Transforming Travel

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BCP Council and Dorset Council

TRANSFORMING CITIES FUND SOUTH EAST DORSET CITY REGION

Cycle Corridor Outline Business Case

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1 INTRODUCTION

1.1 OVERVIEW

1.1.1. This Outline Business Case (OBC) is submitted to the TCF Programme Management Board (PMB) and Councils Governance Board (CGB)[1] for approval and in support of the network of Cycle ("C") Corridors Scheme. The four 'C' corridors form part of the wider South East Dorset (SED) City Region TCF Package of measures. Alongside the cycle corridors, a further two 'Connectivity' or 'S' Corridors are proposed with enhanced bus infrastructure alongside cycle and walk improvements.

1.1.2. This OBC references back to the overall SED TCF Strategic Outline Business Case which covered the overall SOBC package and was approved by the Department for Transport to secure the TCF funding in March 2020.

1.1.3. A further OBC will be produced alongside this to cover the case for the two 'S' corridor improvements. A series of 'quick win' projects have been identified to achieve early intervention across the programme. Due to the timescales, individual Full Business Case (FBC) documents have been, or are in the process of being, produced for these.

1.1.4. This OBC recognises the current global challenges due to the Covid 19 pandemic and the impact it will have to the TCF programme and supporting activities / events.

1.2 SOUTH EAST DORSET TRANSFORMING CITIES FUND

1.2.1. Following a description of the wider package of schemes, the remainder of this OBC is made up of five separate cases. This Outline Business Case sets out the case for the Cycle Corridors scheme, using the five-case methodology set out in the DfT "Transport Business Case"[2] document:

- The Strategic Case which shows that there is a robust 'case for change', closely aligned to wider strategic and public policy objectives;
- The Economic Case which shows that the scheme provides value for money;
- The Financial Case which explains how much the scheme will cost and how it will be paid for, showing that it is affordable and within the limits of the TCF budget;
- The Commercial Case which shows that the scheme is commercially viable; and
- The Management Case which shows that the scheme is achievable in practical terms, and explains how the project will be managed to ensure it achieves its objectives. This will set

[1] Subject to Independent Review and S151 signoff in accordance with the TCF Local Assurance Framework

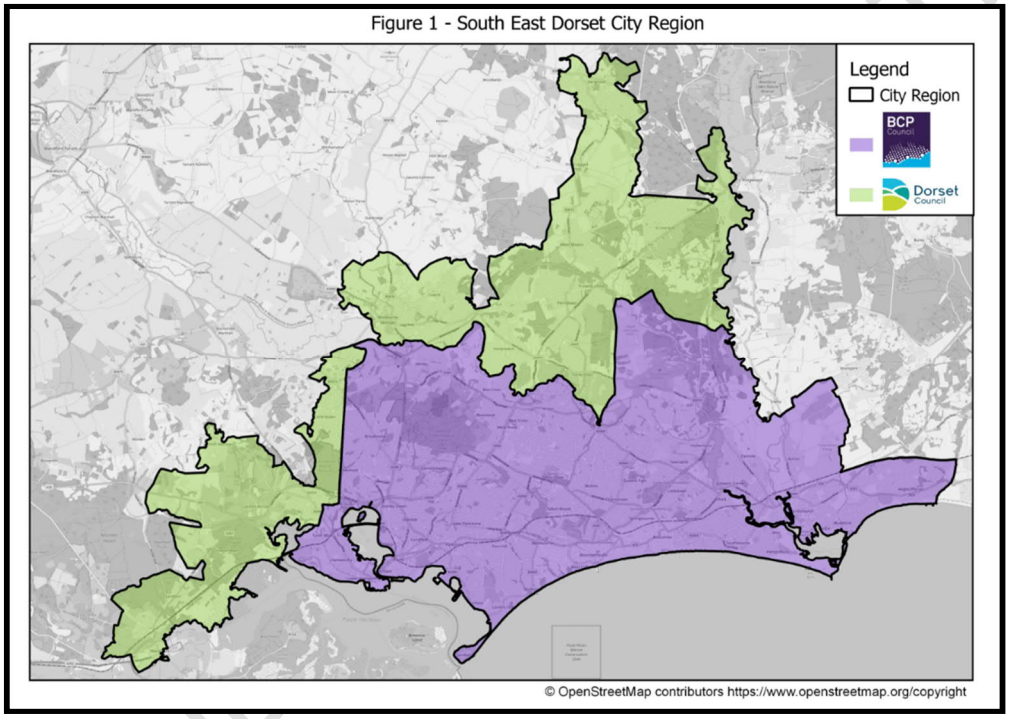
[2] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/918399/dft-transport-business-case.pdf

out the successful track record of project delivery the strong team has on similar projects such as LSTF.

1.3 SOUTH EAST DORSET CITY REGION STUDY AREA

1.3.1. As set out in the SOBC the SED city region covers the central core area of Bournemouth, Poole and Christchurch and the adjacent built-up towns and settlements within Dorset of Wareham, Upton, Corfe Mullen, Wimborne, Ferndown, West Moors and Verwood. This makes up the SED city region's main travel to work area.

Figure 1-1 - South East Dorset City Region



1.3.2. In April 2019, through local government reorganisation, nine Councils in Dorset consolidated into two new Unitary Authorities – BCP Council and Dorset Council. BCP Council covers the Bournemouth, Christchurch and Poole areas with a population approaching 400,000. Surrounding the city region are key settlements in the Dorset Council area forming the remaining travel to work area with a workday population of 463,743 (based on the 2011 Census). The Bournemouth Primary Urban Area (which represents the SED city region) is now the 7th largest non-mayoral city region in England.

1.3.3. The city region suffers from a range of transport challenges which include its unique geography, incomplete strategic transport network and lack of joined up sustainable transport infrastructure which leads to high car usage for people who live and work or visit the area. Furthermore, there is a lack of strategic connectivity to the wider area, in particular to Bristol and the West of England with very limited north-south links by road or rail. Recent reports have identified the SED area as the 3rd most congested place in the

UK, and 56th most congested in the world[3]. The local transport network is inhibiting productivity in the city region.

1.3.4. The natural geography of the area includes a coastline to the south, the River Stour to the north and significant areas of protected heathland. Each of these factors contribute to the complexities of addressing the transportation challenges

Figure 1-2 - View of the Poole and Bournemouth Coastline

1.3.5. BCP Council's Corporate Strategy[4] sets out the following values:

- *We have **integrity**;*
- *We are **passionate** about our communities;*
- *We treat everyone with **respect**;*
- *We embrace **innovation**;*
- *We take **pride** in what we do.*

[3] TomTom Traffic Index 2018.

[4] BCP Corporate Strategy: https://www.bcpcouncil.gov.uk/About-the-council/Strategies-plans-and-policies/CorporateStrategy/Corporate-Strategy.aspx

1.3.6. This set out of values is supported by a set of Priorities and Objectives:

- **Sustainable Environment**
  - Ensure sustainability underpins all of our policies;
  - Protect and enhance our outstanding natural environment;
  - Develop an eco-friendly and active transport network;
  - Tackle the climate and ecological emergency;
  - Promote sustainable resource management;
  - Maximise access to our high quality parks and open spaces.
- **Dynamic Places**
  - Revitalise and reinvent our High Streets and local centres;
  - Invest in the homes our communities need;
  - Create a sustainable, vibrant and inclusive economy;
  - Increase productivity through skills development;
  - Develop sustainable infrastructure;
  - Support our businesses to operate more creatively;
  - Create a 21st century digital infrastructure.
- **Connected Communities**
  - Strengthen the cultural identity of our towns and places;
  - Respect and engage with our diverse communities;
  - Encourage intergenerational interactions;
  - Reduce loneliness and isolation;
  - Ensure our communities feel safe;
  - Empower a thriving voluntary and community sector.
- **Brighter Future**
  - Enable access to high quality education;
  - Be aspirational for our children in care;
  - Support parents and guardians to care for their children well;
  - Prevent harm through early intervention.
- **Fulfilled Lives**
  - Support people to live safe and independent lives;
  - Promote happy, active and healthy lifestyles;
  - Develop age-friendly communities;
  - Value and support carers;
  - Enable people to live well through quality social care;
  - Tackle homelessness and prevent rough sleeping;
  - Promote lifelong learning for all.

1.3.7. The BCP Council priorities are complemented by Dorset Council's priorities:

- Economic growth – we will deliver sustainable economic growth, increasing productivity and the number of jobs in Dorset, creating great places to live, work and visit;
- Unique Environment – we will help to deliver sustainable development whilst protecting and enhancing Dorset's environment;
- Suitable Housing – we will facilitate the availability of more affordable, suitable and decent housing;
- Strong, Healthy Communities – we will work with residents and partners to build and maintain strong communities where people get the best start and live fulfilling lives;
- Staying Safe and Well – we will work with all our residents to have a good quality of life.

1.3.8. The TCF programme will help support the vibrant SED city region communities by, for example, providing improved transport connectivity, particularly to deprived areas. This will contribute towards providing an outstanding quality of life where no one gets left behind and helps achieve our objectives aligned to the TCF objectives.

1.3.9. Following approval of the TCF SOBC in March 2020, the SED City Region have been progressing the TCF programme.

1.3.10. One of the elements of the TCF was to create a brand and dedicated communications plan to promote the programme and wider sustainable travel initiatives across the region to ensure the public and stakeholders were fully aware of the TCF programme and planned works. This brand is known as **Transforming Travel.** Transforming Travel encompasses the TCF programme to benefit Bournemouth, Christchurch, Poole and Dorset, known as the south-east Dorset city region.

1.3.11. TCF is one of the first programmes to be delivered under the Transforming Travel initiative and will be the largest sustainable transport infrastructure improvement programme ever seen in south east Dorset.

1.3.12. Transforming Travel is an overarching programme to broaden the travel options that people have for getting around our area. As well as supporting the local economy by improving productivity, this work is designed to make our region a better place by tackling congestion, improving air quality and boosting health and well-being.

1.3.13. The SED City Region have also produced a Local Assurance Framework, which is a requirement from the DfT, as part of the grant conditions, which sets out programme governance and decision making.

1.4 TCF OBJECTIVES

1.4.1. The Transforming Cities Fund has a series of overarching objectives. Below, Table 1-1 demonstrates the alignment of the SED TCF proposals with achieving these objectives.

Table 1-1 – SED TCF Objectives

TCF Objective	SED TCF Scheme Supporting Objective
Support the local economy and boost productivity	Providing a network of reliable and efficient sustainable travel corridors linking employment, housing and town centres will improve access to jobs for residents and access to skills for employers. Providing access to improved workplace cycle facilities to further encourage sustainable commuting
Reducing Carbon Emissions	Provision of high quality cycle infrastructure, identified through LCWIP assessment, on corridors across the SED region, enabling active travel and the reduction in single-occupancy vehicles (SOVs) Beryl bike scheme – wider provision and introduction of e-bikes to facilitate increased use and across longer journeys, reducing unnecessary short SOV trips Network management to prioritise bus movements through key junctions, reducing idling of buses and enabling mode shift from Single Occupancy Vehicles
Air Quality Improvements	Improvements to air quality on all corridors through increased sustainable travel. Two active AQMAs in region. Both lie to the east of S5 and will benefit from improved sustainable travel interventions. E-bikes in particular will reduce the number of short urban car trips The uptake of electric vehicles is anticipated to increase significantly in coming years, improving air quality in urban areas significantly
Support Housing Delivery	29,400 households planned across SED region which will be connected up via the network of sustainable transport and cycle corridors
Wider social/economic benefits	Encouragement of low cost, sustainable travel through improved walking and cycle infrastructure are likely to disproportionately benefit lower income group and providing improved links to the most deprived areas of the region. Improved access to services, training and employment Health benefits of active travel Improved passenger experience for bus and rail passengers Bus operators are committed to provision of apprenticeship scheme places in conjunction with the TCF scheme implementation
Aligned to Future Mobility Grand Challenge	The widespread provision of E-bikes through the Beryl scheme will significantly improve future mobility options. Provision of electric car charging points at main stations to encourage the uptake of electric taxis Commitment to establish a multi-modal joint ticketing product.

1.5 OVERVIEW OF SED CITY REGION TCF PACKAGE

1.5.1. The TCF package of schemes being proposed for the SED City Region covers a range of interventions aimed at enabling increased use of sustainable transport and meeting the wider TCF objectives set out by the DfT. The package is based upon a series of corridor-based interventions to connect areas of housing and linking them to employment sites to promote employment growth across the SED City Region.

1.5.2. The overarching ambition of the SED TCF programme is to revolutionise how people get about across the region. The vision for the programme is:

"To create an environment where sustainable travel becomes the obvious transport choice for local journeys – enabling safer journeys to schools, building fairer and easier access to jobs, businesses and activities, tackling inequality – enabling growth and prosperity in the south-east Dorset region as part of our action plan to address the climate and ecological emergency."

1.5.3. The following elements form the basis of the TCF package for the SED City Region and are shown in Figure 1-3:

- Improvements across six sustainable travel corridors (four cycle corridors and two sustainable travel corridors) benefiting from a range of cycle, walking and bus improvements across the south-east Dorset region, to help better connect key residential, retail and industrial areas.
- The six routes are:
  - Bournemouth rail station to/from Jumpers Common, Christchurch (C1)
  - Bournemouth town centre to/from Ferndown (C2)
  - Poole town centre to/from Wareham Road, Holton Heath (C3)
  - Poole town centre to/from Merley, Poole (C5)
  - Poole town centre to/from Ferndown & Wimborne (S5)
  - Merley, Poole to/from Christchurch town centre (S6)

Figure 1-3 – Planned Sustainable travel routes for the South East Dorset TCF Programme

1.5.4. Other elements of the TCF package include:

- Improved network management through bus priority and signal optimisation;
- Transport hub improvements – enabling easier interchange between modes, in particular through the expansion of the Beryl bike share scheme;
- Wayfinding and signage improvements across the SED Region;
- Workplace facilities – improvements to workplace/education sites with 'end of trip' facilities

1.6 CYCLE CORRIDORS SCHEME

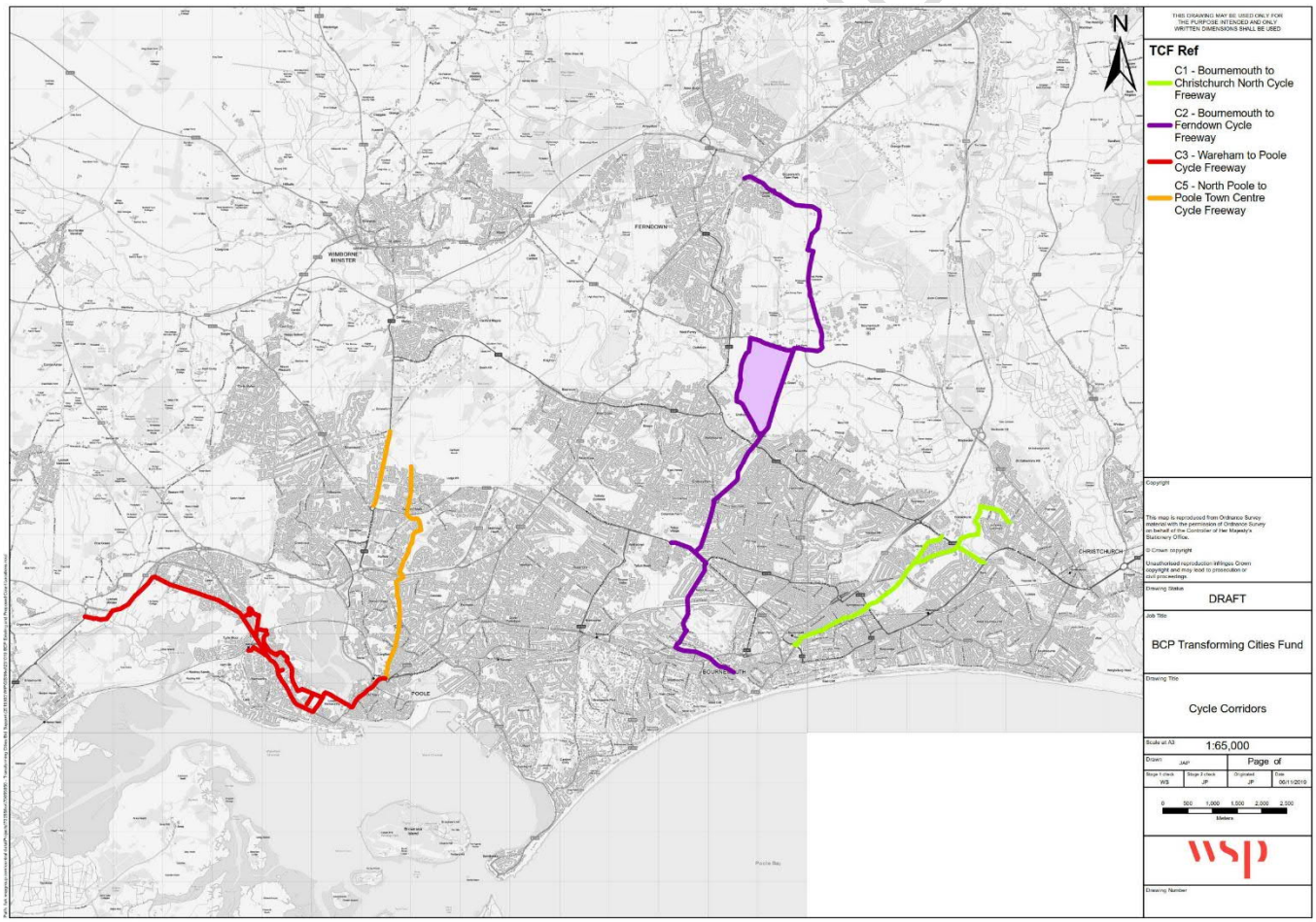
1.6.1. This OBC relates to the four 'C' corridors. These corridors are:

- Bournemouth rail station to/from Jumpers Common, Christchurch (C1)
- Bournemouth town centre to/from Ferndown (C2)
- Poole town centre to/from Wareham Road, Holton Heath (C3)
- Poole town centre to/from Merley, Poole (C5)

1.6.2. The cycle corridor works comprise a series of network improvements to provide safe routes for cyclists. Improvements include stepped cycle track; improved lighting; 'Toucan' and 'Tiger' crossings to enable safe crossing for pedestrians and cyclists; improved wayfinding and signage; shared use paths where available width is more limited; side road entry treatments; and improved connections to existing paths.

1.6.3. Figure 1-4 below shows the proposed routes of the four corridors.

Figure 1-4 - Cycle Corridors Route Map



1.7 MEASURES FOR SUCCESS

1.7.1. At the SOBC stage, a range of measures for success against the overarching TCF Objectives were set out. For the Cycle Corridors package, the relevant measures of success are shown below in Table 1-2 below.:

Table 1-2 – SED TCF Programme – Cycle Corridors Measures for Success

Objective	Target	Timescale	Measure (s)
Reducing Carbon Emissions	Increased use of Sustainable modes in Corridors Improve and enhance access for business and tourism	Annual travel survey from 2020	Increased cycle trips and corresponding reduction in SOVs; Increasing levels of e-bike share trips
Air Quality Improvements	Improved Air Quality at key monitoring points	5 years post opening	Reduction in particulate and NOx levels along corridors and at AQMAs; Reduced congestion and delay on highway network.
Wider social/economic benefits	Improve health gain and wellbeing for population Improve Road Safety	Annual Quality of Life Survey	Increased activity and exercise in population and workforce; Increased levels of walking and cycling trips Reduced collision rates on network within SED region, focused upon TCF Connectivity corridors and Freeways

2 STRATEGIC CASE

2.1 OVERVIEW

2.1.1. The Strategic Case sets out the need for the proposed improvements in the SED region, demonstrating the case for interventions via the Transforming Cities Fund. The context within which the interventions are proposed, the alignment with TCF objectives and the impact of not making these important changes are all set out below. This Strategic Outline Business Case has been compiled in line with DfT Guidance[5]. Table 2.1 below provides a checklist of the sections in the Strategic Case.

Table 2-1 – Outline Business Case Contents

Issue	Description	OBC Requirement	Location
Business Strategy	Context for the business case – strategic aims and responsibilities of organisation responsible	Updated	2.3
Problem Identified	Describe the problem. What is the evidence base? Is there justification for intervention?	Updated	2.5
Impact of Not Changing	What is the impact of not intervening?	Updated	2.6
Objectives	Establish specific, measurable, achievable, realistic and time-bound (SMART) objectives. Align with overarching TCF objectives	Updated	2.7
Measures for Success	Set out what constitutes successful delivery of the objectives	Updated	2.8
Scope	Explain what the project will deliver, including what is out of scope	Updated	2.9
Constraints	High level internal/external constraints	Completed	2.11
Interdependencies	Internal/external factors upon which the successful delivery of the project is dependent	Completed	2.12
Stakeholders	Outline the main stakeholder groups and their contribution.	Completed	2.13
Options	Set out options identified (including do nothing) and evaluate impact on the project objectives and wider public policy objectives. Risks associated with each option should be identified.	Completed	2.9

2.2 PROJECT DESCRIPTION

2.2.1. This Outline Business Case relates to the development of the four Cycle Corridors, proposed as part of the SED TCF Package.

[3] DfT, The Transport Business Cases, January 2013

2.2.2. Following the initial sifting exercise detailed within the SOBC, and review of the connectivity between the Cycle corridors, Sustainable Connectivity Corridors, housing and employment sites, four corridors of high quality cycle routes and improved cycling facilities will be delivered. The package of measures, aligned with the LCWIP process, will also incorporate upgrades and creation of links feeding into these corridors to ensure the greatest catchment and accessibility for local users. Locations for Mobility Hubs are also included along with Beryl Bike Share hubs.

2.2.3. The corridors proposed for investment under the TCF programme are:

- **C1 – Bournemouth Station to Christchurch** – this key east-west route connects an important employment area in Bournemouth town centre east via Boscombe to Christchurch via Wessex Fields (another employment area) which includes Bournemouth Hospital. This route has employment sites at both ends and passes through densely populated residential areas;
- **C2 – Bournemouth Town Centre to Ferndown** – Links Bournemouth town centre, the university campuses, Bournemouth Airport and Aviation Park and the key employment area at Ferndown Industrial Estate. This route links to employment sites and passes through densely populated residential areas;
- **C3 – Wareham/Holton Heath to Poole** – connecting local commuter route with Poole town centre, Port of Poole and nearby employment sites completing the final gaps in the existing cycle route between the two locations; and
- **C5 – Merley to Poole town centre** – links significant residential area to key industrial estates, Poole town centre and rail station.

2.3 BUSINESS STRATEGY

2.3.1. This section considers the context of this bid within wider national and local policies and strategies.

CENTRAL GOVERNMENT POLICY

Industrial Strategy 2017

2.3.2. The UK Industrial Strategy was published in 2017 and set out the vision for economic prosperity and growth. The Strategy is based upon five foundations:

1. Ideas – the world's most innovative economy
2. People – good jobs and greater earning power for all
3. Infrastructure – a major upgrade to the UK's infrastructure

4. Business Environment – the best place to start and grow a business
5. Places – prosperous communities across the UK

2.3.3. The Places foundation includes the commitment "to create a Transforming Cities Fund that will provide £1.7bn for intra-city transport. This will fund projects that drive productivity by improving connections within city regions."

2.3.4. The Industrial Strategy also includes four "Grand Challenges" for technology and industry:

1. Artificial Intelligence and Data Revolution
2. Clean growth
3. Future Mobility
4. Addressing the needs of an ageing society

2.3.5. Although the SED city region did not submit an Expression of Interest to the Future Mobility Zones Fund, the proposals within this TCF align with future mobility innovations, in particular around Smart Ticketing, RTI technology, delivering infrastructure to accommodate future mobility and E-bikes.

2.3.6. The SED city region TCF bid aligns with these broad foundations, in particular supporting the creation of employment, housing growth and establishing prosperous communities through improving connectivity between areas of housing and employment across the city region.

Future Mobility

2.3.7. There have been a number of significant developments with regards to policy and strategy over recent months which provide the foundations for the Future Mobility agenda:

1. Four Grand Challenges within the Industrial Strategy, Department for Business, Energy and Industrial Strategy (June 2018) –The 'Future of Mobility' Grand Challenge outlined in the industrial Strategy outlines the Government objective to keep the UK at the forefront of transport innovation, stating that 'we will become a world leader in the way people, goods and services move'. Opportunities to dramatically reduce congestion, carbon emissions, improve customer experience, drive efficiency and enable access for all through innovation in engineering, technology and business models will be encouraged by a flexible regulatory framework, testbed funding and research & development investment;
2. National Infrastructure Assessment, National Infrastructure Commission (July 2018) – The report makes recommendations on the infrastructure needs and priorities of the UK. In relation to the future of mobility, the commission commends the Government for positioning the UK as a leader of connected and autonomous vehicle innovation, however recommends that 'the implications of technological innovation in long term transport planning processes' are addressed;
3. Road to Zero, Department for Transport (July 2018) –The Government outlined its ambition to see at least 50% of new cars and 40% of new vans to be ultra-low emission by 2030 and end the sale of new conventional petrol and diesel cars and vans by 2040. The strategy also sets out plans to enable massive expansion of green infrastructure and reduce extant vehicle emissions in order to help the government achieve elements of the Industrial Strategy; and

4. Future of Mobility: Urban Strategy – Department of Transport (March 2019) - The 'Future of mobility: urban strategy' outlines the government's approach to maximising the benefits from transport innovation in cities and towns.

2.3.8. Considering the wider access and mobility needs rather than just traditional transportation modes provides for an integrated approach to people, the places they need to visit and the activities they undertake. This also allows for a wider consideration of land use, activity and mobility needs, all within the context of enabling economic growth across the SED city region and delivery of the TCF programme.

HM Treasury Green Book Review[6]

2.3.9. In 2020, a review of the 'Green Book' guidance on options appraisal was commissioned by HM Treasury. The guidance is used to guide the appraisal and evaluation process of policies, programmes and projects seeking government funding. The guidance sets out the best practice five case model approach. In publishing its guidance on Transport Business Cases, the DfT takes direct reference from The Green Book, and as such any review of the Green Book should be taken account of within transport Business Cases following DfT and Transport Analysis Guidance (TAG). The review concluded that often the strategic context of a scheme is not demonstrated sufficiently against clear objectives, with too heavy a reliance on the BCR of schemes to secure funding.

2.3.10. Whilst the DfT TAG, business case guidance and value for Money framework has not changed, it is useful to consider the recommended changes in the context of this OBC and the TCF process.

2.3.11. The Green Book Review recommended the following changes:

- Reduced emphasis on the BCR and increased emphasis on Strategic Case;
- Increased emphasis on place-based analysis (including delivering the 'Levelling Up' agenda);
- Adjustment to environmental appraisal including the delivery of Carbon Net Zero.

2.3.12. This OBC, and the SOBC submitted in November 2019, sets out a strong Strategic Case for change and transformation of travel in the South East Dorset region. Any alterations to the Green Book and subsequently to TAG is considered to work favourably for the TCF scheme and it's focus upon Active and Sustainable transport interventions.

CENTRAL GOVERNMENT TRANSPORT POLICIES

2.3.13. The SED city region TCF bid has considered a number of other Central Government transport policies to ensure consistency and compliance. These include:

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6 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938046/The_Green_Book_2020.pdf

1. Future Mobility Policy;
2. WebTAG Compliance and Business Case guidance;
3. Public Transport Policies;
4. Cycle Walking Investment Strategy (CWIS) Guidance.

2.3.14. In 2020, the Department for Transport published two key documents relevant to the TCF programme – 'Gear Change' [7]and LTN 1/20[8]. These documents provide revised guidance on designing high quality and safe cycle infrastructure. These documents are summarised below and have directly influenced the proposed infrastructure improvements that make up both the Cycle Corridors that this OBC relates to, and the Connectivity Corridors.

Gear Change: A Bold Vision for Cycling and Walking

2.3.15. The document sets out a vision for achieving a significant step change in cycling and walking levels across the country. The vision is split across four themes:

Theme 1: Better Streets for Cycling and People

2.3.16. This theme sets out the ambition to facilitate the construction and implementation of extensive new cycle infrastructure, including the creation of cycle, bus and waking corridors, Low Traffic Neighbourhoods and School Streets.

2.3.17. A series of design principles are identified:

- Cyclists must be separated from volume traffic;
- Cyclists must be separated from pedestrians;
- Cyclists must be treated as vehicles, not pedestrians;
- Routes must join together into a network;
- Routes must feel direct, logical and intuitive;
- Routes and schemes must take account of user behaviour;
- Cosmetic alterations to be avoided;
- Barriers such as dismount signs should be avoided;
- Routes should be designed by cyclists.

[7] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904146/gear-change-a-bold-vision-for-cycling-and-walking.pdf

[8] https://www.gov.uk/government/publications/cycle-infrastructure-design-ltn-120

Theme 2: Putting cycling and waking at the heart of transport, placemaking, and health policy

2.3.18. This theme sets out the need for long-term planning and programming for cycling and walking infrastructure, and the commitment of government funding. Importantly, the theme sets out that government funding for local highways investment is dependent on the inclusion of improved cycling infrastructure. Highways England have aligned their policy with this through the commitment to deliver cycling infrastructure as part of RIS2.

2.3.19. The theme also emphasises the need for multi-modal planning and the role cycling plays in onward journeys at stations, also considering the potential for bus and cycle interchange to be improved.

2.3.20. The theme goes on to state the importance of ensuring that new developments are built around active and sustainable travel. Active Travel England, the proposed new commissioning and funding body, will become a statutory consultee within the planning system to ensure adequate cycling and waking provision is made in all major developments.

Theme 3: Empowering and Encouraging Local Authorities

2.3.21. This theme recognises the need to give power and expertise to the local highway authorities, providing additional funding and new powers to enable cycling and walking infrastructure to be implemented more widely.

2.3.22. Funding will not be given by central government for schemes that do not achieve the design principles above, and the more detailed standards set out within the Appendix of the policy.

2.3.23. Active Travel England will hold the budget for cycle and walking infrastructure funding, examining all applications for funding and verifying their compliance with the new national standards.

Theme 4: We will enable people to cycle and protect them when they cycle

2.3.24. This theme makes a commitment to cycle safety training for all, and alignment with health professionals to promote the health benefits of cycling.

Cycle Infrastructure Design LTN 1/20 July 2020 (Department for Transport)

2.3.25. The Local Transport Note provides guidance and good practice for the design of cycle infrastructure, in support of the Cycling and Walking Investment Strategy (CWIS). There are five core design principles where the networks and routes should be coherent, direct, safe, comfortable and attractive.

2.3.26. These are expanded below:

- Cycle networks should be planned and designed to allow people to reach their day to day destinations easily, along routes which connect, are simple to navigate and are of a consistently high quality.
- Cycle routes should be at least as direct than those available for motor vehicles.
- It should be safe, and perceived to be safe, so more people feel able to cycle.

- Routes should be comfortable, good quality, well-maintained smooth surfaces, adequate width for the volumes of users, minimal stopping and starting and avoiding steep gradients.
- Cycle infrastructure should help to deliver public spaces that are well-designed and finished in attractive materials and be places that people want to spend time using.

2.3.27. Both Gear Change and LTN 1/20 are central to the design development for the four cycle corridors that this OBC is based upon. The provision of high quality, accessible and safe cycle infrastructure aligns directly with the ambitions and vision of Gear Change. The detailed design guidance set out in LTN 1/20 has directly influenced how the cycle corridor proposals have developed since the SOBC submission.

LOCAL POLICIES

Dorset LEP Strategic Economic Plan (SEP) – Transforming Dorset

2.3.28. The Dorset LEP produced their Strategic Economic Plan in 2014 which was then refreshed in 2016. Dorset's Economic Vision is:

> *"By 2033 Dorset will be one of Britain's Core City-Regions, and the most sustainable of these. Its competitiveness will be driven by innovation."*

2.3.29. The Plan is formed around four themes:

- Competitive Dorset
  - Unleash the potential of existing Dorset businesses
  - Encourage the creation of new businesses
  - Leading the growth agenda through enterprise and business
- Responsive Dorset
  - Address the barriers to growth
  - Responsive planning and development system and a dynamic housing market
- Connected Dorset
  - Improve electronic and physical connectivity throughout Dorset
- Talented Dorset
  - Enhance the skills of our current and future workforce
  - Offset skills gaps, remove blockages to employment and enable adaptation in the workforce.

Dorset LEP – Emerging Industrial Strategy for Dorset

2.3.30. In December 2018, the Government asked Dorset LEP to help deliver the national strategy by developing a Local Industrial Strategy (LIS) for Dorset. Working in close collaboration with local businesses, stakeholder organisations, BCP Council and Dorset Council, Dorset's LIS will be a twenty-year plan to increase productivity, innovation, earnings and wellbeing

across the county, delivering on an ambition to create a local economy that is sustainable, innovative, resilient and inclusive.

