April 2023

Evaluation of the Greater Cambridge Investment Fund

Local Evaluation Framework

This Local Evaluation Framework (LEF) of the Greater Cambridge City Deal was completed following the launch of the Department for Levelling Up Housing and Communities (DLUHC) National Evaluation Framework (NEF) in January 2023. The LEF was developed using information as available during February through to April 2023. As a result, the information in this document is subject to change as adjustments in project scope and budgets are regularly made to account for feedback from the Executive Board as well as economic conditions outside the GCPs control (such as inflationary impacts). Any such impacts will be taken into account throughout the gateway review assessment process in agreement with DLUHC.

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1. Introduction

1.1 This document sets out the Local Evaluation Framework for the evaluation of the Greater Cambridge Investment Fund to be undertaken and finalised by October 2024 to inform the second Gateway Review of the fund. The Framework has been developed by the Greater Cambridge Partnership (GCP[1]) in partnership with the Independent Evaluation Panel (IEP).

1.2 Greater Cambridge is one of the 'Cohort 1 Areas' covered by the National Evaluation Framework. These Areas agreed their investment fund allocation with Central Government in 2015/16, meaning the second five-year Gateway Review period runs to the end of the 2024/25 fiscal year. The Gateway Review will be framed by the Performance Indicators included in the National Evaluation Framework and repeated as an Annex to this document.

1.3 As established in the National Evaluation Framework, the IEP is to:

- support Areas in the design of evaluation research in line with the National Evaluation Framework
- oversee and guide its implementation in each Area
- review and synthesise the evidence generated into a report to inform the Gateway Review.

1.4 This Evaluation Framework contains six elements:

- an introduction to Greater Cambridge and its socio-economic context
- an overview of the Investment Fund, the interventions that have been approved and are the focus of this Evaluation Framework, and the evaluation category (impact, progress plus or progress) for each intervention
- the approach to evaluation for those interventions that will be subject to progress evaluation, with a focus on how this will be realised practically in Greater Cambridge
- the approach to evaluation for those interventions that will be subject to impact evaluation, including a logic model, the analytical methods to be applied and data requirements (including any primary research and baseline research requirements)
- the approach to evaluation for those interventions that will be subject to progress plus evaluation, including a logic model, the analytical methods to be applied and data requirements (including any primary research and baseline research requirements)

[1] See: https://www.greatercambridge.org.uk/

- the approach to the complementary evaluation workstreams in Greater Cambridge covering process evaluation, capacity development and partnership working, and contextual economic forecasting
- an implementation plan, setting out the integrated timetable for evaluation activity.

1.5 Five supporting annexes are provided:

- Risk log
- Intended interviewees for the capacity development and partnership research
- Intervention level changes since Gateway Review 1
- Performance Indicators
- Evidence Assessment Criteria.

2. Introduction to the Area

Summary of socio-economic context

2.1 In spatial terms, Greater Cambridge approximates to the area administered by two lower tier local authority districts (LADs): Cambridge and South Cambridgeshire. It has a total population of over 300,000 people, and an economy with GVA of around £.10.7bn. A snapshot of current socio-economic data is provided in the table below.

Table 2-1: Key socio-economic data

	Year	Greater Cambridge	East of England	UK
GVA (balanced), £m	*2020*	10,733	163,602	1,949,605
GVA per job, £k/job	*2020*	Cambridge: 52,530 South Cambs: 57,993	53,737	58,054
Total population	*2021*	307,716	6,348,096	67,026,292
Working age population as % total population	*2021*	67%	62%	63%
Business enterprises per 10,000 working age population	*2021*	646	697	656
Jobs, thousand	*2021*	216,000	3,282,000	35,852,000
Unemployment rate aged 16-64	*2021*	3.6%	3.9%	4.5%
% with NVQ4+ aged 16-64	*2021*	63.2%	39.6%	43.5%
% with no qualifications (NVQ) aged 16-64	*2021*	3.3%	5.8%	6.8%

Source: ONS, NOMIS Annual Population Survey, NOMIS UK business counts, NOMIS population estimates projections, NOMIS job density

2.2 For the last two decades, it has been characterised by rapid growth on many different indicators. Data from the Census point to sustained and rapid population growth across Greater Cambridge. Between 2001 and 2021, the population of Cambridge (LAD) grew by 33.8% while South Cambridgeshire (LAD) saw an increase of 24.5%. In parallel, there has been significant housing development and overall Local Plan targets have been exceeded. Data published by Cambridge Ahead[2] – based on MHCLG/DLUHC Live Tables and Local Plans – suggest that over the decade from 2012:

- Cambridge surpassed its Local Plan requirement – delivering an average of 811 new homes per annum against a plan requirement of 700 (average delivery rate)

[2] Cambridge Ahead – Housing Dashboard, January 2023

- South Cambridgeshire delivered average of 885 new homes per annum against a plan requirement of 975 (average delivery rate)

- collectively the two districts delivered an average of 1,695 new homes per annum against a collective plan requirement of 1,675.

2.3 Although there is much debate within Greater Cambridge about the appropriateness of different measures and the accuracy of different data sources, the pace of employment growth appears to have exceeded the rate of growth in net new dwellings. In the period to 2020/21, CBR estimates employment growth of 4.1% per annum over the preceding three years and 5.9% over the last six. Corresponding figures from ONS (through BRES) are considered to be an underestimate and are reported as 3.4% per annum and 3.1% per annum respectively. Over both periods, the stock of net new dwellings has increased by about 1.4% per annum, with implications for the local housing market and affordability.

2.4 Greater Cambridge is one of the most important sub-regional economies in the UK. It has a substantial concentration of knowledge-based assets. This includes the University of Cambridge and its associated colleges, departments and institutes, but also major research organisations and a strong cadre of research-intensive businesses – ranging from the research facilities/labs linked to multinational companies (e.g. Astra Zeneca, Arm, Microsoft); to now well-established 'Cambridge companies' (e.g. Cambridge Consultants, Amgen); and to smaller, venture-backed companies, some of which are growing quickly (e.g. Owlstone Medical, Qkine, etc.). Key hubs within Greater Cambridge include sites in or close to the city (e.g., Cambridge Science Park to the north and Cambridge Biomedical Campus, around Addenbrooke's Hospital, to the south), alongside major sites which are well into South Cambridgeshire (e.g.. Babraham Research Campus and Wellcome Genome Campus (Hinxton)). However, defined, Greater Cambridge's knowledge economy has grown (and is growing) rapidly; and as a cluster context, there has been a premium on adjacency and more general proximity.

2.5 In parallel, Cambridge has grown as a city within a wider Greater Cambridge context. There have been (and will be) many major housing schemes – some through new settlements (e.g., Cambourne, Northstowe, Bourn Airfield), others as major *de facto* urban extensions (e.g., Eddington to the west of central Cambridge, Trumpington Meadows to the south, Marleigh to the east). Cambridge '*as a city*' is adjusting and adapting. Although there have been some major investments in infrastructure over the last decade – notably the Cambridgeshire Guided Busway, significant improvements to the A14 and the new railway station at Cambridge North – the pressures linked to congestion, travel and traffic continue to be acute.

2.6 It is also important to note that alongside the growth narrative, Greater Cambridge is characterised by high and rising levels of inequality; indeed, Centre for Cities has identified Cambridge as the UK's most unequal city. Many local areas that are still characterised by high levels of deprivation. In Cambridge itself, areas to the east (e.g., Abbey ward) and north (e.g., King's Hedges ward) are characterised by high levels of deprivation. Cambridge has been identified as a 'cold spot' in terms of social mobility. In response, Cambridge City Council's vision

is of a united city, '*One Cambridge - Fair for All*', in which economic dynamism and prosperity are combined with social justice and equality.

Policy context

Greater Cambridge City Deal

2.7 The devolved Investment Fund covered by this evaluation forms a key part of the Greater Cambridge City Deal, which was approved in June 2014 between the UK Government and Greater Cambridge (represented by the three local authorities that serve the area, the University of Cambridge and local business as initially represented by the Greater Cambridge and Greater Peterborough Local Enterprise Partnership).

2.8 Over its lifetime, by investing £1bn of national and local public sector funding in housing, transport infrastructure and skills – it was estimated that the Greater Cambridge City Deal would[3]:

- create an infrastructure Investment Fund worth a total of £500m, with an initial £100m over the first five years and then a further £400m over the next 10-15 years (the Investment Fund is the focus of this LEF)
- support an additional overall increase of around 44,000 jobs in the City Region (including the delivery of 420 new Apprenticeships to young people)
- accelerate the delivery of around 33,500 planned homes, and enable the delivery of 1,000 extra new homes on rural exception sites
- enable an estimated £4bn of private sector investment in the Greater Cambridge area
- create a governance arrangement for joint decision making between the councils.

2.9 The City Deal and the Fund are based on a partnership between the three local authorities; Cambridgeshire County Council, and two of the district authorities within it, namely Cambridge City Council and South Cambridgeshire District Council. The districts of Cambridge and South Cambridgeshire map onto the functional economic area referred to in this report as Greater Cambridge encompassing the whole city and its commuter hinterland. The GCP was established by the authorities to deliver the City Deal and Investment Fund.

Greater Cambridge policy priorities

2.10 Although a **Local Economic Recovery Strategy** was produced by the Cambridgeshire and Peterborough Combined Authority (CPCA) at the height of the pandemic, the key overarching economic statement at the early stage of the Gateway Review 2 period was the Combined Authority's **Local Industrial Strategy for Cambridgeshire and Peterborough** from 2019 (even

[3] *Greater Cambridge City Deal*

though its links back to the Industrial Strategy White Paper are now dated and its commitment to the Oxford-Cambridge Arc has varied over time). The LIS sets out three overarching priorities for Cambridgeshire and Peterborough: improve the long-term capacity for growth in Greater Cambridge by supporting the foundations of productivity; increase sustainability and broaden the base of local economic growth; and expand and build upon the clusters and networks that have enabled Cambridge to become a global leader in innovative growth. Underneath these high-level priorities were more specific ambitions linked to key sectors/clusters. The LIS also identified a wide range of actions under the five foundations of productivity.

2.11 Subsequently, in 2022 an **Economic Growth Strategy for Cambridgeshire and Peterborough** was developed by the CPCA. This established a vision that:

"Cambridgeshire and Peterborough is the place where unique business, natural and research assets tackle world problems whilst creating good jobs and healthy lives for all our residents in all our places. We are globally leading and competitive, and also more equal and sustainable."

2.12 This vision was underpinned by a set of objectives to:

- reduce inequality, in terms of health, wealth and opportunity
- ensure transition to a green/low carbon economy
- deliver good quality jobs in high-performing businesses
- deliver better quality skills via a world-class skills system
- accelerate local placemaking and renewal
- accelerate business growth.

2.13 Within this context, in relation to transport, CPCA has strategic transport powers and is the Local Transport Authority for the Cambridgeshire and Peterborough area. In 2022, it commenced the refresh of the **Local Transport and Connectivity Plan (LTCP)**. When completed, this will be the region's statutory transport plan. The draft strategy broadly set out a vision for transport to support a more prosperous, fairer, more accessible, better connected, less polluting and lower carbon transport network, which also delivered better public health. The draft LTCP aims to make public transport, and cycling and walking infrastructure better, reaching more people and making it a more attractive alternative to the car. The strategy aims to cut the miles driven on roads in the region by 15%.

2.14 A raft of other strategies have been – or are being – developed for the wider area, including:

- Employment and Skills Strategy (2022) – focusing on whole system leadership across the statutory education, post-16 skills, higher education, and employment sectors
- Cambridgeshire and Peterborough Digital Connectivity Infrastructure Strategy 2021-2025

2.15 At a more local level, various **planning statements** are key. Cambridge City Council and South Cambridgeshire District Councils currently have separate Local Plans – although the two councils worked together to develop an evidence base with many shared elements and the level of co-operation was high throughout. The existing Local Plans were adopted in 2018. They are now being refreshed. For the next iteration, Cambridge City Council and South Cambridgeshire District Council will work together to create a joint Local Plan for the two areas (i.e., Greater Cambridge). This will ensure that there is a consistent approach to planning and building across both areas up to 2041. The plan making process is currently at an early stage, but the overarching vision is stated as follows: *we want Greater Cambridge to be a place where a big decrease in our climate impacts comes with a big increase in the quality of everyday life for all our communities.*

3. The Investment Fund

Overview of the Investment Fund

3.1 The Investment Fund covered by the evaluation is part of the Greater Cambridge City Deal. The Investment Fund is a 15-year, £500m fund that began in 2015. At the time of writing, £500m of the Fund had been committed across 26 interventions, with expenditure of approximately £118m.

Table 3-1: Investment Fund deployment at March 2023

Total number of interventions approved since Fund launch	30
…of which number of interventions completed	9 (12 by GR2)
Number of interventions approved at Gateway Review 1 report	24
…of which number of interventions completed	9
Number of interventions approved since Gateway Review 1 report	6
…of which number of interventions completed	0
Total Investment Fund resource committed since Fund launch	£500.00m
… of which total Investment Fund expenditure at Gateway Review 1	£39.10m
…and total Investment Fund expenditure to date	£117.66m

Source: GCP

3.2 Interventions supported by the Investment Fund have been approved under the City Deal Assurance Framework agreed with Government. The Assurance Framework establishes the membership, responsibilities, processes, and principles that are in place for agreeing and overseeing investments to deliver the overarching City Deal objectives. The first version of the Assurance Framework was agreed in July 2014. This was subsequently reviewed in May 2022, and it was determined that the document is still in line with up to date national Guidelines and Legislation, and ensures compliance with the Government's National Local Growth Assurance Framework (NLGAF).[4]

3.3 Interventions approved in the first Gateway Review period (i.e., the 24 noted in Table 3-1) underwent a high-level assessment in line with criteria agreed between local partners and Government within the Assurance Framework at the outset of the City Deal. This ensured that schemes which offered maximum benefits and value for money were prioritised for investment. This included the use of the DfT's Early Assessment and Sifting Tool (EAST) methodology to enable a robust prioritisation exercise. The scheme's SRO then submitted the scheme for prioritisation and review by the GCP Leadership Group (which reserves the right to decide not to

[4] The latest version of the Assurance Framework document is available here

include a scheme in the prioritisation process if key information is missing or if it is not based on a robust set of assumptions).

3.4 Subsequently, the GCP has refined this approach through the development of a Future Investment Strategy (FIS), first drafted in March 2018 and updated in March 2019 (including evidence taken from the 2018 Cambridgeshire and Peterborough Independent Economic Review), and December 2020 (particularly in the light of Covid-19 and reflecting on the City Deal's priorities following the first Gateway Review of the Investment Fund).

3.5 The FIS includes a series of strategic prioritisation criteria, designed to ensure that schemes are prioritised which have the greatest potential to deliver the City Deal's objectives, and to capture new and emerging strategic priorities. For example, in December 2020, the FIS strategic prioritisation criteria were updated to emphasise the importance of environmental objectives. The FIS will be reviewed again in Autumn 2023 to reflect the current economic landscape. Full details of the assessment and decision-making criteria are set out in the Assurance Framework.[5]

3.6 Within this context, the core driving principle of the Greater Cambridge City Deal, of which the Investment Fund is a core part, is to unleash the potential of the 'Cambridge Phenomenon' by relieving the transport, housing and skills constraints that currently prevent it from driving growth as effectively as it could do. Investment is needed to deliver fast, reliable and affordable ways of travelling between employment and housing hubs, and to deliver the right number, types and tenures of housing, in the right places and well-connected to employment centres. This is crucial so that workers can find the housing they need at a price they can afford, can get to work to take up the jobs essential to the economic success of Greater Cambridge and the UK, and can benefit from the high quality of life offer which is essential to maintaining and enhancing Cambridge's competitive position internationally as a place to do business, invest and grow.

3.7 In response to this agenda, the Investment Fund focuses primarily (though not exclusively) on enhancing transport infrastructure, through a suite of interventions designed to address blockages to growth resulting from congestion and the impacts this has on the economy. The interventions comprise a mix of schemes intended to encourage people out of their cars and onto other modes of transport, with a particular focus on active and sustainable travel modes, including walking, cycling, and bus usage. This represents a long-term package of complementary interventions, with the full impacts expected over the medium-to-long-term.

3.8 This principal focus on transforming transport infrastructure has been consistent across both the Gateway Review 1 and Gateway Review 2 period. This includes schemes focused on providing residents and workers with improved means to travel into and around Greater Cambridge, by public transport or cycling, to prevent its growing pains from limiting Greater Cambridge's growth potential. The strategy includes enhanced 'green' transport routes into and through the city, improved public transport with dedicated bus routes, city centre solutions to reduce traffic

[5] Governance-Assurance-Framework-2022 (greatercambridge.org.uk)

in the historic core, and enhanced transport interchanges and public transport infrastructure in and outside the city.

3.9 The Investment Fund is part of a wider suite of developments to support the ongoing growth of Greater Cambridge, with other initiatives including the development of new settlements, such as Northstowe, Cambourne West and Waterbeach around the city to alleviate the growth pressure on the city itself, spreading growth beyond the immediate area of Cambridge.

Parameters for consideration within the evaluation

3.10 As noted above, 24 interventions had been approved at the Gateway Review 1 reporting stage with a further six interventions approved since the Gateway Review 1 report. These interventions break down into three groups:

- Group A: Interventions which started before Gateway Review 1 and were complete by Gateway Review 1
- Group B: Interventions which started before Gateway Review 1 and were in delivery after Gateway Review 1 (some of which may now be complete)
- Group C: Interventions which started after Gateway Review 1 (some of which may now be complete).

3.11 The focus of the evaluation is on interventions that have been approved formally and where Investment Fund expenditure has been (or is expected to be) incurred within the second Gateway Review period, i.e., Groups B and C. We return to Group A below.

- By 'within the second Gateway Review period', we mean expenditure after the Gateway Review 1 report and at least 12 months in advance of the evaluation reporting requirement for the Gateway Review in October 2024 i.e., Investment Fund expenditure began by October 2023. This is to allow sufficient time for evidence on progress of delivery to emerge, to inform the evaluation in the Area.
- Interventions that are approved within the second Gateway Review period but where no Investment Fund expenditure is planned prior to October 2023 are *not* covered by the evaluation i.e., they are not within scope. By 'expenditure' we mean any form of expenditure from the Investment Fund monies on an intervention *after* the formal project/programme approval stage. This includes preparation/design/planning work for capital and revenue interventions that is incurred following project approval, but does *not* include pre-approval expenditure, for example on feasibilities studies, business case development or appraisals.
    - All 'pre-approval' expenditure should be presented at aggregate level, with no supporting commentary required. Where these 'pre-approval' activity leads onto interventions that are supported by the Investment Fund, the 'full' interventions should be included for progress evaluation and, where appropriate, impact or progress plus evaluation (see

below). The broader, strategic benefits of using Investment Fund resource to support feasibility studies will be covered as part of the Capacity Development and Partnership Working element (see Section 7).

- Where the Investment Fund is matched to other sources of finance – be this public or private – the intervention will be considered in scope only where Investment Fund monies have been expended by October 2023.

3.12 Provided they meet the criteria set out above, 'new' interventions approved after the date of this Local Evaluation Framework are also in-scope. The inclusion of any such interventions can be confirmed in the Mid Term Report.

3.13 A separate approach is required for Group A interventions – those which started before Gateway Review 1 and were complete by the Gateway Review 1 report. Where these interventions were not fully evaluated at the first Gateway Review, they are in scope for impact evaluation at this Gateway Review 2 stage. For example, where there is now a more developed impact story to be told. These interventions are not in scope for progress evaluation.

Interventions within scope of the evaluation

3.14 Consistent with the parameters set out above, the interventions that are within scope of the evaluation are set out in the tables overleaf. Progress evaluation (discussed in Section 4) will track progress against these expenditure and delivery expectations.

3.15 The Gateway Review 1 evaluation process set out expected/achieved expenditure and output profiles for each intervention which was in scope at that point (Groups A and B). In some cases, these profiles have been updated to reflect changes in intervention delivery. These changes are presented in Annex C.

3.16 Two points are noted regarding the tables that follow:

- As reflected in Table 3-2, there are no projects completed in the Gateway Review 1 period that remain in scope for impact evaluation in Gateway Review 2, as projects were evaluated previously or are not considered viable for impact evaluation. Specifically: the Cross City Cycling Improvements projects were fully evaluated in Gateway Review 1; and the A10 Shepreth-Meldreth Cycle Link was not considered viable for impact evaluation in Gateway Review 1, with this position consistent for Gateway Review 2.[6]

- Table 3-3 includes c.£32m of 'Other Income (NHB and interest)' in the approved other expenditure column. This reflects £32m of secured income for the programme that is not specific to a project. This has been added to the general infrastructure pot and is accessible across the programme. For example, this includes a percentage of New Homes Bonus that has

[6] The link had been open for nearly 12 months at the time of the Evaluation Plan for the Gateway Review 1 (since 2017), and it was not considered for impact evaluation at this point due to its modest investment relative to the much larger scheme of which it forms a part and opening precluding any 'pre' and 'post' assessment.

been provided to the GCP from the 3 Councils in the Greater Cambridge area. This income is utilised across the programme.

Table 3-2: Group A: Interventions which started before Gateway Review 1 and were complete by Gateway Review 1 (in scope for impact evaluation only)

Name of intervention	Approved IF expenditure – total	Approved other expenditure – total	Approved IF expenditure – by end of 2024/5	Approved other expenditure – by end of 2024/5	Intervention start year	Intervention end year	National Evaluation Framework Theme	National Evaluation Framework Primary Intervention Area
None								

Source: GCP

Table 3-3: Group B: Interventions which started before Gateway Review 1 and were in delivery after Gateway Review 1 (in scope for progress, and impact or progress plus where appropriate)

Name of intervention	Approved IF expenditure – total	Approved other expenditure – total	Approved IF expenditure – by end of 2024/5	Approved other expenditure – by end of 2024/5	Intervention start year	Intervention end year	National Evaluation Framework Theme	National Evaluation Framework Primary Intervention Area
Chisholm Trail Phase 1	£11.59m	£6.32m	£11.59m	£6.32m	2015	2021	T1	1A
Histon Road	£10.36m	£0.24m	£10.36m	£0.24m	2015	2021	T1	1A
Skills Phase 1	£0.38m	0	£0.38m	0	2015	2020	T2	2D
Cambridge SW Travel Hub	£42.00m (SW + Foxton Hubs)	0	£30.65m (SW + Foxton Hubs)	0	2017	2026	T1	1A

Name of intervention	Approved IF expenditure – total	Approved other expenditure – total	Approved IF expenditure – by end of 2024/5	Approved other expenditure – by end of 2024/5	Intervention start year	Intervention end year	National Evaluation Framework Theme	National Evaluation Framework Primary Intervention Area
Cambridge South East Transport (CSET) Phase 1 and 2	£146.27m	£2.97m	£48.8m	£0.77m	2015	2026	T1	1A+1B
Milton Road	£22.13m	£1.87m	£22.13m	£1.87m	2015	2024	T1	1A
Chisholm Trail Phase 2	£5.00m	0	£5.00m	0	2017	2024	T1	1A
Cambourne to Cambridge	£119.01m	£37.99m	£40.06m	£1.6m	2015	2026	T1	1A+1B
Greenways Programme	£73.75m	£5.9m	£43.33m	£1.24m	2017	2025	T1	1A
Foxton Travel Hub	£42.00m (SW + Foxton Hubs)	0	£30.65m (SW + Foxton Hubs)	0	2018	2026	T1	1A
Madingley Road	£0.99m	£2.88m	£0.99m	0	2018	2025	T1	1A
Waterbeach to Cambridge	£44.05m	£8.55m	£5.06m	0	2018	2027	T1	1A+1B

Name of intervention	Approved IF expenditure – total	Approved other expenditure – total	Approved IF expenditure – by end of 2024/5	Approved other expenditure – by end of 2024/5	Intervention start year	Intervention end year	National Evaluation Framework Theme	National Evaluation Framework Primary Intervention Area
City Access Programme[7]	£19.171m	£1.149m	£19.171m	£1.149m	2015	2027	T1	1C
Smart Cambridge	£4.82m	£0.25m	£4.57m	£0.25m	2015	2030	T1T3/T4	1C/3C/4B
Other Income (NHB and interest)	£0	£32.03m						

Source: GCP

Table 3-4: Group C: Interventions which started after Gateway Review 1 (in scope for progress, and impact or progress plus where appropriate)

Name of intervention	Approved IF expenditure – total	Approved other expenditure – total	Approved IF expenditure – by end of 2024/5	Approved other expenditure – by end of 2024/5	Intervention start year	Intervention end year	National Evaluation Framework Theme	National Evaluation Framework Primary Intervention Area
Cambridge Eastern Access	£47.92m	£2.58m	£14.00m	£0.03m	2020	2027	T1	1A+1B

[7] This includes Making Connections and the City Access Quick Wins

Name of intervention	Approved IF expenditure – total	Approved other expenditure – total	Approved IF expenditure – by end of 2024/5	Approved other expenditure – by end of 2024/5	Intervention start year	Intervention end year	National Evaluation Framework Theme	National Evaluation Framework Primary Intervention Area
Waterbeach Station	£20.00m	£17.00m	£12.5m	0	2022	2025	T1	1A+1B
Cycling Plus (Hills Road and A1134)	£9.70m	£0.5m	£3.40m	0	2021	2027	T1	1A
Skills Phase 2	£2.2m	0	£1.21m	0	2021	2025	T2	2D
Energy grid substations	£0.86m	0	£0.78m	0	2020	2026	T3	3A

Source: GCP

Evaluation category

Impact, progress plus and progress evaluation

3.17 The purpose of the Gateway Review is to evaluate the impact of (locally appraised) interventions funded by each Investment Fund on local economic growth, and the process by which these interventions were agreed and implemented. As such, **impact evaluation** is the core focus of this Evaluation Framework. All interventions (expected to) complete one year in advance of the Gateway Review Final Report are in scope for impact evaluation.

3.18 However, as discussed in the National Evaluation Framework, in some cases it may be too early for the evaluation to evidence impacts by the Gateway Review, even of an interim form. The Evaluation Framework therefore also includes **progress evaluation** that reports on the progress that interventions have made by the point of the Gateway Review in their delivery, for example, against anticipated expenditure, delivery milestones, and in generating outputs. Note that 'process' issues are covered in the Complementary Workstreams (Section 7).

3.19 If impact evaluation is not appropriate, **progress plus evaluation** can be a secondary option for interventions which are significant in terms of progress with implementation, financial scale, novel delivery method, strategic importance etc. Progress plus research will identify emerging outcomes and consider the anticipated future beneficial impacts of an intervention (or group of linked interventions).

Approach by intervention

3.20 All interventions within scope of the evaluation will be included for progress evaluation (e.g. reporting against expenditure and outputs milestones/targets). Table 3-5 sets out whether interventions are also included for impact or progress plus evaluation. In total, three interventions will be subject to impact evaluation, and four interventions will be subject to progress plus evaluation. One further intervention, Making Connections, may be subject to progress plus evaluation; this will be confirmed at the Mid-Term Report stage, following a key decision point on the progress of the intervention which is expected in June 2023 (and with several options currently being considered).

