is therefore potential for this BC5 to have a Minor Negative effect on this IIA objective. <u>Mitigation and Enhancement</u> • Services to support more people using sustainable transport should be focused more widely than just online tools and phone apps, as use of these amongst older people, those on lower incomes, disabled and non- English speakers may be limited and exclude them from the service. • Potential negative effects associated with BC5 could be lessened if the MaaS payment platform could be accessed via a website or 'ticket' machine and a physical card used on transport services (e.g., Oyster card system) as opposed to through an app. This could make the service more accessible to a wider group of people. <u>Assumptions</u> • See core assumptions outlined in **Table E.6** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.6**
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	++	++	++	++	+/-	<u>Assessment of Predicted Effects</u> • BC1 will have a Significant (Major) Positive effect on this IIA objective as it will improve quality and reliability of bus services and increasing accessibility to local destinations. • BC2 will have a Significant (Major) Positive effect on this IIA objective through providing discounted or free travel to those who are less able to afford public bus services (e.g., the elderly or those on low incomes), helping increase access to services and amenities. • BC3 and BC4 will help increase the accessibility of local facilities and services for those who are less able bodied, located in more remote locations away from public transport services or are out of work/ low incomes. It is therefore anticipated that BC3 and BC4 may have a Significant (Major) Positive effect on this IIA objective. • BC5 will help provide ease of payment for travel via multimodal journey which will increase accessibility of travel to a range of groups. As noted under IIA objective 3 however, there is potential for groups who are more elderly or on lower incomes to be excluded from this intervention and the accessibility of such services reduced in comparison to others, however it is anticipated that transport services would still be accessible without the use of the app. It is therefore anticipated that BC5 may have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. • Services to support more people using sustainable transport should not be focused on using online tools and phone apps, as use of these amongst older people, those on lower incomes, disabled and non-English speakers may be limited and exclude them from the service. • Potential negative effects associated with BC5 could be lessened if the MaaS payment platform could be accessed via a website or 'ticket' machine and a physical card used on transport services (e.g., Oyster card system) as opposed to through an app. This could make the service more accessible to a wider group of people.

IIA Objective	Public Transport – Behaviour Change and Shared Services					Commentary
	BC1	BC2	BC3	BC4	BC5	
						Assumptions • See core assumptions outlined in **Table E.6** Uncertainties • See core uncertainties outlined in **Table E.6**
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	++	++	++	++	+	Assessment of Predicted Effects • BC1 – BC5 will all work to help reduce reliance on private car use and encourage the uptake of more sustainable forms of travel. This will generally help reduce congestion on the road network and decrease journey times at AM and PM peak commuter periods, helping increase access to employment and education. • BC1-2 will help support those on lower incomes and school ages children to access work and education through providing free and reduced fair bus services. It is therefore anticipated that this will have a Significant (Major) Positive effect on this IIA objective. • BC3 and BC4 will help increase the accessibility of education and employment opportunities for those who are less able bodied, located in more remote locations away from public transport services or are out of work/ low incomes. It is therefore considered that BC3 and BC4 may have a Significant (Major) Positive effect on this IIA objective. • It is anticipated that BC5 will have a Minor Positive effect on this IIA objective through increasing the geographical scope of MaaS services and making multi-modal journeys easier to plan and pay for which can increase access to education and employment opportunities. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.6** Uncertainties See core uncertainties outlined in **Table E.6**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+	+	+	+	+	Assessment of Predicted Effects • BC1 – BC4 will all work to help reduce reliance on private car use and encourage the uptake of more sustainable forms of travel. This will generally help reduce congestion on the road network and decrease journey times at AM and PM commuter periods, helping increase access capacity on the road network. In addition to this, BC3 and BC4 will help improve travel for those who are less able and located in more rural areas where there is a lack of transport infrastructure available. It is therefore considered that BC1-BC4 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.6** Uncertainties See core uncertainties outlined in **Table E.6**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	+	+	+	+	+	Assessment of Predicted Effects • BC1 and BC2 will help improve the effectiveness of existing transport schemes, whereas BC3 and BC4 will provide new schemes and systems which will make public transport more accessible and efficient for a wide range of users. BC1 – BC5 will also all work to help reduce reliance on private car use and encourage the uptake of more sustainable forms of travel. This will generally help reduce congestion on the road network and decrease journey times at AM and PM commuter periods, helping transport people and freight in and around Reading more efficiently • It is therefore anticipated that BC1-BC5 will have a Minor Positive effect on this IIA objective.

	Public Transport – Behaviour Change and Shared Services					
IIA Objective	**BC1**	**BC2**	**BC3**	**BC4**	**BC5**	**Commentary**
						Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.6** Uncertainties See core uncertainties outlined in **Table E.6**
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	+	+	+	+	+	Assessment of Predicted Effects • Interventions BC1-BC4 will all work to help reduce reliance on private vehicle use and encourage the uptake of more sustainable forms of transport which can help reduce emissions and have associated positive impacts on air quality. Despite the probable increase in induced traffic, it is anticipated that BC1-BC4 may have a Minor Positive effect on this IIA objective. • Mitigation and Enhancement No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.6** Uncertainties See core uncertainties outlined in **Table E.6**
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.	0	0	0	0	0	Assessment of Predicted Effects • BC1-BC45involves no land take and so has a limited relationship with this IIA objective. Reductions in traffic as a result in these schemes may enhance the urban environment, however the interventions may have a fairly limited impact in isolation. It is therefore anticipated that these measures will have Neutral effects on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.6** Uncertainties See core uncertainties outlined in **Table E.6**
10.Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	+	+	+	+	+	Assessment of Predicted Effects • Interventions BC1-BC4 will all work to help reduce reliance on private car use and encourage the uptake of more sustainable forms of travel. This can help reduce GHG emissions associated with private car travel and reduce transport related contributions to climate change. It is anticipated that BC1-BC4 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.6** Uncertainties See core uncertainties outlined in **Table E.6**
11.Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure	+	0	0	0	0	Assessment of Predicted Effects • BC1-BC4 do not involve any land take and therefore have no direct land taken that could have an effect on biodiversity. All measures will help reduce reliance on private car travel by increasing the attractiveness of non-car travel, helping reduce air and noise pollution and the associated effect on wildlife, however, these interventions may have a limited effect on their own. BC1 will have a Minor Positive impact on biodiversity if bus stop facilities are enhanced with sustainable materials such as shelters with green roofs or solar panels. It is therefore anticipated that BC2-BC4 will have a Neutral effect on this IIA objective.

	Public Transport – Behaviour Change and Shared Services					
IIA Objective	**BC1**	**BC2**	**BC3**	**BC4**	**BC5**	**Commentary**
						Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.6** Uncertainties See core uncertainties outlined in **Table E.6**
12.Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	~	~	~	~	~	Assessment of Predicted Effects • Interventions BC1-BC4 have No Clear Relationship with this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.6** Uncertainties See core uncertainties outlined in **Table E.6**
13.Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	0	0	0	0	0	Assessment of Predicted Effects • BC1-BC4 involves no land take and so has a limited relationship with this IIA objective, however reductions in traffic as a result in these schemes may enhance the urban environment. However, the interventions may have a fairly limited impact in isolation. It is therefore anticipated that these measures will have Neutral effects on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.6** Uncertainties See core uncertainties outlined in **Table E.6**

2 **Reading Borough Council (2017) Reading's Health and Wellbeing Strategy 2017-2020. [Online] Available at: http://www.reading.gov.uk/media/6822/Health–Wellbeing-Strategy/pdf/Health_and_Wellbeing_Strategy_2017-2020_final.pdf**

E.4 Public Transport – Fast Track Public Transport Corridors and Bus Corridors

E.4.1 This subsection provides an assessment of the component of the transport schemes that relate fast track public transport corridors (FTPTC). These are:

- FT1: South Reading Bus Rapid Transit; and
- FT2: Bus Rapid Transit Corridors.

E.4.2 The schemes are identified in **Table E.8.** The assessment is provided in **Table E.9.**

E.4.3 The South East FTPTC scheme is included in the RTS but is some distance beyond the RBC boundary therefore is only 'supported' in the LPT4, as the Borough can have no influence over its delivery.

E.4.4 The core assumptions and uncertainties listed in Table E.8 have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix (Table E.9).

Table E.8: Public Transport – Fast Track Public Transport Corridors and Bus Corridors – Assumptions and Uncertainties

Name	Justification	Uncertainties and Assumptions
FT1: South Reading Bus Rapid Transit	Staged delivery of a bus Rapid Transit corridor along the A33 (including future development sites), linking Mereoak Park & Ride, south Reading business parks, Kennet Island, Madejski Stadium and Reading town centre is already underway.	See common assumption (Table E.3) related to bus emissions. Parts of the route are already being delivered along the A33. Therefore, a reasonable assumption can be made on the routes, although no detail is provided in the RTS. Any future planning application related to this route will be subject to necessary environmental assessment and reporting and mitigation will be applied, as necessary. This includes management of impacts during construction. It is assumed that cyclists are permitted to use transit infrastructure within the town centre. However, cyclists, motorcyclists and taxis will not generally be permitted to use transit infrastructure outside the town centre. It has been assumed that the Rapid Transit network will be designed to meet a set of standards above and beyond the Superbus network (i.e., all of the measures proposed for the Superbus network will be included as a minimum).
FT2: Bus Rapid Transit Corridors	Delivery of Bus Rapid Transit Corridors in the east, west, southwest, and southeast of Reading, linking nearby Park & Rides and Reading town centre (as well as Winnersh Park and Ride and Cross Thames Travel). The delivery of these route would help improve the reliability of public transport and frequency of services along this route, improving the attractiveness of bus travel. It will also help reduce car commuter congestion and improve access to the strategic transport network.	See common assumption (Table E.3) related to bus emissions. Sites have previously been identified for these routes. However, potential routes are not specific in the RTS beyond the need to link the proposed Park and Rides and Reading town centre. Any future planning application related to these routes will be subject to necessary environmental assessment and reporting and mitigation will be applied, as necessary. This includes management of impacts during construction. It is assumed that cyclists are permitted to use Rapid transit infrastructure within the town centre. However, cyclists, motorcyclists and taxis will not generally be permitted to use transit infrastructure outside the town centre. It has been assumed that the Rapid Transit network will be designed to meet a set of standards above and beyond the Superbus network (i.e., all of the measures proposed for the Superbus network will be included as a minimum).

Table E.9: IIA of Public Transport – Fast Track Public Transport Corridors and Bus Corridors – Assessment Matrix

	Public Transport – Fast Track Public Transport Corridors and Bus Corridors		
IIA Objective	**FT1**	**FT2**	**Commentary**
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	++	++	Assessment of Predicted Effects • FT1 is being implemented along the A33, which was a heavily congested route located within an AQMA. This intervention will help bus services become more reliable as measures will be implemented to enable buses to gain priority over private vehicles on congested roads. This may encourage people to use public transport to travel in and out of Reading instead of driving which can help improve air quality and in turn will have positive health effects. By improving journey time and reliability this will also help residents located within south Reading to better access facilities and services (including healthcare) located within the town centre. It is therefore considered that FT1 may have a Major Positive effect on this IIA objective. • FT2 will be implemented along key corridors across west, southwest, east, and southeast Reading, which experience high levels of congestion. If buses are provided sufficient road space and are able to pass through congested areas quicker, this may encourage residents to use public transport instead of private vehicle, therefore improving air quality. As per FT1, residents located in these areas will also have better access to facilities and services (including healthcare), and thus FT2 may have a Major Positive effect on this IIA objective Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • It is assumed that benefits of reduced car usage will outweigh negative effects from air pollution cause by buses travelling along the proposed routes. Uncertainties • It is uncertain where bus stops will be located and therefore to what extent this intervention will have a positive effect on this objective (e.g., in relation to access to health and leisure facilities). • If the choice of routes will provide improved access to primary and secondary health care and sports facilities.
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	+/?	+/?	Assessment of Predicted Effects • FT1 includes, and FT2 will include provision of interchanges which maximise safety and increase sense of security for passengers. In addition to this, the proposed interventions may help reduce traffic flowing through the city centre by reducing private car usage which in turn my decrease the likelihood of collisions occurring with vulnerable road users, however there is some uncertainty in the effect that these measures will have. These measures will involve upgrades or provision of new bus shelters and providing real time information at bus stops, helping improve safety and reducing the likelihood of people waiting prolonged periods for cancelled or late buses which will be particularly beneficial in the evening and early hours of the morning. It is therefore considered that FT1-FT2 may have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • FT1-2 would benefit from further detail on how the buses and bus stops on any Rapid Transit route will be delivered at a high standard that encourages use of the network (e.g., accessibility, cycle parking, Wi-fi connectivity etc.), in a comparable way as for PT1. Assumptions • See core assumptions outlined in **Table E.8** Uncertainties See core uncertainties outlined in **Table E.8**
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	++	+	Assessment of Predicted Effects • Generally, FT1-FT2 will improve accessibility of bus stops and buses (e.g., low floors to accommodate wheelchairs quickly) which will be beneficial for those who are less able bodied. It will also increase the quality and reliability of the associated bus services which will have a beneficial effect on those who are on lower incomes or cannot drive (such as the young and the elderly) and rely on public transport to travel. In addition to this, FT1 and FT2 are likely to pass through areas with relatively high proportions of children. • FT1 and the West Reading route of FT2 also passes through areas with relatively high rates of income deprivation and health deprivation and disability and/ or in close proximity to GP surgeries, local centres, and primary schools. Due to the characteristics of the areas where these interventions will be provided and the proximity of the routes to local services, it is anticipated that FT1 and FT3 are likely to have a Significant (Major) Positive effect of this IIA objective. • Non-west Reading routes in FT2 (east, southwest, southeast) have no clear location and so cannot be assessed spatially in terms of proximity to schools or demographics, for example. However generally it will help increase the accessibility and reliability of public transport for those who are not able to drive or do not have access to a car. It is therefore anticipated that this will have a Minor Beneficial effect on this IIA objective. Mitigation and Enhancement

	Public Transport – Fast Track Public Transport Corridors and Bus Corridors		
IIA Objective	**FT1**	**FT2**	**Commentary**
			• No significant effects have been identified and so no mitigation measures are required. • Enhanced equality may be achieved through making sure all Rapid Transit routes have associated improvements to segregated cycle and pedestrian routes, that will support and encourage safer travel by those modes. Assumptions • See core assumptions outlined in **Table E.8** • It is assumed that fare structures for vulnerable specific groups will be available on Rapid Transit routes as well as the other Reading buses, including free bus use for pensioners, and reduced fares for 18s and under and those on Jobseekers allowance. Uncertainties • It is uncertain where bus stops will be located and therefore to what extent this intervention will have a positive effect on this objective (e.g., in relation to access to educational facilities and local centres).
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	++	++	Assessment of Predicted Effects • Generally, FT1 and FT2 will improve accessibility of bus stops and buses which will benefit a wide range of users, particularly those who don't have a car or are unable to walk long distances or cycle. These interventions will also help reduce bus journey times and improve frequency and reliability of services through providing priority measures for buses, increasing the accessibility of local destinations. • It is therefore considered that FT1-FT2 will have a Significant (Major) Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table E.8** • It is assumed that fare structures for vulnerable specific groups will be available on Rapid Transit routes as well as the other Reading buses, including free bus use for pensioners, and reduced fares for 18s and under and those on Jobseekers allowance. Uncertainties • It is uncertain where bus stops will be located and therefore to what extent this intervention will have a positive effect on this objective (e.g., in relation to access to educational facilities and local centres).
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	++	++	Assessment of Predicted Effects • Generally, interventions FT1-FT2 will increase the quality of bus services and help reduce bus journey times, improve reliability and frequency of services through providing priority measures for buses. This can help promote the use of public transport and help ease congestions problems through reduced reliance on private cars. This can have beneficial effects on movement of people to and from school, training and work and help reduce time spent commuting. • FT1 – FT2 will also help provide connections from the outskirts of the Reading urban area to Reading town centre where there are educational and employment opportunities (e.g., Thames Valley Park). Routes will also help provide connections to out of town employment areas such as along the A33 to Green Park. • All of the schemes are intended to reduce congestion and therefore reduce journey times, this will support the economic growth objectives for the wider Reading area and help unlock future development areas. • It is therefore considered that FT1 – FT2 may have a Significant (Major) Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table E.8** Uncertainties See core uncertainties outlined in **Table E.8**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+		Assessment of Predicted Effects • FT1- FT2 will generally help reduce congestion on town centre roads by promoting the use of public transport through providing more reliable and frequent bus services. The FTPTC routes link to areas of allocated and potential residential development in and around Reading, Wokingham, and West Berkshire. These schemes are part of the strategy to deliver the needed transport infrastructure that is essential to deliver road capacity necessary to support the planned level of housing growth. Therefore, it is therefore considered that all the schemes may have a Minor Positive effect on this IIA objective. • FT6 will help meet required infrastructure needs through providing more reliable bus services which are given priority over private vehicles, an issue which is currently causing delays to services and making public transport a less desirable form of transport. It is therefore considered that FT6 may have a Minor Positive effect on this IIA objective.

	Public Transport – Fast Track Public Transport Corridors and Bus Corridors		
IIA Objective	**FT1**	**FT2**	**Commentary**
			Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table E.8** Uncertainties See core uncertainties outlined in **Table E.8**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	+	+	Assessment of Predicted Effects • All these schemes will generally help reduce congestion and journey times through providing high quality bus services which are more reliable, with the aim of fewer vehicles on the road. This can help increase the efficiency of the movement of people and freight on the road network. • In addition to the above, FT1-2 will also pass in close proximity to local centres in Reading and Wokingham, helping reduce journey times to these areas, that are likely to be the focus of jobs and services in the area. Although some routes are not known, it has been identified that routes will link transport hubs, residential areas and employment areas which will help provide efficient movement of people. It is anticipated that FT1-2 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table E.8** Uncertainties • See core uncertainties outlined in **Table E.8** • It is uncertain where public transport measures will require road space to be reallocated to provide priority lanes for bus services. Reallocating space may have an impact on general traffic flows and movement of freight, this may be an issue in the short term where uptake of public transport on the proposed routes is yet to have a knock-on impact on relieving traffic congestion.
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	++	++	Assessment of Predicted Effects • Interventions FT1 and FT2 will help promote the use public transport in and around Reading, helping reduce use of private car and in turn reduce the release of vehicle related emissions such as NO2 and Particulate Matter (PM). Providing priority measures for bus services will also reduce the time buses are spent in slow moving traffic, reducing air quality deterioration in congested areas. FT1 and FT2 are also likely to be implemented on routes which are designated as part of the AQMA. It is anticipated that both of these interventions are likely to have a Significant (Major) Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table E.8**, in particular that relating to emissions for buses. Uncertainties See core uncertainties outlined in **Table E.8**
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.	+	+	Assessment of Predicted Effects • Interventions FT1-FT2 may result in alterations to the layout of current highways as opposed to the creation of new routes, as well as potentially new built infrastructure necessary to build segregated routes and avoid congestion hotspots. Some of the proposed Rapid Transit routes do pass through or in close proximity to Conservation Areas such as Russell St / Castle Hill, Downshire Square and Horncastle along the A4, or near to listed buildings and structures. It is likely that the new Rapid Transit routes may help reduce congestion which may in turn contribute positively to place setting. Overall, it is likely that FT1 and FT2 would have a Minor Positive impact on this objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Routing details as part of the RTS could provide more detail on the potential for effects on sustainable placemaking allowing measures to be identified for to mitigation. Assumptions

	Public Transport – Fast Track Public Transport Corridors and Bus Corridors		
IIA Objective	**FT1**	**FT2**	**Commentary**
			• See core assumptions outlined in **Table E.8** Uncertainties See core uncertainties outlined in **Table E.8**
10.Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	++	++	Assessment of Predicted Effects Interventions FT1 and FT2 will directly prioritise public transport services over private car travel. They will help provide high quality, reliable public transport which can help reduce reliance on private car travel and the associated release of GHG emissions. It is anticipated interventions FT1 and FT2 are likely to have a Significant (Major) Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table E.8**, in particular that relating to emissions for buses. Uncertainties See core uncertainties outlined in **Table E.8**
11.Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	?	?	Assessment of Predicted Effects • Interventions FT1 and FT2 are anticipated to involve limited land take, with interventions primarily relating to alterations to the layout of current highways and bus stops, however they may involve the creation of new routes. Therefore, there is the potential for some loss of habitats or street trees, and there may be a minor effect. There may be positive impacts on habitats and species in close proximity to main roads (e.g., Highwood and Pearmans Copse Local Nature Reserve) through reductions in traffic noise and air pollution. Overall, due to the lack of specific details about routing of these schemes and potential reduction in traffic, the contribution to this IIA objective is uncertain. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Routing details as part of the RTS could provide more detail on the potential for effects on biodiversity allowing measures to be identified for to mitigation. Assumptions • See core assumptions outlined in **Table E.8** Uncertainties See core uncertainties outlined in **Table E.8**
12.Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	?	?	Assessment of Predicted Effects • FT1 and FT2 will involve limited land take and may result in alterations to the layout of current highways or transport systems, however the interventions may involve the creation of new routes in certain areas. Generally, it is not anticipated that there will be any significant land take or impact on flooding. Therefore, these PT1- PT5 have an Uncertain contribution to this IIA objective and PT6 has a neutral contribution. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Routing details as part of the RTS could provide more detail on the potential for effects on water resources allowing measures to be identified for to mitigation. Assumptions • See core assumptions outlined in **Table E.8** Uncertainties See core uncertainties outlined in **Table E.8**
13.Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.			Assessment of Predicted Effects • FT1 and FT2 will involve limited land take and will primarily relate to alterations to the layout of current highways and supporting infrastructure, however these interventions may involve the creation of new routes in certain areas. There may be the need for some routes to pass through areas of higher townscape or semi- natural character (e.g., near the River Thames) which therefore raises the possibility of some effect if not suitability mitigated. Traffic reductions and reduced congestion associated with the uptake of public transport may positively contribute to landscape and townscape character which is anticipated to result in a Minor Positive effect on this IIA objective.

	Public Transport – Fast Track Public Transport Corridors and Bus Corridors		
IIA Objective	**FT1**	**FT2**	**Commentary**
	+	+	Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • It is assumed that construction management measures will be in place to manage temporary effects on the townscape. • Routing details as part of the RTS could provide more detail on the potential for effects on townscape/landscape character allowing measures to be identified for to mitigation. Assumptions • See core assumptions outlined in **Table E.8** Uncertainties See core uncertainties outlined in **Table E.8**

E.5 Public Transport Schemes – Park and Ride

E.5.1 This subsection provides an assessment of the transport schemes that seek to deliver new Park and Ride sites. The Park and Rides schemes are:

- PR1: Mereoak Park and Ride Mobility Hub Expansion;
- PR2: Winnersh Triangle Park and Ride Mobility Hub Enhancements;
- PR3: Park and Ride Mobility Hubs.

E.5.2 The schemes are identified in **Table E.10**, together with any identified reasonable alternatives. The assessment is provided in **Table E.11.**

E.5.3 The core assumptions and uncertainties listed in **Table E.10** have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix **(Table E.11).**

E.10: Proposed Public Transport – Mass Rapid Transit Schemes and Buses – Assumptions and Uncertainties

Transport Scheme	Justification	Core Assumptions and Uncertainties
PR1: Mereoak Park and Ride Mobility Hub Expansion	Expansion of the existing Mereoak P&R to provided increased parking provision, secure cycle parking, new electric vehicle charging points, and a facilities hub (which could include toilets, a waiting room and café, for example). The purpose is to increase the attractiveness of the Park and Ride facility, improve capacity along the A33, reduce the current congestion experienced on this route and help unlock development around the Southern Neighbourhood Area. The expectation is also for more coaches from the motorway to stop here. The site is located just beyond the RBC boundary.	No detail is given to the exact extent of expansion necessary. It is assumed any land take will be relatively minor. Any future planning application related the Park and Ride will be subject to necessary environmental assessment and reporting and mitigation will be applied, as necessary. This includes management of impacts during construction.
PR2: Winnersh Triangle Park and Ride Enhancements	Further enhancements are proposed to increase parking capacity and improve for the park and ride services. Additional car parking will provide and include more electric charging points for cars and buses. Waiting facilities and associated amenities will also be upgraded to enhance user experience. Overall, this would increase usage of the Park and Ride and reduce congestion. The site is located beyond the RBC boundary and will be delivered by Wokingham Borough council.	No detail is given to the exact extent of expansion necessary, however it is noted that the existing car park will be decked to increase parking capacity. It is assumed any land take will be relatively minor. Any future planning application related the Park and Ride will be subject to necessary environmental assessment and reporting and mitigation will be applied, as necessary. This includes management of impacts during construction. It is noted that the Park and Ride Mobility Hub is located in Wokingham Borough, and therefore delivery of this scheme is reliant on partnership working with Wokingham Borough Council.
PR3: Park and Ride Mobility Hubs	Delivery of new Park & Ride facility/ies at the northern and western edges of Reading, serving the town centre. The purpose is to help reduce high levels of congestion on the routes into the town centre from the north, west and southwest which negatively impacts public space and air quality in Caversham and West Reading. There is the potential for more than one site to be delivered.	No detail is given to the exact location or scale of the facility.

Transport Scheme	Justification	Core Assumptions and Uncertainties
	The benefits of this scheme would be maximised through the delivery of BRT corridors and the Superbus Network, which will introduce public transport priority and service frequency enhancements and integration of local walking and cycling networks, and cycle parking. Delivering a comprehensive park and ride network also aims to increase demand for public transport services to enable viability and enhance service frequency. It is likely that the north and southwest site(s) will be beyond the RBC boundary, and the west sites to be delivered within the RBC boundary.	Any future planning application related the Park and Ride will be subject to necessary environmental assessment and reporting and mitigation will be applied, as necessary. This includes management of impacts during construction. It is noted that the Park and Ride Mobility Hub is located in Wokingham Borough, and therefore delivery of this scheme is reliant on partnership working with Wokingham Borough Council.

Table E.11: IIA of Public Transport - Park & Ride Interventions – Assessment Matrix

	Public Transport – Park & Ride			
IIA Objective	**PR1**	**PR2**	**PR3**	**Commentary**
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	+	+	Assessment of Predicted Effects • Generally, these interventions will help improve capacity on the local road network, decreasing journey times from the outskirts of Reading to local centres and therefore helping improve accessibility to health care services, including hospitals, of those travelling into Reading. This will also help reduce congestion in the town centre, helping reduce emissions and health effects associated with poor air quality. • Use of Park and Ride facilities will also help increase levels of physical activity as people will be required to walk from town centre bus stops to access the town centre. It is therefore anticipated that PR1-PR3 may have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Measures will be more effective implemented alongside bus priority measures that include new Rapid Transit routes and Superbus Network servicing these facilities. • P&R schemes could include cycle parking provisions to encourage people to undertake physical activity as part of their journey if they are unable to undertake their whole journey by bike. Assumptions • See core assumptions outlined in **Table E.10** Uncertainties See core uncertainties outlined in **Table E.10**
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	+	+	0	Assessment of Predicted Effects • Generally, PR1-PR3 may help reduce traffic flowing through the city centre by reducing private car usage which in turn my decrease the likelihood of collisions occurring with vulnerable road users, however overall, these interventions have limited impact on this IIA objective and so are considered to have a Neutral effect. • PR1 and PR2 includes measures to improve perceptions of safety and security at the site through provision of new or improved facilities. This is a recognised shortfall at this site currently and therefore a Minor Positive effect is identified against this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • Measures will be incorporated on new sites to reduce crime and fear of crime, including suitable lighting, security cameras would also be installed where appropriate (e.g., waiting rooms or café's) to reduce potential for opportunistic crimes to occur. Uncertainties See core uncertainties outlined in **Table E.10**
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	?	?	?	Assessment of Predicted Effects • PR1-PR3 facilities will be designed to be accessible to all users, helping improve inclusivity. However, these facilities are most beneficial to those who own cars which may be users who are more affluent or able to drive (e.g., not visually impaired, epileptic, of driving age etc.). Park and Rides sites may benefit older drivers who do not wish to travel busy town centre routes. Where new bus routes are provided that allow non-Park and Ride uses access this may help reduce inequity as for other bus improvements. However more generally, the reduction in congestion caused on key routes to Reading city centre will decrease which will help improve

	Public Transport – Park & Ride			
IIA Objective	**PR1**	**PR2**	**PR3**	**Commentary**
				connectivity to local services (e.g., education and employment) for general road users. Compared to other public transport it is Uncertain what the relationship of these interventions would be with this IIA objective in delivering more equitable access. • Measures to reduce crime and fear of crime at park and ride sites would have positive implications for equality, covered by the previous IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Measures will be more effective implemented alongside bus priority measures that include new Rapid Transit routes and Superbus Network servicing these facilities. • The buses should be available for general passenger use along their routes and not only be reserved for those who park at the Park and Ride site. Assumptions • Although not explicitly stated under the RTS, it is assumed that the facilities would be accessible to all (e.g., disabled access and assistance for those who are visually impaired). Uncertainties See core uncertainties outlined in **Table E.10**
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	+	+	+	Assessment of Predicted Effects • PR1-PR3 facilities will be designed to be accessible to all users. Provision of these facilities can contribute towards increasing capacity on key transport links to Reading (such as the A33, A4 and A329), which can help increase the accessibility of town centres for residents on the outskirts of Reading. Reduced congestion on local road networks as a result of uptake of the use of P&R schemes can also increase journey time reliability in and around Reading for other users. It is therefore anticipated that PR1-PR3 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Measures will be more effective implemented alongside bus priority measures that include new Rapid Transit routes and Superbus Network servicing these facilities. • The buses should be available for general passenger use along their routes and not only be reserved for those who park at the Park and Ride site. Assumptions • Although not explicitly stated under the RTS, it is assumed that the facilities would be accessible to all (e.g., disabled access and assistance for those who are visually impaired). Uncertainties See core uncertainties outlined in **Table E.10**
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	++	+	+	Assessment of Predicted Effects • By reducing congestions PR1-PR3 will help increase access to employment and education by reducing journey times to local centres and services. By providing improved services to Reading and increased capacity on the road network this will also help facilitate economic growth. PR1-3 will provide new or extended P&R facilities in locations where there are high proportions of allocated or potential residential development. Increasing transport services to Reading town centre, West Berkshire and Wokingham from these areas will help support employment and educational opportunities for existing and future residents. • It is therefore anticipated that PR2 and PR3 will have a Minor Positive effect on this IIA objective and PR1 will have a Significant (Major) Positive effect. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Measures will be more effective implemented alongside bus priority measures that include new Rapid Transit routes and Superbus Network servicing these facilities. Assumptions • See core assumptions outlined in **Table E.10** Uncertainties It is uncertain what proportion of the 'potential' residential development areas identified in the RTS will be allocated and built out over the period of the RTS.