2.3.31. The emerging plan proposes the following targets:

- Reduce the productivity gap from £2.5bn to £1bn;
- Halve the wage gap between Dorset and the UK from 6% to 3%;
- Reduce the number of 50-64 year olds with no formal qualifications from 6% to 4%;
- Reduce the number of areas in Dorset LEP region considered to be in the 20% most deprived from 25 to 20;
- Increase the number of businesses undertaking Research and Development from 20% to 30%.

2.3.32. With regard to Infrastructure, the plan commits to prioritising digital infrastructure and renewable energy resilience, and 'delivering one strategic sustainable transport plan for Dorset'.

2.3.33. The TCF proposals set out within this SOBC will facilitate delivery of this LIS through providing enhanced connectivity and access to employment areas for the most deprived areas of the SED city region population.

BCP Council Emerging Local Plan

2.3.34. BCP has recently commenced the process of preparing a new Local Plan for the council area of Bournemouth, Christchurch and Poole as a whole. The plan will set the framework for development across the BCP Council area for the next 20 years and will replace the individual Local Plans currently in place covering the three towns.

2.3.35. The themes for the plan, aligning with the Corporate Strategy are:

- Sustainable Environment – leading our communities towards a cleaner, sustainable future that preserves our outstanding environment for generations to come;
- Dynamic Places – supporting an innovative, successful economy in a great place to live, learn, work, and visit;
- Connected Communities – empowering our communities so everyone feels safe, engaged, and included;
- Brighter Futures – caring for our children and young people;
- Fulfilled Lives – helping the population lead active, healthy and independent lives.

2.3.36. The TCF proposals set out within this OBC align with these broad objectives and will enable BCP to more effectively work towards these growth plans.

Dorset Council Local Plan

Dorset Council has commenced consultation on its new Local Plan in January 2021. The strategic priorities for the plan are as follows:

- Climate and ecological emergency;
- Economic growth;
- Unique environment;
- Suitable housing; and
- Strong, healthy communities.

2.3.37. The TCF proposals set out within this OBC align with these broad objectives and will enable Dorset Council to more effectively work towards these growth plans.

Bournemouth, Poole, and Dorset Local Transport Plan 2011 to 2026

2.3.38. The LTP 3 states the key transport policies for Bournemouth, Poole, and Dorset (including Christchurch) as:

Key Transport Priorities

- Providing adequate transport infrastructure to serve and unlock major new developments, which will enable more sustainable travel than historic development, and securing developer funding to meet these needs;
- Improved transport infrastructure and access, supporting planned growth for housing and higher value jobs;
- Reduction in single occupancy car use, with growth in public transport, cycling and walking;
- Achieving no increase in congestion despite anticipated housing / economic growth to 2026;
- Continue to unlock access to new employment areas in Bournemouth, Poole, Ferndown, Aviation Business Park and the Dorset Innovation Park at Wool, an Enterprise Zone which is expected to facilitate 2,000 new jobs;
- Step change in public transport provision with improvements in bus journey times, and reliability through Quality Bus Corridors;
- More reliable and sustainable access to the Port of Poole and Bournemouth Airport, and improved connections to national road / rail networks;
- Continued investment in walking and cycling infrastructure

2.3.39. The TCF proposals set out within this OBC align with the transport priorities identified above and will enable these priorities to be realised on the ground within the LTP3 period.

2.3.40. At the time of publication of this document further refresh work is being undertaken on both Local Plan and Local Transport Plan and this shall include for emerging DfT strategies on bus and decarbonisation. Although the detail of such is uncertain at this time it is likely that the current TCF case shall align in providing a more sustainable infrastructure for the future. Approach can be flexible as far as is reasonable to take on aboard any emerging requirements from DfT.

Climate and Ecological Emergency

2.3.41. Both BCP and Dorset Councils have declared a 'Climate Emergency' in 2019.

2.3.42. In May 2019, Dorset Council declared the emergency and committed to:

- Taking direct action to reduce the negative environmental impact of [Dorset Council's] services;
- Using [Council] services to support and influence Dorset communities and organisations to reduce their carbon footprint;
- Working with partners to develop [the Council's] climate emergency plan.

2.3.43. In July 2019, BCP Council committed to making BCP Council and its operations carbon neutral by 2030, and to work with the wider community to look at how early the BCP region can be made carbon neutral, ahead of the UK target of 2050.

2.3.44. The TCF proposals set out within this OBC support the Climate Emergency commitments by facilitating low carbon travel across the SED city region.

2.4 LOCAL CONTEXT

LOCAL POPULATION AND DEMOGRAPHICS

2.4.1. The SED city region has a workday population of 480,000 and is forecast to experience a growth of 20,000 new jobs and 29,400 new homes by 2026. Without addressing the local transport network problems, this growth will be stifled unless the source of congestion, delays and poor air quality are mitigated.

2.4.2. The SED city region experiences significant seasonal variation in population due to its popularity as a holiday destination. Based on data from Visit England the summer period population is typically circa 30% higher than the average population across the year. Taking account of variations between weekdays and weekends this can contribute to significant variations in travel demand. Summer weekends can attract high numbers of day visitors from across the South of England.

2.4.3. Leisure and tourism are a key contributor to the economy of the SED city region. 12% of all employment is related to Tourism, with significant variations in seasonal demand. BCP Council area is one of the few areas in the UK that competes with London in terms of hotel room occupancy rate, but the patterns are quite different. London attracts a lot of business and overseas visitors where the local trend has seen increases in domestic tourism, often dominated by short-breaks.[9]

2.4.4. The conurbation has resulted from the growth of three historic neighbouring towns, Bournemouth, Christchurch, and Poole. Unsurprisingly, the conurbation is polycentric, as there is no one dominant 'centre' rather a series of neighbourhoods around clusters of major employers. The SED city region geographical spread of housing, employment and education across urban sub-urban and rural areas results in complex travel and commuting patterns.

2.4.5. Several major strategic projects have been established to support Dorset's growth aspiration and its contribution to national economic growth.

2.4.6. The previously submitted SOBC sets out the population growth that has taken place across SED city region over the past seven years and future population projections for the wider Dorset area.

[9] https://www.bournemouth.co.uk/dbimgs/Bmth%20Poole%20Tourism%20Strategy%202017-22.pdf

2.4.7. The growth in Bournemouth is 2.2% above the national average and 1.6% above the regional average. This has brought with it a significant increase in pressure on the local transport networks. However, there has not been a corresponding increase in road network capacity or investment in sustainable transport infrastructure.

2.4.8. The area also has an addition to the population from year-round tourism with over 17 million day and overnight visitors to Bournemouth, Christchurch, East Dorset, Poole and Purbeck each year.

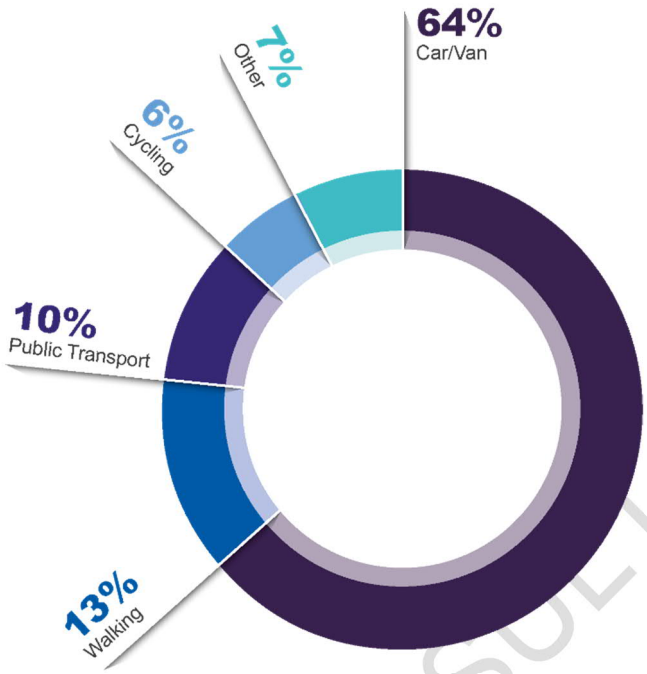
LOCAL TRAVEL BEHAVIOUR

2.4.9. The majority of journeys within the city region are currently undertaken by motor vehicle – this is demonstrated by the fact that Journey to Work car mode share is 64% (2011 Census).

2011 Census Travel to Work Patterns

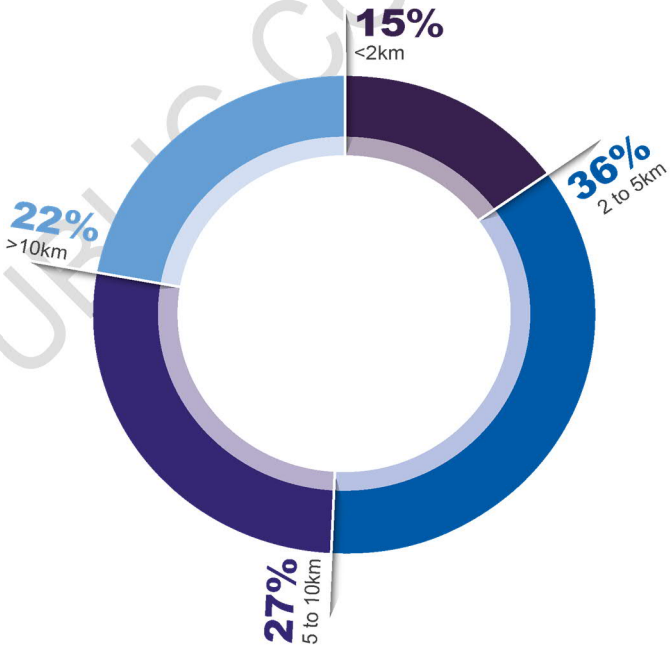
2.4.10. Census data for employees travelling into the Poole and Bournemouth areas from 2011 (see below) indicates that 64.1% of commuters use a car or van to travel to work. 15% of these car/ van journeys are less than 2km. In the Bournemouth area alone, this equates to 7,000 people driving less than 2km to work each day.

Figure 2-1 - Travel to Work Mode Share - Poole & Bournemouth



Source: 2011 Census

Figure 2-2 - Travel to Work Distance by Car - Poole & Bournemouth

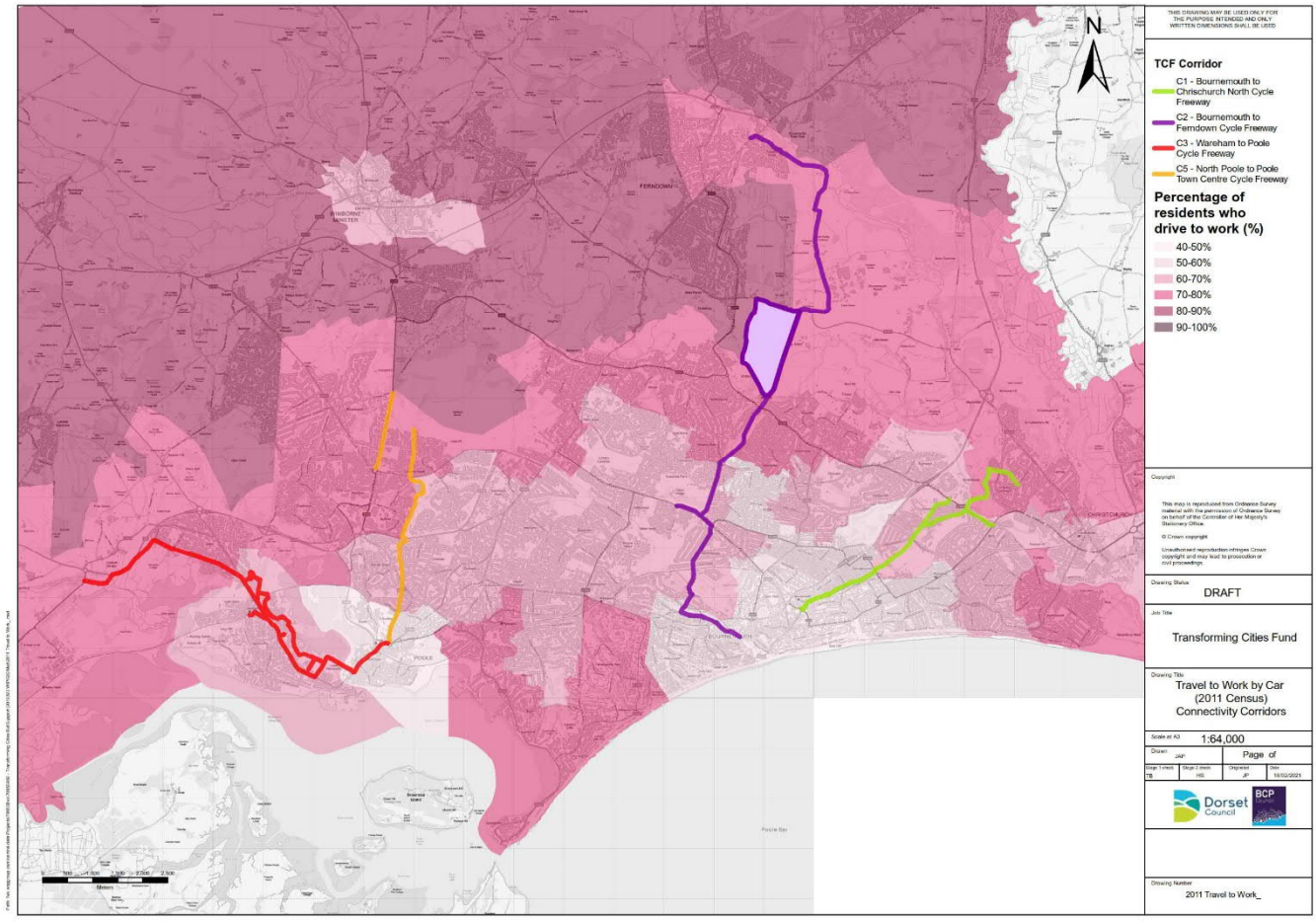


Source: 2011 Census

2.4.11. The map shown in Figure 2-3 below provides a spatial representation of the high use of car and van for travel to work purposes in the conurbation. The map shows there are areas of

high car use within the more central urban areas, not just the more rural periphery as might be expected.

Figure 2-3 - Travel to Work by Car - Total Population (Census 2011)



Business travel network – Travel plan data

2.4.12. The Business Travel Network (BTN), supported by BCP Council and Dorset Council, provides local businesses and employers support in facilitating sustainable staff travel. The BTN provides free advice and resources and assists in developing travel plans for workplaces.

2.4.13. Members of the BTN commit to developing and delivering Travel Plans. This entails carrying out site audits and Staff Travel Surveys. The results of these surveys are then used to identify appropriate 'hard' and 'soft' measures to encourage sustainable travel by employees and visitors.

2.4.14. The results from a number of Staff Travel Surveys carried out by BTN members from across the SED city region are provided in Appendix A.

CYCLE NETWORK

2.4.15. The SED city region cycling network is growing and well used. The leisure market is well catered for with some excellent NCR and coastal routes as well as being within easy reach of the popular New Forest and Isle of Purbeck nearby. There is huge potential for increasing the modal share of cycling.

2.4.16. There are several Sustrans Local, Regional and National Cycle routes within the region together with Public Rights Of Way (PROW). These include cycleways and footpaths. There are also small sections of bridleways. Interventions will seek to connect with these existing routes where possible.

2.4.17. Figure 2-7 below shows the extent of the current designated Local Cycle Network across the SED Region.

2.4.18. This shows the NCN running along the seafront, connecting Poole with Bournemouth and Christchurch. However, the routes inland are more sparse with little network connectivity. This lack of connectivity across the region does not provide a high quality, safe and reliable network suitable for all commuters.

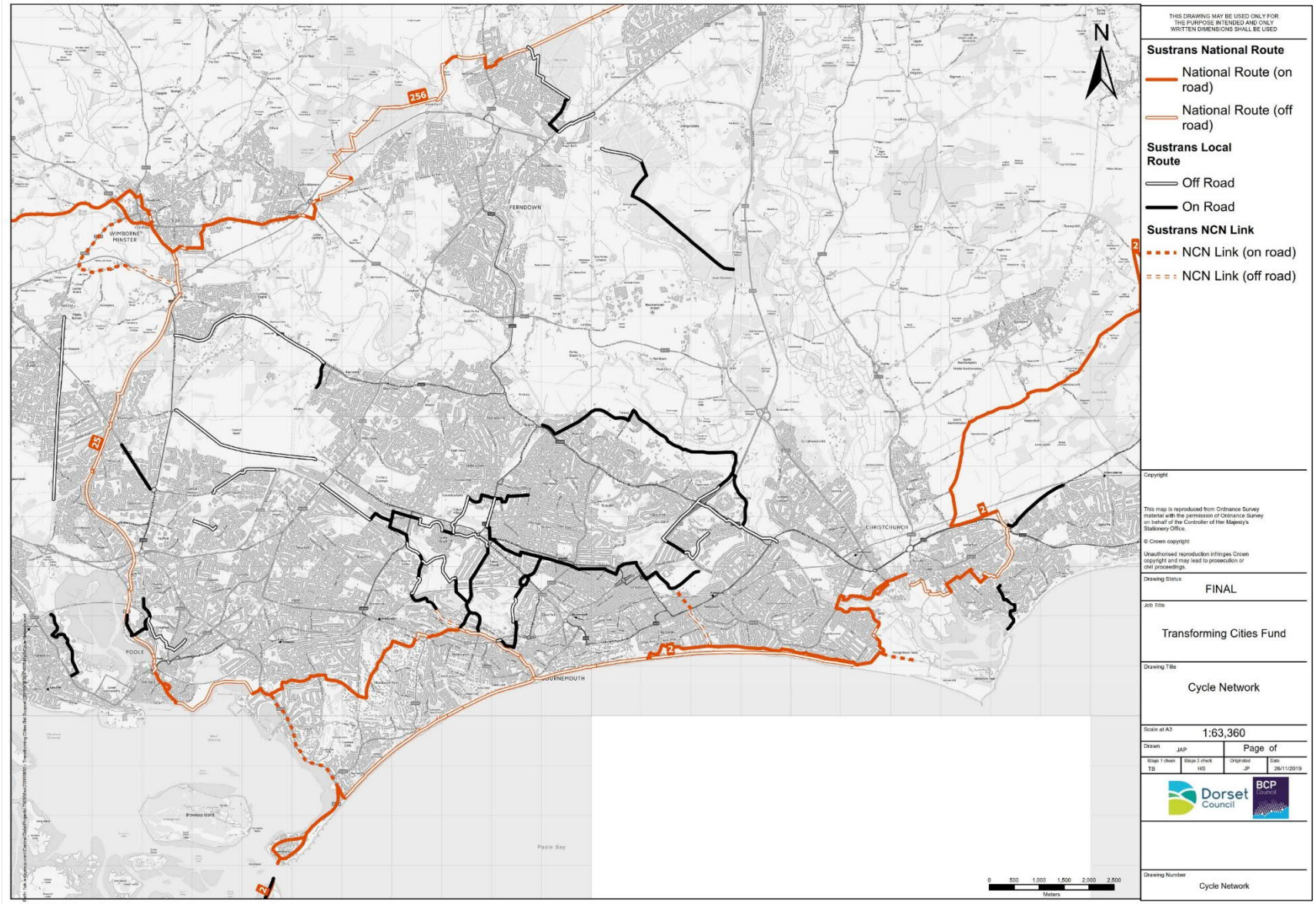
Covid-19 – Emergency Active Travel Fund

2.4.19. The Covid-19 pandemic has accelerated cycling and walking infrastructure investment in some areas through the Active Travel Fund tranches of funding. The first tranche of funding received by BCP Council has been used to implement temporary measures in the following locations:

- Bird's Hill Road – creation of a low traffic neighbourhood
- Darby's Lane – cycle prioritisation
- Evening Hill – installation of a protected cycle lane
- Poole Quay/Lower High Street – town centre pedestrianisation
- Stanley Green Road – creation of a low traffic neighbourhood
- Victoria Park Road – creation of a low traffic neighbourhood
- Whitecliff Road – prioritising cycling and walking.

Whilst the measures are currently temporary in nature to respond directly to the need to socially distance during the pandemic, feedback is being collated on the schemes from the public in order to determine whether these measures, and similar measures elsewhere, should be made permanent. Further Tranche 2 funding has recently been secured by BCP Council which will be used in some cases to make temporary measures identified above permanent, and also expand measures to other locations in the council area. These measures will directly compliment and align with the TCF Cycle Corridor proposals.

Figure 2-4 - Local Cycle Network



Commuter Challenge Results – 2017 & 2019

2.4.20. Sustrans have operated commuter challenge competitions in the SED city region in 2017 and 2019. The 2017 Commuter Challenge covered the former Bournemouth Borough Council area; whilst in 2019 the Commuter Challenge covered Dorset.

2.4.21. The purpose of the 'Challenge' is to encourage sustainable commuting over a period of time, with workplaces registering for the challenge, incentivised by the offer of prizes for logging sustainable journeys. The findings of those challenges are set out in the previously submitted SOBC but generally presented positive results with a move towards active travel modes.

Bournemouth Commuter Challenge 2017

2.4.22. During the 2017 challenge, 751 participants registered to take part. As a result, 3,795 Single Occupancy Vehicle trips were replaced, with 51% of those being by active travel modes.

2.4.23. Follow up surveys determined that 76% of participants had increased the number of days on which they do physical activity after taking part in the Challenge. 38% of respondents had increased the amount they cycle, and 41% had increased the amount they walk since participating in the Challenge.

Dorset Commuter Challenge 2019

2.4.24. The 2019 challenge ran for 4 weeks and was aimed specifically at employers only. During the 2019 challenge, 614 individuals registered to take part. Of those, 541 logged journeys (88%). The challenge logged 3,342 Single Occupancy Vehicle trips replaced with 2,141 of these switching to active travel modes.

2.4.25. 49% of follow up respondents felt they were more likely to become physically active as a result of taking part in the Challenge. Motivating factors included 'reducing environment impact' (68%), 'improving fitness' (66%) and 'improving health' (64%).

PUBLIC TRANSPORT NETWORK

Bus Network

2.4.26. The bus network in the SED city region is primarily provided by two main operators – Morebus (part of Go South Coast) and Yellow Buses. The operators run a comprehensive network of services east-west through the region. Journey times on radial routes are less competitive.

2.4.27. Bus services within the SED city region have been highly successful in recent years with an increase in patronage of 85% between 2004/05 and 2016/17. This is one of the largest increases in the whole of the UK. There are many factors behind this success which has been driven by a strong and effective voluntary Quality Bus Partnership. It must be noted that more recently, due to the Covid 19 pandemic, patronage has reduced significantly however it is expected numbers will rise again as the pandemic becomes under control.

2.4.28. The A35 Corridor Three Towns Travel LSTF project received £12.1m, supported by £5.5m local contributions. A further £3.4m was received from the Better Bus Area Fund towards

bus improvements along the corridor. The project enabled a step-change in infrastructure and passenger facilities. This has resulted in high frequency bus services on the main east/west corridor significantly reducing dependency on the car for residents and visitors and produced an increase in patronage on the corridor of approximately 7.5% between 2012 and 2015[10]. There has not been a corresponding investment in the radial routes, creating an imbalance in the level of service frequency, quality and journey times across the network

2.4.29. Both major local bus operators have invested heavily in upgrading their fleets; newer, cleaner buses, on-bus technology including next stop audio/visual, Wi-Fi, USB charging and GPS/RTI, development of contactless and smart ticketing systems and producing clearer stop-specific bus timetables. These improvements have been well received by the passengers as demonstrated by the 2018 Transport Focus Bus Passenger Survey which rated Bournemouth and Poole joint top in England at 91% for overall passenger satisfaction.

2.4.30. In light of the recent COVID-19 pandemic there has been significant pressures on local operators with a decline in patronage. Considerable efforts are being made to provide safe transit for passengers and protecting bus operator staff. The DfT have also made funding available to operators to support them and the recovery from the pandemic.

Rail Network

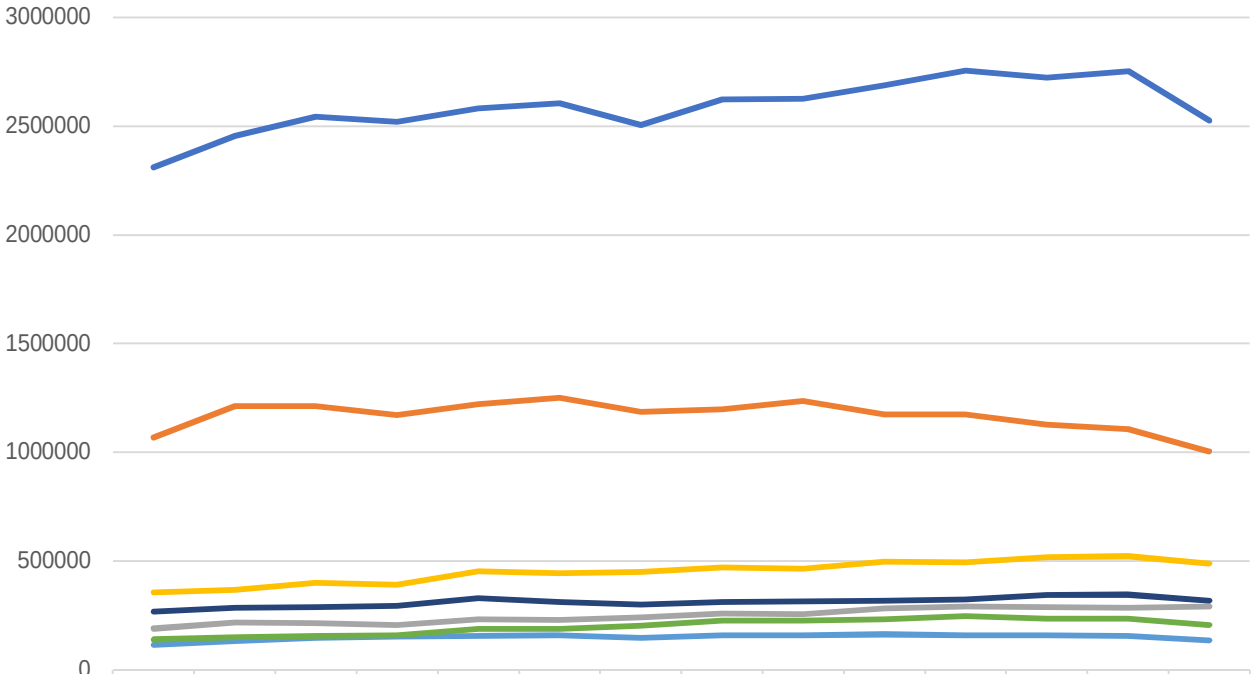
2.4.31. The SED city region benefits from seven rail stations however there is only a single east/west line. There are currently three trains an hour between Poole and Brockenhurst with an additional Cross-Country service adding a fourth service between Bournemouth and Brockenhurst. There are no rail connections from the northern suburban areas to the centres.

2.4.32. There are two primary inter-city stations (Poole and Bournemouth) in the BCP Council area and five smaller stations (Branksome, Christchurch, Hamworthy, Parkstone and Pokesdown).

2.4.33. Figure 2-4 shows the change in rail passenger levels at stations across the SED city region between 2006 and 2020. The data shows a general upward trend in passenger numbers across all stations to around 2017 with some levelling off since then, and a dip during the pandemic conditions of 2020. While Bournemouth has seen the largest absolute increase in passenger entry and exits over that period at almost 440,000 additional movements, Parkstone has shown the largest percentage increase in movements at 68%, with Branksome increasing by 51%. In general, rail use has grown significantly, a pattern seen across the rail network over recent years.

[10] Three Towns Travel LSTF Annual Outcome Monitoring Reports Years 2 and 3

Figure 2-5 – Rail Station Entries and Exits 2004-2020



	2006-07	2007-08	2008-09	2009-2010	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Bournemouth	2310099	2455927	2542092	2519100	2582864	2604162	2505754	2623628	2624682	2688160	2755772	2721494	2751866	2526398
Poole	1069639	1213687	1211888	1170558	1221206	1250636	1185744	1196626	1236048	1174922	1173356	1126930	1108066	1004716
Branksome	189961	218298	214914	205478	233162	230688	242610	258816	256342	282650	291532	287516	286162	290598
Christchurch	357013	368081	401544	392088	453944	444944	449562	471928	465334	498016	495788	519332	522964	488304
Hamworthy	114505	133755	148126	152148	156910	160206	147356	158554	157940	163854	159902	160042	155118	134370
Parkstone	139383	150454	155096	159654	187102	189928	204614	225890	226270	232130	247142	236962	234380	207346
Pokesdown	267815	286139	287574	293418	330424	312344	299126	311832	315302	318958	323198	343164	345354	317968

EMPLOYMENT

2.4.34. It is estimated that circa 20,000 new jobs will be created in the SED city region by 2026 and future forecasts suggest this figure will increase significantly beyond 2026 as recognised in DLEPs Dorset Horizon 2038 – a Vision for Growth[11]

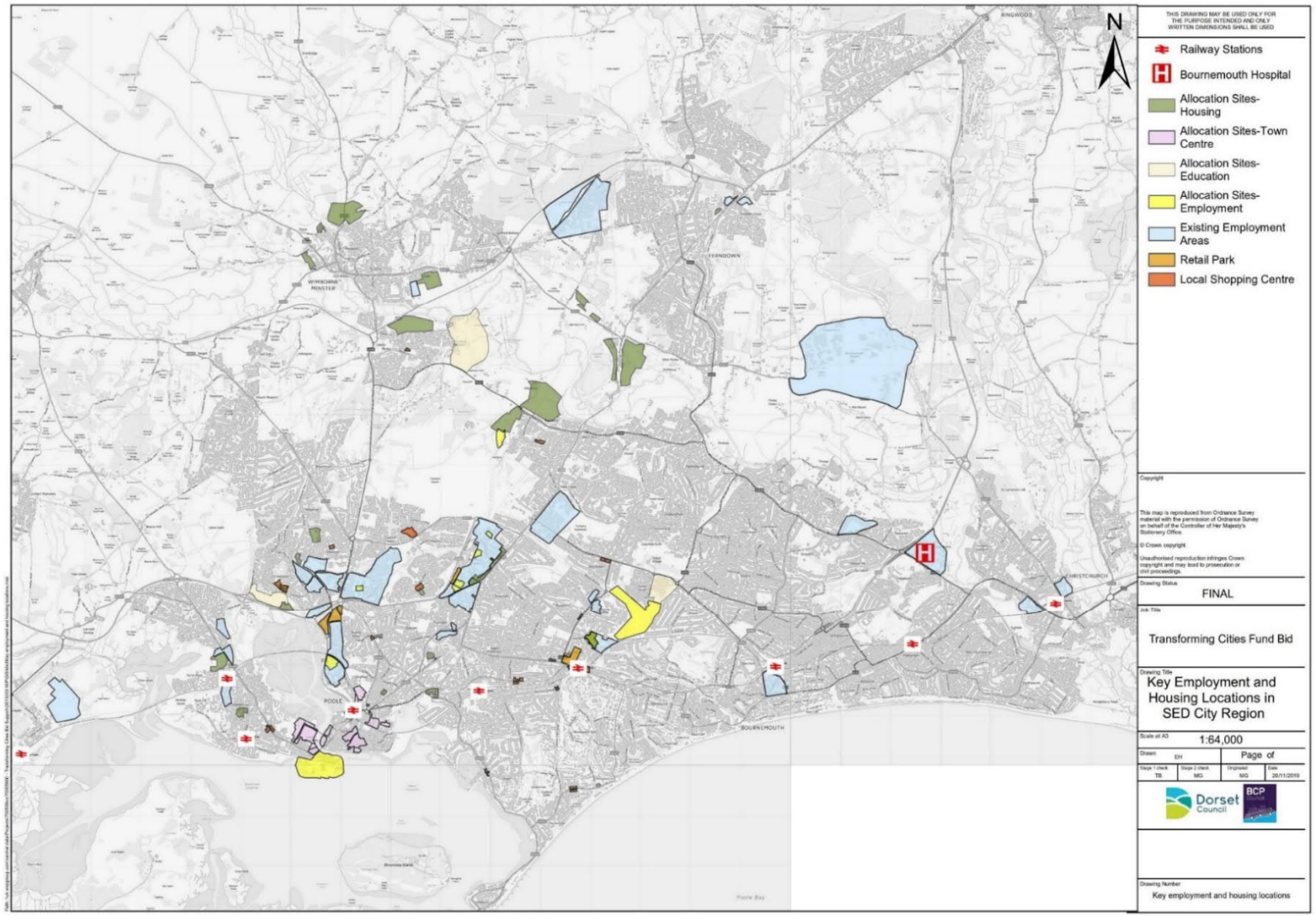
2.4.35. Table 2-2 summarises the main employment areas in SED city region, highlighting the largest employment locations and the main areas where new jobs are forecast to be created. It should be noted that the proposed SED city region TCF network d Cycle Freeways will serve all of these employment locations. The locations of the major employment and housing locations is shown in Figure 2-x below.

