Stantec

Reading Transport Strategy 2040

Integrated Impact Assessment

Volume 1 – Main Report

On behalf of **Reading Borough Council**

Reading Borough Council

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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 emerging 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 Consultation Draft Reading Transport Strategy 2040 (hereafter the Draft 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 Draft 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 Draft RTS, which has been prepared by RBC. In doing so, this report responds to relevant statutory assessment requirements, considers the evolution of the Draft RTS to date and presents an assessment of likely effects from the Draft 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 Draft RTS;

- Assess the potential for any significant environmental, equality and health effects likely to arise from the implementation of the Draft 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   How to Comment on this IIA Report

1.3.1   This IIA report and the associated NTS are being issued for consultation alongside the Draft RTS. Details of how to participate in the consultation, including providing comments on this IIA report, will be provided on RBC's Local Transport Plan website and published in a local newspaper prior to the consultation period commencing.

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[1] Formerly Peter Brett Associates LLP (PBA)

1.4   Structure of this Report

1.4.1   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 emerging RTS and provides a summary of its proposed content and purpose of the Draft RTS.

- **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 emerging RTS to date including the content of the Draft RTS. This focuses on explaining how a suite of independent recommendations arising from the IIA have been incorporated into the Draft RTS.

- **Section 6** - presents the key findings of the IIA of the Draft 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.

1.5   Statutory Requirements

1.5.1   The Draft 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 emerging RTS. Additionally, the Environmental Assessment of Plans and Programmes Regulations 2004 ('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

1.5.2   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 emerging RTS is being developed in part to fulfil this requirement for RBC (acting as a local transport authority).

1.5.3   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*".

1.5.4   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

1.5.5   The SEA Regulations' requires 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 will be carried out by following a staged process of reporting known as Strategic Environmental Assessment (SEA) which in the case of the emerging RTS has been incorporated into a wider IIA process.

1.5.6   The emerging 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 Draft 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 and is being published for consultation in tandem with the Draft RTS.

1.5.7   Following the consultation on the Draft RTS and this IIA Report, RBC will take account of all comments received before preparing the finalised RTS for adoption. Once finalised and adopted, in accordance with the SEA Regulations RBC must then prepare a 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 is being undertaken as part of a wider IIA, these post-adoption requirements will be fulfilled through the publication of an IIA Post Adoption Statement relating to environmental, equalities and health considerations.

Health Impact Assessment

1.5.8   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.

1.5.9 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 emerging RTS.

Equalities Impact Assessment

1.5.10 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."*

1.5.11 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.

1.5.12 Insofar as transport affects access to services, amenities, economic opportunities and social activities, the implementation of the emerging 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 emerging RTS.

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

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[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 emerging 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 emerging 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 emerging 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:

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[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;

- Draft 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 draft RTS;

- Consultation with RBC internal departments and committees; and,

- Final preparation of Draft RTS and accompanying IIA Report.

2.3.2   This demonstrates that the preparation of the Draft 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 Draft RTS are provided 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).

2.4.3   The Draft RTS which has been subject to IIA comprise the following substantive components, which are also expected to be included in the final RTS in due course:

- Executive summary – provides a succinct review of the vision & objectives, context, challenges & opportunities, policies, schemes and monitoring arrangements outlined in subsequent sections of the RTS;

- Introduction – overview of the purpose and approach to preparing the emerging RTS, including the role to date of consultation, engagement and the IIA in informing the Draft 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:

  o Creating a Clean and Green Reading

  o Supporting Healthy Lifestyles

  o Enabling Sustainable and Inclusive Growth

  o Connecting People and Places

  o 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 new 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);

  o Improving air quality

  o Reducing car congestion and the negative effects it causes

  o Providing affordable and accessible travel for all

  o Removing barriers to healthy lifestyles

  o Achieving good accessibility to local facilities and employment

  o 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.

2.4.4 In accordance with statutory requirements, all substantive components of the Draft 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 Draft 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 Draft RTS itself. In overall terms, this helps the direction of travel for the emerging RTS responds to key issues as identified through the IIA process. However, it is still necessary to examine each emerging substantive component of the Draft 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 Emerging RTS

SEA Topic(s)	Possible Changes 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, 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 emerging 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 emerging 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 emerging 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 emerging 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;

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[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 emerging 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 emerging 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 emerging RTS. In doing so the section explains the approach which has been adopted to undertake and report the findings of an IIA of the Draft 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 emerging RTS is being 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 Draft RTS.