Table 3-5: Evaluation approaches for the second Gateway Review

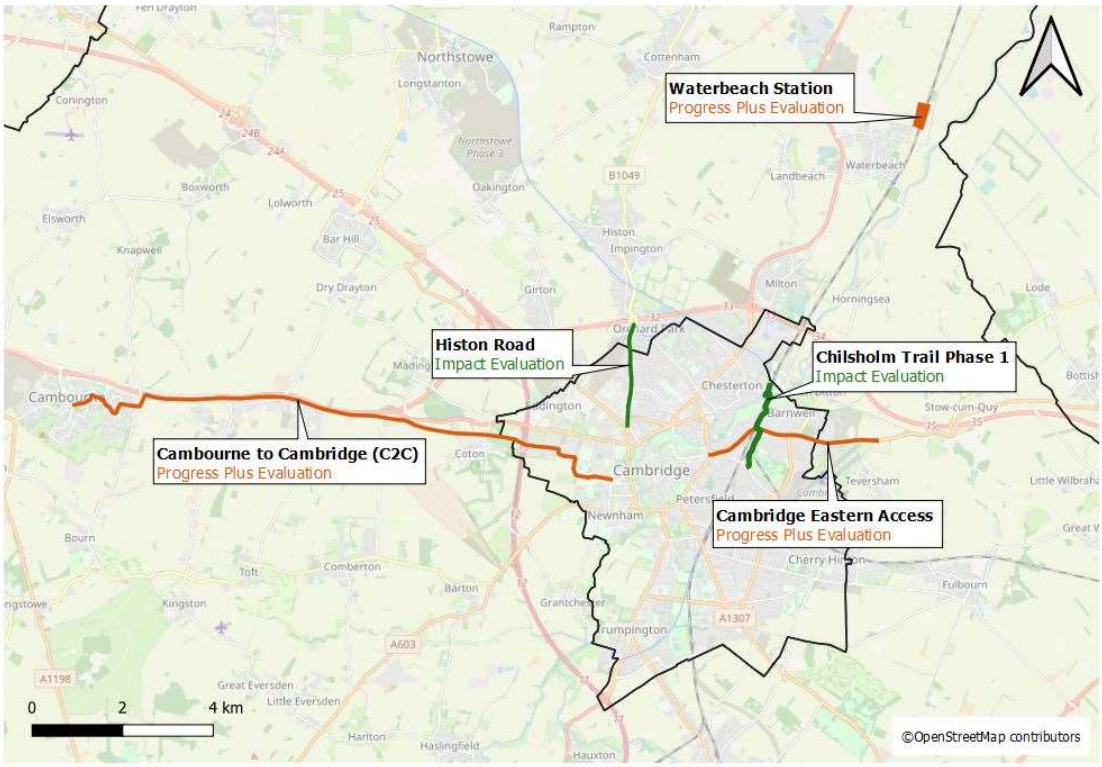
Intervention	Impact evaluation	Progress plus evaluation	Factors influencing allocation
Chisholm Trail Phase 1	✓	X	• Intervention completed in 2021 • Outcomes anticipated to be emerging by point of the Gateway Review 2
Skills Phase 1	✓	X	• Intervention completed in 2021 • Outcomes anticipated to be emerging by point of the Gateway Review 2
Histon Road	✓	X	• Intervention essentially completed in 2021 (with minor works completed in 2022) • Outcomes anticipated to be emerging by point of the Gateway Review 2
SMART	X	✓	• Intervention on-going, and will not be complete one year before GR2 Final Report • Significant in relation to: delivery progress (launched in 2016); strategic alignment to City Deal, value for money and return on investment • Theme-specific outcomes may be realised alongside on-going delivery
Waterbeach Station	X	✓	• Intervention on-going, and will not be complete one year before GR2 Final Report • Significant in relation to: strategic alignment to City Deal; scale of potential contribution to economic growth; financial scale
Cambridge Eastern Access	X	✓	• Intervention on-going, and will not be complete one year before GR2 Final Report • Significant in relation to: strategic alignment to City Deal; scale of potential contribution to economic growth; financial scale
Cambourne to Cambridge	X	✓	• Intervention on-going, and will not be complete one year before GR2 Final Report • Significant in relation to: strategic alignment to City Deal; scale of potential contribution to economic growth; financial scale
Making Connections	X	(✓)	• Intervention on-going, and will not be complete one year before GR2 Final Report • Significant in relation to: strategic alignment to City Deal; scale of potential contribution to

Intervention	Impact evaluation	Progress plus evaluation	Factors influencing allocation
			economic growth; financial scale; novel/innovative delivery method • Progress plus status to be confirmed at the Mid-Term Report stage
Energy grid substations	X	X	• Intervention on-going, and will not be complete one year before GR2 Final Report
City Access	X	X	• Intervention on-going, and will not be complete one year before GR2 Final Report
South West Travel Hub	X	X	• Intervention on-going, and will not be complete one year before GR2 Final Report
Madingley Road	X	X	• Intervention on-going, and will not be complete one year before GR2 Final Report
Cycling Plus (Hills Road and A1134)	X	X	• Intervention on-going, and will not be complete one year before GR2 Final Report
Waterbeach to Cambridge	X	X	• Intervention on-going, and will not be complete one year before GR2 Final Report
Chisholm Phase 2	X	X	• Intervention on-going, and will not be complete one year before GR2 Final Report
CSET Phase 1 and Phase 2	X	X	• Intervention on-going, and will not be complete one year before GR2 Final Report
Greenways	X	X	• Intervention on-going, and will not be complete one year before GR2 Final Report
Skills Phase 2	X	X	• Intervention on-going, and will not be complete one year before GR2 Final Report
Foxton Travel Hub	X	X	• Intervention on-going, and will not be complete one year before GR2 Final Report
Milton Road	X	X	• Intervention on-going, and will not be complete one year before GR2 Final Report

Source: GCP

3.21 The spatial coverage of the transport-focused interventions which are subject to impact and progress plus evaluation (and therefore a priority for this LEF) are set out in Figure 3-1.

Figure 3-1: Spatial coverage of transport-focused interventions subject to impact and progress plus



Source: GCP

4. Approach to Progress evaluation

Coverage

4.1 The following 12 interventions will be subject to progress evaluation only for the second Gateway Review:

- Energy infrastructure
- City Access (Quick Wins)
- South West Travel Hub
- Madingley Road
- Cycling Plus (A1134 and Hills Road)
- Waterbeach to Cambridge
- Chisholm Phase 2
- Cambridge South East Transport (CSET) Phase 1 and Phase 2
- Greenways
- Skills Phase 2
- Foxton Travel Hub
- Milton Road

4.2 The progress evaluation questions and approach set out below will also be delivered for interventions subject to impact or progress evaluation.

Progress evaluation

4.3 The progress evaluation for each of the interventions will seek to answer five key progress evaluation questions. The questions, source(s) of evidence, and relevance for the different stages of the evaluation, are set out in Table 4-1. The sources of evidence will be monitoring data and documents, and interviews with those involved in the delivery of the interventions and the Investment Fund (discussed in more detail below).

Table 4-1: Progress evaluation questions and source(s) of evidence

Progress evaluation question	Mid Term Report	Final Report
Q1: Is expenditure on budget?	✓	✓
Q2. Have agreed delivery milestones been met?	✓	✓
Q3: Have anticipated outputs been delivered, and (where relevant) how does this compare to planned outputs at this stage in terms of scale/nature?	✓	✓
Q4: Have intermediate outcomes been delivered, and (where relevant) how does this compare to planned outcomes at this stage in terms of scale/nature?	✓	✓
Q5. Does the project remain on course to deliver against its original objectives?	✓	✓

Source: IEP

Mid Term and Final Report stages

4.4 The following work will be delivered by the GCP to inform the Reports:

- monitoring data (including expenditure and outputs) and documents will be gathered to cover the Fund as a whole and all individual projects. This will include for each intervention:
  - planned expenditure by quarter: split by Investment Fund expenditure, other public expenditure, and private expenditure
  - actual expenditure by quarter: split by Investment Fund expenditure, other public expenditure, and private expenditure
  - planned outputs by year
  - actual outputs by year
  - planned intermediate outcomes by year (where captured in monitoring data)
  - actual intermediate outcomes by year (where captured in monitoring data)
- primary evidence will be gathered from each 'project lead' on project progress. This will include reference to the monitoring data
- primary evidence will be gathered from 'central' representatives from the GCP to provide evidence for the progress evaluation across all interventions and overall levels of Investment Fund commitment and expenditure.

4.5 The monitoring data on expenditure will be used to populate one standard table covering all interventions. The monitoring data on outputs (and intermediate outcomes where available)

will be combined with the primary evidence from project leads to populate a standard, c.1 page proforma framed by the five progress evaluation questions for each intervention.

Interim stages

4.6 This progress evaluation activity delivered for reporting stages will be complemented by a bi-annual review of monitoring data with the IEP. The purpose will be to identify any issues/gaps in the data and the reasons for this, to ensure any actions are taken in advance of Mid Term and/or Final Reports. This bi-annual review will involve the Area providing monitoring data to the IEP at intervention level and for the Fund in aggregate. The data should cover achieved and expected expenditure, and achieved and expected outputs. The IEP will hold an online discussion with a relevant lead at the Area responsible for the collation of the monitoring data. Data should be provided for Q4 in May each year, and data for Q2 in November each year.

4.7 Two important points are noted regarding the monitoring process:

- At both the reporting and interim stages, the IEP will liaise with a single relevant lead at the Area responsible for the collation of the monitoring data and completion of the monitoring template[8], not with individual project leads responsible for each intervention covered by the Investment Fund. Any gaps/issues in the monitoring data identified will be reported to the monitoring lead who will be responsible for subsequent engagement with those delivering/managing each intervention.

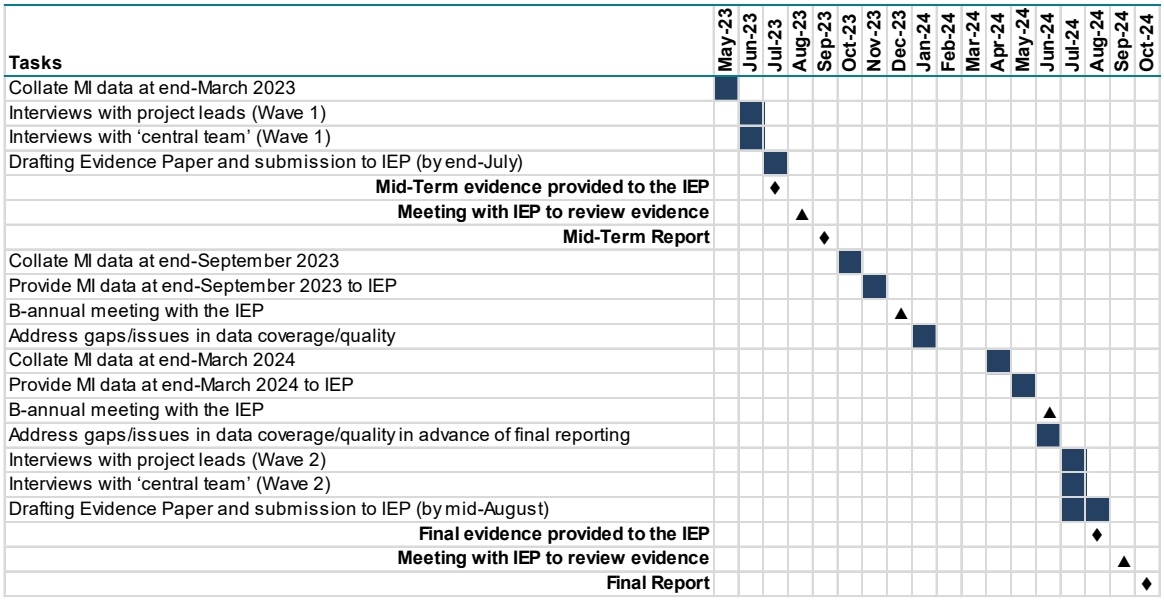
- The Independent Evaluation Panel is not responsible for verification/audit of monitoring information (including financial information and reported outputs). The role of the Independent Evaluation Panel will be to check the coverage of the data provided and identify any gaps/uncertainties in the material. Areas are responsible for ensuring that the data provided are accurate.

Timing and delivery

4.8 The timetable for the progress evaluation – that will apply to all interventions covered – is set out in Figure 4-1.

[8] The IEP will provide a set of standard set of monitoring tables to be used by all Areas

Figure 4-1: Timetable for progress evaluation



Source: GCP

4.9 The progress evaluation activity will be delivered by the independent provider appointed by GCP following a competitive tender exercise to deliver the evaluation to inform the Gateway Review.

5. Plans for Impact evaluation

Coverage

5.1 The following three interventions will be subject to impact evaluation for the second Gateway Review:

- Chisholm Trail Phase 1
- Skills Phase 1
- Histon Road

5.2 For each intervention, this section sets out the following:

- a **logic model** for the intervention that has been developed and used to inform the impact evaluation approach
- the **method** for the impact evaluation covering: an overview of the approach; how the counterfactual will be identified; the alignment of the method to the National Evaluation Framework (and the explanation for any variance); other potential methods that were considered for the evaluation, and why these were not progressed.
- the **data requirements** for the method covering primary evidence, monitoring information, and secondary data; this includes requirements at different points in the evaluation including at the baseline stage.
- the **timing** of the impact evaluation research for the intervention over the period up to and including the Gateway Review report in October 2024, including identifying the key tasks that will be required.

Chisholm Trail Phase 1

Logic model

5.3 In evaluating publicly funded interventions it is good practice to develop a 'logic model' which articulates explicitly the relationship between inputs, activities, outputs and outcomes:

- inputs are the resources used by the intervention, including the Investment Fund resource
- activities are those tasks undertaken by the intervention
- outputs are the readily measurable results of those activities

- outcomes are the benefits attributable to the intervention, including 'intermediate outcomes' for the direct beneficiaries of the intervention, and 'final outcomes' for the wider economy/society.

5.4 Logic models are useful devices to inform evaluation because they encourage thinking about the steps required for an intervention to have its desired effects, and the nature of effects that can be covered in evaluation. Therefore, to be effective, a logic model should represent the causal theory about why and how an intervention might work over time, that is, the 'theory of change'.

5.5 The National Evaluation Framework developed a set of headline logic models for each of the 13 Primary Intervention Areas, to provide an initial framework and starting point for the development of tailored logic models, including the expected range of activities, outputs and outcomes that may be delivered/generated through the Investment Funds.

5.6 The National Evaluation Framework logic models covering Theme 1A: Improved connectivity has been used as the basis for the development of a logic model for Chisholm Trail Phase 1. The logic model contains the following components:

- a narrative 'theory of change' that articulates how and why the intervention is expected to generate benefits, and what the intervention involves
- an overview of the scale of inputs covered by the intervention included within the logic model from the Investment Fund and other sources (in this case zero)
- the activities, outputs and outcomes that are expected to be delivered/generated by the intervention included within the logic model
- the expected timescales for the inputs, activities, outputs, and outcomes; for inputs and activities, this includes the information on when expenditure/activities are planned to be delivered, with 'best estimates' on the subsequent timescales for the realisation of outputs and outcomes.

5.7 The logic model for Chisholm Trail Phase 1 is set out below.

Logic model title	Chisholm Trail Phase 1
Interventions / projects covered by logic model	Chisholm Trail Phase 1

Theory of change:

Cycling usage is already high in Greater Cambridge. For example, at the 2021 Census, 31% of commutes to work were made by bicycle in Cambridge, and 9% in South Cambridgeshire, compared to 3% across England[9]. Further, 43% of residents cycled at least once per week for any purpose in Cambridge in 2021, and 22% in South Cambridgeshire, compared to 9% across England[10]. The intended theory of change is that new dedicated cycling infrastructure will remove some of the remaining barriers to cycling, in particular through greater segregation of cycling from motorised traffic, the provision of quicker and safer routes across Cambridge, and providing direct links between housing and employment growth points and public transport infrastructure, such that those cycling intermittently cycle more frequently and those not cycling at the moment will start to use cycling as a mode of transport for work and education. This further increase in cycling will represent a modal shift away from using cars, resulting in reduced congestion in/around Cambridge and so in CO2 emissions, and increase modal share for cycling. The segregated routes will make cycling safer, reducing the number of road traffic collisions involving cyclists. The route will also encourage higher levels of walking for both leisure/exercise, and for work and education purposes, Specifically, Phase 1 of the Chisholm Trail will link Cambridge North Station (in close proximity to several business and science parks) to Coldham's Lane, providing a dedicated new cycling and walking route including over the new Abbey-Chesterton Bridge which forms part of the intervention, better linking the station to employment sites in the city. Subsequently, Phase 2 (a separate intervention) will create a link to Cambridge Station and Addenbrooke's Hospital and the Biomedical Campus in the south.

Key assumptions: there is scope to increase cycling usage further, i.e. there remains a group of people that are open to start taking up cycling or cycling more often; housing and employment growth sites would be less accessible (such that success is adversely affected) without cycling improvements; and modal shift from motor vehicle not outweighed by general growth in traffic or people switching to driving/driving more as they see reductions in congestion.

Other factors: other interventions that are designed to lead to modal shift such as bus priority measures; cycling schemes themselves are part of wider improvements to national cycling network, which has funding through Cycle City Ambition Grant; and provision of appropriate complementary infrastructure such as bike storage at employment sites.

Inputs	Activities	Outputs	Outcomes
Investment Fund inputs • £11.6m Other inputs (including staffing and in-kind)	• Existing cycle paths improved / enhanced (including widening and resurfacing) • New cycle paths developed • Associated infrastructure works (e.g. construction of a new underpass below Newmarket Road, construction	• Cycle routes become fully operational • Km of new or improved cycle paths • Associated infrastructure completed	**Theme-specific outcomes** • Increased cycle usage, including for work and education • Increased walking, including for work and school • Improved safety (including via reduction in road traffic collisions involving pedestrians and cyclists)

[9] Census 2021, TS061 - Method used to travel to work. Data excludes those working mainly at or from home.
[10] Active Lives Survey by Sport England, Table CW0302: Proportion of adults who cycle, by any purpose, frequency, and local authority, England, November 2015 to November 2021

• £6.3m S106 developer contribution	of the Abbey-Chesterton Bridge Bridge)	• Construction years of employment (i.e. to build infrastructure)	• Reduced traffic congestion (via fewer numbers of vehicle trips) • CO2 savings via modal shift • Enhanced local environment through improved air quality • Improved independence and wellbeing **Broader outcomes** • Enhanced access to training and employment • Enhanced access to green spaces • Enhanced attractiveness and deliverability of employment growth sites, e.g., North East Cambridge (15,000 new jobs), and wider city centre • Enhanced attractiveness and deliverability of new housing development sites, e.g. North East Cambridge (8,350 new homes) • Long-term positive effects on socio-economic conditions including: ➢ improved business productivity via travel time savings, agglomeration effect ➢ improved public health (via increased active travel, air quality)

Expected timescales for inputs / activities / delivery of outputs and outcomes			
• Inputs over 2015-2021	• Activities spread over the period of inputs. The scheme opened in late-2021.	• Outputs realised on completion of the scheme in late-2021 • Construction employment realised during delivery of activities	• Theme-specific outcomes are expected to start to be realised from the scheme opening, and are expected to increase over time as behaviours are influenced and more people are encouraged to walk/cycle. • Broader-outcomes listed above in relation to enhanced access and access and the attractiveness and deliverability of employment and housing sites can be expected to be realised following scheme opening, but it will take several years for this to be realised fully, and will depend on the status of each site and expected delivery periods. The long-term positive effects on socio-economic conditions are expected to take 3-5 years post-opening to start to be realised and observable.

Relationship to other interventions

Other Investment Fund logic models:

- This scheme is related to the other Active Travel schemes in the Programme including the Greenways Programme and Cross-City Cycling Programme. It is also directly linked to the Chisholm Trail Phase 2 which will provide onward connection to Cambridge Railway Station from the end of this scheme.
- Other interventions including City Access, Public Transport Corridor schemes (including Cambourne to Cambridge) and the Histon and Milton corridor schemes are all designed to reduce congestion and bring about modal shift from the car to public transport/ active travel
- Other schemes will also facilitate developments in wider city centre

Other non-Investment Fund activities:

- The scheme is linked to wider development around Cambridge including the North East Cambridge development.

Source: GCP

Method

Overview of the approach

5.8 The impact evaluation of Chisholm Trail Phase 1 will be theory-based, using mixed-methods, including evidence on 'pre' and 'post' behaviours and indicators to assess how the scheme has contributed to intended outcomes. This is in line with guidance in the National Evaluation Framework for Theme 1A interventions.

5.9 The principal focus of the evaluation will be to assess whether the intervention can plausibly be considered to have led to increased levels of cycling and walking and associated modal shift from car usage, which is recognised as key to relieving the transport pressures acting as a constraint to the economic growth of Cambridge. This will be based on (i) primary evidence from users of the Chisholm Trail, collected by two waves of cyclist and pedestrian intercept surveys in June 2023 and 2024 and (ii) analysis of time-series data on cycle usage and pedestrians both before and after the completion of the scheme drawn from a range of existing sources including annual surveys and traffic counts.

5.10 The time-series data will include data at three levels: "on-trail locations", several "proximate locations", and wider city-centre trends.

5.11 The "on-trail locations" data will provide the evaluation with evidence on the level of cycle usage and pedestrians on the trail route post-intervention, and in one location both pre-intervention and post-intervention. When complemented with the survey evidence collected in 2023 and 2024, this will be used to estimate the effects of the scheme on increased cycle usage and walking.

5.12 The cycle and pedestrian counts data from "proximate locations" and wider city-centre trends will be used to provide the evaluation with insight on (i) potential displacement effects from the scheme on other cycle/walking routes in the area (which will also be considered in the surveys) and (ii) wider cycling/walking trends in Cambridge, including in relation to how this may have been influenced by the Covid-19 pandemic and its legacy effect on travel movements, most notably commuting patterns and levels. This evidence will be used to inform the theory-based assessment of the extent to which the scheme can plausibly be seen to have led to increased levels of cycling and walking, and so modal shift, taking into account wider factors and other potential drivers of behaviour.

5.13 Alongside the principal focus of the evaluation on increased levels of cycling and walking, the surveys will also be used to gather self-reported evidence on whether the scheme has led to: reduced traffic congestion (via fewer numbers of vehicle trips made owing to modal shift), improved safety (via perceptions of safety), an enhanced local environment (via perceptions of the environment), improved independence and wellbeing (via personal perception of these issues), enhanced access to training and employment and green spaces (via personal

perception of these issues), and improved public health (via whether people are cycling / walking more frequently as a result of the route).

5.14 The following are also noted in relation to the outcomes set out in the logic model:

- Time-series data on road traffic collisions involving pedestrians and cyclists in the area around the Chisholm Trail will be considered alongside the primary evidence from the surveys in relation to improved safety (using Cambridgeshire Road Traffic Collision Data). It will not be possible to directly attribute any observed changes in collision to the scheme quantitatively, given the range of other factors that will influence collision levels. Contextual data on road traffic collisions on roads potentially influenced by the scheme (which will be confirmed in a detailed scoping stage) will be reviewed both pre- and post-intervention, in order to inform the theory-based assessment on whether it is plausible that the scheme may have contributed to improved safety, including triangulated with self-reported data from survey respondents.

- The effects of the scheme on reduced traffic congestion will be based on the survey evidence and analysis of cycle-count and pedestrian-count data to estimate quantitatively the direct effects on the number of vehicle trips saved. The evaluation will *not* seek to model or quantify the impact of the scheme on the road network using secondary data, for example on traffic volumes or average travel times. This reflects both the nature and scale of the intervention and the likely level of contribution to overall traffic patterns in the city, and a range of other activity in the area (including other Investment Fund interventions including Histon Road, Milton Road, Greenways, and the Cambridge Eastern Access) that will influence road usage and congestion. In turn, CO2 savings will not be quantified. It is noted that potential impacts on air quality will be considered at a programme level, with the findings included in GCP's Complementary Report.

- The effects of the scheme on enhanced attractiveness and deliverability of employment growth and housing development sites will be considered via qualitative research with key stakeholders. Stakeholders will also provide qualitative evidence on observed enhanced access to training and employment outcomes for learners/staff.

- The potential longer-term effects of the scheme on improved business productivity will not be assessed directly by the evaluation.

5.15 This final point reflects that the links between enhanced transport connectivity, including improved active travel provision, business productivity, and economic growth are complex. However, faster and more reliable movement for some sectors can enhance business productivity by reducing time wasted in transit by both people and goods. Further, for knowledge-based industries in particular – prominent in Cambridge – maintaining a healthy and attractive environment, and ensuring appropriate accessibility to jobs and other services are important factors in attracting and retaining knowledge workers, and thereby critical to supporting growth and maintaining Cambridge's position as a leading centre internationally

for investment. Further, providing all residents and workers with improved means to travel into and around Cambridge, to prevent its growing pains (including increasing traffic congestion owing to car usage) from limiting Greater Cambridge's growth potential is core to the strategic focus of the City Deal and Investment Fund.

5.16 This strategic case for the scheme and its role within the rationale for the Investment Fund's focus on active travel and related interventions to support economic growth over the longer-term will be recognised fully in the evaluation. The focus of the analysis will be to consider whether the new active travel provision via the Chisholm Trail Phase 1 has led directly to outcomes associated with the take up or increase in the level of cycling and walking, and the resulting modal shift (from car to active travel), thereby delivering against this strategic economic growth narrative.

Analytical approach

5.17 As noted above, the evaluation will be theory-based, applying a mixed-methods approach and the use of Contribution Analysis.

5.18 This will include a pre- and post-assessment on cycle usage and walking, based on triangulating the evidence from the cyclist and pedestrian surveys with the time-series data on route usage. The surveys will be used in particular to gather evidence – using respondent recall – on the extent to which behaviours have been changed as a result of the Chisholm Trail (i.e. are individuals cycling/walking more or less now than before the scheme, and is this instead of using other travel modes?). This alongside the time-series data on actual usage before and after the scheme will be used to estimate quantitatively the potential scale of the effect of the scheme on levels of cycling and walking and the associated modal shift, taking into account wider evidence on trends in cycling and walking across Cambridge.

5.19 The survey evidence will also be used to provide perception-based evidence on other outcomes (as discussed above), which in some cases will be complemented via secondary data (e.g., on collisions), and qualitative perspectives from stakeholders (e.g., attractiveness of employment and housing sites).

5.20 In analysing the data, the focus of the impact evaluation of Chisholm Trail 1 will be to test the extent to which the activities and outputs of the logic model (as set out above) have been delivered, and whether there is plausible evidence that the scheme has made a contribution to realising the anticipated outcomes, based on the range of evidence collated and analysed.

5.21 This will include a formal Contribution Analysis. This involves assessing the evidence collected against the logic model and theory of change, to assess the scale and nature of outcomes observed (e.g., change in levels and patterns of cycling and walking), and the contribution of the Chisholm Trail Phase 1 to this, relative to other factors, drawing on the quantitative and qualitative data collected. Other factors influencing outcomes may include the effects and legacy of Covid-19 leading to changes in travel behaviours, the effect of other

transport investments or developments in the city (notably Cambridge North Station which opened in 2017), wider investments and developments which may have led to increased/reduced movements associated with the trail, and broader social and economic drivers and conditions which may influence behaviours.

5.22 In this context, a *plausible association* can be made (or attribution is demonstrated beyond reasonable doubt) if the following are satisfied:

- a reasoned theory of change is set out
- the activities have been implemented as set out in the theory of change
- the chain of expected results, e.g., effects on cyclists can be shown to have occurred
- other influencing factors have been shown not to have made a difference, or the decisive difference.

5.23 It is important to recognise that a Contribution Analysis approach does not provide *definitive proof* that the intervention has had a causal effect. Rather, it provides an evidenced, systematic, and logical line of reasoning which gives a level of confidence of an intervention's contribution to the outcomes observed. This assessment of a contribution is consistent with the challenges discussed below that preclude the use of a formal comparison group, time-lags in the collation of data on the route, and the complexity of the delivery environment including the potential influence of other schemes and the legacy effects of Covid-19 on travel and particularly commuting patterns.

Key sources of evidence

Intercept surveys – cyclists

5.24 Two surveys of cyclists using the Chisholm Trail will be a core source of evidence for the impact evaluation. This will have two main aims, namely to:

- gather data on users' travel behaviours before and after the intervention, including any changes in behaviours as a result of the Chisholm Trail (to estimate quantitatively change in usage and modal shift), and any changes in the reasons for journeys (to estimate effects on usage for employment or education purposes)
- gather data on effects of the Chisholm Trail on users' perceptions of safety, their independence and wellbeing, and access to training, employment and green space and the quality of the local environment.

5.25 The surveys can also gather data on satisfaction with the Chisholm Trail, which can provide useful evidence on the potential wider effects and contribution of the scheme to active travel in Cambridge. For example, has the scheme led to changes in broader perceptions

of/engagement in cycling and active travel, and feedback to inform potentially Phase 2 e.g., related to signage, surfacing, associated infrastructure. Changes in behaviours may also vary by different groups – so data on demographics and characteristics will be captured.

5.26 Practically, the surveys will involve cyclists being handed cards at a selected safe point (or points) along the route (to be confirmed, subject to detailed planning), inviting the cyclists to complete an online survey (by visiting a weblink referenced on the card). CCTV will be installed for the period that these cards are handed out, so as to understand how representative a sample is obtained from the population of cyclists that passes the survey team (e.g., by monitoring principal characteristics such as gender and age). Surveys will be handed out between 7am and 7pm on selected (and different) weekdays and at the weekend over the first two weeks of June in 2023 and 2024, in order to obtain a broad sample of users.

5.27 Two waves of survey are proposed in June 2023 and June 2024 respectively. The data from 2023 will provide evidence from users as close to the point of the trail opening (in late-2021) as possible, and generate initial evidence for the Mid-Term Report. The aim will be to complete at least 200 survey completions in each wave. The population is not known at this stage in advance of the research (with the population captured by the CCTV installed for the work). However, 200 completions has been proposed as the target sample size to provide an expected deliverable, reasonable and proportionate level of confidence in the results (with 200 completions resulting in a 95% confidence interval of up to +/-6.5%%[11]). It is also noted that this is explicitly a *minimum* completion target (not a maximum target), and fieldwork on surveys will continue as planned even if the target is reached.

5.28 The data from 2024 will provide a further year of data on the potential effects of the trail on levels of cycling and modal shift, reflecting that it may take time for the full benefits of the intervention to emerge (and/or that behaviours may have changed as the novelty of the trail diminishes over time). Data from a further year post-Covid-19 will also support the analysis and interpretation associated with ongoing changes in commuting patterns, and allow for triangulation with a further year of cycle count data from the on-trail locations, proximate locations, and the wider city-centre locations. At the final evaluation stage, the survey data from the two years can also be pooled to provide a more robust evidence base on the post-intervention position. Statistical analysis will be undertaken to compare the results from the two years to inform the impact analysis and interpretation, which may also generate evidence e.g., if there is evidence of a change in the types of user or journey purpose over time.

5.29 Close involvement of the GCP (and other organisations as required) will be essential in undertaking these surveys, to ensure that survey work aligns with and complements any similar efforts already underway, and to ensure that the process obtains appropriate permissions and sufficiently takes account of any sensitivities.

[11] The exact confidence limits will depend on the individual survey question and results which cannot be known at this stage.

5.30 Several points/limitations regarding the approach (and proposed solutions to help address/mitigate these issues where relevant) are highlighted explicitly.

- First, the 7am-7pm time fieldwork period may influence the results, with users outside this time not captured, and potential differences in the use/purpose of usage. However, these hours are considered to be the most appropriate and proportionate to cover both commuting (on weekdays) and leisure (on weekends) usage.[12] Further, this period includes the points when effects on modal shift are expected to be most pronounced i.e. including both the morning and evening 'rush hour' period for commuting, school-related travel etc.