Table 2-2 – Estimated Future Jobs Growth to 2026

Ref	Employment Site/Area	Estimated Existing Jobs	Estimated New Jobs by 2026
1	Bournemouth Aviation Park	2,000	3,000
2	Wessex Fields/Chaseside	10,000	2,500
3	Lansdowne Business District	8,000	2,000
4	Bournemouth Town Centre	4,000	1,000
5	Poole Town Centre	4,000	1,500
6	Talbot Heath (Digital Village – new site)	0	2,000
7	Nuffield Industrial Estate	4,500	1,300
8	Ferndown Industrial Estate	4,000	1,800
9	Holton Heath Industrial Estate	1,500	500
	Sub Total	38,000	15,600
	Other locations		4,400
	Total		**20,000**

[11] https://dorsetlep.s3.amazonaws.com/Horizon%202038%20final/Dorset_Horizon2038_Nov2018_FINAL.pdf

Figure 2-6 - Key Employment and Housing Locations in SED City Region



HOUSING

2.4.36. Each of the amalgamated planning authorities have updated their Growth Plans. As national and local land supply objectives have continued to shift, the physical, environmental and economic constraints of the green-belt, ecology and air quality interventions have restricted growth. Due to the urban nature of the main towns, there is limited scope for major housing delivery growth close to the town centres. Therefore most of the significant housing allocation sites are located on the edges of the existing urban areas. These locations generally have poor connectivity to employment centres and thus require additional transport investment.

2.4.37. Whilst Poole recently reviewed its Community Infrastructure Levy to address viability and delivery, having decided to amalgamate the authorities, BCP Council recognise the need to complete a Local Plan Review as part of a need to address affordability in the region.

2.4.38. TCF forms part of a package of interventions to influence travel demand, provide transport connectivity to link housing to urban centres and support sustainable growth.

2.4.39. Table 2-3 indicates the breakdown of the additional 29,400 new homes required in SE Dorset by 2026 based upon work being undertaken by the Local Planning Authorities as part of their complete and emerging Local Plans.

Table 2-3 –Housing Growth Estimates to 2026

ONS Code	Local Planning Authority (LPA) Area	Total LPA Areas Workday population (2011 Census)	SED city region Area Workday population (2011 Census)	Total LPA Areas Indicative assessment of housing need - Dwellings per Annum 2016 to 2025	SED city region Indicative assessment of housing need - Dwellings per Annum 2016 to 2026 (Pro-rata based on workday pop.)	SED city region Indicative assessment of total additional housing (dwellings) 2016 to 2026
E06000028	Bournemouth	175,409	175,409	1,458	1,458	14,580
E06000029	Poole	154,823	154,823	710	710	7,100
E07000048	Christchurch	48,152	48,152	352	352	3,520
E07000049	East Dorset	81,069	68,687	442	374	3,745
E07000051	Purbeck	43,750	16,672	120	46	457
Totals		503,203	463,743	2,646	2,504	29,402

2.5 PROBLEMS IDENTIFIED

2.5.1. The SED city region, comprising the BCP Council area and adjacent urban areas within Dorset Council, suffers from limited connected sustainable transport choices available for people who live and work in or visit the area, along with a range of transport challenges including its unique geography, incomplete strategic transport network and increasing population, all of which lead to increased levels of congestion.

2.5.2. To overcome the productivity gap it is essential that unnecessary car use is reduced in lieu of alternative sustainable modes. Previous transport studies highlighted areas such as Wimborne and Ferndown as having bus and cycling connectivity requiring improvements leading to an overdependence upon cars, resulting in congestion.

PHYSICAL AND NATURAL CONSTRAINTS

2.5.3. The transport network itself is constrained by the coastline to the south. Although the coast is a significant asset and one of the country's most spectacular natural features that attracts many visitors, it results in the lack of orbital routes that many other urban areas benefit from. The River Stour also runs through the SED city region. This provides another valuable natural asset albeit currently also presenting a barrier to north-south transport movements particularly for sustainable modes.

2.5.4. To the north of the city region, there are multiple protected sites, much of the surrounding area is protected heathland, with Special Protection Areas (SPA) or Site of Special Scientific Interest (SSSI) designations. There are also Special Areas of Conservation (SAC) and Ramsar sites.

2.5.5. The area is bordered by the South East Dorset and South West Hampshire Green Belt which includes the New Forest National Park and to the north lies the Cranborne Chase AONB which covers 380 sq. miles of countryside overlapping the boundaries of Wiltshire, Dorset, Hampshire and Somerset. In summary, the area enjoys a world class, protected environment and landscape which in a transport context, presents significant constraints and fewer opportunities to improve mobility.

2.5.6. Figure 2-6 below shows the limited river crossing points (seven) and multiple environmental designations that represent barriers to delivering sustainable and strategic transport infrastructure.

2.5.7. The river crossings themselves vary in quality and suitability for use for walking and cycling movements across the river. The north of the BCP Council area is almost entirely designated as SPA.

2.5.8. Two of the C corridors rely upon crossing the River Stour and upgrades are proposed in key locations. The C2 corridor runs between Bournemouth town centre and Ferndown. The C2 corridor cross the River Stour between Parley Lane and Whitelegg Way via an off-road section of route. It is proposed that a new bridge crossing be constructed on this route, providing additional connectivity for both cyclists and pedestrians.

2.5.9. The C1 corridor crosses the River Stour to the north of Castle Lane East, adjacent to the Wessex Fields employment area.

Figure 2-7 - River Stour Vehicular Crossings and Environmental Designations

PRODUCTIVITY & PLANNED LOCAL GROWTH

2.5.10. The SED city region has huge potential for economic growth and increased productivity, evidenced by the proposed job forecasts to 2026. However, evidence is suggesting that the local transport network is stifling productivity across the area.

2.5.11. Gross Value Added (GVA) per hour worked data from the Office for National Statistics (ONS) indicates that Dorset under-performs relative to the UK. The SOBC sets out the GVA hours worked in 2016 which allows the estimation of how much more could be produced if the region were to perform at the same level as the national average.

2.5.12. Compared with the UK average, output per hour (productivity) in Dorset Council is £4.80 lower and in Bournemouth & Poole areas of BCP Council it is £3.90 per hour lower.

2.5.13. In 2016, total GVA in the DLEP area was £16.13bn. Filling the output gap would raise this by £2.5bn across the whole of Dorset. Making an adjustment for population and relative productivity between the SED city region it is estimated that by matching the UK level of productivity, the SED city region could contribute an additional £1.5bn GVA per annum to the UK's economy

2.5.14. Although this output gap is not specifically attributed to poor transport network, qualitative evidence below suggests local business consider transport to be the most significant issue when considering potential growth.

2.5.15. In April 2018 the Dorset LEP conference attending Dorset businesses were asked to vote on what they considered to be the biggest impediments to growth, by far the largest factor was transport links with, recruitment, broadband access and housing relatively close behind.

2.5.16. At the next Dorset LEP conference held in May 2019, also attended by Dorset businesses, they were asked to vote again on what three issues they considered to have the biggest impact on business growth. Attendees were also asked to consider in more detail the external constraints on business growth and choose their main three. In both survey responses, connectivity and transport infrastructure was identified as the factor perceived by attendees to be having or likely to have on their business growth. This demonstrates the identified need from business for investment in improvements to transport infrastructure links across the SED city region.

Bournemouth, Christchurch and Poole Travel Survey 2019

2.5.17. In January 2019 BCP Council carried out a Travel Survey designed to monitor long-term trends in personal travel, to inform the development of policy and to help identify measures to improve sustainable travel in the area.

2.5.18. The aim of the survey was as follows:

- Provide baseline data
- Identify travel patterns and trends
- Monitor long-term trends in personal travel
- Inform travel policy
- Understand barriers and incentives to sustainable travel

2.5.19. The online survey sought to better capture the travel patterns of those who live, work and go to school within the BCP Council area. Findings of the survey are set out in the SOBC.

Business Travel Network – Key Issues Arising from Surveys

2.5.20. Based on a broader review of Travel Plans and sustainable travel activities across the Business Travel Network and the SED city region, the following issues have been identified:

- Lack of facilities for staff using active travel modes (workplaces and educational establishments).
- Insecure cycle storage, lack of shower and changing facilities and kit drying facilities
- Lack of facilities for children using active travel modes to get to school. Covered secure cycle storage & scooter storage with additional space for storage/lockers for helmets & wet weather gear.
- Lack of all-weather bus stops – exacerbated by indirect routes and high-ticket fares, and perceived low quality of service

- Lack of Season ticket offers from South Western Railway for local commuter journeys on the train. Need for salary sacrifice schemes to be more readily available for staff to enable the purchase of season tickets.
- Lack of integrated ticketing across modes, other than the PlusBus option for rail/bus travel.
- Low uptake of car sharing in businesses, lack of infrastructure, monitoring and promotion
- Lack of car sharing amongst staff at Educational Establishments
- Workplace car park management is often inadequate, and not based on business need. This impacts on car sharing promotion and uptake. Also, the need to have more prioritising of car sharing parking bays to be prominent and near to the building.
- Lack of smart working infrastructure – resulting in peak and off-peak trips which are not necessary (commuting and business travel)
- Lack of EV charging infrastructure in the workplace
- Lack of on-street residential EV charging infrastructure, limiting the uptake of EV vehicles
- Dangerous and irresponsible parental parking near to educational establishments creating congestion issues, impacting on road safety, safety of and perception of safety of active travel (Walking, Cycling & scootering).
- Increase in air pollution levels through use of motor vehicle in the near vicinity of the schools and increasing levels of idling.

LOCAL HIGHWAY NETWORK

2.5.21. In the SED city region, there are no motorways, few trunk roads and a lack of dual carriageway primary routes. Many planned major road schemes were abandoned in the 1980s and 1990s. This has led to isolated sections of dual carriageway interconnecting with pre-existing lengths of single carriageway roads.

2.5.22. Work undertaken for Poole's former Local Plan provides a useful evidence base for setting the scene for a 'do nothing' scenario[12].

2.5.23. The transport modelling to inform the plan was undertaken using the South East Dorset Transport Model; a strategic SATURN (Simulation and Assignment of Traffic in Urban Road Networks) traffic model which covers the SED city region. The model covers the morning and evening weekday periods of 8-9am and 5-6pm and considers car, light goods vehicle (van) and heavy goods vehicle trips.

2.5.24. The model ran across several future year demand scenarios that forecasts traffic levels, congestion, delays and junction performance in 2033. It also identified locations that were worst affected. The SATURN model predicted the overall number of trips on the network in

[12] https://www.poole.gov.uk/planning-and-building-control/planning-policy-and-guidance/poole-local-plan-evidence-base/

2033 based on TEMPRO 2017 growth factors derived from NTEM data for the 'Do Minimum' case. By adding the Poole Plan growth sites to TEMPRO, the model then predicted the overall number of trips in 2033 with the Poole Plan growth sites included, known as the 'Do something' case. This allowed an understanding of the likely impact of the new growth sites over and above background growth

2.5.25. The main Future demand scenarios without mitigation considered were:

- i. Do Minimum 2033– Background growth and committed development in 2033; and
- ii. Do Something 2033– The Do Minimum + additional growth sites in the Poole Local Plan.

2.5.26. The model predicted that in the Do Minimum 2033 scenario the Poole network in 2033 will experience approximately **34% more trips than in 2012**. Adding the Poole Plan growth sites, the network is forecast to contain **36.8% more trips than in 2012**, therefore it can be stated that the newly allocated sites in the Poole Local Plan add 2.5% more trips across the full network on top of the existing planned and further background growth.

2.5.27. Due to a lack of sustainable travel choices, the local highway network accommodates high levels of traffic resulting in urban congestion, very poor network resilience, unreliable journey times, severance and air quality issues for residential neighbourhoods.

2.5.28. There are two Air Quality Management Areas locally. These are discussed further later in the chapter, along with a plan. Both are located in the Parkstone area of Poole, northeast of the town centre, closest to the proposed S5 corridor between Poole town centre and Ferndown.

2.5.29. The lack of a connected strategic network causes increased traffic congestion, characterised by low traffic speeds and increased journey times on the main approaches to the conurbation, particularly on the main corridors in the peak periods (e.g. A31T, A338, A35, A348, and A3049).

2.5.30. The A35 runs west from Bournemouth, connecting the SED city region with Dorchester and Devon further west. To the east/northeast, the A338 connects Bournemouth to St Leonards, the A31 and Ringwood. Both of these routes are important connecting routes into the SED city region and links to the Strategic Road Network.

2.5.31. The A338 in the Hurn area has recently been the subject of works delivered through the Bournemouth International Growth (BIG) Programme, a £45m Growth Deal project aimed at tackling congestion and poor highway links to the Airport and developments sites in the vicinity. This programme is scheduled to continue through to 2021. The works provide significant additional highway capacity for inbound traffic, improving journey times into the conurbation.

2.5.32. The SOBC set out the trend in motor vehicle traffic across the SED Region. Bournemouth saw a rise of 3.9% between 2011 and 2018, Poole saw a rise of 1.9% whilst Dorset's increase was 9.0%. This was higher than the national and regional average. The dominance of private car traffic across the region has created a congested network with slow vehicle speeds and high volumes.

2.5.33. Work carried out by BCP Council officers using Highways Analyst illustrated the increase in journey times and reductions in average speeds across Poole and Bournemouth between

2011 and 2016 a summary of that work is set out in the SOBC, however using the various data sources it is clear that congestion has increased Dorset especially in the Urban Areas between 2011 and 2016.

Tom Tom Congestion Index

2.5.34. The TomTom Congestion Index 2019 data has recently identified the Bournemouth urban area as being the 4th most congested city or city region in the UK. Whilst this is down one place since 2018 when the conurbation ranked 3rd, there has been no measurable change in congestion (remaining at 34% congestion) in the area, only a slight increase in other cities by comparison.

2.5.35. It is estimated that 18 minutes of additional time (based on a 30-minute trip) was spent driving during morning rush hour, and additional 20-minutes in the evening peak.

2.5.36. Without the investment in the active travel network, as well as the public transport offer, the level of congestion and delay across the SED Region will continue to increase.

Estimated Economic Cost of Congestion in BCP and Dorset

2.5.37. Dorset Council has undertaken a high-level analysis to estimate the economic cost of congestion on the SED city region. This uses the WebTAG compliant 2012 SE Dorset multi-modal transport (SATURN) base model which covers a 'travel to work' area slightly larger than the city region, e.g. includes Blandford and Ringwood. The analysis only assesses the impact on the economy of lost time and does not take into account wider dis-benefits such as health or air quality impacts. Transient queues and over-capacity queues were taken for each of the peak periods and multiplied by the 2012 pence per minute (PPM) costs. The peak results were factored to represent average 24Hr annual costs in £'s.

2.5.38. Table 2-4 below indicates the annual cost of congestion based upon 2012 prices.

Table 2-4 – Costs of Modelled Queues (Transient plus Over Capacity) (2012 Prices)

Time Period	Base 2012
AM Period (0700-1000)	£ 145,445.24
Inter-peak (1000-1600)	£ 227,155.41
PM Peak (1600-1900)	£ 148,329.43
12Hour Sub Total	£ 520,930.08
12Hour to 24Hour	£ 634,492.83
Annual Cost (24Hr x 365)	£ 231,589,884.76

2.5.39. Using RPI to account for inflation the base 2012 value of £232M/annum for the economic cost of congestion on the SED city region approaches £270M/annum **at 2017 prices**.

LOCAL CYCLE NETWORK

2.5.40. The SED city region cycling network is growing and well used. However, the area suffers from many common challenges. Poor safety, due to a lack of segregation, a lack of high quality connectivity between routes and a lack of a well-connected network linking popular

origins and destinations are major barriers to take up of cycling as a natural mode of choice for journeys to work and education. Journey to Work modal share in 2011 Census was 5.5%, compared with 2.8% across England and Wales. This compares with 8.2% in Bristol, 6% in Exeter and 5% in Brighton and Hove.

Pedal Cycle Casualties

2.5.41. Individually, over the past five years Bournemouth is the fourth worst and Poole the thirteenth worst Local Highway Authority nationally in terms of road cycling casualties from 2012 to 2016. Combining the totals from both places Bournemouth and Poole as sixth worst, highlighting the need for major improvements to cycling infrastructure in the SED city region.

2.5.42. There is no appropriate data to compare the relative performance of SED city region with other areas of the country. The following table, which indicates the number of cycling casualties per million population, is therefore based upon the joint performance of Bournemouth and Poole.

Table 2-5 - Reported casualty rate per million population, England, 2012-2016

ONS Code		Region/Local Authority	2012	2013	2014	2015	2016	5 Year Ave	Rank
E06000028		Bournemouth	803	689	711	715	486	**681**	(4)
E06000029		Poole	390	483	560	405	363	**440**	(13)

DfT RAS30045

2.5.43. The current cycle facilities lack cohesion, with small sections of high-quality infrastructure within a broader poorly connected network. It is important to provide a more comprehensive network of cycle route to better facilitate regular and leisure cycle use for all residents, visitors and employees in the SED city region.

Local Cycle and Walking Implementation Plan (LCWIP)

2.5.44. BCP Council have commissioned the production of LCWIP alongside the TCF package of interventions. The LCWIP process has begun to address the lack of network connectivity and cohesion through identifying a Primary and Secondary Cycle Network across the BCP Council area around which cycle infrastructure investment will be focused in future years.

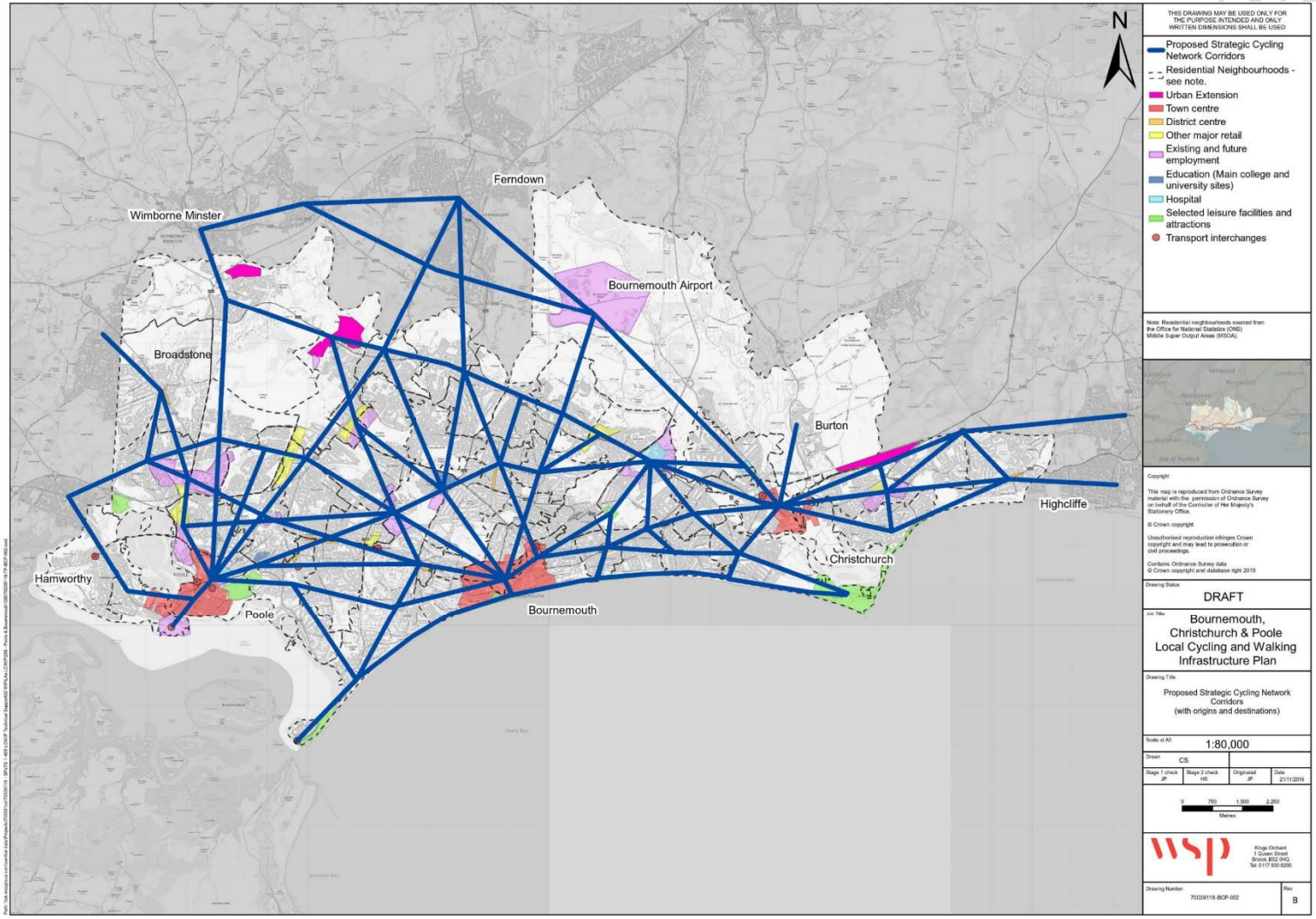
2.5.45. It is important to note that the LCWIP forms the basis of the potential cycle network and infrastructure in the future, it does not guarantee it's implementation without additional funding and programmes such as the TCF.

2.5.46. The LCWIP process identified a Network Plan which analysed the main origins and destinations across the area to identify the main strategic cycle corridors. This is provided below at Figure 2-8. The network around these corridors has been further appraised as to the suitability for cycle use to identify a Primary Cycle Network across the BCP area. This is now being developed further to identify a Secondary Cycle Network through quiet streets and local neighbourhoods to establish a comprehensive network of cycle routes across the BCP area.

2.5.47. As detailed above, the Covid-19 pandemic has brought forward some smaller scale interventions in cycling and walking infrastructure across BCP. Nationally, during the pandemic there was around a 100% increase in weekday cycling, with weekend increases of up to 200%, despite fewer people travelling overall[13]. In order to maintain this transition to active travel, the infrastructure needs to be improved such that even if general traffic levels return to their pre-Covid levels, there is a safe and attractive cycle network for all users.

[13] DfT (2020) Statistics on transport use during the coronavirus pandemic (online). Available at: https://www.gov.uk/government/statistics/transport-use-during-the-coronaviruscovid-19-pandemic

Figure 2-8 - LCWIP Strategic Cycle Corridors



RAIL NETWORK

2.5.48. The rail network is currently not used to its maximum potential for local journeys within the conurbation and from the wider Dorset / Hampshire sub region. The limited services (two per hour at irregular intervals) from Wareham and Hamworthy into Poole and Bournemouth does not provide an attractive frequency for local commuters. Ticket pricing is also a disincentive for local travellers. Rail travel from the SED city region to London is slow, with the journey from Bournemouth to London taking almost two hours.

2.5.49. In line with Gear Change, there is a need to significantly improve the opportunity to interchange from cycle or bus to rail at stations.

Rail Interchanges

Poole Station

2.5.50. The current station suffers from a poor quality cramped building with inadequate waiting and toilet facilities. The forecourt is poorly laid out for drop-off, interchange and onward travel.

2.5.51. Access to the station for pedestrians and cyclists from other parts of the town is unattractive with 'first/last mile' links between the station, the bus station and the shopping centre similarly difficult. The bus station provides important connectivity from within and beyond Poole.

Bournemouth Travel Interchange

2.5.52. The recent improvement of the westbound station forecourt including bus facilities has been a major step forward, but the upside forecourt has lacked the same level of investment. As rail patronage continues to grow it is likely that there will be increased pressure on internal facilities within the station that require significant improvement to bring the interchange fully up to a high quality modern standard. On the forecourt, cycle parking provision is limited. Beyond the station, pedestrian and cycle connections into the town centre are poor and circuitous around the supermarket and via Station Road roundabout subway. This does not provide a suitable gateway to the town centre.

2.5.53. Other stations within the conurbation suffer from very poor access conditions not only via the immediate platform access but also between the station and the surrounding streets. Several of these

underutilised stations are in need of major upgrade. The introduction of the shared bike scheme during 2019 offers significant opportunity for improve urban connectivity between modes.

2.6 IMPACT OF NOT CHANGING

OVERVIEW

2.6.1. Market failure to provide accessible, efficient, enjoyable and safe transportation alternatives to the motor vehicle has resulted in the SED city region being heavily congested, resulting in significant negative externalities. Without government intervention the status quo will prevail and roads will continue to be congested, carbon emission levels will continue to rise, air quality will deteriorate, economic growth, housing delivery and productivity will be further constrained. Furthermore, health and wellbeing will be adversely affected in residential and urban areas, and car dependency will continue to prevail disproportionately impacting deprived communities.

2.6.2. Across the board, a limited investment in sustainable travel modes will not result in the modal shift required in order for the SED city region to achieve the level of economic productivity that the output gap identified in Section 2.4 above suggests is possible over coming years and will not serve to achieve net reduction in carbon in the future.

2.6.3. Motor vehicles prove to be expensive on individuals, as well as for society. The economic, social, environmental, and health consequences associated with motor vehicles (and car oriented urban design as found in Bournemouth, Christchurch and Poole) are well documented. Thus, individual incentives for the "rational behaviour" of using a car does not lead to the rational outcomes expected for the individual or the conurbation.

2.6.4. In summary, not changing will mean:

- **Opportunities for increasing modal shift will be reduced;**
- **Traffic congestion (and impact upon productivity) would continue to be an issue;**
- **Improvements to air quality will not be realised;**
- **Opportunities to encourage and incentivise active and healthier travel will be missed;**
- **Opportunities for increasing travel choice, particularly for those at risk of social exclusion, will be missed.**

CYCLE NETWORK

2.6.5. Without transformational levels of investment in the local cycle network, there is likely to be very limited further growth in cycle use across the SED city region. This will restrict health and wellbeing benefits and may also influence businesses ability to recruit and maintain staff.

The LCWIP process confirms the locations where interventions will be best placed to achieve modal shift to cycle. Without TCF funding, the programme for introducing these interventions will be extended and therefore the benefits will take longer to be realised with no guarantee that all measures identified will be implemented. Road traffic estimates for 2018 show that 3.3bn miles were cycled in Great Britain last year – 33.7% more than recorded in 1993. If safer cycling environments are not provided then the risk is that greater numbers of cyclists will be injured as cycle patronage increases further. Cyclists make up 1% of all vehicle traffic, travelling 3.3 billion vehicle miles. In road safety casualty terms, however, they make up around 5% of all Fatalities and 12% of all Serious Injuries

2.6.6. The Covid-19 pandemic has highlighted the importance of Active Travel and the relative health benefits. Whilst the ATF funding has enabled some small scale measures to be brought forward at an early stage, these are relatively limited, temporary and not network-wide. The TCF proposals represent the opportunity to achieve a comprehensive network of routes connecting up these smaller scale localised interventions.

HIGHWAY NETWORK

2.6.7. Based on the evidence set out earlier in this report, congestion and delay will continue to increase on the network without a combined improvement in sustainable transport options and a shift in council-wide parking policy.

2.6.8. As detailed earlier, Poole's Local Plan evidence base is relevant in setting the scene for a 'do nothing' scenario.

2.6.9. The overall model statistics (with no mitigation) do show considerable additional queuing in the 2033 forecasts both with and without the additional Poole Plan sites. Average modelled vehicle speeds in the AM peak are shown to reduce from around 43kph to 32.2kph (a fall 25%) with background growth only and to 31.6kph with the Poole Plan sites added (a fall of 28%). In the PM peak, average modelled vehicle speeds are shown to reduce to 31.2kph with the background growth only (a fall of 28%) to 28.7kph including the Poole Plan sites (a fall of 33 %). The additional sites can be said to reduce average vehicle speeds by an additional 5%.

PUBLIC TRANSPORT NETWORK

Bus Services

2.6.10. The bus network suffers from significant journey time and reliability issues due to the level of congestion and delay experienced on the network. Without improvements to bus corridors delays will continue and opportunities to attract new bus passengers will be limited. Bus journey times will continue to be scheduled based on very low speeds, limiting the opportunities to attract new passengers, particularly commuters.

Rail Network

2.6.11. The lack of ability to interchange from cycle to rail at the main stations will continue to stifle the use of cycle for onward travel and longer journeys, including commuting. The inconvenient routes to the main railway stations will continue to distance the stations from the main town centres, deterring visitors and commuters from using rail connections to access the towns.

LOCAL HEALTH AND DEPRIVATION

Local Health Profile

2.6.12. Local Authority Heath Profiles provide an overview of health for each local authority in England. Below are selected indicators taken from the 2019 profiles of Dorset Council and BCP Council.

Table 2-6 – Local Authority Health Profile Data 2019

Indicator	BCP Council Area	Dorset Council Area	England Average
Life Expectancy (male)	80.2	80.2	79.6
Life Expectancy (female)	83.7	83.7	83.1
Under 75 mortality rate	302.8	302.8	331.9
Diabetes Diagnosis rate	74.0	74.0	78.0
Percentage of Physically Active Adults	71.0	70.5	66.3
Percentage of adults classified as overweight or obese	61.9	61.7	62.0
Year 6: Prevalence of Obesity	16.5	16.1	20.1
Percentage of Children in Low Income Families	14.0	14.0	17.0

2.6.13. Life expectancy, mortality rates, obesity levels and diabetes diagnosis rates are all below the England average, demonstrating a healthy population across BCP and Dorset Council areas.

2.6.14. A healthier population are more likely to make use of sustainable active travel infrastructure where provided. Regular physical activity reduces the risk of dementia by up to 30%, depression by up to 30%, Type 2 diabetes by up to 40% and cardiovascular disease by up to 35%[14].

2.6.15. These statistics should be considered alongside the population age breakdown of the SED city region, as detailed at Section 2.3 which shows a higher proportion of the population within the SED city region aged 65 and over.

[14] Public Health England (2019) Physical activity: applying All Our Health (online). Available at: https://www.gov.uk/government/publications/physical-activity-applying-all-ourhealth/physical-activity-applying-all-our–health

2.7 TCF OBJECTIVES

2.7.1. As detailed in Chapter 1, The Transforming Cities Fund has a series of overarching objectives. Below, Table 2-7 demonstrates the alignment of the SED TCF proposals with achieving these objectives.

Table 2-7 – SED TCF Scheme Objectives

TCF Objective		SED TCF Scheme Supporting Objective
Support the local economy and boost productivity		Providing a network of reliable and efficient sustainable travel corridors linking employment, housing and town centres will improve access to jobs for residents and access to skills for employers. Providing access to improved workplace cycle facilities to further encourage sustainable commuting
Reducing Carbon Emissions		Provision of high quality cycle infrastructure, identified through LCWIP assessment, on corridors across the SED region, encouraging active travel and the reduction in single-occupancy vehicles (SOVs) Beryl bike scheme – wider provision and introduction of e-bikes to facilitate increased use and across longer journeys, reducing unnecessary short SOV trips Network management to prioritise bus movements through key junctions, reducing idling of buses and encouraging mode shift from SOVs
Air Quality Improvements		Improvements to air quality on all corridors through increased sustainable travel. Two active AQMAs in region. Both lie to the east of S5 and will benefit from improved sustainable travel interventions. E-bikes in particular will reduce the number of short urban car trips The uptake of electric vehicles is anticipated to increase significantly in coming years, improving air quality in urban areas significantly
Support Housing Delivery		29,400 households planned across SED region which will be connected up via the network of sustainable transport and cycle corridors
Wider social/economic benefits		Encouragement of low cost, sustainable travel through improved walking and cycle infrastructure are likely to disproportionately benefit lower income group and providing improved links to the most deprived areas of the region. Improved access to services, training and employment Health benefits of active travel Improved passenger experience for bus and rail passengers Bus operators are committed to provision of apprenticeship scheme places in conjunction with the TCF scheme implementation
Aligned to Future Mobility Grand Challenge		The widespread provision of E-bikes through the Beryl scheme will significantly improve future mobility options. Provision of electric car charging points at main stations to encourage the uptake of electric taxis Commitment to establish a multi-modal joint ticketing product.

2.7.2. The SED city region TCF package has been developed to focus upon addressing the sustainable transport problems identified within this Strategic Case. The SED city region covers the main travel to work area and the TCF proposals are aimed at enabling commuters to 'switch' to sustainable transport modes, along with improved sustainable transport for those that already walk, cycle or travel by bus. This will improve their health and wellbeing, reduce carbon emissions, improve air quality, and reduce congestion and delay on the local highway network thereby boosting productivity, enabling housing delivery and growth.

2.7.3. A significant productivity gap exists in the city region, exacerbated by a constrained transport network dominated by private car use. The formation of BCP Council and the joined-up approach with Dorset Council for this TCF programme presents a real opportunity to address this economic under-performance through joint working and a strategic approach across operators, employers, Councils, LEP, and other key stakeholders.