	Public Transport – Park & Ride			
IIA Objective	**PR1**	**PR2**	**PR3**	**Commentary**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+	+	+	Assessment of Predicted Effects • Much of the key road network routes such as A4, A33, A329 and Caversham and Reading bridges are heavily congested and constrained. The implementation of PR1-PR3 will help increase capacity on these networks by encouraging the use of P&R schemes to travel from surrounding areas to the centre of Reading. It is therefore anticipated that PR1-PR3 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Measures will be more effective implemented alongside bus priority measures that include new Rapid Transit routes and Superbus Network servicing these facilities. Assumptions • See core assumptions outlined in **Table E.10** Uncertainties See core uncertainties outlined in **Table E.10**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	+	+	+	Assessment of Predicted Effects • PR1-PR3 will help increase capacity on these networks by encouraging the use of P&R schemes to travel to the centre of Reading which will help support economic growth. Reductions in congestions and journey times will also help increase efficiency of movement of people and freight. It is therefore anticipated that PR1-PR3 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table E.10** Uncertainties See core uncertainties outlined in **Table E.10**
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	+	+	+	Assessment of Predicted Effects • PR1- PR3 will help reduce the number of private cars travelling from the outskirts of Reading, Wokingham, West Berkshire, and South Oxfordshire into Reading town centre by providing alternative travel options through the P&R schemes. This can help improve air quality in the Reading AQMA and along heavily congested roads by reducing the release of pollutants from vehicles such as NO2. However, the schemes do little to reduce congestion on peripheral roads and have the potential to encourage private car travel along these routes, as only part of the trip is made by public transport. It is therefore anticipated that interventions PR1-PR3 will have a Minor Positive effect on air quality and noise within RBC, but a Neutral effect outside this area. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Measures will be more effective implemented alongside bus priority measures that include new Rapid Transit routes and Superbus Network servicing these facilities. Assumptions • See core assumptions outlined in **Table E.10** Uncertainties See core uncertainties outlined in **Table E.10**
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.				Assessment of Predicted Effects • Generally, these measures can help reduce traffic and congestion within the town centre through the uptake of public transport which may positively contribute to urban character and the setting of local heritage assets. • PR2 similarly will involve the expansion of an existing P&R and will include decking the car park to provide more parking spaces. The P&R is surrounded by commercial development to the north, east and west and residential development on the opposite side of the railway line to the south. The nearest designated heritage asset is located about 400m southwest of the P&R. There are existing trees and vegetation around the site which provides some screening from the surrounding area. Depending on the height and design of the scheme there is potential for there to be a negative effect on this IIA Objective. However, decking the car parking will help more efficiently use the existing land and site which would have a Minor Positive effect on this IIA objective. It is therefore considered that on balance, PR2 may have a Minor Positive effect on this IIA objective.

	Public Transport – Park & Ride			
IIA Objective	**PR1**	**PR2**	**PR3**	**Commentary**
	-	+	-	• The PR1 scheme is an expansion of currently the current Mereoak P&R which is adjacent to a residential area and open agricultural fields. Depending on the design, it may have an effect on the surrounding urban realm. However, it is not in proximity to any heritage assets. is therefore anticipated that there may therefore be a Minor Negative effect on this IIA objective without further mitigation. • No defined locations are given for PR3. However, these may be near the fringes of Caversham and Purley on Thames where there are a number of listed heritage features the settings of which setting may be negatively affected by such a scheme. Without mitigation measures, including careful siting and landscape buffering, it is anticipated that there may be a Minor Negative effect on this IIA objective that will need suitable mitigation as part of any planning permission to ensure the effect are acceptable. <u>Mitigation and Enhancement</u> • P&R schemes should be sensitively designed to suit their specific locations (such as open countryside or listed buildings), be screened where appropriate, have sensitively sited entrances and make use of low impact lighting (while not compromising safety). • More detail of likely locations of the P&R sites would help assess the likely impacts against the IIA objectives. <u>Assumptions</u> • See core assumptions outlined in **Table E.10** <u>Uncertainties</u> See core uncertainties outlined in **Table E.10**
10.Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	+	+	+	<u>Assessment of Predicted Effects</u> • PR1-PR3 will help reduce the distance travelled by private cars as the schemes will support alternative transport options to travel from the outskirts of Reading to the city centre. However, Park and Rides do not necessary reduce the overall number of car journeys and may encourage some with improved access to the town centre. There may be some benefit of reduce emissions, but this is assessed as minor positive only against this this IIA objective. <u>Mitigation and Enhancement</u> • No Significant Negative effects have been identified and therefore no mitigation is required. • Measures will be more effective implemented alongside bus priority measures (FT1 and FT2) that include new public transport services and connections to these facilities. • Secure cycle facilities, and possibly showers, should be provided at the Park and Ride sites so people can choose to cycle and ride. <u>Assumptions</u> • See core assumptions outlined in **Table E.10** <u>Uncertainties</u> See core uncertainties outlined in **Table E.10**
11.Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	0	0	?	<u>Assessment of Predicted Effects</u> • Interventions PR1-PR3 will help reduce traffic travelling on key routes in and around Reading which will generally have a positive impact on habitats and species in close proximity to busy highways (e.g., Highwood LNR along the A3290) through reduction in noise and air pollution. • PR1-PR3 will involve the conversion of open space into built development, which will involve some loss of habitat and potential impact on species. No details are given on the exact locations for development (except for location of existing facilities for PR1 and PR). Neither of these areas are designated ecological sites. Other sites where a general appreciation of possible locations can be identified are largely agricultural in use and therefore effects on biodiversity are likely to be more limited, however this does not exclude the potential for protected species and habitat to be present). There may also be effects to soil resources depending on the quality of the land. Any necessary ecological and agricultural land evaluation and mitigation as necessary will be needed as part of any planning permission of the sites, potentially including formal biodiversity net gain requirements. It is therefore anticipated that overall, interventions PR1 and PR2 will have a neutral effect on this IIA objective. • Given the ambiguity of the location(s) of PR3 it is not possible to determine the likely impacts this intervention will have on this IIA objective. There are a range of ecologically designated sites located to the north and west of Reading including Clayfield Copse LNR, Sulham and Tidmarsh Woods and Meadows SSSI and patches of ancient woodland. Care should be taken to avoid these areas when siting new park and ride schemes, and precautionary measures would need to be included in planning applications for these sites. <u>Mitigation and Enhancement</u> More detailed ecological impact assessment and/or agricultural land assessment may be required when a detailed proposal is brought

	Public Transport – Park & Ride			
IIA Objective	**PR1**	**PR2**	**PR3**	**Commentary**
				forwards which also considers species present on site and soil resources. Appropriate mitigation measures should be identified and implemented prior to and during construction to reduce potential negative effects on protected species on site and soil. • More detail of likely locations of the Park and Ride schemes would help assess the likely impacts against the IIA objectives. Assumptions • RBC have committed to providing a net gain in biodiversity as part of all transport schemes as noted in policy RTS2. It has therefore been assumed that there would be an increase in appropriate natural habitat and ecological features over and above that being affected by the proposals. Uncertainties There is some uncertainty as to the exact location of the P&R interventions and extent of land take, therefore this assessment gives a general overview of the level of effect anticipated.
12.Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	0	0	?	Assessment of Predicted Effects • PR1 Is located in flood zone 1 and so is at low risk from flooding from rivers or seas. It is located in close proximity to a small watercourse which lies to the west of the Mereoak P&R site which may be affected by pollution from runoff during construction of the proposed extension, however it has been assumed that appropriate mitigation will be put in place during the construction phase. It is therefore anticipated that there will have a Neutral effect on this IIA objective. • PR2 is located in flood zone 2. The current design and extent of development is currently not known. The need for a flood risk assessment and any necessary mitigation will be identified during of the planning application and may be required as part of any planning permission of the site. It is therefore anticipated that PR2 will have a Neutral effect on this IIA objective. • It is uncertain what effect PR3 will have on this IIA objective given that the location of these intervention(s) is currently unknown, albeit flood risk immediately north and west of the urban areas are low, there are waterbodies and areas of higher flood risk present. Mitigation and Enhancement • No significant effects have been identified however, appropriate mitigation measures should be put in place during construction and operation to protect environmental receptors from impacts associated with runoff of pollution into local waterbodies. Assumptions • See core assumptions outlined in E.10 • It is assumed that PR2 will be built out as shown on the proposals and plans which planning permissions was granted. Uncertainties There is some uncertainty as to the exact location of the P&R interventions (except for PR2) and therefore this assessment gives a general overview of the level of effect anticipated.
13.Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	0	0	?	Assessment of Predicted Effects • The PR1 scheme is an expansion of currently the current Mereoak P&R which is adjacent to a residential area and open agricultural fields. Depending on the design, it may have an effect on the surrounding landscape character, however it is not located in a statutory designated landscape area. It is therefore anticipated that this intervention may have a Neutral Negative effect on this IIA objective. • PR2 similarly will involve the expansion of an existing P&R and will include decking the car park to provide more parking spaces. The P&R is surrounded by commercial development to the north, east and west and residential development on the opposite side of the railway line to the south. There is existing trees and vegetation around the site which provides some screening from the surrounding area. Effects will be depended on the height and design of the scheme, however given the extent of the infrastructure required and nature of the surrounding area, the potential for negative effects is limited. It is therefore anticipated that PR2 will have a Neutral effect on this IIA objective. • It is uncertain what effect PR3 will have on this IIA objective given that the location of these interventions is currently unknown. Depending on the location these may also be in close proximity to the Chilterns or North Wessex Downs AONB. Mitigation and Enhancement • P&R schemes should be sensitively designed to suit their specific locations, particularly where they may be sited close to or within open countryside or Conservation Areas or near to listed buildings). In any event they should be screened where appropriate, have appropriate sited entrances and adopt appropriate lighting standards for safety and carbon reduction purposes. Assumptions • None. Uncertainties

	Public Transport – Park & Ride			
IIA Objective	**PR1**	**PR2**	**PR3**	**Commentary**
				See core uncertainties outlined in **Table E.10**

E.6 Public Transport Schemes - Railway Stations

E.6.1 This subsection provides an assessment of the transport schemes that seek to deliver new or improved railway stations sites. The schemes are:

- RS1: Reading Station Interchange Enhancements;
- RS2: Reading West Station Upgrade; and
- RS3: Tilehurst Station Upgrade;

E.6.2 The schemes are identified in **Table E.12,** together with any identified reasonable alternatives. The assessment is provided in **Table E.13.**

E.6.3 The core assumptions and uncertainties listed in **Table E.12** have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix **(Table E.13).**

Table E.12: Public Transport Schemes - Railway Stations – Assumptions and Uncertainties

Transport Scheme	Justification	Core Assumptions and Uncertainties
RS1: Reading Station Interchange Enhancements	Further enhancements to the Reading Station interchange to prioritise pedestrian, cyclists and public transport use including upgrading public transport stops, reducing severance, improvements to cycle parking provision and signage. This will help increase attractiveness of rail travel and reduce prevalence of cycle theft at the station.	It is assumed that the development will be delivered in accordance with the existing permissions/applications.
RS2: Reading West Upgrade	Upgrade of existing Reading West railway station, including provision of a ticket office and barriers, access improvements, cycle parking, shelter, and signage improvements. Reallocation of road space to improve access on foot, cycle, and bus. The scheme is intended to help reduce crime or fear of crime and improve access for those with mobility impairments, buggies, young children etc., new cycle parking, better weather protection for users and staff. This can act as a catalyst for regeneration of the area and help increase the uptake of public transport, leading to air quality improvements.	It is assumed that the development has been delivered in accordance with the existing permissions/applications.
RS3: Tilehurst Station Upgrade	Improve customer experience and make the station fully accessible providing lifts to allow customers to access all platforms. In addition, improve the access to the station by all modes to improve safety and user experience. This could include improved footways, crossings, drop-off/pickup layout, and additional cycle and car parking.	It is assumed that the development will be delivered in accordance with the existing permissions/applications.

Table E.13: IIA of Public Transport Schemes - Railway Station Interventions – Assessment Matrix

Public Transport Schemes – Railway Stations				
IIA Objective	**RS1**	**RS2**	**RS3**	**Commentary**
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	++	++	++	<u>Assessment of Predicted Effects</u> • Interventions RS1-RS3 would provide enhanced and new rail facilities for residents of Reading West, those in proximity to Tilehurst Station and central Reading, and future residents and workers in Green Park Village. Modal shift towards public transport would reduce negative impacts on health from transportation, including air pollution, noise, and vibration. These measures may also increase levels of physical activity as more people may walk or cycle as part of the journey to and from the railway stations. Ensuring good and equitable connectivity of new communities in growth locations to a wider area, for social and leisure purposes can also benefit the wellbeing of these communities. It is anticipated that RS1-RS4 will have a Significant (Major) Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No Significant Negative effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.12** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.12**
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	+	++	+	<u>Assessment of Predicted Effects</u> • Perceptions of safety at Reading West Station are currently poor and deter people from using the station late in the evening and during the dark during winter months. The station is not secure and natural surveillance and visibility on the ramps and platforms is also lacking. RS2 will involve upgrades to the station such as ticket barriers and disabled access and improve entrances and platform widening to help increase security. It is therefore anticipated that RS2 will have a Significant (Major) Positive effect on this IIA objective. • RS1 and RS3 will involve upgrades to existing stations to help improve accessibility and safety. Measures may include provision of secure cycling parking and lifts to platforms to provide safer access for those who are less able bodied. There is therefore potential for RS1 and RS3 to have a Minor Positive effect on this IIA objective. • Stations will need to be designed and delivered to reduce opportunities for crime and fear of crime. An assumption is made that modern stations will include measures to allow for this. There is potential for RS2 and RS3 to have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No Significant Negative effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.12** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.12**
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	+	++	++	<u>Assessment of Predicted Effects</u> • RS1-RS3 will provide new or upgraded facilities which will enable stations to be accessible to all user groups. RS2 and RS3 will provide much needed upgrades to Reading West and Tilehurst stations which currently lack these elements, making access difficult for those who are less mobile. It is therefore anticipated that RS2 and RS3 will have a Significant (Major) Positive effect on this IIA objective.

Public Transport Schemes – Railway Stations				
IIA Objective	**RS1**	**RS2**	**RS3**	**Commentary**
				• RS1 will help reduce severance and increase the accessibility of Reading station via public transport, walking and cycling and therefore the accessibility of the station to a wider range of user groups. It is not anticipated that this scheme will have an inequitable impact on any particular group and therefore RS1 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No Significant Negative effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.12** Uncertainties • See core uncertainties outlined in **Table E.12** • It is uncertain what the demographics of Green Park will be once the potential and proposed residential developments in these areas are operational, and therefore specific needs of vulnerable groups or people with protected characteristics.
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	++	++	++	Assessment of Predicted Effects • As noted in objective 3, RS1-RS3 will increase accessibility of stations for all users and via a range of transport modes (bus, cycling and walking) and help improve access to Reading city centre. RS1-RS3 specifically target improving the accessibility of the existing stations to increase the attractiveness and uptake of rail travel. It is therefore anticipated that RS1-RS3 will have a Significant (Major) Positive effect on this IIA objective. Mitigation and Enhancement • No Significant Negative effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.12** Uncertainties • See core uncertainties outlined in **Table E.12**
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	+	+	+	Assessment of Predicted Effects • RS1-RS3 will help increase the attractiveness of using rail services to access employment and education both in Reading and more regionally in (e.g., London). This will be done through improving station facilities to increase accessibility to all users and increase perceptions of safety. It is therefore anticipated that RS1-RS3 will have Minor Positive effect on this IIA objective. Mitigation and Enhancement • No Significant Negative effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.12** Uncertainties • See core uncertainties outlined in **Table E.12**

Public Transport Schemes – Railway Stations				
IIA Objective	**RS1**	**RS2**	**RS3**	**Commentary**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+	+	+	Assessment of Predicted Effects • RS1-RS3 may have a Minor Positive effect on this IIA objective through providing upgrades to station services which are much needed and will help increase sustainable travel from the Reading, helping relieve congestion on key roads such as the Oxford Road corridor. Mitigation and Enhancement • No Significant Negative effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.12** Uncertainties • See core uncertainties outlined in **Table E.12**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	+	+	+	Assessment of Predicted Effects • It is anticipated that RS1-RS3 will have a Minor Positive effect on this IIA objective by helping reduce travel time in and around Reading centre through promoting the uptake of rail travel and reducing congestion on key routes such as the Oxford Road Corridor. Mitigation and Enhancement • No Significant Negative effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.12** Uncertainties • See core uncertainties outlined in **Table E.12**
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	++	+	+	Assessment of Predicted Effects • RS1 will help increase the uptake of rail travel which will help relieve traffic in and around Reading, helping reduce NO_2 emissions and improve air quality in the AQMA around the A33 and Oxford Road corridor. It is anticipated that RS1 will have a Significant (Major) Positive effect on this IIA objective. • RS2 and RS3 will also help to increase uptake of rail travel, relieving road traffic in and around Reading to improve air quality and reduce exposure to pollutants and noise and vibration exposure. These schemes will have a minor Positive impact on this IIA objective. Mitigation and Enhancement • No Significant Negative effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.12,** particularly in relation to the future electrification of the Reading-Basingstoke line. Uncertainties • See core uncertainties outlined in **Table E.12**

Public Transport Schemes – Railway Stations				
IIA Objective	**RS1**	**RS2**	**RS3**	**Commentary**
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.	+	+	+	Assessment of Predicted Effects • RS1-RS3 will involve upgrades to train stations, including in relation to access, shelter provision and platform improvements which will help improve the public realm and design. These measures can also generally help contribute to increasing uptake and use of public transport, reducing congestion, and associated negative impacts on the setting of heritage assets in the centre of Reading. It is anticipated RS1-RS3 this will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No Significant Negative effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.12** Uncertainties • See core uncertainties outlined in **Table E.12**
10. Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	++	++	+	Assessment of Predicted Effects • RS1-RS3 will provide new and upgraded rail stations and infrastructure, which would promote a modal shift towards sustainable travel and the decarbonisation of the transport sector. These interventions would therefore directly contribute to GHG emission reductions and climate change mitigation. Improved connectivity via proposed interchanges in RS1 and RS2 will resulting in Significant (Major) Positive effects on this IIA objective. Enhancements proposed for RS3 will result in a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No Significant Negative effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in Table E.12, particularly in relation to the future electrification of the Reading-Basingstoke line. Uncertainties • See core uncertainties outlined in Table E.12
11. Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	0	0	0	Assessment of Predicted Effects • Generally, these measures can help reduce private car travel, and associated disturbance to ecological features through air and noise pollution. RS1-RS3 involves upgrading facilities of existing train station and will not involve any change to habitats or have a direct impact on protected species. RS1-RS3 is therefore likely to have a Neutral effect on this IIA objective. Mitigation and Enhancement • More detailed ecological impact assessment may be required when a detailed proposal is brought forwards which also considers species present on site. Appropriate mitigation measures should be identified and implemented prior to and during construction to reduce potential negative effects on protected species on site. Assumptions • See core assumptions outlined in Table E.12 Uncertainties • See core uncertainties outlined in Table E.12

Public Transport Schemes – Railway Stations				
IIA Objective	**RS1**	**RS2**	**RS3**	**Commentary**
12.Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	0	0	0	Assessment of Predicted Effects • RS1-RS3 involves upgrading facilities of existing train station and will not involve any land take. RS1-RS3 is therefore likely to have a Neutral effect on this IIA objective. • A Flood Risk Assessment was completed as part of the approved application for Green Park Railway Station which assessed potential impact on flooding and any necessary mitigation to be implemented. RS1 is therefore likely to have a Neutral effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified. However appropriate mitigation measures should be put in place during construction to protect environmental receptors from impacts associated with runoff of pollution into local waterbodies. Assumptions • See core assumptions outlined in **Table E.12** Uncertainties • See core uncertainties outlined in **Table E.12**
13.Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	+	+	+	Assessment of Predicted Effects • RS3 involves upgrading facilities of existing train station and will involve minor external improvements (such station access) which will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No Significant Negative effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.12** Uncertainties • See core uncertainties outlined in **Table E.12**

E.7 Active Travel

E.7.1 This subsection provides an assessment of the Active Travel schemes that seek to deliver new or improved walking and cycling links and facilities. The schemes are:

- AT1: Town and Local Centre Public Space Enhancements;
- AT2: Strategic Pedestrian Routes;
- AT3: Local Pedestrian Routes;
- AT4: Strategic and Town Centre Cycle Routes;
- AT5: Shinfield Road Active Travel Improvements;
- AT6: Bath Road/Castle Hill Active Travel Improvements;
- AT7: London Road Active Travel Improvements
- AT8: Local Cycle Routes;
- AT9: Sustainable and Safer Travel to School;
- AT10: Play and School Streets Programme;
- AT11: Cycle Parking Hubs and Facilities; and
- AT12: Micro-Mobility Hire Scheme.

E.7.2 The schemes are identified in **Table E.14**, together with any identified reasonable alternatives. The assessment is provided in **Table E.15.**

E.7.3 The core assumptions and uncertainties listed in **Table E.14** have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix **(Table E.15).**

Table E.14: Active Travel – Assumptions and Uncertainties

Transport Scheme	Justification	Core Assumptions and Uncertainties
AT1: Town and Local Centre Public Space Enhancements	Improvements may include providing adequate facilities for deliveries, manage available kerb space and removal of obstructions to free bus movement on approaches to central areas. Improvements could also be made to provide better access for walking and cycling in and around Reading town centre, including to Reading Station and better access for bus passengers to key interchanges in the town centre, as well as creating car or vehicle-free areas, and providing rest and amenity areas. Improvement will help enhance the experience of visiting central Reading including access between buses and other modes of transport by removing or reducing conflicts between motorised transport and walking and cycling.	Exact location and type of improvements are uncertain. However, an assumption is made that improvements will help encourage Active Travel through making routes more attractive and safer as set out in the Healthy Streets principles and Local Cycling and Walking Infrastructure Plan (LCWIP).
AT2: Strategic Pedestrian Routes	Key walking routes will be established which connect major employment areas, transport hubs, the town centre and district hubs across the Reading area and provide improvements to encourage commuter walking and improve options for multi-modal interchange. Deliver improvements which reduce conflict with traffic and other road users and improved safety and perception of safety. Improvements may include road space reallocation, public realm enhancements, lighting and CCTV, improved crossings with priority for pedestrians and signage and removal/ consolidation of street clutter.	Exact location and type of improvements are uncertain. However, an assumption is made that improvements will help encourage Active Travel through making routes more attractive and safer as set out in the Healthy Streets principles and LCWIP.
AT3: Local Pedestrian Routes	Create a network of local pedestrian routes that connect people to local facilities and provide feeder links to the strategic pedestrian network. This will help increase the accessibility of local facilities and encourage walking.	Exact location and type of improvements are uncertain. However, an assumption is made that improvements will help encourage Active Travel through making routes more attractive and safer as set out in the Healthy Streets principles and LCWIP.
AT4: Strategic Cycle Routes	The creation of a strategic cycle network to connect major destinations (including employment centres and transport hubs) along key transport corridors. These routes include both radial and orbital routes. Improvements have been identified on all of these strategic routes which include reallocating road space, segregation between pedestrians and cyclists and traffic (where possible and advantageous), surface improvements, crossing enhancements, parking restrictions, signage and reducing street furniture. This will help encourage a shift away from	Exact location and type of improvements are uncertain, however the general location of the strategic cycle routes is noted. However, an assumption is made that improvements will help encourage Active Travel through making routes more attractive and safer, as set out in the Healthy Streets principles and LCWIP.

Transport Scheme	Justification	Core Assumptions and Uncertainties
	private car travel.	
AT5: Shinfield Road Active Travel Improvements	Funding has been secured from the Government's Active Travel Fund to deliver active travel improvements on Shinfield Rd between Christchurch Green and Shinfield Rise. This route is a key strategic corridor into Reading town centre. Improvements to the quality of the route will enable increased connectivity into the town centre, and its facilities, particularly for pedestrians and cyclists.	Exact location (and type) of improvements is uncertain. However, an assumption is made that improvements will help encourage Active Travel through making routes more attractive and safer.
AT6: Bath Road/Castle Hill Active Travel Improvements	Funding has been secured from the Government's Active Travel Fund to deliver active travel improvements on Bath Road Rd/Castle Hill between Berkeley Avenue and the IDR and Castle Street. This route is a key strategic corridor into Reading town centre. Improvements to the quality of the route will enable increased connectivity into the town centre, and its facilities, particularly for pedestrians and cyclists.	Exact location (and type) of improvements is uncertain. However, an assumption is made that improvements will help encourage Active Travel through making routes more attractive and safer.
AT7: London Road Active Travel Improvements	Active travel improvements to the London Road corridor between cemetery Junction, the Royal Berkshire Hospital, Sidmouth Street, and the town centre would provide a key missing link in the existing cycle network by connecting the residential areas of East Reading to the hospital, town centre and wider cycle network.	Exact location (and type) of improvements is uncertain. However, an assumption is made that improvements will help encourage Active Travel through making routes more attractive and safer.
AT8: Local Cycle Routes	The creation of a new or improved local cycle network along lightly trafficked routes, linking communities to local facilities such as shops, leisure facilities, healthcare, and education. Cycle facilities will include a mixture of shared foot/cycleways, on-carriageway cycle lanes, cyclist awareness signage and crossing facilities. This will help increase the connectivity of local facilities and encourage cycling.	Exact location (and type) of improvements is uncertain. However, an assumption is made that improvements will help encourage Active Travel through making routes more attractive and safer.
AT9: Sustainable and Safer Travel to School	Introduction of a package of measures to encourage sustainable and safer travel to school, which could include local road closures at school start and finish times, new and improved crossing facilities, traffic calming measures and reduced speed limits, cycle and scooter parking provision and support to set up Park and Strides, walking buses or bike buses. RBC will also work with schools and public transport operators to review bus service provision to and from schools. In addition, encourage schools to enrol in the Modeshift STARS to	Exact location (and type) of improvements is uncertain. However, an assumption is made that improvements will help encourage Active Travel through making routes more attractive and safer.