- Second, a consistent time-period in June each year is proposed to allow both comparison of the results, and pooling of the data to provide a more robust evidence base on the post-intervention position (which would not be possible using different time-periods owing to seasonal variation in usage). Different days will be selected in each week to avoid any particular patterns, and to mitigate the risk of conditions on individual days (notably weather) influencing the survey results. Further, it is noted that the survey data will not be used as the main source of evidence on usage levels; this will be drawn from the "on-trail locations" time-series data, which will also provide data from other points in the year (with seasonal variation in cycling) which can inform the analysis of potential levels of modal shift when triangulated with the survey evidence, and wider insight into the use of the trail throughout the year (and how this may vary in volume and pattern).

- Third, individuals that do not have access to the internet will not be able to complete the survey, which may lead to some variation in the representativeness of the survey sample to the population. Given the likely demographic and spatial context for the survey, it is not considered a material risk that a sufficient number of individuals will not able to access the internet, and that this will lead to a statistically significant effect on the representativeness of the sample. In this context, it is noted that a similar survey approach was completed successfully for the evaluation of Cross-City Cycling Scheme in the Gateway Review 1 and this was not found to be an issue. Given these considerations it is not considered proportionate to offer alternative response mechanisms at this stage. However, reasons for refusal in the wave one survey will collected, and if this is found to be an issue influencing variation between the sample and the population (i.e. individuals indicating they would be willing to complete the survey but are unable to do so as they do not have access to the internet), the wave two survey will include an option for an alternative mechanism of survey completion e.g. by post, telephone.

- Fourth, the construction of Phase 2 of the Chisholm Trial will be underway during the survey period. This will need to be taken into account in the survey fieldwork (e.g. related to intercept locations) and analysis of results, with the potential that the on-going works for Phase 2 may lead to reduced usage of Phase 1 e.g. owing to information gaps (where

[12] It is also noted that surveys will require the presence of researchers on-site, potentially working alone, meaning that times before/after 7am and 7pm are not considered appropriate or proportionate.

residents believe that the route is closed for on-going construction) or where construction activity on Phase 2 limits access to existing routes, meaning that individuals make alternative travel arrangements impacting on the use of Phase 1.

- Fifth, for any survey the results are subject to potential response bias and a degree of uncertainty. As noted above, CCTV data will be used to understand how representative a sample is obtained from the population of cyclists that passes the survey team. Where the sample is found to not be representative of the population, weighting will be employed to adjust the survey results to reflect the population.

Intercept surveys – pedestrians

5.31 Equivalent surveys of pedestrians to those for cyclists set out above will also be completed. These surveys will be completed over the same period, and potentially using consistent safe points for the intercepts, and cover the same issues, adjusted to reflect the focus on walking rather than cycling.

5.32 The principal survey method will be to ask individuals to complete the survey on-site/in-person at the time of the intercept (via responding to questions from a researcher who will record the results in 'real time'). Pedestrians will also be provided with the opportunity to complete the survey online (being given a card with a weblink consistent with the approach for the cyclist surveys). Again, CCTV will be installed to understand how representative a sample is obtained from the population of pedestrians that passes the survey team (and any variation between on-site and online completion). Weighting will be employed to adjust the survey results to reflect the population if this is found to be necessary.

5.33 The aim will be to complete at least 200 survey completions in each wave. Again, this has been identified as the sample size to provide an expected reasonable and proportionate level of confidence in the results (with 200 completions resulting in a 95% confidence interval of up to +/-6.5%[13]). It is also noted that this is explicitly a minimum target (not a maximum target), and surveys will continue as planned even if the target is reached.

5.34 The issues and mitigation factors associated with the fieldwork period (both in terms of the time of days and fieldwork in June), construction of Phase 2 of the Chisholm Trial, and response bias related to the cycling survey are also relevant here. The issue of individuals that do not have access to the internet not being able to complete the survey is not an issue for the pedestrian survey which will be completed both on-site/in-person at the time of the intercept and online.

Cycle and pedestrian counts

5.35 Time-series data on cycle and pedestrian counts will be collated and analysed at three levels:

[13] The exact confidence limits will depend on the individual survey question and results which cannot be known at this stage

- **"on-trail locations"**, with data available at four points from a combination of existing counters and annual surveys
- **several "proximate locations"**, with data available at five points from annual surveys
- **wider city-centre trends**, with data available at multiple points across the city from a combination of existing counters and annual surveys.

5.36 The "on-trail" and "proximate" locations are set out below.

Figure 5-1: On-trail and proximate locations for cycle and pedestrian count data

Source: GCP

5.37 As shown in the Table 5-1 below, in three of the four "on-trail locations", the data available will be for the post-intervention position, as these counters/survey locations were established following the completion of the Chisholm Trail Phase 1. This will include:

- detailed data from November 2022-July 2024 for the two Vivacity sensors (which includes data from continuous monitoring sensors providing data at 5-minute, 15-minute, hourly and daily intervals and can be used to construct average daily values)
- data for April 2022, April 2023 and April 2024 for the Screenline Survey (providing a one-day average based on a manually classified count each year); this counter is located on the Abbey-Chesterton Bridge.

5.38 The River Cam Path location from the Cambridge Radial Survey will provide data at both the pre- and post-intervention position, with annual data available from 2017. This provides a 1-day average, based on a manually classified count. It is noted that care will be needed in interpreting this data, with the Chisholm Trail construction influencing potentially the data, and a spike in usage in October 2020. Further, post-intervention data for the River Cam Path Radial Survey location will include 2022 and 2023 only; the data is collected in October each year, meaning data for 2024 will not be available for the final evaluation.

5.39 Both pre- and post-intervention position data will be available for the "proximate locations", covering the period from 2017-2021 and 2022-2024.

Table 5-1: Cycle and pedestrian counter data pre- and post-intervention coverage

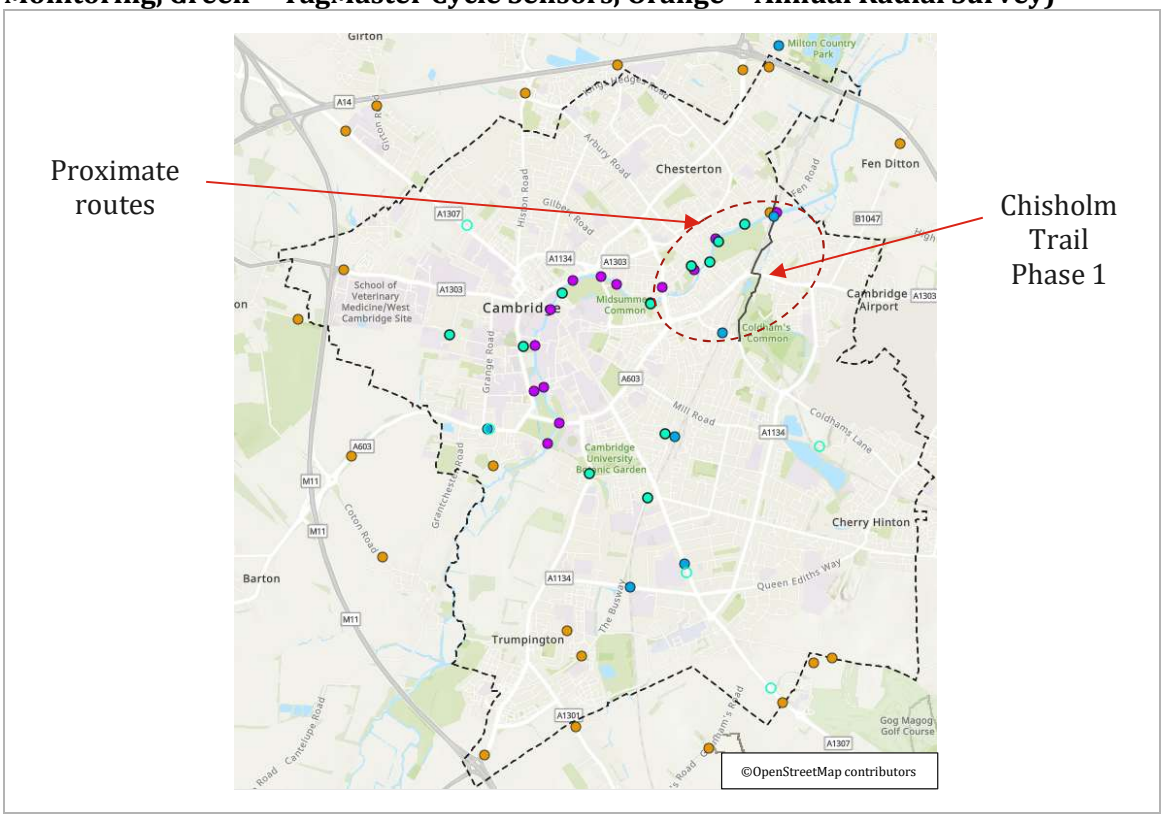
Location	Type and frequency	Pre-intervention	Post-intervention
On-trail locations			
Barnwell West Path	Vivacity (on-going)	×	✓
Ditton Meadows Bridge	Vivacity (on-going)	×	✓
Chisholm Trail Footbridge	Screenline Survey (annual)	×	✓
River Cam Path	Radial Survey (annual)	✓	✓
Proximate locations			
Green Dragon Footbridge	Screenline Survey (annual)	✓	✓
Riverside Footbridge	Screenline Survey (annual)	✓	✓
Elizabeth Way	Screenline Survey (annual)	✓	✓
Jubilee Way	Cycle Route Monitoring (annual)	✓	✓
Coldham's Lane	Cycle Route Monitoring (annual)	✓	✓

Source: GCP

5.40 It is noted that there are four further Tag Master Cycle Sensors in close proximity to the scheme, which provide detailed data counting cycles in 15-minute, 30-minute and hourly intervals. There are some gaps in the data available from these sensors in both the pre- and post-intervention period (e.g., all four have no data in 2022, three of the four have no data in 2021, and one has partial data only 2017-2019). However, there may be specific periods/points where consistent data is available from these sensors over 2017-2020 and 2023-24 that could be used meaningfully to inform the evaluation as additional "proximate locations" for cycling data. This will be considered in more detail in the scoping stage (and is consistent with the approach taken to the Impact Evaluation of the Cross City Cycling Schemes completed for Gateway Review 1).

5.41 Data on wider city-centre cycling and pedestrian trends will also be collated, using the range of counters and surveys available. The specific locations to be included in the analysis will be determined during the scoping stage, including to identify any issues in the quality/consistency of the data for different sources of evidence, and to ensure any comparisons to the Chisholm Trail Phase 1 are meaningful and appropriate (notably for pedestrians, with many of the counters covering areas of Cambridge with high numbers of tourists, which will have been influenced very significantly over 2020-2022 by the COVID-19 pandemic and associated restrictions). The spatial coverage of sensors and survey points that will form the basis of this scoping in the wider area are set out in the map below.

Figure 5-2: Location of sensors/counts across Cambridge (Blue = Annual Cycle Route Monitoring, Green = TagMaster Cycle Sensors, Orange = Annual Radial Survey)



Source: Cambridgeshire County Council

Qualitative research

5.42 Up to 20 consultations will be undertaken with key stakeholders to understand any effects of Chisholm Trail Phase 1 on the attractiveness and deliverability of new housing and employment sites near the route. The consultations will also consider (where relevant): observed enhanced access to training and employment outcomes for learners/staff as a result of the Chisholm Trail Phase 1, which may include the development of their own incentives, initiatives or investments (realised or planned) related to active travel, including considering how and why the scheme may have influenced this; and any wider organisational benefits or effects of the Chisholm Trail Phase 1 (both direct and indirect).

5.43 Consultee organisations will be confirmed in the scoping stage, however, at this point the expectation is that this will include, for example, local councillors and council officials involved in planning/economic development/cycling, tenants and managing agents at relevant proximate business and science parks, local schools and educational institutions (including potentially Anglia Ruskin University, Cambridge Campus), Cam Cycle, and landowners and developers involved in bringing forward relevant employment and housing sites. The effects will be considered qualitatively.

Other approaches considered

5.44 Establishing a formal control area as the basis for a quasi-experimental evaluation was considered. Two options were possible.

- First, identifying a control area in another location/city. However, Cambridge is unique in terms of transport and active travel habits, with higher cycling rates than any other city in the country. For example, cycling statistics from Sport England's Active Lives Survey indicated that 50% of adults in Cambridge cycled at least once a month in 2021, some ten percentage points above Oxford (at 40%, the second highest proportion) and 13% across England overall. Likewise, whilst 43% of adults in Cambridge cycled at least once a week in 2021, the equivalent for Oxford (again, the closest comparator) was just 34%, and the equivalent for England was 9%. As such, there is no sensible external location with a similar context elsewhere to use as a control area.

- Second, identifying a control area within Cambridge. However, a wide range of cycle and active travel improvement schemes have been delivered across the city, and other mixed transport interventions (such as on Histon Road and Milton Road) also include cycling and active travel improvements. This leaves no viable options for identifying a 'non-affected' route to use as a formal control area.

5.45 The Chisholm Trail Phase 1 scheme is also highly context-specific, including through the Abbey-Chesterton Bridge delivered via the Investment Fund, which has provided a new cycling and pedestrian route across the River Cam, and enhancing access to Cambridge North Station. Formal comparisons with other locations/routes may be potentially highly misleading given this scheme-specific context.

5.46 Further, the wide range of other interventions designed to influence active travel within Cambridge means that the intervention has been delivered within a complex environment with multiple factors that may influence the outcomes of interest. There is also the significant challenge in observing impact quantitatively when considering the effects and legacy of Covid-19, and changing patterns of cycling and commuting. In this context, an experimental or quasi-experimental approach is not considered viable.

5.47 Therefore, it was agreed that other routes either within Cambridge or elsewhere cannot robustly be used as formal control areas. However, as noted above, data on "proximate

locations" and wider city-centre trends will be used to provide context as part of a theory-based approach, including in relation to potential displacement effects, wider cycling and walking trends, and to help triangulate the evidence on how Covid-19 may have influenced effects in relation to cycle usage, walking, and wider associated outcomes.

5.48 In practice, the comparison will include analysis of data on cycle and pedestrian counts and road traffic collisions involving cyclists, with data available from the GCP. No primary research on the "proximate locations" is proposed, given the site-specific context for Chisholm Trail, the fact that any survey work would be post-intervention only, the availability of both pre- and post-intervention count data, and taking into account the proportionality of evaluation activity.

5.49 Undertaking primary research with 'non-users' of the Trail was also considered, to provide evidence potentially on the factors that may influence the use of the Trail, and modal shift. However, this would be more appropriate to inform learning for future schemes and on-going implementation, rather than impact evaluation and is therefore not considered proportionate. Identifying an appropriate 'non-user' group would also be very challenging conceptually, as behaviours may change over time, and the research itself may lead to "contamination" in the evaluation (where non-users surveyed then do make use of the Trail as a result of the experience/participation in the research).

Data requirements

5.50 The data requirements for the evaluation approach for Chisholm Trail Phase 1 are summarised in Table 5-2.

Table 5-2: Data requirements for the proposed evaluation approach for Chisholm Trail Phase 1

Source of evidence	Requirements and approach
Primary evidence	• Surveys of cyclists and pedestrians (and associated CCTV count data to gather data on the representativeness of the sample), to be completed in June 2023 and June 2024 on the Chisholm Trail (specific locations to be agreed as part of an initial scoping stage). Key points include: ➢ The two surveys will be largely consistent to allow the data to be pooled for the final evaluation where appropriate, and to enable a comparison of results in 2023 and 2024 respectively. The 2024 survey will also include tailored questions for individuals that responded in the previous year to understand any changes in behaviours/perceptions between the two surveys. ➢ Data to be collected in June to allow for data to align with student term-time (Cambridge University and Anglia Ruskin University) ➢ The aim would be to achieve at least 200 survey completions with cyclists and pedestrians respectively for each wave of research,

Source of evidence	Requirements and approach
	although this will need to be confirmed in the scoping phase (based on existing usage data) • Consultations with stakeholders, to understand the wider effects and provide qualitative evidence to inform the theory-based assessment. Up to 20 consultations will be completed, for the final report in 2024.
Monitoring data and information	• Data on the outputs set out in the logic model related to the scheme delivery should be collated and reported as part of the evaluation (i.e. progress on cycle routes becoming fully operational, km of new or improved cycle paths, associated infrastructure completed). • Construction years of employment (i.e. to build infrastructure) should be provided by the GCP where available (e.g. using data from contractors), and where this is not available should be estimated by the evaluators using conversion rates from expenditure to construction years of employment. This analysis (where necessary) will be completed for the final evaluation.
Secondary data	• Cycle and pedestrian count data for the "on-trail locations', "proximate locations" and the wider city-centre should be collated and provided to the evaluators to facilitate the pre and post assessment for the route and wider context (including an assessment of potential displacement effects) • Data on road traffic collisions involving cyclists and pedestrians for the area around the Chisholm Trail should be provided to understand potential effects on improved safety outcomes. • These data should be provided in June 2023 and June 2024 to inform the mid-term and final report.

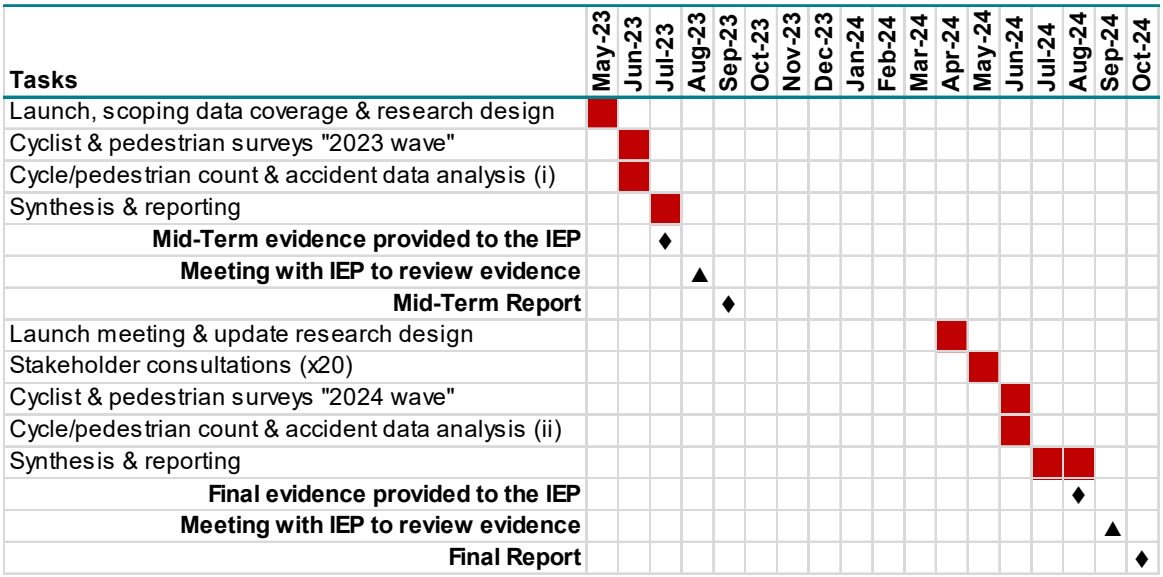
Source: GCP

5.51 As noted above, there will need to be an initial detailed scoping stage at the outset of the evaluation to review the consistency and quality of secondary data in relation to wider city cycle and pedestrian counts and road traffic collisions, to confirm stakeholder consultees, and undertake detailed research design for the cyclist and pedestrian surveys. This scoping exercise should also seek to gather information from the GCP on other investments and activities supporting the development/enhancement of the active travel infrastructure across the city in order to provide context for the theory-based assessment of the potential contribution of the Chisholm Trail Phase 1 to observed outcomes.

Timing and delivery

5.52 The timing of the evaluation for the Chisholm Trail Phase 1 and the key tasks to be delivered is set out in Figure 5-3. For context, the timetable includes the fixed milestones for the overall evaluation of the Investment Fund in Greater Cambridge, including the Mid Term and Final Reports that will draw on the evidence from the intervention-level impact evaluation.

Figure 5-3: Timetable for the evaluation of Chisholm Trail Phase 1



Source: GCP

5.53 The impact evaluation of Chisholm Trail Phase 1 will be delivered by the independent provider appointed by GCP following a competitive tender exercise to deliver the evaluation to inform the Gateway Review.

Skills Phase 1

Logic model

5.54 The logic model for the GCP skills intervention is set out below.

Logic model title	GCP Skills 1
Logic model type	People theme: 2B Skills revenue and 2D School age education
Interventions / projects covered by logic model	Greater Cambridge Apprenticeship Service (delivery March 2019- March 2021) / Careers advisers in schools

Theory of change:

A locally responsive skills systems is needed to forge stronger links between employers and the education system to drive growth across Greater Cambridge. While Cambridge is successful in attracting graduate and post-graduate talent, **businesses have suffered from skills shortages for technical and support functions and frequently claim that an inability to attract or retain a skilled workforce is their biggest barrier to growth[14].** One way to develop these skills is through apprenticeships. Apprenticeships blend learning and working and allow companies to develop employees with exactly the skills they need to help their organisations grow. At the same time as providing the companies with the talent to increase productivity, offer a step into a career for young people – and a step up for others. The Greater Cambridge Partnership is committed to substantially increasing the number of successful, high-quality apprenticeships across Greater Cambridge[15]. However, companies may not consider apprenticeships as part of their workforce recruitment strategy because they may not fully understand the recent changes to Standards and the Levy, be wary about the commitment, or be unable to attract suitable candidates for new apprenticeship opportunities. On the supply side potential candidates for apprenticeship roles may not know about such opportunities (due in part to insufficient career information or guidance) or, how to secure them.

The deal agreed between Government and Greater Cambridge committed to increasing the uptake of apprenticeships in growing sectors, specifically delivering 1,556 apprenticeships aligned to local growth sectors (professional scientific, bio-medical, clean-tech, technology, and advanced manufacturing); 420 of whom were additional (i.e. they started an apprenticeship as a result of the intervention) and at level 2 or 3.

The Investment Fund developed and supported the Greater Cambridge Apprenticeship Service between February 2019 and February 2021. Delivery of this phase of funding is now complete. The programme was delivered by Form the Future (FTF) and Cambridge Regional College (CRC) who supported and placed apprentices with employers. Training support was provided by CRC, West Suffolk College, Anglia Ruskin University and other independent training providers. It supported both organisations to create new apprenticeships, and candidates who could take these up. Financial support was concluded in 2021 at which point the partners had exceeded all their KPIs[16]. A subsequent phase of investment to support career guidance in schools and develop new learning pathways has built on the activity delivered in this phase (skills phase 2).

Assumptions: the two key partners brought their brands, skills and networks to the scheme to enable it to become operational very quickly, employers who participated either had not offered apprenticeships before, or apprenticeships at levels 2 or 3, or this type had not been offered before, candidates for apprenticeships made decisions to apply after impartial careers advice.

Other factors: the lockdowns associated with COVID-19 affected employers, schools and training providers, services had to shift mode rapidly and some recruitment decisions were paused during this period. In a tight labour market some apprentices may leave for other paid work before it is completed as soon as they have their qualifications / certificates and this may be especially prevalent in certain sectors (such as construction).

[14] Form the Future Final Report May 2021
[15] GCP Apprenticeship Service Specification.pdf (April 2018)
[16] The four KPIs were: KPI 1: 420 people starting an apprenticeship as a result of intervention by the Service; KPI2: 20 new employers have agreed to support an apprenticeship scheme, KPI3: 18 schools have agreed to support enhanced apprenticeship activity, and KPI 4: 7,500 students connected with employers.

Inputs	Activities	Outputs	Outcomes
Investment Fund inputs • £300,000 investment funding • £75,000 additional for 2 careers advisors for 12 months *Other inputs (including staffing and in-kind)* • Networks and connections with schools and employers developed by Form the Future and Cambridge Regional College • Teachers / tutors and assessors with skills to support new apprentices • Networks and connections with other colleges and training providers to support apprenticeships	• Creation of an apprenticeship brokerage service, with a focus on local growth sectors • Build a brand, marketing campaign and microsite • Promote through media and events to employers and candidates • Raise awareness of apprenticeships with young people through integrating material into schools' careers programmes • One to one support to help businesses create an opportunity • One to one support to help candidates select and apply for opportunities. • Record and report that activity which is additional and through the brokerage service • Develop and maintain data records with appropriate GDPR safeguards • Facilitate and grow existing connections/networks between employers, schools, potential apprentices and training providers	Between Feb 2019 and Feb 28th 2021: • 436 people started apprenticeship as a result of intervention by the Service • 327 employers engaged to create 425 new apprentice opportunities • 27 schools supported enhanced apprenticeship activities • 13,358 students connected with employers. Since 2019: • # apprenticeships fully completed • # apprentices gaining qualifications • Completion rate compared with sector benchmark • # employers from the scheme creating further apprenticeship opportunities • # schools recording better Gatsby benchmark scores on Compass+	**Theme-specific outcomes** • Better knowledge of apprenticeships among teachers, school / college students and their parents • Apprentice and employer satisfaction with matching service • Matched apprentice and employer satisfaction with each other • Continued employment of apprentices following completion • Wage uplift for apprentices (beyond minimum wage) **Broader outcomes** • Employers in participating sectors are: ➢ better able to recruit workers ➢ better able to upskill their employees

	• Change delivery mode in response to COVID-19 mitigation measures.		
Expected timescales for inputs / activities / delivery of outputs and outcomes			
Investment Fund inputs • £300,000 investment funding (2019-2021) • £75,000 additional (2020-2021) *Other inputs (including staffing and in-kind)*	• All activities delivered and complete by 2021.	• Apprenticeships should be minimum 12 month duration with at least 20% of time in learning • Most should have completed their qualification and their apprenticeship by mid-term report (September 2023)	• Impacts on employer recruitment behaviour should be observed from summer 2020 onwards • Impacts on apprentice progression should be observed from Sept 2021

Relationship to other interventions:
Other Investment Fund interventions are:
Initial Skills Programmes (2015-2018) The purpose of the service was to improve the employability of all students in Greater Cambridge area schools and colleges through active engagement with employers. It provided impartial career guidance services into schools, worked with schools, colleges, learning providers and businesses to identify workforce needs and implement strategies to meet them, and focussed on increasing the numbers of apprenticeship starts, particularly in the strategically important STEM sectors.
Skills 2 (2022-2025) Following the completion of the 2019-2019 Skills 1 programme a further programme was developed to support skills work in Greater Cambridge through the Covid-19 pandemic that did not duplicate national initiatives whilst focussing on supporting young people into employment, and adults who need to retrain, preventing NEET and ensuring employers can access the skills and talent they need locally.

Other non-Investment Fund activities:
- N/A

Source: GCP

Method

Overview of the approach

5.55 The impact evaluation of Skills 1 will be **theory-based, and use mixed-methods, including tracking of participants and qualitative insights**, in line with guidance in the National Evaluation Framework for Theme 2 interventions.

5.56 The **principal focus** of the evaluation will be to assess whether the intervention can plausibly be seen to have led to changed behaviours among employers (by creating apprenticeship opportunities), and candidates (to pursue these opportunities). It will explore the following assertions:

- the intervention created quality apprenticeship opportunities with employers that would not have happened were it not for the intervention; and that those opportunities addressed local skills shortages particularly in the STEM sectors
- the intervention supported young people so that they were aware of apprenticeships and new local opportunities, made informed decisions to apply and were supported to be successful in their application.
- the bespoke support offered by the service created realistic expectations about the apprenticeship opportunity (both for employer and apprentice) and created a better quality experience than would otherwise have been the case.
- capacity has been built into the system as teachers, businesses, careers volunteers in schools engage with the service, learn about apprenticeships and share their learning among their networks.

5.57 Contribution analysis will be used to examine a range of evidence that will trace the steps through the logic model and theory of change. Programme reports will be used to identify inputs and activities, monitoring data will provide outputs, and outcomes will be assessed by participant surveys (of both employers and apprentices). Attributing the observed effects (namely that 436 people started apprenticeships, and that 425 employers participated) to the programme will be done by asking participants what they might have done otherwise and by comparing trends of take-up, attainment and completion either within the GCP area, or, across participating sectors (depending on data availability and profile of the types of apprentice and apprenticeships).

5.58 The proposed approach outlined in this document will need to be reviewed after a **scoping exercise**. The scoping exercise will primarily be focussed on unpacking existing monitoring data which has been used to report progress against KPIs, and providing assurance about data protection protocols. It will need to review all documentary evidence including case studies created by Form the Future (FTF) and Cambridge Regional College (CRC) and other

management reports. More specifically in the scoping phase the evaluation will need to know (or know whether it is available):

- Employer information
  - Information about participating employers including their name, contact information, size and sector, number of apprentices, previous apprenticeship history
  - Contact data for participating employers and business advisers (GDPR compliant)
  - Comparator information about employers in the GCP area regarding their engagement with apprenticeships or T Levels and skills needs, gaps and shortages
  - Comparator information about employers in sectors that have been supported through the programme regarding sector participation in standard development, attitude towards and growth in apprenticeships.
- Apprentice information
  - Information about apprentices who have been supported through the programme focussing on those who applied and were successful in securing apprenticeship opportunities. Information about starts by age and other protected characteristics, sector, apprenticeship Standard, learning provider, level of qualification. Information about qualification attainment, level, apprenticeship completion and subsequent employment or training status.
  - Contact data for participating apprentices, providers, programme leads/assessors (GDPR compliant)
  - Comparator information about apprentices in Greater Cambridge starting during the same time period by age, other protected characteristics, sector, apprenticeship Standard, learning provider, level of qualification, attainment, completion and subsequent employment or training status.
- Careers environment information
  - Availability of results of previous FTF annual surveys of schools and pupils by educational institution and year
  - Compass+ self-completion assessment of all school and college careers guidance standards against the Gatsby benchmarks by provider and by each of the 8 benchmarks.
  - Contact data for careers leaders in schools and colleges (GDPR compliant).