2.7.4. This section sets out the identified opportunities that the TCF package provides for f the local cycle network, as well as a summary of the wider transport network impacts.

CYCLE NETWORK

2.7.5. The LCWIP will deliver on multiple policy objectives set out in the Local Transport Plan. An infrastructure plan that delivers a safer and better connected cycling network will contribute to tackling climate change, create better quality environments, help regenerate the town and local centres, improve economic performance, improve air quality, contribute to living healthier lifestyles and the wellbeing of residents and visitors to Dorset and reduce congestion.

2.7.6. BCP Council and Dorset Council are currently developing their Local Cycling and Walking Infrastructure Plans (LCWIPs) that will set out a coordinated plan of investment in infrastructure across the conurbation and enable residents and visitors to the area to make cycling a natural and convenient choice for shorter journeys, either for work, study or leisure. The process of developing an LCWIP has ensured that we have created an evidence based plan that identifies quick wins, makes the most of existing infrastructure, plugs the gaps in the network, connects trip generators with trip attractors and genuinely enables all cohorts to cycle safely and conveniently and make cycling the preferred choice for travel. The LCWIP process has directly informed the TCF programme of interventions as detailed above.

2.7.7. The Cycling Vision within Dorset up to 2026 is: -

"To create a cycle-friendly environment and culture where residents and visitors of varying ages and abilities cycle regularly as the obvious choice for shorter distance journeys."

2.7.8. The Cycling Vision directly supports Government's ambition for Cycling in England as set out in its adopted Cycling and Walking Investment Strategy (CWIS) 2017:

"We want to make cycling and walking the natural choice for shorter journeys, or as part of a longer journey".

2.7.9. The Cycling Vision further supports the overarching Local Transport Plan 3 vision –

"To create a safe, reliable and accessible transport system for Bournemouth, Poole and Dorset that assists in the development of a strong low carbon economy, maximises the opportunities for sustainable transport, and respects and protects the area's unique environmental assets."

BIKE SHARE AND ELECTRIC BIKE SCHEMES

2.7.10. BCP Council awarded a 5-year contract for bike share to Beryl in 2019. Operation commenced in June 2019 and currently covers Poole and Bournemouth areas with a total of 1,200 bikes across 330 bays.

2.7.11. Since being introduced, the bike share scheme has registered 11,000 users and over 100,000km cycled in 6 months. The average journey distance across the BCP scheme currently is 3km.

2.7.12. Expansion of bike share to other local towns and centres including Christchurch will be effective in addressing congestion caused by first and last mile journeys.

2.7.13. LCWIP analysis using Propensity to Cycle Tool (PCT) has shown that Christchurch has much higher levels of 'propensity to cycle' compared with the wider region due to the flatter topography.

2.7.14. Beryl are also proposing to add 300 electric bikes (e-bikes) to the BCP Beryl scheme. This will encourage bike share usage in hillier areas, allow for longer journeys and enable a more diverse set of users, particularly older people. A recent study of the activity of electric bike users compared to conventional bike users and non-cyclists found that average trip distance for e-bike users were approximately twice that of conventional bike users (9.4km compared to 4.8km.

HIGHWAY NETWORK

2.7.15. Whilst reducing the propensity of people to travel by private car in the SED city region is the focus of the TCF package, these measures will reduce traffic levels on main corridors, improving air quality and improving journey times for bus services.

2.7.16. Other improvements to the highway network include addressing pinch points on the network and enhancements to the UTMC systems to better respond to issues in the network across the SED region.

BUS NETWORK

2.7.17. The TCF programme presents the opportunity to improve the bus infrastructure along key corridors, enabling the achievement of better and more reliable journey times. Bus priority measures at signals can reduce delay through congested junctions.

2.7.18. Both main bus operators in the SED city region run diesel vehicles of varying ages and efficiencies. Investment in improved, cleaner vehicles, will be beneficial both in terms of air quality, but also in terms of the image and attractiveness of services to new passengers.

RAIL NETWORK

2.7.19. The growth in rail passengers over recent years as detailed in Section 2.3 represents a very positive situation, despite certain problems identified with the local station conditions and facilities. The TCF programme will seek to improve conditions for passengers at stations and provide enhanced interchange opportunities

2.7.20. In the longer term, there is a need for a solution to the level crossing constraint, and safety issues related to the curvature of existing station platforms. Early feasibility work into the relocation of, or redevelopment of the existing station is in progress, in partnership with Network Rail.

WAYFINDING & SIGNAGE

2.7.21. Wayfinding is an intrinsic part of the overall package of infrastructure improvements. Wayfinding provides essential information (e.g. direction, journey time, bike share locations, providing information on travel app) to both residents and visitors on the key destinations using accessible walking and cycling routes across the SED city region and will complement the enhanced walking and cycling network emerging through the LCWIP process. This will provide users with added confidence in their journeys and link to other sustainable modes such as bus, rail and bike share.

2.7.22. A Wayfinding project has recently been delivered in Bournemouth Town Centre and this has been very well received by residents and visitors. The scheme has provided a series of Wayfinding 'totems' around the town centre providing onward travel information and maps. Prior to the deployment of this a thorough quality audit process was undertaken and lessons learnt can be applied to wider expansion. The expansion and development of the scheme could not otherwise be funded across the SED city region due to budget constraints.

2.8 MEASURES FOR SUCCESS

2.8.1. Set out below are a series of proposed targets against which the success of the TCF programme will be measured. These align with the TCF objectives as discussed above and cover the overall TCF package.

Objective	Target	Timescale	Measure (s)
Support the Local Economy and Boost Productivity	Close the productivity gap Boost economic growth; prosperity and investment	5 years post opening	GVA (£) per hour relative to UK by 2028 Delivery of commercial development – consents and construction levels by 2028
Reducing Carbon Emissions	Increased use of Sustainable modes in Corridors Improve and enhance access for business and tourism	Annual travel survey from 2020	Increased bus patronage and cycle trips and corresponding reduction in SOVs; Increasing levels of e-bike share trips
Air Quality Improvements	Improved Air Quality at key monitoring points	5 years post opening	Reduction in particulate and NOx levels along corridors and at AQMAs; Reduced congestion and delay on highway network.
Housing Delivery	Support Housing Growth	5 years post opening	Delivery of housing development – consents and completions by 2028
Wider social/economic benefits	Improve health gain and wellbeing for population Embrace innovation and new technology Improve Road Safety	Annual Quality of Life Survey 5 years post opening Annual monitoring	Increased activity and exercise in population and workforce; Increased levels of walking and cycling trips Increased levels of Smart Ticketing uptake; Increased levels of ebike share trips Reduced collision rates on network within SED region, focused upon TCF Connectivity corridors and Freeways
Aligned to Future Mobility Grand Challenge	Facilitate use of future mobility options	Annual monitoring	Increased EV and E-bike Modal Share

2.9 SCOPE AND OPTIONS

2.9.1. This section sets out the process by which the overall TCF proposed package of interventions was decided and how various options have been considered in order to fully address the TCF objectives.

2.9.2. The focus of the TCF programme seeks to provide residents, employees and visitors with a transformational change to sustainable travel options across the conurbation meeting both TCF and local objectives. Alongside specific corridor interventions, a series of region-wide improvements and initiatives are also included.

SCOPING PROCESS – EOI

2.9.3. An initial Expression of Interest (EOI) was submitted the DfT in June 2018 to the TCF Call for Proposals.

2.9.4. The EOI introduced the concept of a series of transport packages focused around sustainable transport and digital corridors, complemented by a network of strategic cycle routes.

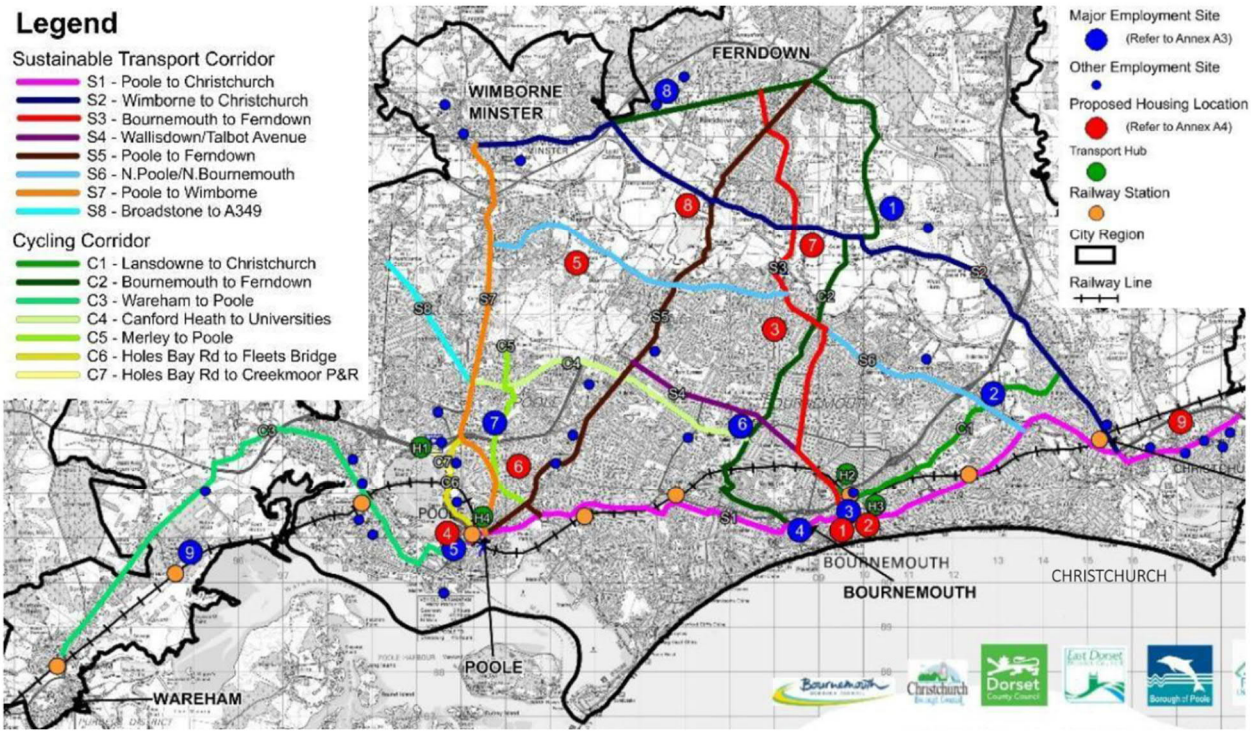
2.9.5. The original EOI had a technology bias and DfT feedback in March 2019 was that proposals should be more focused upon sustainable modes of transport including walking, cycling, bus and rail interventions.

SCOPING PROCESS – EAST APPRAISAL

2.9.6. Following the feedback from the DfT the identified corridors within the EOI were reviewed by BCP Council and Dorset Council, their partners and stakeholders. Interventions were updated to address the comments received. This was to ensure that the proposals aligned with the TCF objectives as outlined in the guidance.

2.9.7. A long list of interventions across the SED city region were drawn up supporting improvements to corridors (as shown in Figure 2-8 below from the original EOI), connections between corridors and network wide improvements.

Figure 2-9 - Original EOI corridors identified for TCF programme



EAST Methodology for SOBC

2.9.8. The primary method utilised for option sifting was the EAST methodology. The steps used to complete the EAST methodology for the Cycle Freeway options are described below. The updated interventions per corridor were appraised and sifted.

2.9.9. The aim of the EAST is to "identify – at a high level – the nature and extent of the impacts of all modes of transport / mode shift related interventions in order prioritise strategic and cycle corridors based on the average scores from the EAST appraisal criteria and to enable the ranking of proposals to determine a preferred set of interventions across a range of cost levels."

EAST process

2.9.10. The EAST methodology offers a structured way to consider which options best fit the overall TCF and local objectives. The EAST methodology is divided into two distinct phases.

Phase 1 – post EOI and pre June 2019 draft SOBC submission to DfT

2.9.11. Phase 1 consists of an initial 'long list' of interventions drawn up for each corridor to cover a range of modes, approaches and scales of intervention to address the overall TCF and BCP&D objectives.

2.9.12. For each of the Sustainable Corridors (S1 to S8) and Cycle Corridors (C1 to C7) the list of interventions through site visits and workshops has been determined and split into the following broad themes to assist with further economic appraisal.

- Bus journey time

- Bus quality impacts
- Cycleways
- Cycle Facilities
- Pedestrian facilities
- Mix Cycleway and Footway
- Transport Hubs
- Enhanced Infrastructure
- Network Management and Technology.

2.9.13. For the Strategic connectivity corridors and Cycle Freeways corridors the long list of identified interventions considered criteria to ensure that the identified interventions fit within the TCF and SED city region objectives and are also deliverable within the timescales of the TCF programme – between 2020 and 2023.

2.9.14. Following the creation of the long-list of interventions for each Strategic and Cycle corridor an initial sift was undertaken, which involved assessing whether the options address the following criteria.

- Whether the option is within the **TCF scope**;
- Whether the option is **deliverable within the TCF programme timescales**; and
- Whether the option is **already a committed scheme**. (i.e. programmed for delivery)

2.9.15. The long list of interventions per corridor is detailed at Appendix B.

2.9.16. This process, known as the Initial Option Sift, produced a shortened list of interventions in preparation for Phase 2.

Phase 2 - pre June 2019 draft SOBC submission to DfT

2.9.17. Phase 2 consisted of two parts: The Strategic Viability Assessment and the ranked EAST Assessment. This phase of the option sifting analysed the remaining interventions in more depth in order to rank the interventions for each corridor to determine the low, medium and high to inform a draft SOBC required by DfT in June 2019. This confirmed which corridors were taken forward for further appraisal and detailed modelling to inform this final SOBC.

2.9.18. The Strategic Viability Assessment consisted of reviewing and scoring the sifted long list interventions against the TCF weighted objectives as set out below.

Table 2-8 – TCF Objective Weighting

Objective number	TCF Objective	Weighting
1	Improve intra-city transport	1.25
2	Improve productivity through the provision of public and sustainable transport connectivity	1.25
3	Improve access to work and delivering growth	1.1
4	Encourage use of new mobility systems and technology	1.1
5	Tackle air pollution and reduce carbon emissions	1.1
6	Deliver more homes	1.1
7	Deliver apprenticeships and improving skills	1.1

2.9.19. Each intervention was scored on the above criteria out of five, with five being largely beneficial and one being largely adverse.

2.9.20. Thereafter the interventions per corridor undertook further scoring (out of five) using a more detailed EAST assessment. This involved using DfT's Transport Business Case Principles, specifically the five-case business model.

2.9.21. For the draft SOBC submitted in June 2019 an overall average EAST score for each Sustainable Transport Connectivity Corridor and Cycle Freeway was determined. Both groups of corridors were ranked to prioritise the corridors for the draft SOBC stage (June 2019) before further analysis was completed for the final SOBC (November 2019).

2.9.22. Appendix C provides an example of the EAST process followed to inform the early sifting process.

Table 2-9 – Overall Corridor EAST Scores and Ranking for Cycle Freeways (At draft SOBC stage June 2019)

Cycling TCF Corridors	Overall Score	Overall Ranking
C1 - Lansdowne to Christchurch	3.571	1
C6 - Holes Bay to Fleetsbridge	3.533	2
C5 - Merley to Poole	3.519	3
C4 - Canford Heath to University	3.505	4
C7 - Holes Bay Road to Creekmoor P&R	3.503	5
C3 - Wareham to Poole	3.453	6
C2 - Bournemouth to Ferndown	3.338	7

Phase 3 – post June 2019 draft SOBC submission to DfT

2.9.23. Following the submission of the draft SOBC to DfT in June 2019 and subsequent comments received from DfT on the draft submission BCP Council and Dorset Council worked with partners and stakeholders to refine the TCF package of interventions.

2.9.24. A detailed review of the proposed costs and delivery of proposed schemes within the draft SOBC was undertaken and detailed modelling working in co-development with DfT.

2.9.25. It was concluded (in discussions with the DfT) that certain elements of the draft proposal would not be delivered by the end of the TCF programme in March 2023 and there were questions on affordability. Therefore, a further sifting exercise took place which removed Poole bus station improvements and specific elements of cycle corridors. 3 levels of ask were determined to undergo detailed modelling, development of preliminary design drawings and independent quantity surveying checks

Local Cycling and Walking Infrastructure Plan (LCWIP)

2.9.26. The Transforming Cities Fund has been running alongside the LCWIP process in South East Dorset and therefore the network development and identification of key corridors has been aligned. This provides efficiency in identifying interventions and a robust approach upon which the cycling and walking elements of the TCF bid has been based.

2.9.27. The LCWIP process has been used to derive and prioritise cycling and walking interventions across the SED city region.

2.9.28. LCWIPs are a strategic approach to identifying cycling and walking improvements required at the local level. They enable a long-term approach to developing local cycling and walking networks and form a vital part of the strategy to increase the number of trips made on foot or by cycle.

2.9.29. The key outputs of LCWIPs are:

- A Network plan for walking and cycling which identifies preferred routes and core zones for further development;
- A prioritised programme of infrastructure improvements for future investment;
- A report which sets out the underlying analysis carried out and provides a narrative which supports the identified improvements and network.

2.9.30. In BCP, a network was devised by identifying the main origins and destinations across the area. Origins were based on existing residential neighbourhoods along with urban extensions as identified within local policy. Destinations were based on a variety of journey purposes including town centres, employment areas, educational institutions, leisure attractions and key transport interchanges.

2.9.31. Figure 2-8 earlier in the report shows the identified Strategic Cycle Network Corridors. This network and the analysis undertaken in preparing the wider LCWIP has been used to verify and inform the proposed TCF corridor improvements. Developing the LCWIP in tandem with the TCF provided an efficient way of collecting evidence and identifying improvements that are complementary to the wider TCF package of proposals.

2.9.32. A Primary Cycle Network (Figure 2-9) has been devised for the BCP area identifying the recommended main cycle routes. Alongside this, a secondary network is being devised to identify interconnecting links to the main network, and quieter routes to be used. This secondary network is designed to connect areas and destinations of lower priority, but provide a density of network across the BCP area to facilitate safe cycling across the whole area

POST-SOBC DESIGN DEVELOPMENT & OPTIONEERING

2.9.33. Since the confirmation of the TCF funding from the Department for Transport, significant further design development has been undertaken to refine the proposed cycle infrastructure improvements.

2.9.34. The funding successfully secured aligned with the original 'Low Ask' proposals in the submitted SOBC document. These proposals included the four cycle freeway corridors providing links between the main towns across the SED Region.

2.9.35. Since the submission of the SOBC, the designs for the four Cycle Corridors have been refined and developed through the Transforming Travel programme. Consultation on the corridors has been undertaken via the Transforming Travel website, seeking to capture the views and opinions of stakeholders, members and the public prior to the designs being fixed.

2.9.36. Of particular importance is the need to align all cycle infrastructure designs with the Gear Change Vision document, and LTN 1/20 as summarised earlier which sets out clear design guidance for cycle infrastructure in the future.

2.10 PROPOSED FINAL CYCLE CORRIDOR PACKAGE

2.10.1. The sifting, appraisal (inc. DfT comments) and design development process detailed above has resulted in the development of the 'C' corridor package of interventions.

TCF FUNDED PACKAGE

Cycle Freeways

2.10.2. Following the initial sifting exercise, DfT comments and review on the connectivity between the Freeways, Connectivity Corridors, housing and employment sites, high quality cycle routes and improved cycling facilities will be delivered on 4 corridors. The package of measures, aligned with the LCWIP process will also incorporate upgrades and creation of links feeding into these corridors to ensure the greatest catchment and accessibility for local users. Locations for Mobility Hubs are also included along with Beryl Bike Share hubs. The corridors identified for investment under the TCF programme are:

- **C1 – Bournemouth Station to Christchurch** – this key east-west route connects an important employment area in Bournemouth town centre east via Boscombe to Christchurch via Wessex Fields (another employment area) which includes Bournemouth Hospital. This route has employment sites at both ends and passes through densely populated residential areas;
- **C2 – Bournemouth town centre to Ferndown** – Links Bournemouth town centre, the university campuses, Bournemouth Airport and Aviation Park and the key employment area at Ferndown Industrial Estate. This route links to employment sites and passes through densely populated residential areas;
- **C3 – Wareham to Poole** – connecting local commuter route with Poole town centre, Port of Poole and nearby employment sites completing the final gaps in the existing cycle route between the two locations;
- **C5 – North Poole to Poole town centre** – links significant residential area to key industrial estates, Poole town centre and rail station.

Cycle Freeway Proformas

2.10.3. Each of the Cycle Freeways have been broken down into sections with a proforma document prepared to aid understanding of the proposed works in each location.

2.10.4. On the following pages, a proforma for each section of the Cycle Freeways is provided. These proformas provide overview of each section of the Cycle Freeway corridors, with details of the proposed interventions on each section.

Detailed preliminary drawings of the sections can be found under Appendix D and Proformas in Appendix E

LOCAL AUTHORITY/THIRD PARTY FUNDED SCHEMES

Transport Hubs

2.10.5. A region wide package aimed at enabling interchange between sustainable modes is proposed. This includes a series of proposed improvements at rail stations which would come forward in partnership with Network Rail, South Western Railway, Go South Coast/Morebus and Yellow Buses.

Rail station Improvements

2.10.6. The TCF programme will unlock the following improvements at mainline and local rail stations:

- E-bike hubs at key stations;
- Improved forecourts at stations with passenger information and onward travel/last mile provision; through improved signage and walk/cycle links;

2.10.7. The options that are proposed at the rail stations as part of the TCF programme will complement the recently announced Cycle Rail fund at Bournemouth, Parkstone and Wareham railway stations. These 3 stations have been awarded a total of £101,350 for cycle parking15.

E-bike Sharing & Mobility Hubs

2.10.8. The TCF programme will enable the expansion of the existing Beryl Bike scheme across a wider area of the SED city region and the incorporation of e-bikes across the network allowing a more accessible bike sharing scheme.

2.10.9. Beryl Bikes have developed proposals to expand the existing bike hire scheme into Christchurch with an existing 300 bikes spread across 50 new bays. Since the publication of the SOBC, the majority of these new bikes and bays have been delivered. They are concentrated in Christchurch and along corridors S6 and C1.

2.10.10. In addition, Beryl are proposing the introduction of up to 200 additional e-bikes to the share scheme. These are intended to broaden the appeal of the bike scheme to a broader age group and geography, as well as enabling their use for longer distance journeys. These e-bikes will be distributed across the existing bays initially for use across the whole SED city region.

2.10.11. The Beryl Bike expansion proposals will be funded through a combination of LA and Third-party contribution.

15 https://www.gov.uk/government/news/68-million-boost-to-help-thousands-more-rail-commuters-travel-by-bike?utm_source=885ee1d8-38c7-466a-b07e-ac34272da6af&utm_medium=email&utm_campaign=govuk-notifications&utm_content=immediate

- Establishment of mobility hubs across the region providing access to e-bike charging facilities. These will be delivered through a series of 'parklets' replacing on-street parking with a community facility;
- E-cargo bikes to be incorporated into town centre parklets/hubs for use by local businesses;
- Compatibility of Beryl scheme with broader Smart ticketing system to enable ITSO compliant ticketing across modes.

Workplace Facilities – Cycle Facilities Grant

2.10.12. Alongside the network infrastructure to be implemented, it will be important to ensure facilities at the ends of trips are suitable and attractive for users in order to achieve high quality point to point journeys.

2.10.13. A cycling 'End of Trip Facilities Grant Scheme' for workplaces and education sites will be delivered as part of the TCF package. This will complement the provision of cycling infrastructure and result in larger impacts, increasing the number of cycle trips and cycling modal share. The funding for this element will be via LTP3.

2.10.14. The focus of the Grant Scheme will be to provide good quality cycle parking facilities at workplaces and education sites. Where cycle parking facilities are present other end of trip facilities will also be considered like cycle pumps, repair stands, showers, lockers, clothes dryers and charging points for e-bikes. Where possible cycle parking facilities will be provided that can accommodate non-standard bikes such as adapted bikes and cargo bikes.

2.10.15. Key aspects of the Grant Scheme will include:

- Procurement process by BCP Council and Dorset Council to select preferred suppliers for the provision of end of trip facilities to applicants;
- Applicants will choose from a menu of pre-selected facilities up to the value of £20,000 - Local Authorities place the orders for selected facilities with the suppliers;
- Applicants will be required to provide 20% match funding;
- Online promotional material;
- An online application process including guidance and application form;

- Guidance will cover all information pertinent to the application process and the applicants ongoing obligations;
- Successful applicants will be required to sign Terms and Conditions;
- A robust application assessment process including a site visit to discuss the application with the applicant and check the proposal meets the Grant Scheme's standards;
- Strong 'back office' processes;
- Ongoing monitoring by successful applicants and evaluation by the Local Authorities.

2.10.16. The Grant Scheme will also accommodate a limited number grant awards for 'bespoke' facilities or as contributions towards large cycle facilities projects. For example, where a workplace is planning to provide significant cycling facilities as part of a programme facilitating active travel.

2.10.17. This will differ from the 'standard' approach as outlined above in that:

- Applications will be by invitation only;
- The grant award will be for a financial contribution towards a project;
- Grant awards may be more than £20,000;
- Procurement of these facilities will be the responsibility of the applicants who will need to demonstrate they have the capabilities of doing this.

2.10.18. As part of the Terms and Conditions of the Grant Scheme successful applicants will be required to participate in Cycle UK's Cycle-Friendly Employer Certification Scheme and obtain, as a minimum, their Bronze Accreditation. To obtain accreditation applicants will need to deliver measures that support cycling across a number of different categories including information, communication and incentives for employees; coordination and organisation; facilities and parking management.

WIDER ECONOMIC BENEFITS

2.10.19. The direct and indirect benefits of the TCF proposals will have a positive impact on the local economy. Table 2-10 below sets out the identified benefits for Commuters and Business Users.

Table 2-10 – Expected Wider Economic Impacts

Commuter User Benefits	Business User Benefits
More efficient travel between key employment and residential areas due to more direct cycling routes and higher network efficiency	Higher productive efficiency due to lower time costs
More reliable daily commutes between employment and residential areas due to higher network efficiency	Lower uncertainty in business-to-business and business-to-consumer connections thanks to higher network resilience
Increased labour market participation of lower income residents thanks to lower generalised transport costs	Lower business transaction costs thanks to higher network resilience
Increases in disposable income and consumer welfare thanks to a wider variety of lower cost transport options	Increased labour market participation as key employment areas become more accessible to segments of the local labour market
Increased labour productivity and output as a result of the above developments	**Increased business productivity and output as a result of the above developments**

2.10.20. Increased accessibility across the SED city region will enable more people to access the most productive parts of the local economy, increasing the concentration of workers in productive places. Accessibility improvements are driven by reductions in bus journey times and improvements to journey quality for bus and active mode users.

2.10.21. Expansion of the sustainable transport network will mean that future population and economic growth can be accommodated whilst producing fewer negative environmental and social externalities. Enabling future development presents opportunities to increase economic output in the SED city region and to attract high-skilled workers who may choose to remain or relocate in the area to benefit from improved local markets, and the improved local environment.

2.10.22. Although not appraised quantitatively, reduced transport costs are likely to lead to improved productivity, agglomeration, and clustering benefits; with the proposals focussing on reducing costs and improving accessibility in the most important economic corridors in the area.

2.11 CONSTRAINTS ON DELIVERY

ENVIRONMENTAL CONSTRAINTS WITHIN THE SED CITY REGION

2.11.1. This section considers the local environmental constraints that may impact on the delivery of the Cycle Corridors package of improvements and identifies relevant local environmental designations to be taken into account during the construction and delivery programme. A set of Environmental Constraints Maps are provided at Appendix F.

Air Quality

2.11.2. There are two Air Quality Management Areas (AQMAs) within the SED city region. None of them are located within 500m of the cycle corridors. There are no potential constraints associated with air quality.

Noise and Vibration

2.11.3. There are a number of Noise Impact Actions Planning Areas (NIPAs) within the SED city region. Cycle corridors C1, C2, C3 and C5 all intersect or lie within the immediate vicinity of these areas. They are located mainly along routes leading to and within the more densely built-up areas of Poole and Bournemouth. The noise levels would be primarily generated by high levels of traffic travelling through the areas. The proposed cycle corridors would seek to mitigate these noise levels by attracting users to change from vehicle transport to cycling. There are no potential constraints associated with noise and vibration.

Historic Heritage

2.11.4. There are numerous statutorily designated heritage assets within 100m of the C corridors including Listed Buildings, Registered Park and Gardens, Scheduled Monuments and Conservation Areas. Non-designated heritage assets are also likely to be present. Historic heritage, including potential unknown buried archaeological remains are key constraints to the scheme. Further assessments of potential impacts on statutory and non-statutory designated heritage assets would be required to inform required mitigation to minimise potential adverse impacts and maximise potential opportunities.

Landscape and Townscape

2.11.5. Approximately half of the SED city region area is within the Greenbelt, particularly the more rural areas further away from the town centres. In general, the urban areas i.e. Poole and Bournemouth are excluded from the designation. Interventions will need to be mindful of proximity to these Greenbelt areas.

2.11.6. The SED city region is surrounded by the Cranborne Chase & West Wiltshire Downs Area of (AONB) to the north of Bournemouth and by the Dorset AONB to the south and west Poole. Given the cycle corridors are located within an urban environment and the distance to the AONBs, potential impacts on landscape are not considered likely to be significant with the potential constraints and opportunities being linked to townscape.

2.11.7. Further assessments of potential landscape and townscape impacts would be required to inform required mitigation to minimise potential adverse impacts and maximise potential opportunities. The headline focus of TCF is improving connectivity between urban centres and suburbs with a focus on modal shift towards sustainable modes including public

transport, cycling and walking. Key words in the Government literature point towards an expectation that schemes will be 'transformational' and mention is also made of a 'place-based' approach.

2.11.8. The National Infrastructure Commission has established four design principles that underpin 'good design' for national infrastructure: climate, people, places, value. These principles encompass outcomes, such as maximising the impact of investment through delivery of multiple benefits, but also the process of getting there which should be collaborative and inclusive.

2.11.9. Through sensitive and holistic landscape design this project can offer a transformative, place-based approach for the corridors to have a broader scope that also encompasses opportunities for social and environmental benefits which would also support delivery of wider corporate strategic objectives. As an example, incorporating green and blue infrastructure objectives would also deliver benefits that respond to climate change factors (such as air quality, flood risk, biodiversity loss and urban heat island effect) and benefit the health and well-being of users and local communities.

Nature Conservation and Biodiversity

2.11.10. The SED city region contains numerous environmentally designated sites and Priority Habitats. Designated sites in close proximity to the C corridors include Special Areas of Conservation (SAC), Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSI), Ramsar sites and Local Nature Reserves. Sections of all the proposed C corridors either pass through or lie in the immediate vicinity of one or more types of these designated sites. Biodiversity and nature conservation are therefore key constraints to the scheme. Further surveys and assessments would be required to inform required mitigation to minimise potential adverse impacts and maximise potential opportunities such as planting to contribute towards carbon offsetting.

Drainage and the Water Environment

2.11.11. The River Stour and River Avon run through the SED city region between Bournemouth and Christchurch. As a result, much of the SED city region within the vicinity of these two rivers is at risk of flooding. The C2 Corridor alignment lies in the immediate vicinity of the River Stour and the Uddens Water floodplain to the north of Bournemouth. Poole is also at high risk of tidal and coastal flooding. The design of the cycle corridors infrastructure will need to take into account the location of existing water resources and the potential implications of climate change on flood risk.

Geology and Soils

2.11.12. There are a number of historic landfill sites scattered across the wider SED city region. Design of the C Corridors should consider potential ground conditions in close proximity to these areas, and the possible presence of contaminated land. This constraint also needs to be considered where the routes cross through industrial areas.

People & Communities

2.11.13. There are numerous local facilities and sensitive receptors within the SED city region, these include GP surgeries, dental surgeries, pharmacies, hospitals (including one A&E), primary

schools, secondary schools, colleges, a university and public library. The C corridor alignments pass through densely populated residential areas in the SED city region.

Infrastructure Constraints within the SED City Region

2.11.14. As the C Corridor programme of interventions is developed, it is recognised that the following infrastructure constraints need to be taken into consideration.

Above ground utilities - The obvious utilities within the SED city region (particularly outside of the urban areas) are the overhead high voltage power lines belonging to National Grid and the energy supply companies. A critical concept to be retained for more detailed studies is the need to place any interventions close to but not immediately adjacent to pylons and to cross beneath the cables at as close as possible right angles.

Underground utilities - There will be a significant network of pipelines carrying fuel, gas, water and communications across the SED city region.