Transport Scheme	Justification	Core Assumptions and Uncertainties
	influence the modal shift of school travel for children and staff. This would help encourage a shift to sustainable travel for journeys to school, resulting in increased active travel and health benefits associated with improved air quality.	
AT10: Play and School Street Programme	Support will be offered to local communities and schools who would like to organise temporary street closures for up to three hours, to create Play Streets. This will help develop streets as a shared space, increase physical activity and help children develop cycle confidence. School Streets enable children to walk, cycle or scoot to school without danger of traffic, for 45 minutes, twice a day. A trial period ran evidence of success, and no significant issues for displaced parking.	It is assumed that there are no financial costs to individuals or groups wishing to set up temporary closures.
AT11: Cycle Parking Hubs and Facilities	Provision of secure, covered cycle hubs at transport interchanges, with the potential for manned security to provide additional reassurance at major hubs. Hubs can provide a large number of secure spaces with double height racks and include facilities including CCTV, lighting, electric charging points, bicycle repair stands, pumps, and 24-hour access with key cards. Establishment of residential cycle parking facilities, particularly in areas of terraced housing. Provide communal cycle hangars in residential areas which provide safe storage for residents who currently do not have the provision and as a result do not own a bike. New and improved cycle parking hubs and facilities would encourage an increase in cycling.	It is assumed that new cycle hubs would involve limited (if any) new land take and the design would be in keeping with the existing buildings and planning permissions. Costs associated with renting the proposed hangar space are currently unknown. Costs associated with similar rental in London vary between £0 and £70 per year. For the basis of this assessment similar costs are assumed.
AT12: Micro-Mobility Hire Scheme	The provision of a new micro-mobility hire scheme to serve Reading and the wider area. Investigate opportunities to upgrade the existing cycle hire stations and include possible fleet of e-bikes. This will help increase access to cycling and complement other transport options.	None

Table E.15: IIA of Active Travel Interventions – Assessment Matrix

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	++	++	++	++	++	++	++	++	++	++	++	++	<u>Assessment of Predicted Effects</u> • AT1 – AT12 should help increase the uptake of more active forms of travel (such as cycling and walking), helping increase levels of physical activity and provide associated benefits for health outcomes related to this, such as reducing coronary disease, cancers, and type 2 diabetes. There may also be associated mental health effects. These interventions can also help reduce private car use and improve air quality which will have further health benefits. Residents will additionally have more sufficient means of accessing services that will benefit their health and wellbeing, such as health services and green space. • The inclusion of Healthy Streets (HS) as guiding principles will ensure that health and inclusion is embedded in transport planning, benefitting the human experience physically and mentally. It is therefore considered that AT1-AT12 may have a Significant (Major) Positive effect on this IIA objective. • AT10 will directly contribute to increasing levels of physical activity in children by providing them with space to play, helping reduce levels of childhood obesity. AT10 was trialled for 45 minutes, two times a day, and resulted in positive outcomes, including improvements to walking and cycling, and reduced car travel. These have positive effects including better concentration in class, increased awareness, and sense of place, and increased social interaction between users. Overall, it is considered that AT10 may have Significant (Major) Positive effect on this IIA objective. • Locations of AT2 – AT4 are not confirmed, however the schemes will now be guided by the Local Cycling and Walking Infrastructure Plan (LCWIP) which will help ensure that the scheme is implemented in locations which need, and which will benefit most from it. It is therefore considered that a Significant

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													(Major) Positive effect on the IIA objective would remain. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.14** <u>Uncertainties</u> See core uncertainties outlined in **Table E.14**
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	++	++	++	++	++	++	++	++	++	++	++	-	<u>Assessment of Predicted Effects</u> • AT1 will provide public realm improvements guided by Healthy Streets principles, which will help increase the safety of cyclists and pedestrians, helping reduce collisions between cars and vulnerable road users and improve road safety. It is therefore anticipated that AT1 may have a Significant (Major) Positive effect on this IIA objective. • AT2- AT8 will provide new pedestrian and cycle routes (include segregated routes) and associated infrastructure which will help create a safer active travel environment. Appropriate signage will also be provided to reduce conflict between pedestrians, cyclists, and motorists. It is therefore anticipated that AT2-AT8 may have a Significant (Major) Positive effect on this IIA objective. • AT9 will help increase the safety of those travelling to and from school through the introduction of improved crossing facilities, traffic calming measures and reduced speed limits. It will also help provide travel information and education to pupils, teachers, and visitors to help them be safer when undertaking journeys. It is therefore anticipated that AT9 may have a Significant (Major) Positive effect on this IIA objective. • AT1- will involve closures of streets to allow children to use the roads without the potential of being involved in a vehicle collision. It is therefore anticipated that this will have a Significant (Major) Positive effect on this IIA objective.

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													• AT11 will provide more secure cycle parking locations which will help reduce the likelihood of cycle thefts in the areas where the scheme is implemented, it is therefore anticipated that AT11 may have a Significant (Major) Positive effect on this IIA objective. • AT12 may increase the number of less experienced micro-mobility users on roads, potentially leading to an increase in collisions involving vulnerable road users. Helmets are also unlikely to be provided alongside the hires which, depending on the schemes used, may be collected from stands across the urban area. Without safety measures and indicator in place, this may have a Minor Negative effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. • It would help avoid negative effects if micro-mobility hire facilities provided information on where users can access local courses or information on road safety. <u>Assumptions</u> • See core assumptions outlined in **Table E.14** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.14** • Additional accidents that may arise as a result of AT12 and an increased number of potentially less experienced road users being present on roads around Reading.
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	++	++	++	+	++	++	++	+	+	0	+	+	<u>Assessment of Predicted Effects</u> • AT1-AT3 will help improve public realm areas, including reducing conflicts between motorised transport and walking and cycling, and providing rest areas which will help make active travel more accessible to a range of users. AT2 will benefit those who do not own cars (e.g., due to low incomes) by providing alternative travel options. AT3 can help reduce walking times to local facilities

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													therefore increasing accessibility for vulnerable groups. AT1-AT3 is further enhanced by the addition of the Healthy Streets principles, which embed diverse aspects of the human experience to ensure that transport planning is inclusive. It is therefore anticipated that AT1-3 may have a Major Positive effect on this IIA objective. • AT5-7 will improve active travel routes along key strategic corridors into Reading Town centre. Improved safety and accessibility will mean that more users, such as those on low-incomes and those who are unable to drive, have the option to cycle or walk. As the routes connect to key destinations in the town centre, this will facilitate community cohesion and therefore AT5-7 are anticipated to have significant Major Positive effects on this IIA objective. • Cycling schemes are less likely to be used by people who are less able bodied. AT4, AT9, AT10 and AT12 are most likely to be benefit groups that are not part of any protected characteristic. However, cycling (and in particular walking) will support travel by those on lower incomes and young adults and teenagers, who do not drive. Furthermore, AT12 will include groups who are not able to cycle and thus enable their use of the road to access destinations and facilities. It is anticipated that AT4, AT8, AT9, AT11 and AT12 will have Minor Positive effects on the IIA objective. • It is anticipated that AT9 will have a Neutral effect on this IIA objective as it will be provided across all schools within the Borough, including those in more deprived areas. • AT10 will help encourage children to undertake physical activity. It is assumed that RBC will provide support to all schools and local communities, including those in deprived areas. Providing spaces to interact may also help reduce isolation for children and adults and promote community cohesion. Therefore, AT10 may have a Significant (Major) Positive effect on this IIA objective. <u>Mitigation and Enhancement</u>

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													• No significant effects have been identified and therefore no mitigation is required. • New cycle lanes, wherever possible, should be designed to accommodate micro-mobility vehicles. <u>Assumptions</u> • See core assumptions outlined in **Table E.14** • It is assumed that appropriate measures will be put in place with the implementation of AT6 to ensure that access is available to disabled users during times of local road closures. • It is assumed that during temporary street closures as part of AT9, procedures should be put in place to enable users who are less able to travel further distances to their homes/ cars as part (e.g., due to disability or if they are travelling with small children/ babies) to safely access their homes/ cars). This would help reduce potential negative effects associated with this intervention. <u>Uncertainties</u> • See core uncertainties outlined in **Table E.14**
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	+	++	++	++	++	++	++	++	+	0	++	++	<u>Assessment of Predicted Effects</u> • Generally, measures AT1-AT9 will help promote active travel and reduce reliance on cars which will help relieve congestion and have knock on benefits to the accessibility of Reading for road users including bus users. • AT1 will have a Minor Positive effect on this IIA objective as it will increase the attractiveness of active travel in the town centre by reducing severance and providing improved crossings for pedestrians and cyclists. • AT2, AT3, AT4 and AT8 will enhance local and strategic walking and cycle networks, helping improve links and access to local facilities and major hubs (such as employment centres). It is anticipated that AT2, AT3, AT4 and AT8 will have a Significant (Major) Positive effect on this IIA objective.

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													• The cycle improvement measures as part of AT5, AT6and AT7 will enhance accessibility to high-quality cycle infrastructure, as well as improve safety. It is therefore anticipated that AT5 and AT6 will have a Significant (Major) Positive Effect on this IIA objective. • Proposed improvement measures to be undertaken as part of AT9 such as improve crossing facilities, increased scooter and cycling parking provision and the set-up of Park and Strides and the link will help increase the accessibility of the area surrounding schools by means of active travel. It is assumed that this will have a Minor Positive effect on this IIA objective. • AT11 and AT12 will enhance cycling services and facilities, which will help make general facilities and transport hubs more accessible for cyclists. It is anticipated that AT11 and AT12 will have a Significant (Major) Positive effect on this IIA objective. • AT10 will reduce the accessibility of streets to road users traveling via vehicles during the closure period which may have a negative effect on groups who are less able. However, as closures will be short term and temporary it is anticipated that this effect will be limited. This scheme will also increase the accessibility of streets for children to play without the fear of colliding with passing vehicles. On balance, it is anticipated that AT10 will have a Neutral effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.14** • It is assumed that appropriate measures will be put in place with the implementation of AT6 to ensure that access is available to disabled users during times of local road closures. <u>Uncertainties</u>

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													• See core uncertainties outlined in **Table E.14**
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	+	+	+	+	+	+	+	+	+	+	+	+	<u>Assessment of Predicted Effects</u> • AT1-8 will help improve the urban realm which will include improving pedestrian and cycle use, access and parking which can help increase access to education and employment opportunities in the town centre for a wider group of people. It is considered that this may have a Minor Positive effect on this IIA objective. • AT9 will help improve access to schools by active travel by improving crossings, introducing local road closures and traffic calming measures and providing bike and scooter parking provision. It is therefore anticipated that this may have a Minor Positive effect on this IIA objective. • AT10 can help children develop cycling confidence which will enable them to cycle to school. Teachers may also be encouraged to cycle. Vehicular access will be provided for certain users who require it, therefore AT10 will not negatively impact any groups. Overall, it is considered that this will have a Minor Positive effect on this IIA objective. • AT11 and AT12 will open up more employment and educational opportunities for people who would otherwise have limited access to these. Parking hubs and facilities, and hire schemes, will allow a wider group of people to use micro-mobility vehicles around the city and therefore expand education and work options. It is anticipated that AT11 and AT12 will have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. • To enhance effects more strategic walking and cycle links should also include increasing links to education facilities (such as colleges and schools) as well as employment hubs to ensure

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													that improvements and better access to educational facilities benefit a wider range of users, including students. • New cycle hire facilities should be provided within new major development areas as they are progressed and all of Reading's railway stations. <u>Assumptions</u> • See core assumptions outlined in **Table E.14** <u>Uncertainties</u> See core uncertainties outlined in **Table E.14** <u>Assumptions</u> • See core assumptions outlined in **Table E.14** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.14**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+	+	+	+	+	+	+	+	+	0	+	+	<u>Assessment of Predicted Effects</u> • AT1-AT7 will help reduce congestion and increase capacity on the local road network through promoting active travel and reducing private car use. AT2 and AT5 will help improve local and strategic walking and cycle networks, creating more direct and better-quality routes. AT1-AT7 will also help increase the attractiveness of active travel by creating a safer and more pleasant urban realm. It is therefore anticipated that these interventions will have a Minor Positive effect on this IIA objective. • AT6 will have a similar effect on helping reduce congestion but around school start and finish times. It will also help improve existing infrastructure, such as pedestrian and cycle crossings and provide cycle and scooter parking provision. It is therefore considered that AT6 may have a Minor Positive effect on this IIA objective. • AT10 will help encourage children to use more active forms of travel (e.g., through improved cycling confidence) which can help instil this habit and continue this through to adulthood. This will generally help reduce private car travel, reducing congestion and

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													increasing capacity on the road network; however, it is likely to have a limited effect on its own. It is therefore anticipated that this will have a Neutral effect on this IIA objective. • A high level of cycle theft is currently an issue in Reading including at P&R's, train stations and the city centre, which can deter people from cycling to locations where secure parking is not available. AT11 will help meet this need by improving cycle parking infrastructure to help encourage the uptake of cycling to travel, including to transport hubs and the centre. It is anticipated that this AT11 have a Minor Positive effect on this IIA objective. • As there is currently no active cycle hire scheme in Reading, AT12 will help meet this identified need. This provision of cycle hire facilities can help increase the uptake of cycling, reducing car journeys and congestion, helping increase capacity on the road network. It is therefore anticipated that AT12 will have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.14** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.14**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	+	+	+	+	+	+	+	+	+	0	+	+	<u>Assessment of Predicted Effects</u> • AT1-8 will help improve the urban realm which could help improve perceptions of the area and attract business and economic growth. Additionally, the support for walking and cycling and uptake may reduce car journeys and associated congestion, therefore increasing road network capacity around Reading. This may result in decreased journey times for people and freight, help facilitate economic growth. Therefore, these may have a Minor Positive effect on this IIA objective.

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													• AT9 will support the uptake of walking and cycling to school, and reduce associated car use, particularly at peak times. Similarly, to AT1-8, this scheme may increase road network capacity and facilitate associated productivity for both schoolchildren, and parents who drive their children to school. AT9 is therefore anticipated to have a Minor Positive effect on this IIA objective. • AT10 can also help promote the use of more sustainable forms of travel in children. Encouraging the use of sustainable transport from a young age can also help children continue these habits into adulthood, improving uptake of sustainable transport and increased road network capacity, however general this scheme is likely to have a limited impact on its own. It is therefore anticipated that it will have a Neutral effect on this IIA objective. • AT11 and AT12 will expand the geographical reach of employment and education opportunities for people, which will facilitate overall economic growth in Reading. In line with other schemes in the RTS, such as cycle lanes and priority measures, AT11 and AT12 may improve commutes for these users, and therefore contribute to an improvement in productivity. It is anticipated that these schemes will have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.14** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.14**
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of													<u>Assessment of Predicted Effects</u> • AT1 – AT12 will help promote the uptake of more active forms of travel such as walking and cycling through improvements to

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
harmful atmospheric pollutants and minimise exposure to noise and vibration	++	++	++	++	++	++	++	++	++	+	0	0	cycling infrastructure and the urban realm. This can help reduce private car use reduce associated air and noise emissions, helping improve air quality and the soundscape. AT1 can also help improve air quality on roadsides where the urban realm improvements are implemented by increasing the separation between cyclist/pedestrians and roads and also providing more green space/ vegetation. • AT2 – AT9 can help increase the uptake of walking and cycling to make journeys to work, education, and services, helping reduce car journeys and the associated impact on noise and air quality. This will be particularly beneficial to the human receptors in the AQMA. AT6 will also encourage travel to school by more active forms of transport, helping reduce private car travel and associated effects on air quality. Local road closures around schools will also have particularly beneficial effects in improving air quality around schools. • It is therefore anticipated that AT1 – AT9 will have a Significant (Major) Positive effect on this IIA objective. • AT10 can also help promote the use of more sustainable forms of travel in children. Encouraging the use of sustainable transport from a young age can also help children continue these habits into adulthood, improving uptake of sustainable transport and help improve air quality, however generally this scheme is likely to have a limited impact in isolation. There may also be temporary local improvements to air quality during closures. Overall, it anticipated that this would have a Minor Positive effect on this IIA objective • AT11 and AT12 will have limited effects on this IIA objective and are therefore rated as Neutral. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. <u>Assumptions</u>

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													• See core assumptions outlined in **Table E.14** <u>Uncertainties</u> • It is uncertain where exactly these schemes are to be provided and therefore what area and transport routes will be most affected by the measures in terms of air quality improvements.
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.	++	+	+	+	+	+	+	+	+	0	0	0	<u>Assessment of Predicted Effects</u> • AT1 will involve urban realm improvements to the town centre, including reducing severance and improvements to walking and cycling infrastructure and amenity areas. It is therefore anticipated that this may have a Significant (Major) Positive effect on this IIA objective. • AT2 – AT9 will improve local and strategic cycling networks, linking gaps in the network and providing more direct routes which will help improve the general urban design of Reading and an improved cycle network can have a positive effect on the perceived character of a town or city. The uptake of more active forms of travel can also help reduce traffic and congestion which can deter from the setting of heritage assets. It is anticipated that this will have a Minor Positive effect on this IIA objective. • AT10 may help temporarily improve the surrounding urban realm area around schools through reducing traffic at school drop off and pick up times. Overall, it is considered that this may have a Neutral effect on this IIA objective. • AT11 will increase the efficient use of land by providing improved cycle parking and infrastructure. The design of such facilities is currently not known however, it is anticipated that this would be in keeping with the existing buildings and infrastructure. It will also provide cycle hangars in residential areas. Such hangars are relatively compact and are of limited height and size and therefore are likely to have a limited impact of the urban character and nearby heritage assets, however consideration will need to be given to the appropriateness and design of such hangars within Conservation Areas and in proximity to listed buildings.

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													• Similarly, micro-mobility hire facilities (AT12) can be highly visible (and often brightly coloured) and have the potential to have a negative impact depending on the design and location. With considered design, the hubs can support vitality and development in the surrounding areas. It is anticipated that the effect of AT11 and AT12-11 on this IIA objective is Neutral until the design and integration of the facilities are known. • Street closures will have the potential to improve urban quality and setting of local heritage assets through removal of traffic, however these closures will only be temporary. It is therefore anticipated that AT9 will have a Neutral effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. However, where safe and appropriate, green infrastructure (such as tree planting) should be provided along off-road cycling paths to separate roads and cycle paths and help create a more pleasant cycling environment. • In sensitive townscape or heritage areas consideration will need to be given to the design and appropriateness of AT10 and AT11 to see that it does not deter from setting of heritage assets in the area. <u>Assumptions</u> • See core assumptions outlined in **Table E.14** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.14**
10.Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.													<u>Assessment of Predicted Effects</u> • AT1-AT9 will all generally support the uptake of more active travel such as walking and cycling, helping reduce reliance on private car travel and associated release of GHG emissions. It is therefore anticipated that AT1- AT9 will have a Significant (Major) Positive effect on this IIA objective.

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
	++	++	++	++	++	++	++	++	++	+	0	0	• AT10 can also help promote the use of more sustainable forms of travel in children. Encouraging the use of sustainable transport from a young age can also help children continue these habits into adulthood, improving uptake of sustainable transport and help reduce emissions, however generally this scheme is likely to have a limited impact in isolation. There may also be temporary local improvements to air quality during closures. Overall, it anticipated that this would have a Minor Positive effect on this IIA objective. • AT11 supports the other active travel schemes outlined and AT12 will provide small scale sustainable travel options. However, the overall impact of the interventions of this objective is likely to be Neutral. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.14** <u>Uncertainties</u> See core uncertainties outlined in **Table E.14**
11.Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	+	+	0	0	0	0	0	0	0	0	0	0	<u>Assessment of Predicted Effects</u> • AT1 may potentially have a Minor Positive effect through providing green space and additional planting along streets, which could have a significant beneficial effect on biodiversity and provide new green infrastructure. • AT2-A12 will help reduce reliance on private car travel by increasing the attractiveness of cycling, helping reduce air and noise pollution and the associated effect on wildlife, as well as provide public realm enhancement benefits in the case of AT2, although this may be negligible. AT3- AT12 may therefore have a Neutral effect on this IIA objective, although AT2 would be Minor Positive.

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. • However, it would be beneficial to local wildlife if proposed urban realm planting included a mix of native fruiting and flowering species which are used by insects and birds. Green space and planting should be incorporated as part of walking and cycling route infrastructure (AT2-AT8 and 10) where possible to increase benefits to health and biodiversity. Assumptions • See core assumptions outlined in **Table E.14** Uncertainties See core uncertainties outlined in **Table E.14**
12.Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	0	0	0	0	0	0	0	0	0	0	0	0	Assessment of Predicted Effects • AT1 will involve improvements to the public realm, including landscaping, which may help reduce runoff, however this effect is likely to be limited. It is therefore anticipated that AT1 will have a Neutral effect on this IIA objective. • AT2– AT7 will primarily involve reallocation and upgrades to existing highways and transport infrastructure. Where new paths or routes are provided there is opportunity incorporate infrastructure to help reduce flooding, (e.g., sustainable urban drainage schemes). However, the impact is likely to be limited given the extent of the proposed infrastructure. It is therefore considered that AT2-AT7 will have a Neutral effect on this IIA objective. • AT7 -AT12 will also involve limited infrastructure, upgrade, and build development and so are anticipated to have a Neutral effect on this IIA objective. Mitigation and Enhancement

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													• No significant effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.14** <u>Uncertainties</u> See core uncertainties outlined in **Table E.14**
13.Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	++	+	+	+	+	+	+	0	0	0	0	0	<u>Assessment of Predicted Effects</u> • AT1 will involve urban realm improvements to the town centre, including reducing severance and improvements to walking and cycling infrastructure and amenity areas. It is therefore anticipated that this may have a Significant (Major) Positive effect on this IIA objective. • AT2-AT7 will involve improvements to and provision of new walking and cycle links in and around Reading, which will help improve the general urban design of Reading and an improved cycle network can have a positive effect on the perceived character of a town or city. It is anticipated that this will have a Minor Positive effect on this IIA objective. • AT8 and AT12 will result in limited physical changes to areas in which they are implemented (e.g., new cycle storage or parking hubs for hire bikes). Depending on the location this could have positive or negative effects on townscape character, as the facilities or hire bike locations can be highly visible (e.g., brightly coloured). There is therefore potential for AT8 and AT9 to have a Neutral effect on this IIA objective, depending on the design of the interventions. • Interventions AT10 do not involve any land take and therefore are unlikely to have a direct effect on placemaking. However, reductions in traffic associated with these measures (albeit temporarily) can positively contribute to the character of an area. In the longer term it can help support the uptake of cycling and active travel which may benefit local character. It is therefore

	Active Travel												
IIA Objective	**AT 1**	**AT 2**	**AT 3**	**AT 4**	**AT 5**	**AT 6**	**AT 7**	**AT 8**	**AT 9**	**AT 10**	**AT 11**	**AT 12**	**Commentary**
													anticipated that there will be a Neutral effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. • The design and location of new bike hire, or storage facilities should take into account townscape character. Furthermore, any future e-bike scheme will need to be managed to ensure the bikes, often brightly coloured, do no collect in certain locations and detract from townscape or landscape character. Assumptions • See core assumptions outlined in **Table E.14** Uncertainties See core uncertainties outlined in **Table E.14**

E.9 Network and Demand Management

E.9.1 This subsection provides an assessment of the Network Management and Demand Management schemes that can be used to reduce and limit car travel and manage existing transport infrastructure more effectively. The schemes are:

- NM1: Neighbourhood and Highways Management;
- NM2: Parking Schemes and Management;
- NM3: Road Safety Schemes;
- NM4: Electric Vehicle Charging;
- NM5: Car Clubs
- NM6: Intelligent Transport Systems (ITS) – Managing Travel on the Roads;
- NM7 - Intelligent Transport Systems (ITS) – Improving Maintenance; and
- NM8: Smart City Initiatives.

E.9.2 The schemes are identified in **Table E.16,** together with any identified reasonable alternatives. The assessment is provided in **Table E.17.**

E.9.3 The core assumptions and uncertainties listed in **Table E.16** have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix (Table E.17).

Table E.16: Network and Demand Management – Assumptions and Uncertainties

Transport Scheme	Justification	Core Assumptions and Uncertainties
NM1: Neighbourhood and Highways Management	Infrastructure schemes will be provided to improve network efficiency which may include upgrades and changes to highways and traffic signals, including priority for pedestrians and cyclists(e.g., junctions, reallocation of road space and public transport and pedestrian/cycle priority). This will help support in shift to more sustainable modes of transport, reduce congestion and improve air quality.	It is assumed that any construction work would be managed to avoid and mitigate adverse environmental effects.

Transport Scheme	Justification	Core Assumptions and Uncertainties
NM2: Parking Schemes and Management	Dynamic management of kerb space through use of technology to improve efficiency of usage, with the aim of making best use of this asset, reduce congestion and support a shift towards more sustainable modes of travel.	It is assumed that parking can be booked through a range of mediums to ensure that all users have access.
NM3: Road Safety Schemes	Safe roads and pavements will be provided, including crossings, that prioritise and encourage walking, cycling and public transport. Schemes could include improved crossings, traffic calming, reduced speed limits and public realm improvements (e.g., lighting, signage, and rest areas).	It is assumed that any construction work would be managed to avoid and mitigate adverse environmental effects.
NM4: Electric Vehicle Charging	Installation of limited numbers of electric vehicle charging points on-street within the Borough and support the introduction of electric car club vehicles and associated charging bays. Where possible, electric vehicle charging points on-street will be incorporated within existing street furniture to avoid street clutter. Within public car parks, existing spaces will be converted to electric vehicle parking spaces, including at Park and Ride sites. EV demand will be monitored, and land use policies reviewed for the installation of EV garages as battery technology improves across the growing EV fleet.	The extent that new infrastructure would be is currently unclear. It is therefore assumed that any changes made to accommodate EV charging points would be managed to avoid and mitigation adverse environmental effects.
NM5: Car Clubs	Car clubs and Peer to Peer car rental companies would allow users to access a vehicle without owning one, offering a flexible, convenient alternative to private car ownership or leasing. Reduced car ownership levels can result in less trips made by cars overall and less demand for on-road parking.	None.
NM6: Intelligent Transport Systems (ITS) – Managing Travel on the Roads	Management of the network through an integrated system of packages making use of big data, machine learning and artificial intelligence. The system for this is currently being built. This system will provide network operators with enhanced information to manage the network and provide traveller information. Thus, improved insight will be used to better manage the network and promote sustainable travel including direct peak traffic demand, and redirect traffic in emergency situations, provide real time information, development smart alternatives to closure diversions and keep public transport out of congested spots.	None.

Transport Scheme	Justification	Core Assumptions and Uncertainties
NM7: Intelligent Transport Systems (ITS) – Improving Maintenance	Management of the network through an integrated system of packages making use of big data, machine learning and artificial intelligence. The system for this is currently being built. This system will provide network operators with enhanced information to manage the network and provide traveller information. Thus, improved insight will be used to better manage the network and promote sustainable travel including direct peak traffic demand, and redirect traffic in emergency situations, provide real time information, development smart alternatives to closure diversions and keep public transport out of congested spots.	None.
NM8: Smart City Initiatives	The Smart City approach will look to make best value of data from both the perspective of what it can tell us about our transport network and also from the perspective of its potential value to the local authority. It will be used to improve understanding of people's travel needs and will work cross-sector and cross-authority to address the transport challenges, using data and technology to address these needs where they provide the optimum solution. This will help improve the management of the transport system, allowing movement of more people, supporting economic growth, whilst reducing carbon emissions, poor air quality and congestion issues	None.