5.59 If comparator information is available it will be assessed by the evaluation team to assess whether it is robust and reliable based on its method, coverage, analysis and presentation. If data is available at sufficient scale and in detail then it might be possible to construct a statistical comparator group. Where this is not the case data may provide good insight into local economic contexts, and trends.

5.60 The evidence from the secondary and primary data will be triangulated to assess the potential contribution of the Skills 1, with the sources of evidence for each key outcome summarised in the table below.

Table-5-3: Data collection mapped to impact indicators

	Employers			Apprentices			Career guidance		
	Participant Survey	Interviews	Other survey	Participant survey	Learner data	Interviews	FTF surveys	Compass +	Interviews
Better knowledge of apprenticeships	✓	✓	✓	✓		✓	✓	✓	✓
Apprentice & employer satisfaction	✓	✓		✓		✓			✓
Attainment & completion rates				✓	✓	✓			
Continued employment	✓	✓	✓	✓		✓			✓
Wage uplift for apprentices			✓	✓		✓			
Employers skills needs met	✓		✓			✓			✓

Source: SQW

Analytical approach

5.61 Contribution analysis has been selected as the most effective, practical and proportionate approach for the impact evaluation. This uses the evidence collected against the logic model and theory of change, to assess the contribution of the Skills 1 Greater Cambridge Apprenticeship Service to the outcomes observed for employers, participants and the career guidance environment in schools and colleges. It does this by assessing the contribution of the intervention relative to other factors, drawing on the quantitative and qualitative data collected.

5.62 In this context, a *plausible association* can be made (or attribution is demonstrated beyond reasonable doubt) if the following are satisfied:

- a reasoned theory of change is set out
- the activities have been implemented as set out in the theory of change
- the chain of expected results, e.g., on starts, attainment and completion of apprenticeships have occurred

- other influencing factors have been shown not to have made a difference, or the decisive difference.

5.63 In this case, other influencing factors include the range of other interventions that run alongside the matching service including; operation of the apprenticeship levy, prevailing recruitment and training initiatives by local companies, the statutory duty on schools and colleges to provide impartial career guidance that aligns with the Gatsby Benchmarks and the work of supporting initiatives from The Careers and Enterprise Company (such as Enterprise Advisers and Careers Hubs), and other enrichment activities (such as STEM Ambassadors).

5.64 The effect of Covid-19 on any learning and training activity during the extended period following the first national lockdown needs to be recognised. During this period schools and colleges were closed and training provision was moved online; employers who were not providing essential services were required to move their business online, business plans and recruitment planning was paused due to lack of certainty for the immediate, short and medium term. This makes any analysis of local trend data from 2019 through to the current time unreliable[17]. We consider that the most valid comparisons are those with contemporaneous groups.

5.65 It is important to recognise that a Contribution Analysis approach does not provide *definitive proof* that the intervention has had a causal effect. Rather, it provides an evidenced, systematic, and logical line of reasoning which gives a level of confidence of an intervention's contribution to the outcomes observed.

Other approaches considered

5.66 Other approaches have been considered and rejected. Experimental and quasi-experimental approaches to compare the progress of a control group of apprentices and / or employers over the same period within the Greater Cambridgeshire area. This was discounted because a method to create a control group (for example those who expressed interest but did not then pursue the option) was not created at the time of project delivery. Further factors shaping this assessment include data availability limitations (the profile of all participants is not known making a statistical comparator group difficult) and the relatively small geographical area (risking making individuals identifiable) making identification of a matched sample unsuitable. The creation of a matched sample of either employers and/or apprentices would be resource intensive as it would need the identification of a sample matched by age, geographical location, subject choices and skills requirements. Further considerations include the fact that all young people in the area have access to career guidance making the creation of a control group for the career guidance elements of the work untenable.

[17] See Education Statistics (2023) Impact of COVID-19 on reporting of FE and apprenticeship data. This states that historic data covering periods affected by varying COVID-19 restrictions, impacted on apprenticeship and traineeship learning and also provider reporting behaviour via the Individualised Learner Record. Therefore, extra care should be taken in comparing and interpreting such data.

Key sources of evidence

5.67 The availability of data, and specific details of what is captured in various sources is being explored and will be concluded in the evaluation scoping phase outlined above. The section below describes an approach to both primary and secondary data creation and collation that provide the evidence base for the evaluation.

Impact on Employers

5.68 The effect on participating employers will be explored through a self-completion online survey, supplemented with interviews. Contextual and comparator data from existing business surveys will be used. These are described below.

Employer surveys

5.69 The FTF have provided the names of 327 employers who went on to recruit additional apprentices[18]. The focus was on additional opportunities from employers and not just new employers engaged. As is set out in the logic model, we assume that for some of these it will be the first time they have employed an apprentice, or, for larger employers, the first time an apprenticeship at level 2 or 3 of this type has been recruited.

5.70 An employer survey will be designed for all employers who have recruited and trained an apprentice. Questions will cover prior use of apprentices, barriers to creating apprenticeships and recruiting apprentices, motivations for engaging, satisfaction with the service, the nature of the apprenticeship opportunity (Standard, level, duration), alternative sources of support or advice explored, satisfaction with the apprenticeship, any effects on their business, whether they continued to employ the apprentice and how they have progressed, subsequent actions with regard to apprenticeship opportunities, relative importance of the matching service to decisions made, and any future recruitment plans. They will also be asked the counterfactual question ('what might you have done otherwise?'). Some of these will be written up as short case studies for the report to provide rich insights into apprenticeship support for the reader. In this case, the case study text would be provided to the employer for approval prior to publication.

5.71 Employers who engaged with the service but did not recruit an apprentice after engagement with the Greater Cambridge Apprenticeship Service will be asked questions about their prior use of apprentices, barriers to creating apprenticeships and recruiting apprentices, motivations for engaging, engagement with the service, satisfaction with the service, alternatives considered and reasons for not pursuing the apprenticeship and their subsequent recruitment actions.

5.72 Securing responses from businesses to such surveys in sufficient number to provide meaningful data is challenging. We propose to use a 30 minute telephone survey in the first

[18] There may be other employers whose contact information was not provided to GCP, who either did not go on to recruit an apprentice or, who supported career guidance activities in schools and colleges.

instance to approach all 327 employers that did offer an apprenticeship and all those employers for whom contact information is available that did not. We would hope to achieve a 10% response rate. Non-respondents will be invited to participate in a self-completion online survey. The evaluator will work with the Service's advisors and team to develop a communication strategy to agree timing and key messages for the survey. They will be asked to invite participants to interview and subsequently to distribute an online survey, because this means the invitation is more likely to be read and actioned (as it comes from a known contact), and minimises risks associated with transfer of personal data.

5.73 Primary research is not being proposed with businesses that have not engaged with the apprenticeship service because a) it would need to ask employers about decisions taken when the intervention was running which would be unreliable and b) it is unlikely to elicit a response from a comparable group of employers in terms of sector, size and skills needs.

Other stakeholder interviews

5.74 Up to ten other professionals who support businesses with their training and skills needs will be asked to share their insights for the evaluation. These will include the advisers who provided the Service, those who work in other services locally (including other ITPs and training providers), relevant experts from Cambridge Ahead and other business networks (such as Cambridgeshire Chamber of Commerce and Federation of Small Business). A full list of stakeholder organisations and contacts will be included as part of the scoping stage.

Business surveys

5.75 Evidence from primary fieldwork (surveys and interviews) will be contextualised using other secondary evidence available to the evaluation. The scoping exercise will explore in more detail other robust evidence regarding:

- The experiences of employers in the same sectors as those who used the Service, but in different places who were employing and training apprentices during the same period – including the effects of the pandemic and any sector-specific issues that arose (for example research from CITB (for the construction sector) or Skills for Care).

- The experiences of employers in the Greater Cambridge area, their skills gaps and needs and how these changed over the same period – again assessing the effect of the pandemic among other environmental factors. (for example through the Cambridge Network or local analysis of national surveys such as those for the Institute of Apprenticeships and Technical Education).

Impact on Apprentices

5.76 The effect on participating apprentices will be explored through analysis of participation and completion data, and a self-completion online survey, supplemented with stakeholder interviews. These are described below.

Learner data

5.77 GCP can access the records of learners held on the Individualised Learner Record (ILR). Individual students have their own Unique Learner Number (ULN). Training providers in the vocational and technical education sector are required to record and track progress of students, which is linked to information about their personal characteristics and, qualification attainment and level, and course completion. This can be used both to describe and profile, and track the achievements of those who have had contact with the Service. The ULNs of all Service users who enrolled at CRC is known and this accounts for 286 of all 436 apprentices (66%). Scoping will test whether the ULN's of apprentices supported by other providers including West Suffolk College, and Anglia Ruskin University are available to the evaluation.

5.78 This also creates the potential for creating a counterfactual group of either all 436 apprentices who started courses and all other apprentices who started any other courses during the same period in the GCP area, or, all 436 apprentices by level of course and start year and all other apprentices who started similar courses by level and start year. Assessment of which option would be appropriate would depend on a number of considerations including the total number of apprentices who enrolled during the same period, and how reasonable a comparison would be based on level of learning and sector. A comparison of the participant group with the wider group might reveal differences in their attainment and completion. However, any observable differences would need to be moderated by consideration of personal characteristics (e.g. gender and age) and possibly employer size or prior experience of employing apprentices. The evaluators would assess the potential for counterfactual assessment once the description and profiling of apprentices who were supported by GCP and those that weren't was complete.

Apprentice survey

5.79 Evidence about the apprentice experience from their perspective will be important to provide impact information. A self-completion survey that asks all those who engaged with the Service about their experiences of it, how it helped them to make an informed decision, what other factors influenced their decision, and what they might have done otherwise will be designed. The survey tool will also ask about qualification attainment, employment progression (whether they remain at the employer, and whether they have seen a wage increase beyond the statutory minimum) and any future training plans. The survey would be distributed to all apprentices for whom contact details are known (currently 286), and a response rate of 10% would be typical.

5.80 Again, securing participation in a survey for an event that might have started up to four years ago needs to anticipate and prepare for low response. Scoping will explore the most practical method to distribute the survey and secure responses. A 'thank you' payment in the form of a £10 high street voucher or similar incentive could be considered alongside agreement of who should distribute it from the relevant training providers. Consideration of mitigating actions

(such as interviews with apprentices still in the system) will need to be an ongoing feature of project management discussions.

Stakeholder interviews

5.81 The evaluation needs to focus primarily on the effects of the Greater Cambridge Apprenticeship Service on the individual, with an assessment of the apprenticeship itself as a secondary focus. The Service cannot claim any effects of an apprenticeship if it did not influence the creation of the opportunity, or connecting a learner to that opportunity. The evaluation will need to interview those who were directly associated with the matching service (the personal advisers employed by it), and their peers including college admissions teams and careers leaders in schools and colleges to explore what other options might have been available to them.

5.82 The effect of the pandemic on the apprentice will also be important to assess within this set of stakeholder interviews. Tutors and assessors who supported the induction, training and assessment of apprentices during this period will be invited to participate.

5.83 Between 12 and 15 interviews across these two groups, with perspectives from different sectors, schools and training providers will provide an indicative range of insights.

Analysis

5.84 The data collected will provide primary evidence from both employers and apprentices who have participated with the service, additional primary evidence from informed stakeholders, and secondary contextual evidence from published research conducted within the same sector or locality contemporaneously. A 10% response rate would provide telephone survey data from c.32 employers (potentially with additional survey responses), and self-completion survey data from c.29 apprentices[19]. As with all survey research there is a risk of completion bias, which in this instance may skew responses towards those who had a more intensive engagement with the service. This would need to be highlighted in evaluation findings. The qualitative material would be thematically analysed to follow the structure of the research tools. The evaluation should map the extent and reach of matching service interventions across the Greater Cambridge to provide a visual representation of reach. Evidence from stakeholders familiar with the delivery of apprenticeships in the area and the nature and level of support provided to employers and apprentices during this period of change (i.e. the introduction of Standards and the Levy, plus the effects of the pandemic) will help triangulate research findings. Contextual insights from local, national or sector based research about apprenticeships will provide additional insight into prevailing trends.

[19] This number may increase if delivery partners (other than CRC) have agreements from learners to contact them for evaluation or research purposes.

Impact on career guidance

5.85 The matching service could not deliver its work without the foundation of an effective career guidance system in schools and colleges. It needs an infrastructure whereby schools and colleges routinely invite guests to provide careers information and insights, curriculum enrichment and personalised employability support. Similarly, it needs an infrastructure that allows local employers to connect to schools and colleges in ways that are easy to access, require minimal burden and are impeccable with regards to safeguarding.

5.86 The Investment Fund has contributed to this career guidance environment and many of its KPIs reflect the scale of its reach. However, while the evaluation must acknowledge and document this activity it cannot focus on the impact of this aspect of the investment. This is because the infrastructure has developed over decades, minimum standards are required by statute, and there are many other organisations, professionals and volunteers involved in its delivery. Therefore, assessing the effect of the intervention's additionality in this context would be extremely challenging.

5.87 Nonetheless it is important to account for it as it sets the context within which career-decisions are made by apprentices and by employers.

Form the Future data

5.88 Form the Future have undertaken surveys of pupils and parents in schools they support for several years. These provide a useful longitudinal account of the prevailing knowledge of guidance and attitude to options that provide useful context. They may also have insights and data relating to the prevailing extent and quality of information and guidance available to young people and their families across the Greater Cambridge area.

Compass+

5.89 Schools and colleges should be benchmarking their career guidance activity using the Gatsby benchmarks. The Careers and Enterprise Company own a tool called Compass+ that helps their careers leader to assess their current provision and focus on improvement. This is a self-completion tool although there is some external validation and because it is used over a period of time it provides helpful insight into what is being done well and where improvements might be required. Three of the benchmarks relate to 'encounters with employers and employees', 'experiences of workplaces' and 'encounters with further and higher education'. Compass+ data is not publicly available, but it is reported to each Combined Authority / LEP area's CEC enterprise co-ordinator. The evaluation should explore what might be available (possibly in anonymised form) and any trends that are emerging (compared to national trends) across the Greater Cambridge area. In addition The CEC produce survey and analysis based on Compass + in their State of the Nation annual reports that provide further context.

Interviews

5.90 Interviews with FTF will be undertaken (managers and advisers). These interviews will commence with a mapping exercise to define those funded services and where they have taken place. Interviews will then explore the type of support offered to young people or schools/colleges (enterprise advisor, workplace experience, talks and sights), scale and reach, value added by the service and what might have happened otherwise. Questions will specifically explore how the activity has informed young people and their parents about apprenticeship opportunities.

5.91 Further interviews with up to ten school and college leads, heads of sixth form and pastoral support leads will provide insights into the scale of support particularly with reference to apprenticeships and apprenticeship opportunity, and connections with employers and the effect on the career guidance environment. Some of these conversations may take place with the same people as those for the apprentice experience above.. This will then be developed further to map other services into schools and colleges to provide a sense of relative scale. Questions will explore the prevailing nature of career guidance prior to the intervention (with insights from Compass+ if possible), the nature and scale of support provided through the intervention, quality and reach, and the effect of it on young people and their parents, and on the system of career guidance provision in schools and colleges.

Analysis

5.92 The evaluation should map the extent and reach of career guidance interventions across the Greater Cambridge to provide a visual representation of reach. The context for career guidance interventions will need to be outlined in detail using contemporaneous information from the Careers and Enterprise Company surveys as well as local insights from stakeholders. Primary qualitative insights would be analysed thematically to follow the structure of the research tool. The report would be able to provide a narrative for the changes in the career guidance environment during the intervention period and a qualitative assessment of the contribution and effect of the career guidance activities delivered through the intervention on apprenticeships in Greater Cambridge. However, as we said earlier providing a definitive assessment of the intervention's additionality in this context would be extremely challenging.

Data requirements

5.93 The data requirements for the evaluation approach for Skills 1 are summarised below.

5-4: Data requirements for the proposed evaluation approach for Skills 1

Source of evidence	Requirements and approach
Primary evidence	Telephone and online survey sent to 327 employers who engaged with the Greater Cambridge Apprenticeship Service – with around 30 expected completions

Source of evidence	Requirements and approach
	Online survey sent to 286 apprentices, with around 30 expected completions. Interviews with 12- 15 stakeholders who were directly connected with the service (Service providers, employer groups, career guidance professionals, admissions and pastoral support professionals). Interviews with Form the Future (managers and advisers) Interviews about the career guidance environment with up to 10 school and college leads, heads of sixth form and pastoral support leads (some duplication with those above)
Monitoring data and information	Form the Future monitoring reports Learner data (ILR)
Secondary data	Compass+ reports or summary of reports Skills surveys of employers by sector and / or by area Form the Future stakeholder surveys

Source: GCP

5.94 As noted above, there will need to be an initial scoping stage at the outset of the evaluation to:

- review the availability, quality and coverage of secondary data, including survey and self-assessment data
- determine the extent to which individual data is available for all apprentices including the third who are registered with learning providers other than CRC
- identify the names and contact details of potential interviewees and clarify procedures need to ensure that all community is GDPR compliant.
- confirm the approach to the primary research, including the employer survey, apprentice survey, stakeholder consultees, and business interviews.

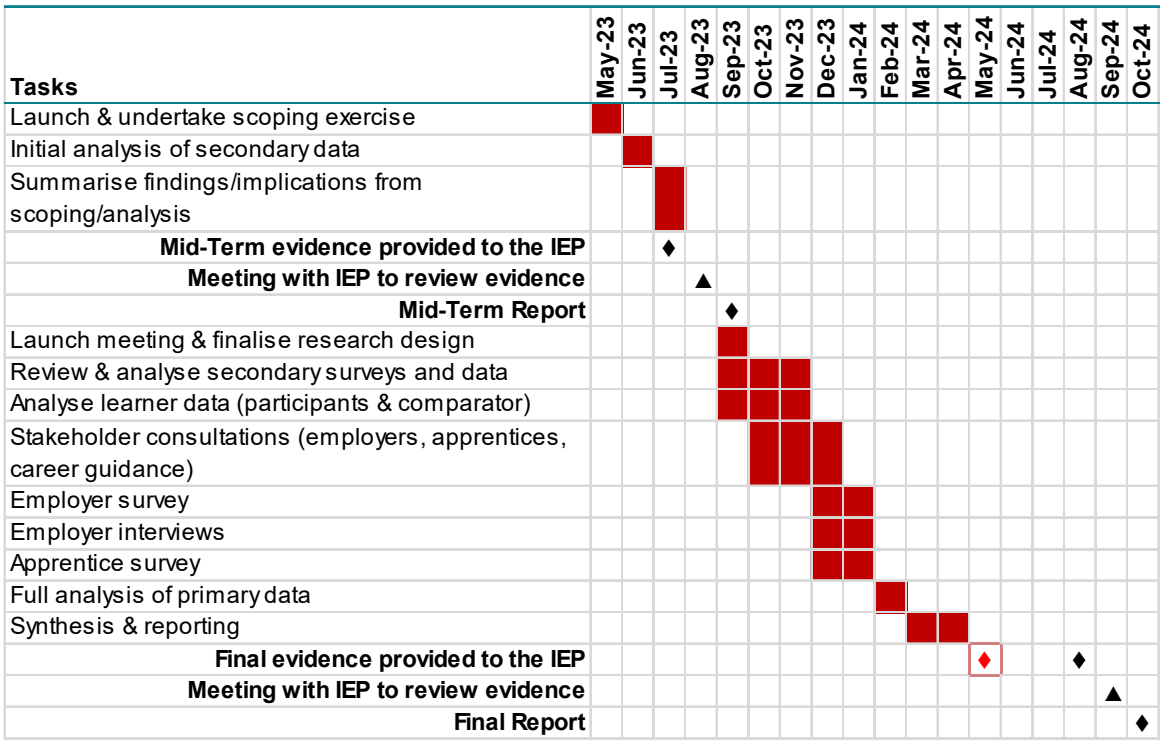
Timing and delivery

5.95 The Service was operational between Feb 2019 and Feb 2021. Employers and learners were supported throughout this period meaning there will be no cohort start date that is relevant to all participants and the period at which they engaged with the service could be at any point from four or two years ago (from the time of LEF preparation; March 2023). The duration of an apprenticeship has to be at least 12 months but can last longer depending on the employer and the pathway. We can assume that most apprentices should have completed their apprenticeship by now – even if there were delays associated with the Covid-19 pandemic. Therefore, the impact evaluation can commence as soon as resources are in place to deliver it

as there has been sufficient time elapsed for observable impact. The Figure below sets out the proposed timeline.

5.96 For context, the timetable includes the fixed milestones for the overall evaluation of the Investment Fund in Greater Cambridge, including the Mid Term and Final Reports that will draw on the evidence from the intervention-level impact evaluation. However, to help manage the review of evidence by the IEP, the aim will be to provide the evidence paper for the Skills impact evaluation in May 2024 following the completion of the research (as highlighted in the Figure below).

Figure 5-4: Timetable for the evaluation of Skills 1



Source: GCP

5.97 The impact evaluation of Skills Phase 1 will be delivered by the independent provider appointed by GCP following a competitive tender exercise to deliver the evaluation to inform the Gateway Review.

Histon Road

Logic model

5.98 The logic model for Histon Road is set out below.

Logic model title	Histon Road Bus Priority and Active Travel Improvement Scheme
Interventions / projects covered by logic model	Histon Road

Theory of change

Effective transport infrastructure is key to local economic growth, but poor or sub-optimal transport connections can act as a barrier to growth, due to congestion, inconsistent and unreliable journey times, infrequent services, or a lack of accessibility to areas of opportunity. Transport schemes have the potential to address these barriers and unlock economic and social opportunities. Histon Road is one of the key radials into Cambridge and is identified as an important public transport corridor. However, it suffers from localised congestion at peak times, bus journey time reliability is poor, and safety issues have become more pronounced over time, including a current trend of cycle collisions. Given anticipated increases in travel demand over the next decade due to the growth of the area, these issues are anticipated to deteriorate further without intervention. Through improvements to the road infrastructure including creating enhanced priority and facilities for buses, new and improved cycling and walking routes, and greening and landscaping improvements to the public realm, the Histon Road Bus Priority and Active Travel Improvement Scheme will support planned growth, whilst maintaining/improving journey quality and the local environment, and creating the capacity for an increased level of sustainable trips to employment/education sites.

Key assumptions: there is scope to further increase both walking and cycling above the current levels achieved in Greater Cambridge; there is scope to improve bus journey reliability; the scheme will enhance demand for housing and employment at key development sites.

Other Factors: the scheme is part of the Transport Strategy for Cambridge and South Cambridgeshire (TSCSC), the Long Term Transport Strategy (LTTS), and a strategic focus on supporting housing and employment growth across the City Region. There are a range of other schemes to support active travel, bus priority measures, and enhanced city centre access (including the Making Connections scheme), and the proximate Milton Road Scheme, which involves similar improvements to a further key radial route. Note there are likely to be short-term adverse effects during the construction period on Histon Road, and potentially in the initial period post-completion as the new infrastructure and travel patterns become established. Further, traffic conditions on Histon Road may be impacted by the developments on Milton Road which will be completed from Summer 2022- Summer 2024, with the potential for traffic displacement.

Inputs	Activities	Outputs	Outcomes
Investment Fund inputs • £10.36m from the Investment Fund *Other inputs (including staffing and in-kind)* • £0.24m in S106 funding • Stakeholder /public consultation feedback	• Cycling infrastructure development / improvement • Junction improvements (including a Cycle Optimised Protected Signals junction) • Bus priority works and supporting infrastructure (e.g. bus lane, floating bus stops)	• Scheme is constructed and becomes fully operational • Km of new or improved cycling infrastructure delivered • Km of dedicated bus / public transport infrastructure delivered • Km of new or improved footways • Junctions improved	**Theme-specific outcomes** • Reduced journey times for public transport • Increased levels of cycling for all journey purposes • Increased walking for all journey purposes • Increased passenger numbers on public transport

• Consultancy design team and early contractor engagement	• Key corridor improvements e.g. footway crossings, footways • New cycle parking facilities • Public realm improvement work, including greening	• m2 of improved public realm • Cycling / bus infrastructure improvements delivered • New or improved green infrastructure delivered (e.g. trees, green fencing) • Construction years of employment (i.e. to build infrastructure) • Metres data cabling installed	• Enhanced safety and reduction in collisions • Modal shift from car to sustainable (bus) and active (cycling, walking) modes of travel, with associated CO2 savings, and maintained/reduced congestion for general traffic • Improved local air quality • Enhanced local environment and streetscape • Enhanced access to education/training and employment opportunities **Broader outcomes** • Improved attractiveness of employment sites at Waterbeach barracks, Northstowe and wider city centre • Improved attractiveness of housing sites at Waterbeach barracks and Northstowe • Long-term positive effects on socio-economic conditions including: ➢ improved business productivity via travel time

savings, agglomeration effects

- improved public health (via increased active travel, air quality)

Expected timescales for inputs / activities / delivery of outputs and outcomes

- Stakeholder/public consultation – 2015-2016
- Consultant Design Team Inputs – 2016-2017
- Detailed Design – 2018-2019
- Construction – 2019-2022 (note that the main construction was completed in 2021 and the scheme substantially opened in 2021, with only minor works completed in 2022).
- **Theme-specific outcomes** listed above expected to start from scheme opening**.** Given the seasonal variation in cycling the benefits are expected to increase over time and may not reach their **maximum until summer 2025**.
- **Broader Outcomes** listed above in relation to the attractiveness of employment and housing sites can be expected to be realised following scheme opening, but it will take several years for this to be realised fully. The long-term positive effects on socio-economic conditions are expected to take 3-5 years post-opening to start to be realised and observable.

Relationship to other interventions

Other Investment Fund logic models:

- Milton Road – which aims to improve public transport, cycle, and walking infrastructure on a key route between the city centre, the A14 and A10, as well as the nearby villages of Milton and Waterbeach.
- Making Connections and Road Hierarchy Review, city-wide proposals to reduce vehicle travel and enable modal shift the walking, cycling and public transport

Other non-Investment Fund activities:

- Developer-led improvements at Northstowe and Darwin Green

Source: GCP

Method

Overview of the approach

5.99 The impact evaluation of Histon Road will be theory-based, using mixed-methods, including a 'pre' and 'post' approach to assess how the scheme has contributed to intended outcomes. Relevant outcome measures will also be compared to conditions/trends on other "best fit" radial routes into Cambridge that have not been subject to the equivalent treatment to provide insight into the potential contribution of the scheme. This is line with guidance in the National Evaluation Framework for Theme 1A interventions.

5.100 The principal focus of the evaluation will be to assess whether the intervention can plausibly be considered to have led to reduced journey times for public transport, increased use of public transport, and increased cycle usage and walking, and how this may have contributed to modal shift. Increasing the use of public transport and raising levels of active travel are recognised as key to relieving the transport pressures acting as a constraint to the economic growth of Cambridge.

5.101 This will draw on a mix of existing secondary data and primary research:

- secondary time-series data on bus journey times and multi-modal traffic counts covering cycles and vehicles: this will provide a pre- and post-position for Histon Road, and relevant other "best fit" radial routes into Cambridge to enable a comparison of trends over time and how this may vary to Histon Road

- primary research involving surveys of bus passengers, cyclists on the route and local residents (focused on pedestrian outcomes): this will provide evidence on the post-intervention position on Histon Road, but also ask about how the changes implemented through the scheme have influenced individuals' behaviours since it was completed (and the influence of other factors), to provide evidence on the change pre- and post-intervention.

5.102 Time-series data on bus patronage levels will also be sought from the local bus operator. The availability and coverage of this data will be dependent on discussions with the operator as part of a formal scoping stage and is not confirmed at this point. Where data is not made available, the primary research with bus passengers and local residents will be used to estimate effects on passenger numbers on public transport.

5.103 The evidence from the secondary and primary data will be triangulated to assess the potential contribution of the scheme, with the sources of evidence for each key outcome summarised in the table below.

Table 5-5: Sources of evidence for key outcome measures

	Secondary time-series data (pre and post)				Primary data (post)		
	Bus journey times	**Cycle counts**	**Bus passen-gers**	**Vehicle counts**	**Bus passen-ger survey**	**Cyclist survey**	**Resi-dent survey**
Reduced journey times for public transport	✓				✓		
Increased use of public transport			✓		✓		(✓)
Increased cycle usage		✓				✓	(✓)
Increased walking							✓
Modal shift		✓	✓	✓	✓	✓	✓
Source and frequency	*Cambs CC (Vix data) Live/daily*	*Radial Survey Annual*	*Operator TBC*	*Radial Survey Annual*	*Survey One-off in 2024*	*Survey One-of in 2024*	*Survey One-off in 2024*

Source: GCP

5.104 The primary research with cyclists and residents will also be used to gather self-reported evidence on whether the scheme has led to: improved safety (via perceptions of safety), an enhanced local environment (via perceptions of the environment), improved public health (via whether people are cycling/walking more frequently as a result of the route), and enhanced access to education/training and employment opportunities (via personal perception of these issues); this final outcome will also be covered in the bus passenger survey.

5.105 The following are also noted in relation to the outcomes set out in the logic model:

- Time-series data on road traffic collisions involving pedestrians and cyclists on Histon Road will be considered alongside the primary evidence from the cyclist and resident surveys in relation to enhanced safety and reduction in collisions (using Cambridgeshire Road Traffic Collision Data). It will not be possible to directly attribute any observed changes in collision levels to the scheme quantitively, given the range of other factors that will influence accident levels. Further, alongside a potential increase in cycling and walking volume, any absolute change in the number of collisions will require careful consideration (e.g., if there are many more cyclists/pedestrians, the absolute number of

accidents may not reduce materially). However, data on road traffic collisions on Histon Road will be reviewed both pre- and post-intervention, in order to inform the theory-based assessment on whether it is plausible that the scheme may have contributed to improved safety, including triangulated with self-reported data from survey respondents.