Previous IIA Reporting – IIA Scoping

4.3.2   The only previous stage of IIA undertaken in respect of the emerging RTS was the preparation and consultation on an IIA Scoping Report. 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 Draft 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 emerging 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 Draft 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 Draft RTS

4.3.8 A key element of the IIA methodology was the undertaking of an independent review of the initial draft RTS prior to the finalisation of the document as the Draft RTS. As detailed in **Section 5**, this 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 was finalised. The settled Draft RTS was then subject to formal assessment, as reported in **Section 6** and **Appendices E – F**. This approach minimised abortive assessment work whilst improving the clarity and effectiveness of the Draft RTS. In particular, taking account of the incorporation of all IIA recommendations within the plan (see **Section 5**), no likely significant adverse effects and a greater range of beneficial effects are now predicted to result from the Draft RTS.

Approach to Reasonable Alternatives

4.3.9 The SEA Regulations require the likely significant effects of implementing a plan or programme (i.e., the emerging 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 emerging RTS and are consistent with relevant national and other policy frameworks;

- Related to the objectives of the emerging RTS; and,

- Within the geographical scope of the emerging 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 emerging RTS. However, it is imperative to note that:

- The interventions and policies ultimately included within the Draft 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 Draft RTS itself.

- The Draft 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 Draft 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 Draft RTS itself. On this basis it was not possible to identify any fundamentally different reasonable alternative options such that no reasonable alternatives required to be assessed. However, as detailed in Section 5, the development and incorporation of the IIA recommendations within the Draft RTS itself represents a form of 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   Building upon previous IIA reporting, this IIA Report has been prepared to accompany the Draft RTS for consultation. 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 Draft RTS. In doing so, each substantive component has been subject to assessment against the 13 IIA Objectives defined within the finalised Reading RTS IIA Framework (**Table 4.1**). The Draft RTS as a whole has also been separately assessed against the PSED (under the Equality Act 2010) and the NHS Healthy Urban Development Unit (HUDU) Rapid HIA Assessment Tool (2019).

IIA Reporting

4.4.2   The detailed IIA of proposed policies and schemes & initiatives within the Draft 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 Draft 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 Draft RTS was originally undertaken in early 2019 on a pre-mitigation basis, i.e., assuming full implementation of the Draft RTS as drafted at that point, 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 Draft 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.	-

Score	Description	Symbol
Significant (Major) Negative Effect	The proposed option/policy detracts significantly from the achievement of the IIA Objective. Mitigation is therefore required.	- -
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 Draft 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 Draft RTS and this IIA Report has been updated accordingly. The incorporation of all the recommendations means that, as detailed in **Section 6**, the Draft RTS is assessed as performing well 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 Draft RTS?

5.1 Introduction

5.1.1 This section details the ways in which the IIA undertaken in respect of the Draft RTS has shaped and strengthened the document throughout its development. The IIA of the Draft RTS can be 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 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 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 in l and subsequently incorporated within the final version of the Draft RTS. In consequence, the quality of the Draft RTS and its coverage of key environmental, equalities and health issues has been demonstrably improved through this independent review process. As noted in Section 4, this IIA report has since been updated to take account of subsequent changes to the Draft RTS, including the incorporation of the majority of the IIA recommendations. A further review was undertaken in 2023, these recommendations and actions are also listed in the below table marked '(further review)'

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 Draft 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 Draft 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)* • *Equalities Impact Assessment (EqIA)*	Recommendation agreed and implemented

Reference	Section	Recommendations	Action
		• *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 Draft 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. Under national policy and guidance, include a reference to the NPPF.	Recommendation agreed and implemented

Reference	Section	Recommendations	Action
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 draft 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 (Figures 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 draft 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	2.1 - 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.
17.	RTS4	Clarify the proposed safeguarding of land for transport schemes (as the routes and designs of schemes has not yet been confirmed).	Recommendation agreed and implemented.

Reference	Section	Recommendations	Action
		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	
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. 8.3 - Expand to explain how the policy support for community transport will be implemented by RBC and partners.	Recommendation agreed and implemented. RBC identifies that subsidies are provided to Readibus to supports community transport.

Reference	Section	Recommendations	Action
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.
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. 17.3 – Amend for clarity and to confirm the policy objective of increasing monitoring and data use.	Recommendation agreed and implemented.