Table E.17: Network and Demand Management Improvements – Assessment Matrix

	Network and Demand Management Improvements								
IIA Objective	**NM1**	**NM2**	**NM3**	**NM4**	**NM5**	**NM6**	**NM7**	**NM8**	**Commentary**
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	+	+	+	+	+	+	+	Assessment of Predicted Effects • NM1 – NM8 will generally help encourage people to use public transport in and around Reading by helping improve public transport reliability (e.g., through providing public transport priority measures). The measures may also help increase the uptake of more active forms of travel, such as walking and cycling by providing improved junction

IIA Objective	Network and Demand Management Improvements								Commentary
	NM1	NM2	NM3	NM4	NM5	NM6	NM7	NM8	
									crossing facilities which are safer. Reducing private car use can help improve air quality and in turn will have positive health effects. The measures will also help reduce congestion and smooth traffic flow which will have a beneficial impact on air quality. • NM4 will encourage the use of electric vehicles, which will help reduce the emission of pollutants associated with petrol and diesel vehicles. The lower vehicle noise of this type of cars also has the potential to improve residential amenity. • It is therefore NM1-NM8 will have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.16** <u>Uncertainties</u> See core uncertainties outlined in **Table E.16**
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	++	+	++	0	0	0	0	0	<u>Assessment of Predicted Effects</u> • NM1 may generally help reduce congestion and the risk of collisions between road users, provide sufficient space and greater connectivity and priority for pedestrians and cyclists. Additionally, traffic signal upgrades, improved crossing points on key desire lands, changes to junction layouts and the creation of small community amenity spaces will all contribute to enhanced safety and security for pedestrians and cyclists. It is therefore anticipated that NM1 will have a Major Positive (Significant) effect on this IIA objective. • NM2 may improve local safety by making reducing cars

	Network and Demand Management Improvements								
IIA Objective	**NM1**	**NM2**	**NM3**	**NM4**	**NM5**	**NM6**	**NM7**	**NM8**	**Commentary**
									parked at the kerbside at certain times of day when they are causing congestion or reduced visibility at times of heavy traffic. It is anticipated that this will have a Minor Positive effect on this IIA objective. • NM3 will directly impact safety by through providing improved safety measures to help reduce potential for collisions with vulnerable road users such as at pedestrian and cyclists' crossings, traffic calming and reduced speed limits. Is therefore anticipated that this may have a Significant (Major) Positive effect on this IIA objective. • NM4 will help promote the use of electric vehicles in Reading which will support a reduction in emissions. With regard to safety and security, this scheme will have a Neutral effect on this IIA objective. • NM5 – NM8 may help reduce congestion and improve mobility which can help reduce potential for collisions with vulnerable road users, however the effects of these individual schemes on safety are limited. It is therefore anticipated that they will have a Neutral effect on this IIA Objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.16** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.16**

	Network and Demand Management Improvements								
IIA Objective	**NM1**	**NM2**	**NM3**	**NM4**	**NM5**	**NM6**	**NM7**	**NM8**	**Commentary**
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	+	+	+	0	~	~	~	~	Assessment of Predicted Effects • NM1 – NM3 may have a beneficial effect as improvements may help prioritise non-car drivers and pedestrians. The inclusion of QTAs in NM1 will reduce noise, pollution, and congestion for those living and visiting the affected areas, with Healthy Streets supporting safer placemaking for vulnerable groups. NM2 may also help make more kerbside space available for those who are less able. NM1 – NM3 may therefore have a Minor Positive effect on this IIA objective. • NM4 will be more beneficial for those who are able to afford to upgrade their car to an electric vehicle but generally this intervention is likely to have a limited effect on equalities It is anticipated that NM4 will have a Neutral effect on this IIA objective. • There is no clear relationship identified between NM5-NM8 and this IIA objective, however it is acknowledged that these measures can generally help improve journey planning and travel which will benefit all users. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. With a roll out of electrical vehicle charging consideration will need to be given to ensure those who live in flats, or otherwise are unable to charge vehicles from their homes, are not put at a disadvantage. Assumptions • It is assumed crossing facilities will include sound and visual aids to support those with impaired senses cross junctions safely. Uncertainties See core uncertainties outlined in **Table E.16**

	Network and Demand Management Improvements								
IIA Objective	**NM1**	**NM2**	**NM3**	**NM4**	**NM5**	**NM6**	**NM7**	**NM8**	**Commentary**
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	+	?	+	0	+	+	+	+	Assessment of Predicted Effects • NM1, NM3, and NM5-NM8 may help reduce private car travel, smooth traffic flows, reduce congestion and generally make travel around Reading (particularly congested areas) quicker and safer, including for pedestrians and cyclists through (e.g., improved crossing facilities). It is therefore anticipated that NM1, NM3, and NM5-NM8 will have a Minor Positive effect on this IIA objective. • NM4 does not have any direct effect on this IIA objective and is therefore anticipated to have a Neutral effect. • NM5 and NM6 will help increase the accessibility of Reading for users with electric vehicles which is anticipated to have a Minor Positive effect on this IIA objective. • It is Uncertain the impact NM2 would have on improving access to services and facilities as this may depend on what measures are put in place. For example, there may be a restriction on parking at certain times of day, or reduced congestion may improve overall accessibility by reducing journey times. Overall, it is uncertain the effect of this measures on the IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.16** Uncertainties See core uncertainties outlined in **Table E.16**

IIA Objective	Network and Demand Management Improvements								Commentary
	NM1	NM2	NM3	NM4	NM5	NM6	NM7	NM8	
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	+	~	+	~	+	+	+	+	Assessment of Predicted Effects • NM1, NM3, and NM5-NM8 may help reduce private car travel, smooth traffic flows, reduce congestion and generally make travel around Reading (particularly congested areas) quicker and safer, including for pedestrians and cyclists through improved crossing facilities. This will help improve access to education and employment directly through crossing improvements and also through increase capacity on the road network and reduced congestion. It is anticipated that NM1, NM3 and NM5-NM8 will have a Minor Positive effect on this IIA objective. • There is No Clear Relationship is identified between NM2, NM4 and the IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.16** Uncertainties See core uncertainties outlined in **Table E.16**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+	+	+	++	+	+	+	+	Assessment of Predicted Effects NM4 will help provide needed infrastructure to support the move from conventional petrol and diesel cars to electric vehicles. It is therefore anticipated that this will have a Significant (Major) Positive effect on this IIA objective. • NM1, NM3, and NM5-NM8 will generally help reduce congestion on the road network and decrease journey times, helping increase capacity on the road network. NM1 and NM3 will also help provide general safety improvements and pedestrian and cyclist improvements to

	Network and Demand Management Improvements								
IIA Objective	**NM1**	**NM2**	**NM3**	**NM4**	**NM5**	**NM6**	**NM7**	**NM8**	**Commentary**
									meet identified needs. NM6 and NM7 will use technology to help more effectively and efficiently manage the transport network and travel disruptions. It is therefore anticipated that NM1, NM3, and NM5-NM8 will have a Minor Positive effect on this IIA objective. • NM2 will make better use of technology to manage limited kerbside / road space and may help reduce congestion. It is anticipated to a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.16** <u>Uncertainties</u> See core uncertainties outlined in **Table E.16**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	+	+	+	~	+	+	+	+	<u>Assessment of Predicted Effects</u> NM1, NM3, and NM5-NM8 will help reduce reliance on private car use and encourage the uptake of more sustainable forms of travel. This will generally help reduce congestion on the road network and decrease journey times, helping increase access to employment and the efficiency of moving people and freight. NM5-NM7 will use technology to help more effectively and efficiently manage the transport network and travel disruptions. It is therefore anticipated that NM1, NM3 and NM5-NM8 will have a Minor Positive effect on this IIA objective. • NM2 may make better use of kerb space for deliveries of freight, for instance to town centre locations, where less time is wasted by delivery companies waiting for space to park. It is anticipated that NM2 will have a Minor Positive

IIA Objective	Network and Demand Management Improvements								Commentary
	NM1	NM2	NM3	NM4	NM5	NM6	NM7	NM8	
									effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.16** Uncertainties See core uncertainties outlined in **Table E.16**
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	++	+	+	+	+	+	+	++	Assessment of Predicted Effects • NM1 is anticipated to have a Significant (Major) Positive effect given that the schemes will be provided to improve network efficiency support in a shift to more sustainable modes of transport which are expected to reduce congestion and improve air quality and reduce noise emissions • NM3, and NM5-NM8 will help encourage people to use public transport in and around Reading instead of driving which can help improve air quality and in turn will have positive health effects. Measures will also help reduce congestion and smooth traffic flow which will have a beneficial impact on air quality and other amenity such as reduced noise and vibration impacts. Demand management measures implemented as part of NM8 such as clear air zones and emissions-based charging could be particularly beneficial in improving air quality in the worst affected areas (e.g., AQMAs). It is therefore anticipated that NM8 may have a Significant (Major) Positive effect on this IIA objective and NM1, NM3, NM5, NM6 and NM7 may have a Minor Positive effect. • NM4 will help increase the use of electric vehicles, help reduce the emission of pollutants associated with petrol and diesel vehicles. It is anticipated that this will have a

	Network and Demand Management Improvements								
IIA Objective	**NM1**	**NM2**	**NM3**	**NM4**	**NM5**	**NM6**	**NM7**	**NM8**	**Commentary**
									Minor Positive effect on this IIA objective. • There is the potential for NM2 to reduce parking in locations where it has been shown to be poor air quality. However, currently locations of implementation are not known. Generally, it may help reduce private car travel by improving the reliability of public transport services through reductions in congestions associated with deliveries and servicing vehicles, for example. It is therefore anticipated that this may have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required, although opportunities exist to enhance the streetscape and improve visual amenity and local biodiversity. To bring further benefits the potential for using the Intelligent Travel Systems to reduce traffic flows in areas that are exceeding air quality objectives (or getting near thresholds), until the levels of pollutants drop. A similar system could be in place for parking and road space management. <u>Assumptions</u> See core assumptions outlined in **Table E.16** <u>Uncertainties</u> See core uncertainties outlined in **Table E.16**
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.									<u>Assessment of Predicted Effects</u> • NM1 and NM3 will involve improvements to the urban design through installation of safety measures and highway improvements such as improved crossing pedestrian and cyclist facilities, provision of new planting and rest areas, and removal of street clutter. Actions will be based on Healthy Streets principles and parking strategies, which will enhance the public realm and urban character. It is

	Network and Demand Management Improvements								
IIA Objective	**NM1**	**NM2**	**NM3**	**NM4**	**NM5**	**NM6**	**NM7**	**NM8**	**Commentary**
	++	+	++	0	0	0	0	0	anticipated that this may have a Major Positive effect on this IIA objective. • NM2 will involve more efficient use of existing kerbside space to manage parking more effectively, helping to reduce obstructions. There may therefore be a Minor Positive effect on this IIA objective. • NM4 will involve on-street charging points and the introduction of charging bays in public car parks and car club spaces. Where possible, electric vehicle charging points on-street will be incorporated within existing street furniture to avoid street clutter. The provision of EV charging points, if installed sensitively may enhance placemaking and it is anticipated that these measures will have a Neutral effect on this IIA objective. • Interventions NM5, NM6, NM7 and NM8 do not involve any land take and therefore are unlikely to have an effect on placemaking, albeit they may generally help reduce congestion and improve maintenance of roads which can positively contribute to placemaking and heritage setting. It is therefore anticipated that these measures will have a Neutral effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. The design and placement of electrical charging points will need to take into account specific locational advantages or other factors such as heritage resources. Where space is available, particularly for Interventions NM1 and NM3, there are opportunities to build environmental enhancements into final designs. <u>Assumptions</u> • See core assumptions outlined in **Table E.16** <u>Uncertainties</u>

	Network and Demand Management Improvements								
IIA Objective	**NM1**	**NM2**	**NM3**	**NM4**	**NM5**	**NM6**	**NM7**	**NM8**	**Commentary**
									See core uncertainties outlined in **Table E.16**
10. Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	+	+	+	++	+	+	+	+	<u>Assessment of Predicted Effects</u> • NM4 will help increasing uptake in use of electric vehicles and have a clear benefit for carbon emissions in the local area and it is hoped through low carbon energy production in the future. It is therefore anticipated that these schemes will have the potential for Significant (Major) Positive effect on this IIA objective. • NM1, NM3, and NM5-NM8 may encourage a shift towards more sustainable modes of transport. This may be achieved by improving attractiveness of non-car travel and reducing congestion, all of which are beneficial in helping decarbonise the transport sector. NM6 in particular will provide restrictions on car travel in certain areas of Reading where measures are implemented but this may not deter car travel in the wider area. However, there is the potential that reduced congestion and the encouragement of car use due to reduced journey times. It is therefore anticipated that these schemes will have the potential for Minor Positive effect on this IIA objective. • NM2 will help reducing congestion, including for public transport services, which can help increase the uptake of more sustainable forms of transport. These measures will also help reducing emissions through providing more efficient access to parking spaces. It is therefore considered that this will have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no

IIA Objective	Network and Demand Management Improvements								Commentary
	NM1	NM2	NM3	NM4	NM5	NM6	NM7	NM8	
									mitigation is required. Assumptions • It is assumed that electric vehicles have lower overall carbon emissions, and that over time a greater proportion of electricity generation for EV charging will be derived from low or zero carbon sources. • See core assumptions outlined in **Table E.16** Uncertainties • See core uncertainties outlined in **Table E.16**
11. Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	+	0	+	0	0	0	0	0	Assessment of Predicted Effects • NM4 to NM8 are likely to have limited or no land take and therefore are not likely to have a direct effect on habitats and species. However, these interventions will help improve air quality and noise pollution through increasing uptake in the use of electric vehicles, reducing congestion and encouraging a shift towards more sustainable modes of transport, although effects may be limited. In addition to this NM3, will include the provision of vegetation on streets. It is therefore anticipated that NM1 – NM8 will have a Neutral Positive effect on this IIA objective. • NM1 and NM3 provide the opportunity for streetscape enhancements including new planting which would be benefit local biodiversity, particularly when associated with adjacent green spaces and wildlife corridors. This would result in Minor Positive effect. • NM2 and NM4 may also provide opportunities for biodiversity enhancements but they would be relatively limited. Mitigation and Enhancement • No significant effects have been identified and therefore no

IIA Objective	Network and Demand Management Improvements								Commentary
	NM1	NM2	NM3	NM4	NM5	NM6	NM7	NM8	
									mitigation is required. Assumption • See core assumptions outlined in **Table E.16** Uncertainties See core uncertainties outlined in **Table E.16**
12. Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	~	~	~	~	~	~	~	~	Assessment of Predicted Effects • These interventions involve limited or no land take and have No Clear Relationship with this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.16** Uncertainties See core uncertainties outlined in **Table E.16**
13. Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	+	0	+	0	0	0	0	+	Assessment of Predicted Effects • NM1 and NM3 will involve improvements to the townscape through installation of safety measures and highway improvements such as improved pedestrian and cyclist facilities, provision of new planting and rest areas, and removal of street clutter. It is anticipated that this may have a Minor Positive effect on this IIA objective. • Interventions NM2, NM5, NM6 and NM7 do not involve any land take and therefore are unlikely to have a direct effect on placemaking. However, reductions in traffic associated with these measures can positively contribute to the character of an area. It is therefore anticipated that there will be a Neutral effect on this IIA objective. NM similarly does not involve any direct land take but will more strongly

	Network and Demand Management Improvements								
IIA Objective	**NM1**	**NM2**	**NM3**	**NM4**	**NM5**	**NM6**	**NM7**	**NM8**	**Commentary**
									contribute to reductions in traffic where proposed demand management measures are implemented resulting in reduced visual impact. It is therefore anticipated that this will have a Minor Positive effect ton this IIA objective. • NM4 will involve on-street charging points and the introduction of charging bays in public car parks and car club spaces. Where possible, electric vehicle charging points on-street will be incorporated within existing street furniture to avoid street clutter. The provision of EV charging points, if installed sensitively may enhance placemaking and it is anticipated that these measures will have a Neutral effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. The design of electrical charging points on the kerbside needs to take into account setting and the need to reduce street clutter. Assumptions • See core assumptions outlined in **Table E.16** Uncertainties See core uncertainties outlined in **Table E.16**

E.10 Communication and Engagement

E.10.1 This subsection provides an assessment of the component of the transport schemes that relate to communication and engagement with the public. These schemes appear in different sections of the RTS, however, are grouped due their similar aspirations related to altering how people choose to travel. The schemes are:

- CE1: Progress Reporting and Public Engagement
- CE2: Marketing and Promotion;
- CE3: Travel Information and Advice;
- CE4: Training, Education, and Initiatives;
- CE5: School Travel Accreditation Programme; and

E.10.2 The schemes are identified in **Table E.18** The assessment is provided in **Table E.19.**

E.10.3 The core assumptions and uncertainties listed in **Table E.18** have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix **(Table E.19).**

Table E.18: Behavioural Change and Shared Services – Assumptions and Uncertainties

Transport Scheme	Justification	Core Assumptions and Uncertainties
CE1: Progress Reporting and Public Engagement	Consultations and provision of regular updates on progress in delivering the transport strategy will be provided for the public. Updates include press releases, residents' newsletters, and social media platforms to reach a wide range of the population of all ages, language, economically active, retired, students, unemployed, families, single people, couples, etc.	None.

Transport Scheme	Justification	Core Assumptions and Uncertainties
	Public engagement and support are critical to deliver and shape the schemes, and help RBC deliver their vision.	
CE2: Marketing and Promotion	Marketing of travel marketing, promotion and raising awareness of travel choices and improve understanding of new schemes and initiatives which could include signage, mobile applications, advertisement in local and social media, promotion events and	It is assumed that marketing and media will be provided in a range of formats and languages to enable messages to reach a wide range of groups within the community.

Transport Scheme	Justification	Core Assumptions and Uncertainties
	material and press releases. Promotion of sustainable travel options and new schemes and initiatives will encourage mode shift away from the private car, greater uptake/use, and support for change.	
CE3: Travel Information and Advice	High quality, real-time travel information will be provided through a number of means and accessible formats, which could include mobile applications,	It is assumed that information will be provided in a range of formats and languages to enable it to be accessible to a wide range of groups

Transport Scheme	Justification	Core Assumptions and Uncertainties
	real time information boards, print, website, personalized travel advise and information boards and signage. A wayfinding strategy will also be developed to help better share information. This will help improve ability to response to travel disruptions, wayfinding, and knowledge of sustainable travel options, helping reduce private car trips.	within the community.
	RBC will work to deliver age-	

Transport Scheme	Justification	Core Assumptions and Uncertainties
CE4: Training, Education, and Initiatives	appropriate training courses to children and adults in the community, which may include adult cycling programmes, Bikeability, road safety roadshows, pedestrian and scooter road safety training, young driver safety awareness training, and professional driver refreshment training. This will help improve safety and reduce road accidents involving vulnerable road users and also help encourage uptake of more	None.

Transport Scheme	Justification	Core Assumptions and Uncertainties
	active forms of travel.	
CE5: School Travel Accreditation Programme	Schools will be encouraged and supported to take part in the Modeshift STARS scheme and work towards both accreditation and national and regional awards. The travel planning programme will encourage children, parents, and staff to make more sustainable travel choices, leading to a mode shift away from the private car.	None.

Table E.19: IIA of Communication and Engagement Schemes – Assessment Matrix

	Communication and Engagement					
IIA Objective	**CE1**	**CE1**	**CE2**	**CE3**	**CE4**	**Commentary**
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	++	++	++	++	<u>Assessment of Predicted Effects</u> • Interventions CE2-CE5 will all work to help reduce reliance on private car use and encourage the uptake of more sustainable forms of travel and more active travel. This can help reduce emissions from cars which can have beneficial health impacts through associated improvements to air quality. These measures may also encourage and give people confidence to undertake their full journey by walking or cycling through providing better, accessible information and incentives. This would have greater health benefits as physical activity becomes part of their lifestyles and commute. CE5 may also help reduce adverse air quality at schools from measures that would reduce vehicles near schools at busy times. These measures would also have positive health effects. It is therefore anticipated that CE2 – CE5 Major (Significant) Positive effects against this IIA objective. • CE1 enables co-production towards the development and delivery of transport schemes which may reduce anxiety related to changes and make communities more likely to support and use them and increase uptake of walking, cycling or public transport. CE1 may therefore have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.18** <u>Uncertainties</u> • See core uncertainties outlined in **Table E.18**

	Communication and Engagement					
IIA Objective	**CE1**	**CE1**	**CE2**	**CE3**	**CE4**	**Commentary**
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	~	+	+	++	++	Assessment of Predicted Effects • CE4 and CE5 may help reduce road accidents of vulnerable road users by providing courses and (such as adult cycling lessons) and information on road safety. CE5 will help improve air quality near schools, encourage walking and cycling and could help reduce potential for accidents near schools by requiring parents to park their cars further from schools and organised groups of non- car travel to school. It is anticipated that CE4 and CE5 may have a Significant (Major) Positive effect on this IIA objective. • CE2 and CE3 will help increase connectivity and knowledge of public transport services which may enable people to travel more safely to their destinations and make more informed travel choices (e.g., where and when night buses are travelling from late at night). It is therefore anticipated CE3 would have a Minor Positive effect on this IIA objective. • CE1 has no clear relationship with this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.18** Uncertainties See core uncertainties outlined in **Table E.18**

	Communication and Engagement					
IIA Objective	**CE1**	**CE1**	**CE2**	**CE3**	**CE4**	**Commentary**
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	++	0	0	?	0	<u>Assessment of Predicted Effects</u> CE2-3 will have a Neutral effect on this IIA objective as a range of mediums will be used to provide travel information and engage with the public such as social media and newsletters and in different languages, so that is acceptable to all groups. • CE4 primarily targets school groups and young adults. It is unclear how training and education will be provided to harder to reach groups (e.g., people who are unemployed). It is also not clear if training will be available in other languages. It is therefore uncertain what impact CE4 will have on this IIA objective. • CE5 will help encourage children to undertake physical activity. It is assumed that RBC will provide support to all schools and local communities, including those in deprived area and will not have an inequitable impact on any particular group. Therefore, CE1 may have a Neutral effect on this IIA objective. • CE1 may provide scope for schemes to be shaped and considered in light of the needs of those with protected characteristics. So long as inclusive engagement programmes are incorporated into consultations, there is an anticipated Major Positive effect. <u>Mitigation and Enhancement</u> • Services to support more people using sustainable transport should not be focused on using online tools and phone apps, as use of these amongst older people, those on lower incomes, disabled and non-English speakers may be limited and exclude them from the service. • Training and education programmes (BC4) should be made available and include targeting harder to reach groups such as those who are unemployed or on low incomes who may also benefit from bikeability courses which would make travelling via this mode more appealing and would increase uptake of physical activity in such

	Communication and Engagement					
IIA Objective	**CE1**	**CE1**	**CE2**	**CE3**	**CE4**	**Commentary**
						groups. Assumptions • It is assumed that 'newsletters' refers to physical copies and not an electronic newsletter. Uncertainties See core uncertainties outlined in **Table E.11**
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	+	+	+	+	+	Assessment of Predicted Effects • CE1, CE2 and CE3 will increase awareness of services available to users. It is anticipated that this will have a Minor Positive effect on this IIA objective. • CE4 and CE5 will provide training and education to groups to help improve their skills and ability to use more sustainable modes of transport such as walking and cycling, helping increase the accessibility of facilities and services via these modes of transport. It is anticipated CE4 and CE5 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.18** Uncertainties See core uncertainties outlined in **Table E.18**

	Communication and Engagement					
IIA Objective	**CE1**	**CE1**	**CE2**	**CE3**	**CE4**	**Commentary**
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	+	+	+	+	+	Assessment of Predicted Effects • CE1 – CE5 will help increase awareness of the travel services available, and the confidence to travel by more active forms of travel (such as walking and cycling) to access work and education. CE1 – CE5 will all work to help reduce reliance on private car use and encourage the uptake of more sustainable forms of travel. This will generally help reduce congestion on the road network and decrease journey times at AM and PM peak commuter periods, helping increase access to employment and education. It is therefore anticipated that these measures will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.18** Uncertainties See core uncertainties outlined in **Table E.18**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+	+	+	+	+	Assessment of Predicted Effects • CE1 – CE5 will all work to help reduce reliance on private car use and encourage the uptake of more sustainable forms of travel. This will generally help reduce congestion on the road network and decrease journey times at AM and PM commuter periods, helping increase access capacity on the road network. It is therefore considered that CE1 – CE5 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required.

	Communication and Engagement					
IIA Objective	**CE1**	**CE1**	**CE2**	**CE3**	**CE4**	**Commentary**
						Assumptions • See core assumptions outlined in **Table E.18** Uncertainties See core uncertainties outlined in **Table E.18**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	+	?	+	+	+	Assessment of Predicted Effects • CE1 – CE5 will all work to help reduce reliance on private car use and encourage the uptake of more sustainable forms of travel. • This will generally help reduce congestion on the road network and decrease journey times at AM and PM commuter periods, helping increase access to employment and the efficiency of moving people and freight. Even if car users opt to continue using their vehicle, training courses have the potential to increase knowledge and awareness of other road users and the road network, which can improve driving ability and efficiency. • CE5 can also help promote the use of more sustainable forms of travel to reach schools. This in turn can have a beneficial impact on the capacity of the road network during school drop off and pick up times. Encouraging the use of sustainable transport from a young age can also help children continue these habits into adulthood, further improving uptake of sustainable transport and increased road network capacity. It is therefore anticipated that CE1-CE5 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.18** Uncertainties

	Communication and Engagement					
IIA Objective	**CE1**	**CE1**	**CE2**	**CE3**	**CE4**	**Commentary**
						See core uncertainties outlined in **Table E.18**
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	+	+	+	+	+	Assessment of Predicted Effects • Interventions CE1 – CE5 will all work to help reduce reliance on private car use and encourage the uptake of more sustainable forms of travel which can help air quality. CE5 will have particularly beneficial impacts in proximity to schools during drop off and pick up times by reducing the number of cars passing schools and idling outside. It is anticipated that CE1-CE5 may have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.18** Uncertainties See core uncertainties outlined in **Table E.18**
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.	+	+	+	+	+	Assessment of Predicted Effects • CE1-CE5 has the potential to contribute to a sense of place through education and initiatives that will encourage the use of active and sustainable travel. If residents are encouraged to change their travel behaviours, this can facilitate a sense of belonging and community cohesion and help to develop a sense of urban identity and character. It is anticipated that CE1-5 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required.

	Communication and Engagement					
IIA Objective	**CE1**	**CE1**	**CE2**	**CE3**	**CE4**	**Commentary**
						Assumptions • See core assumptions outlined in **Table E.18** Uncertainties See core uncertainties outlined in **Table E.18**
10.Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	+	+	+	+	+	Assessment of Predicted Effects • Interventions CE1-CE5 will all work to help reduce reliance on private car use and encourage the uptake of more sustainable forms of travel. This can help reduce GHG emissions associated with private car travel and reduce transport-related contributions to climate change. • CE5 can help increase the uptake of more sustainable forms of transport both initially, when children are traveling in school, and later in life through introducing these habits into their lives which may follow them through to adulthood. This can help reduce car journeys and the associated impact on climate change for GHG emissions. • It is anticipated that CE1- CE5 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.18** Uncertainties See core uncertainties outlined in **Table E.18**

	Communication and Engagement					
IIA Objective	**CE1**	**CE1**	**CE2**	**CE3**	**CE4**	**Commentary**
11.Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	0	0	0	0	0	Assessment of Predicted Effects • CE1-CE5 do not involve any land take and therefore have no direct land taken that could have an effect on biodiversity. All measures will help reduce reliance on private car travel by increasing the attractiveness of non-car travel, helping reduce air and noise pollution and the associated effect on wildlife, however this intervention may have a limited effect in respect of this issue. It is therefore anticipated that CE1-CE5 will have a Neutral effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.18** Uncertainties See core uncertainties outlined in **Table E.18**
12.Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	~	~	~	~	~	Assessment of Predicted Effects • Interventions CE1-CE5 have No Clear Relationship with this IIA objective. Mitigation and Enhancement • No significant effects have been identified and therefore no mitigation is required. Assumptions • See core assumptions outlined in **Table E.18** Uncertainties See core uncertainties outlined in **Table E.18**

	Communication and Engagement					
IIA Objective	**CE1**	**CE1**	**CE2**	**CE3**	**CE4**	**Commentary**
13.Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	0	0	0	0	0	<u>Assessment of Predicted Effects</u> • CE1-CE5 involves no land take and so has a limited relationship with this IIA objective, however reductions in traffic as a result in these schemes may enhance the urban environment. However, despite helping to develop a sense of urban identity and character the interventions may have a fairly limited impact. It is therefore anticipated that these measures will have Neutral effects on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and therefore no mitigation is required. <u>Assumptions</u> • See core assumptions outlined in **Table E.18** <u>Uncertainties</u> See core uncertainties outlined in **Table E.18**

Appendix F IIA of RTS Policies

Appendix F IIA of RTS Policies

F.1 Overview

F.1.1 This appendix provides an overall assessment of the suite of policies set out within the RTS. The assessment is provided in **Tables F.3 - F.8** below. The symbols and scoring system shown in **Table F.1** and are the same as those used throughout this IIA.

F.1.2 The policies presented in the RTS outline general overarching principles and actions to be taken to support RBC's transport visions and objectives. They are consequently at a broader, Borough wide level, unlike location-specific measures and schemes set out elsewhere in the RTS and IIA. However, when assessing the policies that support measures that would require some land take or installation of new infrastructure, consideration is given to potential environmental or other sensitives that may have implications for their routeing/delivery at both a local and broader level.

Table F.1: IIA Scoring System to Establish Likely Significant Effects

Score	Description	Symbol
Significant (Major) Positive Effect	The policy contributes significantly to the achievement of the IIA objective.	++
Minor Positive Effect	The policy contributes to the achievement of the IIA objective but not significantly.	+
Neutral Effect	The policy is related to but does not have any effect on the achievement of the IIA objective.	0
Minor Negative Effect	The policy detracts from the achievement of the IIA objective but not significantly.	-
Significant (Major) Negative Effect	The policy detracts significantly from the achievement of the objective. Mitigation is therefore required.	- -
Uncertain Effect	The policy has an uncertain relationship to the IIA objective, or the relationship is dependent on the way in which the aspect is managed. In addition, insufficient information may be available to enable an assessment to be made.	?
No Clear Relationship	There is No Clear Relationship between the policy and the achievement of the IIA objective or the relationship is negligible.	~

F.1.3 In order to complete the assessment of the policies, assumptions and uncertainties have been identified and explained. These are considered to be reasonable given the level of information provided with the policies and information known about prevailing and emerging influencing factors, such as current transport trends and emerging technology. These core assumptions and uncertainties are outlined in **Table F.2** below. In addition to these further policy specific assumptions/uncertainties are outlined in the assessment **Tables F.3 – F.8**.

Table F.2 Proposed Policy Measures – Core Assumptions and Uncertainties

Measures	Core Assumptions and Uncertainties
Transport Emissions – Cars	In assessments it is assumed that technological improvements (such as improvements in catalytic converters, traps and adsorbers and filters) will lead to a gradual reduction in vehicle emissions for individual vehicles.
Motorcycles, Powered Two-Wheelers (PTW) and Connected and Autonomous Vehicles (CAVS)	It is assumed that these vehicles will emit less emissions while being used than standard petrol or diesel cars as they are more fuel efficient (in the case of motorcycles and PTW) or because models are usually hybrids or electric (in the case of CAVS). It is also assumed that where CAVS are utilised and implemented, they will comply with any relevant rules and licensing. It is uncertain how encouraging the use of these vehicles will impact the number of collisions occurring on roads in the Reading urban area.
Public Transport - Buses	It is uncertain what emission standards the buses on the schemes would comply with. However, it is assumed that there would also be a continued improvement in bus emissions and the existing fleet already performs quite well. It is noted that the Reading bus fleet has high environmental standards with 72% of the fleet hybrid or gas powered, or meeting Euro IV emissions standards. The assessment assumes similar lower emission vehicles would operate on the bus schemes identified in RTS in and outside the Borough boundaries.
Implementation of New Technology	Where the implementation of new technological advancements is proposed to help improve the efficiency and effectiveness of the transport network (e.g., CAVs), it is assumed that sufficient trials and testing will be undertaken prior to it being rolled out to ensure that new technologies are not prematurely introduced to the transport system, causing unnecessary disruptions.
Support of Existing Policies or RBC Documents	It is assumed that where a policy identified in the RTS supports an existing policy or RBC document there is likely to be a limited impact on IIA objectives as no new measures are introduced. It is uncertain whether an existing policy or RBC document would remain in use or applicable in absence of the policies identified in the RTS.