- The effects of the scheme on general traffic congestion will be based on the survey evidence on modal shift (i.e. whether bus passengers, cyclists and residents have switched from vehicles for their journeys on Histon Road) and analysis of complementary vehicle count data to estimate the effects on the number of vehicle trips saved. The evaluation will *not* seek to model or quantify the impact of the scheme on general traffic congestion directly, for example using journey times or average speeds. This reflects the core objective of the scheme to enhance active and sustainable travel, leading to reductions in public transport journey times, whilst maintaining or potentially reducing general traffic levels. Further, general congestion levels on Histon Road will be influenced by wider road network conditions and dependencies with non-treated areas, a range of other investments and activity in the area (including other Investment Fund interventions including Milton Road) that will influence road usage, and wider trends in travel behaviours. As such, it is anticipated that it would be very challenging to attribute any changes to general congestion to the scheme, and taken in isolation any changes in general congestion (particularly for private car usage) on Histon Road may present a misleading picture of the effects of the scheme, which is focused on supporting the GCP's overall transport vision of implementing improved transport infrastructure to encourage more people to use sustainable transport modes ahead of the private car. In turn, CO2 savings will not be quantified. It is noted that potential impacts on air quality will be considered at a programme level, with the findings included in GCP's Complementary Report.

- The effects of the scheme on enhanced attractiveness and deliverability of employment growth and housing development sites will be considered via qualitative research with key stakeholders. Stakeholders will also provide qualitative evidence on observed enhanced access to training and employment outcomes for learners/staff.

- The potential longer-term effects of the scheme on improved business productivity will not be assessed quantitatively. The evaluation will include interviews with businesses located on or around Histon Road to understand if and how the improvements may have led to effects on their organisation.

5.106 In this context, it is noted that the links between enhanced transport connectivity, including improved public transport and active travel provision, business productivity, and economic growth are complex. However, faster and more reliable movement for some sectors can enhance business productivity by reducing time wasted in transit by both people and goods. Further, for knowledge-based industries – prominent in Cambridge – maintaining a healthy and attractive environment, and ensuring appropriate accessibility to jobs and other services are important factors in attracting and retaining knowledge workers, and thereby

critical to supporting growth and maintaining Cambridge's position as a leading centre internationally for investment. Further, providing all residents and workers with improved means to travel into and around Cambridge, to prevent its growing pains (including increasing traffic congestion owing to car usage) from limiting Greater Cambridge's growth potential is core to the strategic focus of the City Deal and Investment Fund.

5.107 This strategic case for the scheme and its role within the rationale for the Investment Fund's focus on public transport and active travel interventions will be recognised fully in the evaluation. The focus of the analysis will be to consider whether the improvements on Histon Road have led directly to better public transport outcomes and higher levels of active travel, and the resulting modal shift (from car), thereby delivering against this strategic economic growth narrative.

Analytical approach

5.108 As noted above, the evaluation will be theory-based, applying a mixed-methods approach and the use of Contribution Analysis.

5.109 This will include a pre- and post-assessment on bus journey times, levels of cycle usage and walking on the route, and use of public transport, based on triangulating the evidence from the secondary and primary data.

5.110 The secondary data will identify bus journey times, vehicle and cycle counts, and potentially bus patronage levels, both before and after the intervention. This time-series data will be triangulated with surveys that will gather evidence – using respondent recall – on the extent to which behaviours have been changed as a result of the Histon Road scheme and why i.e. are individuals cycling, walking or using the bus more or less now than before the scheme, is this instead of using other travel modes, and is this because of the improvements or other factors? Together this evidence will be used to estimate quantitatively the potential effects of the scheme on key outcomes and modal shift.

5.111 To complement this pre- and post- assessment and inform the Contribution Analysis, the evaluation will also involve comparing any changes observed in time-series data on Histon Road to other "best fit" radial routes into Cambridge that have not been subject to the equivalent treatment.

5.112 In analysing the data, the focus of the impact evaluation of Histon Road will be to test the extent to which the activities and outputs of the logic model (as set out above) have been delivered, and whether there is plausible evidence that the scheme has made a contribution to realising the anticipated outcomes, based on the range of evidence collated and analysed.

5.113 This will include a formal Contribution Analysis. This involves assessing the evidence collected against the logic model and theory of change, to assess the scale and nature of outcomes observed (e.g., change in levels and patterns of cycling and walking), and the

contribution of the Histon Road scheme to this, relative to other factors, drawing on the quantitative and qualitative data collected. Other factors influencing outcomes may include the effects and legacy of Covid-19 leading to changes in travel behaviours, the effect of other transport investments or developments in the city (including in relation to the bus operator e.g. changes in service levels or quality), wider investments and developments which may have led to increased/reduced movements associated with Histon Road (including the similar scheme on Milton Road), and broader social and economic drivers and conditions which may influence behaviours.

5.114 In this context, a *plausible association* can be made (or attribution is demonstrated beyond reasonable doubt) if the following are satisfied:

- a reasoned theory of change is set out
- the activities have been implemented as set out in the theory of change
- the chain of expected results, e.g., effects on bus journey times and cycle usage can be shown to have occurred
- other influencing factors have been shown not to have made a difference, or the decisive difference.

5.115 It is important to recognise that a Contribution Analysis approach does not provide *definitive proof* that the intervention has had a causal effect. Rather, it provides an evidenced, systematic, and logical line of reasoning which gives a level of confidence of an intervention's contribution to the outcomes observed. This assessment of a contribution is consistent with the challenges identified above that preclude the use of a formal comparison group, time-lags in the collation of data on the route, and the complexity of the delivery environment including the potential influence of other schemes and the legacy effects of Covid-19 on travel and particularly commuting patterns.

Key sources of evidence

Time-series data

5.116 Bus journey times for both Histon Road and the "best fit" radial routes will be sourced from Cambridgeshire County Council, who have access to detailed time-series data on the local bus service using the 'Vix' database. This database contains detailed historic 'real-time' information collected via hardware installed on buses on a wide range of indicators including actual travel time which can be filtered by corridor (including Histon Road) and service.

5.117 The database also includes a range of other data that may also be of use contextually including details on bus stops, bus speeds, min/max journey times, number of journeys, scheduled journey time etc. The data to be collated and detailed research design (e.g., on indicators

captured, level of detail etc.) will be reviewed in the detailed scoping phase. However, in principle, this will allow the evaluation to analyse how any changes in bus journey times pre- and post-intervention on Histon Road compare to changes on the "best fit" comparator corridors/services. Care will be needed in this analysis considering the dependencies and complexities associated with the wider transport network, including where service levels and quality may change owing to unrelated factors, and the effects of other transport and wider infrastructure investment.

5.118 Cycle counts and motorised vehicle counts times for both Histon Road and the "best fit" radial routes will be sourced from the Annual Cambridge Radial Survey, which involves an annual, one-day survey in Oct/Nov counting pedestrians, cycles, and motorised vehicles by type at half hourly intervals, 7am – 7pm. Again, this will allow the evaluation to compare the position on Histon Road pre- and post-intervention, and compare any changes in the volume of cycles and motorised vehicles between Histon Road and the "best fit" radial comparators, taking into account the different route characteristics and functions. For Histon Road specifically, this data will be triangulated with survey evidence to assess quantitatively modal shift.

5.119 The count locations for the Radial Survey are set out in the map below. The "best fit" locations will be identified in an initial scoping stage, to ensure that comparisons to Histon Road are meaningful. It is noted that this will not include the proximate Milton Road scheme, with the construction on this scheme launching at the point that Histon Road was completed.

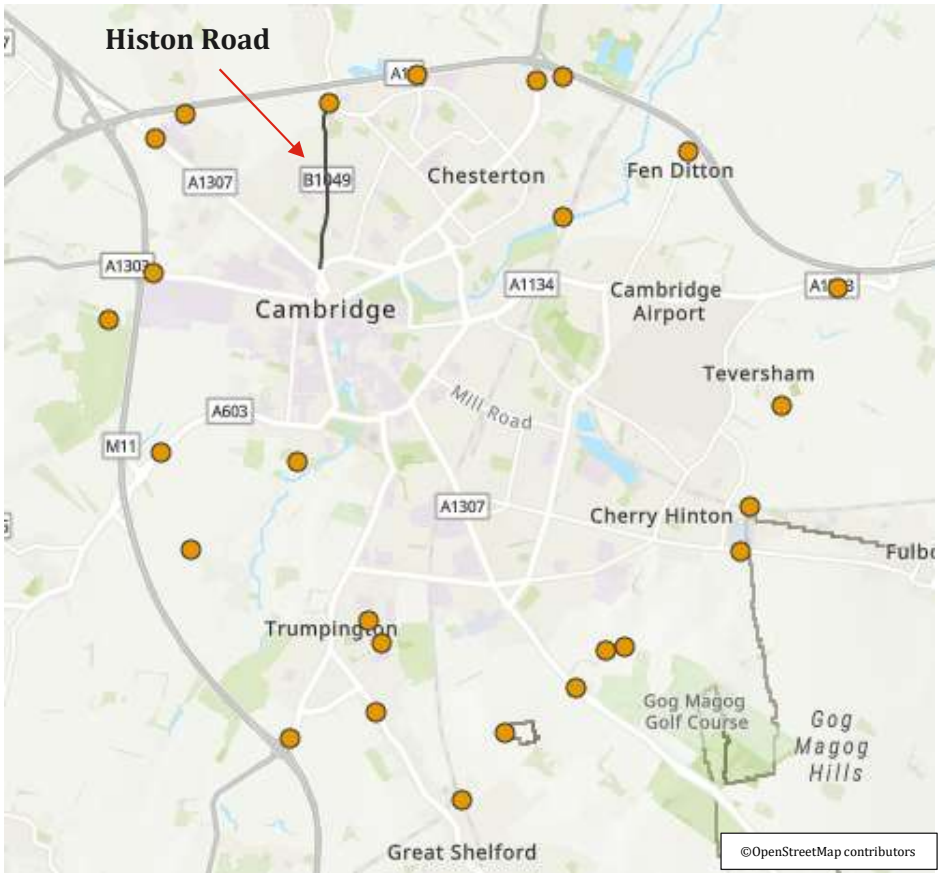
5.120 It is also noted that the location of the counter for Histon Road is to the north of the road near the junction with the A14. This has two implications:

- First, care will be needed in relation to using this data in the assessment of the change in cycle counts and the relationship to the improvements on Histon Road. Whilst there have been some improvements through the project in this area of Histon Road (widening the on-road cycle lane from A14 to Kings Hedges junction), the counter is located some distance away from the main residential area, and it may undercount levels of cycling on the road overall. This highlights the importance of the cyclist intercept survey for assessing the effects of the scheme on cycling levels.

- Second, and linked to this, although data is also collected on pedestrians via the Radial Survey at this location, it is located a significant distance away from the pedestrian improvements (which are further to the south on the road), and this part of the road is principally used by motor vehicles e.g. the October 2021 data recorded 116 pedestrian counts, and 16,664 motor vehicle counts[20]. As such, it is not proposed that the Radial Survey data is used to inform the assessment effects on walking, which will be based principally on the findings of the resident survey.

[20] Cambridgeshire County Council. Traffic Counts 2017-2021

Figure 5-5: Annual Cambridge Radial Survey locations



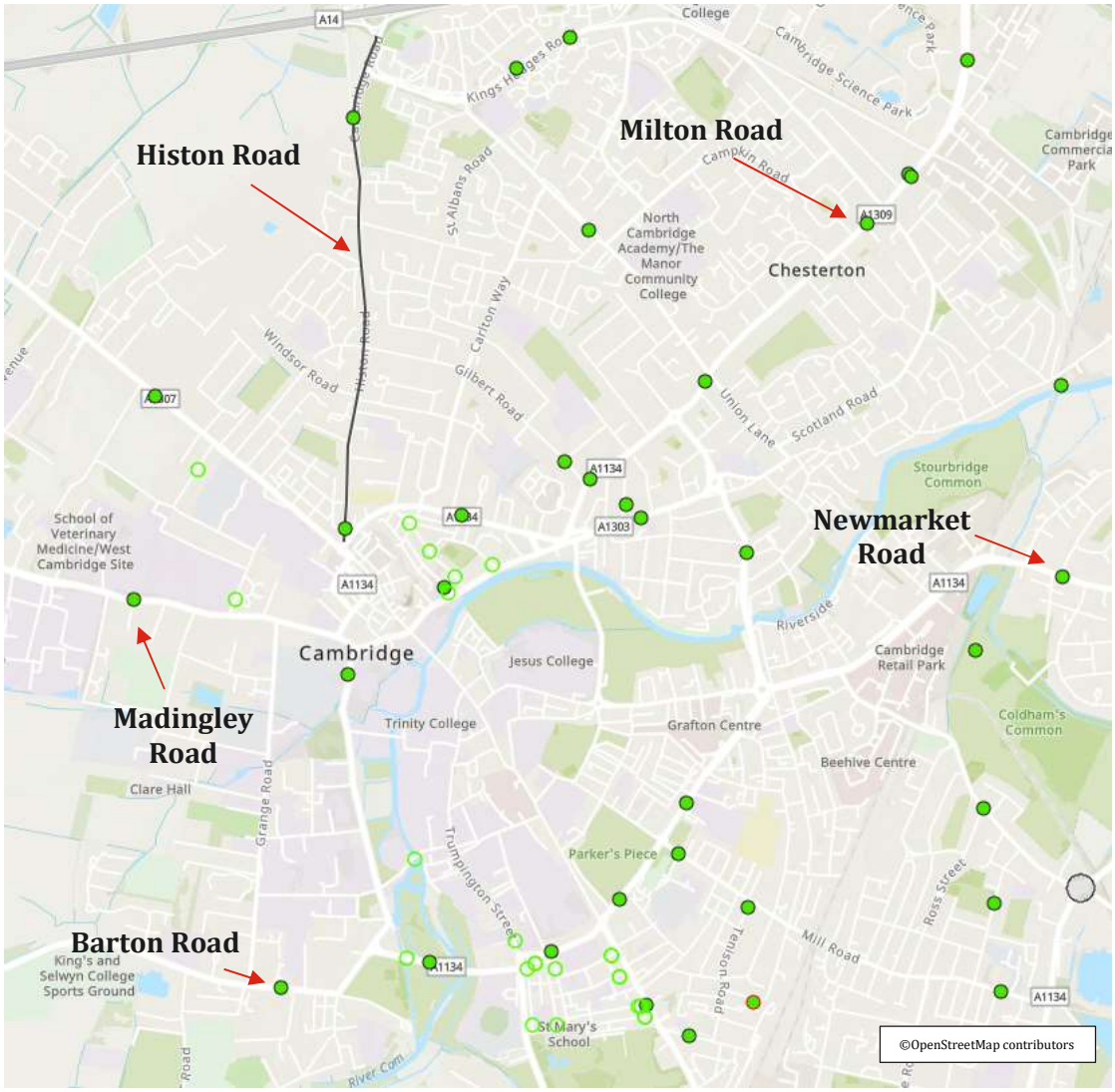
Source: GCP

5.121 There is also a network of Vivacity Sensors across Cambridge that provide permanent sensors counting pedestrians, cycles and motorised vehicles in 5-minute, 15-minute, hourly and daily intervals. There are two sensors on Histon Road, operational and providing data (both "in" and "out" of the city centre) since September 2019. With the Histon Road scheme construction launching in January 2020, this provides potentially three months of pre-intervention data, and full post-intervention data (with data collection on-going). The location of the sensors are shown in the map below.

5.122 However, the sensors on Histon Road and in other locations were upgraded in mid-2022, and analysis[21] has indicated that data on cycle counts and pedestrians is not consistent before and after the upgrade. This means that the evaluation cannot use the Vivacity Sensors to directly compare pre- and -post intervention levels of pedestrians and cyclists on Histon Road. However, given the upgrades have led to systematic changes in counts, it may be possible to make some use of the data to compare the change before and after the update on Histon Road (i.e. late-2019 to late-2022, and late-2023) to the change before and after the same dates on other sensors on comparator roues, for example Madingley Road, Barton Road or Newmarket Road (as shown below, with Milton Road identified for information).

[21] Vivacity Sensor Validation Exercise: June 2022 (cambridgeshireinsight.org.uk)

Figure 5-6: VivaCity sensor locations



Source: GCP

5.123 Although care would be needed in this analysis, this would provide further evidence on the potential effects of the scheme on walking in particular, which will be based principally on the resident survey (given the location of the Radial Survey counter as discussed above). Further, the Vivacity data will provide a very rich dataset on levels of cycling and walking on Histon Road from mid-2022 onwards which aligns with the timing of the full completion of the scheme and helps to mitigate the issues with cycling data on the Radial Survey also discussed above. The use of this data will therefore be considered in more detail in the detailed scoping stage.

Bus passenger survey

5.124 A survey of bus passengers will be completed in mid-2024 to inform the final evaluation of the scheme. This will involve gathering data on:

- current travel behaviour, including frequency, purposes of the use of the route and origin/destination

- change from pre-intervention travel behaviour (where relevant), including evidence of modal shift (including from car to bus), and factors influencing this including related to the improvements to Histon Road and other factors

- change from pre-intervention perception (where relevant) on the following conditions, and factors influencing this including related to the improvements to Histon Road and other factors

  - access to education/training and employment opportunities (where relevant)
  - changes in journey times and reliability
  - propensity to travel by bus

- awareness of the improvements to Histon Road

- characteristics, including gender, age group, disability

5.125 At this stage, the expectation is that the surveys will be completed on-board buses travelling both towards and away from the city-centre (on routes "A" and "8") via a mix of face-to-face and self-completion surveys. This will need to be agreed in the scoping phase, including via discussions with the relevant operator. Surveys will be undertaken between 7am and 7pm on weekdays and at the weekend over two weeks in May 2024. The survey will aim to secure 400 completions (200 in each direction). The specific services/timings to be covered via the surveys will be defined in the study scoping phase.

5.126 The population is not known at this stage in advance of the research (with the population captured by the CCTV installed for the work). However, 400 completions (200 in each direction) has been proposed as the target sample size to provide an expected deliverable, reasonable and proportionate level of confidence in the results (with 200 completions resulting in a 95% confidence interval of up to +/-6.5%[22]). It is also noted that this is explicitly a *minimum* target (not a maximum target), and survey fieldwork will continue as planned even if the target is reached.

5.127 Several points/limitations regarding the approach (and proposed solutions to help address/mitigate these issues where relevant) are highlighted explicitly.

- The 7am-7pm time fieldwork period may influence the results, with users outside this time not captured, and potential differences in the use/purpose of bus usage. However, these hours are considered to be the most appropriate and proportionate to cover both

[22] The exact confidence limits will depend on the individual survey question and results which cannot be known at this stage.

commuting (on weekdays) and leisure/local access (on weekends) usage.[23] Further, this period includes the points when effects on modal shift are expected to be most pronounced i.e. including both the morning and evening 'rush hour' period for commuting, school-related travel etc. A two-week research period is proposed to take into account variation in weather which may influence both the volume and characteristics of bus users and travel purpose.

- For any survey the results are subject to potential response bias and a degree of uncertainty. Further, for this survey, the scale of the characteristics of the population are not known. This will be considered in the scoping stage, including seeking to access any data from the operator on the level of usage and (if this is collected) characteristics of users to inform the data collection and subsequent analysis. If the sample is found to not be representative of the population (either based on detailed data or compared to operator evidence and wider data on bus patronage in Greater Cambridge and nationally, where this is available), weighting will be employed to adjust the survey results to reflect the population. Where robust data on the population is not knowable, conclusions and findings will be caveated as appropriate.

Cyclist survey

5.128 A survey of cyclists will be completed in mid-2024 to inform the final evaluation of the scheme. This will involve gathering data on:

- current travel behaviour, including frequency, purposes of the use of the cycle route and origin/destination
- change from pre-intervention travel behaviour (where relevant), including evidence of modal shift (including from car to cycling), and factors influencing this including related to the improvements to Histon Road and other factors
- change from pre-intervention perception (where relevant) on the following conditions, and factors influencing this including related to the improvements to Histon Road and other factors
  - access to education/training and employment opportunities
  - enhanced local environment
  - perception of safety of the route
  - propensity to cycle
- awareness of the improvements to Histon Road

[23] It is also noted that surveys will require the presence of researchers on-site, potentially working alone, meaning that times before/after 7am and 7pm are not considered appropriate or proportionate.

- characteristics, including gender, age group.

5.129 The survey will involve cyclists being handed cards at a selected safe point (or points) along Histon Road (to be confirmed, subject to detailed planning), inviting the cyclists to complete an online survey (by visiting a weblink referenced on the card). CCTV will be installed for the period that these cards are handed out, so as to understand how representative a sample is obtained from the population of cyclists that passes the survey team (e.g., by monitoring principal characteristics such as gender). Surveys will be handed out between 7am and 7pm on different weekdays and at the weekend over a two-week period in May 2024, in order to obtain a broad sample of users. The survey will aim to secure 200 completions (100 in each direction). The population is not known at this stage in advance of the research (with the population captured by the CCTV installed for the work). However, 200 completions has been proposed as the target sample size to provide an expected deliverable, reasonable and proportionate level of confidence in the results (with 200 completions resulting in a 95% confidence interval of up to +/-6.5%[24]). It is also noted that this is explicitly a *minimum* target (not a maximum target), and survey fieldwork will continue as planned even if the target is reached.

5.130 Close involvement of the GCP (and other organisations as required) will be essential in undertaking these surveys, to ensure that survey work aligns with and complements any similar efforts already underway, and to ensure that the process obtains appropriate permissions and sufficiently takes account of any sensitivities.

5.131 Several points/limitations regarding the approach (and proposed solutions to help address/mitigate these issues where relevant) are highlighted explicitly.

- First, the 7am-7pm time fieldwork period may influence the results, with users outside this time not captured, and potential differences in the use/purpose of usage. However, these hours are considered to be the most appropriate and proportionate to cover both commuting (on weekdays) and leisure/local access (on weekends) usage.[25] Further, this period includes the points when effects on modal shift are expected to be most pronounced i.e. including both the morning and evening 'rush hour' period for commuting, school-related travel etc. A two-week research period is proposed to take into account variation in weather which may influence both the volume and characteristics of cyclists and travel purpose. Further, it is noted that the survey data will not be used as the main source of evidence on cycling levels; this will be drawn from the Vivacity data, which will also provide data throughout the year which can inform the analysis of potential levels of modal shift when triangulated with the survey evidence.

[24] The exact confidence limits will depend on the individual survey question and results which cannot be known at this stage.
[25] It is also noted that surveys will require the presence of researchers on-site, potentially working alone, meaning that times before/after 7am and 7pm are not considered appropriate or proportionate.

- Second, individuals that do not have access to the internet will not be able to complete the survey, which may lead to some variation in the representativeness of the survey sample to the population. Given the likely demographic and spatial context for the survey, it is not considered a material risk that a sufficient number of individuals will not able to access the internet, and that this will lead to a statistically significant effect on the representativeness of the sample. Therefore it is not considered proportionate to offer alternative response mechanisms. However, reasons for refusal will collected, and if this is found to be an issue influencing variation between the sample and the population (i.e. individuals indicating they would be willing to complete the survey but are unable to do so as they do not have access to the internet), this will be taken into account in the analysis e.g. to include weighting for particularly characteristics where this was found to be most pronounced.

- Third, for any survey the results are subject to potential response bias and a degree of uncertainty. As noted above, CCTV data will be used to understand how representative a sample is obtained from the population of cyclists that passes the survey team. Where the sample is found to not be representative of the population, weighting will be employed to adjust the survey results to reflect the population.

- Fourth, construction on the Milton Road scheme may be on-going at the point of the survey in May 2024. This will need to be taken into account in the analysis of results, with the potential for displacement effects from Milton Road, and it may be appropriate for this to be included as a specific question in the survey i.e. whether individuals were using Histon Road owing to the on-going work on Milton Road.

Resident survey

5.132 A resident survey will be completed in mid-2024 to inform the final evaluation of the scheme. The principal focus of the survey will be related to the effects of the scheme on walking, and involve gathering data on:

- current levels of pedestrian usage of Histon Road, including frequency, purposes of the use of the road as a pedestrian

- change from pre-intervention travel behaviour (where relevant), including evidence of modal shift (including from car to walking-only and car to multi-mode travel including walking), and factors influencing this including related to the improvements to Histon Road and other factors

- change from pre-intervention perception (where relevant) on the following conditions, and factors influencing this including related to the improvements to Histon Road and other factors

  - the quality of the pedestrian experience e.g., lighting, kerb level, crowding, pavement evenness, benches, directional signage, crossings, and conditions for people with mobility impairments, visual impairments etc.
  - the quality of the local environment and streetscape on Histon Road
  - safety of Histon Road as a pedestrian
  - access to services, education/training and employment opportunities
- awareness of the improvements to Histon Road
- characteristics, including gender, age group, length of time resident in the area, and relevant household characteristics.

5.133 The survey will also include several questions on whether the improvements on Histon Road have led to any other effects on travel behaviours and perceptions related to (i) usage of public transport, and the factors influencing this (ii) cycling levels following the completion of the scheme, and the factors influencing this (iii) overall levels of congestion and (iv) overall attractiveness of the area. This will be used to triangulate with the other sources of evidence on public transport and cycling to inform the assessment of whether there is plausible evidence that the scheme has made a contribution to realising the anticipated outcomes.

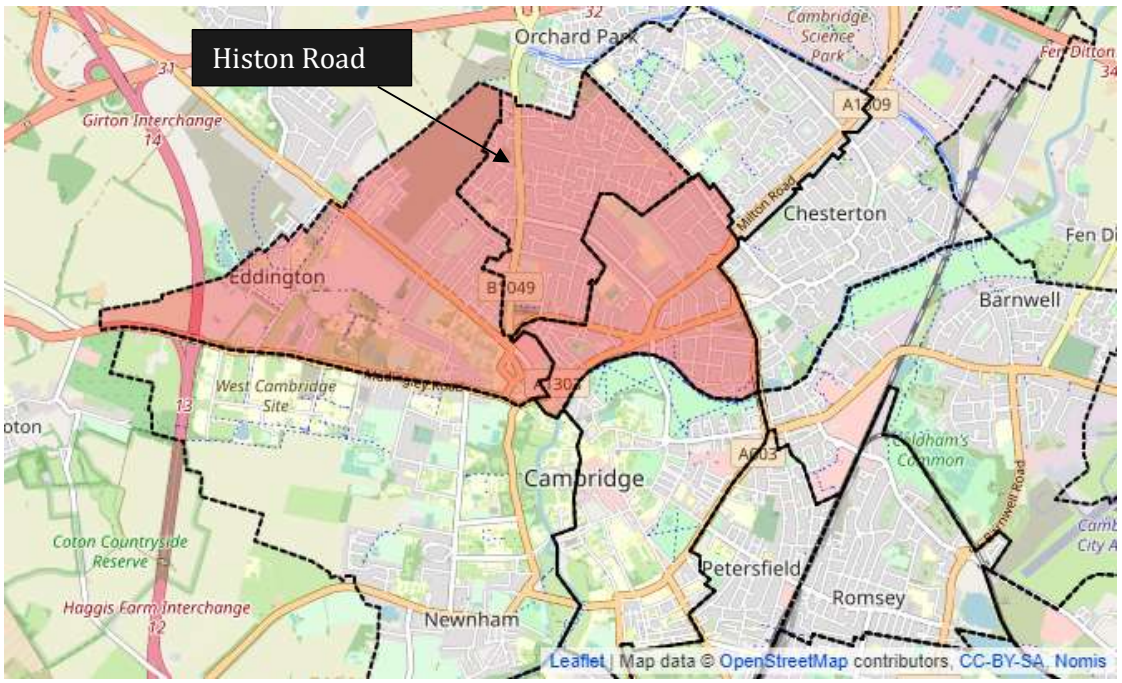
5.134 Residents will be surveyed via telephone, using a Random Digit Dial methodology (RDD). The exact spatial definition of the survey will be confirmed in the scoping phase, however this will include households up to c.1km radius of Histon Road, to reflect the likely areas within which the improvements are likely to influence resident behaviour. The aim will be to complete up to 400 interviews.

5.135 By way of context and for illustration of the potential household population coverage, data from the Census 2021 indicates that in the three wards of Arbury, Castle, and West Chesterton (see map below) which surround Histon Road, there were around 10,200 households. In practice, the survey will also include relevant households in the Orchard Park area (in the South Cambridgeshire ward of Histon & Impington), with 400 completions resulting in a 95% confidence interval of up to +/-4.8% [26]).

5.136 For any survey the results are subject to potential response bias and a degree of uncertainty. Data from the Census 2021 will be used to identify key household and individual characteristics of the local area, with key data collected in the survey to enable an assessment of the representativeness of the survey sample to the population. Where the sample is found to not be representative of the population, weighting will be employed to adjust the survey results to reflect the population.

[26] The exact confidence limits will depend on the individual survey question and results which cannot be known at this stage.

Figure 5-7: Arbury, Castle, and West Chesterton wards



Source: Nomis

Qualitative research

5.137 Up to 10 consultations will be undertaken with key stakeholders to understand the effects of the Histon Road scheme on the attractiveness and deliverability of new housing and employment sites (e.g., Waterbeach Barracks, Northstowe). The consultations will also consider (where relevant): observed enhanced access to employment/training outcomes for learners/staff a result of the improvements, which may include the development of their own incentives, initiatives or investments (realised or planned) related to sustainable/active travel, including considering how and why the scheme may have influenced this; and any wider organisational benefits or effects of the improvements (both direct and indirect).