Reference	Section	Recommendations	Action
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.
32.	RTS21	(further review) Include requirement for monitoring and remediation plans regarding enforcement, specifically regarding equalities, safety and sustainable placemaking.	Recommendation of specific reference to monitoring and remediation plans not included in Draft RTS
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 for sustainable travel. Recommend measures to protected cultural/heritage assets in construction and uptake of sustainable travel.	Recommendation agreed and implemented.
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.

Reference	Section	Recommendations	Action
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 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.	Recommendation agreed and implemented through the inclusion of appropriate text within the Draft RTS which requires the design and consenting of proposed transport schemes to take account of relevant environmental constraints (including through undertaking appropriate technical assessments.

Reference	Section	Recommendations	Action
		(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.	
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. (further review) Equalities: include hospitals as a charging location. (further review (Sustainable placemaking): consider EV parking for visitor attractions.	NM1: (Road Safety Schemes) as a general issue that is covered through approaches to communicating changes to public NM4: Recommendation agreed and implemented.
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	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.

Reference	Section	Recommendations	Action
	Park and Ride Mobility Hubs		
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 Draft RTS. As a result, the Draft RTS Strategy is now considered to be more robust and effective in terms of addressing key environmental, equalities and health issues. This means that the Draft RTS is predicted to result in 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 Draft RTS.

6 IIA of the Draft 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 Draft RTS. The following plan components have been subject to assessment and are considered below in turn:

- Vision and Objectives;

- Draft Policies; and,

- 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**;

- Draft RTS Transport Schemes and Initiatives - **Section 7.3**, with detailed policy assessment matrices for each policy grouping provided in **Appendix E**; and,

- Draft 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 final 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 Draft RTS. In particular, with the incorporation of all IIA recommendations the assessment results are now more positive: a greater number of Draft RTS components are now 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 Draft 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, improve **accessibility** 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 Draft 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 these Draft RTS components nor undermine their effectiveness.

Table 6.1: Compatibility of Draft 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. Mitigation and Enhancement • None required Assumptions • No additional assumption identified Uncertainties • 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.	+	+	+	+	+	+	Assessment of Predicted Effects • 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. Mitigation and Enhancement • None required Assumptions

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). 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.
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	Assessment of Predicted Effects • 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 Draft 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 Draft RTS).

6.3   IIA of Proposed Transport Schemes and Initiatives

6.3.1   **Section 6** of the Draft 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 Draft 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 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 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 RoutesAT5: 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 SchemesNM4: Electric Vehicle Charging

- NM5: Car Clubs

- NM6: Intelligent Transport Systems (ITS)

- NM7: Smart City Initiatives

- NM8: Demand Management

- Communication and Engagement

- CE1: Marketing and Promotion

- CE2: Travel Information and Advice

- CE3: Training, Education and Initiatives

- CE4: School Travel Accreditation Programme

- CE5: Progress Reporting and Public Engagement

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. 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 Draft 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 39 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 RTS13 - Healthy Streets and Quiet Traffic Areas 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 RTS18 - Road Safety and RTS23 - Motorcycles and Powered Two-Wheelers will have significant 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 Quiet Traffic Areas and Policy RTS15 - High-Quality Public Space are anticipated to have significant 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 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 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 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 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 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 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   An uncertain effect was identified in regard to 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. The most significant 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, 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 positive effect. Policy RTS13 - Healthy Streets and Quiet Traffic Areas will involve the creation of green corridors as part of streetscapes which can support improvements to biodiversity.

6.4.23   An Uncertain 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

6.4.24   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.

6.4.25   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. 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

6.4.26   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 positive effect through improving local environments and protecting heritage assets.

6.4.27 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

6.4.28 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.

6.4.29 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 Draft 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

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[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

expectancies for both men and women are higher compared with Reading and England averages.

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:

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[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

- 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;

- 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 Draft 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 Draft 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 Draft 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 Draft RTS such as 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 Draft 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 Draft RTS will 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 Draft 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 Draft RTS aims to 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 Draft 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 Draft RTS also 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 Draft 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 Draft 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 Draft 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 Draft 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 Draft RTS and 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 Draft 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 Draft 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, to help transport people around Reading and reduce congestion. The Draft RTS supports a transition to more sustainable forms of transport and shared services which will help minimise the use of resources. The Draft 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 Draft 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). T. The Draft RTS does not 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 Draft 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 Draft 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 Draft 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 Draft RTS

6.6.4   In relation to the Draft 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 proposed 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.