Gas mains - National Grid operate large diameter high and medium pressure gas mains across the country providing direct routes and resilience network for the transportation of gas. With such a large city region covering both Poole and Bournemouth it is inevitable that some conflict will occur with any highway or greenfield construction.

Water supplies - A number of water sources for Bournemouth and Poole are located adjacent to routes within the SED city region. Efficient surface water drainage will also be an essential factor to consider across all schemes.

Transport infrastructure – The Weymouth to Waterloo mainline severs the SED city region creating restrictions to cycling infrastructure. The Strategic Highway network (A31, A3049, A350 and A338) serve the SED city region but also sever communities from leisure, education and places of work.

2.12 INTERDEPENDENCIES

Political Context

2.12.1. Working across boundaries with the newly formed BCP and Dorset Councils.

Interaction with Bus and Rail operators and local businesses

2.12.2. The TCF programme is founded upon good relationships with local bus and rail operators along with key local employers and other stakeholders.

Technological Compliance

2.12.3. The TCF programme will ensure compliance with existing systems such as ITSO across operators and network management systems e.g. UTMC.

Alignment with Funding Streams

2.12.4. The TCF programme will align with and rely on the success of associated projects:

- Local Growth Deal DLEP Programmes;
- LTP settlements continuing at 2019/20 levels

2.13 STAKEHOLDERS

2.13.1. Through the TCF process, a range of stakeholders have been consulted and integrated into the planning and development of the intervention packages. Direct consultation has been undertaken with:

- Members of the public;
- Local Councillors;
- Local MPs;
- Department for Transport;
- Dorset LEP;
- Local businesses;
- Morebus (Go South Coast);
- Yellow Buses;
- South Western Railway;
- Network Rail;
- Highways England;
- Sustrans;
- Cycling UK
- Beryl Bikes;
- Environment Agency;

- Natural England;
- Bournemouth Airport;
- Bournemouth and Poole Hospitals; and
- Bournemouth University and other educational establishments.

2.13.2. Since the TCF funding was secured, these stakeholders have continued to be consulted and involved in the design development. A Communications Plan has been developed by the TCF Programme Management Board. Further details are provided at Section 6.7 below.

2.14 SUMMARY

2.14.1. In summary, this section demonstrates a strong strategic case as the cycle corridors fit wider strategic goals within BCP & Dorset Councils. The cycle corridors will have wider economic and health benefits to benefit the whole of the SED City Region.

3 THE ECONOMIC CASE

3.1 INTRODUCTION

3.1.1. This Outline Business Case (OBC) considers four cycling corridors (C corridors) within the BCP and Dorset areas. These corridors form part of the Transforming Cities Fund (TCF) programme of works, which includes sustainable transport and cycling corridors within the BCP and Dorset areas. Improved cycle and pedestrian infrastructure will be delivered along these four corridors.

3.1.2. The Strategic Outline Business Case (SOBC) for the TCF programme was submitted to DfT in November 2019, which considered the Value for Money (VfM) of the whole TCF package. The TCF package demonstrated very high VfM, delivering benefits to bus users, cyclists and pedestrians. The package ensures continuity of active travel infrastructure, avoiding disjointed segments for sections of journeys.

3.1.3. The Economic Case identifies the impacts of the four C corridors to inform the assessment of their Value for Money (VfM). It considers the impacts that can be measured and quantified, and those that are assessed qualitatively. To assess the value for money of the C corridors, these impacts have been compared to the scheme costs.

3.2 OPTIONS APPRAISED

3.2.1. An extensive option development process was undertaken for the SOBC, including sifting and refinement of options to identify the preferred packages seeking funding. As part of the OBC process these designs have been considered in further detail and refined as required.

3.2.2. The four cycleways have been identified to deliver transformational cycle connectivity within the conurbation, providing direct and continuous cycle routes between residential areas and places of employment in the SED city region. The current proposals are aligned with the developing Local Cycling and Walking Investment Programme (LCWIP).

3.2.3. The four corridors are:

- Bournemouth rail station to/from Jumpers Common, Christchurch (C1);
- Bournemouth town centre to/from Ferndown (C2);
- Poole town centre to/from Wareham Road, Holton Heath (C3); and
- Poole town centre to/from Merley, Poole (C5).

3.2.4. The cycle corridor works comprise a series of network improvements to provide safe routes for cyclists. Improvements include stepped cycle tracks; improved lighting; 'Toucan' and 'Tiger' crossings to enable safe crossing for pedestrians and cyclists; shared use paths where available width is more limited; side road entry treatments; and improved connections to existing paths.

3.2.5. In addition to the improvements to cycling and pedestrian infrastructure along these corridors, wayfinding totems and signage is also proposed as part of the scheme.

Wayfinding infrastructure is largely proposed within central Poole, Bournemouth and Christchurch, with further signage along the cycling and sustainable transport corridors. Appendix G shows the location of the proposed wayfinding totems.

3.2.6. The appraisal also considers the impact of the introduction of e-bikes from operator Beryl. The e-bikes are proposed to be introduced between Bournemouth and Poole. The SOBC also included the expansion of Beryl Bikes in Christchurch, however this has already been delivered in September 2020.

3.2.7. The benefits (and costs) of the scheme are compared to the current situation (the Do Minimum) to estimate the incremental benefit of the interventions.

3.3 APPRAISAL METHODOLOGY AND ASSUMPTIONS

3.3.1. The Economic Case has been developed following the principles of the HM Treasury Green Book and the Department for Transport's (DfT) Transport Analysis Guidance (TAG). The economic appraisal refers to, and follows the guidance of, the following TAG Units:

- TAG Unit A1-1 (May 2018): Cost-Benefit Analysis;
- TAG Unit A1-2 (July 2017): Scheme Costs;
- TAG Unit A1-3: User and Provider Impacts; and
- TAG Unit A5-1: Active Mode Appraisal.

3.3.2. In line with TAG, all costs and benefits in the appraisal have been presented in 2010 present values (market prices). The appraisal period used for the cycling and pedestrian infrastructure on these corridors is 30 years, for wayfinding infrastructure an appraisal period of 20 years has been used, and for Beryl Bikes an appraisal period of 4 years has been assumed. The length of appraisal period has been based on the anticipated lifespan of the infrastructure. For cycling, pedestrian and wayfinding infrastructure a scheme opening year of 2023 has been used, the roll out of Beryl Bikes is assumed take place between 2022 and 2023.

3.3.3. An assessment has been made of the benefits of the intervention, with an overall assessment comparing aggregated costs and benefits across the four corridors.

3.3.4. The following themes of intervention have been included in the appraisal:

- Interventions aimed at improving cycling journeys; and
- Interventions aimed at improving pedestrian journeys.

3.3.5. For each of the C corridors, the interventions aligning with the themes above have been assessed. An appraisal model has been developed to compare the benefits of the interventions to the estimated costs for the C corridors. A bottom-up approach has been used to estimate the costs, where the cost of each corridor is calculated based on the interventions within it. These corridor capital costs are then summed to give the total capital costs across all C corridors. The treatment of costs for the Economic Case has been carried out in the appraisal model (e.g. inclusion of optimism bias, discounting, market price conversion).

IMPROVING CYCLING JOURNEYS

3.3.6. Along the C corridors there are proposed improvements to cycling infrastructure, the nature of these improvements varies by route. Some examples include:

- Widen existing cycle provision;
- Provide on road segregated cycle lanes; and
- Provide off-road segregated cycle tracks e.g. resurfacing existing paths to create cycle tracks.

3.3.7. In line with TAG Unit A5.1, the DfT's Active Mode Appraisal Toolkit (AMAT) (July 2020 update) has been used to estimate the benefits associated with this improved cycling infrastructure. The tool considers the benefits in terms of physical activity, absenteeism, journey quality, environmental, indirect tax and congestion. The current and anticipated cycle demand is input to the AMAT, as well as the change in infrastructure provision. Combining this with a number of assumptions from the National Travel Survey (NTS) regarding journey length, journey speed, purpose split and cycling diversion factors, the tool estimates the benefits associated with the intervention. An AMAT has been developed for each section of each corridor (see section 2-10 of the Strategic Case for the corridor sections) to reflect the interventions proposed on that segment. Where there may be infrastructure proposed for multiple roads within a section (i.e. C1-2), then a separate AMAT has been used for each of these.

3.3.8. The scheme costs can also be input to the tool such that the Benefit to Cost Ratio (BCR) can be calculated, however for this submission the benefits and costs are brought together in the appraisal model.

3.3.9. The following sections discuss the approach to using the AMAT model in this Business Case.

Intervention

3.3.10. The AMAT allows the existing infrastructure for the route to be selected, and the proposed new infrastructure. Within the tool, the options that can be selected to capture these before and after states include:

- No provision;
- Shared bus lane;
- Wider lane;
- On-road non-segregated cycle lane;
- On-road segregated cycle lane; and
- Off-road segregated cycle track.

3.3.11. The tool cannot be used to establish the benefits of wider changes to cycling infrastructure, for example improved wayfinding, lighting, raised tables at junctions and toucan/parallel crossings. Therefore, the benefits of cycling interventions that have been monetised in the appraisal are restricted to those that align with the headings above.

3.3.12. For each section of each C corridor the proposed infrastructure has been considered against the categories above to determine the most appropriate.

3.3.13. The AMAT requires the average proportion of a trip which uses the scheme infrastructure as an input. As set out above, the tool can only reflect the benefits of changes to cycling infrastructure in terms of cycle lanes i.e. not smaller scale pieces of infrastructure. One of the key benefits of the TCF package is the continuity of provision provided. Currently cycle infrastructure is disjointed, with individual cycle lanes ending and cyclists forced to join a busy carriageway part-way through their journey. The proposed routes have been designed such that the main cycle routes in the area have continuous, dedicated cycle facilities so that cyclists can travel for the duration of their trip on safe and accessible infrastructure. The length of infrastructure proposed for each section of corridor is compared to the average cycle journey length provided in the AMAT to give the proportion of journey experiencing the benefit. This average journey length of 4.8KM is based on NTS.

Existing Demand

3.3.14. The AMAT requires the existing and scheme induced demand to be included as an input. To establish the existing cycling demand along the C corridors several data sources have been used:

- Existing count data held by DfT;
- Existing count data held by BCP or Dorset Councils; and
- Data collected as part of the SOBC.

3.3.15. Given the count data is from a range of sources, to ascertain that it is representative of an average day, the month and collection period of each count has been considered. For the cycle count data, 88% of the count locations were collected in a neutral month (i.e. not December through to February, and July), 6% during winter months and 6% during summer months. There was insufficient data to normalise all counts to an average day, and given the vast majority of the data collected was in neutral months this was considered to be suitably representative of an average day.

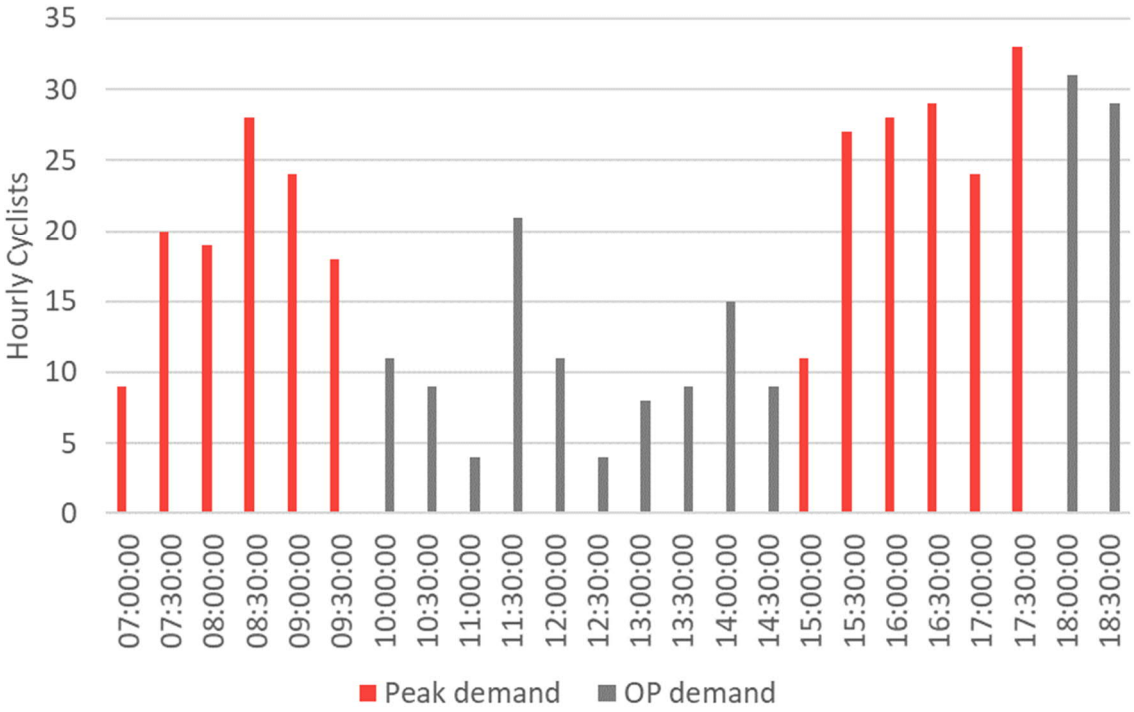
3.3.16. These counts (both existing and collected) have been allocated to each of the cycling interventions based on closest proximity. Where it was identified that there was no count data within a reasonable distance of an intervention, the average cycle demand for the corridor was calculated and used.

3.3.17. The input to the AMAT is daily demand, therefore a process has been undertaken to expand/adjust the count data from the various sources to ensure it represents average daily demand. Much of the count data used was collected over a 12-hour period. As part of its monitoring processes, BCP have established a relationship between 12-hour and 24-hour demand. It is estimated that the expansion factor to estimate 24-hour demand from 12-hour demand is 1.22.

3.3.18. Where count data was collected only in the peak periods (0700 – 1000, 1500 – 1800) this has also been expanded to a 24-hour period for inclusion in the AMAT. The hourly profile of

existing cycle demand at Holdenhurst Road was used[16] to calculate a factor to expand from peak periods to 12-hour. Using the above factor of 1.22 the demand has then been adjusted to 24-hour. Figure 3-1 shows the 12-hour demand profile at Holdenhurst Road. The same count point has been used to expand both cycling demand and pedestrian demand (see Existing Demand section within Improving Pedestrian Journeys), this ensures consistency in expansion of count estimates.

Figure 3-1 - Cycling Demand Daily Profile



3.3.19. The AMAT expands the daily demand to annual demand using a factor of 253.

Scheme Induced Demand

3.3.20. To estimate the scheme induced cycling demand, local evidence of demand uplift pre- and post- cycling interventions has been used.

3.3.21. As part of the Olympics Transport Package, 24km of cycle route was built in an around Weymouth. Within this package, a 3m wide shared use footway was constructed parallel to Weymouth Way which was a single carriageway, 60mph relief road with no footway or cycleway. Prior to intervention previous counts indicated between 40 and 100 cyclists per day. Over the last 5 years, an Automatic Cycle Counter (ACC) has reported consistent daily demand between 250 and 300 cyclists.

[16] Hourly demand data for Holdenhurst Road (June 2018)

3.3.22. Portland Beach Road is another scheme delivered under the Olympic Transport Package, and involved widening an existing footway to allow for shared use. The scheme was completed in phases to 2011/12. Prior to intervention the daily cycle demand in 2008 was seen to be in the region of 140 users, ACCs now measure this demand to be 250-300 cyclists a day.

3.3.23. Surface improvements and integration with the wider cycling network has seen demand on the Rodwell Trail increase from 190 cyclists per day in 2008 to 420 per day in 2018.

3.3.24. The construction of a 3.5m wide, 1.6km long shared use path was constructed on Ham Lane in 2018/19. This road is a 60mph single carriageway. A long-term cycle count on an adjoining link showed 20 to 30 cyclists per day before intervention. A counter was installed at the time of intervention and has recorded between 60 and 90 cyclists per day. As a result of the neighbouring TCF programme schemes and wider network connectivity a significant increase in usage is anticipated. During the COVID-19 lockdown in March 2020 Dorset Council observed a significant increase in cycle movements on this link also highlighting the scheme's potential positive impact as a leisure route

3.3.25. A stepped cycle track was implemented on Castle Lane West. Peak hour counts (0800 - 0900) before and after the intervention were undertaken. In 2014, before the intervention, 50 cyclists were recorded on the road in the AM peak hour, by 2017 this had increased to 73 suggesting a 46% increase. It should be noted that there was a small reduction outside of the peak hour.

3.3.26. Across four ACC sites in Weymouth (Preston Beach Cycleway, Portland Beach Road Cycleway, Radipole Park Drive Cycleway and Rodwell Trail), the average daily cycle demand in 2008 was 660, by 2014 this had increased to 1,010. The infrastructure changes to two of these sites are detailed above, the remainder show the resultant uplift on the surrounding network. Across these sites a 55% increase in cycling demand was therefore seen. For comparison, over the same period in East Dorset there was no increase in demand recorded on a set of three ACCs, where average daily demand remained at 530 cyclists. This demonstrates the impact of intervention on cycling demand in the local area.

3.3.27. Table 3-1 below shows a summary of this local evidence of cycling demand uplift through intervention.

Table 3-1 – Local Evidence of Cycling Demand Uplift

Scheme	Demand Before	Demand After	% Change
Weymouth Way	40 - 100	250 - 300	150 – 650%
Portland Beach Road	140	240 - 300	79 – 114%
Rodwell Trail	190	420	121%
Ham Lane	20 - 30	60 - 90	100 – 350%
Castle Lane West	50 (0800 – 0900)	73 (0800 – 0900)	46% (0800 – 0900)
Weymouth ACCs (4 locations)	660	1,010	55%

3.3.28. As mentioned above, the four ACC sites across Weymouth that recorded a 55% cycling demand uplift when interventions were implemented have been compared to an appropriate

control group. Having this control group for comparison provides confidence that the demand uplift is induced by the interventions, which is the measure input to the AMATs. Therefore, a 55% uplift in cycling demand as a result of TCF interventions has been applied within the AMAT toolkit. It should be noted that this is considerably lower than some of the local evidence presented in the table above, and therefore could be viewed as conservative.

3.3.29. Given the importance of this assumption, sensitivity tests have been carried out that assume alternative levels of demand uplift to the 55% used in the central case.

3.3.30. Across the C corridors there is a range of proposed interventions and infrastructure that spans the various local case studies. Considering the local evidence set out above, the average uplift in demand across the seven case studies was circa 155%. To reflect that the scheme could result in a higher level of demand uplift, a sensitivity test assuming a 110% uplift has been undertaken. This uplift represents double the core scenario forecast of a 55% uplift.

3.3.31. In addition to an upside sensitivity test, a downside test has also been undertaken. A number of national case studies exist as part of the Cycling City and Towns Programme[17], and the Cycling Demonstration Towns[18]. These studies found an average of 24% and 29% uplift in cycling demand respectively. A lower bound sensitivity test has been undertaken assuming a 27% uplift in cycle demand, this is within the bounds of the national case studies and represents half of the uplift assumed for the core scenario.

3.3.32. These demand uplifts have been assumed in the sensitivity tests results presented in Section 3.8.

AMAT Assumptions

3.3.33. The AMAT is populated with the standard assumptions for a number of parameters primarily based on TAG and the NTS. A small number of assumptions are based on alternative inputs. The table below shows the standard assumptions within the AMAT.

Table 3-2 - AMAT Standard Assumptions

AMAT Assumption	Value	Source
Average length of trip	Cycling: 4.84km Walking: 1.1km	National Travel Survey Data 2012-14
Average speed	Cycling: 15km/h Walking: 5km/h	National Travel Survey Data 2016

Proportion of users who are employed	56.40%	National Travel Survey Data 2018
Proportion otherwise using a car	11%	Literature Review carried out by RAND Europe / Systra for DfT
Proportion otherwise using a taxi	8%	Literature Review carried out by RAND Europe / Systra for DfT
Return journeys	90%	National Travel Survey Data 2018
Background growth rate in trips	0.75%	National Travel Survey Data 2006-2016
Period over which this growth rate applies	20 years	Assumption based on TAG
Number of days for which intervention data is applicable per year	253 days	Number of working days per year
Car occupancy rate	1.6	National Travel Survey 2002-16
Taxi occupancy rate	2.4	TAG Data Book 2010

Outputs

3.3.34. Within the tool the benefits are assessed over a 30-year appraisal period. This is in line with the DfT guidance. The output of the AMAT tool are the monetised impacts of the intervention under the following headings in 2010 PV:

- Congestion benefit;
- Infrastructure;
- Accident;
- Local air quality;
- Noise;
- Greenhouse gases;
- Reduced risk of premature death;
- Absenteeism;
- Journey ambience; and
- Indirect tax.

3.3.35. The costs of the interventions have been considered outside of the AMAT tool and has been incorporated into the appraisal model.

3.3.36. The AMATs for the C corridors are included in Appendix H.

Non-AMAT Cycling Interventions

3.3.37. Part of the infrastructure delivered under C2 is a cycle bridge over the River Stour to the north of Redhill Roundabout. This intervention will deliver substantial benefits in terms of journey times, however given the scope of inputs it cannot be captured in the AMAT tool. Therefore, the benefits of this intervention have been calculated using an alternative approach.

3.3.38. The river crossing will provide a continuous route from the existing path at Redhill Roundabout to Parley Lane to the west of Chapel Gate Roundabout. Currently there is no river crossing at the proposed location. The route between Redhill Roundabout and Chapel Gate Roundabout is currently 4.3km, with the proposed river crossing this will reduce to 1.9km. Assuming an average journey speed of 15km/h (aligned to the AMAT toolkit), the river crossing would result in a reduction in journey time of just under 10minutes.

3.3.39. It is assumed 100 people are currently making a journey that would benefit from the river crossing. This is based on the current cycling demand at Redhill Roundabout travelling to/from Wimborne Road, and it is assumed that 50% of this demand would benefit from the river crossing. In line with the other cycling interventions considered in the AMAT it is assumed that this demand would increase by 55% if the bridge were in operation.

3.3.40. A weighted Value of Time (VoT) of £7.59/hour (2010 market prices) has been calculated using the commuting and other VoTs from the July 2020 TAG Databook, and the journey purpose split from the AMAT. This VoT has been applied to the average time savings and, employing the rule of a half for new users, the daily benefit associated with the river crossing have been calculated. The annualisation factor used in the AMAT (253) has been used to estimate the annual benefits. The annual benefits are then profiled and converted to 2010 PV within the economic appraisal model. The appraisal period of this piece of infrastructure is assumed to be 60-years based on the anticipated life span of the bridge.

IMPROVING PEDESTRIAN JOURNEYS

3.3.41. All C corridors include improvements to the pedestrian infrastructure. Examples of this include:

- Provision of zebra/toucan crossings where there are currently informal crossing points;
- Widening of pavements;
- Resurfacing of pedestrian paths; and
- Improved lighting along off-road pedestrian paths.

3.3.42. The benefits associated with improvements to pedestrian infrastructure in terms of crossings, pavement widening, and lighting have been captured using the Ambience Benefits Calculator (ABC) tool, a model developed by Transport for London (TfL). The ambience valuations within the model are calculated based on market research assessing passengers willingness to pay for improvements to their journey[19]. Benefits associated with pavement resurfacing have been captured in the walking section of the AMAT, as these cannot be suitably captured within the ABC tool.

[19] Business Case Development Manual, TfL Finance, March 2017

Ambience Benefits Calculator

Intervention

3.3.43. For the purposes of the Business Case, the 'walking' section of the tool has been used. Within this, changes to the following groups of infrastructure can be captured:

- Crossings;
- Street security;
- Street signs;
- Pavements; and
- Facilities and visual attractions.

3.3.44. For each of the groups above an attribute is selected, for this attribute the conditions pre- and post-intervention are selected in the tool. The tool calculates a pence per trip from willingness to pay market research for the conditions before and after intervention. Table 3-3 shows an example.

Table 3-3 – ABC Tool Structure

Group	Attribute	State		Willingness to pay (2014 prices, pence per trip)		
		Before	After	Before	After	Diff.
Crossings	Proximity of 'green man crossing'	No pedestrian 'green man' crossing nearby	Pedestrian 'green man' crossing at a convenient point nearby	0	3.909	3.909

3.3.45. For some attributes the minutes per trip for which the improved infrastructure is experienced is required as an input i.e. for improvements to pavements which cover a greater distance than say a pedestrian crossing. For consistency with the AMAT, which is discussed in detail in earlier sections, the average length of walk journey and walking speed has been based on the 2016 National Travel Survey. This gives an average walking trip length of 1.1km, combined with an average walking speed of 5km/h this gives and average journey time of 13mins 12s. For those interventions requiring a duration input, the journey time has been calculated based on the length of enhanced pedestrian infrastructure multiplied by a walking speed of 5km/h. The length of infrastructure provision has been considered per section of each corridor.

Existing Demand

3.3.46. The tool requires the existing and scheme induced demand to be included as an input. Existing walking demand has been established based on pedestrian count survey data. Existing count data has been supplemented by primary data collected during the SOBC stage. A proportionate approach has been taken, such that for any one corridor there are a vast number of interventions to improve journey ambience for pedestrians and it was not

feasible or realistic to collect pedestrian count data for each of these locations (there are in the region of 50 interventions enhancing pedestrian facilities across the four corridors). The count location in the closest proximity to the intervention has been identified for use in the ABC tool, or, where no count point was reasonably close, an average corridor demand has been calculated (the average of the available count data in each corridor).

3.3.47. To provide confidence that the count data is representative of an average day, the month and collection period of each count location has been considered. For the pedestrian count data, all counts were collected in a neutral month (i.e. not December through to February, and July) therefore no adjustment to the count data was considered necessary.

3.3.48. The ABC model considers daily demand, therefore a process has been undertaken to expand the count data from the various sources to ensure it represents an average daily demand.

3.3.49. The count data collected during the SOBC stage was collected in the morning and evening peaks, with counts between:

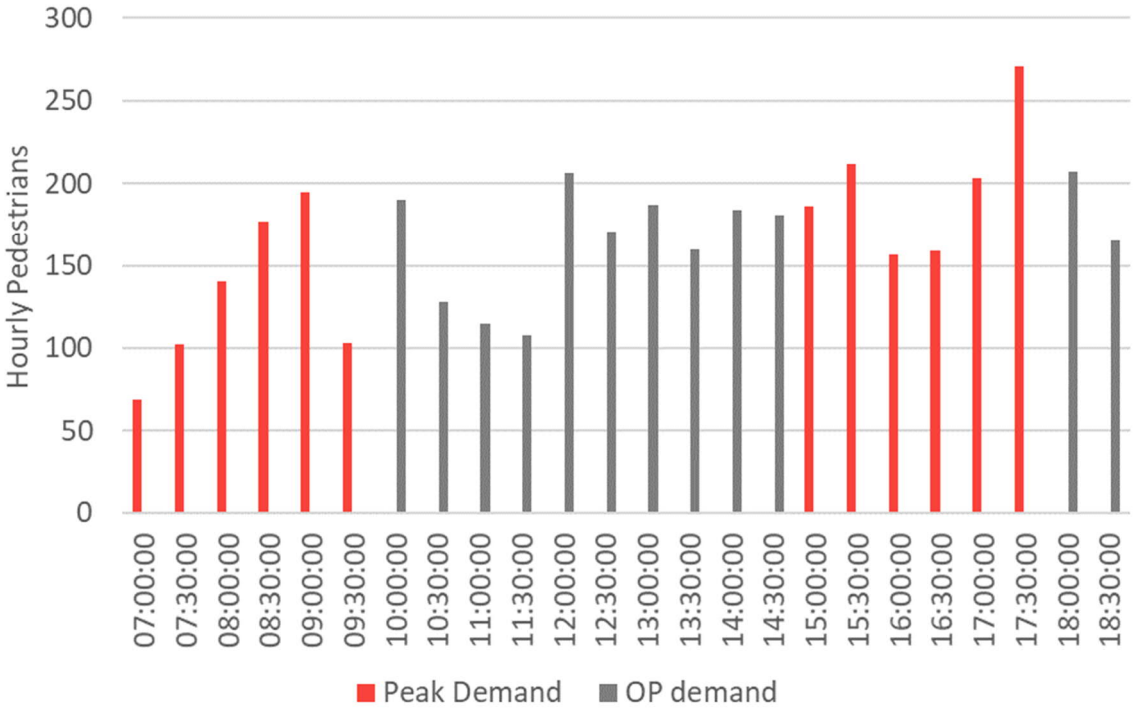
- AM peak: 0700 – 1000; and
- PM peak: 1500 – 1800

3.3.50. For use in the ABC tool, this peak data has been expanded to represent 24-hour daily demand. This has been done in two steps, firstly by expanding to a 12-hour demand, and then to scale from 12-hour to 24-hour. To calculate the 12-hour expansion factor, the hourly profile of existing pedestrian demand at Holdenhurst Road was used[20]. Figure 3-2 shows the daily profile of pedestrian demand that has been used to expand the peak hour count data. The total peak period demand was circa 50% of the 12-hour demand, therefore a factor of 2.01 has been applied to the peak period count data to expand to 12-hour demand. To calculate the 12-hour to 24-hour expansion factor, National Travel Survey data on time of travel has been used[21]. Comparing the 12-hour demand between 0700 and 1900 and the 24-hour demand gives an expansion factor of 1.16. This factor is applied to the 12-hour pedestrian demand data to expand to a full day.

[20] Hourly demand data for Holdenhurst Road (June 2018)

[21] 2018 NTS Table NTS0501 Trips by time of day and day of week

Figure 3-2 - Pedestrian Demand Daily Profile



3.3.51. The count points used are generally for pedestrians walking along a route, as opposed to at crossings. Therefore to account for the fact that the number of pedestrians benefitting from the crossing improvements is likely lower than those walking along routes, an adjustment factor has been used. This factor has been calculated based on a count point which captured pedestrians using a crossing as well as those travelling along the route. The number of pedestrians crossing has been compared to those walking along the route to provide a factor of 38%. It is acknowledged that the proportion of pedestrians using crossings may vary considerably and will be context specific, however, with limited data, and taking a proportionate approach, this factor has been applied across all corridors.

Scheme Induced Demand

3.3.52. The ABC tool also requires the demand uplift as a result of the scheme as an input. Across all interventions the demand uplift has been assumed to be 12%. This uplift is based on the findings of the Living Streets publication *Making the Case for Investment in the Walking Environment*. This report reviews evidence of the impact of schemes targeting improvement of the walking environment. The report evaluated the impact of improvements to Mixed Priority Routes (MPR), where these included reducing road carriageway widths, increasing the number of formal and informal crossing points and the use of high quality materials and street furniture. These improvement categories align well to the enhanced pedestrian infrastructure interventions included in this TCF bid. The report states that across the 12 MRP demonstration projects in England, pedestrian demand increased by between 2% and 22%. The midpoint of this range has been assumed for the core scenario. It is acknowledged that the induced demand may vary by intervention type and location, however given the number of interventions it is not proportionate to consider each in this level of detail. The uplift assumed represents the average uplift, it also represents the

impact on active travel of consistency of provision. This TCF bid is focussed on increasing active mode/sustainable travel through providing additional infrastructure with better connections to existing infrastructure, giving an improved overall journey experience. As the TCF bid will lead to a significant overall improvement to the pedestrian environment in the proposed corridors, the overall demand uplift is considered appropriate.

3.3.53. The impact of this assumption on the level of benefits forecast is captured in the sensitivity testing reported in section 3.8. Two tests have been conducted, halving the pedestrian induced demand to a 6% uplift, and doubling the pedestrian induced demand to a 24% uplift.

Outputs

3.3.54. The ABC tool has the capacity to monetise the benefits of multiple interventions within one toolkit. Therefore, an ABC toolkit has been prepared for each corridor. The output of the model is the total annual monetised ambience benefits for the corridor. The price base of outputs can be selected within the model. The tool has been developed using 2014 values, and uses the November 2017 Databook. To ensure the inflation and discounting assumptions are consistent with the remainder of the Business Case, the ambience benefits have been output in 2014 prices and values and adjusted outside the tool in the economic appraisal model.

3.3.55. Prior to rebasing to the appraisal price base, the ABC tool outputs have been adjusted to reflect that the tool is built based on market research of willingness to pay in London and therefore may not be directly representative of other areas. A number of methods were considered for adjusting the toolkit output to account for potential bias in the results. The most appropriate and proportionate method, given the data available, was considered to be making an adjustment based on the differential between London income levels and local income levels. To adjust the outputs of the tool, the average income in London has been compared to the population weighted average earnings in Bournemouth, Christchurch and Poole using the ONS dataset[22]. The table below shows this comparison.

Table 3-4 – ABC tool adjustment factor

County and district/unitary authority	Number of individuals	Average income	Weighted average	Adjustment factor
London	4,210,000	£46,900		
Bournemouth UA	90,000	£27,700	£29,817	64%
Poole UA	76,000	£32,100		

[22] Income and tax by borough and district or unitary authority: 2016-17, Office of National Statistics

Christchurch	25,000	£30,500		

3.3.56. Based on this an adjustment factor of 0.64 has been applied to the annual ambience benefit of the ABC tool for each corridor.