5.138 Consultee organisations will be confirmed in the scoping stage, however, at this point the expectation is that this will include, for example, local councillors and council officials involved in planning/economic development/cycling, relevant schools/colleges and educational institutions, and landowners and developers involved in bringing forward relevant employment and housing sites. The effects will be considered qualitatively.

5.139 A focused round of targeted interviews with up to 15 businesses located on or around Histon Road is also proposed. The purpose will be to gather primary evidence on if and how the scheme has affected local businesses, for example in relation to journey times for staff/employees, levels of footfall, the quality of the local environment for business, and any wider effects related to economic growth. The purpose here will *not* be to seek to gather quantitative effects on business performance or productivity (where direct attribution to the scheme is not considered viable), and the focus will be on engaging with businesses to provide

qualitative insights and evidence, not to undertake a representative survey of the local business base.

Other approaches considered

5.140 Establishing a formal control as the basis for a quasi-experimental evaluation was considered. Three options were possible.

- First, identifying a control area in another location/city. However, Cambridge's transport network and context is unique. For example, Cambridge has higher rates of cycling than any other city in the country. For example, cycling statistics from Sport England's Active Lives Survey indicated that 50% of adults in Cambridge cycled at least once a month in 2021, some ten percentage points above Oxford (at 40%, the second highest proportion) and 13% across England overall. Likewise, whilst 43% of adults in Cambridge cycled at least once a week in 2021, the equivalent for Oxford (again, the closest comparator) was just 34%, and the equivalent for England was 9%. As such, comparing the effects of a scheme such as Histon Road which is seeking to influence levels of active travel to a location in another city with a very different transport network, culture and behaviours was not considered appropriate.

- Second, identifying a control area within Cambridge. However, a wide range of other road and cycling improvement schemes have been delivered across the city e.g., at Milton Road. Further, each of the radial routes into Cambridge will be influenced directly and indirectly by this range of interventions, and there are also site-specific contexts which limit the ability to identify a formal control area. This leaves no viable options for identifying a 'non-affected' route in Cambridge to use as a formal control area as the basis for quantitative/statistical analysis.

- Third, the use of a 'synthetic' control group. This is a quantitative method which uses historical data to construct a 'synthetic clone' of a group/area receiving a particular intervention. Divergence between the treatment area and its synthetic clone provide the impact estimate.[27] In practice this would mean using historical data on traffic and cycling volumes, mix and trends and from other radial routes into Cambridge to construct a 'synthetic Histon Road', with data from the other routes weighted to best reflect the characteristics of Histon Road. This weighted average calculated using historical data would then be continued through the time-series after implementation to form the 'synthetic clone' i.e., comparing what has happened on Histon Road to the weighted average of the synthetic clone (drawn from the time-series data from those other routes). As set out in the Magenta Book, the key advantage of this method is that it can create a relevant and highly visual point of comparison where no suitable comparators exist. However, this approach is not considered viable given: the interdependencies and relationships between Histon Road and other radial routes; the different functional and

[27] Magenta Book Annex A. Analytical methods for use within an evaluation.pdf (publishing.service.gov.uk)

spatial characteristics of each route; the other interventions that may influence trends on other routes (e.g. scheme such as the Cambridge Eastern Access, Chisholm Trail Phases 1 and 2, Milton Road scheme) meaning that they have been subject to or influenced similar treatment; the limited period for post-completion data that will be available meaning that observing any divergence in trends will be challenging; and the potential differential impacts of Covid-19 and changing patterns of travel which may impact on radial routes differently over time. It is also noted that this approach would be highly exploratory, and subject to a high level of uncertainty in relation to its potential to generate robust and meaningful results of impact.

5.141 Further, the wide range of other interventions designed to influence sustainable and active travel within Cambridge means that the intervention has been delivered within a complex environment with multiple factors that may influence the outcomes of interest. There is also the significant challenge in observing impact quantitatively when considering the effects and legacy of Covid-19, and changing patterns of cycling, walking and commuting. In this context, an experimental or quasi-experimental approach (e.g., difference-in-difference) involving the use of a formal control area is not proposed. However, as noted above, comparison to trends on "best fit" radial routes into Cambridge will be used to provide context as part of a theory-based approach.

5.142 In practice, the comparison will include analysis of trends on bus journey times, bus patronage numbers (if this data is made available), cycle counts and vehicle counts on these other routes to see how any changes may compare to the experience on Histon Road to inform the assessment of the potential nature and extent of the effects of the scheme. This analysis will also help to contextualise the trends observed on Histon Road in relation to the effects of Covid-19, and how this may have influenced outcomes of the scheme. No primary research on the "best fit" comparator routes is proposed, taking into account the proportionality of evaluation activity and purpose of the comparison (which is not seeking to estimate a causal effect via quantitative analysis, or effect size).

5.143 Undertaking primary research with 'non-users' of Histon Road was also considered, to provide evidence potentially on the factors that may influence the use of the improved cycle, pedestrian and public transport infrastructure. However, this would be more appropriate to inform learning for future schemes and on-going implementation, rather than impact evaluation, and is therefore not considered proportionate. Identifying an appropriate 'non-user' group would also be very challenging conceptually given the breadth of the intervention, as behaviours may change over time, and the research itself may lead to "contamination" in the evaluation (where non-users surveyed then do make use of the infrastructure as a result of the experience/participation in the research).

Data requirements

5.144 The data requirements for the evaluation approach for Histon Road 1 are summarised in Table 5-6.

Table 5-6: Data requirements for the proposed evaluation approach for Histon Road

Source of evidence	Requirements and approach
Primary evidence	• Survey of bus passengers in May 2024. Aim for 400 completions (to be confirmed in detail scoping), likely completed via on-board surveys (to be confirmed, subject to discussion with operators) • Surveys of cyclists (and associated CCTV count data to gather data on the representativeness of the sample), to be completed in May 2024. Specific locations to be agreed as part of an initial scoping stage. Aim for 200 survey completions • Resident survey in April 2024 (focused on walking). Aim for 400 completions, undertaken via telephone using Random Digit Dial methodology to seek to secure a representative sample of households. • Consultations with stakeholders, to understand the wider effects and provide qualitative evidence to inform the theory-based assessment. Up to 10 consultations will be completed, for the final report in 2024. • Interviews with local businesses, to gather primary evidence on if and how the scheme has affected local businesses, for example in relation to journey times for staff/employees, levels of footfall, the quality of the local environment for business, and any wider effects related to economic growth. Up to 15 interviews to be completed, for the final report in 2024. The approach, and potential businesses to be contacted for interviews will be considered in the scoping phase, including drawing on recommendations from GCP.
Monitoring data and information	• Data on the outputs set out in the logic model related to the scheme delivery should be collated and reported as part of the evaluation (i.e., scheme becoming fully operational, Km of new or improved cycling infrastructure delivered, Km of dedicated bus / public transport infrastructure delivered etc.) • Construction years of employment (i.e., to build infrastructure) should be provided by the GCP where available (e.g., using data from contractors), and where this is not available should be estimated by the evaluators using conversion rates from expenditure to construction years of employment. This analysis (where necessary) will be completed for the final evaluation.
Secondary data	• Vehicle and cycle count data from Annual Cambridge Radial Site Survey for Histon Road and comparator locations. Data to cover period 2015-2019 where available for 'pre' position, 2020-2021 for 'construction period' position, and 2022-23 for 'post' position. Data is for October in each year (meaning 2024 data will not be available for the evaluation). • Data on bus journey times from Cambridgeshire County Council for Histon Road and comparator locations. Data to cover the 'pre' and 'construction'

Source of evidence	Requirements and approach
	periods as above, and the 'post' position to mid-2024 (where available). The specific timing and coverage of the data will be confirmed in the scoping phase. • The availability of bus patronage data will be confirmed in the scoping stage following discussions with operators. • Data on road traffic collisions from 2015-2024 for Histon Road to understand potential effects on improved safety outcomes. • An initial contextual analysis of trends in data for Histon Road, and identification of and comparison to "best fit" routes should be completed for the mid-term evaluation in mid-2023. • The main analysis and triangulation with the survey data should be completed for the final evaluation in mid-2024.

Source: GCP

5.145 As noted above, there will need to be an initial scoping stage at the outset of the evaluation to:

- review the consistency, quality and access requirements of secondary data, including in relation to data on bus journey times
- consider the availability and coverage of bus patronage data, including discussions with the operator on what data can be made available related to Histon Road and "best fit" comparator radial routes
- identify the "best fit" comparator radial routes; this will be based on analysis of secondary data (e.g. traffic mix, flow and trends over time), functional role including based on a review of relevant policy/strategy documents, analysis of route-specific characteristics, and a review of relationships to other active and sustainable travel (and wider) transport interventions
- confirm the approach to the primary research, including the bus user survey, cycling survey, stakeholder consultees, and business interviews.

Timing and delivery

5.146 The timing of the evaluation for Histon Road and the key tasks to be delivered is set out in Figure 5-8. For context, the timetable includes the fixed milestones for the overall evaluation of the Investment Fund in Greater Cambridge, including the Mid Term and Final Reports that will draw on the evidence from the intervention-level impact evaluation.

Figure 5-8: Timetable for the evaluation of Histon Road

Tasks	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24
Launch & undertake scoping exercise	■																	
Initial analysis of secondary data		■																
Summarise findings/implications from scoping/analysis			■															
Mid-Term evidence provided to the IEP			♦															
Meeting with IEP to review evidence				▲														
Mid-Term Report					♦													
Launch meeting & finalise research design											■							
Resident survey												■						
Bus passenger survey													■					
Cyclist survey													■					
Stakeholder consultations (x10)														■				
Business interviews (up to 15)														■				
Full analysis of secondary data														■				
Synthesis & reporting															■			
Final evidence provided to the IEP																♦		
Meeting with IEP to review evidence																	▲	
Final Report																		♦

Source: GCP

5.147 The impact evaluation of Histon Road will be delivered by the independent provider appointed by GCP following a competitive tender exercise to deliver the evaluation to inform the Gateway Review.

6. Plans for Progress Plus Evaluation

Progress Plus Approach

6.1 Given the long term and (sometimes) complex routes to economic impact of some interventions, it may be too early to attempt a robust and meaningful economic impact evaluation for the Gateway Review. However, it will be possible to identify emerging outcomes and consider anticipated future beneficial impacts.

6.2 The 'progress plus' evaluations are intended to supplement the standard 'progress' evaluation by seeking the views of stakeholders on the emerging and anticipated impacts of the interventions (some of which may be observable during project delivery). Whilst stakeholder feedback may be affected by attribution and optimism bias, this will be mitigated by triangulating the stakeholder evidence against project monitoring data and wider secondary data.

6.3 The key issues to be explored through the progress plus research are:

- Progress against project milestones/outputs and early outcomes
- Expectations on future outcomes
- Extent to which the Investment Fund is levering in additional sources of finance to Greater Cambridge
- Key delivery lessons, including how far the project is encouraging local/regional solutions and helping to leverage key assets/expertise in area
- Additionality – to what extent partners would be taking forward activity without Investment Fund support.

Coverage

6.4 The following four interventions will be subject to progress plus evaluation for the second Gateway Review:

- SMART
- Waterbeach Station
- Cambridge Eastern Access
- Cambourne to Cambridge

6.5 For each intervention, this section sets out the following:

- a **logic model** for the intervention that has been developed and used to inform the evaluation approach
- the **method** for progress plus evaluation with an overview of the approach and how additionality will be identified
- the **data requirements** for the method covering primary evidence, monitoring information, and secondary data; this includes requirements at different points in the evaluation including at the baseline stage.
- the **timing** of the evaluation research for the intervention over the period up to an including the Gateway Review report in October 2024, including identifying the key tasks that will be required.

6.6 Note that reflecting the consistency in the activity/coverage of the Waterbeach Station, Cambridge Eastern Access, and Cambourne to Cambridge interventions (all of which are categorised under the '1A+1B' Primary Intervention Areas in the NEF), in practice the progress plus evaluation of these three interventions will be completed as part of a single research process to maximise efficiencies in the completion of the research e.g. related to interviews (including with individuals involved across the interventions) and document/data review. In turn, it is proposed that a single progress plus evaluation evidence paper will be produced. This will set out the evidence on each of the three interventions individually. However, it will also draw out any consistent evaluation messages/findings/themes across the three interventions (where evident).

Smart

Logic model

6.7 The logic model for Smart Cambridge is set out below.

Logic model title	SMART Cambridge
Logic Model Type	1C – Transport Systems (data systems)
Interventions / projects covered by logic model	SMART Cambridge

Theory of change

As transport systems become more complex and as challenges including addressing congestion and environmental quality become more acute and potentially limiting to growth in Greater Cambridge, there is an increasing need to harness the opportunities provided by the use of technology and integrated and data-driven transport planning. The Smart programme will identify and test smart ways to tackle city challenges, and consider how existing and emerging technologies and data can help to support the overall objectives of the City Deal, and to progress initiatives to implementation. Leveraging Greater Cambridge's position as one of Europe's leading tech hubs and home to a world-leading research intensive university, the Smart programme will support a range of bespoke and targeted research and innovation activity across the themes of 'Better Data', 'Making Sustainable Transport Easier', 'Better operation of the Highway', 'Enabling the next generation of public transport', and 'Enabling Smart Communities'. This will include projects involving the set-up, collection and analysis of real-time transport data, considering how data can be better stored, shared and used; the delivery and evaluation of trials, pilot initiatives and test-beds including projects to encourage active travel and greater use of sustainable public transport, and the use of autonomous vehicles; and the development of funding bids for external funding where there is clear alignment to GCP's objectives. The Smart programme will also provide thought leadership to inform the on-going development and delivery of transport interventions across Greater Cambridge through the City Deal, and strategic engagement with the private sector and other partners involved in transport planning and implementation.

Key assumptions: new and emerging technologies are being developed that can support the delivery of the GCP programme; external funding is available to support the trialling of new technologies; GCP decision makers have an appetite for risk profile of innovation projects.

Other factors: a range of other City Deal interventions are seeking to address issues of congestion and supporting modal shift (e.g., cycle schemes, bus priority measures, radial route improvements and enhancements, City Access programme etc.); collaboration in the delivery of the Smart programme with Connecting Cambridgeshire and the University of Cambridge.

Inputs	Activities	Outputs	Outcomes
Investment Fund inputs £4.82m • Other inputs (including staffing and in-kind) • £100,000 from Vivacity • £50,000 from Starling	• Core Smart Cambridge Team at GCP (1 FTE), with additional capacity through a collaboration agreement with Connecting Cambridgeshire • Delivery of research and innovation projects across five workstreams ➢ Better Data ➢ Making Sustainable Transport Easier ➢ Better operation of the Highway	• Technology platforms and applications developed • Take-up of technology platforms (e.g., downloads, registered users)	**Theme-specific outcomes** • Improved integration of transport system • Enhanced understanding of transport planning conditions, challenges, and opportunities • Improved scheme development, appraisal, implementation, and monitoring • Funding secured / leveraged for investment in transport systems/projects – public (£)

- £100,000 from the University of Cambridge

  - Enabling the next generation of public transport
  - Enabling Smart Communities
- Development of funding bids
- Engagement with academic partners, including collaboration on funding bids and project delivery
- Engagement with private sector partners, including support for funding bids, advice on engagement with public sector and product development, and collaborative innovation projects
- Engagement with public and community / voluntary sector partners, including development of collaborative projects, partnership arrangements, strategic planning and integration of activities (e.g. integration of ICT infrastructure in transport projects)
- Management / delivery of established Smart systems (e.g. Smart Panels, Totem, Motion Map, Smart Cambridge Data Platform and data into travel apps)

- Trial / pilot / test-bed initiatives delivered
- Bespoke / original data-sets established / collated
- Bespoke / original data-sets disseminated / released
- Smart transport infrastructure / facilities created
- ICT infrastructure created (via integration of activities with partners)
- Strategies, plans and research reports produced
- Innovation prospectus developed
- Funding bids submitted
- Businesses engaged in collaborative innovation projects

- Funding secured / leveraged for investment in transport systems/projects – private (£)
- Long-term, positive effects on transport conditions, including
  - reduced congestion
  - modal shift via increased use of sustainable and active travel
  - enhanced local environment (incl. air quality)
  - CO2 savings

Broader economic outcomes

- Improved ICT connectivity for local residents and businesses (via integration of activities with partners)
- Enhancement of local innovation ecosystem and networks
- Long-term, positive economic effects including
  - enhanced attractiveness as a place to invest (e.g. employment sites, housing development)
  - improved business productivity via travel time savings, agglomeration effects
  - entrepreneurship and job creation in technology sector
  - R&D investment and spillovers

Expected timescales for inputs / activities / delivery of outputs and outcomes			
Investment Fund inputs • Phase 1 expenditure from 2016/17 – 2019/20 in Gateway Review 1 period • Phase 2 expenditure from 2020/21 – 2024/25 in Gateway Review 2 period • Programme expected to be delivered to 2030 Other inputs (including staffing and in-kind) • Over the period of investment from 2016/17 to 2024/25	• Over the period of investment from 2016/17 to 2024/25	• Over the period of investment from 2016/17 to 2024/25	• Theme-specific outcomes relating to integration, understanding, scheme improvement, and funding realised within the activity period • Longer-term theme-specific outcomes may start to be realised within the activity period, but will emerge more fully over the 3-5 years post-Gateway Review 2 as the programme informs strategic planning and interventions • Broader outcomes related to improved ICT connectivity and enhancement of local innovation ecosystem and networks realised within the activity period • Longer-term broader outcomes may start to be realised within the activity period, but will emerge more fully over the 3-5 years post-Gateway Review 2 as the programme informs strategic planning and interventions

Relationship to other interventions

Other Investment Fund logic models:

- All logic models under Theme 1 – Transport are relevant to the Smart programme, including the City Access and Making Connections, and schemes focused on enhancing use of sustainable and active travel across the GCP area to support modal shift, reduce congestion and enhance the integration and accessibility of the transport network

Other non-Investment Fund activities:

- Wider Connecting Cambridgeshire programme, supporting enhanced infrastructure and capacity for broadband, mobile and public access Wifi coverage

Source: GCP

Method

6.8 The Progress Plus evaluation for Smart Cambridge will build on the evidence collected for the Progress evaluation including the consultation with the project lead and assessment of delivery against planned expenditure, milestones, and monitoring data. It will focus on the progress towards the following 'outcomes of interest' set out in the logic model: improved integration of the transport system, enhanced understanding of transport planning conditions, challenges, and opportunities, improved scheme development, appraisal, implementation, and monitoring, and funding secured/leveraged. These are outcomes which are expected to start to emerge within the activity period.

6.9 The Progress Plus evaluation will be delivered over November 2023 to February 2024 to inform the Final Report. It will involve four main elements:

- **consultations (x10) with representatives involved in the management and governance of the Smart programme** including from the Programme Board and Smart Working Group; this will include a mix of private sector, academic, and public sector organisations
- **consultations (x10) with partner organisations involved directly with the programme**; this will include for example, research centres at Cambridge University, Innovate UK, Centre for Connected and Autonomous Vehicles, BSI, and businesses engaged in collaborative innovation projects
- **consultations (x10) with stakeholder organisations involved in the 'smart city' research and innovation landscape** across Greater Cambridge and the UK; this will include for example the Smart Cities Network, local technology companies, England's Economic Heartland and other relevant representatives groups with an interest in/knowledge of the programme
- **project case studies (x4) of selected programme activities**, to provide detailed insight into the nature of activities delivered, emerging benefits, and the potential longer-term contribution to economic growth across Greater Cambridge.

6.10 Each project case study will involve:

- consultations with the relevant project lead and delivery staff at Smart Cambridge; the exact number of consultations may vary in line with the coverage of the case study, but indicatively this will involve 2-3 consultations for each case study
- consultations with relevant delivery partners/organisations involved with the case study; the exact number of consultations may vary in line with the coverage of the case study, but indicatively this will involve 3-4 consultations for each case study

- a focused review of relevant activity data and documents, including any relevant data collected by the project that provides an indication of the emerging outcomes/effects of the activity on theme-specific outcomes relating to the integration of the transport system, understanding of transport planning, scheme improvement, and funding.

6.11 The focus of the case studies will be agreed at the launch of the evaluation in October 2023. However, at this stage the expectation is that this may include:

- **Sensor Network**: Greater Cambridge has a network of connected infrastructure including traffic lights, parking meters, passenger information screens, bus stop displays, bike sensors which are collecting data. The Smart team has worked to build upon this by joining these networks up and using the data in a smarter way.

- **Autonomous Vehicles**: Smart Cambridge has delivered a range of work related to autonomous vehicles, informed by an initial study looking at how autonomous vehicles could be used in Cambridge and an Autonomous Vehicle Strategy. The programme subsequently secured funding from the Government's Centre for Connected and Autonomous Vehicles (CCAV) and industry-matched funding including to deliver an initial trial linking Trumpington Park and Ride with the University's West Cambridge campus. The GCP was also recently (February 2023) awarded CCAV funding to pilot on-demand self-driving vehicles, with up to 13 electric vehicles to provide passenger services that integrate with existing transport services within Cambridge, with the project to be delivered between April 2023 and April 2025.

- **SMART Panels:** SmartPanel screens have been trialled in the foyers of public buildings, organisations, and large employers in and around Cambridge city centre since 2018, offering tailorable travel and other information for employees and visitors. The panels display live bus and train times specific to the location, together with road traffic maps, travel updates on Twitter, and weather reports.

- **Networks Management Interventions**: the effective operation and management of traffic signals is an important component of reducing congestion, providing rapid and reliable public transport, improving air quality, and delivering net zero carbon. The programme has delivered several projects to trial new innovative technologies including a 'Smart Signals' trial working with Vivacity, and an Intelligent Crossing trial working with Starling.

6.12 The Progress Plus evaluation will also involve:

- **a desk-based review of the underpinning context and rationale for the programme** (e.g., review of business cases, relevant strategic plans and strategies, transport challenges as established in existing secondary datasets)

- **a high-level review of relevant underpinning information available on the outputs set out in the logic model** e.g. details of the strategies, plans and research reports produced, data on the take-up of technology platforms, and an overview of the bespoke original data-sets established/collated and disseminated/released.

6.13 Note that the purpose of the review of relevant underpinning information will *not* be to undertake a detailed analysis of the reports/data or to seek to assess the potential effects on transport conditions or economic growth. Rather, the purpose will be to provide a review of the scope, coverage and nature of evidence and insight that has been generated by the programme, and how this is aligned to the underlying Theory of Change and anticipated outcomes.

6.14 Two further points are noted in relation to the coverage and purpose of the progress plus evaluation:

- Issues of activity additionality (i.e., the extent to which partners would be taking forward activity without Investment Fund support) will be considered qualitatively and be based on self-reported feedback via consultations with representatives involved in the management and governance of the Smart programme and partner organisations involved directly with the programme. Note that consistent with the purpose and remit of progress plus evaluation, the research will *not* seek to assess outcome additionality (i.e. the extent to which outcomes would have been realised without intervention and/or the other factors that may have led to outcomes).

- As noted above, the research will focus on progress towards the integration, understanding, scheme improvement, and funding theme-specific outcomes set out in the logic model, which will be considered via the consultations with all groups and case studies, including the extent to which there is any evidence of emerging/early outcomes, and any risks associated with the realisation of outcomes in the future. Evidence on funding secured/leveraged for investment in transport systems/projects from public and private sources will also be collated and reported, where available. The longer-term theme specific outcomes (e.g. related to reduced congestion and modal shift) and broader economic outcomes will *not* be considered, reflecting the time-paths to impact. These outcomes would be subject to subsequent impact evaluation.

Data requirements

6.15 The data requirements for the evaluation approach for Smart Cambridge are summarised in Table 6-1**Error! Reference source not found.**.

Table 6-1: Data requirements for the Progress Plus evaluation of Smart Cambridge

Source of evidence	Requirements and approach
Primary evidence	• Consultations (x10) with representatives involved in the management and governance of the Smart programme • Consultations (x10) with partner organisations involved directly with the programme • Consultations (x10) with stakeholder organisations involved in the 'smart city' research and innovation landscape • Consultations (x5-7 per case study) with delivery staff and project partners as part of the case study research • All primary research to be undertaken in Dec '23-Feb '24 to inform the final evaluation
Monitoring data and information	• Monitoring data related to the outputs set out in the logic model should be collected and reported to the IEP to inform the Progress Evaluation, and this will be considered in the Progress Plus evaluation. • Further details and underpinning evidence (e.g., reports produced, data usage etc.) should also be collected and reported to inform the Progress Plus evaluation; this data will be reviewed for the Progress Plus evaluation. • Outcome data on funding secured/leveraged for investment in transport systems/projects from public and private sources should be collected and reported to inform the Progress Plus evaluation
Secondary data	• No specific secondary data will be collected for the Progress Plus evaluation. However, the case study research will include review of relevant documents and data that has been collected through the Smart programme, and this may include secondary data e.g., associated with transport usage and conditions. • Documentation associated with the scheme development and business planning process should be provided to inform the review of the underpinning context, rationale and anticipated outcomes of the programme

Source: GCP

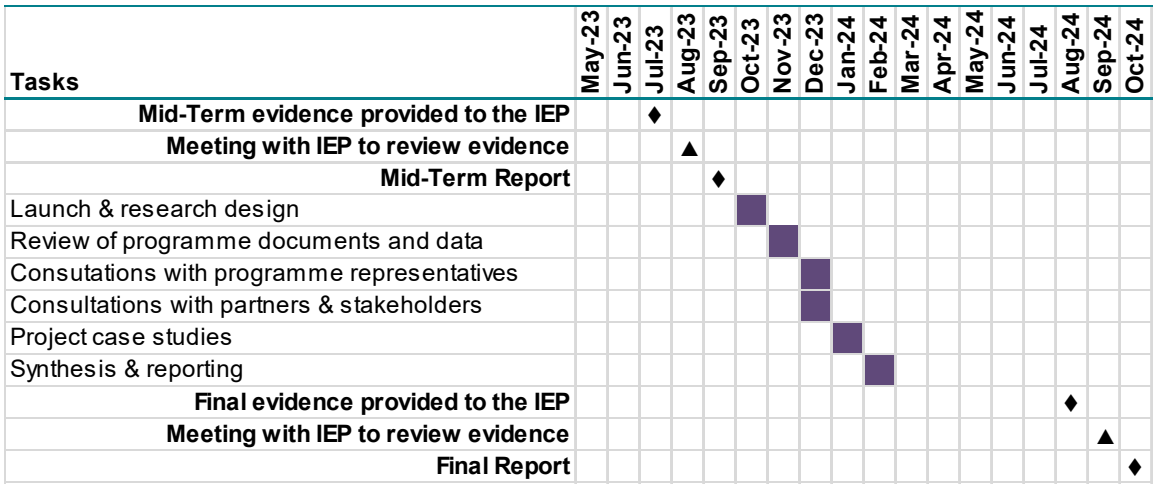
6.16 It is noted that it is *not* proposed that the Progress Plus evaluation will include primary research with users e.g., members of the public, businesses benefiting indirectly from Smart activities. This reflects the nature of activity, and complex route to impacts. The case study research will include review of any relevant evidence collected in relation to public/user engagement and feedback.

Timing and delivery

6.17 The timing of the Progress Plus evaluation for Smart Cambridge and the key tasks to be delivered is set out in Figure 6-1. For context, the timetable includes the fixed milestones for the overall evaluation of the Investment Fund in October 2024, including the Mid Term and

Final Reports that will draw on the evidence from the intervention-level progress plus evaluation.

Figure 6-1: Indicative timetable for the Progress Plus evaluation of Smart Cambridge



Source: GCP

6.18 The progress plus evaluation of Smart Cambridge will be delivered by the independent provider appointed by GCP following a competitive tender exercise to deliver the evaluation to inform the Gateway Review.

Waterbeach Station

Logic model

6.19 The logic model for the re-siting of Waterbeach Station is set out below.

Logic model title	Waterbeach Station, on land between Cody Road and railway, north of Waterbeach
Interventions / projects covered by logic model	Relocation for enhanced connectivity of Waterbeach Station to better serve the proposed new town development

Theory of change

Economic growth of Greater Cambridge requires enhanced connectivity within and across the area by public transport, alongside additional housing for people to live and work in the area. Waterbeach new town is a is a proposed development comprising 11,000 housing units and 56,300 sqm of commercial floorspace (mix of retail/ commercial). The development will be home to up to 25,000 people and create up to 2,500 new jobs on the site. The existing railway station of Waterbeach serves catchment that includes the immediately adjacent village of Waterbeach and other nearby settlements including Cottenham and Horningsea. The existing station is located approximately 1.5km to the south of the new development. It is currently ill-equipped to handle the anticipated growth in rail demand generated by the new town. The existing station's configuration, unfavourable ground conditions and heritage constraints limit the opportunity to build new railway infrastructure at the station's existing location. The re-siting of Waterbeach station closer to the new town development brings the station within easier reach of significantly more people once the site is fully built out. It will thereby encourage a higher number of journeys to be made by rail within the local area. It will reduce the average access distance to the station thereby facilitating a greater proportion of rail access journeys by active modes. The new station will connect with both the Waterbeach to Cambridge public transport scheme and the Waterbeach Greenway.