F.2 Multi-Modal

F.2.1 This subsection provides an assessment of the Multi-Modal policies presented within the RTS. These are:

- Policy RTS1 - Sustainable Transport;
- Policy RTS2 - The Environment and Climate Change;
- Policy RTS3 - Equality and Inclusivity;
- Policy RTS4 - Development Control;
- Policy RTS5 - Sustainable Modes of Travel to School; and
- Policy RTS6 - Smart Solutions and Innovation.

F.2.2 The core assumptions and uncertainties listed in **Table F.1** have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix.

Table F.3: IIA of Multi-modal Policies – Assessment Matrix

IIA Objective	RTS1	RTS2	RTS3	RTS4	RTS5	RTS6	Commentary
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	+	+	+	+	+	<u>Assessment of Predicted Effects</u> • RTS1, and RTS5 will help promote travel by more sustainable forms of transport, including more active forms such as walking and cycling which can increase levels of physical activity in children and adults, including delivery of measures such as Healthy Streets (RTS 1) and the inclusion of monitoring provision (RTS5) for approaches such as the Modeshift STARs program in schools. Travel plans present the opportunity for travel modes and facilities to be delivered with the needs of the local population, and key users, in mind. An uptake in sustainable travel will contribute to improving air quality can bring benefits associated with concentration in class, and engagement in the local environment. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA objective. • RTS2 directly supports improvements to air quality and RTS4 requires that developers must demonstrate that they will make a positive contribution to the walking, cycling and public transport network, this can positively impact physical health outcomes. RST3 will help increase access to the transport network for everyone, including those who are less able bodied which may positively contribute to health through improving access to local facilities, such as health care and also reducing social isolation. Whilst positive impacts are anticipated the scale of impact will be minor reflecting the piecemeal nature of transport improvements on the wide range of journeys people undertake, it is therefore considered that this will have a Minor Positive effect on this IIA objective. • RTS6 focuses on use of big data to support health and wellbeing benefits for local communities. Technological advances can positively contribute to health through promoting more sustainable and active travel which can positively impact health directly (e.g., through increased physical activity) and indirectly through improvements to the local environment (e.g., improved air quality). RT6 also includes the need to consider and encourage the impact of hybrid working on carbon footprints and that the Council will lead by example in this area. It is therefore anticipated this policy will have a Minor Positive effect on this IIA objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table F.2.** <u>Uncertainties</u> • See core uncertainties outlined in **Table F.2.**
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	+	0	+	+	++	?/+	<u>Assessment of Predicted Effects</u> • RTS5 will actively help improve the safety of children travelling to school both through education programmes and physical infrastructure changes, including the monitoring of such programmes. It is therefore anticipated that this will have a Significant (Major) Positive effect on this IIA objective.

IIA Objective	RTS1	RTS2	RTS3	RTS4	RTS5	RTS6	Commentary
							• RTS1and RTS4 have the potential to contribute to safety through providing improvements to walking and transport infrastructure and reductions in traffic (reducing risks of collisions with vulnerable road users) including the creation of walkable neighbourhoods. Allocation of road space for active travel (RTS1) can support safer active travel journeys and encourage perceptions of safer walking and cycling opportunity. Healthy Streets in new development supports safety, particularly of pedestrians and cyclists. Travel plans have the potential to consider the safety and security of certain groups and set out safety measures and provisions to ensure that protected groups are not disproportionately affected. It is therefore anticipated that they will have a Minor Positive effect on this IIA Objective. • RTS3 will help provide more accessible transport for those who are less able bodied, helping reduce risk of injury associated with trying to use unsuitable transport facilities (e.g., use of stairs in stations where no lifts are provided). It is therefore anticipated that this may have a Minor Positive effect on this IIA objective. • RTS2 has the potential to contribute to safety through providing a transport network which is resilient to climate change (e.g., risks to life from flooding), however effects on safety are Uncertain. • RTS6 has an Uncertain relationship with this IIA objective. It is acknowledged that improvements to sustainable transport and the introduction of new technology have the potential to positively contribute to safety, however the type of measures to be implemented and associated effects are currently Uncertain. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table F.2.** <u>Uncertainties</u> • See core uncertainties outlined in **Table F.2.**
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	+	+	++	+	+	?	<u>Assessment of Predicted Effects</u> • RTS3 will actively contribute to reducing existing barriers to the transport network and creating a transport system that is accessible to all. It is therefore anticipated that this will have a Significant (Major) Positive effect on this IIA objective. • RTS1 and RTS 4 will help promote the use of more sustainable modes of transport which are more accessible than private car to people on low incomes or those with mobility issues which prevent them driving (e.g., vision impairments). RTS1 specifies that electric vehicles and alternative ultra-low emission vehicles for essential car journeys relating to a range of equalities issues will be promoted. Travel plans can support schools and businesses in deprived areas, or with an uptake of those from protected groups, to enable their users to travel to, and access, their facility. It is therefore anticipated this will have a Minor Positive effect on this IIA objective. • RTS2 will support climate change mitigation. Climate change impacts disproportionately affect more deprived sectors of society and older people. Adapting the transport network to enable groups vulnerable to climate change to maintain access to work, leisure and services supports equality and social inclusion). It is therefore anticipated that this may have a Minor Positive effect on this IIA objective. • RTS5 is targeted at sustainable modes of travel to school, as age is a key protected characteristic and activity in early life is associated with improved health outcomes this is expected to have a Minor Positive effect. Additionally, 5.4 within RTS 5 anticipates working with school communities to identify and breakdown barriers that prevent sustainable travel which will encourage accessing sustainable travel modes and monitoring these impacts. • It is Uncertain what impact RTS6 will have on this IIA objective as the extent of the technological advances to be implemented are not currently known. Improvements in technology have the potential to positively contribute to equality though guiding decisions that will benefit groups from protected characteristics. A positive impact from smart solutions and innovation can only be realised if data is translated into remedial action plans that consider the needs of particular groups. • There is No Clear Relationship between RTS2 and this IIA objective. However, it is noted that older residents and children may be more vulnerable to effects of climate change, including increased temperatures therefore adaptation and design that is conscious of this is welcomed. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. • When employing smart technologies which are to be accessed by travellers, consideration should be given to ensure that they can be accessed in a variety of medium (e.g., website and telephone line as opposed to just a mobile app), and languages and support services are available. This will help see that certain groups are not disadvantaged in accessing the transport network or benefits provided by new technologies (e.g., cost savings).

IIA Objective	RTS1	RTS2	RTS3	RTS4	RTS5	RTS6	Commentary
							Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	+	~	++	++	+	?	Assessment of Predicted Effects • RTS3 is anticipated to have a Significant (Major) Positive effect given that it will help increase the accessibility of the transport network and local area to people who currently have limited access e.g., due to physical infrastructure barriers or the cost of services. • RTS4 is anticipated to have a Significant (Major) Positive effect due to the requirement for major developments to produce, submit, carry out and monitor travel plans, as well as prioritising the creation of walkable neighbourhoods This will enforce travel planning in Reading and ensure that interventions to improve accessibility are being produced and upheld. • These policies will generally contribute to improving the accessibility and reliability of the transport network, particularly through the use of more sustainable modes of transport such as buses, walking and cycling. RTS1 and RTS5 are anticipated to have a Minor Positive impact on this IIA objective given that they will help improve the accessibility of the transport network and improve ability for other modes of transport to be used, whilst acknowledging the need for essential car journeys. • It is Uncertain what effect RTS6 will have on this IIA objective given the limited information known at this stage about the technologies. However, it is acknowledged that it has the potential to have positive impacts to accessibility through reducing the need to travel, travelling more efficiently and improvements to transport networks. Additionally, RT6 states that RBC will work with businesses to reduce the need to travel as appropriate. • Ensuring the transport network can withstand the impacts of climate change (e.g., flooding, overheating,) will help provide continuity of access to all types of destinations. This suggests RTS2 has a Minor Positive effect on this objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • RTS6 would benefit from further clarifications and examples of the types of technologies it is looking to employ and how it will 'reduce the need to travel', as well as remedial action plans in light of the data collected. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	+	~	+	+	+	?	Assessment of Predicted Effects • RTS1, RTS3 and RTS5 will help to increase access to employment and education through increasing capacity on the transport network, improving the accessibility of transport for a wider group of people and by creating safer routes for children to travel to school potentially encouraging independent travel. RTS4 will supports appropriate sustainable transport measures in new developments, notably travel plans, aiding access to employment and education opportunities, whilst recognising the need to promote certain journeys by electric and low emission vehicles. It is therefore anticipated that these policies will have a Minor Positive impact on this IIA objective. • It is Uncertain what effect RTS6 will have on this IIA objective given the limited information known at this stage about the technologies. However, it is acknowledged that it has the potential to have positive impacts to access through improvements to the transport network. • There is No Clear Relationship between RTS2 and this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • RTS4 would be further enhanced by including monitoring and remedial action plans to help secure and maintain access to employment and education in a safe manner. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties

IIA Objective	RTS1	RTS2	RTS3	RTS4	RTS5	RTS6	Commentary
							• See core uncertainties outlined in **Table F.2**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+	+	+	+	+	?	<u>Assessment of Predicted Effects</u> • These policies work to improve existing assets and identified issues (such as transport capacity) to help create a more resilient, effective, and efficient transport network for all. RTS2 includes embedding whole life carbon considerations. • It is therefore anticipated that RTS1 – RTS5 will have a Minor Positive effect on this IIA objective. It is Uncertain what effect RTS6 will have on this IIA objective given the limited information known about the technology to be implemented at this stage. However, it is acknowledged that it has the potential to positively contribute to this objective through improving the efficient use of existing infrastructure. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table F.2** <u>Uncertainties</u> • See core uncertainties outlined in **Table F.2**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	+	~	+	+	+	?	<u>Assessment of Predicted Effects</u> • RTS1 and RTS3 will help encourage a transition to more sustainable forms of transport, reducing private car travel, where appropriate, and increasing capacity on the transport network to move people and freight more effectively, and reduce commute times. RTS4 and RTS5 will help improve the uptake of more efficient, or sustainable forms of travel for children, and users impacted by new developments, however this will have a more limited, less direct effect on increasing economic prosperity. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA objective. • It is Uncertain what effect RTS6 will have on this IIA objective given the limited information known about the technology to be implemented at this stage. However, it is acknowledged that it has the potential to positively contribute to this objective through improving the effectiveness of the transport network. • There is No Clear Relationship between RTS2 and this IIA Objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table F.2** <u>Uncertainties</u> • See core uncertainties outlined in **Table F.2**
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	++	++	++	++	++	+	<u>Assessment of Predicted Effects</u> • Generally, these policies support a move away from use of private cars and uptake in the use of more sustainable modes of transport, including monitoring of these impacts (RTS5) which will help improve air quality. In particular, RTS1 - RTS5 are anticipated to have a Significant (Major) Positive effect on this IIA objective given that they will have a more direct impact on supporting a significant shift to more sustainable modes of transport and walkable neighbourhoods, all of which will serve to reduce transport emissions. • It is likely that RTS6 will have a Minor Positive effect on this IIA objective. Although there is uncertainty given the limited information known about the technology to be implemented at this stage, it is acknowledged that it has the potential to positively contribute to this objective through improving the effectiveness sustainable transport, as well as demand management resulting in associated air quality improvements. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table F.2** <u>Uncertainties</u> • See core uncertainties outlined in **Table F.2**

IIA Objective	RTS1	RTS2	RTS3	RTS4	RTS5	RTS6	Commentary
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.	+	++	+	++	+	+	Assessment of Predicted Effects • RTS1, RTS3, RTS5 and RTS6 will generally produce more efficient use of land, improve urban design in existing and new developments and protect existing assets including built heritage. However individual interventions may have a fairly limited impact in isolation on sustainable placemaking resulting in a Minor Positive designation. It is expected that RTS1 will have a Minor Positive effect due to the reallocation of road space to sustainable modes and the commitment to cross-borough working. RTS3 is anticipated to contribute to this objective due to commitments to consider physical barriers to placemaking and thus enhancing design quality for more users. It is anticipated that RTS1, RTS3, RTS4 and RTS5 will help reduce traffic which can contribute to enhancing the urban environment, however the interventions may have a fairly limited impact in isolation. RTS5 also seeks to create more attractive environments around schools. It is noted that these are given Minor Positive designations as exact implementation may be case by case dependent. Finally, RTS6 is also designated Minor Positive as the use of smart solutions and innovation can be used to test innovative solutions to land use. • It is anticipated that RTS2 will have a Significant (Major) Positive effect on this IIA Objective given that it directly supports protection of heritage assets and improvements to the local environment. RTS4 is also expected to have a Significant (Major) Positive effect as it directly links to requirements for new development to deliver sustainable placemaking features such as healthy streets and making direct financial contributions to this, as well as creating walkable. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
10. Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	++	++	+	+	+	?	Assessment of Predicted Effects • These policies all support a transition to the use of more sustainable forms of transport and reduction in the reliance of private car travel. This will directly help to reduce CO_2 emissions and associated impacts relating to climate change. In addition, RTS2 also supports the creation of a more resilient transport network which will mitigate the effects of climate change, including the consideration of whole life carbon in projects. It is therefore anticipated that RTS3, RTS4 and RTS5 will have a Minor Positive effect on this IIA Objective, with RTS1 and RTS2 having a Significant (Major) Positive effect given that it will actively reallocate space from private cars and prioritise sustainable transport. • It is uncertain what effect RTS6 will have on this IIA Objective given the limited information known about the technology to be implemented at this stage. However, it is acknowledged that it has the potential to positively contribute to this objective through improving the effectiveness of sustainable transport and associated reductions in carbon emissions. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
11. Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	0	++	0	+	0	?/+	Assessment of Predicted Effects • RTS2 identifies that transport schemes will deliver biodiversity net gains and will therefore directly contribute to enhancing biodiversity. It is therefore anticipated that this will have a Significant (Major) Positive effect on this IIA Objective. • RTS1, RTS3, RTS4 and RTS5 can contribute to reducing traffic, and associated disturbances to local biodiversity. However, these effects are likely to be limited. It is therefore anticipated that they will have a Neutral effect on this IIA Objective. Depending on interaction with other policies relating to the planning consent process, RTS4 is likely to have an increased positive effect as Biodiversity Net Gain targets are required to be implemented. • RTS6 can similarly contribute to reducing traffic through implementation of new technology. However, given the limited information available at this time the effect on this IIA Objective is Uncertain. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required.

IIA Objective	RTS1	RTS2	RTS3	RTS4	RTS5	RTS6	Commentary
							Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
12. Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	~	++	~	~	~	~	Assessment of Predicted Effects • RTS2 identifies that the transport network will be adapted to prepare for climate change, which will include the potential for increased flood risk through increased rainfall and extreme weather events, with a requirement for mitigation through such solutions as sustainable urban drainage. It will also support improvements to the local environment, which is assumed to include water environments. It is therefore anticipated that this will have a Significant (Major) Positive effect on this IIA Objective. • There is No Clear Relationship between RTS1, RTS3 - RTS6 and this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
13. Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	+	++	+	+	+	?	Assessment of Predicted Effects • RTS2 identifies that it will improve the local environment and protect and promote heritage which will positively contribute to the local landscape and townscape. It is therefore anticipated that this will have a Major Positive effect on this IIA Objective. • RTS1, RTS3, RTS4 and RTS5 will help reduce traffic by promoting a transition to more sustainable forms of transport and improving walking and cycling links which can have beneficial effects to the character of an area. However, these policies will have a relatively limited effect in isolation. RTS 1 includes the commitment to work with neighbouring authorities and other significant landowners to identify suitable land for transport infrastructure, which will encourage strategic implementation of schemes. It is therefore considered that these policies will have a Minor Positive effect on this IIA Objective. • It is uncertain what effect RTS6 will have on this IIA Objective given the limited information known about the technology to be implemented at this stage. However, it is acknowledged that it has the potential to positively contribute to this objective through improving reducing the need to travel and therefore traffic which may positively contribute to landscape and townscape character. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**

F.3 Public Transport

F.3.1 This subsection provides an assessment of the Public Transport policies presented within the RTS. These are:

- Policy RTS7 - Public Transport;
- Policy RTS8 - Bus and Community Transport;
- Policy RTS9 – Rail;
- Policy RTS10 - Taxis and Private Hire;
- Policy RTS11 – Waterways;
- Policy RTS12 - Connected and Autonomous Vehicles.

F.3.2 The core assumptions and uncertainties listed in **Table F.1** have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix

Table F.4: IIA of Public Transport Policies – Assessment Matrix

IIA Objective	RTS7	RTS8	RTS9	RTS10	RTS11	RTS12	Commentary
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	+	+	+	+	?	Assessment of Predicted Effects • RTS7-RTS10 will help improve transport connections and promote the use of public transport to travel in and around Reading, reducing reliance on private car travel. This includes RTS8 which specifies working with neighbouring authorities to deliver Park and Ride Mobility Hubs and bus services to enable a mode shift away from the private car. This can help improve air quality and have associated benefits for health. In addition to this, improvements to the public transport system can help increase access to local facilities, including health and leisure, and reduce social isolation. • RTS11 has the potential to provide greater means of access to facilities that benefit health and wellbeing through encouraging better walking and cycling access to waterways for leisure, tourism, and recreation, as well as health and fitness, and the potential to help improve air quality (and have associated health benefits) by providing an alternative to private car. Therefore, it is anticipated that it will have a Minor Positive effect on this IIA Objective. • Given the limited detail available on the introduction and use of CAVs at this point, it is Uncertain what effect this policy will have on this IIA Objective, albeit it is acknowledged that there is potential for CAVs to positively contribute to health through improving access to services and facilities. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	0	0	0	+	0	?	Assessment of Predicted Effects • RTS10 has a potential Minor Positive effect on safety and security, particularly perceived safety of taxi and private vehicle travel by women and other groups vulnerable to discrimination. • It is anticipated that RTS7 – RTS9 and RTS11 will have a Neutral effect on this IIA Objective as it is acknowledged that improvements to public transport systems can generally help to improve perceptions of safety and security, however direct effects of these policies are likely to be limited. • It is Uncertain what effect RTS12 as CAVs are not widely used in mainstream public transport at present. However, it is acknowledged that CAVs have the potential to have a positive effect e.g., through removing human 'errors' from driving, leading to a reduction in road collisions. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required.

IIA Objective	RTS7	RTS8	RTS9	RTS10	RTS11	RTS12	Commentary
							Assumptions • See core assumptions outlined in **Table F.2** • It is assumed that should the further use of waterways for transport are explored appropriate health and safety systems would be implemented to ensure travel is safe and that there are no unacceptable risks to passengers (e.g., from drowning). • It is assumed that should use of CAVs be implemented appropriate legislation and health and safety procedures would be put in place to ensure travel is safe and that there are no unacceptable risks to passengers or vulnerable road users. Uncertainties • See core uncertainties outlined in **Table F.2**
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	+	+	+	+	?	?	Assessment of Predicted Effects • RTS7- RTS10 will help improve the accessibility, availability, reliability, and affordability of public transport in Reading which will help increase the accessibility of the transport network to a wider range of people including those who are less able bodied or on lower incomes which can help reduce social isolation. RTS7 specifies working with operators to seek to reduce public transport fares, to encourage mode shift away from private cars, as well as RT9 including lobbying for increased service frequencies between Reading and local stations. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • RTS10 is anticipated to have a positive effect on equality and social inclusion however, care must be taken when implementing new technology as part of taxi services (such as apps and cashless payment) which may be less accessible to, and exclude certain groups, such as the elderly or those on low incomes. However, should cash payment options still be available then there is less potential for exclusion. Additionally, it is noted that the RBC role is to ensure that taxi and private hire services adhere to quality obligations and are compliant with all relevant guidance, this is anticipated to have a Minor Positive equality and social inclusion effect when considering access to taxis and private hire vehicles for disabled users. • RTS11 has the potential to reduce inequality and social exclusion by providing a means of access to facilities across the waterways network, particularly for those of low mobility or residing in deprived areas. However, the policy as written does not set out if and how access will be provided for those with protected characteristics. Therefore, the impact of RTS11 on this IIA objective is Uncertain. • Given the limited detail available on the introduction and use of CAVs at this point, it is Uncertain what effect this policy will have on this IIA Objective, albeit it is acknowledged that there is potential for CAVs to positively contribute to this IIA Objective by providing feeder services to the transport network for those who are in more isolated areas/ less able to access services. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** • It is assumed that although other forms of payment methods for taxi services may be made available, cash payment methods will still be accepted. Uncertainties • See core uncertainties outlined in **Table F.2**
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	++	++	++	+	+	+	Assessment of Predicted Effects • RTS7, RTS8 and RTS9 directly contribute to helping improve public transport services by providing reliable, affordable transport to enable people to access facilities and services in and around Reading, but also the wider region, including RTS7 which specifies that RBC will work with operators to reduce public transport fares. It is therefore anticipated that they will have a Significant (Major) Positive effect on this IIA Objective. • RTS10 will improve and expand upon existing transport services which may help improve accessibility however the impact is likely to be more limited. RTS11 will promote the use of Reading's waterways to improve accessibility to affordable recreational and social facilities, however its impact on improving accessibility to public transport is limited. It is therefore anticipated that this policy may have a Minor Positive effect on this IIA Objective. • RTS12 has the potential to help improve the accessibility of the transport network by providing feeder services to public transport services and door-to-door transport which can help improve the accessibility of local services where there are currently limited transport services. However generally limited information is known about what form this would take at present and where and how this would be implemented. It is therefore anticipated that this policy may have a Minor Positive effect on this IIA Objective.

IIA Objective	RTS7	RTS8	RTS9	RTS10	RTS11	RTS12	Commentary
							Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	+	+	+	0	0	?	Assessment of Predicted Effects • RTS7, RTS8 and RTS9 will help improve and expand upon existing public transport services and access to employment and educational services. Improvements to these services can also help reduce congestion, increasing capacity on the transport network for new development (such as employment sites) to be delivered This includes RT9 which includes RBC lobbying for increased service frequencies between Reading and local rail stations which can positively impact access to employment. It is therefore anticipated that these policies may have a Minor Positive effect on this IIA Objective. • RTS11 has the potential to support the growth and development of business providing waterway services and also expand access to education and employment sites via waterways in Reading. However, this is likely to have a limited effect given the potential size and capacity of Readings waterways. RTS10 will also have a more limited effect given that it is focused on taxis and private hire vehicles, and not wider public transport services. It is therefore considered these policies may have a Neutral effect on this IIA Objective. • Effects of RTS12 on this IIA objective are Uncertain given the limited detail currently know about implementation and use. However, it is acknowledged that it has the potential to positively contribute to this objective through increasing access to public transport services. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+	+	+	+	++	?	Assessment of Predicted Effects • RTS11 is anticipated to have a Significant (Major) Positive effect as the policy will result in joined up working with the Environment Agency and private operators to ensure the safe and effective management of the waterways. • RTS7-RTS10 will all generally contribute to improving existing infrastructure and services so that they are more effective and reliable to help increase capacity on the transport network. RTS10 will also help improve the effective use of natural resources (e.g., fossil fuels) by promoting a shift to electric and hybrid taxis) and RTS9 includes RBC lobbying for the decarbonisation of the rail network including rail freight. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • Effects of RTS12 on this IIA objective are Uncertain given the limited detail currently know about implementation and use. However, it is acknowledged that it has the potential to positively contribute to this objective through increasing access to public transport services and creating a more effective transport network. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	++	++	++	0	+	+	Assessment of Predicted Effects • RTS7, RTS8 and RTS9 all support improvements to public transport services to help increase capacity on the transport network and help people travel around Reading and surrounding areas more effectively. By creating additional capacity on the highway network by reducing reliance on private car travel and uptake in rail and bus travel, this can also help reduce

IIA Objective	RTS7	RTS8	RTS9	RTS10	RTS11	RTS12	Commentary
							congestion and the time freight vehicles spend travelling through Reading. It is therefore anticipated that these policies will have a Significant (Major) Positive effect on this IIA Objective. • RTS11 and RTS12 will provide alternative modes of transport to help move people in and around Reading and connect to other transport services. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • RTS10 in part supports the implementation of new technology in taxis to make travel more accessible which can help facilitate the effective movements of people, however the impact is more limited. It is therefore anticipated that this policy will have a Neutral effect on this IIA Objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table F.2** <u>Uncertainties</u> • See core uncertainties outlined in **Table F.2**
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	++	++	++	++	+	++	<u>Assessment of Predicted Effects</u> • RTS7, RTS8 and RTS9 will generally support a shift away from private car travel and an uptake in more sustainable forms of transport such as bus and rail, including working with neighbouring authorities to deliver park and ride mobility hubs (RTS8). This will help improve air quality through reducing emissions from private car travel. RTS10 will help support taxi drivers to transition to hybrid and electric vehicles which will also help reduce emissions and impacts on air quality. As CAVs are anticipated to be primarily hybrid or electric, RTS12 is also anticipated to positively contribute to air quality improvements through moving away from use of petrol and diesel vehicles, but also through supporting the use of public transport. It is therefore anticipated that all these policies will have a Significant (Major) Positive effect on this IIA Objective. • Boats and ferry services typically use combustion engines which release NOx and particulate matter and therefore RTS11 has the potential to negatively impact air quality. However, if improvements in clean technology for water vehicle power is achieved, then positive, though uncertain, impacts may neutralise this minor though adverse change, and boat services may provide alternative options to private car use thus reducing overall vehicle numbers. In addition, RTS 11 refers to improvements to the environment and amenity of waterways. It is therefore anticipated that this policy may have a Minor Positive effect on this IIA Objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. • Where new riverboat services are delivered, electric motors should be encouraged over traditional combustion engines to reduce potential negative impacts on air quality. <u>Assumptions</u> • See core assumptions outlined in **Table F.2** <u>Uncertainties</u> • See core uncertainties outlined in **Table F.2**
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality protect and enhance the significance, special interest and character of heritage assets and their settings.	+	++	++	0	+	?	<u>Assessment of Predicted Effects</u> • RTS7, RTS8 and RT9 will help use existing land more effectively by promoting use of public transport, reducing the need to create additional highways capacity for private car use. RTS8 and RTS9 also directly support improvements to public space including street planting and upgrades to train stations. It is therefore anticipated that RTS7 will have a Minor Positive effect on this IIA Objective and RTS8 and RTS9 will have a Significant (Major) Positive effect. • There is potential for RTS11 have both positive and negative impacts, RTS11 acknowledges that there is a need to balance the need for new sustainable placemaking to encourage wider access to the waterways, which can have positive health impacts, and considering the impact on the current environmental baseline, heritage assets and existing communities of increased use of the waterways. Therefore, the impact of this policy on this IIA Objective is Minor Positive. • It is Uncertain what effect RTS12 will have on this IIA Objective given that there is limited information provided about the implementation and design of CAVs at present. • It is anticipated that RTS10 will have a Neutral impact on this IIA Objective given that upgrades to taxis to electric or hybrid models will have a limited impact on urban design and character. <u>Mitigation and Enhancement</u>

IIA Objective	RTS7	RTS8	RTS9	RTS10	RTS11	RTS12	Commentary
							• No significant effects have been identified and so no mitigation measures are required. • As licenses/ permissions are granted for new river services operating on the River Thames, consideration and appropriate assessments should be undertaken to understand and mitigate potential adverse effect to nearby heritage assets. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
10. Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	++	++	++	++	+	+	Assessment of Predicted Effects • RTS7, RTS8 and RTS9 will support the uptake and use of more sustainable forms of transport by providing new and improved public transport services. This will help reduce carbon emissions and associated impacts on climate change through reducing private car usage. RTS9 includes RBC lobbying for the decarbonisation of the rail network including rail freight. RTS10 will actively support taxi drivers move to the use of hybrid and electric vehicles which similarly will help reduce carbon emissions from transport. It is therefore anticipated that these policies will have a Significant (Major) Positive effect on this IIA Objective. • The use of CAVs (which are predominantly hybrid and electric) will also help reduce carbon emissions from transport and help support the uptake of more sustainable forms of transport, however this is likely to have a lesser effect that the above policies. Similarly, RTS11 will likely have a more limited effect on this IIA Objective as the uptake in use of public boat services (and associated reduction in private car travel) is partly offset by the conventional use of combustion engines on boats. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Where new riverboat services are delivered, electric motors should be encouraged over traditional combustion engines to reduce carbon emissions. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
11. Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	0	0	0	0	0	0	Assessment of Predicted Effects • RTS7 - RTS10 and RTS12 can contribute to reducing traffic, and associated disturbances to local biodiversity. However, these effects are likely to be limited. It is therefore anticipated that they will generally have a Neutral effect on this IIA Objective. • There is potential for RTS11 have both positive and negative impacts, RTS11 acknowledges that there is a need to balance the need for new sustainable placemaking including biodiversity, geodiversity and soil to encourage wider access to the waterways, which can have positive health impacts, and considering the impact on the current environmental baseline and existing communities of increased use of the waterways. Therefore, the impact of this policy on this IIA Objective is Neutral and would be dependent on individual schemes. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • As licenses/ permissions are granted for new river services operating on the River Thames, consideration and appropriate assessments should be undertaken to understand and mitigate potential adverse effect to biodiversity. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
12. Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	~	~	~	~	-	~	Assessment of Predicted Effects • RTS11 will involve an increase in the traffic using Readings waterways which has the potential to cause disturbance to water environments and deterioration of water quality (e.g., through fuel leaks and spills). It is therefore anticipated that this policy may have a Minor Negative effect on this IIA Objective.