3.3.57. To rebase the adjusted ABC tool outputs to represent a 30-year appraisal in 2010 PV the following adjustments have been made:

- Assume the ABC tool output in 2014 prices for each of the 30 years from 2023;
- To reflect growth in Values of Time (VOTs) over these 30 years, apply the forecast growth in GDP/capita from 2014 to each appraisal year in line with the TAG Databook;
- Deflate the benefits from 2014 prices to 2010 in line with GDP Deflator forecast from the TAG Databook; and
- Apply discounting at 3.5% per year to convert to 2010 values.

3.3.58. It is assumed that as the willingness to pay values are based on survey data, that they are already in market prices.

3.3.59. The adjustment to 2010 PV is undertaken in the economic appraisal model which is attached to this submission in Appendix I. The ABC tool for each corridor is included in Appendix J.

AMAT

Intervention

3.3.60. To capture the benefits to pedestrians of improved surfacing of footways, the Walking section of the AMAT has been used. Within the Tool the current and future standard of walking infrastructure on the route can be selected using a 'Yes' or 'No' for various categories. It is assumed that currently the pavement is not even, but that in the future this will be.

3.3.61. To avoid risk of double counting with impacts within the ABC no further changes to pedestrian infrastructure are modelled within the AMAT.

Existing Demand

3.3.62. The assumption for existing demand is the same as that used in the ABC tool.

Scheme Induced Demand

3.3.63. The assumption for the scheme induced demand is the same as that used in the ABC tool.

Outputs

3.3.64. The outputs of the AMAT for walking schemes are consistent with those output for cycling schemes, as detailed previously.

OTHER INTERVENTIONS

3.3.65. There are two interventions for which the benefits could not be estimated using the tools described above, these are wayfinding infrastructure and the provision of Beryl e-bikes. The

approaches taken to estimate the benefits of these interventions are discussed in the sections below.

Wayfinding

3.3.66. BCP proposes to deliver a range of wayfinding improvements along all the cycling corridors. These improvements include:

- 39 wayfinding totems (including smart totems); and
- 59 wayfinding signs.

3.3.67. Appendix G shows the proposed locations of the wayfinding interventions. Where infrastructure is proposed off-corridor, i.e. within central Poole, Bournemouth and Christchurch, these have been allocated to the nearest corridor section to capture the costs and impacts within the appraisal.

3.3.68. The willingness to pay values from the ABC tool have been used to monetise the benefits associated with this improved signage. The ABC tool allows three 'states' for signs to public transport and attractions:

- No signs to public transport, no maps or information boards;
- Signs to public transport; and
- Local area maps, information board and signed routes

3.3.69. It is assumed that following the installation of the totems these areas would then be the third 'state' where the 32inch double sided totems will provide maps of the local area, directions to key attractions and public transport. The interactive totems will allow members of the public to access bus and train timetable information as well as interactive maps. The totems will also act as WiFi hotspots providing internet connectivity to the public. From review of the local area, BCP Council assessed that 90% of these wayfinding totems are proposed to be installed in areas where there are currently no signs to public transport and no maps or information boards. The remaining 10% are in areas where there are currently signs to public transport. These proportions have been used to estimate the benefits of the wayfinding totems.

3.3.70. Further benefit will be achieved through the installation of 59 wayfinding signs along the corridors. For these, it is assumed that the current 'state' is that there are no signs to public transport, no maps or information boards. Following implementation of the signs it is assumed that these areas would then be the second 'state' where there would be signs to public transport (in reality these signs could be to local attractions, high street, etc).

3.3.71. The table below shows the willingness to pay for improvements to wayfinding, using values from the ABC tool.

Table 3-5 - Wayfinding willingness to pay

Wayfinding before 'state'	Wayfinding after 'state'	Willingness to pay (2014 prices, pence per trip)
No signs to public transport, no maps or information boards	Local area maps, information boards and signed routes	12.5
Signs to public transport	Local area maps, information boards and signed routes	1.6
No signs to public transport, no maps or information boards	Signs to public transport	10.9

3.3.72. The wayfinding interventions are proposed for Poole and Christchurch Town Centres, and along the corridors. An average of the pedestrian demand per section of corridor has been used to estimate the demand that will benefit from these interventions. Where there are sections without count data, the average of the corridor has been used. This does not consider the cycling demand that will benefit from increased signage along the C corridors, therefore the benefits of wayfinding could be greater than those captured within the appraisal.

3.3.73. The number of proposed wayfinding totems / signs has been multiplied by the daily demand and the willingness to pay to estimate the daily benefit of the interventions. An annualisation factor of 332, from the ABC tool, has used to expand this to annual benefits. Similar to the ABC tool outputs used to estimate the benefits of enhanced pedestrian infrastructure, these annual benefits have then been adjusted to account for the differences in willingness to pay between London and the study area.

3.3.74. To reflect that the count data reflects a single point within each corridor section, and not necessarily the number of individuals who encounter the wayfinding infrastructure, a sensitivity test has been undertaken where the wayfinding benefits have been reduced by 50%.

3.3.75. The installation of the wayfinding improvements will be in line with the completion of the corridors, and is therefore assumed to be installed in 2023. The benefits are considered over a 20-year period, in line with the expected life expectancy of the infrastructure. Wayfinding benefits are converted to 2010 PV within the economic appraisal model.

Beryl Bikes

3.3.76. BCP Council and Beryl Bikes propose to roll out e-bikes in the region. Beryl bikes are currently available within the Bournemouth and Poole area, where it has demonstrated a strong user market with 12,000 users and over 42,000 journeys. E-bikes allow improved accessibility for those in hillier areas and those whose commute may be too long to conventionally cycle. E-bikes can encourage longer journeys than conventional bikes.

3.3.77. As part of the TCF bid it is proposed to incorporate 200 e-bikes to the current Beryl bike provision in the area, with these assumed to be equally spread across the C corridors. It is assumed that the e-bikes would be rolled out between March 2022 and March 2023.

3.3.78. In order to estimate the benefits associated with this provision, the average rides per bike per day has been multiplied by the bike provision to give a daily demand increase. It is assumed that this demand is not captured from existing cycling demand as those already using private bike are unlikely to switch to paying to use bikes. The rides per day per bike has been provided by Beryl bikes based on monitoring and evaluation of their current operation, this is estimated to be 1.4. Combining this with the phasing of introduction of bikes between 2022 and 2023 suggests a daily demand of 218 rides in 2022 and 280 from 2023 onwards.

3.3.79. The AMAT tool has been used to estimate the health benefits associated with this increase in cycling demand. The daily demand entered into the tool is the demand induced by the scheme, and the benefits associated with reduced risk of premature death and absenteeism have been extracted from the outputs. To reflect that journeys via e-bike are likely to have less physical health benefits than conventional bikes, the benefits have been scaled down by a factor of 50% for inclusion in the appraisal. The appraisal period for e-bikes is relatively short compared to the other interventions, the benefits have been considered over a 4-year period from 2022 to 2025.

3.3.80. The outputs of the AMAT are in 2010 PV and so have been included directly into the economic appraisal model.

OVERALL BENEFIT

3.3.81. The sections above have shown how the benefits of the scheme are assessed and quantified considering four categories of benefits:

- Improving cycling journeys: AMAT tool and bespoke benefits calculation for river crossing over 30-years;
- Improving pedestrian journeys: ABC tool over 30-years;
- Wayfinding: bespoke calculations drawing on values from the ABC tool; and
- Beryl Bikes: bespoke calculations drawing on values from the AMAT

3.3.82. The benefits from these sources have been brought together in the economic appraisal model. The model rebases each of these inputs to ensure they are consistent with the 2010 appraisal base year and calculates the overall present value of benefits.

3.3.83. The impacts for the C corridors include:

- Enhanced pedestrian infrastructure (ABC tool)
  - Ambience benefits
- Cycling infrastructure (AMAT)
  - Congestion benefits
  - Accidents
  - Local air quality

- Noise
- Greenhouse gases
- Reduced risk of premature death
- Absenteeism
- Journey ambience
- Indirect tax

- Other interventions: wayfinding and e-bikes (AMAT, ABC and bespoke calculations)
  - Ambience benefits
  - Reduced risk of premature death
  - Absenteeism

CAPITAL COSTS

Cycling Corridors

3.3.84. The Capital Expenditure (CapEx) is the cost required to develop and construct the infrastructure along the corridors. A bottom-up approach has been used to estimate the costs, where the cost of each corridor is calculated based on the interventions within it. These corridor capital costs are then summed to give the total capital cost of the C corridors. Costs are assumed to be incurred from 2020/21 through to 2023/24 when the full programme is completed.

3.3.85. The scheme costs have been prepared by WSP. The costs are estimated in 2020 prices, to which inflation is applied to reflect the value in the year the cost is incurred. To convert the 2020 cost estimate to outturn costs inflation has been applied based on the BCIS All-In TPI forecasts. For further detail of the scheme cost estimation methodology please refer to the Financial Case.

3.3.86. A Quantified Risk Assessment (QRA) has been carried out for the scheme. This assessment estimated the risk allowance to be included in the scheme costs. This QRA has been incorporated with the base scheme costs for inclusion in the Business Case. Please refer to the Financial and Management Cases for further detail of the QRA exercise undertaken.

3.3.87. For inclusion in the appraisal the following adjustments have been made to these costs:

- Apply a risk adjustment (QRA);
- Apply optimism bias;
- Deflate to 2010 prices;
- Discount to 2010 values; and
- Apply market price adjustment.

3.3.88. An adjustment for optimism bias is made in the appraisal of interventions to reflect the well-established systematic bias in scheme cost and delivery time estimates, where there is a tendency for promoters to underestimate cost and be over optimistic about delivery timescales. Both may lead to an increase in outturn cost, which needs to be reflected in the appraisal. The appraisal uses an optimism bias of 15% as recommended in TAG Unit A1.2 for cycling and pedestrian projects at Stage 2 of development (OBC stage).

Wayfinding

3.3.89. The capital costs associated with the installation of wayfinding totems have been estimated based on a unit cost per totem provided by 21st Century. The following unit costs are assumed:

- Wayfinding totem: £8,000 each;
- Wayfinding direction signs: £1,000 each; and
- Smart interactive wayfinding totems: £29,000 each.

3.3.90. These costs are tendered prices, and therefore do not need to be adjusted for inflation. The costs have been assumed to be incurred in the same profile as the C corridor costs, between 2021 and 2023. The wayfinding infrastructure will be installed before the completion of the cycling corridors.

3.3.91. The total capital cost for improved wayfinding provision is £0.64m.

3.3.92. Within the economic appraisal model these costs have been deflated and discounted to 2010 prices and values, and converted to market prices.

Beryl Bikes

3.3.93. The capital costs of delivering 200 e-bikes and associated infrastructure have been estimated by Beryl. These costs include:

- E-bikes;
- Charging stations;
- Bikes;
- Bays;
- Operational equipment;
- Protective equipment;
- Warehouse; and
- Staff costs.

3.3.94. The costs of the expansion is assumed to be incurred between 2021 and 2023. The cost associated with delivering the 200 additional bikes is estimated to be £0.5m. Inflation has been applied to these costs to reflect the year they are incurred.

3.3.95. Within the economic appraisal model these costs have been deflated and discounted to 2010 prices and values, and converted to market prices.

OPERATING AND MAINTENANCE COSTS

3.3.96. The Operating and Maintenance (O&M) costs have been considered separately for the corridors and the other interventions (wayfinding, Beryl bikes), and the timescales over which these costs are considered varies to reflect the appraisal period of each category.

3.3.97. The anticipated O&M costs for each corridor have been estimated by BCP Council based on experience of delivering, operating and maintaining infrastructure of this nature. The O&M costs associated with the corridors have been considered for the 30 year period from 2023 to 2052.

3.3.98. BCP Council also estimated the likely O&M costs associated with the wayfinding totems. The O&M costs for wayfinding totems is estimated to be £220 per year per unit, this comprises £120 for cleaning, inspection and maintenance and £100 for vandalism and updating of maps. For the smart totems the cleaning, inspection and maintenance cost is £700, the cost of power is £590 and the vandalism and updating of maps cost remains at £100. In total this gives an annual O&M cost for each smart totem of £1,390. Costs associated with the operation and maintenance of the wayfinding totems are considered for 20 years from 2023 in line with the benefits assessment.

3.3.99. The O&M costs associated with the delivery of Beryl e-bikes have been provided by Beryl and are based on a 4-year maintenance cycle. The costs include those associated with employment of mechanics and management staff, overheads and maintenance of bikes. Over the 4-year cycle the O&M costs are estimated to be £0.61m including inflation. The O&M costs will be funded by Beryl, therefore no optimism bias has been added to these costs. It is assumed the expansion will be implemented during 2022 and 2023, therefore the four year appraisal period spans to 2025. In reality these costs would be at least partly offset by the revenue generated, this revenue impact has not been captured within the appraisal.

3.3.100. The level of inflation associated with these costs has been assumed to be in line with general inflation, therefore no real growth has been applied. Given BCP Council's experience in this area, and lower likelihood of cost overruns, no optimism bias has been applied to these costs.

3.3.101. In the economic appraisal model, the O&M costs have been deflated and discounted to 2010 prices and values, and adjusted to market prices.

SUMMARY

3.3.102. The table below provides a summary of the key assumptions used in the appraisal of the C corridors.

Table 3-6 – Appraisal Assumptions Summary

Assumption	Value	Source
Scheme opening year	2023	
Appraisal period	Active Mode: 30 years (2023 – 2052) Wayfinding: 20 years (2023 – 2042) Beryl bikes/e-bikes: 4 years (2022 – 2025)	HM Treasury Green Book TAG Assumption
Appraisal base year	2010	HM Treasury Green Book

Appraisal output price base	2010 PV	HM Treasury Green Book
Discount rate	Year 0 – 30: 3.5% Year 31 – 60: 3.0%	TAG Databook Table A1.1.1
Market price adjustment	1.19	TAG Databook
General inflation	GDP Deflator Forecasts	TAG Databook
Construction inflation	BCIS All-In TPI Forecasts	BCIS All-In TPI Forecasts
O&M cost inflation	General Inflation	Assumption
Pedestrian demand peak to 12-hour expansion factor	2.01	BCP count data
Pedestrian demand 12-hour to 24-hour expansion factor	1.16	National Travel Survey (2018)
Pedestrian scheme induced demand	12%	*'Making the Case for Investment in the Walking Environment'* Living Streets
Willingness to pay adjustment factor	0.64	Comparison of London and BCP average earnings (ONS dataset)
Cycling demand peak to 12-hour expansion factor	1.94	BCP count data
Cycling demand 12-hour to 24-hour expansion factor	1.22	BCP count data
AMAT annualisation factor	253	AMAT default value
Cycling scheme induced demand	55%	Cycling Demonstration Towns and Cycling City and Towns Programme evaluation (Sustrans)
Construction period	Corridors: 2021 – 2023 Wayfinding: 2021 - 2023	

	Beryl bikes: 2022 – 2023	
Optimism Bias on capex	15% No OB applied to third party contribution costs	Assumption
Optimism Bias on opex	0%	Assumption

3.4 APPRAISAL RESULTS

3.4.1. The tables below show a summary of the appraisal results, under the themes of interventions set out in the sections above.

3.4.2. Table 3-7 below shows the benefits associated with improving cycling journeys through improved infrastructure on the corridors. These impacts have been calculated using the DfT's AMAT model.

Table 3-7 – Improved Cycle Journey Impacts

Impact	£m, 2010 PV over appraisal period
Congestion	1.61
Accident	0.27
Local air quality	0.03
Noise	0.02
Greenhouse gases	0.06
Reduced risk of premature death	31.59
Absenteeism	3.89
Journey ambience	7.25
Indirect tax	-0.13
Total	**44.60**

3.4.3. This table shows the benefits associated with improved cycle journeys are mainly generated through the health benefits of cycling including reduced risk of premature death and reduction in absenteeism from work. These health impacts account for over 80% of the benefits across the corridors. The impact on journey ambience is also significant where enhanced provision of cycling infrastructure improves the quality of journey experienced by cyclists. There are congestion benefits associated with mode shift from private car, improving journey times for other highway users, and tied in with this is a reduction in indirect tax revenues where fuel usage reduces. Also associated with mode shift from private car are benefits in terms of air quality, noise and greenhouse gases.

3.4.4. Table 3-8 below shows the benefits associated with improving pedestrian journeys through improved infrastructure on the corridors. These impacts have been calculated using the TfL ABC tool and the DfT AMAT tool.

Table 3-8 - Improved Pedestrian Journey Impacts

Impact	£m, 2010 PV over appraisal period
Ambience Benefits	6.05
Congestion	0.06
Accident	0.01
Local air quality	0.001
Noise	0.001
Greenhouse gases	0.002
Reduced risk of premature death	2.06
Absenteeism	0.42
Journey ambience	0.09
Indirect tax	-0.005
Total	**8.70**

3.4.5. Table 3-9 below shows the impacts as a result of the other interventions discussed previously (wayfinding, Beryl Bikes, river crossing on the C2 corridor). The range of impacts that has been assessed varies by each of these interventions dependent on the appraisal methodology and anticipated benefits.

Table 3-9 – Other Interventions Impacts

Impact	£m, 2010 PV over appraisal period
Wayfinding	
Ambience Benefits	31.72
Beryl Bikes	
Health Benefits (reduced risk of premature death and absenteeism)	0.06
River Crossing on C2 corridor	
Journey time savings	0.66
Total	**32.44**

3.4.6. The most substantial contributor to these benefits is the ambience benefits associated with improved wayfinding. The TCF package includes extensive provision of wayfinding totems and signs across the region, the ABC tool shows a high willingness to pay value for improvements to signage and wayfinding.

3.4.7. Table 3-10 below shows the overall capital cost of the C corridors, wayfinding infrastructure and Beryl Bikes. Within the economic appraisal these costs have been adjusted for optimism bias, deflated to 2010 prices and values, converted to market prices.

Table 3-10 – Capital Costs

	Capital Cost (£m, 2010 PV, market prices)							
	2019	2020	2021	2022	2023	2024	2025	Total
Costs	-	-	7.54	12.14	3.16	-	-	**22.84**

3.4.8. The O&M costs in the appraisal are incurred over differing timeframes depending on the appraisal period of each intervention. The table below shows the total O&M costs.

Table 3-11 – O&M Costs

Impact	O&M Costs (£m 2010 PV, market prices, over appraisal period)
O&M Costs	1.05

3.5 INITIAL BCR

3.5.1. Implementing the methodology and assumptions in the previous section, the benefits and costs associated with the scheme have been estimated.

3.5.2. The table below shows the comparison of these benefits and costs, and the initial Benefit to Cost Ratio (BCR) for each package. Please refer to Appendices K-M for the detailed Transport Economic Efficiency (TEE), Public Accounts (PA) and Analysis of Monetised Costs and Benefits (AMCB) tables.

Table 3-12 – Initial BCR

	£m 2010 PV over appraisal period
Noise	0.02
Local Air Quality	0.03
Greenhouse Gases	0.06
Journey Quality (ambience benefits from ABC, journey quality from AMAT, wayfinding)	45.12
Physical Activity (reduced risk of premature death and absenteeism from the corridors, Beryl bikes)	38.02
Accidents	0.28
Economic Efficiency: Commuting	1.30
Economic Efficiency: Other	1.02
Economic Efficiency: Business & Providers	-0.34
Wider Public Finances (Indirect Tax)	-0.13
PVB	**85.39**
Broad Transport Budget	23.54
PVC	**23.54**
NPV	**61.85**
BCR	**3.6:1**

3.5.3. The table above shows that the scheme comfortably delivers High value for money based on the initial BCR of 3.6:1.

3.6 ENVIRONMENTAL IMPACTS

3.6.1. The environmental impacts outlined below have been identified on the basis of desk-based environmental constraints mapping information. The Environmental Constraints Map is included as Appendix F.

3.6.2. As stated in paragraph 1.4.3 of TAG Unit A3, it is usually not appropriate to consider environmental impacts during, or as a result, of construction as part of the transport appraisal process. However, there may be circumstances when these impacts are relevant and should be taken into consideration. Given the nature of the works involved in the scheme, it is considered that construction impacts do not need to be considered as part of the OBC and hence are not further considered in this appraisal.

3.6.3. Notwithstanding this, to ensure that the extent to which the scheme supports Carbon Net Zero is captured, subsequent stages in design, procurement, construction and operation should be informed by the Resources and Waste Strategy for England[23] and IEMA's guidance on Materials and Waste[24].

NOISE

3.6.4. The proposed cycle corridors link Bournemouth and Poole town centres with various employment / industrial sites whilst running through densely populated areas. There are numerous residential properties and community facilities along the corridor routes. Transport (mainly road but also rail and airport related in some locations) is likely to be the most significant contributor to existing noise levels, with some localised noise and vibration associated with industrial and commercial premises where these are present.

3.6.5. There are many Noise Important Areas (NIAs), locations most exposed to high levels of noise, within the SED City Region area. The majority of the NIAs are located along the A35, A338, A3060, A341, Ringwood Road and Bournemouth Road. There are fewer NIAs in Poole, mainly along Parkstone Road, Bournemouth Road and the A3040. The location of these NIAs with regards to the proposed cycle routes are shown on the Environmental Constraints Map included as Appendix F.

3.6.6. A full quantitative assessment has not been undertaken for the noise impacts of the scheme at this stage. The proposed scheme is aimed at encouraging a shift from car use to cycle travel. Overall and, assuming that the expected modal shift takes place, the expectation is that the long-term impact of the proposals on noise might be beneficial**.**

3.6.7. Based on high level calculations within the AMAT, the monetised assessment of the noise impacts of the scheme is estimated to be £0.02m (2010 PV).

LOCAL AIR QUALITY

3.6.8. Bournemouth and Christchurch currently do not have any Air Quality Management Areas (AQMAs). There are two AQMAs in Poole i.e. Ashley Road AQMA and Commercial Road AQMA. None of the AQMAs are within 500m of any of the proposed cycle corridors (please refer to Environmental Constraints Map in Appendix F).

3.6.9. A full quantitative assessment has not been undertaken for the air quality impacts of the scheme. The proposed scheme has the potential to positively impact air quality by reducing car emissions through encouraging a shift to cycling. Overall, and assuming that the expected modal shift takes place, the expectation is that the long-term impact of the proposals on air quality would be beneficial**.**

[23] https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england

[24] IEMA guide to: Materials and Waste in Environmental Impact Assessment

3.6.10. Based on high level calculations within the AMAT, the monetised assessment of the local air quality impacts of the scheme is estimated to be £0.03m (2010 PV).

GREENHOUSE GASES

3.6.11. Data published by the Department for Business, Energy and Industrial Strategy (BEIS) shows the total Carbon Dioxide emissions in Bournemouth, Christchurch and Poole were 1,442 CO2 kt in 2018, with the largest sector emissions from domestic gas (370 CO2 kt) and the second largest sector from minor roads transport (324 CO2 kt). The data also shows a reduction in Carbon Dioxide emissions between 2014 and 2018 in the local authority area.

3.6.12. A full quantitative assessment has not been undertaken for the greenhouse gases impacts of the scheme. One of the main aims of the proposed scheme is to reduce private car use. If this is achieved, there is likely to be a reduction in greenhouse gas emissions. Assuming that the expected modal shift from vehicle to cycling travel takes place, the expectation is that the long-term impact of the proposals on greenhouse gases would be beneficial.

3.6.13. Based on high level calculations within the AMAT, the monetised assessment of the greenhouse gas emissions impacts of the scheme is estimated to be £0.06m (2010 PV).

LANDSCAPE

3.6.14. The SED city region lies in the vicinity of two Areas or Outstanding Natural Beauty (AONBs). To the north of Bournemouth lies the Cranborne Chase & West Wiltshire Downs AONB, and to the south (and west) of Poole lies the Dorset AONB. The approximate point of closest approach to these AONBs is 4.5km from the Cranbourne Chase AONB (C2 corridor) and 2km from the Dorset AONB (C5 corridor) across Poole Harbour. All the proposed cycle interventions lie outside the AONBs.

3.6.15. Sections of the cycle corridors are within Greenbelt, and the C5 corridor to the south of Upton running through the Bournemouth Greenbelt is likely to be visible from the Dorset AONB. Potential landscape and visual impacts have not been assessed, but at this stage it is considered likely that potential impacts would be **Neutral** assuming appropriate design as further discussed under townscape below.

3.6.16. Planned correctly as part of the design process, landscape considerations can support a transformative, place-based approach for the corridors to have a broader scope that also encompasses opportunities for social and environmental benefits which would also support delivery of wider corporate strategic objectives. As an example, incorporating green and blue infrastructure objectives would also deliver benefits that respond to climate change factors (such as air quality, flood risk, biodiversity loss and urban heat island effect) and benefit the health and well-being of users and local communities. Failure to consider landscape fully prior to design could result in adverse impacts.

TOWNSCAPE

3.6.17. The scheme will improve cycle connectivity within the BCP and Dorset Council boundaries. The improvements have the potential to enhance appearance, connectivity, human interaction and activity. However, there will inevitably be direct impacts on the local townscape character as a result of the works, including potential tree loss, which will be

mitigated through sensitive and well-integrated design that supports wider social and environmental benefits.

3.6.18. If landscape architects and urban designers are meaningfully engaged at the start of the design process to influence the strategic design, certain proposals have the potential to enhance the immediate locality and area surrounding the C corridors. In this scenario the scheme is considered to have a **Slight Beneficial** impact on the townscape. However, failure to engage at the right time could result in adverse impacts on townscape character.

3.6.19. Further assessments of potential landscape and townscape impacts would be required to understand impacts and inform required mitigation. Integration of a place and people led design approach will be required to maximise benefits, value and opportunities.

HISTORIC ENVIRONMENT

3.6.20. There are numerous statutorily designated heritage assets within 100m of the C corridors. These include over 50 Listed Buildings, two Registered Park and Gardens, one Scheduled Monument and 10 Conservation Areas. The majority of these designated heritage assets are found at the southern end of the C2 Corridor in central Bournemouth. There are further designated heritage assets in various places along the alignment of C1, C3 and C5 corridors. Non-designated heritage assets are also likely to be present.

3.6.21. No significant adverse impacts on designated heritage assets are expected as a result of the proposed scheme. There is, however, the potential for changes in the setting of the designated heritage assets and direct adverse impacts on unknown archaeological remains in the sections of the proposed cycle routes outside the current road system.

3.6.22. Based on the information available at this OBC stage, the scheme is considered to have a **Slight Adverse** impact on the historic environment.

3.6.23. Further assessments of potential impacts on statutory and non-statutory designated heritage assets would be required to inform the required mitigation to minimise potential adverse impacts and maximise potential opportunities.

BIODIVERSITY

3.6.24. There are numerous statutory designations in close proximity to the C1, C2, C3 and C5 corridors. These include international designations such as Special Areas of Conservation (SAC), Special Protected Areas (SPA), Ramsar Sites; national statutory designations (i.e. Sites of Special Scientific Interest (SSSI); and Local Nature Reserves. Priority Habitats including marine, heathland and woodland are also present. These, and other habitats, may support protected and/or notable species.

3.6.25. Given the close proximity to some of the statutory designated sites (i.e. sections of all the proposed C corridors either pass through or lie in the immediate vicinity of one or more designated sites) and the potential for removal of vegetation which could adversely affect protected and non-protected species, it is considered that the scheme has the potential to have a **Slight Adverse** impact on biodiversity.

3.6.26. Further surveys and assessments would be required to inform the required mitigation to minimise potential adverse impacts on designated sites, Priority Habitats and / or protected

species and, to maximise potential opportunities such as planting to contribute towards carbon offsetting.

WATER ENVIRONMENT

3.6.27. The River Stour and River Avon run through the SED city region between Bournemouth and Christchurch. As a result, much of the SED city region within the vicinity of these two rivers is at risk of flooding.

3.6.28. Corridors C1 and C2 both cross the River Stour and its associated floodplain. The C2 corridor also lies in the immediate vicinity of the Uddens Water floodplain. It is envisaged that the corridors and associated infrastructure will be set back from the river's edge and not impede flood flow through the adjacent floodplain. Corridors C2, C3, and C5 cross other watercourses, fluvial flood plain and Flood Zone 3 including coastal and tidal flooding areas in Poole.

3.6.29. The scheme is considered to have the potential for a **Slight Adverse** impact on the water environment and on flood risk. The design of the cycle corridors infrastructure will need to take into account the location of existing water resources and the potential implications of climate change on flood risk.

SUMMARY

3.6.30. The table below summarises the environmental impacts, as considered as part of this stage of the transport appraisal process, of the scheme.

Environmental Impact	Assessment
Noise	£0.02m
Local Air Quality	£0.03m
Greenhouse Gases	£0.06m
Landscape	Neutral
Townscape	Slight Beneficial
Historic Environment	Slight Adverse
Biodiversity	Slight Adverse
Water Environment	Slight Adverse

3.7 SOCIAL IMPACTS

3.7.1. The following sections describe the social impacts of the packages under the headings aligning to the Appraisal Summary Table.

RELIABILITY

3.7.2. Through providing continuity of cycling and walking infrastructure, the TCF packages will improve reliability for those travelling by active modes. The corridors will offer facilities that users can rely on to travel safely and with improved journey times and journey experience.

3.7.3. The impact of the scheme on reliability is considered to be beneficial, but has not been assessed in detail.

PHYSICAL ACTIVITY

3.7.4. The benefits associated with increases in physical activity capture the health impacts of increased physical activity through improvements to cycling and walking infrastructure inducing demand. The AMAT toolkit captures the health impacts related to increased cycle demand (and therefore physical activity) in terms of reduced risk of premature death and a reduction in absenteeism where a healthier workforce requires less time absent from work. The expansion of Beryl bikes to Christchurch and the implementation of e-bikes will allow/encourage those who are less physically able to choose active travel modes and increase physical activity.

3.7.5. In addition to these health benefits captured through the AMAT, the scheme will also deliver infrastructure to support active travel journeys across the region. Providing connectivity between cycle routes, with improved pedestrian facilities, end to end journeys are more likely to be by active modes. This will further provide benefits associated with physical activity.

3.7.6. The impact of the scheme on physical activity is assessed to be beneficial, the AMAT assessment estimates health benefits to be in the region of £38.02m.

JOURNEY QUALITY

3.7.7. The benefits associated with improvements to journey quality (including ambience) for walking and cycling trips have been monetised using the ABC tool and the AMAT model. This captures improvements such as better paving/re-surfacing, lighting, signage and wayfinding and increased segregation from traffic. Over the appraisal period, these benefits are estimated to be £45.12m.

3.7.8. The scheme will improve journey quality for cyclists and pedestrians. The corridors will offer improved infrastructure making cyclists and pedestrians feel safe, and improve the quality of the journey they experience.

ACCIDENTS

3.7.9. A high-level quantification of the impact of the packages on accident rates has been carried out for this Business Case, a full COBA-LT assessment has not been undertaken.

3.7.10. The impact of the interventions on accidents have been considered within the AMAT model (based on mode shift from car to cycle). The benefits associated with reductions in accidents as a result of the scheme are £0.28m.

3.7.11. The estimation of accident benefits within the AMAT does not account for the improved safety of segregating cyclist and pedestrians from highway traffic along sections of the corridors. Reducing this interaction will reduce the likelihood of collisions.

SECURITY

3.7.12. Along the majority of sections of the cycleways and pedestrian paths, lighting will be installed which will increase the feeling of safety along these routes. For any environmentally sensitive areas, lighting solutions will be codeveloped with the relevant bodies.

3.7.13. The impact of the scheme on security is estimated to be **Slight Beneficial**.

ACCESS TO SERVICES

3.7.14. The scheme will have a positive impact on the availability and physical accessibility of transport with the BCP and Dorset regions. The expansion of existing cycling and pedestrian infrastructure and 'filling the gaps' of the current network will provide access to transport for areas not currently well-served.

3.7.15. The introduction of e-bikes to Bournemouth and Poole will improve transport facilities and access to services in areas that are currently geographically challenging for active modes.

3.7.16. The impact of the scheme on access to services is estimated to be **Slight Beneficial**.

AFFORDABILITY

3.7.17. The cycling and walking interventions are not estimated to have any negative impact on affordability as these modes are free to use. As a result of improved infrastructure, current highway users are forecast to switch to cycling in the AMAT model. This may result in a reduction in cost to the user in terms of reduction in fuel costs and car maintenance.

3.7.18. The impact of the scheme on affordability is estimated to be **Slight Beneficial**.

SEVERANCE

3.7.19. As part of the proposals for the corridors, over 20 new road crossings will be installed (both formal and informal). This will improve the permeability of travel for pedestrians and cyclists, reducing severance.