Key assumptions: the relocation of the station will temporarily affect the active travel patterns of existing users during construction and will change existing users travel patterns after opening; there will be no disruption to rail services during the construction period; the housing development will not be occupied before the station is open to passengers; there is scope to further active travel options across Greater Cambridge; the removal of the existing level crossing will enhance road safety. The scheme will be open to passengers from December 2025 (earliest).

Other factors: the scheme is part of the Transport Strategy for Cambridge and South Cambridgeshire (TSCSC), the Long-Term Transport Strategy (LTTS), and a strategic focus on supporting housing and employment growth across the City Region. There are a range of other schemes that support active travel, with enhanced city centre access (including the Making Connections scheme). In particular the Waterbeach to Cambridge Guided Busway and the Waterbeach Greenway schemes.

In January 2020 the scheme received planning permission subject to conditions. Since then, the single option design for the station has been developed to Network Rail Engineering Stage 4 (PACE ES4 - Stage 2). Priority actions to ensure construction teams are onsite by Q4 2024 are to develop the full business case with associated project costs by the end of 2023 and ensure all design and plans have been approved by Q4 2024.

Inputs	Activities	Outputs	Outcomes
Investment Fund inputs *Total* £37.0m (net £20m, see below) (Via the Greater Cambridge City Deal)	• Completion of development design and plans • Closure of existing station with site made good and returned to conventional operational railway.	• New station is constructed and becomes fully operational • Rail services connect the new town development to Ely and Cambridge • Parking for 200 cars completed	**Theme-specific outcomes** • Homes unlocked for development including a proportion of affordable homes (directly related to unlocking 4,500 homes and

- £17m to be repaid by the development company (RLW) via a Section 106 Agreement.

- Building new station at Waterbeach adjacent to new town development with supporting infrastructure including connection to the Greenway, cycle storage and pedestrian walkways etc.
- Creation of a new two-platform station which will be able to accommodate 8-car trains (Great Northern)
- Building a station car park for 200 vehicles to serve a wider catchment and to intercept traffic from the A10 bound for Cambridge.
- Public realm improvement work, including greening within the confines of the red line boundary

- Storage for 400 bikes completed
- Land unlocked for development (ha) and
- Number of new homes unlocked for development
- Construction years of employment (i.e. to build the station)

supporting a further 6,500 at Waterbeach New Town)

- Creation of land value uplift on the adjacent housing site
- Creation of new jobs and new business in the new town
- Employers have access to skilled workforce
- Increased number of rail journeys
- Increased passenger numbers on public transport
- Enhanced safety and reduction in collisions
- Increased number and a greater proportion access journeys to the station using active mode access than at the old station
- Increased proportion of journeys by rail than would be the case with the former station site.

Broader outcomes

- Improved attractiveness of new town developments at Waterbeach
- Long-term positive effects on socio-economic conditions including:
  - improved business productivity via travel time savings, access

to a skilled workforce, and agglomeration effects

- improved public health (via increased active travel)

Expected timescales for inputs / activities / delivery of outputs and outcomes

Investment Fund inputs

- £9.5m by October 2024
- £20.00m to complete the scheme
- is subject to build out of the project

Other inputs (including staffing and in-kind)

- £17m of S106

- FBC approval: December 2023
- Contract award (D&B Contractor): January 2024
- Start of Construction: October 2024
- The above dates meet current programme expectations and are subject to change as the Project develops

- The new Waterbeach railway station is to be opened prior to the occupation of the first home built by the development company RLW.
- The closure of the existing Waterbeach station will happen contemporaneously.
- The target date for opening of the new station is December 2025
- Principal outputs to be achieved as construction activities completed.
- Construction employment delivered as part of delivery of activities

- **Theme-specific outcomes** listed above expected to become evident from scheme completion, and will accumulate over time as the build out of the development will continue over a number of years beyond the station opening.
- **Broader outcomes** listed above in relation development and socio-economic outcomes can be expected to take years for it to be fully realised
- **In both cases the benefit will be net of the effect of the closure of the existing station.** Baseline data to understand the current use and travel patterns of the existing station will be essential to capture the net benefit in the longer term.

Relationship to other interventions

Other Investment Fund logic models:

- Waterbeach to Cambridge Guided Busway, Waterbeach Greenway scheme

Source: GCP Partnership

Method

6.20 The Progress Plus research for Waterbeach Station will build on the evidence collected for the Progress evaluation including the consultation with the project lead and assessment of delivery against planned expenditure, milestones, and monitoring data. It will focus on the progress towards the following 'outcomes of interest' set out in the logic model: homes unlocked for development, land value uplift, and improved attractiveness of new town developments at Waterbeach. These are outcomes where: the progress towards them can be considered via tangible milestones/deliverables (e.g. planning decisions/statements), there is existing analysis/estimates which can be reviewed and discussed (i.e. on land value uplift), and qualitative evidence from partners/stakeholders can inform the assessment (i.e. on improved attractiveness of new town development).

6.21 The Progress Plus evaluation will be delivered over Jan-April 2024 to inform the Final Report. It will involve:

- **A desk-based review of the underpinning context and rationale for the scheme** (e.g., review of business cases, relevant strategic plans and strategies)
- **A review of monitoring data, expenditure, and assessment of progress against key milestones during the review period** (April 2023 to October 2024)
- **Interviews with the project manager, senior representatives from the GCP with responsibility for the scheme, and the chief planning officer** on the status/progress of the scheme at the point of the evaluation, and progress in delivery against the 'outcomes of interest'.
- **Potentially, and subject to the status/progress of the scheme at the point of the evaluation, focused interviews on the strategic position and economic growth potential of the scheme with up to five key stakeholders**, including developers/landowners of key development sites influenced by the scheme. This will be confirmed in the research design stage.

6.22 Two further points are noted in relation to the coverage and purpose of the progress plus evaluation:

- Issues of activity additionality (i.e., the extent to which partners would be taking forward activity without Investment Fund support) will be considered qualitatively, and be based on self-reported feedback via consultations with senior representatives from the GCP with responsibility for the scheme. Note that consistent with the purpose and remit of progress plus evaluation, the research will *not* seek to assess outcome additionality (i.e. the extent to which outcomes would have been realised without intervention and/or the other factors that may have led to outcomes).

- As noted above, the research will focus on progress towards the homes unlocked for development, land value uplift, and improved attractiveness of new town developments at Waterbeach, including the extent to which there is any evidence of emerging/early outcomes, and any risks associated with the realisation of outcomes in the future. Other theme specific and broader economic outcomes will *not* be considered, reflecting the time-paths to impact. These outcomes would be subject to subsequent impact evaluation.

Data requirements

6.23 The data requirements for the evaluation approach for Waterbeach are summarised in Table 6-2**Error! Reference source not found.**.

Table 6-2: Data requirements for the progress plus evaluation for Waterbeach station

Source of evidence	Requirements and approach
Primary evidence	• Consultations relevant partners (x3) and potentially stakeholders (x5) • Consultations will be completed in March/April 2024
Monitoring data and information	• Monitoring data related to the outputs set out in the logic model should be collected and reported to the IEP to inform the mid term evaluation. These will be repeated for the final report for the Gateway Review 2 and will provide a baseline for future impact assessment.
Secondary data	• Documentation associated with the scheme development and business planning process should be provided to inform the review of the underpinning context, rationale and anticipated outcomes of the scheme (including in relation to land value uplift).

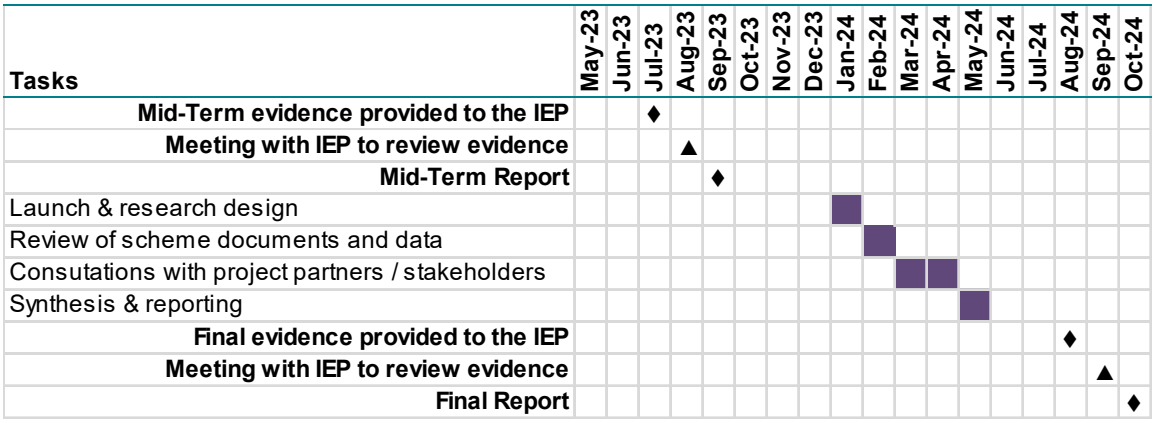
Source: GCP

6.24 It is noted that it is *not* proposed that the Progress Plus evaluation will include primary research with beneficiaries e.g., residents, individual business, users of the transport infrastructure. This reflects the timing of the evaluation and anticipated time-paths to impact.

Timing and delivery

6.25 The timing of the Progress Plus evaluation for Waterbeach station and the key tasks to be delivered is set out in Figure 6-2. For context, the timetable includes the fixed milestones for the overall evaluation of the Investment Fund in October 2024, including the Mid Term and Final Reports that will draw on the evidence from the intervention-level progress plus evaluation.

Figure 6-2: Indicative timetable for the Progress Plus evaluation of Waterbeach Station



Source: GCP

6.26 The progress plus evaluation of Waterbeach Station will be delivered by the independent provider appointed by GCP following a competitive tender exercise to deliver the evaluation to inform the Gateway Review.

Cambridge Eastern Access

Logic model

6.27 The logic model for Cambridge Eastern Access (CEA) is set out below.

Logic model title	Cambridge Eastern Access
Interventions / projects covered by logic model	Cambridge Eastern Access

Theory of change

The Cambridge Eastern Access (CEA) scheme seeks to enhance sustainable transport provision into and within the east of the city. Currently, Newmarket Road suffers considerably from congestion during peak times, causing delays, disruption and worsening problems for an existing infrastructure that cannot support future growth within the east of Cambridge. The CEA scheme will provide the transport infrastructure needed to enable people to switch from private car to walking, cycling and public transport, and improve access to both education and opportunities for people in one of the more deprived areas of Cambridge. Phase A (expected to be completed by 2026) will seek to address congestion and connectivity issues by reducing journey times for public transport and making walking and cycling more attractive options through the provision of high-quality footways, crossings, segregated cycle tracks, bus lanes and junction improvements and the relocation and expansion of the existing Newmarket Road Park & Ride site. Phase B (expected to be completed by 2030) will look to increase the capacity and connectivity of sustainable transport, opening locations for growth and reducing reliance on the car though the creation of a new continuous busway (with associated active travel provision) from the new Park and Ride to Coldham's Lane via the Cambridge Airport development site.

Key Assumptions: those who currently (or who would, in the case of residents of new developments at Marleigh and the Cambridge Airport site) drive into Cambridge are sufficiently attracted to alternative modes of transport – either bus travel, Park & Ride or active travel modes; the Phase B proposals for a new continuous busway is dependent on the vacation of the Airport site by Marshalls and the development of that site as indicated in the emerging draft Local Plan.

Other Factors: other interventions are designed to lead to modal shift such as other City Deal schemes (e.g., other bus priority measures, the Making Connections scheme), and non-City Deal schemes (e.g., integration of bus rapid transit with existing Cambridgeshire Guided Busway); and increased demand for travel from growth in and around Cambridge City. Note that there are likely to be adverse effects on outcomes over the period of developing the new routes (e.g., increased congestion due to road closures).

Inputs	Activities	Outputs	Outcomes
Investment Fund inputs • £47,920,000 *Other inputs (including staffing and in-kind)* • S106 £2,580,000 • Scheme development, including consultant support.	**Phase A** • Online improvements to Newmarket Road, including: ➢ cycle lane development / improvement ➢ segregated foot paths and crossings	• Scheme is constructed and becomes fully operational • Km of new or improved cycle paths delivered • Km of new or improved dedicated bus / public transport infrastructure delivered • Km of new or improved footpaths	**Theme-specific outcomes** • Safer, faster, more reliable journeys using sustainable modes. • Increase in trips undertaken by bus, walking, and cycling into Cambridge from the east

- Public/Political/Stakeholder support.
- Materials, facilities, and technology.
- Project management.
- Time to develop and construct.

  - bus priority works and supporting infrastructure (e.g. floating bus stops)
- Relocated Newmarket Road Park & Ride site
- Public realm improvement work

Phase B

- Provision of a continuous busway with associated active travel route from the new Park and Ride facility, through the current airport site to the vicinity of the junction of Coldham's Lane and Barnwell Road

- Number of junctions improved
- Number of new / improved pedestrian crossings
- New Park and Ride facility created
- Number of Park and Ride car parking places created
- m2 of improved public realm
- Construction years of employment (i.e., to build infrastructure)

- Reduce congestion and traffic flows along the Newmarket Road corridor.
- Capacity to accommodate an increase in travel demand associated with future growth.
- Enhanced accessibility – employment / business locations
- Enhanced accessibility – services / community locations
- Improved connectivity to new housing
- Creation of land value uplift

Broader outcomes

- Enhanced attractiveness and deliverability of new housing development sites at Marleigh, East Barnwell, and the Cambridge Airport site.
- Delivery of Masterplan for existing Airfield sites of the order of 7000-9000 houses and similar level of jobs likely to be allocated in emerging Local Plan
- Long-term positive effects on socio-economic conditions including:

- improved business productivity via travel time savings, agglomeration effects
- improved public health (via increased active travel, air quality)

Expected timescales for inputs / activities / delivery of outputs and outcomes

Investment Fund inputs

- Phase A inputs spread between 2020 & 2026. Around £1m expected to be spent before second Gateway Review.
- Phase B inputs by 2030

Other inputs (including staffing and in-kind)

- Inputs spread between 2020 and 2026
- Phase B inputs by 2030

- Phase A main construction activities expected to be completed Q1 2024 and Q4 2026
- Phase B construction of Busway to follow relocation of Marshalls from Cambridge business but construction costs will be provided through S106

- Outputs delivered up to December 2026 when scheme Phase A expected to be completed, and by 2030 when Phase B expected to be completed
- Construction employment realised during delivery of activities.

- Theme specific outcomes related to congestion, public transport journey times (duration and reliability) cycling safety and pedestrian connectivity are expected to occur from 2026, can be expected to increase over time and may not reach their maximum until post-2030.
- The enhanced attractiveness of development sites will occur as the scheme design is confirmed and work begins. The long-term positive effects on socio-economic conditions are expected to take 3-5 years post-opening to start to be realised and observable and may not reach their maximum until post-2030.

Relationship to other interventions

Other Investment Fund logic models:

- Making Connections proposals.

Other non-Investment Fund activities:

  - Mill Road scheme
- Actions specific to bringing forward development sites themselves, i.e., Marleigh & Marshalls.
- East Barnwell Regeneration Study - Newmarket Road severs East Barnwell whilst the volume and dominance of traffic does little to enhance the area in terms of noise or air quality. Measures to curb the dominance of general traffic could therefore improve the quality of life for local residents and support its regeneration. Similarly, improved travel choice and connectivity with the rest of the city will increase life chances in terms of access to employment and other facilities.
- There have been proposals to redevelop the Beehive and Grafton Centres. Already significant sites of employment, CEA would offer improved access to both.

Source: GCP

Method

6.28 The Progress Plus evaluation for CEA will build on the evidence collected for the Progress evaluation including the interview with the project lead and assessment of delivery against planned expenditure, milestones and monitoring data. It will focus on the progress towards the following 'outcomes of interest' set out in the logic model: creation of land value uplift, and enhanced attractiveness and deliverability of new housing development sites. These are outcomes where: the progress towards them can be considered via tangible milestones/deliverables (e.g. planning decisions/statements), there is existing analysis/estimates which can be reviewed and discussed (i.e. on land value uplift), and qualitative evidence from partners/stakeholders can inform the assessment (i.e. improved attractiveness of housing developments).

6.29 The Progress Plus evaluation will be delivered over Jan-April 2024 to inform the Final Report. It will involve:

- **A desk-based review of the underpinning context and rationale for the scheme** (e.g., review of business cases, relevant strategic plans and strategies); in this context, it is noted that the scheme has been subject to detailed development with an extensive documentary evidence base in place to track the progress of its development and significant economic targets/impacts including Strategic/Outline Business Cases and supporting investigations/assessments, and several rounds of public consultation.

- **A review of monitoring data, expenditure, and assessment of progress against key milestones during the review period** (April 2023 to October 2024)

- **Interviews with the project manager, senior representatives from the GCP with responsibility for the scheme, and the chief planning officer** on the status/progress of the scheme at the point of the evaluation, and progress in delivery.

- **Potentially, and subject to the status/progress of the scheme at the point of the evaluation, focused interviews on the strategic position and potential of the scheme with up to five key stakeholders**, including developers/landowners of key development sites influenced by the scheme and Homes England (as the "government's housing accelerator", given the potential scale of housing delivery potentially enabled by the scheme over the longer-term).

6.30 Two further points are noted in relation to the coverage and purpose of the progress plus evaluation:

- Issues of activity additionality (i.e., the extent to which partners would be taking forward activity without Investment Fund support) will be considered qualitatively, and be based on self-reported feedback via consultations with senior representatives from the GCP

with responsibility for the scheme. Note that consistent with the purpose and remit of progress plus evaluation, the research will *not* seek to assess outcome additionality (i.e. the extent to which outcomes would have been realised without intervention and/or the other factors that may have led to outcomes).

- As noted above, the research will focus on progress towards the land value uplift, and enhanced attractiveness and deliverability of new housing development sites, including the extent to which there is any evidence of emerging/early outcomes, and any risks associated with the realisation of outcomes in the future. Other theme specific and broader economic outcomes will *not* be considered, reflecting the time-paths to impact. These outcomes would be subject to subsequent impact evaluation.

Data requirements

6.31 The data requirements for the evaluation approach for CEA are summarised in Table 6-3**Error! Reference source not found.**.

Table 6-3: Data requirements for the Progress Plus evaluation of CEA

Source of evidence	Requirements and approach
Primary evaluation evidence	• Consultations relevant partners (x3) and potentially stakeholders (x5) • Consultations will be completed in March/April 2024
Monitoring data	• Monitoring data related to the outputs set out in the logic model should be collected and reported to the IEP to inform the Progress Evaluation, and this will be considered in the Progress Plus evaluation (where realised).
Secondary evaluation evidence	• Documentation associated with the scheme development and business planning process should be provided to inform the review of the underpinning context, rationale and anticipated outcomes of the scheme (including in relation to land value uplift).

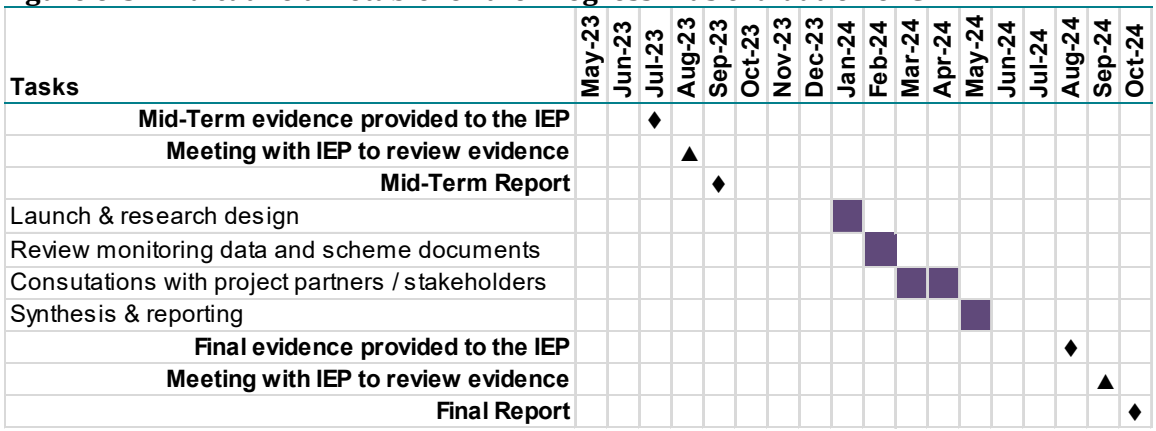
Source: GCP

6.32 It is noted that it is *not* proposed that the Progress Plus evaluation will include primary research with wider stakeholders or other beneficiaries e.g., residents, individual businesses. This reflects the timing of the evaluation and the nature of and anticipated time-paths to impact.

Timing and delivery

6.33 The timing of the Progress Plus evaluation for CEA and the key tasks to be delivered is set out in Figure 6-3. For context, the timetable includes the fixed milestones for the overall evaluation of the Investment Fund in October 2024, including the Mid Term and Final Reports that will draw on the evidence from the intervention-level progress plus evaluation.

Figure 6-3: Indicative timetable for the Progress Plus evaluation of CEA



Source: GCP

6.34 The progress plus evaluation of CEA will be delivered by the independent provider appointed by GCP following a competitive tender exercise to deliver the evaluation to inform the Gateway Review.

Cambourne to Cambridge

Logic model

6.35 The logic model for Cambourne to Cambridge is set out below.

Logic model title	Cambourne to Cambridge - Better Public Transport
Interventions / projects covered by logic model	Cambourne to Cambridge - Better Public Transport

Theory of change

The Cambourne to Cambridge - Better Public Transport scheme seeks to improve public transport provision within the A428/A1303 corridor between Cambourne and Cambridge. This will comprise an offline busway with some online sections of route with bus priority measures that will improve connectivity between several areas of housing and employment growth to the west of Cambridge and Cambridge city. It will improve the attractiveness of using either bus travel and Park & Ride facilities or cycling, compared to driving into the centre of Cambridge due to reduced and more reliable public transport journey times and improved accessibility to Park & Ride. In doing so, it will alleviate congestion in/around Cambridge, making roads safer and more attractive for cyclists and pedestrians. In combination with improved Active Travel facilities along the corridor, this will result in increases in cycling and walking. The scheme is identified as enabling infrastructure which will unlock key housing and employment sites at Cambourne West and Bourn Airfield.

Key assumptions: those who currently (or who would, in the case of residents of new developments in Cambourne/Bourn Airfield) drive into Cambridge are sufficiently attracted to alternative modes of transport – either bus travel, Park & Ride or active travel modes; Bourn Airfield and Cambourne West sites would not have gone ahead without transport improvements (or at same speed, scale) and demand from businesses and residents for these sites is enhanced due to improved connectivity. Underpinning all these assumptions is Cambridge continues to grow/have favourable conditions for growth.

Other factors: other interventions are designed to lead to modal shift such as other City Deal schemes (e.g., other bus priority measures, city centre access), and non-City Deal schemes (e.g. integration of bus rapid transit with existing Cambridgeshire Guided Busway); and increased demand for travel from growth in and around Cambridge City. Note that there are likely to be adverse effects on outcomes over the period of developing the new routes (e.g., increased congestion due to road closures).

Inputs	Activities	Outputs	Outcomes
Investment Fund inputs • £119.01m from the Investment Fund *Other inputs (including staffing and in-kind)* • £37.99m from S106 funding	• Scheme development and approval through planning requirements • Creation of new dedicated busway and bus priority measures along the whole of the Cambourne- Cambridge corridor • Development of a new Park & Ride site at Scotland Farm	• Scheme is constructed and becomes fully operational • Land unlocked for development (ha) and • # New homes unlocked for development • Km of new or improved cycle paths delivered	**Theme-specific outcomes** • Land unlocked for new homes and new employment development • New segregated high quality public transport system to the west of Cambridge to encourage modal change (car to bus) ➢ journeys 20 minutes faster at peak times

- Scheme development, including consultant support.
- High-quality public transport (HQPT) as Policy.
- Public/Political/Stakeholder support.
- Materials, facilities, and technology.
- Project management
- Time to develop and construct

- Service and maintenance track carrying segregated cycle lane and pedestrian walkway

- Km of dedicated bus / public transport infrastructure delivered
- Km of new or improved footpaths
- New or improved green infrastructure delivered (e.g. trees, green fencing)
- Construction years of direct employment (i.e. to build infrastructure)

  - Doubling of bus passengers each of Madingley Mulch
  - Doubling of bus travel mode share
- Increase in transport capacity along A428/A1303 corridor.
  - Maintained/reduced congestion for general traffic
  - Enhanced road safety
  - Improved air quality along A428/A1303 and in city centre
- Active travel encouraged
  - Increase in walking and cycling into Cambridge from the West
- Improved connectivity between key growth sites.
  - Land Value Uplift benefits (£458m)
  - GVA uplift (£636m over 30 years)

Broader outcomes

- Enhanced attractiveness and deliverability of employment growth sites i.e., Bourn Airfield, Cambourne West, West

			Cambridge and 'wider city centre' (LT) • Enhanced attractiveness and deliverability of new housing development sites i.e., Bourn Airfield (3,500 homes) and Cambourne West (2,350 homes) (LT) • Public health improvements associated with greater levels of active travel
Expected timescales for inputs / activities / delivery of outputs and outcomes			
Investment Fund inputs • Base year was 2015 with end of construction planned for 2027 • Expected spend of £40.06m (£41.66m including S106 funding) by March 2025. *Other inputs (including staffing and in-kind)* • Inputs spread between 2015/16 and 2026.	• Public inquiry and planning application process 2023 and 2024 • FBC 2024 • Main construction activities expected to be completed between 2024 & 2026 • Scheme opening Q2 2027	• Outputs delivered from 2027 when the scheme is expected to be fully open. • Construction employment delivered during delivery of activities.	• Theme specific outcomes related to congestion, public transport journey times (duration and reliability) cycling safety and pedestrian connectivity, and associated benefits related to environment and air quality, occur from 2027 onwards. • The development at Bourn Airfield and Cambourne West, as well as West Cambridge will occur during the life of the Local Plan (i.e., until 2041) contributing to the attractiveness part of investor 'expectations'.

Relationship to other interventions

Other Investment Fund logic models:

- A1307 corridor improvements; Histon and Milton Road bus priority and road improvements; cycling schemes; and Making Connections proposals – all designed to reduce and/or maintain levels of congestion and to bring about modal shift from private car to public transport and/or cycling and increase the modal share for non-private car modes of transport.
- A1307 corridor improvements and Histon and Milton Road bus priority and road improvements – all designed to reduce public transport journey times and increase reliability of public transport.
- The period of construction of other schemes may adversely affect congestion, public transport journey times and reliability in the short-term.
- Other schemes will also facilitate developments in wider city centre. Other non-Investment Fund activities:
- Actions specific to bringing forward development sites themselves, i.e., Bourn Airfield (3,500 houses) and Cambourne West (2,350 houses).
- Complementary to delivery of Cambridge West Masterplan
- Possible inclusion of a further 2,000 houses north of Cambourne in next Local Plan on the basis that Cambourne to Cambridge provides connectivity
- Potential to complement East West Rail Oxford-Cambridge corridor, by providing last mile connectivity to adjacent development

Source: GCP

Method

6.36 The Progress Plus evaluation for Cambourne to Cambridge will build on the evidence collected for the Progress evaluation including the consultation with the project lead and assessment of delivery against planned expenditure, milestones, and monitoring data. It will focus on the progress towards the following 'outcomes of interest' set out in the logic model: land unlocked for new homes and new employment development, land value uplift, and enhanced attractiveness and deliverability of employment and housing sites. These are outcomes where: the progress towards them can be considered via tangible milestones/deliverables (e.g. planning decisions/statements), there is existing analysis/estimates which can be reviewed and discussed (i.e. on land value uplift), and qualitative evidence from partners/stakeholders can inform the assessment (i.e. improved attractiveness of housing/employment developments).

6.37 The Progress Plus evaluation will be delivered over Jan-April 2024 to inform the Final Report. It is noted that the scheme has been subject to intensive scrutiny with development of a series of environmental and transport investigations as part of request for planning permission. There is therefore extensive documentary evidence to track the progress of its development. In addition, the scheme will go to a public inquiry (probably in early 2024). The range of stakeholders who might usually be expected to contribute to a Progress Plus evaluation may participate in the Inquiry

6.38 In this context, the Progress Plus evaluation will involve:

- **A desk-based review of the underpinning context and rationale for the scheme** (e.g., review of business cases, relevant strategic plans and strategies)
- **A review of monitoring data, expenditure, and assessment of progress against key milestones during the review period** (April 2023 to October 2024)
- **Interviews with the project manager, senior representatives from the GCP with responsibility for the scheme, and the chief planning officer** on the status/progress of the scheme at the point of the evaluation, and progress in delivery.

6.39 Two further points are noted in relation to the coverage and purpose of the progress plus evaluation:

- Issues of activity additionality (i.e., the extent to which partners would be taking forward activity without Investment Fund support) will be considered qualitatively, and be based on self-reported feedback via consultations with the lead GCP contact with responsibility for the scheme. Note that consistent with the purpose and remit of progress plus evaluation, the research will *not* seek to assess outcome additionality (i.e. the extent to

which outcomes would have been realised without intervention and/or the other factors that may have led to outcomes).

- As noted above, the research will focus on progress towards the land unlocked for new homes and new employment development, land value uplift, and enhanced attractiveness and deliverability of employment and housing sites, including the extent to which there is any evidence of emerging/early outcomes, and any risks associated with the realisation of outcomes in the future. Other theme specific and broader economic outcomes will *not* be considered, reflecting the time-paths to impact. These outcomes would be subject to subsequent impact evaluation.

Data requirements

6.40 The data requirements for the evaluation approach for Cambourne to Cambridge are summarised in Table 6-4**Error! Reference source not found.**.