IIA Objective	RTS7	RTS8	RTS9	RTS10	RTS11	RTS12	Commentary
							• There is No Clear Relationship between RTS7 – RTS10, RTS12 and this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • As licences/ permissions are granted for new river services operating on the River Thames, consideration and appropriate assessments should be undertaken to understand and mitigate potential adverse effect to the water environment including licencing of non-polluting riverboats and control of emissions to water. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
13. Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	+	+	+	+	0	?	Assessment of Predicted Effects • RTS7, RTS8, RTS9 and RTS10 will help increase the uptake of public transport which can help reduce traffic and positively contribute to the townscape/ landscape character. In addition to this, RTS10 also supports improvements to street and public spaces (e.g., though additional planting). It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • There is potential for RTS11 is likely to have a neutral impact on landscape and townscape given the ambition to effectively manage the waterways and increase boat travel as a public transport service where this would not cause unacceptable local problems. It is therefore considered that this policy may have a Neutral effect on this IIA Objective. • It is Uncertain what effect RTS12 will have on this IIA Objective given that there is limited information provided about the implementation and design of CAVs at present. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • As licences/permissions are granted for new river services operating on the River Thames, consideration and appropriate assessments should be undertaken to understand and mitigate potential adverse effect to local townscape/landscape character. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**

F.4 Active Travel

F.4.1 This subsection provides an assessment of the Active Travel policies presented within the RTS. These are:

- Policy RTS13 - Healthy Streets;
- Policy RTS14 - Cycling and Walking;
- Policy RTS15 - High-Quality Public Space; and
- Policy RTS16 - Rights of Way.

F.4.2 The core assumptions and uncertainties listed in **Table F.1** have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix

Table F.5: IIA of Active Travel Policies – Assessment Matrix

IIA Objective	RTS13	RTS14	RTS15	RTS16	Commentary
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	++	++	+	+	Assessment of Predicted Effects • The active travel policies support improvement to streets, public realm space and walking and cycling infrastructure to help support physical activity and improvements to air quality, both of which have positive impacts on health and wellbeing. • RTS13 directly promotes the creation of HealthyStreets will improve respiratory health through improvements to air quality, as well as auditory health, sleep conditions and wellbeing through a reduction in noise levels. There may be a reduced risk of accidents from occurring in residential areas, therefore reducing the risk of injury-related morbidity and mortality. RTS14 directly supports improvements to walking and cycling infrastructure which are likely to have more beneficial impacts on health and commits to the careful design of areas to reduce conflict and improve safety. Additionally, RTS14 commit to delivering high-quality, secure cycle parking which can reduce impact of theft on mental health, as well as maintaining access to parks and public open space for walking and cycling for leisure which can positively impact health outcomes. It is therefore anticipated that RTS13 and RTS14 are likely to have a Significant (Major) Positive effect on this IIA Objective and RTS15 and RTS16 are likely to have a Minor Positive effect. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	+	++	+	+	Assessment of Predicted Effects • RTS14 commits to delivering high quality, secure cycle parking to reduce cycle theft which is likely to have a Significant (Major) Positive effect on this IIA. • Part of the healthy streets approach is to see that communities are safe, and feel safe, on the streets, and therefore by promoting this approach RTS13 will directly support this IIA Objective. RTS16 will involve the creation of new and improved walking and cycling infrastructure, including Rights of Way, which may include off-road or segregated routes for pedestrians and cyclists which is safer than travelling on, or in proximity to highways. The creation of high-quality public spaces can help reduce crime and fear of crime, particularly where spaces are designed to have high levels of natural surveillance and therefore RTS15 has the potential to help improve safety and security. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**

IIA Objective	RTS13	RTS14	RTS15	RTS16	Commentary
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	++	+	++	+	Assessment of Predicted Effects • RTS13 and RTS15 support the creation of inclusive, accessible streets and public spaces which promote social interactions and community cohesion. They will also benefit neighbourhoods of existing low-quality public and private space, through improvements to air quality, noise level and congestion. Groups that may benefit the most include those with or at-risk of respiratory conditions, children and older people, and pregnant people. It is therefore anticipated that these policies will have a Significant (Major) Positive effect on this IIA Objective. • RTS14 will help promote more uptake of walking and cycling which may help increase access of local facilities and services, this includes a commitment to designing walking and cycling networks to accommodate all users, including wheelchair users, adapted cycles, design for those who are visually impaired and cycles with trailers. Additionally, the design will reflect all latest national and local guidance for this type of infrastructure. Therefore, a Minor Positive impact on this objective is expected. • RT16 is anticipated to have a Minor Positive effect on equality and social inclusion as seeking to improve opportunities to deliver legible walking and cycling routes through development and new proposals can increase community cohesion through a sense of space and lack of gated communities. • It is therefore anticipated that these policies will have a Neutral effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	++	++	++	++	Assessment of Predicted Effects • RTS13-RTS16 all directly support improvements to walking and cycling infrastructure (including streets and public spaces) to help increase the accessibility and connectiveness of these networks. RTS14 commits to maintaining and enhancing access to public open space and parks for leisure which will ensure access to facilities and social activities. It is therefore anticipated these policies will have a Significant (Major) Positive effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	+	+	+	+	Assessment of Predicted Effects • RTS13-RTS16 will help improve and expand upon existing active travel networks and as a result, help improve access to employment and educational services. Improvements walking and cycling facilities can also help reduce congestion, increasing capacity on the transport network for new development (such as employment sites) to be delivered. RTS13 and RTS15 will also help improve streets and public spaces, making these more attractive and pleasant environments which can also help attract businesses to the area. It is therefore anticipated that these policies may have a Minor Positive effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	0	0	0	+	Assessment of Predicted Effects • Generally, these policies support improvements to existing public spaces and active travel networks which are needed to increase uptake of more active forms of transport (and associated decreases in use of vehicles which may use fossil fuels). However, the effect to material assets is likely to be more limited isolation with the exception of RTS14 which will make walking and cycling

IIA Objective	RTS13	RTS14	RTS15	RTS16	Commentary
					infrastructure more effective. It is therefore anticipated RTS14 will have a Minor Positive effect and RTS13, RTS15 and RTS16 will have a Neutral effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	+	+	+	+	Assessment of Predicted Effects • RTS13-RTS16 will generally help support the uptake of more active forms of travel and improve the attractiveness and connectivity of this network. This can help increase access to local facilities and services and help promote uptake of walking and cycling, reducing reliance on private car travel, and freeing up capacity on the highway network. At neighbourhood level, an improvement in productivity may be expected as a result of lower noise levels and traffic disruption. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	++	+	++	+	Assessment of Predicted Effects • RTS15 will provide improvements to public spaces within the town centre which will help encourage people to walk and cycle when travelling through this area (which lies within the AQMA). RTS15 is focused on delivering high quality public spaces which includes encompassing streets and accessible interchanges as well as a comprehensive way finding system for residents and visitors that is aligned with the Local Plan. This is crucial to improved amenity and the physical environment of places where people want to live and work. Additionally, strengthening commitment to high quality links between public spaces can improve air quality overall. It is therefore anticipated that this policy will have a Significant (Major) Positive effect on this IIA Objective. • RTS13 directly supports improvements to air quality including through reductions in congestion, transitions to more sustainable modes of transport and creation of green corridors. It is therefore anticipated that this policy may have a Significant (Major) Positive effect on this IIA Objective. • RTS14 and RTS16 will help support increases in walking and cycling, helping reduce reliance on private car travel which will have associated improvements to air quality. It is therefore anticipated that RTS14 and RTS16 will have a Minor Positive effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Town centre public space enhancements would benefit from inclusion of planting, including green corridors along roads to provide townscape and amenity enhancements and also provide some limited protection from air pollution to people traveling along streets within the town centre. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.	++	+	++	+	Assessment of Predicted Effects • RTS13-RTS16 will support improvements to public spaces, creating cleaner, greener streets and new and improved walking and cycling links. In particular RTS13 and RTS15 directly support enhancements to urban design quality. It is therefore anticipated that

IIA Objective	RTS13	RTS14	RTS15	RTS16	Commentary
					RTS13 and RTS15 will have a Significant (Major) Positive effect on this IIA Objective and RTS14 and RTS16 will have a Minor Positive effect. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
10. Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	++	++	+	++	Assessment of Predicted Effects • RTS13 - RTS16 will help support the uptake of more active forms of travel which will help reduce reliance on private car travel, and release of associated GHG emissions. In particular RTS14, RTS15 and RTS16 will support improvements to walking and cycling networks, including local streets, to improve access to facilities and services and so are anticipated to have a Significant (Major) Positive effect on this IIA Objective. RTS15 will help generally improve public spaces which will help encourage people to walk and cycle but is likely to have a less direct impact than the other policies. It is therefore anticipated that RTS15 will have a Minor Positive effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
11. Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	+	0	+	0	Assessment of Predicted Effects • RTS13-RTS16 will help promote a shift towards more active forms of transport which can help reduce disturbance to biodiversity associated with noise and air pollution. However, this may have a limited effect. RTS13 will involve the creation of green corridors and RTS15 will create more attractive streetscapes including planting schemes, all of which can support improvements to biodiversity. It is therefore anticipated that RTS13 and RTS15 will have a Minor Positive effect on this IIA Objective. • RTS14 and RTS16 will have a Neutral effect as these policies do not directly interact with improvements in biodiversity or green infrastructure unless linked with other green infrastructure policies within RBC. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • High quality public spaces should include green spaces and planting as this can also help increase biodiversity in urban areas. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
12. Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	+	0	0	0	Assessment of Predicted Effects • RTS13 has the potential to positively impact flood risk though inclusion of planting and green corridors which can help slow surface water runoff. It is therefore anticipated that this policy will have a Minor Positive effect on this IIA Objective. • There is RTS14 - RTS16 are likely to have a Neutral impact on this IIA Objective. There is a possibility however, that a positive impact can be created through the consideration of inbuilt drainage solutions, porous pavements, linear SuDs, and other design solutions associated with new rights of ways, cycling and walking infrastructure and the public realm which may improve resilience to water and flood risk reducing stress associated with these events. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required.

IIA Objective	RTS13	RTS14	RTS15	RTS16	Commentary
					• Consideration can be given to inbuilt drainage solutions, porous pavements, linear SuDs, and other design solutions associated with new rights of ways, cycling and walking infrastructure and the public realm. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
13. Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	++	+	++	+	Assessment of Predicted Effects • RTS13 - RTS16 will all generally contribute to improving the design and accessibility of walking and cycling infrastructure and public spaces for all active transport modes. In particular RTS13 and RTS15 support the improvements of streets and Reading town centre, including wayfinding, which will directly contribute to improving landscape character. It is therefore anticipated that RTS13 and RTS15 will have a Significant (Major) Positive effect on this IIA Objective and RTS14 and RTS16 will have a Minor Positive effect. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**

F.5 Network Management

F.5.1 This subsection provides an assessment of the Multi-Modal policies presented within the RTS. These are:

- Policy RTS17 - Network Management;
- Policy RTS18 - Road Safety;
- Policy RTS19 – Streetworks;
- Policy RTS20 – Parking;
- Policy RTS21 – Enforcement;
- Policy RTS22 - Demand Management;
- Policy RTS23 - Motorcycles and Powered Two-Wheelers;
- Policy RTS24 - Freight and Sustainable Distribution;
- Policy RTS25 - Highways Asset Management;
- Policy RTS26 - Sustainable Drainage (SUDS) & Surface Water Management;
- Policy RTS27 - Smart City Approach;
- Policy RTS28 - Mobility Services & Sharing Economy;
- Policy RTS29 - Ultra-Low Emission Vehicles.

F.5.2 The core assumptions and uncertainties listed in **Table F.1** have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix. For formatting purposes, the 12 network management policies have been split across two assessment matrix tables (**F.6** and **F.7**). Policies RTS17 – RTS22 are assessed in **Table F.6** below.

Table F.6: IIA of Network Management Policies – Assessment Matrix – Part 1

IIA Objective	RTS17	RTS18	RTS19	RTS20	RTS21	RTS22	Commentary
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	0	+	+	0	0	0	Assessment of Predicted Effects • RTS18 will directly support improvements to the road safety for vulnerable road users which will improve health directly, but also indirectly through increasing the attractiveness of walking and cycling which will help increase levels of physical activity. It is therefore anticipated that this policy will have a Minor Positive effect on this IIA Objective. • RTS19 incorporates safe practices in Streetworks, such as measures to reduce impacts on road users, monitor sites, and reinstate areas to a high standard. This will maintain the physical safety of vulnerable road users, therefore reducing the risk of collisions and consequently, injury-related morbidity and mortality. A high quality of reinstatement will contribute to safe and healthy streets for pedestrians. It is therefore anticipated that this policy will have a Minor Positive effect on this IIA objective. • RTS17 and RTS20-RTS22 will generally help manage traffic and reduce congestion and disruption which can have beneficial effect to health through reducing stress, although effects are likely to be limited. RTS20 includes specifying to review the level of provision and location of parking across the borough to manage and influence sustainable travel choices, including provision for those who are less mobile, depending on outcomes identified that may have beneficial health impacts, however, this is not known at this stage. It is therefore anticipated that these policies will have a Neutral effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions

IIA Objective	RTS17	RTS18	RTS19	RTS20	RTS21	RTS22	Commentary
							• See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	+	++	0	0	+	+	Assessment of Predicted Effects • RTS18 directly supports improvements to the safety of vulnerable road users and so is anticipated to have a Significant (Major) Positive effect on this IIA Objective. • RTS17 and RTS22 also contribute to this objective by supporting management of the transport network to help improve safety and reduce accidents. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • RTS21 also includes policy 21.3 to work with the police to enforce transport issues currently outside RBCs control, such as antisocial behaviour or use of footway by powered vehicles, as well as 21.2 to undertake enforcement against engine idling.' It is anticipated these are likely to have a Minor Positive effect. • RTS19-RTS20 play a role in helping supporting road safety (e.g., seeing that vehicles are not parked in places that would cause visibility or access issues that could lead to collisions) however are likely to have a lesser impact. It is therefore anticipated that these policies will have a Neutral effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	0	+	0	0	0	?	Assessment of Predicted Effects • RTS18 supports improvements to road safety for vulnerable road users, including those in lower income neighbourhoods which can help support improvements to inequality. It is therefore anticipated that this policy will have a Minor Positive effect on this IIA Objective. • RTS17 and RTS19 - RTS21 are not anticipated to have an unequitable impact on any particular group and so it is anticipated that these policies will have a Neutral effect on this IIA Objective. • RTS22 supports the implementation of measures such as reallocating road space to sustainable modes, and road user charging, which have the potential to adversely impact those who need to travel by private car through areas where charges are implemented (e.g. to access health services).Whilst revenue is expected to be invested in capacity for sustainable modes, there is a need to ensure that these modes will be inclusive and safe for all road users, particularly those on low-incomes or of low mobility. It is currently Uncertain as to what impact RTS22 will have on this IIA objective overall. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • When demand management measures are implemented, consideration should be given to providing discounts and/or exemptions to those on low incomes. • RTS19 may be further enhanced through ensuring that information provision is done so in an accessible manner and can also reach non-English speaking groups. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	+	+	+	+	+	+	Assessment of Predicted Effects • RTS17-RTS22 will generally help reduce traffic and disruption and make travel around Reading (particularly congested areas) quicker and safer and more accessible, including for pedestrians and cyclists through infrastructure enhancements and education programmes. RTS20 specifies that RBC will deliver high quality secure cycle and micro-

IIA Objective	RTS17	RTS18	RTS19	RTS20	RTS21	RTS22	Commentary
							mobility parking which can encourage accessibility to key location by sustainable means. RTS22 will also reduce the accessibility of private car travel in areas where demand management measures are implemented (e.g., clean air zones). This reduction in private car accessibility will however be complemented with increased capacity for travel by sustainable modes. It is therefore considered that these policies will have a Minor Positive effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** • It is assumed that as part of RTS20, appropriate parking provisions will be provided for blue badge holders. Uncertainties • See core uncertainties outlined in **Table F.2**
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	+	0	0	0	0	+	Assessment of Predicted Effects • RTS17-RTS22 will generally help manage the transport network more effectively to reduce congestion, improve accessibility (including to employment and education facilities) and transport capacity which can help support the provision of new developments. RTS17 and RTS22 in particular will directly contribute to supporting this through implementation of network and demand management measures. RTS18-RTS21 are likely to have a more indirect effect in supporting this objective. It is therefore anticipated that RTS22 and RTS17 will have a Minor Positive effect and RTS18-RTS21 will have a Neutral effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+	+	+	+	+	+	Assessment of Predicted Effects • RTS17-RTS22 will all generally contribute to improving existing infrastructure and services so that they are more effective and reliable to help increase capacity on the transport network. It is therefore anticipated that RTS17-RTS22 will have a Minor Positive effect on this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	+	0	0	0	0	+	Assessment of Predicted Effects • RTS17-RTS22 will generally help manage the transport network more effectively to reduce congestion, improve accessibility and transport capacity which can reduce journey times across Reading and the surrounding area. RTS17 and RTS22 in particular will directly contribute to supporting this and transporting people and goods more effectively. RTS18-RTS21 are likely to have a more indirect effect in supporting this objective. It is therefore anticipated that RTS17 and RTS22 will have a Minor Positive effect on this IIA Objective and RTS18-RTS21 will have a Neutral effect. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties

IIA Objective	RTS17	RTS18	RTS19	RTS20	RTS21	RTS22	Commentary
							• See core uncertainties outlined in **Table F.2**
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	+	+	~	+	+	++	Assessment of Predicted Effects • RTS22 supports the implementation of demand management measures, such as clear air zones, which will help reduce air pollution in areas where these measures are implemented. It is therefore anticipated that this policy will have a Significant (Major) Positive effect on this IIA Objective. • RTS18, RTS20 and RTS21 support a transition to more sustainable modes of transport through increasing safety for pedestrians and cyclists and also restricting and enforcing traffic and parking to encourage use of alternative modes of transport to private car, which will have beneficial impacts on air quality. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • RTS17 will support effective management of the transport network, including sustainable transport options which will help reduce congestion and emissions from transport, helping improve air quality. It is therefore anticipated that RTS17 will have a Minor Positive effect on this IIA objective. • There is No Clear Relationship between RTS19 and this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.	0	0	0	+	0	0	Assessment of Predicted Effects • RTS20 is likely to have a Minor Positive effect on this objective as it commits to managing parking including in new developments to influence sustainable travel choices and provide for those who are less mobile. This is linked to the parking standards outlined in the Local Plan (2019) and RBC's Parking Strategy. Managing this should have a positive impact on urban design quality and placemaking to embed design that encourages safe, sustainable and appropriately managed parking. • RTS17- RTS19, RTS 21 and RTS22 will generally help to ease congestion and disruption and therefore improve the urban public realm and make efficient use of existing assets. Reinstatement of areas following construction, and implementation of sustainable travel modes will help enhance the overall urban space. However, these will have a limited effect on this objective in isolation. It is therefore anticipated that these policies will have a Neutral effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • Within RTS22, high quality designs may be used to guide sustainable travel network implementation to ensure that the urban public realm benefits from it. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
10. Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	+	+	0	+	+	++	Assessment of Predicted Effects • RTS22 will help reduce use of private cars to travel through or to areas where demand management measures are implemented, helping support a transition to and uptake of more sustainable forms of transport which will have the effect of reducing carbon emissions. RTS17, RTS18, RTS20 and RTS21 will also support a transition to more sustainable forms of travel through disincentivising private car use, although such measures are likely to have a lesser effect than RTS22. It is therefore anticipated that RTS22 will have a Significant (Major) Positive effect and RTS17, RTS18, RTS20 and RTS21 will have a Minor Positive effect on this IIA objective. • RTS19 will general help reduce disruptions to the transport system. However, it is unlikely to have a significant beneficial impact on reducing carbon emissions. It is therefore anticipated that this will have a Neutral effect on this IIA objective.

IIA Objective	RTS17	RTS18	RTS19	RTS20	RTS21	RTS22	Commentary
							Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
11. Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	0	0	0	0	0	0	Assessment of Predicted Effects • RTS17 – RTS22 can contribute to reducing traffic, and associated disturbances to local biodiversity. However, these effects are likely to be limited. It is therefore anticipated that they will have a Neutral effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
12. Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	~	~	~	~	~	~	Assessment of Predicted Effects • There is No Clear Relationship between RTS17-RTS22 and this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
13. Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	+	+	+	+	+	+	Assessment of Predicted Effects • RTS17, RTS18 and RTS20 -RTS22 will help increase the uptake of more sustainable forms of transport which can help reduce traffic and positively contribute to townscape/landscape character, as well as reducing detractors to visual amenity. In addition, RTS18 also supports improvements to pedestrian and cycling infrastructure. RTS19 will manage streetworks more effectively and ensure that diversions are in place. It is therefore anticipated that all these policies will all have a Minor Positive effect on this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**

F.5.3 **Table F.7** presents the assessment of network management policies RTS23 – RTS30.

Table F.7: IIA of Network Management Policies – Assessment Matrix – Part 2

IIA Objective	RTS23	RTS24	RTS25	RTS26	RTS27	RTS28	RTS29	Commentary
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	+	+	~	?	+	±	Assessment of Predicted Effects • RTS23 can positively contribute to health through direct improvements to safety, as well as improved access to destinations and services that benefit health and wellbeing. RTS24 is also likely to have a positive impact on this objective through reducing air pollution associated with freight vehicles and the associated improvements this may have on health. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • Under RTS25 RBC will fully consider the maintenance of active travel and public transport infrastructure to enable and encourage active travel by these modes. This is likely to have a Minor Positive Impact as there is the potential to impact positive health impacts. • RTS28 can help increase mobility for a wider range of users, helping increase access to local services and facilities (including health care). It is therefore anticipated that this will have a Minor Positive effect on this IIA objective. • RTS29 has the potential to improve respiratory health outcomes as a result of improved long-term air quality arising from zero-emission vehicle uptake, and reduced reliance on car to access nearby airports. It is anticipated that these policies will have a Minor Positive effect on this IIA objective. • RTS27 has the potential to positively impact health (e.g., through improvements to health and social care services). However, there is limited details known about how this would be implemented at this stage and so there is an Uncertain effect on this IIA Objective. • There is No Clear Relationship between RTS26 and this IIA objective. Under RTS25 RBC will fully consider the maintenance of active travel and public transport infrastructure to enable and encourage active travel by these modes. This is likely to have a Minor Positive Impact as there is the potential to impact positive health impacts. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	++	+	+	~	?	?	?	Assessment of Predicted Effects • RTS23 directly supports improvements to road safety for motorcycles and powered two-wheelers. It is therefore anticipated that this will have a Significant (Major) Positive effect on this IIA Objective. • RTS24 and RTS25 support measures that minimise the impact of freight vehicles on road safety and continued maintenance of highway infrastructure to see that they are safe. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • There is impact of RTS27 – RTS29 are Uncertain in regard to these policies. Whilst both RTS27 and RTS28 have the potential to have positive safety and security impacts the implementation of these policies is undetermined and there is ongoing research and investigation into improving technology and features that will ensure safety and the perception of safety amongst groups with protected characteristics. The impact of RTS29 on this IIA objective is also Uncertain. The policy states equitable and disability-aware provision, which will make zero-emissions vehicle usage safer for groups with disabilities, however, safety measures for other protected groups are unknown. In particular, deaf road users are unable to hear zero-emission/electric vehicles which tend to be much quieter, and this presents a potential risk to their safety. • There is No Clear Relationship between RTS26 and this IIA objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** • RTS23: secure parking is being provided.

IIA Objective	RTS23	RTS24	RTS25	RTS26	RTS27	RTS28	RTS29	Commentary
								Uncertainties • See core uncertainties outlined in **Table F.2**
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	+	0	0	~	~	-	?	Assessment of Predicted Effects • RTS23 has the potential to reduce inequalities in access to key destinations and facilities, by providing parking access for motorcycles and two-powered wheelers. However, the extent of this impact may be limited due to the pre-existing availability of other transport modes which future users of motorcycles and two-powered wheelers can already access. It is therefore anticipated that RTS23 will have a Minor Positive effect on this IIA objective. • RTS28 has the potential to exclude certain groups (e.g., the elderly or those on low incomes) where the technology needed to access sharing services are complicated or expensive. It is therefore anticipated that there may be a Minor Negative effect on this IIA Objective. • RTS24 and RTS25 are linked to community cohesion as traffic from freight vehicles and poor highway infrastructure can cause severance between communities however overall, these policies are likely to have a Neutral effect on this IIA Objective. • There is No Clear Relationship between RTS26, RTS27 and this IIA Objective. • RTS29 sets out a commitment to develop policy for equitable and disability-aware provision for electric and zero-emissions vehicles, which is inclusive of diverse physical and mental needs. However, potential adverse impacts across all road users should be considered and remediated, particularly for those on low-income, and deaf users. Therefore, the full impact of RTS29 on equalities is Uncertain. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • When sharing services are progressed, consideration should be given to have to make platforms and systems accessible to as wide a range of users as possible. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	+	+	+	~	?	+	?	Assessment of Predicted Effects • RTS23, RTS25 and RTS28 support improvements to accessibility through maintaining and providing improvements to infrastructure, through providing education services, and also through the promotion of the use of shared services as an alternative option to ownership (e.g., cars). RTS24 will also help reduce impacts on the road network associated with freight transport, increasing the accessibility of the network for other road users. It is therefore anticipated that these measures will have a Minor Positive effect on this IIA objective. • RTS27 has the potential to increase transport accessibility. However, there is limited details known about how this would be implemented at this stage and so there is an Uncertain effect on this IIA Objective. RTS29 additionally has the potential to improve accessibility to zero-emission vehicles, although the impact of this may be an increase in private vehicle usage. It is therefore anticipated that this policy will have an Uncertain effect on this IIA Objective. • There is No Clear Relationship between RTS26 and this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	+	+	+	~	?	+	±	Assessment of Predicted Effects • RTS23 and RTS28 have the potential to help increase access to employment and education opportunities by providing more affordable transport option to those who are on lower incomes (and do not have access to a car) or are too young to drive but are able to drive a car (e.g., 16-year old's). Although generally these policies are likely to impact a limited group of users and so it is anticipated that there will be a Minor Positive effect on this IIA Objective.