3.7.20. The installation of cycleways and footways is alongside existing highway alignments, therefore there is estimated to be no negative impact on severance compared to the current situation.

3.7.21. The impact of the scheme on severance is estimated to be **Moderate Beneficial**.

OPTION AND NON-USE VALUES

3.7.22. This TCF bid is building on and enhancing existing transport infrastructure i.e. improvements for pedestrians, and cyclists. Therefore there is not anticipated to be any impact on option and non-use values.

3.7.23. The impact of the scheme on option and non-use values is considered to be **Neutral**.

SUMMARY

3.7.24. The table below summarises the social impacts of the scheme.

Table 3-13 – Summary of Social Impacts

Social Impact	Assessment
Reliability	Beneficial
Physical Activity	£38.02m
Journey Quality	£45.12m
Accidents	£0.28m
Security	Slight Beneficial
Access to Services	Slight Beneficial
Affordability	Slight Beneficial
Severance	Moderate Beneficial
Option and Non-Use Values	Neutral

3.8 SENSITIVITY ANALYSIS

3.8.1. Sensitivity testing has been undertaken to explore the sensitivity of the expected outcomes to changes in inputs. The following sensitivity tests have been carried out, drawing on the key assumptions made in the core scenario for each of the package:

- Test 1: Increase cycling induced demand from 55% to 110% to reflect the high levels of demand increased observed across local cycling projects.
- Test 2: Reduce cycling induced demand from 55% to 27% to reflect Cycling Demonstration Towns and Cycling City Demonstration Programmes case study evidence.
- Test 3: Reduce pedestrian induced demand from 12% to 6%
- Test 4: Increase pedestrian induced demand from 12% to 24%
- Test 5: Reduce cycling induced demand from 55% to 27%, and reduce pedestrian induced demand to 6%
- Test 6: Reduce wayfinding benefits by 50%
- Test 7: July 2020 Sensitivity TAG Databook

3.8.2. The table below show the impact on PVB, PVC, NPV and BCR of each of these tests compared to the initial BCR.

Table 3-14 – Sensitivity Analysis

Sensitivity Test	PVB (£m)	PVC (£m)	NPV (£m)	BCR
Initial BCR	**85.39**	**23.54**	**61.85**	**3.6:1**
Test 1: 110% cycling induced demand	124.30	23.54	100.76	5.3:1

Test 2: 27% cycling induced demand	65.59	23.55	42.04	2.8:1
Test 3: 6% pedestrian induced demand	83.94	23.55	60.40	3.6:1
Test 4: 24% pedestrian induced demand	88.29	23.54	64.75	3.8:1
Test 5: 27% cycling induced demand and 6% pedestrian induced demand	64.14	23.55	40.59	2.7:1
Test 6: 50% wayfinding benefits	69.53	23.54	45.99	3.0:1
Test 7: July 2020 Sensitivity TAG Databook	80.14	23.77	56.37	3.4:1

3.8.3. The results of these tests show that under all sensitivity test scenarios, the BCR remains above 2.0:1 and therefore represents high value for money.

3.8.4. The scheme benefits are most sensitive to the assumption of cycling demand uplift. Under sensitivity Test 1, where this is doubled to 110% from 55%, the PVB can be seen to increase by around 46%. Alternatively, under sensitivity Test 2, where the cycling demand uplift is reduced to 27% from 55%, the PVB is seen to decrease by almost 25%, but the BCR remains above 2:1. Under Test 2 the PVC is seen to change marginally, this is due to a lower modal shift from car compared to the central case resulting in less infrastructure cost savings (calculated in the AMAT).

3.8.5. The benefits are less sensitive to changes in assumptions of pedestrian demand uplift. Reducing the demand uplift to 6% and increasing to 24%, the BCRs generally remain at the same level as the central case (up to 0.2 difference). There is marginal change to the PVC under Test 3 due to a lower mode shift from car compared to the central case resulting in less infrastructure cost savings.

3.8.6. Test 5 represents a downside scenario where both cycling and pedestrian demand uplifts are at the lower bounds of the previous tests. Under this test the scheme continues to demonstrate high value for money, with a BCR of 2.7:1.

3.8.7. Reducing the benefits through wayfinding by 50% within the appraisal reduces the BCR to 3.0:1. This demonstrates that, although this infrastructure is an important element of the scheme, if there is a reduction in benefits through this the scheme still offers strong value for money.

3.8.8. In July 2020 DfT released a sensitivity version of the TAG Databook reflecting lower economic forecasts in the short term due to COVID-19, and in the longer term due to Brexit and other factors. This interim Databook should be used as a sensitivity test in advance of its formal adoption as part of the February 2021 TAG update. Test 7 results in a 6% decrease in PVB and a small increase in PVC. The impact on the BCR is relatively limited.

3.9 VALUE FOR MONEY STATEMENT

3.9.1. The initial BCR for the scheme is 3.6:1, suggesting it has the potential to deliver High VfM. The BCR calculation is based on the monetised impacts alone. There are a number of main sources of benefit contributing to the PVB. Firstly, the health impacts, including reduced risk of premature death and reduced absenteeism, associated with increased uptake of cycling and walking. Secondly, journey quality benefits as a result of improved infrastructure for pedestrians and cyclists. In addition there are benefits related to highway decongestion, including air quality, greenhouse gases and accidents. Costs to the private sector have

been subtracted from the benefits. These costs include the operating and maintenance costs of Beryl Bikes which are incurred by the operator. Accounting for this, the PVB is £85.39m.

3.9.2. The PVC is £23.54m which includes 15% optimism bias. These costs include the construction costs of developing the cycling and pedestrian infrastructure, and delivery of Beryl bikes and supporting infrastructure. The PVC also includes the operating and maintenance costs of the cycling corridors and the wayfinding infrastructure.

3.9.3. There is also the potential for other impacts not currently captured or monetised in the appraisal to positively impact on the scheme benefits, and further boost the VfM. These are anticipated to be reliability benefits for active mode users through providing improvement to, and continuity of, infrastructure. In addition the scheme is anticipated to have a beneficial impact on severance, affordability and access to services. The scheme could have a slight adverse impact on historic environment, biodiversity or water environment but measures would be taken to mitigate and minimise these impacts. The scheme could lead to benefits in terms of townscape by improving the streetscape of what is currently a vehicle dominated street. Overall, the impact of these non-monetised impacts is anticipated to positive and likely to increase the monetised benefits associated with the scheme.

3.9.4. The sensitivity test results demonstrate that the scheme can withstand reductions in cycling and pedestrian demand uplift, and both, and continue to demonstrate High VfM. If the uplift in demand increases compared to the core scenario, the scheme has the potential to offer Very High VfM. If the benefits realised through wayfinding were reduced by 50%, the BCR would reduce to 3.0:1, maintaining High VfM. Sensitivity Test 7 demonstrated that even under lower economic forecasts the scheme could still offer High VfM.

3.9.5. Overall, the scheme is most likely to return High VfM. The initial BCR exceeds this threshold and there are then additional, non-monetised, impacts including reliability, severance and affordability, to be considered.

3.10 SUMMARY

3.10.1. Therefore, as outlined above the scheme the scheme comfortably delivers High value for money based on the initial BCR of 3.6:1 and is likely to return High VfM.

4 THE FINANCIAL CASE

4.1 INTRODUCTION

4.1.1. This section describes the Financial Case for the programme of the cycle corridors, outlining the high-level capital cost estimate and spend profile.

4.1.2. The Financial Case provides details of the risk and inflation assumptions, the affordability of each element and potential funding arrangements.

4.1.3. The operating and maintenance costs are also presented to provide consideration of whole life costs.

4.1.4. This chapter deals with costs and accounting issues. The question of value for money is dealt with separately in the Economic Case.

4.2 COSTS

4.2.1. The development of the cycle corridors was funded at SOBC stage by SED. This included option reviews and development of the cycle corridors, preliminary design and SOBC was funded by SED through their annual funding allocations from 2018/19 and 2019/20.

4.2.2. After the award of the funding for the low ask in March 2020 further design work has taken place to develop the drawings for the cycle corridors and provide updated costings. Although the costs have changed slightly we still anticipate delivering the same outcomes for DfT as indicated when the TCF grant was awarded. The costs are presented in Table 4-1 below.

Table 4-1 – Cycle Corridor OBC Cost Estimates

Package	Sub-Package	OBC Cost estimate
Cycle Corridors	Cycle Corridor C1	£4,445,177.01
	Cycle Corridor C2	£14,774,203.23
	Cycle Corridor C3	£3,508,248.06
	Cycle Corridor C5	£5,902,323.23
Total		£28,629,951.53

4.3 SCHEME PREPARATION AND CONSTRUCTION

4.3.1. The cost of cycle corridors has been estimated by SED. These have undergone a further independent Quantity Surveying review by consultants WSP.

4.3.2. This review has comprised the quantification of the significant elements of the work from the outline design available building on the work done at the OBC stage, building on the previous work done at SOBC stage. The resulting items/quantities have been priced using industry standard published data informed by tenders from similar projects with adjustments made for productivity issues associated with working in live carriageways/pedestrian areas and the restrictions that this may have on working hours and efficiency. Allowances have been made for main contractor's preliminaries and OH & P and traffic management where required based on tenders comprising similar works.

4.3.3. This has produced a base estimate cost to which has been added an allowance for professional fees, STATS and risk.

4.4 RISK BUDGET

4.4.1. The detailed cost of delivering the cycle corridors schemes will not be known until the detailed design has been completed, land purchased (where applicable), and tender prices have been received. To reflect the uncertainty associated with known risks and the estimate, a Quantified Risk Assessment (QRA) and Estimating Uncertainty exercise have been undertaken to inform this OBC. The following risk categories were added to the sub total costs for each corridor based on the current status of design development and uncertainty.

- Work by Statutory undertakers and others (over and above risk allowance);
- Survey/Investigate/Design/Procure/Supervise/manage & liaise; and
- QRA Risk Allowance.

The QRA was conducted using the risk register put together by the Programme Management Team. It assesses the severity of impacts and the probability of a risk occurring and uses these assessments to calculate the % score of each risk (using impact x probability). From these calculations the 80th percentile value was used to ascertain the QRA risk value for the corridors.

4.5 SPEND PROFILE

4.5.1. The assumed annual profile of expenditure is shown in the Table below.

Table 4-2 – Cycle Corridor Spend Profile

Source of funding	Cycle Corridors Spend profile by financial year			Total
	2020-2021	2021-2022	2022-2023	
TCF	£400,228.73	£10,916,365.16	£17,313,357.64	£28,629,951.53
SED City Region (LA) Contribution	£569,716.53	£569,733.62	£569,716.53	£1,709,166.67
Sub Total	£969,945.26	£11,486,098.78	£17,883,074.17	£30,339,118.20

Third party contribution*	-	-	-	-
Total	£969,945.26	£11,486,098.78	£17,883,074.17	£30,339,118.20

*Third party contribution is a revenue cost outlined in Section 4.8.

4.6 OUT-TURN PRICE ADJUSTMENT

4.6.1. The cost estimates have a price base of Q3 2020. An allowance will therefore be made for expected inflation between the date of the estimate and the date when the expenditure is expected to occur.

4.6.2. The uplift factors to reflect price inflation have been estimated based on the Gross Domestic Product (GDP) deflator methodology recommended by WebTAG as well as inflation calculations undertaken by WSP in line with the latest Building Cost Information Service (BCIS) information available with an assumed average mid point of construction of 4Q'21.

4.7 BUDGETS / FUNDING COVER

4.7.1. An estimated funding profile for all the cycle corridors, split by financial year in accordance with TCF guidance have been provided in Section 4.5. The funding from all parties stated has been secured and budgeted for as part of this scheme.

4.8 WHOLE LIFE COSTS

4.8.1. The cycle corridor schemes will give rise to additional revenue liabilities for capital renewals and maintenance, when compared to a future scenario in which the scheme does not exist. All maintenance obligations will fall under the purview of SED city region and, as such, will be fulfilled as part of the maintenance regime operated. The following allowances have been made by SED city region towards maintaining the cycle corridor schemes.

CAPITAL RENEWAL COSTS

4.8.2. Capital renewal costs have been calculated for the OBC construction costs and material types have been confirmed. These costs will be for the purpose of renewing all relevant transport infrastructure assets over a 60-year period.

ANNUAL MAINTENANCE AND OPERATING COSTS

4.8.3. Annual maintenance and operating costs have been estimated for on the basis of a proportion of capital costs. These costs are to meet annual maintenance liabilities including operations, infrastructure and safety inspections.

4.8.4. The whole life costs identified have been factored into the economic appraisal, and these costs will be covered by SEDs annual maintenance budget.

4.8.5. The Third party contribution for the cycle corridors is included as the annual operating costs below, this will follow the launch of the bike share scheme, with operation and maintenance contributions profiled over four years below.

Table 4-3 – Third Party contribution for cycle corridors (Commercially Sensitive Redacted)

4.9 ACCOUNTING IMPLICATIONS: CASH FLOW STATEMENT

4.9.1. The TCF programme is expected to have the following implications on public accounts:

- Funding from DfT is sought to fund the TCF Programme of schemes with funds being spent during the financial years 2019-2020, 2020-2021, 2021-2022 and 2022-2023;
- Local contribution for the programme will be provided through LA contributions, private development contributions and 3rd party contributions; and
- As part of the TCF programme management arrangements an Assurance Framework and Partnering agreement have been developed. These documents set out who is responsible if the scheme goes over budget.

4.10 SUMMARY OF THE FINANCIAL CASE

4.10.1. The total cost of the cycle corridors is £30,339,118.20.

5 THE COMMERCIAL CASE

5.1 INTRODUCTION

5.1.1. The Commercial Case sets out the procurement approach that is likely to be adopted to ensure that the TCF proposals are commercial viability, deliverable within the scheme budget and can achieve value for money.

5.1.2. This chapter outlines the commercial viability of the cycle corridors, and the procurement strategy which will be used to engage the market. It also provides:

- The intended approach to risk allocation and transfer;
- Contract and implementation timescales; and
- How the capability and technical expertise of the team delivering the programme will be secured to ensure effectively deliver of the cycle corridors part of the TCF programme by March 2023.

5.1.3. Consideration has also been given to the following:

- Payment mechanisms;
- Risk allocation and transfer;
- Pricing Framework and charging mechanisms;
- How the capability and technical expertise of the team delivering the project will be secured;
- Contract length; and
- Human Resource issues including Contract Management.

5.2 PROCUREMENT STRATEGY

5.2.1. The detailed design and constructions phases of the cycle corridors are significant tasks which require a robust procurement strategy. BCP Council and Dorset Council has considered that a mixture of procurement routes is required for design and construction to deliver the TCF programme. These form a 'traditional approach' to procurement for both design and construction phases, and include the following:

- In-house' capability; and
- Contract tendering through use of frameworks.

5.2.2. The methods of procurement proposed for the cycle corridor works by BCP Council and Dorset Council are described below.

5.2.3. The procurement strategy for the delivery of the cycle corridors will utilise a suite of existing (proven) suppliers and providers to deliver all the themes covered within the TCF programme. New providers will also be established through new contractual relationships that are procured in accordance with

the respective Council's financial regulations which are aligned with procurement law. Current providers are set out in the table below:

Table 5-1 – Current Contractors and Professional Services providers for BCP Council and Dorset Council

Council	Contractor	Professional Services provider
BCP Council	Gen 4-2 Contract/Gen 4-3 (value dependent)– Existing Framework R&W Term service– Existing Framework BCP Council Neighbourhood Services– Existing Framework Clear Channel – Direct Contract from previous mini tender Beryl – Awarded via mini tender Siemens – Direct Contract from previous mini tender	WSP – Existing Framework
Dorset Council	Hanson Construction Projects – Existing Contract award following OJEU tender in 2016 Dorset Highways Network Operations-in house resource	WSP - Existing Framework

5.2.4. The overall procurement strategy for this TCF programme will be led by BCP Council and managed through their Growth and Infrastructure Directorate with direction from a TCF Programme Management Board.

5.2.5. Where the scale of potential investment from the TCF programme could lead to existing contract thresholds being exceeded they will either be amended in accordance with procurement law and if necessary new contracts procured to meet the increased demand. In addition to the frameworks identified above, the respective Council's within the city region have already began engaging with new framework contracts in advance of the anticipated TCF programme to ensure that the region is ready to deliver as soon as funding is confirmed. The following table sets out examples of the expected contractual route to deliver the TCF programme (including schemes that form the contributions towards the TCF programme).

Table 5-2 – Cycle Corridors TCF Civils Works procurement Routes

Theme	Procurement route
Cycle corridors –civils works	Gen 4-2 Contract/Gen 4-3 (value dependent)
	BCP R&W Term service contract
	BCP Council Neighbourhood Services
	Dorset Highways Works Term Service Contractor
	Dorset Highways Network Operations

5.2.6. Both BCP Council and Dorset Council have dedicated procurement teams embedded within the financial services offices of their Corporate Services Directorates. Officers from within these teams

form part of the TCF programme delivery team and the programme management team will ensure that these officers will work collaboratively across boundary to guarantee best use of resources/skills. The officer teams within the SED City region have extensive experience in delivering a variety of transportation schemes from inception to completion, such as the Local Sustainable Transport Programme

5.2.7. It is intended that each council will procure the schemes within their area and for any cross-boundary schemes, a further decision will be taken on who the appropriate supplier is to deliver works at that location.

5.2.8. To ensure that the SED City Region is ready to deliver, procurement timelines have been included as an integral part of the delivery programme. In advance and at check points during any procurement process Future Thinking will be applied to ensure that the scheme or product that is being procured is future proofed and represents value for money.

5.2.9. Where opportunities exist to purchase products/materials at scale across the SED City region, then this will be considered as part of the robust procurement strategy to ensure that the TCF funding delivers maximum value for money.

5.3 IN HOUSE AND EXTERNAL DESIGN CAPABILITY

5.3.1. The SED city region has inhouse design and programme/project management resource in both BCP Council and Dorset Council.

5.3.2. BCP Council's Transportation Services Team has extensive experience in delivering sustainable transport schemes, from scheme inception and detailed design, with responsibility to complete works and check for compliance. The Transportation Services Team will ensure that the scheme is fully designed at the time of tender, to comply with the Council's preferred form of contract.

5.3.3. Dorset Council also has extensive experience in delivering transport schemes, for example the BIG Programme, through both the Dorset Council's Highways Improvements team and also through Dorset's framework agreement with WSP. This experience includes scheme inception through to detailed design.

5.3.4. To compliment this resource both have established consultancy service frameworks that will be utilised to increase resource to deliver the additional work that the TCF would provide. In addition to this SED will also utilise other consultancy frameworks as a top up. This approach gives SED a number of professionals to call upon to deliver the TCF programme.

5.3.5. This will include WSP who provide support on existing Framework in place for the next 7 years. WSP have worked with both Bournemouth, Poole and Dorset for the past 12 years and provide civil engineering consultancy services, transport planning and project management.

5.4 IN HOUSE AND EXTERNAL CONSTRUCTION CAPABILITY

5.4.1. BCP and Dorset Councils will utilise a number of routes to market for construction works as detailed under the following sub headings

BCP FRAMEWORK/TERM CONTRACTOR

5.4.2. BCP has access to a Term Services Contractor. This contract will be utilised to deliver schemes between April 2021 and April 2022. The use of this contract will be dependent on the resource capability of the contract and extent to which the contract is utilised by other BCP projects.

5.4.3. The desirability of the use of the term service contract as a route to market for the TCF programme has been assessed by Officers from BCP strategic procurement and the TCF Programme Management Team. It has been deemed an appropriate route to market for works delivered within the BCP Council area.

5.4.4. Examples of schemes delivered using this contract include the following:

- Wallisdown Scheme FWP (Phase 1); and
- Boundary Roundabout improvements.

DORSET HIGHWAY WORKS TERM SERVICE CONTRACT (DHWTSC)

5.4.5. Dorset Council has a strategic partnership contract with Hanson Construction Projects have significant experience of delivering schemes on the Dorset highway network which has included over £40 million of highway construction works in the east of Dorset, comprising 6 major projects valued between £22 and £3.2 million, funded by Dorset Local Enterprise Partnership (DLEP). BCP Council have worked with Dorset Council and DLEP on all these contracts. This experience will be utilised to deliver the cycle corridors efficiently and within programme and budget.

5.4.6. Reciprocal working has been a key feature of the partnership with Hanson using the Dorset Highways Organisation's sign-shop, vehicle workshops, grounds maintenance and highway maintenance departments.

5.4.7. Working collaboratively and using early contractor involvement on all schemes has resulted in considerable benefits in both cost and time. Other initiatives include joint training and material testing, monthly KPI reviews and introduction of Hanson iPave tablet for all onsite recording and sharing of documentation.

5.4.8. The Contract was tendered in 2016 following an OJEU notice with a value of £500,000 and a market engagement exercise. Depending on contractor's performance and KPI scores, the contract can run until 2027.

HAMPSHIRE COUNTY COUNCIL GENERATION 4-2 AND 4-3 CIVIL ENGINEERING

5.4.9. In addition to the Term Service contracts both BCP Council and Dorset Council are named members of the Hampshire County Council Generation 4 Civil Engineering, Highways and Transportation Infrastructure Works Framework which includes several major contracting firms. Works through this framework are subject to mini-competition between interested framework contractors. This construction framework includes engineering contractors who have already demonstrated their technical, commercial and financial quality in a process of competitive pre-qualification and tendering. The proposed TCF Programme will utilise both lot 2 and lot 3 of the Gen 4 contract.

5.4.10. The Generation 4 Lot 2 contract consists of ten suppliers who can provide works between the values of £50,000 to £10million. While the Generation 4 Lot 3 contract consists of four suppliers who can provide works between the values of £8million and £150million. This offers BCP flexibility in procurement dependent on the value of the particular package of works being procured as part of the TCF programme.

5.4.11. The desirability of the use of the Hampshire Generation 4-2 and 4-3 contract as a route to market for the TCF programme has been assessed by Officers from BCP strategic procurement and the TCF Programme Management Team. It has been deemed an appropriate route to market for works delivered within the BCP Council area.

5.4.12. The contractors on the Generation 4 contract are the same contractors that BCP utilised in multiple schemes as part of the Generation 4 Framework. These schemes are detailed below:

Contract	Details	Start	End	Tender Price
Gravel Hill Improvements	Cycleway provision, slope stabilisation, resurfacing	July 2016	Dec 2016	£1.8 million
Poole Bridge Refurbishment	Construction of piled foundations, widening of approach spans, provision of new bridge control system	Sept 2016	Jan 2018	£4.8 million
Townside Access Hunger Hill Improvements	Re modelling of gyratory to a signalised junction involving extensive and complex traffic management	Oct 2018	May 2019	£1.9 million
A5 Dorchester Road Axium centre	Provision of a right turn lane	Sept 2016	Dec 2016	£325 k

BCP COUNCIL NEIGHBOURHOOD SERVICES TEAM

5.4.13. The BCP Council Neighbourhood Services team is BCP Councils internal works team with the capacity to deliver highways improvements. BCP Neighbourhood services offers a route to construction supply that similarly to the BCP Term Service Contractor and eliminates the requirement for a defined tender period with schemes developed collaboratively from an early design stage.

5.4.14. There are numerous examples of BCP Council Neighbourhood Services delivering similar types of infrastructure schemes as the TCF programme including Dunyeats Road and the Townside Access scheme.

DORSET HIGHWAYS NETWORK OPERATION TEAM

5.4.15. Dorset Council has an internal team which is directly employed to deliver highways schemes across the County. This team benefits from a combination of directly employed construction works and sub-contractors. This team can be mobilised quickly and has delivered numerous highways schemes across the Dorset area of the SED City Region.

SUMMARY

5.4.16. The above provides a summary of the various procurement routes that BCP and Dorset Council will utilise to deliver the cycle corridors. As part of corridor delivery, a mixture of routes will be utilised dependent upon scheme value and programme requirements. All the proposed procurement routes have a track record of successfully delivering similar schemes for BCP and Dorset Council.

5.5 PAYMENT MECHANISMS

5.5.1. BCP Council will use a range of contract forms to administer works relative to the route to market and the scope and complexity of scheme. Payment timing will be adopted to maximise the value from the contract through minimising financing and constructing costs. Payment would be made to the contractor by monthly valuation with a BACS payment within 28 days of issue of the initial valuation.

5.5.2. Dorset Council will use a range of contract forms to administer works relative to the route to market and the scope and complexity of scheme. Payment timing will be adopted to maximise the value from the contract through minimising financing and constructing costs. Payment would be made to the contractor by monthly valuation with a BACS payment within 28 days of issue of the initial valuation.

5.6 PRICING FRAMEWORK AND CHARGING MECHANISMS

5.6.1. The preferred competitive tender which will be utilised by the TCF programme for the delivery of the cycle corridors is the HCC GEN4-2 and HCC GEN4-3 lots.

5.6.2. The remaining procurement routes outlined in Section 5.4 will use a contractual schedule of rates that is not subject to a competitive tender.

5.7 RISK ALLOCATION AND TRANSFER

5.7.1. The construction contracts in use by BCP Council and Dorset Council will include clauses to facilitate the transfer of appropriate risks from the Councils to the contractor, such as

risks associated with construction costs increasing above those predicted in the Financial Case.

5.7.2. At this stage the sections are in various stages of design and only the quick win sections have had contractors appointed. This means the scheme cost estimates contain a greater proportion of risk borne by BCP and Dorset Councils, than will remain after appointment. The risk will be captured and quantified within the proposed QRA process. The detailed description of this process is outlined the Management Case. Once the tendering process is complete, some of the risk (such as cost increases associated with the design and construction stages) can be transferred to a contractor(s). Other risks, such as the identification of statutory undertaker equipment, and mitigation costs associated with these, can be removed from the "risk pot" completely if they do not materialise, or transferred to "actual" scheme costs if they do materialise, rather than remaining as risk.

5.7.3. The contracts outlined in 5.4 include clauses to facilitate the transfer of appropriate risks from BCP and Dorset Council to the contractor, such as risks associated with construction costs increasing above those predicted in the Financial Case. The construction cost estimate includes an allowance for risk realised throughout construction. The risk budget for construction has been estimated using a quantified risk register.

5.8 CONTRACT LENGTH

5.8.1. A construction period across three financial years for the complete TCF programme is anticipated. The routes to market mentioned above extend beyond the end of the TCF programme delivery window except for the R&W Term Service contract which is limited to April 2022. Following the end of the Term Service contract it is anticipated another Term Service contract will be procured with similar terms to the existing contract. The timing of this contract length is being considered in the TCF programme and assignment of scheme packages will reflect this.

5.8.2. It is possible that tender submissions will propose a different period than this, and the programme contains elements of contingency following the risk assessment completed by BCP Council, Dorset Council and their technical advisors.

5.9 SUMMARY

5.9.1. This commercial case has demonstrated that with strong TCF governance in accordance with Local Assurance Framework and that BCP and Dorset Council has the appropriate procurement strategy in place to the deliver the cycle corridors.

6 THE MANAGEMENT CASE

6.1 INTRODUCTION

6.1.1. This chapter forms the management case for the cycle corridors.

This section sets out:

- evidence of similar projects;
- programme and project dependencies
- the governance structure (management framework);
- the scheme / project scheduling (i.e. the development of the project programme, and the process for monitoring progress against the milestones within the programme, the assurance and approvals plan);
- the stakeholder management process (how stakeholders have been identified, and their influence on the project managed);
- Project reporting
- the risk management process; and
- how the benefits set out in the economic case will be monitored and realised.

6.2 EVIDENCE OF SIMILAR PROJECTS

6.2.1. The delivery of the proposed interventions will build upon experience gained on a number of highway and transport schemes delivered by the authorities which make up the SED City Region (BCP Council and Dorset Council) in recent times.

6.2.2. A selection of key schemes has been listed in Table 6-1, summarising the scope of works, capital costs, duration and form of contract. Opportunities will be taken, wherever possible, to improve delivery processes, through acting upon lessons learnt and a continuous improvement process of feedback.

Table 6-1 – Key Local Schemes

No.	Contract	Description	Works Date	Form of Contract	Approximate Value	Delivered by?	Project Delivered Successfully?
1	Twin Sails Bridge	Construction of a new twin bascule lifting bridge over the Back Water Channel	April 2010 to April 2012	NEC Option C	£20,000,000	BCP Council	Yes
2	Townside Access	Major access improvements to the Port of Poole and new development sites, improved pedestrian/cycle provision and place-making	October 2018 to December 2019	Competitive Tender & In-House Contractor	£8,000,000	BCP Council	On-going
3	A338 / Blackwater Improvements	Part of £45M of LEP 'BIG Programme' works. Major road works - A338 slip road onto the at Blackwater Junction extension, additional carriageway added	2018 to June 2019	TBC	£8,000,000	BCP Council & Dorset Council	Yes
4	Poole Bridge Approach Spans	Design construction and replacement of approach spans, abutments and supporting piles	September 2016 to December 2017	NEC Option A	£8,000,000	BCP Council	Yes
5	Canford Main Bridge Refurbishment	Repairs to 200 year old stone bridge and provision of a new footbridge	March 2008 to March 2009	NEC Option C	£2,500,000	BCP Council	Yes
6	Castle Lane West Pedestrian and Cycling Scheme	Showcase walking and cycling project. 2km of continental style segregated cycle facilities, enhanced public transport facilities, remodelled signalised junction, side road improvements and reconstruction of main carriageway and footways.	August 2014 – June 2015	Competitive Tender (NEC Option B)	£1,500,000	BCP Council	Yes
7	Royal Bournemouth Hospital Bus Hub	Created dedicated space with new shelters, an improved waiting area and 'real time' passenger information.	September 2013 – February 2014	Competitive Tender (NEC Option B)	£700,000	BCP Council	Yes
8	Gravel Hill Improvements	Bank stabilisation, improved pedestrian facilities and culvert refurbishment	July to December 2016	NEC Option A	£3,500,000	BCP Council	Yes
9	Highway Maintenance	Annual programme of structural maintenance schemes	On-going	In-House Contractor	£1,000,000	BCP Council	On-going
10	Hamworthy Park Footbridge Rail Crossing	Construction of a footbridge over the Hamworthy freight railway line	July 2015 to December 2015	NEC Option A	£781,000	BCP Council	Yes
11	Ringwood Road – Pedestrian and Cycling Scheme	High quality off-carriageway leisure / commuter route.	November 2012 – April 2013	Term Service Contract	£450,000	BCP Council	Yes, this scheme was shortlisted for a South West ICE
12	Bournemouth Travel Interchange	Remodelling of Travel Interchange providing improved and more accessible bus, taxi and cycling facilities.	January 2015 – September 2015	Competitive Tender (NEC Option B)	£1,200,000	BCP Council	Yes
13	Hatch Pond Signal Junction Improvement	Design and refurbishment of large, signalised junction and improvement of pedestrian facilities	February to May 2016	In-House Contractor	£450,000	BCP Council	Yes
14	LSTF (Large), LSTF (Small) and Better Bus Area Fund	Sustainable travel improvements across Bournemouth, Poole and Christchurch, including enhanced local bus, rail, walking and cycling alternatives through a combination of targeted infrastructure, service and operational improvements.	July 2012 to March 2016	ECI NEC	£27,000,000	BCP Council and Dorset Council	Yes
15	A338 Spur Road Maintenance	Re-construction of 9km of dual carriageway	Sept 2015 to May 2016	ECI NEC	£22m	Dorset Council	Yes - on time and under budget
16	Weymouth Relief Road	Construction of new 7 km highway with park and ride site. Also improvements to existing A353 highway on new alignment	2009- 2011	ECI NEC	£85m	Dorset Council	Yes
17	Weymouth Transport Package	Traffic Management improvements	2010- 2011	NEC	£10m	Dorset Council	Yes
18	Chapel Gate	Reconstruction of the existing roundabout	Aug 2016 -Dec 2017	ECI / NEC	£2.8m	Dorset Council	Yes

6.3 PROGRAMME / PROJECT DEPENDENCIES

6.3.1. The TCF programme is dependent upon a number of activities and is subject to risks (as set out in the Risk Register). A detailed project programme is available in Appendix N with a indicative programme for each corridor from feasibility design to construction of all corridor sections is demonstrated in the table below:

Cycle Corridor	Commencement of Feasibility Design	Target Construction Date
Cycle Corridor C1	September 2020	December 2022
Cycle Corridor C2	June 2020	March 2023
Cycle Corridor C3	July 2020	September 2022
Cycle Corridor C5	July 2020	July 2022

6.3.2. A list of key programme risks and mitigations is set out in section 6.11.

6.4 GOVERNANCE, ORGANISATIONAL STRUCTURE & ROLES

OVERVIEW OF DELIVERABILITY

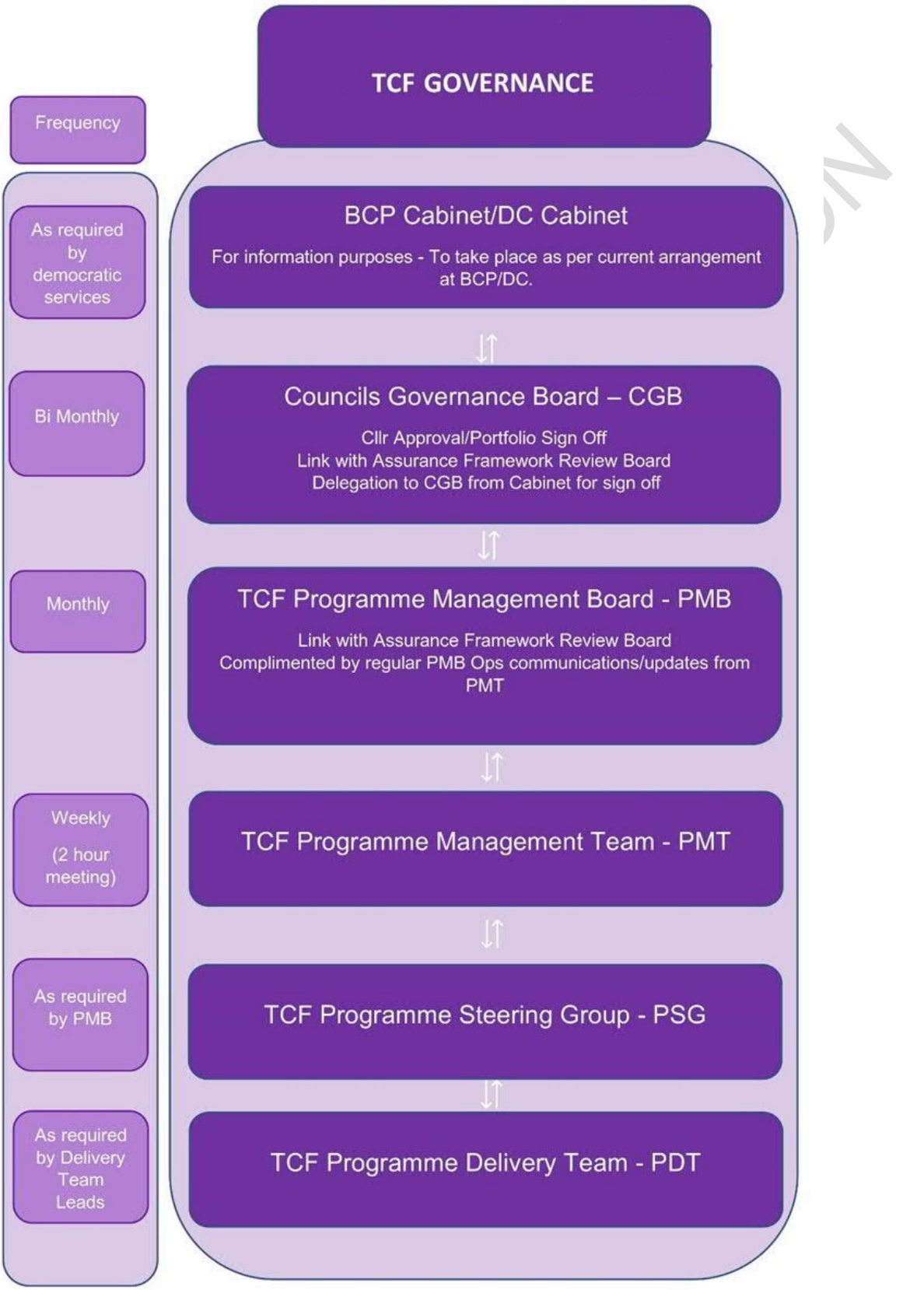
6.4.1. BCP Council is acting as lead authority partner for this programme, but both BCP Council and Dorset Council are committed to combining resources to effectively design, manage and deliver the programme packages. This will include an overall TCF programme manager and a delivery board comprising both BCP Council and Dorset Council officers, technical advisors and appointed contractors.