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 Draft 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 emerging 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 proposed 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 Bus Rapid Transit Schemes will 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 Draft RTS generally supports increased mobility and access of the transport system but does not specifically address inequality or affordability. The supporting objectives do however 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 Draft 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.

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[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 Next Steps and Monitoring

7.1 Further IIA 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 (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,

- 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.

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

7.1.3 The incorporation of the IIA recommendations means all substantive components of the Draft RTS, and the Draft RTS when read as a whole, were assessed as performing well against the IIA Framework. Beneficial effects were identified in relation to many of the IIA Objectives, including specifically in relation to health, accessibility, productivity and competitiveness and climate change. This primarily related to promotion of more sustainable forms of transport, 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.

7.1.4 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.

7.1.5 No significant adverse environmental, health or equalities effects predicted. In consequence it was not necessary to develop specific further IIA recommendations through the assessment process (i.e., for incorporation into the final RTS post consultation). However, the assessment did identify a small number of likely adverse or uncertain effects depending on the future implementation of individual components of the Draft 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 Draft RTS which provide environmental, health and equalities safeguards to be implemented as intended. This includes:

- Application of environmental constraints maps (as included in the Draft 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   Next Steps

7.2.1   This IIA has documented the findings of the IIA carried out in respect of the Draft RTS. At this stage, the following proposed components of the Draft RTS have been subject to IIA:

- Vision and Objectives;

- Draft Policies; and,

- Proposed Transport Schemes and Initiatives.

7.2.2   Following consultation on the Draft RTS and this associated IIA Report, all consultation responses received will be reviewed and used to inform the preparation of the final RTS for adoption. At this point an IIA Post Adoption Statement will be prepared in accordance with the SEA Regulations.

7.3   Monitoring

7.3.1   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. The proposed approach to monitoring the predicted likely significant (all positive) effects of the Draft RTS will be subject to refinement in tandem with the preparation of the final RTS for adoption, with the final approach set out within the RTS IIA Post Adoption Statement.

7.3.2   For a successful monitoring framework, the RTS must identify indicators for monitoring that are specific, manageable and targeted towards measuring the implementation of the plan. For instance, demonstrating a relationship between the condition of a specific environmental receptors and the RTS may be difficult. In additional 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. The IIA Framework set out in **Table 4.1** provides a good starting point for developing targets and indicators for monitoring of the effects predicted through this IIA. In addition, the Draft 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 Draft 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)	25.4% mode share (2022)	10% mode share	Annual
2	Road transport carbon emissions	Carbon Dioxide Emissions Statistics (Department for Business, Energy & Industrial Strategy)	100.4 kt CO_2 (2020)	54 kt CO_2 emissions	Annual
Public Transport Indicators					
3	Bus usage in the Borough	Bus Statistics (Department for Transport)	14 m (2021.22)	28 million passengers	Annual
4	Annual bus use per head of population	Bus Statistics (Department for Transport)	81.2 (2021/22)	162.4 trips per head	Annual
5	Park and Ride usage	Bus ticketing data (Reading Buses)	100,000 per year (2021/22)	1 million passengers	Annual
6	Rail usage – entries and exits for all stations	Office of Rail & Road	9.3 m per year (2021/22)	20 million passengers	Annual
7	Public transport trips to the town centre	Annual cordon count (Reading Borough Council)	39.2% mode share (2022/23)	50% mode share	Annual
8	Overall bus passenger satisfaction	National Highways & Transport Networks Survey	92% (2019/20)	96% satisfaction	Annual

No.	Performance Indicator	Data Source	Baseline	Target by 2040	Monitoring Frequency
Active Travel Indicators					
9	Proportion of adults walking at least 3 times per week for main journey purpose	Walking and Cycling Statistics (Department for Transport)	45.8% (2021/22)	66% of adults walking at least 3 times per week	Annual
10	Proportion of adults cycling at least 3 times per week for main journey purpose	Walking and Cycling Statistics (Department for Transport)	5.8% (2021/22)	15% of adults cycling at least 3 times per week	Annual
11	Active travel trips to, from and through the town centre	Annual cordon count (Reading Borough Council)	35.4% mode share (2022/23 average)	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)	36 per year (2019-21 average)	Reduce by at least 50%	Annual
13	Public satisfaction with highway maintenance (including roads footways and street lighting)	Highway & Transport survey (Ipsos MORI)	52% 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 (2022)	All schools	Annual