IIA Objective	RTS23	RTS24	RTS25	RTS26	RTS27	RTS28	RTS29	Commentary
								• RTS24 and RTS25 will generally help improve the transport network by maintaining highways infrastructure and reducing the impact of freight transport on the highways which can help reduce journey times, including to education and employment. It is therefore anticipated that these policies may have a Neutral effect on this IIA Objective. • Given the limited details known about RTS27 there is an Uncertain effect on this IIA Objective. However, there is potential for it to affect investment in economic sectors though collaborative working and investment and implementation of new technology. • There is No Clear Relationship between RTS26 and this IIA Objective. • RTS29 has the potential to help increase access to employment and education opportunities due to provision of parking for zero-emissions/electric vehicle drivers. A Minor Positive effect on this IIA objective is anticipated. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table F.2** <u>Uncertainties</u> • See core uncertainties outlined in **Table F.2**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	~	+	++	+	+	++	+	<u>Assessment of Predicted Effects</u> • RTS24 and RTS28 directly support maintenance and improvements to existing highways infrastructure and promotion of shared services to reduce the need to individually own assets (e.g., cars) which can help reduce the use of natural resources. It is therefore anticipated that these policies will have a Significant (Major) Positive effect on this IIA Objective. • RTS24, RTS26, RTS27 and RTS29 support improvements to existing services and infrastructure (e.g., through use of technology). It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • There is No Clear Relationship between RTS23 and this IIA Objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table F.2** <u>Uncertainties</u> • See core uncertainties outlined in **Table F.2**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	+	++	+	~	+	+	+	<u>Assessment of Predicted Effects</u> • RTS24 directly supports working with freight operator to both improve the efficient movement of freight, including working with operators, neighbouring authorities and strategic partners to develop a Freight Strategy for Reading, but also to reduce disruption on the transport network for other users. It is therefore anticipated that this policy will have a Significant (Major) Positive effect on this IIA Objective. • RTS23, RTS25, RTS27 and RTS28 will help improve infrastructure and services to enable people to travel more efficiently and safely on the transport network. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • RTS29 supports productivity through greater efficiency of movement and parking for electric and zero-emissions vehicles along the road network. It is therefore anticipated that this policy will have a Minor Positive effect on this IIA Objective. • There is No Clear Relationship between RTS26 and this IIA Objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table F.2** <u>Uncertainties</u>

IIA Objective	RTS23	RTS24	RTS25	RTS26	RTS27	RTS28	RTS29	Commentary
								• See core uncertainties outlined in **Table F.2**
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	+	++	0	~	?	++	++	<u>Assessment of Predicted Effects</u> • RTS28 will help support the use of shared mobility services and reduce reliance on private vehicle ownership and use. This can also contribute to reducing congestion which can positively contribute to improvements to air quality. Autonomous vehicles used as part of mobility packages are also likely to be lower emission vehicles. It is therefore anticipated that RTS28 will have a Significant (Major) Positive effect on this IIA Objective. RTS29 is anticipated to have a significant positive effect as it commits to developing a Reading wide approach to encourage the switch from combustion engine to electric and other zero emission vehicles, which are a major source of poor air quality. • RTS24 is also likely to have a positive impact on this objective through reducing air and noise pollution associated with freight vehicles. It is therefore anticipated that this policy will have a Significant (Major) Positive effect on this IIA Objective. • RTS23 will support use of motorcycles and PTW which typically emit less air pollution and therefore are likely to have a relatively limited impact on air quality than petrol or diesel cars. It is therefore anticipated that this policy will have a Minor Positive effect on this IIA Objective. • RTS25 will have a more limited effect on this IIA Objective as it will provide improvements to the highway which can help support the efficient running of less polluting forms of transport (e.g., buses) but also private car use. It is therefore anticipated that this policy will have a Neutral effect on this IIA Objective. • Given the limited details known about the Smart City approach at this stage there it is Uncertain what effect it will have on this IIA Objective. However, it is acknowledged that collaboration and improved technology can positively contribute to improving air quality (e.g., through improvements to sustainable travel). • There is No Clear Relationship between RTS26 and this IIA Objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table F.2** <u>Uncertainties</u> See core uncertainties outlined in **Table F.2**
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.	0	++	++	0	~	++	+	<u>Assessment of Predicted Effects</u> • RTS24, RTS25 and RTS28 support this objective as they will positively contribute to urban design and potentially the setting of heritage assets through reducing impacts from freight, maintaining streets and highways (e.g., cleaning and street lighting) and reducing congestion and need for street clutter (e.g. signage and traffic lights) though use of shared services and autonomous vehicles. It is therefore anticipated that these policies will have a Significant (Major) Positive effect on this IIA Objective. • RTS23 and RTS26 have a more limited effect and relationship with this IIA Objective in that there is potential for some impact on urban design (e.g. provision of parking spaces and SUDs measures) but this will be relatively limited. It is therefore anticipated that these policies will have a Neutral effect on this IIA Objective. • RTS29 has the potential to improve the long-term public realm and protect heritage assets through improvements to air quality. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • There is No Clear Relationship between RTS27 and this IIA Objective. <u>Mitigation and Enhancement</u> • No significant effects have been identified and so no mitigation measures are required. <u>Assumptions</u> • See core assumptions outlined in **Table F.2** <u>Uncertainties</u> • See core uncertainties outlined in **Table F.2**

IIA Objective	RTS23	RTS24	RTS25	RTS26	RTS27	RTS28	RTS29	Commentary
10. Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	+	+	0	+	?	++	++	Assessment of Predicted Effects • RTS28 and RTS29 both are anticipated to have a Significant (Major) Positive effect on this IIA objective, RTS28 will help reduce reliance on private cars and promote shared use of transport services which will help reduce carbon emissions and contributions to climate change. RTS29 encourages a move away from combustion engine vehicles and supporting the infrastructure to decarbonize the transport sector. • RTS23 and RTS24 will positively contribute to mitigating climate change through promoting the use of vehicles with lower emissions (e.g. PTWs) and reducing emissions from freight. RTS26 also supports incorporating SUDs measures to better manage surface run off and help mitigate potential effects from future climate change and increases in rainfall. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • RTS25 will have a more limited effect on this IIA Objective as it will provide improvements to the highway which can help support the efficient running of more sustainable forms of transport (e.g. buses) but also private car use. It is therefore anticipated that this policy will have a Neutral effect on this IIA Objective. • Given the limited details known about the Smart City approach at this stage there it is Uncertain what effect RTS27 will have on this IIA Objective. However, it is acknowledged that collaboration and improved technology can positively contribute to reducing carbon emissions (e.g. through improvements to sustainable travel). Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
11. Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	0	0	0	?	0	0	~	Assessment of Predicted Effects • RTS23 – RTS25 and RTS27 and RTS28 can contribute to reducing traffic, and associated disturbances to local biodiversity. However, these effects are likely to be limited. It is therefore anticipated that these policies will have a Neutral effect on this IIA Objective. • RTS26 may involve provision of SUDs measures which contribute to biodiversity (such as ponds and wetlands). However, no details are available at this stage. It is therefore anticipated that these policies will have an Uncertain effect on this IIA Objective, but this may be positive depending on ultimate design of individual schemes. • There is No Clear Relationship between RTS29 and this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
12. Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	~	~	?	++	?	~	~	Assessment of Predicted Effects • RTS26 will provide SUDs measures in new transport schemes to manage surface water runoff and reduce local flood events, and which can also help improve water quality. It is therefore anticipated that this may have a Significant (Major) Positive effect on this IIA Objective. • RTS25 which may include improvements to reduce risks of flooding of highways assets and help increase resilience of the transport system to flooding. RTS27 could also involve the collaboration of services and utilities (including water-related services) to help manage this resource. However limited detail is available at this time. It is therefore anticipated that these policies will have an Uncertain effect on this IIA Objective. • There is No Clear Relationship between RTS23, RTS24, RTS28 and RTS29 and this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions

IIA Objective	RTS23	RTS24	RTS25	RTS26	RTS27	RTS28	RTS29	Commentary
								• See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
13. Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	0	++	++	+	~	++	~	Assessment of Predicted Effects • RTS24, RTS25 and RTS28 support this objective as they will positively contribute to protecting and enhancing townscape character through reducing impacts from freight, maintaining streets and highways (e.g. cleaning and street lighting) and reducing congestion and need for street clutter (e.g. signage and traffic lights) though use of shared services and autonomous vehicles. It is therefore anticipated that these policies will have a Significant (Major) Positive effect on this IIA Objective. • The introduction of SUDs, which in some cases would replace hard surfacing and introduce new soft landscape treatments, would result in RTS26 having a Minor Positive effect on then IIA Objective. • RTS23 will have a more limited effect and relationship with this IIA Objective in that there is potential for some impact on urban design (e.g. provision of parking spaces) but this will be relatively limited. It is therefore anticipated that this policy will have a Neutral effect on this IIA Objective. • There is No Clear Relationship between RTS27 and RTS29 for this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**

F.6 Communication and Engagement

F.6.1 This subsection provides an assessment of the Multi-Modal policies presented within the RTS. These are:

- Policy RTS30 - Travel Information;
- Policy RTS31 - Public Consultation and Engagement; and
- Policy RTS32 - Aviation

F.6.2 The core assumptions and uncertainties listed in **Table F.1** have been considered when assessing the relevant policy measure(s) against all IIA objectives. Where assumptions or uncertainties are only relevant for the assessment of a policy measure against an individual IIA objective, this is instead noted within the IIA Matrix.

Table F.8: IIA of Communication and Engagement Policies – Assessment Matrix

IIA Objective	RTS30	RTS31	RTS32	Commentary
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	+	0	Assessment of Predicted Effects • RTS30 and RTS31 will help promote the use of more sustainable forms of travel, such as walking and cycling, through provision of travel information, education and through consulting with local stakeholders to provide schemes which meet the needs of local people. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • It is considered that RTS32 is likely to have a Neutral impact on this IIA objective. RTS32 aligns with RBC Rail Policy, which includes being in favour of investment and improvements to the North Downs Rail Line, and anticipated future investment in the Western Rail Link which may have limited positive health impacts due to decreased congestion, but this is likely to be limited. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
2. Safety and Security: Maintain and enhance safety and security (actual and perceived)	+	0	0	Assessment of Predicted Effects • Through the provision of travel advice and up to date travel information RTS30 supports people to make more informed and safer journeys (e.g., use cycle paths as opposed to cycling on roads), is therefore anticipated that this policy will have a Minor Positive effect on this IIA Objective. • RTS31 has a more limited impact on this objective, however it is acknowledged that public consultation could lead to comments and improvements to the safety of schemes, and educational activities can improve knowledge of safety and security amongst road users. It is therefore anticipated that this policy will have a Neutral effect on this IIA Objective. • It is considered that RTS32 is likely to have a Neutral impact on this IIA objective as this policy may have some limited impacts on increasing safer journey types if rail journeys are increased through lobbying and investment opportunities. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
3. Equality and Social Inclusion: Reduce poverty and inequality in society, tackle social exclusion and promote community cohesion	+	+	~	Assessment of Predicted Effects • RTS30 will provide travel planning services and information that is accessible to all users. RTS31 commits to making improvements to enable all members of the public to participate which may positively benefit those who are e.g., less able bodied or do not speak English to access and comment on schemes and strategies. It is therefore anticipated that these policies will have a Minor Positive effect with this IIA Objective.

IIA Objective	RTS30	RTS31	RTS32	Commentary
				• There is No Clear Relationship between RTS32 for this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. • RTS31 would further benefit from focusing educational initiatives on groups or neighbourhoods in greater need of these. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
4. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities, and social activities.	++	+	~	Assessment of Predicted Effects • RTS29 will provide travel planning services and information to help improve the accessibility of the transport network, including via more sustainable options. It is therefore anticipated that this will have a Significant (Major) Positive effect on this IIA Objective. • RTS30 commits to making improvements to enable all members of the public to participate in public engagement, which can help increase the accessibility of transport systems to a wider range of users by allowing them an opportunity to be heard and input into schemes. It is therefore anticipated that this will have a Minor Positive effect on this IIA Objective. • There is No Clear Relationship between RTS32 for this IIA Objective, particularly given the lack of detail on technological innovations. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
5. Employment and Skills: Support increased and more inclusive employment by enabling investment in key economic sectors, the delivery of key employment sites and by improving access to educational opportunities	+	0	?	Assessment of Predicted Effects • RTS30 supports providing travel planning for workplaces and key destinations (which is likely to include education providers) which will help increase the accessibility of employment and education services through increased awareness of travel options. Improved travel information can also help encourage a reduction in private car travel through providing other more sustainable options, helping free up highway capacity to provide new development. It is therefore anticipated that this policy will have a Minor Positive effect on this IIA Objective. • RTS31 has the potential to improve schemes and access to services through comments from the public, however this is likely to have a lesser impact. It is therefore anticipated that this policy will have a Minor Positive effect on this IIA Objective. • RTS32 currently has an Uncertain impact on this IIA objective. There is potential for increased employment both associated with rail investment and new technologies but as it currently stands this is unclear. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
6. Material assets: Manage, maintain and where possible improve the efficient and effective use of natural resources and infrastructure to meet identified needs.	+	+	0	Assessment of Predicted Effects • RTS30 will help support the more efficient use of existing infrastructure though increased provision of transport information and RTS31will help create more effective transport scheme thought involving the public in the process and design. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • It is considered that RTS32 is likely to have a Neutral impact on this IIA objective as if this policy increases use of existing rail infrastructure. Unmanned Aerial Vehicles (UAV's) and drones are unlikely to have an impact on RBCs material asserts and natural resources but have implications for wider material assets outside both Reading and England which are outside the scope of this IIA.

IIA Objective	RTS30	RTS31	RTS32	Commentary
				Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
7. Productivity and Competitiveness: Deliver an integrated transport system which facilitates the efficient movement of people and freight to increase economic prosperity.	++	+	?	Assessment of Predicted Effects • RTS30 supports increased provision of travel information to help people travel more efficiently and to help encourage a reduction in private car travel through providing other more sustainable options. This can help reduce congestion on the existing highways network and help improve the transport of freight. It is therefore anticipated that this policy will have a Significant (Major) Positive effect on this IIA Objective. • RTS31 has the potential to improve schemes and encourage uptake in more sustainable forms of travel through public involvement, however this is likely to have a lesser impact. It is therefore anticipated that this policy will have a Minor Positive effect on this IIA Objective • RTS32 has an Uncertain outcome regarding productivity and competitiveness. This is because of the lack of certainty regarding investment and detailed design coming forward in the North Downs Rail Line, the proposed Western Rail Link and Project Skyway (a 165-mile drone superhighway). Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
8. Air quality and amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration	++	+	?	Assessment of Predicted Effects • Generally, these measures support a move to more sustainable forms of transport through improvements to transport information availability and also through understanding public opinion and needs to create better transport systems that are more likely to be used by the public. However, RTS30 is likely to have a less direct effect and public opinion may not support the transition to more sustainable modes of transport in some areas (e.g. through reallocating road capacity away from private cars). These measures can therefore help reduce emissions and support improvements to air quality. It is therefore anticipated that RTS29 will have a Significant (Major) Positive effect on this IIA Objective and RTS30 will have a Minor Positive effect. • RTS32 has an Uncertain outcome regarding air quality and amenity. This is because of the lack of certainty regarding investment and detailed design coming forward in the North Downs Rail Line, the proposed Western Rail Link and Project Skyway (a 165-mile drone superhighway). Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
9. Sustainable placemaking: Maximise the efficient use of land, enhance urban design quality, protect, and enhance the significance, special interest and character of heritage assets and their settings.	+	+	~	Assessment of Predicted Effects • RTS30 will encourage a transition to more sustainable forms of transport, helping reduce private car travel and congestion which will help make more efficient use of existing infrastructure, enhance the setting of heritage assets through reductions in local traffic and create community vitality through increased social interaction. RTS31 will help create schemes which are of better quality and reflect the views of the public through allowing them to engage in their development. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective.

IIA Objective	RTS30	RTS31	RTS32	Commentary
				• There is No Clear Relationship between RTS32 for this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
10. Climate change mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	++	+	?	Assessment of Predicted Effects • Generally, RTS30 supports a move to more sustainable forms of transport through improvements to information availability and also through understanding public opinion and needs to create better transport systems that are more likely to be used by the public. However, RTS31 is likely to have a less direct effect and public opinion may not support the transition to more sustainable modes of transport in some areas (e.g., through reallocating road capacity away from private cars). These measures can therefore help reduce carbon emission and help reduce impacts on climate change. It is therefore anticipated that RTS30 will have a Significant (Major) Positive effect on this IIA Objective and RTS30 will have a Minor Positive effect. • RTS32 has an Uncertain outcome regarding climate change mitigation. This is because of the lack of certainty regarding investment and detailed design coming forward in the North Downs Rail Line, the proposed Western Rail Link and Project Skyway (a 165-mile drone superhighway). Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
11. Biodiversity, geodiversity, and soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, and habitats and by protecting green infrastructure.	0	0	~	Assessment of Predicted Effects • Generally, RTS30 and RTS31 support a move to more sustainable forms of transport through improvements to information availability and also through understanding public opinion and needs to create better transport systems that are more likely to be used by the public. This can help reduce disturbance to biodiversity associated with air and noise pollution, however effects are likely to be limited. It is therefore anticipated that these policies will have a Neutral effect on this IIA Objective. • There is No Clear Relationship RTS32 and this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**
12. Water, flood risk and resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst improving climate resilience and reducing the risk of flooding.	~	~	~	Assessment of Predicted Effects • There is No Clear Relationship RTS30 – RTS32 and this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**

IIA Objective	RTS30	RTS31	RTS32	Commentary
13. Landscape and townscape: Protect and enhance the landscape character, townscape character and visual amenity.	+	+	~	Assessment of Predicted Effects • RTS29 will encourage a transition to more sustainable forms of transport, helping reduce private car travel and congestion which can help enhance landscape and townscape character through reductions in traffic. RTS30 will help create schemes which are of better quality and reflect the views of the public through allowing them to engage in their development. It is therefore anticipated that these policies will have a Minor Positive effect on this IIA Objective. • There is No Clear Relationship RTS32 and this IIA Objective. Mitigation and Enhancement • No significant effects have been identified and so no mitigation measures are required. Assumptions • See core assumptions outlined in **Table F.2** Uncertainties • See core uncertainties outlined in **Table F.2**

Appendix G HUDU Rapid Assessment of RTS

Appendix G HUDU Rapid Health Impact Assessment

Overview

G.1.1 This appendix to the IIA Report provides an overall assessment of the health impacts likely to arise from the implementation of the Reading Transport Strategy 2040 ('the RTS') as a whole. At this stage the RTS has been subject to a proportionate level of Health Impact Assessment (HIA) to identify likely impacts on the key determinants of health. The assessment has been undertaken for the RTS as a whole and owing to linkages between individual components of the plan in relation to tackling key health issues, the HIA has not assessed proposed policies or schemes on an individual basis. However, where specific components contribute to the assessment findings these are noted.

G.1.2 The HIA has been undertaken by applying the NHS Healthy Urban Development Unit (HUDU) Rapid HIA Assessment Tool (2019) insofar as relevant to the context and nature of the RTS. This tool provides a checklist which has been adapted as necessary to undertake a proportionate HIA of the RTS, as a plan which once adopted will support the delivery of the new spatial strategy set out within the adopted Reading Local Plan (2019) rather than being an individual proposed development. Some themes within the HUDU Rapid HIA Assessment Tool are not relevant to the RTS and have therefore been excluded as they are concerned with non-transport related aspects of development. These are:

- **Housing quality and design** – This relates to housing provision; and,
- **Access to healthy foods** – This relates to factors such as the provision allotments and proximity of dwellings to food stores/outlets.

G.1.3 Furthermore, a number of questions within the checklist have no relation to the scope and content of the RTS. Where this is the case, these are clearly indicated within the assessment tables.

G.1.4 The assessment is provided in **Table G.1 – G.9** below.

HUDU Rapid Health Impact Assessment Matrix

G.1.5 The assessment matrix[1] below is based on the HUDU Rapid Health Impact Assessment Matrix (2019) and is designed to rapidly assess the likely health impacts of development plans and proposals. This template has been modified to include the final column 'Related Polices and Schemes' to clearly demonstrate which elements of the RTS have informed the potential health impact assigned.

G.1.6 The matrix does not identify all issues related to health and wellbeing but rather focuses on the wider determinants of health with the potential to be directly or indirectly influenced by planning decisions.

G.1.7 The assessment matrix identifies eleven topics or broad determinants. Each assessment criterion is assessed for relevance. If identified as a relevant criterion, then details and evidence

[1] Rapid Health Impact Assessment Matrix, *Self-completion Form*, NHS London Healthy Urban Development Unit, October 2019 available online https://www.healthyurbandevelopment.nhs.uk/wp-content/uploads/2019/10/HUDU-Rapid-HIA-Tool-October-2019.pdf

are provided regarding this element (this includes consideration of potential impacts on any particular vulnerable groups). The potential for this health impact to be positive, negative, neutral, or uncertain is then assessed. The HUDU guidance advises that where a likely adverse or negative impact from a proposal on a key determinant of health is identified mitigation measures should be recommended to address this. Similarly, enhancement measures should be recommended to maximise the positive health impacts of the plan or project under consideration. As detailed in **Section 5** of the IIA Report, in advance of preparing the finalised version of the RTS an independent review carried out by Stantec of the plan was undertaken and a suite of IIA recommendations were developed. Suitable amendments have since been made to the RTS to address previously identified uncertainties and to improve the clarity of the document. The incorporation of all IIA recommendations (as per **Table 5.1**) means no further measures are presently considered to be required to mitigate likely significant adverse effects (none predicted), although it is always the case that further IIA enhancement measures could still be developed and applied.

Table G.1: Access to healthcare services and other social infrastructure

Assessment criteria	Relevant?	Details/evidence	Potential health impact	Recommended mitigation or enhancement actions	Related Policies and Schemes
1) Does the proposal retain or re- provide existing social infrastructure?	N/A – This is not within the scope of the RTS.	-	-	-	
2) Does the proposal assess the impact on health and social care services and has the local NHS been contacted?	N/A – This is not within the scope of the RTS. The NHS have not been contacted as part of this assessment.	-	-	-	
3) Does the proposal include the provision, or replacement of a healthcare facility and does the facility meet NHS requirements?	N/A – This is not within the scope of the RTS.	-	-	-	
4) Does the proposal assess the capacity, location, and accessibility of other social infrastructure (e.g., Primary, secondary and post-19 education needs and community facilities)?	Yes	The RTS identifies policies and schemes to help increase access to social infrastructure (such as schools and health care facilities). This is underpinned by RTS1. A range of transport modes are considered, such as demand-responsive buses, micro-mobility vehicles and pedestrian routes which aim to make the area more accessible and less congested, as well as the inclusion of the delivery of mobility hubs to integrate multiple modes of transport. Increased access to opportunities for socialisation can be a wider determinant in reducing the prevalence of social isolation and loneliness. This includes RTS3 which makes a specific commitment to designing accessible and inclusive schemes (RTS3). Specific policies, primarily RTS5 (but also RTS1) supports approaches that will encourage schools, business, and	Positive	N/A	▪ Policy RTS1 – Sustainable Transport ▪ Policy RTS3 – Equality and Inclusivity ▪ Policy RTS5 – Sustainable Modes of Travel to School ▪ RTS8 – Bus and Community Transport ▪ Policy RTS11 – Waterways ▪ Policy RTS16 – Rights of Way

Assessment criteria	Relevant?	Details/evidence	Potential health impact	Recommended mitigation or enhancement actions	Related Policies and Schemes
		organisations to develop travel plans encouraging increased accessibility by a range of transport means. Additionally, RTS5 in reference to schools, supports commitments to joining national travel accreditation programmes such as Modeshift STARS, Bikeability and School Streets and monitoring the impact of these. RTS8 also outlines a commitment to working with health services, adult social care services and communities to deliver accessible public transport services, which have a focus on societal needs such as tackling loneliness. RTS11, RTS16 and RTS28 all highlight the RTS aim of providing a range of transport services (including via waterways, walking, and cycling and mobility services) that van increase the accessibility of a variety of community services. Active Travel schemes aim to deliver safer and more connected links between key school sites, strategic locations, and residential areas. For school, particularly schemes include AT9 and AT10.			▪ Policy RTS28 – Mobility Services and Sharing Economy ▪ Scheme BC2 – Concessionary and Discounted Travel ▪ Scheme BC3 – Community Transport ▪ Scheme BC4 – Demand Responsive Transport ▪ Schemes PR1-PR3 – Park and Ride Mobility Hubs ▪ Scheme AT2 – Strategic Pedestrian Routes ▪ Scheme AT3 – Local Pedestrian Routes ▪ Scheme At 4 – Strategic and Town Centre Cycle Routes ▪ Scheme AT8 – Local Cycle Routes ▪ Scheme AT9 – Sustainable and Safer Travel to School ▪ Scheme AT10 – Play and School Street Programme ▪ Scheme AT 11 – Cycle Parking Hubs and Facilities

Assessment criteria	Relevant?	Details/evidence	Potential health impact	Recommended mitigation or enhancement actions	Related Policies and Schemes
					▪ Scheme AT12 – Micro-Mobility Hire Scheme
5) Does the proposal explore opportunities for shared community use and co-location of services?	Yes	Schemes such as PR1-PR3 Park and Ride Mobility Hubs aim to provide 'green mobility hubs' that support the circular economy with co-located community uses such as travel information stations, parcel collections, recycling and waste points, household good refill stations, food share-house / community fridges, repair cafes and re-use shops. Cycle parking hubs and facilities will provide secure, sheltered hubs at transport interchanges. Communal safe and secure cycle storage will be provided in residential areas that currently do not have any provision. Micro-mobility hubs will provide increase access to jobs, education, and leisure by enhancing connectivity with other transport options. Micro-mobility hubs also provide access to people who may not own a bicycle, e-bike, or e-scooter. The provision of electric vehicle charging points in residential areas without off street parking and in public car parks or at potential local amenity sites would provide enhanced access to charging points for the community.	Positive	N/A	Scheme PR1-PR3 – Park and Ride Mobility Hubs Scheme AT11 – Cycle Parking Hubs and Facilities Scheme AT12 – Micro-Mobility Hire Scheme Scheme NM4 – EV Charging

Table G.2: Access to open space and nature

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
6) Does the proposal retain and enhance existing open and natural spaces?	Yes	RTS2 outlines a specific commitment to designing schemes which improve both the built and natural environment and embed the consideration of whole life carbon. RTS11, regarding the waterways, states that there is a recognition of the need for consideration of impacts on the environment adjacent to the waterways and RTS14 specifies that access to parks and public open spaces for walking and cycling for leisure will be maintained and enhanced. This suggests that retaining and enhancing existing natural spaces will be considered within proposals. Both policies RTS13 and RTS19 regarding street design and maintenance also demonstrate that existing open and natural spaces will be prioritised through approaches such as healthy streets which relate to the provision of green infrastructure. A number of schemes involve spatial land take on greenfield sites on the edge of Reading. However, the land take of the interventions is generally limited and is subject to funding. The proposal has a strong focus on upgrading and improving existing public and private spaces within Reading, including in relation to access to green space and networks. Therefore, taking into account compliance with the Local Plan and other planning requirements it is expected that any proposals which require land take will endeavour to enhance the natural environment.	Positive	N/A	▪ Policy RTS2 – The Environment and Climate ▪ Policy RTS11 – Waterways ▪ Policy RTS13 – Healthy Streets ▪ RTS 14 - Walking and CyclingPolicy RTS19 – Streetworks ▪ Scheme MM4 – Cross Thames Travel ▪ Schemes MM2-MM3 – Multi-Modal Enhancements (IDR and Oxford Road) ▪ Schemes PR1-PR3 – Park and Ride Mobility Hubs ▪ Scheme AT1 – Town and Local Centre Public Space Enhancements ▪ Scheme AT11 – Cycle Parking Hubs and Facilities
7) In areas of deficiency, does the proposal provide new open or natural space, or improve access to existing spaces?	Yes	RTS will generally help improve access within and around Reading, including via public transport, walking and cycling. This can help enable residents to better access facilities (e.g., local parks), or travel from the city centre to more rural, green areas on the outskirts of Reading. Specific policies which support this include RTS8, RTS7 and	Positive	N/A	▪ Policy RTS8 – Bus and Community Transport ▪ PolicyRTS7 -Public Transport ▪ Policy RTS11 - Waterways

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
		RTS13. As well as RTS11 which supports increasing access to the waterways. Increasing access to open space can also boost levels of physical activity and reduce obesity by providing people with more convenient opportunities and pleasant spaces to exercise outside, this is particularly beneficial given the incidence of obesity and physical inactivity in Reading. There is potential for some disruption to PRoW's and public transport routes during the construction phase of some of the built interventions, which may restrict access to natural spaces (e.g., MM4 Cross Thames Travel, AT2 Strategic and Local Pedestrian Routes, and AT5-AT7 Shinfield Rd/Bath Rd/Castle Hill/Lond Road Active Travel Improvements). However as only indicative locations are known at present it is not clear what effect this will have.			▪ Policy RTS13 – Healthy Streets Policy RTS11 – Waterways ▪ Policy RTS16 – Rights of Way ▪ Schemes MM1-MM5 – Multi-Modal Transport schemes ▪ Schemes AT1-AT12 – Active Travel schemes ▪ Schemes BC1-BC5 - Public Transport Schemes: Behaviour Change and Shared Services ▪ Schemes FT1-FT2 – Public Transport Schemes: Fast Track Public Transport Corridors and Bus Corridors
8) Does the proposal provide a range of play spaces for children and young people?	Yes	Whilst the RTS does not actively seek to provide play spaces for children and young people, the provision of such spaces may occur as outcomes of some of these schemes and policies, notably RTS13. Traffic control, access to school streets and spaces, and the provision of PRoW's (RTS16) may open up space, or access to space, for play.	Positive	N/A	▪ RTS13 - Healthy Streets ▪ RTS16 - Rights of Way ▪ Schemes PR1-PR3 – Park and Ride Mobility Hubs ▪ Scheme AT3 – Local Pedestrian Routes ▪ Scheme AT8 – Local Cycle Routes ▪ Scheme AT9 – Sustainable and Safer Travel to School ▪ Scheme AT10 – Play and School Street Programme