6.4.2. The implementation of the programme will benefit from the well-established joint governance and delivery arrangements which have resulted in the successful development and implementation of numerous cross-boundary schemes (some of which are highlighted in the table above) through joint Local Transport Plan working since 2006.

6.4.3. The remainder of this section discusses the sound management processes in place to deliver the programme effectively and efficiently demonstrating that there will be robust procedures in place for post-implementation monitoring.

GOVERNANCE ARRANGEMENTS

6.4.4. The Local Assurance framework which has been approved by DfT sets out a governance structure to oversee the implementation of the TCF programme. This structure is set out in Figure 6-1 below.


TCF GOVERNANCE
Frequency
As required by democratic services
BCP Cabinet/DC Cabinet
For information purposes - To take place as per current arrangement at BCP/DC.
Bi Monthly
Councils Governance Board – CGB
Cllr Approval/Portfolio Sign Off
Link with Assurance Framework Review Board
Delegation to CGB from Cabinet for sign off
Monthly
TCF Programme Management Board - PMB
Link with Assurance Framework Review Board
Complimented by regular PMB Ops communications/updates from PMT
Weekly
(2 hour meeting)
TCF Programme Management Team - PMT
As required by PMB
TCF Programme Steering Group - PSG
As required by Delivery Team Leads
TCF Programme Delivery Team - PDT

BCP & DORSET COUNCIL CABINET

6.4.5. The BCP Council and Dorset Council Cabinet will continue to meet as required by democratic services. They will be kept updated on the progress of the TCF programme for information purposes only with powers delegated to the Councils Governance Board in relation to financial spend sign off. Information papers will be prepared for these meetings and TRO decisions will continue to be taken to cabinet for approval.

COUNCILS GOVERNANCE BOARD

6.4.6. The TCF Councils Governance Board (CGB) attended by Cabinet Members will meet bi-monthly to approve programme spend and measures planned for TCF programme delivery. Additional meetings will be held during the consultation process and during the delivery of the TCF programme as required/requested by Cabinet Members.

PROGRAMME MANAGEMENT BOARD

6.4.7. The Programme Management Board (PMB) will provide oversight, programme leadership, gateway reviews and challenge the TCF Programme Manager drawing on advice provided to the PMB by the Programme Steering Group.

6.4.8. The PMB will make formal recommendations to the CGB on spend and progress and provides reports to ensure Local Assurance during the delivery of the TCF programme.

6.4.9. The PMB will meet on a monthly basis. The PMB will be complimented by regular updates from Programme Management Team.

PROGRAMME MANAGEMENT TEAM

6.4.10. The Programme Management Team (PMT) will provide a regular coordinating role for the delivery of the TCF programme. The team is made up of officers and consultants providing direct support to delivering the TCF programme. The PMT will provide feedback and updates to the Programme Manager who will then feed into the PMB and CGB.

PROGRAMME STEERING GROUP

6.4.11. The Programme Steering Group (PSG) will include representatives of key stakeholders and delivery partners, plus a wider reference group. The PSG has been formally established and numerous technical groups are meeting to inform numerous programme workstreams.

6.4.12. The PSG will provide advice to the PMB and will guide project development and provide technical oversight on TCF programme and specific project issues. It will also contribute to the identification and management of risk and programme reporting. The Programme Manger will provide reports to the PSG.

TCF PROGRAMME MANAGER

6.4.13. The Programme Manager, who will have experience of similar programme delivery, will have a key role to play to deliver the TCF programme. This will ensure co-ordination between programme/ project delivery teams, the PSG and PMB. The overall role of the Programme Manager will be to run the programme on a day to day basis and will be

accountable to the PSG and report to the PMB on behalf of the PSG. Key responsibilities to include:

- Ensuring the programme delivery meets the TCF objectives through engagement with programme delivery group;
- Planning and monitor the sub-programmes/projects, ensuring that delivery milestones are met;
- Providing progress and financial reporting to the PSG and PMB,
- Receive and act on feedback from PSG and PMB;
- Make recommendations to the PSG and PMB;
- Manage and mitigate risk;
- Issuing works packages / orders to the relevant teams;
- Procuring consultants and contractors with support from skilled staff from within the programme delivery team
- Liaising with external bodies to minimise potential conflicts; and
- Providing periodic progress reports to the PMB and to the DfT as part of the Local Assurance Framework requirements such as quarterly updates.

PROGRAMME DELIVERY TEAM

6.4.14. The proposed resource structure for this team as set out above will be delivered through full-time and part-time roles utilising existing local government roles in BCP Council and Dorset Council.

6.4.15. The PDT will be supported by consultants WSP through the existing frameworks as described in the Commercial Case.

6.4.16. The principal focus of the delivery arrangements will be to make the most effective and efficient use of joint resources between BCP Council and Dorset Council. Due to the nature of the programme, with many different components, and resources across two authorities, co-ordination of the various delivery elements will be particularly important.

6.4.17. Corridor and design delivery leads have been identified based around required skills groups to deliver the TCF programme. The Corridor team leads will have overall responsibility for co-ordinating the design and delivery teams reporting to, and working closely with, the Programme Manager. Key responsibilities will include:

- Notifying the Programme Manager of changes and problems to the TCF programme scheme designs or programmes that may have an impact of costs and / or timescales;
- Identifying risks and opportunities within the sub-streams;
- Overseeing delivery of the sub-workstreams to standard and timescales; and
- Arranged PDT meetings on a weekly basis.

6.4.18. Nominated Officers will have responsibility for leading on design and delivery of tasks under each corridor and theme, reporting to the Corridor and or design lead.

6.4.19. The PDT resources will consist of existing officers across BCP Council and Dorset Council with specific positions appointed. The PDT will have the support of other officers and partnering consultants to fill skills gaps or resource shortages.

6.4.20. Key delivery partners will support relevant design and delivery teams, making use of their unique skills, knowledge and influence. BCP Council and Dorset Council will seek to maximise the added value from partners across all sectors. The delivery of various measures within the programme will be carried out in full consultation with relevant bodies and the local community. This will help to ensure political and public acceptability of the proposals and minimise any risk of associated delay and disruption.

DELIVERY PARTNERS

6.4.21. The delivery of the cycle corridors will build upon the excellent record of collaborative joint working between the authorities and the productive relationships with key delivery partners, as demonstrated in the joint Local Transport Plan, LSTF and the Bournemouth International Growth (BIG) programme. Key partners will add value to the programme and are an integral part of the programme team. Delivery Partners will also be included within the membership of the Programme Steering Group, as detailed above.

LOCAL ASSURANCE FRAMEWORK

6.4.22. The SED TCF Local Assurance Framework has been completed and approved by DfT. The SED TCF Assurance Framework sets out the policies, rules and processes to be applied throughout the TCF programme. The framework provides details of roles and responsibilities, accounting arrangements, and governance and financial management.

6.5 PROGRAMME / PROJECT PLAN

6.5.1. Project plans for the cycle corridors are set out in Section 6.3 above which identifies key project tasks and their duration and the interdependencies between each task. For certain elements of the programme we have built in tolerance / contingency to account for risks identified in the programme risk register.

6.5.2. Each section(s) of the cycle corridors based on the delivery programme will have its own FBC, as set out in the local assurance framework, including a project plan that will then feed into the overarching high-level master programme. They will consist of live documents, with progress on planned task completion being monitored against actual progress by the Programme/Project Managers. The Project Managers will report progress against plan to the Programme Management Team and subsequently to the Programme Management Board.

6.6 ASSURANCE & APPROVALS PLAN

6.6.1. Responsibility for the assurance of subsequent Final Business Cases based on the delivery programme rests with PMB and CGB to approve supported by independent review carried out by Dorset Council, who will assess the technical content of business cases against appropriate business case, transport appraisal guidance and the SED TCF Local

Assurance Framework to confirm that the scheme represents value for money to the taxpayer. This approach has been agreed with DfT as part of the Local Assurance Framework.

6.7 COMMUNICATIONS AND STAKEHOLDER MANAGEMENT

STAKEHOLDER MANAGEMENT

6.7.1. Since the publishing of the SOBC the authorities have produced a three year communications plan which outlines and identifies key stakeholders which will be engaged as part of the programme. As this is a quick-win scheme there has been consultation prior to the formal engagement or consultation planned on the OBC's.

6.7.2. Throughout the detailed design and construction of the cycle corridors there will be detailed stakeholder engagement with the following stakeholder groups:

- Ward Members;
- Town & Parish Councillors;
- Business Improvement Districts (BIDs);
- Public Transport Operators;
- Local businesses;
- Local Schools;
- Local residents;
- Community Groups (including active travel groups); and
- Emergency Services.

6.7.3. The authorities have involved key stakeholders and attracted their support from an early stage in the development of the programme, with feedback having informed the SOBC content and the development of detailed design proposals for the cycle corridors. This has included extensive stakeholder outreach through a series of workshops and presentations that took place alongside public online engagement.

6.7.4. There is a detailed plan of engagement on the corridors themselves followed by detailed public consultation on proposals for each section of the cycle corridors.

6.7.5. Transforming Travel email addresses (transformingtravel@bcpcouncil.gov.uk and transformingtravel@dorsetcouncil.gov.uk) have been established to manage public and stakeholder enquiries and to send out regular updates.

RESOURCES AND COMMUNICATIONS PROTOCOLS

6.7.6. The communications activities and protocols for the cycle corridors are resourced and managed by BCP and Dorset Council communications teams. Protocol has been established for approving communication and marketing outputs as required, to ensure deadlines are met and optimum media and promotional opportunities gained. The

'Transforming Travel' brand (and guidelines) have been developed to promote the aims and ambitions of the programme and to provide a visual connection to sustainable transport and the region's green spaces and coastline. www.transformingtravel.info has been established and an animation video created. The communications team meets weekly with programme managers to keep abreast of programme developments and to prepare appropriate communications activities. A monthly communications plan supports all of the programme's activities, initiatives and schemes.

6.7.7. A range of communications tactics, collaterals and channels are used to promote the programme including press releases, media relations, media briefings, blogs, social media campaigns (organic and paid for) using Twitter, Facebook, LinkedIn and Instagram, newsletters, leaflets, advertisements, animations, videos, banners, events, competitions, maps and infographics.

NOTICE OF WORKS

6.7.8. As part of the delivery of the cycle corridors notice of works will be provided by BCP & Dorset using a range of marketing tactics and channels including media relations, press releases, website updates, social media campaigns (organic and paid for), newsletters, stakeholder emails and videos. Communications plans are tailored according to the needs and scope of individual schemes but in general follow this format:

- Strategic announcement outlining scheme plans and start dates; letters to local residents and businesses: 4-8 weeks ahead of start of construction;
- Operational announcement detailing construction plans and traffic management; letters to local residents and businesses; TRO advertised: three weeks prior to start of construction;
- Start of works announcement: day one of construction; and
- Following the start of works, updates on the progress of works are regularly communicated.

6.8 PROGRAMME / PROJECT REPORTING

6.8.1. The SED City Region has an effective and proven reporting system that will be put in place for this scheme, based on that used in previous schemes and in accordance with the Local Assurance Framework.

6.8.2. As part of this programme and agreed with the DfT there will be quarterly progress reports submitted alongside monthly reports to the CGB and reports to both BCP and Dorset Councils every quarter in line with the Local Assurance Framework.

6.9 KEY ISSUES FOR IMPLEMENTATION

6.9.1. The risk register for the cycle corridors is part of a combined programme risk register. This is a live document and has been reviewed throughout the design stage of this project as part of our project team meetings. The key risks for the cycle corridors have been identified Section 6.11.

6.9.2. All key issues for implementation for each section of the cycle corridors will be assessed and mitigated through close liaison of key stakeholders including BCP Council, Dorset Council and key contractors. At a programme level the delivery of the schemes that make up the cycle corridors are monitored and the delivery programme adjusted accordingly.

6.10 CONTRACT MANAGEMENT

6.10.1. Each contract outlined in the Commercial case defines specific roles in accordance with the terms and conditions of the contract. These roles will be fulfilled by both officers from Dorset and BCP Council and the contractor in question. Contract management communication will be undertaken in accordance with the conditions of contract including the raising of early warnings to identify potential impact on cost and programme. The contract management of each procurement route is summarised in the Table below.

Council	Route to Market	Contract management
BCP	Term service contract	Plan in place as part of contract works information
Dorset	Highways Term Service Contract	Plan in place as part of contract works information
BCP	GEN4-2 and GEN4-3 Civil Engineering	Plans will be written as part of works information for each contract
BCP	BCP Neighbourhood services	Existing arrangements in place but would need to be documented
Dorset	Dorset Highways Network operation team	Existing arrangements in place but would need to be documented

6.11 RISK MANAGEMENT STRATEGY

6.11.1. The risk register is a live document and has been reviewed throughout the design stage of this project as part of our project team meetings and scrutinised by Programme Management and Council Governance Boards The key risks categories for the delivery of the cycle corridors have been identified in the table below and managed by appropriate individuals from the Programme Management Team.

Table 6-2 – Risk Category Table

Risk Category	Risk Owner
Commercial	PMT – Programme Manager and Design Leads
Consents / Order	PMT - Programme Manager and Design Leads
Construction Delivery	PMT - Design Leads
Design Delivery	PMT - Design Leads
Ecological	PMT – Design Lead and key specialist leads at BCP and DC
Financial	PMT – Programme Manager and BCP and DC finance
Governance	PMT – Governance lead
Health and Safety	PMT – Programme Manager
Information	PMT – Design and Governance leads
Legal	PMT – Programme Manager, Governance Lead and legal support
Operational	PMT and PDT leads
Reputational	PMT – Programme Manager
Stakeholder	PMB and PMT – Communications leads
Strategy	CGB and PMB
Technology	PMT and PDT leads

6.12 BENEFITS REALISATION PLAN

6.12.1. A Benefits Realisation Plan will be prepared for the approved TCF programme of schemes. The plan is designed to enable benefits, and disbenefits, that are expected to be derived from the projects, to be planned for, managed, tracked and realised. The plan will help demonstrate whether the schemes objectives identified in the Strategic Case are able to generate the desired 'measures for success'. This can be assessed by tracking and realising the desired outputs and outcomes of the projects.

6.12.2. The Programme Manager will develop the Benefits Realisation Plan, intrinsically linked to the Monitoring and Evaluation Plan set out below.

6.12.3. The benefits realisation plan will:

- Summarise the scheme objectives and associated outcomes;
- Outline the benefit measurement methods and associated data requirements;
- Set out a Benefits Register; and
- Outline the responsibilities and resources required to oversee the plan.

6.12.4. The Benefits Realisation Plan will be owned by the SRO and reviewed as part of the Project Board meetings to ensure that the benefits remain aligned with the study objectives and that appropriate monitoring processes are adopted.

6.12.5. A Table summarising the Benefits Register is presented below.

Table 6-3 - Benefits Register

Benefits	Benefit Recipient	Target	Data Requirement	Owner
Supporting the housing delivery being proposed as part of the new Local Plan	UK Public	Providing 29,400 houses by between 2016 to 2026	Obtain housing build out rates from the respective planning teams, focusing on sites along the corridor.	Programme Manager
Support the Local Economy and Boost Productivity	UK Public	Output per hour (productivity) in Dorset Council is £4.80 lower than in the UK on average and in Bournemouth & Poole areas of BCP Council it is £3.90 per hour lower. At the SOBC stage it was identified that filling the output gap is expected to raise this by £2.5bn across the whole of Dorset. Transport was identified by local businesses as a key element in achieving this. This assessment would highlight this impact, though aware that there are other factors impacting this parameter, which are outside the purview of the scheme.	GVA output in Travel to Work area Delivery of commercial development – consents and construction levels by 2028 for South East Dorset City region provided by the BCP Council and Dorset Council.	Programme Manager
Improve bus usage due to improved service offer, smart ticketing and upgrades to bus stops and shelters	Private sector partners	Increase bus patronage from 2019 levels	Public transport data to be collected from the operators, who would provide the data collected through smart ticketing. If only origin information is available, primary bus stop user surveys will need to be undertaken.	Programme Manager
Increased uptake of cycling on S and C corridors	UK Public	As identified in the SOBC stage, BCP aims to double cycle mode share in main urban area, leading to 10% increase in conurbation.	Classified volume count information to be collected using manual count surveys, so as to include cyclists and pedestrians.	Programme Manager

Journey quality benefits as a result of improved ambience for pedestrians and cyclists	UK Public	No reported issues along the corridor and accident impacts	Number of signages and wayfinding totems, and associated accidents (KSI and minor) along the corridors	Programme Manager

6.13 MONITORING AND EVALUATION

6.13.1. Monitoring and evaluation of benefits is required to establish the extent to which the scheme meets the objectives and the forecast benefits described in the Economic Case section of the SOBC. To be fully effective, plans for monitoring and evaluation should form part of the early development of the scheme's business case and also be a continuous process within the project. The HM Treasury Magenta Book provides the following definition of Monitoring and Evaluation[25]

- Monitoring – seeks to check progress against planned targets and can be defined as the formal reporting and evidencing that spend and outputs are successfully delivered and milestones met; and
- Evaluation – is the assessment of the initiatives effectiveness and efficiency during and after implementation. It seeks to measure the causal effect of the scheme on planned outcomes and impacts and assessing whether the anticipated benefits have been realised, how this was achieved, or if not, why not.

6.13.2. In March 2013, the DfT published a Monitoring and Evaluation Strategy, setting out a framework for enhancing the generation of good quality monitoring and evaluation evidence, which would provide greater accountability and a stronger evidence base for future decision making and communication activities. The strategy outlines that good quality monitoring and evaluation evidence is important for helping make and communicate decisions about where best to target public spending, demonstrating the value for money and benefits which are generated by investment in transport, and learning about how to effectively design and deliver policies, programmes and communications.

6.13.3. The DfT has also published a document entitled, 'Monitoring and Evaluation Framework for Local Authority Major Schemes' (2012), designed to make the process as consistent and proportionate as possible. It also aimed to be complementary with the devolution of decision making. The document sets out three levels of monitoring and evaluation:

- Standard monitoring;
- Enhanced monitoring; and
- Fuller evaluation.

[25] The Magenta Book, HM Treasury (2011)

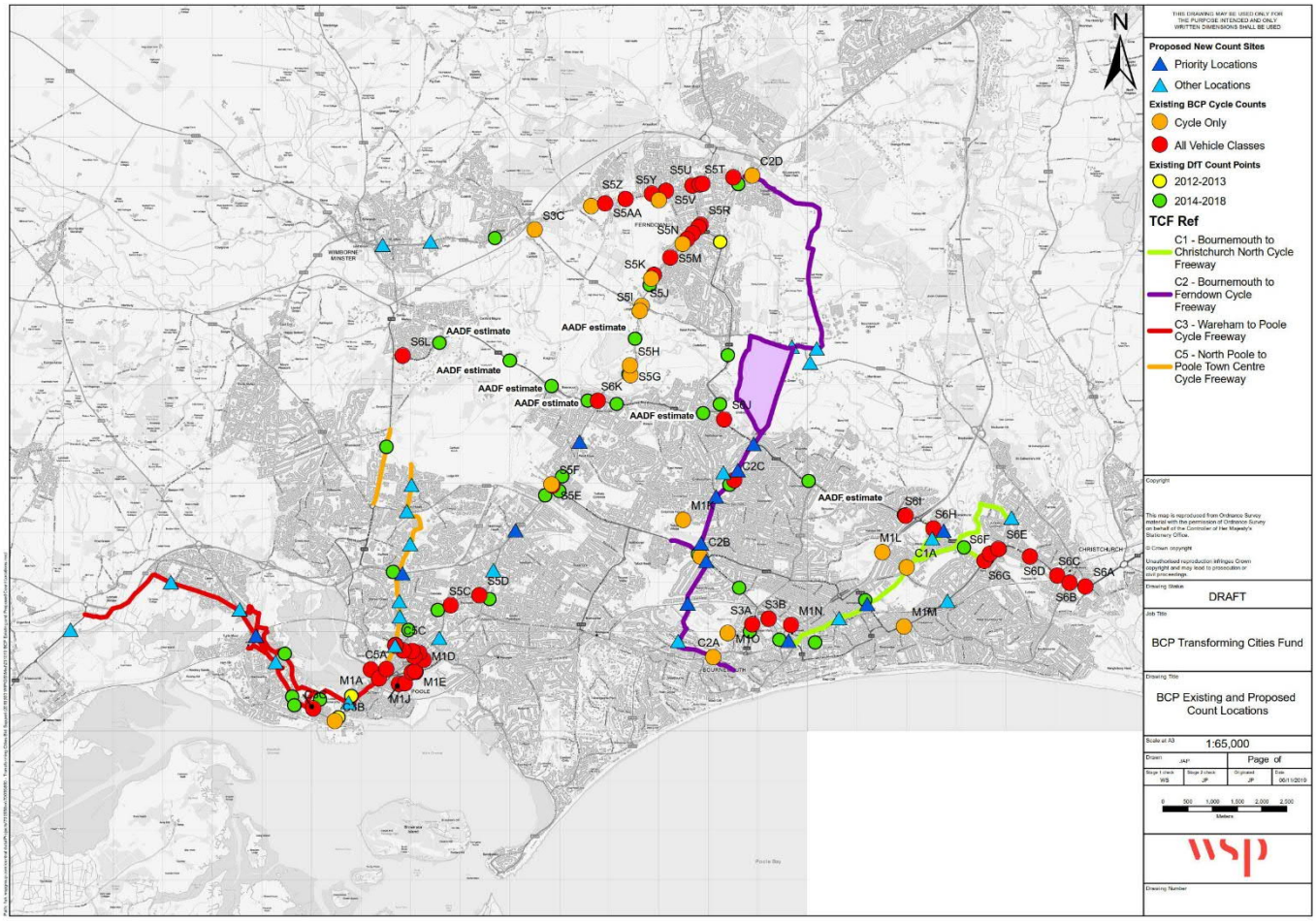
6.13.4. All schemes are required to conduct the 'standard monitoring' approach, whereas schemes costing more than £50 million are expected to follow the 'enhanced' guidance.

6.14 SCHEME EVALUATION

6.14.1. Before and after scheme monitoring will be undertaken to evaluate the effectiveness of the cycle corridors against stated objectives. Traffic and cycle count data will be collected and collated, and journey time data evaluated. Existing traffic count data as well as updated survey data will be used to establish the baseline for the scheme prior to its construction. Monitoring (data collection) will also take place at regular intervals before and after the scheme has opened at one year and five years after opening. This will allow a full before and after comparison to be made and allow judgment of whether the scheme has met its objectives.

TYPE OF EVALUATION

6.14.2. The type of evaluation method proposed to evaluate the scheme will be an 'outcome evaluation'. Outcome evaluations compare the existing situation, i.e. before the interventions have been introduced, against the situation with the interventions in place.



Any observed changes (in the metrics outlined below) are assumed to be the result of the intervention.

DATA REQUIREMENTS

6.14.3. The metrics proposed for the cycle corridors (which will be specific to the intervention for each scheme but generally follow those listed below), associated data collection requirements and frequency of data collection are as follows:

Metric	Frequency	Data
INPUTS		
Expenditure	Post Opening	Financial monitoring of project
Funding Breakdown	Post Opening	Financial monitoring of project
In kind resources provided	During delivery	Monitoring of resources delivering the project (use of project diary)
OUTPUTS		
Delivered schemes	Post Opening	Full description of implemented scheme outputs including design changes post funding approval with reasons for such changes, post scheme as built drawings of works completed
OUTCOMES		
Average daily traffic and by peak / non-peak periods	Pre and post construction, Years 1 and 5 post opening	Annual ATCs and turning counts, collected at junctions where interventions are and wider ATCs across the network
Average AM and PM peak journey time on key routes (journey time measurement)	Pre and post construction, Years 1 and 5 post opening	Journey time surveys and DfT Congestion Statistics on LA A Roads
Cycling and walking usage	Pre and post construction, Years 1 and 5 post opening	Cycle and pedestrian surveys
Accident and casualty rates	Pre and post construction, Years 1 and 5 post opening	Annual monitoring of collisions (STATS 19)
Business attraction to South East Dorset City region	Pre and post construction, Years 1 and 5 post opening	Business Demography Data (indicating new start-ups and closures) provided by the BCP Council and Dorset Council Annual Quality of Life Survey
Economic growth rate	Pre and post construction, Years 1 and 5 post opening	GVA headline figures for South East Dorset City region provided by the BCP and Dorset Councils.
Supporting Regeneration	Pre and post construction, Years 1 and 5 post opening	Monitoring report (of employment, sites delivered) IoD data and employment figures from ONS.

SOURCES OF DATA

6.14.4. The following surveys will be undertaken to support the delivery and monitoring of the cycle corridors:

- Journey times;
- Automatic Traffic Counts (ATCs);
- ANPR survey;
- Turning counts; and
- Mode share.

6.14.5. Other data will be collected by the Council on an annual basis including accidents, financial and planning data (e.g. Annual Monitoring Report).

IMPLEMENTATION

6.14.6. The monitoring and evaluation for the TCF programme will be undertaken by the Programme Manager as part of a Monitoring and Evaluation Plan.

6.14.7. Before and after TCF programme/scheme monitoring will be undertaken to evaluate the effectiveness of schemes against stated objectives. At the time of writing SED awaiting further details from DfT on the engagement with DfT to provide advice on evaluation methods, particularly in light of the COVID-19 pandemic.

6.14.8. Whilst SED await further guidance from DfT Traffic and cycle count data will be collected and collated, and journey time data evaluated. Existing traffic count data as well as updated survey data will be used to establish the baseline for the scheme prior to its construction.

6.14.9. Due to the COVID-19 pandemic additional data collection will not take place during lockdown measures. As the situation develops BCP Council and Dorset Council will decide using guidance from DfT as to when it is appropriate to resume data collection to inform additional baseline data.

6.14.10. Monitoring (data collection) will also take place at regular intervals before and after the scheme has opened at one year and five years after opening. This will allow a full before and after comparison to be made and allow judgment of whether the scheme has met its objectives.

RESPONSIBILITY AND COSTS

6.14.11. The Programme Manager is responsible for ensuring monitoring and evaluation of the cycle corridors is undertaken. Monitoring of successful delivery will be carried out through the individual project monitoring documentation, including the risk register, project programme and financial reports. The CGB will ensure that scheme monitoring is undertaken in a timely fashion and can be reported back to DfT on a quarterly basis or as required.

6.14.12. The monitoring costs will form part of existing revenue/resources within, for example Traffic Modelling and environmental teams. Further details will be provided in scheme specific FBC addendums and the M & E report including monitoring plans at specific locations.

SETTING TARGETS

6.14.13. The BCP and Dorset Council recognises the importance of setting specific indicators and targets, and accepts that the Monitoring and Evaluation Plan does not yet include these. These targets will be included in the full plan on a scheme by scheme basis. It may be possible to involve stakeholders to take ownership of some parts of the monitoring and evaluation; this will become clearer after the consultation phase.

SUMMARY OF ANALYSIS

6.14.14. The cycle corridors will be monitored during delivery through the achievement of KPIs. The KPIs will relate back to the key objectives of the fund and will comprise the following:

- Investment in new local transport infrastructure to boost productivity – job creation;
- Improve public and sustainable transport connectivity – modal shift to public and sustainable travel;
- Improve access to employment sites – journey time improvements on scheme corridors;
- Reducing carbon emissions – Air Quality and EV vehicle uptake;
- Delivering wider social and economic benefits – Increased GVA output in Travel to Work area;
- Supporting housing delivery – delivery of homes within scheme catchments;
- Improvements to air quality – improved air quality at locations close to scheme corridors.

6.14.15. The KPIs will be monitored and issued as part of a Quarterly Monitoring returns and will cover spend profile, milestones, TCF Programme and scheme progress and KPIs.

6.15 CONTINGENCY PLAN

6.15.1. If implementation is delayed, the funding profile may need to be revised which could result in updated business case submissions to the DfT, which may impact on any funding allocations. Any changes to the scheme programme and funding profile will be reported as soon as possible to the PMB and DfT as required.

6.15.2. In light of the COVID-19 pandemic there are additional considerations for the contingency plan. Lockdown measures and social distancing requirements on site may lead to delays. BCP Council, Dorset Council and any appointed contractors will be liaising constantly over changes in government advice and will factor these into the contingency plan as each cycle corridor scheme is constructed.

6.15.3. A further contingency that needs to be planned for is the risk of material shortage due to Brexit, which at time of writing is being observed in February 2021 on some materials. This could lead to delays in the delivery of building materials and aggregates. Over the delivery of the cycle corridors this will be monitored and managed accordingly with advanced orders of materials and aggregates wherever possible to meet the agreed programme.

6.16 SUMMARY

6.16.1. The management case clearly outlines strong project governance, local assurance and communications to support the delivery of the Cycle Corridors. There is a risk management strategy that has clearly identified critical scheme risks and mitigations. Following the delivery of the cycle corridors the management case has also outlined how benefits will be realised and evaluation of the impacts will take place and be reported as part of ongoing programme reporting.