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
9) Does the proposal provide links between open and natural spaces and the public realm?	Yes	The RTS will generally help improve access within and around Reading. This includes links between open and natural spaces, and the public realm, which can help residents to better access facilities that will benefit their health and wellbeing outcomes (e.g., travel to local parks, travel from the city centre to more rural, green areas on the outskirts of Reading, as well as social infrastructure in the town centre). This is emphasized in RTS15 which includes developing a comprehensive wayfinding system. There is potential for some disruption to PRoW's and public transport routes during the construction phase of some of the built interventions which may restrict access to natural spaces (e.g., impact on the Cross Thames Travel on access to the Thames Path). However as only indicative locations are known at present it is not clear what effect this will have.	Positive	N/A	▪ Policy RTS15 – High Quality Public Space ▪ Schemes MM1-MM6 – Multi-Modal Transport schemes ▪ Schemes AT1-At12 – Active Travel schemes ▪ Schemes BC1-BC5 - Public Transport Schemes: Behaviour Change and Shared Services ▪ Schemes FT1-FT2 – Public Transport Schemes: Fast Track Public Transport Corridors and Bus Corridors
10) Are the open and natural spaces welcoming and safe and accessible for all?	Yes	The RTS commits to removing transport-related barriers, which will support all individuals in accessing open and natural spaces in a way that is welcoming and safe (RTS3). The RTS sees that schemes and policies will consider and mitigation against inequitable impact on individuals with protected characteristics through Policy RTS3. Policies and schemes which incorporate support for active and sustainable travel across all groups will encourage individuals to uptake these modes of access to open and natural spaces (RTS14 and RTS16). Measures will also work to help improve accessibility and the safety of public realm areas and transport facilities, including train stations and the highway network (RTS15 and RTS18).	Positive	N/A	▪ Policy RTS3 - Equality and Inclusivity ▪ Policy RTS14 – Walking and Cycling ▪ Policy RTS15 - High-Quality Public Space ▪ Policy RTS16 – Rights of Way ▪ Policy RTS18 - Road Safety ▪ Scheme PR1 – Mereoak Park and Ride Expansion ▪ Scheme PR2 – Winnersh Triangle Park and Ride Enhancements

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
					▪ Scheme PR3 – Park and Ride Mobility Hubs ▪ Scheme AT12 – Micro-Mobility Hire Scheme ▪ Scheme AT1 – Town and Local Centre Public Space Enhancements ▪ Scheme AT8 – Local Pedestrian Routes ▪ Scheme AT8 – Local Cycle Routes
11) Does the proposal set out how new open space will be managed and maintained?	N/A – This is not within the scope of the RTS.	-	-	-	-

Table G.3: Air Quality, noise and neighbourhood amenity

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
12) Does the proposal minimise construction impacts such as dust, noise, vibration, and odours?	Not relevant	-	-	It is expected that any projects requiring planning consents and construction will follow all relevant guidance and standards, including the implementation of tried and tested control measures as outlined in Construction Environmental Management Plans (CEMP), as appropriate.	-
13) Does the proposal minimise air pollution caused by traffic and energy facilities?	Yes	Overall, it is expected that RTS will have a positive impact on reducing air pollution through encouraging a reduction in the reliance on private car use by providing new and improved rail, bus, micro-mobile and pedestrian infrastructure, and services, as well as demand management strategies. It will also help increase the use of electric vehicles by increasing provision of available charging points and associated parking. These measures will act to help improve air quality in Reading. Multiple policies within the RTS reference improvements to air quality as key components of underlying the policy commitment. This includes RTS2, RTS13, RTS14. Additionally, policies RTS21 and RTS22 include improving air quality as an outcome of the enforcement of these policies. Some of the transport interventions may result in a level of induced traffic as they increase capacity on the road network which would limit the potential improvements to air quality in the longer-term as well as introducing potential air pollution effects into a new greenfield area. However, taken overall given policies to use greener, less polluting vehicles through policies such as RTS29, RTS7 and RTS10 it	Positive	N/A	▪ Policy RTS2 - The Environment and Climate ▪ Policy RTS13 – Healthy Streets ▪ Scheme MM4 – Cross Thames Travel ▪ Scheme MM6 – Demand Management ▪ Scheme FT1 – South Reading Bus Rapid Transit ▪ Scheme FT2 – Bus Rapid Transit Corridors ▪ Schemes PR1-3 – Park and Ride Mobility Hubs ▪ Schemes AT1-AT12 – Active Travel schemes ▪ Schemes NM1-NM8 – Network and Demand Management Schemes

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
		is expected that the RTS will have a positive impact on this criterion overall.			▪ Policy RTS14 – Walking and Cycling ▪ Policy RTS21 – Enforcement ▪ Policy RTS22 – Demand Management ▪ Policy RTS29 – Ultra-low emission vehicles ▪ Policy RTS7 – Public Transport ▪ Policy RTS10 – Taxis
14) Does the proposal minimise noise pollution caused by traffic and commercial uses?	Yes	Overall, it is expected that RTS will have a positive impact on reducing noise pollution through encouraging a reduction in reliance on private car use by providing new public transport, cycling and pedestrian infrastructure and services (RTS1, RTS7, RTS8, RTS9). It will also help increase the use of electric vehicles by increasing provision of available charging points (RTS29). These measures will act to help reduce noise pollution in Reading. There may however be some negative noise impacts to those located in proximity to existing and proposed highway and rail routes where there are new or increased frequency of buses and trains (RTS23). This would need to be assessed at an individual scheme level and negative effects are likely to be mitigated. Furthermore, given the direction of the RTS to reduce reliance on the private car it is expected that overall levels of noise pollution may decrease.	Positive	N/A	▪ Policy RTS8 – Bus and Community Transport ▪ Policy RTS7 -Public Transport ▪ Policy RTS9 – Rail ▪ Policy RTS19 – Streetworks ▪ Policy RTS17 Network Management ▪ Policy RTS23 – Freight and Sustainable Distribution ▪ Policy RTS29 – Ultra-Low Emission Vehicles ▪ Schemes MM1-MM6 – Multi-modal Transport schemes

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
					▪ Schemes BC1-BC5 – Public Transport: Behaviour Change and Shared Services ▪ Schemes FT-FT2 – Public Transport: Fast Track Public Transport Corridors and Bus Corridors ▪ Schemes PR1-PR3 – Public Transport: Park and Ride Mobility Hubs ▪ Schemes RS1-RS3 – Public Transport: Railway Stations ▪ Schemes AT1-AT12 – Active Travel ▪ Schemes NM1-NM8 – Network Management

Table G.4: Accessibility and active travel

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
15) Does the proposal address the ten Healthy Streets indicators?	Yes	The RTS' Active Travel schemes are guided by the Healthy Streets principles, which are also incorporated into RBC's Local Cycle and Walking Infrastructure Plan (LCWIP)[2]. Policy RTS13 directly supports the creation of Healthy Streets within Reading, in line with the London Healthy Streets principles. In addition to this, other policies indirectly support Healthy Streets principles through improvements to air quality, providing rest areas, improved crossings, walking and cycling links and safety improvements and initiatives (including policy RTS14, RTS15 and RTS16).	Positive	N/A	▪ Policy RTS13 - Healthy Streets ▪ Policy RTS14 – Walking and Cycling ▪ Policy RTS15 - High-Quality Public Space ▪ Policy RTS16 – Rights of Way ▪ Schemes AT1-AT12 – Active Travel schemes ▪ Scheme CE3 – Training, Education, and Initiatives
16) Does the proposal prioritise and encourage walking, for example through the use of shared spaces?	Yes	The RTS will provide new routes to help reduce severance between different areas making walking a more appealing option and designing schemes which incorporate a hierarchy of safe walking and cycling routes (RTS1, RTS14, RTS15, RTS16, RTS18). The RTS also outlines interventions that will provide improvements to current pedestrian facilities (including the urban realm and road crossings). Measures within the RTS will also help increase the use of public transport. This will help make walking a part of active travelling e.g., walking to and from bus stops and bus/rail stations (Policy RTS5).	Positive	N/A	▪ Policy RTS1 – Sustainable Transport ▪ Policy RTS15 – High Quality Public Space ▪ Policy RTS14 – Walking and Cycling ▪ Policy RTS16 – Rights of Way ▪ Policy RTS18 - Safety ▪ Policy RTS5 – Sustainable Modes of Travel to School

[2] Local Cycling and Walking Infrastructure Plan - Reading Borough Council

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
		Policy measures also support provision of appropriate travel information (RTS30) to help residents and visitors make sustainable travel choices.			▪ Policy RTS30 – Travel Information. ▪ All Active Travel schemes and policies ▪ All Public Transport schemes and policies ▪ All Communication and Engagement schemes and policies
17) Does the proposal prioritise and encourage cycling, for example by providing secure cycle parking, showers, and cycle lanes?	Yes	The RTS will help support and promote cycling as a means of travelling in Reading through provisions of new local and strategic routes which will help connect key areas and be designed to be inclusive and to national standards (RTS1, RTS14). RTS14 also includes the provision that high quality, secure cycle parking will be delivered. Improvements to existing routes are also implemented as schemes in the RTS (AT5-7 Active Travel Improvements. Interventions will also include provision of more secure cycle parking at transport interchanges and in residential areas to reduce incidences of theft (AT11 Cycle Parking Hubs and Facilities). Cycle and other micro-mobile vehicle hire schemes will also be provided at key locations to help encourage people to cycle or use other micro-mobile vehicles as part of their journey (AT12 Micro-Mobility Hire Schemes).	Positive	N/A	▪ Policy RTS1 – Sustainable Transport ▪ Policy RTS14 - Walking and Cycling ▪ Scheme AT1 – Strategic and Town Centre Cycle Routes ▪ Scheme AT5 – Shinfield Rd Active Travel Improvements ▪ Scheme AT6 – Bath Rd/Castle Hill Active Travel Improvements ▪ Scheme AT7 – London Road Active Travel Improvements ▪ Scheme AT8 – Local Cycle Routes ▪ Scheme AT9 – Sustainable and Safer Travel to School ▪ Scheme AT11 – Cycle Parking Hubs and Facilities

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
					▪ Scheme AT12 – Micro-Mobility Hire Scheme ▪ Policy RTS5 – Sustainable Modes of Travel to School ▪ Scheme MM4 – Cross Thames Travel
18) Does the proposal connect public realm and internal routes to local and strategic cycle and walking networks?	Yes	The RTS will help bridge the gap between current walking and cycling links (both local and strategic) supported by Policy RTS14, and help reduce severance between different areas of Reading, making it more convenient and direct to travel by walking or cycling e.g., east Caversham and east Reading. A number of schemes including AT1-AT12 provide enhanced public realm and connections to local and strategic networks for walking and cycling. MM4 Cross Thames Travel provides strategic links and other multi-modal schemes such as MM2, MM3 and MM5 will enhance connections.	Positive	N/A	▪ Policy RTS14 – Cycling and Walking ▪ Policy RTS15 – High-Quality Public Space ▪ Schemes AT1-AT12 – Active Travel ▪ Scheme CE3 - Training, Education, and Initiatives ▪ Scheme MM4 - Cross Thames Travel
19) Does the proposal include traffic management and calming measures to help reduce and minimise road injuries?	Yes	The RTS identifies measures to improve the public realm and crossings to travel safer for vulnerable road users such as pedestrians and cyclists (RTS18, RTS13, RTS14, RTS15). In addition to this it proposes a range of measures to better manage traffic (RTS22) and highways, including through the use of new technology (RTS27). Network Management and active travel schemes will deliver traffic calming measures including upgrades to traffic signals, road space re-allocation to improve active travel, and improved junction and pavement layouts to enhance road safety. See NM3 Road Safety Schemes in particular which includes an array of traffic calming and safety measures	Positive	N/A	▪ Policy RTS13 - Healthy Streets ▪ Policy RTS14 - Cycling and Walking ▪ Policy RTS15 - High-Quality Public Space ▪ Policy RTS18 - Road Safety ▪ Policy RTS22 – Demand Management ▪ Policy RTS27 - Smart City Approach

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
		that aim to encourage walking, cycling and public transport use.			▪ Schemes AT1-AT12 ▪ Schemes NM1-NM8 – Network Management ▪ Scheme CE3 – Training, Education, and Initiatives
20) Is the proposal well connected to public transport, local services, and facilities?	Yes	The RTS aims to help improve the functioning and efficiency of the transport network to allow people to better access a range of services and facilities, both locally within Reading and the wider region, including the provision of mobility hubs (RTS1). All other policies within the RTS support the overall improvement in public transport in relation to the experience of the user and the standard of infrastructure provided. The plan supports a transition to more sustainable forms of transport, including public transport services such as bus and rail through direct improvements to interchanges and provision of new hubs (e.g., Green Park Station) and improvements to services and routes (e.g., Schemes FT1 and FT2: Fast Track Public Transport Corridors). In addition to this, it also supports the provision of shared travel options to users who are located away from public transport links or are less mobile and have difficulty using standard public transport services.	Positive	N/A	▪ Policy RTS1 - Sustainable Transport ▪ Policy RTS1 – RTS32 ▪ Multi-Modal Transport schemes
21) Does the proposal seek to reduce car use by reducing car parking provision, supported by the controlled parking zones, car clubs and travel plans measures?	Yes	The RTS generally supports reductions in use of private cars and a transition to more sustainable forms of transport. This is supported by RTS20 which includes the provision to review the location of parking across the borough and manage this across new developments to influence sustainable travel choices. rRTS4 which ties in	Positive	N/A	▪ Policy RTS20 – Parking ▪ Policy RTS4 – Development Control ▪ Policy RTS21 – Enforcement ▪ Policy RTS22 - Demand Management

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
		requirements regarding new developments and parking spaces, including blue badge spaces. Demand management measures for the overall network are included within the RTS (RTS22, RTS29). These measures potentially introduce financial incentives to reduce car travel in congested areas within Reading through the implementation of Clean Air Zones and Road User Charging. However, it is important to note that this will need to be implemented in conjunction with RTS3 Equality and Inclusivity and take account of potential inequitable outcomes in implementation. Personalised travel planning may also be included as part of travel education programmes (RTS1, RTS RTS30). Policy interventions also promote continued enforcement of parking restrictions.			▪ Policy RTS29 – Ultra-low Emission Vehicles ▪ Policy RTS 3 – Equality and Inclusivity ▪ Policy RTS1 – Sustainable Transport ▪ Policy RTS5 – Sustainable Modes of Travel to School ▪ Policy RTS30 – Travel Information ▪ Schemes PR1-PR3: Park and Ride Mobility Hubs ▪ Scheme NM2 – Parking Schemes and Management scheme
22) Does the proposal allow people with mobility problems or a disability to access buildings and places?	Yes	The RTS will introduce a number of improvements to current services and infrastructure to make it accessibility for those who are less able bodied and provide, including upgrades to railway stations, provision of public and community transport schemes and improvements to high-quality public realm (RTS1, RTS8, RTS9, RTS15) Additionally, RTS14 Walking and Cycling specifically references the need to design walking and cycling infrastructure to accommodate all users where feasible including wheelchair users, adapted cycles, those who are visually impaired and cycles with trailers, and that schemes will be in line with relevant national guidance.	Positive	N/A	▪ Policy RTS1 – Sustainable Transport ▪ Policy RTS8 – Bus and Community Transport ▪ Policy RTS9 - Rail ▪ Policy RTS14 – Walking and Cycling ▪ Policy RTS15 – High Quality Public Space ▪ Policy RTS3 - Equality and Inclusivity ▪ Policy RTS28 – Mobility Services and Sharing Economy

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
		Policies within the RTS also make a commitment to undertaking Equalities Impact Assessment (EqIA) as part of the implementation of any new policy or scheme to see that this does not disadvantage groups with protected characteristics, including those with mobility issues (RTS3). This will be relevant when considering schemes within RTS28 Mobility Services and Sharing Economy and RTS16 Rights of Way. It is noted that Demand Management measures have the potential to negatively impact users who are less mobile and need to use private cars to access facilities or services that may be located within the areas in which demand management measures are implemented; however, there is a commitment to undertake EqIA prior to the implementation of such zones.			▪ Policy RTS16 – Rights of Way ▪ Policy RTS22 - Demand Management ▪ Scheme BC2 – Concessionary and Discounted Travel Scheme ▪ Scheme BC3 – Community Transport ▪ Scheme BC4 – Demand Responsive Transport ▪ Scheme RS2 – Reading West Station Upgrade ▪ Scheme RS3 – Tilehurst Station Upgrade Town and Local Centre Public Space Enhancements

Table G.5: Crime reduction and community safety

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
33) Does the proposal incorporate elements to help design out crime?	Yes	The RTS has identified measures to reduce fear of crime and incidences of cycle theft at transport interchanges and residential areas through provision of secure parking and lockers (AT11). In addition, improvements to existing facilities (e.g., railway stations) are proposed to help increase safety and reduce fear of crime. This is also supported by the creation of healthy streets which supports the provision of space in which people feel safe (RTS13). RTS14 also includes the provision of high quality secure cycling parking and RTS21 supports working with the police to enforce transport issues currently outside RBC's control, such as the illegal use of footways by powered vehicles.	Positive	N/A	▪ Policy RTS13 - Healthy Streets ▪ RTS14 - Walking and Cycling ▪ RTS21 - EnforcementReading West Station Upgrade ▪ Cycle Parking Hubs and Facilities
34) Does the proposal incorporate design techniques to help people feel secure and avoid creating 'gated communities'?	Yes	The RTS has identified measures and policies to both improve the natural surveillance and security of current transport facilities and continue to provide maintained of highway assets such as street lighting which can help make users feel safer. The creation of healthy streets also supports the creation of space in which people feel safe (RTS13). Scheme AT11 Cycle Parking Hubs and Facilities, and enhancements to be delivered as part of rail station upgrades (RS1-RS3) will provide safe and secure cycle store at transport interchanges and in residential areas that do not have any provision. These will include safety features such as CCTV, lighting and in some places, there may be the potential for staffed security to provide reassurance at major hubs. Public realm enhancement will also help to create a secure community space.	Positive	N/A	▪ Policy RTS13 - Healthy Streets Policy RTS25 - Highways Asset Management ▪ RS1-RS3 – Public Transport: Rail Stations ▪ AT11 Cycle Parking Mobility Hubs and Facilities ▪ AT1: Town and Local Centre Public Space Enhancements
35) Does the proposal include attractive, multi-use	Yes	The RTS supports enhancements to and provision of new areas of high-quality public realm spaces (RTS15) and creation of	Positive	N/A	▪ Policy RTS2 - The Environment and Climate

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
public spaces and buildings?		healthy streets to provide spaces for people to meet and socialise (RTS13). Scheme RS1 will deliver public realm improvements as part of Reading Station Interchange Enhancements. High-quality materials, landscaping, and design to encourage social interaction will be delivered as part of scheme AT1, AT2, AT4 and NM1. Schemes such as PR1-PR3 Park and Ride Mobility Hubs aim to provide 'green mobility hubs' that support the circular economy with co-located community uses such as travel information stations, parcel collections, recycling and waste points, household good refill stations, food share-house / community fridges, repair cafes and re-use shops. Cycle parking hubs and facilities will provide secure, sheltered multi-use hubs at transport interchanges.			▪ Policy RTS13 - Healthy Streets Policy RTS15 - High-Quality Public Space ▪ Scheme AT1 – Town and Local Centre Public Space Enhancements ▪ Scheme AT2 – Strategic Pedestrian Routes ▪ Scheme AT4 – Strategic and Town Centre Cycle Routes ▪ Scheme NM1 – Neighbourhood and Highways Management
36) Has engagement and consultation been carried out with the local community and voluntary sector?	Yes	A wide range of consultation and engagement and consultation has been undertaken with residents and local stakeholders to inform the RTS. In addition, policies, and initiatives within the RTS support public engagement and increasing the accessibility of this to a wide range of users to see that views of the community are incorporated into the design and implementation of schemes and strategies (RTS31).	Positive	N/A	▪ Section 1 – Consultation and Engagement ▪ Policy RTS31 - Public Consultation and Engagement ▪ Scheme CE1 – Progress Reporting and Public Engagement

Table G.6: Access to work and training

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
37) Does the proposal provide access to local employment and training opportunities, including temporary construction and permanent 'end-use' jobs?	Yes	The RTS identifies measures and policies to help increase the access of employment areas in and around Reading via a range of transport modes to suit a range of user needs (RTS1). This is specifically referenced in RTS14 regarding improving walking and cycling linkages to places of employment, retail, and leisure. It is also likely that schemes within the RTS will require local employment during both in the construction and operation phases. Furthermore, RTS32 aims at lobbying for increased linkages to Gatwick and Heathrow airport which are employment hubs.	Positive	N/A	▪ Policy RTS1 – Sustainable Transport ▪ Policy RTS14 – Walking and Cycling ▪ Policy RTS32 - Aviation
38) Does the proposal provide childcare facilities?	N/A - This is not within the scope of the RTS.	-	-	-	-
39) Does the proposal include managed and affordable workspace for local businesses?	N/A - This is not within the scope of the RTS.	-	-	-	-
40) Does the proposal include opportunities for work for local people via local procurement arrangements?	N/A - This is not within the scope of the RTS.	-	-	Arrangements for local procurement are recommended to be discussed at scheme development stage as an enhancement.	-

Table G.7: Social cohesion and lifetime neighbourhoods

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
41) Does the proposal consider health inequalities by addressing local needs through community engagement?	Yes	A wide range of consultation and engagement has been undertaken with residents and local stakeholders to inform the RTS. RTS32 outlines the approach to public consultation and engagement where views of the local community can be taken into account and reflected in project approaches. Additionally, this policy outlines that evidence bases and technical assessments will be developed to support schemes which will enable local needs to be targeted. The RTS supports improvements in and around Reading. Specific spatial details are not provided for the majority of measures (e.g., new walking and cycling links) and so likely effects are uncertain, however it is anticipated that generally these will be located to meet identified needs, which are likely to include areas that are more deprived and are likely to suffer from poorer health.	Positive	N/A	▪ Policy RTS32 – Public Consultation and Engagement ▪ Scheme MM2 – Inner Distribution Road (IDR) Multi Modal Improvements ▪ Scheme CE1 – Progress Reporting and Public Engagement
42) Does the proposal connect with existing communities, i.e., layout and movement which avoids physical barriers and severance, and land uses and spaces which encourage social interaction?	Yes	The RTS overall aims to make Reading more accessible, connected, and easier to move around (RTS1). The RTS supports enhancements to and provision of new areas of high-quality public realm spaces (RTS15) and creation of healthy streets to provide spaces for people to meet and socialise (RTS13). It identifies a number of measures to help reduce severance between existing communities including schemes such as NM1	Positive	N/A	▪ Policy RTS1 – Sustainable Transport ▪ Policy RTS15 – High-Quality Public Realm ▪ Policy RTS13 – Healthy Streets

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
		which seeks to reduce highway pinch points and negative impacts that lead to community severance. This will be delivered via public transport and active travel prioritization, improved crossing points on key desire lines, reallocation of road spaces and the creation of small spaces for community amenity, socializing and planting. Other schemes that seek to enhance connections with existing communities include MM4 and MM5, and Active Travel schemes AT1-4 and AT8.			▪ Scheme NM1 – Neighbourhood and Highway Management ▪ Scheme AT1 – Town and Local Centre Public Space Enhancements ▪ Scheme AT2 – Strategic Pedestrian Routes ▪ Scheme AT 3 – Local Pedestrian Routes scheme ▪ Scheme AT4 – Strategic and Town Centre Cycle Routes ▪ Scheme AT8 - Local Cycle Routes scheme
43) Does the proposal include a mix of uses and a range of community facilities?	N/A - This is not within the scope of the RTS.	-	-	-	-
44) Does the proposal provide opportunities for the voluntary and community sectors?	Not Relevant	-	-	Consultation and involvement of VCSE's is recommended to enhance schemes as they progress.	-
45) Does the proposal take into account issues and	Yes	RTS3 supports the removal of barriers for users and provision of assistance to help provide a	Positive	N/A	▪ Policy RTS3 - Equality and Inclusivity

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
principles of inclusive and age-friendly design?		transport network which is accessible to a wide range of users, both in terms of physical infrastructure and affordability.			▪ Reading West Station Upgrade scheme ▪ Scheme RS3 – Tilehurst Station Upgrade scheme ▪ Scheme BC2 – Concessionary and Discounted Travel Scheme ▪ Scheme BC3 – Community Transport scheme ▪ Scheme BC4 – Demand Responsive Transport scheme

Table G.8: Minimising the use of resources

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
46) Does the proposal make best use of existing land?	Yes	The RTS identifies a range of improvements to be made to existing services and facilities including to rail stations, bus routes, junctions, and urban realm to help improve the transport network and increase capacity, specific land development would be in line with RTS4. The RTS also identifies measures to be provided on the outskirts of Reading which are likely to require land take however given the nature of the interventions land take is likely to be limited. Proposed policies also support improved use of existing infrastructure and assets, such as waterways (RTS15).	Positive	N/A	▪ Policy RTS4 Development Control ▪ Policy RTS15 – Waterways ▪ Scheme MM4 – Cross Thames Travel ▪ All Public Transport Schemes ▪ Schemes AT1-AT12 ▪ Scheme NM1 – Neighbourhood and Highways Management ▪ Scheme NM2 – Parking Schemes and Management ▪ NM5 – Car Clubs
47) Does the proposal encourage recycling (including building materials)?	Yes	The RTS does not directly identify measures to encourage recycling; however, it does promote a move to the sharing and circular economy which can help reduce use of materials and resource in the first instance. RTS2 outlines that the existing transport network will be adapted and that considerations regarding whole life carbon will be embedded including where feasible bringing forward projects that are in line with the embodied carbon reduction hierarchy.	Positive	N/A	▪ Policy RTS2 – The Environment and Climate Change ▪ Schemes MM1-MM6 – Multi-modal transport ▪ Schemes PR1-PR3 – Park and Ride Mobility Hubs ▪ All Public Transport schemes (FTPTC, Park and Ride, Railway Stations)

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
48) Does the proposal incorporate sustainable design and construction techniques?	Yes	The RTS includes policies and schemes which relate to creation of sustainable place e.g., through the creation through design and construction techniques under RTS2 and RTS26.	Positive	N/A	▪ Policy RTS2 – The Environment and Climate Change ▪ Policy RTS26 - Sustainable Drainage (SUDS) & Surface Water Management ▪ Schemes MM1-MM6 – Multi-modal transport ▪ All Public Transport schemes (FTPTC, Park and Ride, Railway Stations) ▪ All Active Travel policies and schemes

Table G.9: Climate change

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
49) Does the proposal incorporate renewable energy?	Yes	The RTS does not directly propose to provide renewable energy as this is outside its scope. It does, however, support measures to help decarbonise the transport sector (RTS10, RTS12 and RTS29). Policies and schemes support the uptake and use of electric vehicles (including cars and electrification of railways) which could potentially be powered by renewable energy from the grid.	Neutral	N/A	▪ Policy RTS10 - Taxis and Private Hire ▪ Policy RTS12 – Connected and Autonomous Vehicles ▪ Policy RTS29 Ultra-low Emission Vehicles ▪ Electric Vehicle Charging ▪ Park and Ride and Railway schemes
50) Does the proposal ensure that buildings and public spaces are designed to respond to winter and summer temperatures, i.e., ventilation, shading and landscaping?	Yes	The RTS supports the creation of healthy streets which notes that shading and landscaping should be incorporated (RTS13). The provision of high-quality public realm under RTS15 should also take account of climate change adaptation. A number of measures also identify provision of landscape and green infrastructure which may also provide some form of shading, but this may be more limited. No overall commitment or support is made to provide infrastructure fit for summer and winter temperatures; however, a number of upgrades are proposed to increase protection from the weather for passengers (e.g., Reading West Station Upgrade). Scheme NM7 will harness digital road technology such as pavement temperature	Neutral	N/A.	▪ Policy RTS13 - Healthy Streets Policy RTS15 - High-Quality Public Space ▪ Scheme RS2 – Reading West Station Upgrade ▪ Scheme AT11 – Cycle Parking Hubs and Facilities ▪ Scheme NM7 – Intelligent Transport Systems (ITS) – Improving Maintenance

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions	Examples/ Related
		sensors that can enable targeted winter gritting which will reduce overall amounts of gritting and minimise carbon impacts and the environmental impacts of salt run from the roads.			
51) Does the proposal maintain or enhance biodiversity?	Yes	RTS2 commits to providing a net biodiversity gain as part of its proposed transport schemes. At this stage, only indicative locations are known for the identified transport interventions and so the effect on protected habitats and species is uncertain. More generally, interventions will help reduce air and noise pollution in proximity to highways which may have beneficial effects on biodiversity locally.	Positive	N/A	▪ Policy RTS2 - The Environment and Climate ▪ MM3: Cross Thames Travel ▪ Scheme BC1 – Superbus Network
52) Does the proposal incorporate sustainable urban drainage techniques?	Yes	The RTS includes a policy to incorporate SUDs measures into proposed transport schemes (RTS26).	Positive	N/A	▪ Policy RTS26 - Sustainable Drainage (SUDS) & Surface Water Management

Conclusion

Overall, the Health Impact Assessments demonstrates that the RTS is likely to have a positive impact on the wider determinants of health considered within the HUDU Rapid Health Impact Assessment Tool. Across the eleven topic assessments considered there are 30 positive impacts identified and two neutral impacts. The neutral impacts refer to incorporating renewable energy into design and designing building and public spaces to respond to winter and summer temperatures. These are expected to have a neutral impact as whilst there are no direct commitments within the RTS in regard to this criteria the overall objectives and policies set out within the document support these approaches.

The eleven assessments and their overall likely health impact is listed below:

- Housing design and affordability: Scoped out
- Access to healthcare and social care services and other social infrastructure: Positive
- Access to open space and nature: Positive
- Air quality, noise and neighbourhood amenity: Positive
- Accessibility and active travel: Positive
- Crime reduction and community safety: Positive
- Access to healthy food: Scoped out: Positive
- Access to work and training: Positive
- Social cohesion and inclusive design: Positive
- Minimising the use of resources: Positive
- Climate change: Positive/Neutral