Table 6-4: Data requirements for the Progress Plus evaluation of Cambourne to Cambridge

Source of evidence	Requirements and approach
Primary evaluation evidence	• Consultations with relevant project manager, senior representatives from the GCP with responsibility for the scheme , and chief planning officer • Consultations will be completed in March/April 2024
Monitoring data	• Monitoring data related to the outputs set out in the logic model should be collected and reported to the IEP to inform the Progress Evaluation, and this will be considered in the Progress Plus evaluation (where realised).
Secondary evaluation evidence	• Documentation associated with the scheme development and business planning process should be provided to inform the review of the underpinning context, rationale and anticipated outcomes of the scheme (including in relation to land value uplift).

Source: GCP

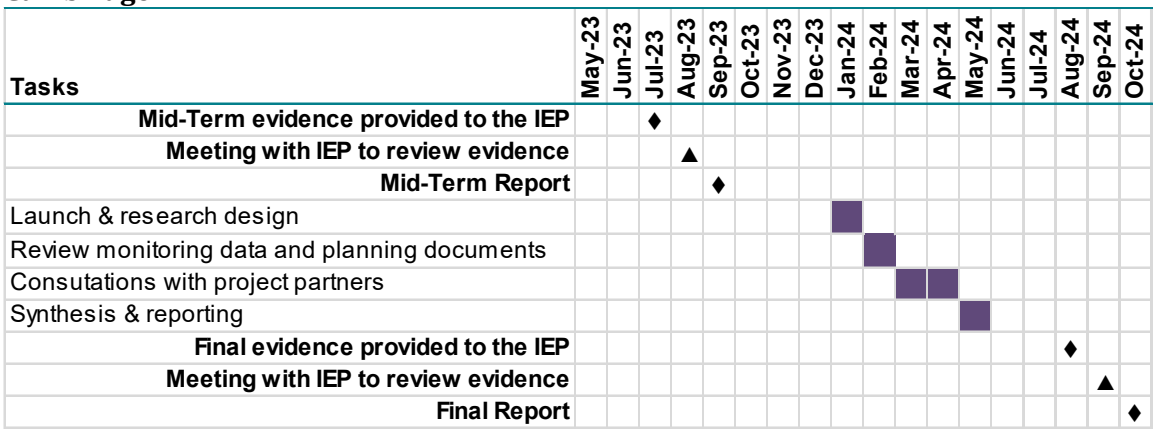
6.41 It is noted that it is *not* proposed that the Progress Plus evaluation will include primary research with wider stakeholders or other beneficiaries e.g., residents, individual business, users of the transport infrastructure. This reflects the timing of the evaluation and anticipated time-paths to impact.

Timing and delivery

6.42 The timing of the Progress Plus evaluation for Cambourne to Cambridge and the key tasks to be delivered is set out in Figure 6-4. For context, the timetable includes the fixed milestones for the overall evaluation of the Investment Fund in October 2024, including the Mid Term

and Final Reports that will draw on the evidence from the intervention-level progress plus evaluation.

Figure 6-5 Indicative timetable for the Progress Plus evaluation of Cambourne to Cambridge



Source: GCP

6.43 The progress plus evaluation of Cambourne to Cambridge will be delivered by the independent provider appointed by GCP following a competitive tender exercise to deliver the evaluation to inform the Gateway Review.

7. Complementary workstreams

7.1 The National Evaluation Framework and Performance Indicators identified three complementary workstreams to be delivered in each of the Localities as part of the evaluation of the Investment Fund: Process Review; Capacity Development and Partnership Evaluation; and Contextual Economic Forecasting. This section sets out what this will involve in Greater Cambridge.

7.2 The purpose of the complementary workstreams is as follows:

- **Process Review**: to explain the process which has been followed in developing, approving, and overseeing projects. This will include reference to how a range of stakeholders have been engaged in developing the programme and projects, and how fit to wider strategies was ensured. It will also demonstrate how value for money has been assured through the intervention appraisal process. The process review will be conducted as an overview of the approach across all projects, with examples provided to illustrate how this has worked in practice (or where some interventions have been developed through other approaches, and why this was appropriate).

- **Capacity Development and Partnership Evaluation**: to provide qualitative evidence for the Gateway Review on the effects of the Investment Funds on local capacity development and partnership working, complementing the evidence from the impact and progress evaluation activity. This is expected to be particularly important where intervention-level quantitative benefits may not yet have been fully realised, and where expenditure/activity is on-going.

- **Contextual Economic Forecasting**: to provide *context* for assessing the effects of the interventions. This will involve identifying headline economic trends before, and at the time interventions were selected, indicating how the economy in Greater Cambridge was expected to develop and revising these data at the point of the Gateway Review to understand what has actually happened. This insight will be used as part of a narrative around what has been achieved against expectations, and the wider economic factors that may have influenced this performance. The contextual forecasts will *not* be used to assess the performance of the GCP and the Investment Fund in generating local economic growth.

Process Review

7.3 Section A of the Performance Indicators included in the National Evaluation Framework covers the intervention approval process. Activities to provide evidence against this will be conducted at a strategic level and also using intervention level examples. This will include:

- An overview of the key steps in Greater Cambridge's Assurance Framework and approach to intervention-related stakeholder engagement. This will include considering the review of the Assurance Framework completed in May 2022.

- Case studies of how specific interventions have moved through the Area's approval process, including demonstrating their fit with the strategic context and how they were appraised. If applicable, information on how delivery plans have been adjusted post intervention approval should also be included.

- Consultations with those involved in the intervention development process, including stakeholders engaged with the specific case study interventions as well as stakeholders who have a broader perspective from having been involved in the development/approval process across multiple interventions.

- At the Mid Term stage, three interventions will be nominated as the subjects of the case-studies. Each case study will involve a small number [typically four-six] in-depth interviews with project partners and stakeholders, and include a timeline showing key dates in the approval process. The case studies will be undertaken to inform the Final Report. At this stage, the expectation is that the case studies will be:

  - **Making Connections**: reflecting the scale and high-profile nature of the intervention, the significant public consultation process undertaken, and the options development and appraisal process which has and will inform scheme design and decision-making on the scheme
  - **Cambourne to Cambridge**: reflecting the scale and high-profile nature of the intervention, the significant public consultation process undertaken, and alignment/engagement with the public inquiry process
  - **Waterbeach Station**: reflecting the scale and high-profile nature of the intervention, partnership working with a range of external partners and stakeholders (including in relation to private sector engagement and leveraging of funding), and linkages with wider planning and development activities in Cambridge.

Capacity Development and Partnership Evaluation

7.4 The Capacity Development and Partnership Evaluation will involve research activities at two-levels:

- **Strategic level** involving an online partner survey, and in-depth 'strategic' consultations with senior stakeholders across the area

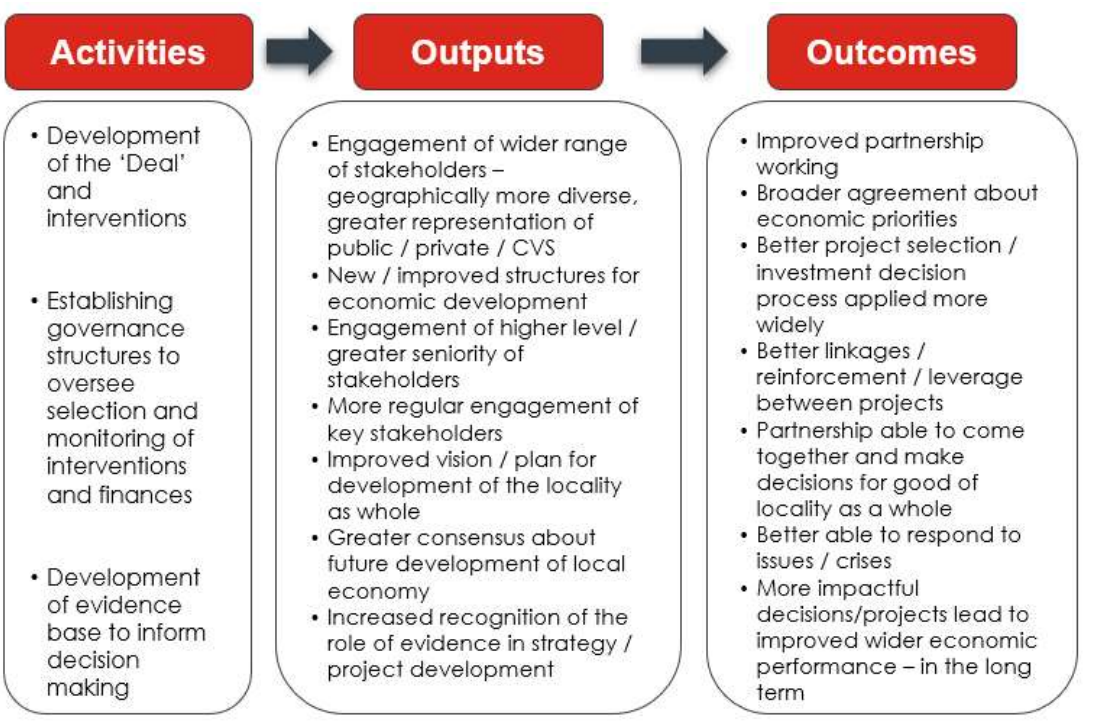
- **Project level involving** in-depth 'project' consultations with project sponsors and partners, and project-level case studies focused on capacity development and partnership outcomes.

Strategic level

7.5 The strategic level research is focused on gathering evidence on how the Investment Fund as a whole has led to changes in the behaviours, perspectives, and decisions of actors across the economic development landscape in Greater Cambridge.

7.6 The type of activities, and the nature of the benefits – in terms of outputs and outcomes – that will be the focus of this research were identified in the National Evaluation Framework and are summarised at Figure 7-1.

Figure 7-1: Framework for assessing strategic impact



Source: National Evaluation Framework, May 2017

In-depth 'strategic' consultations

7.7 The in-depth 'strategic' consultations will engage senior stakeholders across Greater Cambridge to gather qualitative evidence on the observed effects of the Investment Fund on local economic development activity and partnership working. The focus will be on senior-level stakeholders (e.g., Chief Executive, Leader etc.) able to look 'across' the interventions supported by the Investment Fund, and not those involved in the delivery of individual interventions.

7.8 There will be two waves of consultations:

- interim consultations in June 2023 to inform the Mid Term Report
- final consultations in June 2024 to inform the Final Report.

7.9 Each wave will include consultations with up to 20 senior-level stakeholders, completed face-to-face where possible. Where possible, consultees will be consistent with those included in the Gateway Review 1 research to help track change over time, although this will not always be possible, e.g., where individuals have changed jobs or retired. A list of consultee organisations is provided in Annex B.

Online partner survey

7.10 The online partner survey will involve the circulation of a brief survey to a broad range of individuals involved in the local economic development of Greater Cambridge. Where possible, the circulation list will be consistent with that used at Gateway Review 1. The circulation list is set out in Annex B.

7.11 There will be two waves of research:

- an 'interim survey' in May/June 2023 to inform the Mid Term Report
- a 'final survey' in May/June 2024 to inform the Final Report.

7.12 As far as practical, the survey will be circulated to the same cohort in each wave of research in order to track changing perceptions on the strategic effects of the Investment Fund activity. Survey responses will be provided anonymously.

Project level

7.13 The project level research is focused on how the development and delivery of individual interventions (or groups of linked interventions) has led to changes in the behaviours, perspectives, and decisions of actors across the economic development landscape in Greater Cambridge. In the National Evaluation Framework, these are referred to as "project-up" benefits, as they arise from the project up to the strategic level, rather than the strategic driving the project.

7.14 An example might include where an intervention (or a group of linked interventions) brought partners together to develop and implement it, and as a result these partners:

- are working together on other interventions
- have adopted a wider view of the Area's economic development
- have created new partnerships with wider stakeholders
- have demonstrated to others in their organisations the benefits of doing so.

7.15 Evidence on these project up benefits will be captured in two ways.

In-depth 'project' consultations

7.16 Primary evidence will be gathered from each project manager for each intervention within scope of the evaluation focused on these project-up benefits. This will be undertaken to inform the final report in October 2024. This evidence is separate to the progress evaluation activity discussed in Section 4.

Project case studies

7.17 At the Mid Term stage, two interventions will be nominated by officers from GCP as the focus of more detailed case-study research on project-up benefits. Each case study will involve four-six in-depth interviews with project partners and stakeholders (and also draw on the project manager consultations). The case studies will be undertaken to inform the Final Report. At this stage, the expectation is that the case studies will be:

- **Energy grid substations**: reflecting the evolution of the intervention that was initially anticipated to involve significant Investment Fund financial contributions, but was ultimately delivered via strategic engagement and partnership working with policy and regulatory agencies. Project-up benefits related to stakeholder engagement, improved partnership working and project selection and decision making will be a particular focus of the case study. However, the potential contribution of the intervention to all strategic benefits set out in the National Evaluation Framework will be considered.
- **Smart Cambridge (with a particular focus on a Connected Autonomous Vehicles Trial project)**: reflecting the partnership-based nature of the intervention (including extensive working with the County Council and the local research and business base), its success in leveraging significant external investment for activities contributing to local economic growth objectives and outcomes, and its role in providing evidence and insight to inform local strategy, decision making and investment. Project-up benefits related to improved partnership working, the role of evidence, and leverage of funding to deliver more impactful project activity will be a particular focus of the case study. However, the potential contribution of the intervention to all strategic benefits set out in the National Evaluation Framework will be considered.

Contextual Economic Forecasting

Purpose and background

7.18 The purpose of the Contextual Economic Forecasting is to provide the context for how the economy in Greater Cambridge was expected to develop at the time the Investment Fund was approved, via a 'baseline projection' in terms of employment, GVA and productivity. This will then be compared to actual outturns at the point of the Gateway Review to contextualise the findings from the impact and wider evaluation work. For example, whether the interventions

have been delivered in a helpful or challenging economic landscape, and how similar or different that was to what was anticipated at the time the interventions were developed.

7.19 The evaluation activity for Gateway Review 1 included the development of tailored baseline forecasts through to Years 5 and 10 after the Investment Fund approval. This tailoring process involved updating 'standard' projections to take account of specific growth plans or major interventions that were in place at the time the Investment Fund was approved, but which would not be captured in published datasets used to generate the forecasts. Importantly, the forecasts were only tailored to reflect plans/interventions which could reasonably be expected to influence economic growth over the period to the first Gateway Review.

7.20 The forecasts were developed at the level of the Area as a whole (i.e., not for individual Local Authority Districts). The Local Authority Districts included in the Area definition were: Cambridge City and South Cambridgeshire.

Approach

7.21 At Gateway Review 1, actual outturns were compared to the baseline forecast position in terms of employment, GVA and productivity.

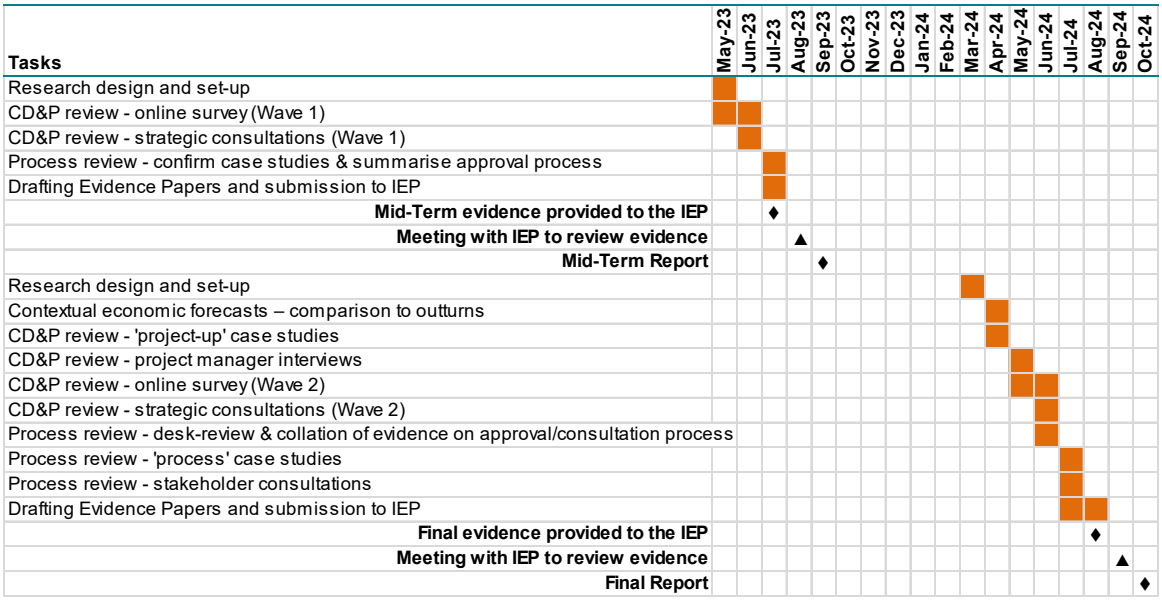
7.22 At Gateway Review 2, the same baseline forecasts will be used and, again, compared against actual outturns at the time of the Final Report.

7.23 As part of this Plan and process, forecasts will also be developed through to the next Gateway Review, to allow for this comparison of forecasts and outturns to be repeated at that time.

Timing and delivery

7.24 The timing for the complementary workstreams is set out in Figure 7-2.

Figure 7-2: Timetable for complementary workstreams



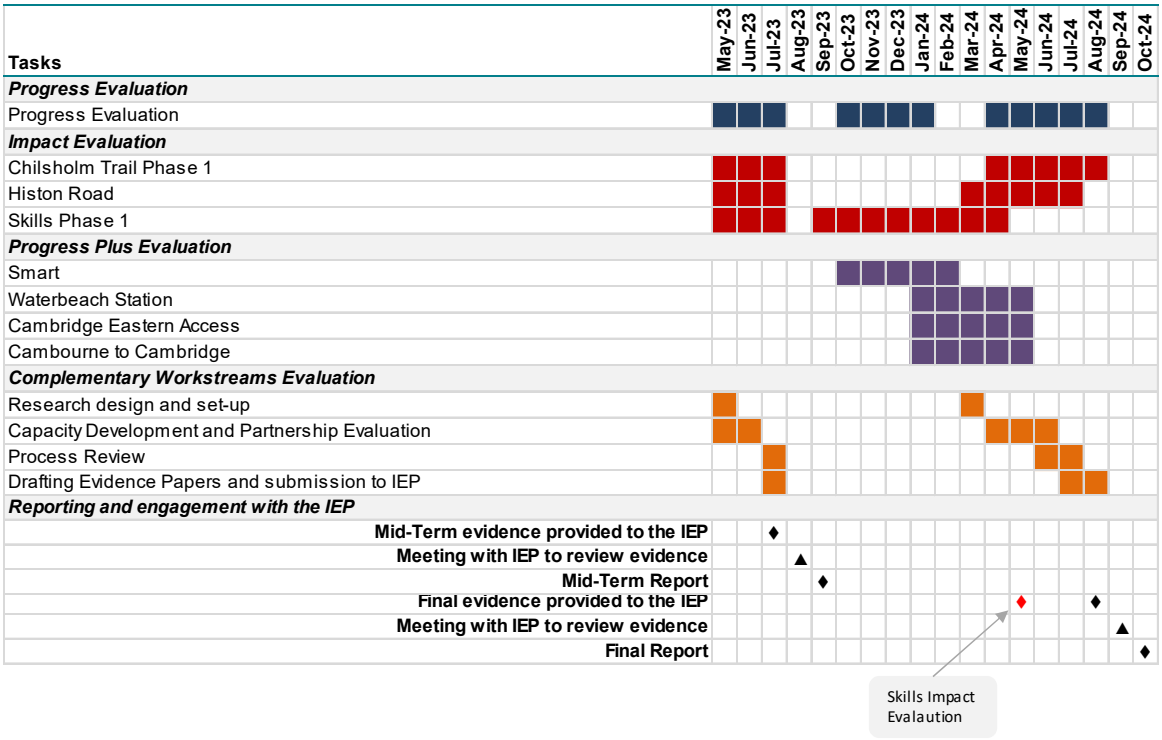
Source: GCP

7.25 The process review and capacity development and partnership evaluation will be delivered by the independent provider appointed by GCP following a competitive tender exercise to deliver the evaluation to inform the Gateway Review. The process contextual economic forecasting will also be delivered by the independent provider appointed by GCP following a competitive tender exercise to deliver the evaluation to inform the Gateway Review.

8. Implementation Plan

8.1 The figure below provides an integrated profile of the evaluation research in Greater Cambridge. Monthly calls between the IEP and GCP (as discussed below) will provide a means to track progress against this timetable.

Figure 8-1: Overall implementation plan for the evaluation



Source: GCP

Working with the Independent Evaluation Panel

8.2 Regular engagement with the Independent Evaluation Panel (IEP) will be a key element of the evaluation. The GCP will have a monthly call with the IEP to discuss progress with the evaluation research, emerging risks etc. These monthly calls will also be used to organise the bi-annual review of monitoring data.

8.3 Generic research tools provided by the IEP, and tailored locally as appropriate, will be used by GCP/appointed third parties to capture information. Evidence Paper reporting templates for the progress, impact, progress plus, and complementary workstreams provided by the IEP will be populated by Greater Cambridge/appointed third parties, and provided to the IEP.

8.4 In accordance with the National Evaluation Framework, and if requested by the IEP, GCP will provide access to any and all data and analysis underpinning the Evidence Papers, including data (quantitative and qualitative), models and assumptions. This will be reflected in the research design process (and where appropriate the commissioning of third parties) so that

data can be shared with the IEP in a GDPR compliant way (e.g., by securing consent from consultees and/or anonymising/pseudonymising survey responses, etc.).

8.5 GCP will provide all relevant monitoring and evaluation evidence to the IEP at least 6 weeks before the Mid Term Report is due to be submitted to DLUHC. The National Evaluation Framework states that evidence can be provided to the IEP as soon as it is available, rather than all submitted at the deadline.

8.6 GCP will provide the final set of monitoring and evaluation evidence to the IEP at least 10 weeks before the Final Report is due to be submitted to DLUHC. The National Evaluation Framework states that evidence can be provided to the IEP as soon as it is available, rather than all submitted at the deadline.

Reporting and sign-off

8.7 As summarised in Figure 8-1, the reporting milestones are as follows:

- Mid Term Report submitted to DLUHC in September 2023
- Final Report submitted to DLUHC in October 2024

8.8 The review, sign-off and circulation process is as follows:

- the draft report will be produced by SQW (as lead of the IEP) and shared with the Areas and Academic Panel for review and comment; a final version (taking into account the comments), will then be sent to the Area and to DLUHC (on behalf of central Government) for information
- The reports will be independent of DLUHC, and DLUHC will not comment on draft reports.

8.9 The final report will cover:

- the findings from the evaluation on the progress made by the Investment Fund in delivering against its planned inputs, activities, and outputs (and outcomes where these are evident from monitoring data/qualitative evidence), and whether it appears to be on course to deliver against its original objectives over the longer-term.
- the evidence on the achieved (and future expected) net economic impacts at the point of second Gateway Review by the interventions subject to impact evaluation, drawing on both quantitative and qualitative evidence; this will be presented in the context of the changes in the overall economic performance of the Area as identified by the econometric forecasts.

- the findings on any observed effects on capacity development and partnership working in the Area that has been generated via the delivery of the Investment Fund, by the point of the Gateway Review.

Planning for Gateway Review 3

8.10 Greater Cambridge will review additional evaluation options for existing and new interventions throughout the period to the Gateway Review. This includes evaluation approaches identified at the Business Case stage. Some interventions which are not suitable for robust impact evaluation in the current Gateway Review period may be suitable for such evaluation at Gateway Review 3. Where appropriate, Greater Cambridge will undertake/commission early baselining activity etc. to help develop robust evaluation evidence to present at any future Gateway Review 3.

Annex A: Risk Log

A.1 This Annex presents risks and mitigating actions related to the proposed evaluation activity. It will be reviewed by GCP throughout the evaluation.

Table A-1: Risk log

Risk	Likelihood / Impact	Mitigating actions
Progress Evaluation		
Gaps in coverage / poor quality of monitoring data	Low / High	Six-monthly reviews of monitoring data with the IEP to enable issues to be identified at an early stage and so addressed in advance of the final report to inform the Gateway Review. IEP will review data for consistency and discuss data issues in consultations with project managers Dedicated GCP Team to lead implementation of the evaluation, working closely with project managers responsible for data collection
Change in projects in scope	Medium / Medium	Delivery timescales may change, meaning projects are no longer in scope; this will be considered in the Mid-Term Report and bi-annual reviews.
Low engagement by project managers in consultations	Low / Medium	Dedicated GCP Team to lead implementation of the evaluation, working closely with project managers responsible for data collection
Impact Evaluation: Chisholm Trail Phase 1		
Lower-than-expected cycle / pedestrian levels on routes affects data collection	Low / Medium	Time-periods covered can be adjusted to maximise response level Fieldwork proposed in 2023 and 2024 to boost total sample size achieved
Low response rates to the cyclist / pedestrian survey	Medium / High	Time-periods covered can be adjusted to maximise response level Fieldwork proposed in 2023 and 2024 to boost total sample size achieved Use of post-intervention on-trail counters to provide data on actual usage Use of strategic networks to promote / highlight the surveys for its users /members
Gaps in post-intervention counter data on on-trail locations	Low / Medium	Cyclist and pedestrian surveys will include CCTV to monitor population, so these can be used to provide estimates for counts if counter data is not available
Gaps in time-series data on proximate locations	Medium / Medium	Detailed scoping phase to investigate quality and coverage of data Use of a mix of counters to address gaps associated with individual counters
Challenges for survey respondents to assess the influence of the Trail – including risk of attribution bias	Low / Medium	Questionnaire design used to draw out various influences on cycling/walking behaviours and attitude Attribution bias considered using pre- and post- data on "proximate locations" and wider contextual data

Risk	Likelihood / Impact	Mitigating actions
Wider changes in cycling / walking associated with COVID-19 limits ability to identify impacts	Medium / Medium	Mixed-methods and theory-based approach adopted to enable assessment of wider factors influencing outcomes Data on wide trends across the city in cycling and walking used to inform the theory-based assessment, which can be used to contextualise findings for Chisholm Trail
Low engagement by stakeholders in qualitative consultations	Low / Low	GCP requested to 'warm-up' stakeholders and highlight importance of the evaluation research to City Deal Flexibility in delivery of consultation e.g., using Teams/Zoom, early contact and set-up etc.
Impact Evaluation: Histon Road		
Lower-than-expected levels of bus passenger / cyclists affects data collection	Low / Medium	Time-periods covered can be adjusted to maximise response level
Low response rates to the bus passenger / cyclist / pedestrian survey	Medium / High	Time-periods covered can be adjusted to maximise response level Use of time-series secondary data as part of mixed-methods approach, reducing reliance on a single source of evidence
Bus patronage data not made available by operator	Medium / Medium	Public transport usage covered in resident survey to provide alternative source of evidence
Low engagement by stakeholders in qualitative consultations	Medium / Low	GCP requested to 'warm-up' stakeholders and highlight importance of the evaluation research to City Deal Flexibility in delivery of consultation e.g. using Teams/Zoom, early contact and set-up etc.
Low engagement by businesses in qualitative consultations	Medium / Low	GCP requested to 'warm-up' businesses and highlight importance of the evaluation research to City Deal Flexibility in delivery of consultation e.g. using Teams/Zoom, and consider potential for on-site interviews where requested, early contact and set-up etc.
Wider changes in bus usage / cycling / walking associated with COVID-19 limits ability to identify impacts	Medium / Medium	Mixed-methods and theory-based approach adopted to enable assessment of wider factors influencing outcomes Use of "best fit" comparators to contextualise findings for Histon Road
Impact Evaluation: Skills		
Unique Learner Numbers not available for all apprentices	High / Medium	ULNs are available for apprentices trained through CRC (66% of total). Analysis reporting to emphasise that the findings are based on a sub-set not the full population
Low engagement from learning providers (other than CRC)	Medium / Medium	GCP have ongoing relationship with learning provides generally and through Skills 2. Participation can be encouraged to build evidence base for subsequent projects and funding.

Risk	Likelihood / Impact	Mitigating actions
Low engagement from employers	Medium / High	Communication strategy to be agreed with GCP and delivery partner. combination of telephone and online proposed to ensure employers have opportunity to participate in ways that suit them best
Low engagement from apprentices	Medium / High	Communication strategy to be agreed with GCP and delivery partner Use of incentive to encourage response.
Limited availability of relevant secondary data	Low / Medium	Several data sources will be explored to provide multiple smaller inputs with different key pieces of contextual information, rather than relying on single significant source.
Progress Plus Evaluations		
Low engagement by partners / stakeholders in consultations	Low / Medium	GCP to 'warm-up' stakeholders and highlight importance of the evaluation research to City Deal Flexibility in delivery of consultation e.g. using Teams/Zoom, early contact and set-up etc.
Delays / changes in project scope means Progress Plus evaluation not possible/ appropriate	Medium / Low	Progress of projects considered at Mid-Term Report stage, and any changes agreed with IEP Projects converted to 'Progress' evaluation where appropriate
Complementary Workstreams		
Low response rate to online survey	Medium / Medium	GCP to 'warm-up' targeted respondents, and highlight importance of the evaluation research to City Deal Research tools provided by the IEP adjusted as appropriate to ensure relevance to GCP context in order to boost participation
Low engagement by stakeholders in consultations	Low / Medium	GCP to 'warm-up' stakeholders and highlight importance of the evaluation research to City Deal
Consultation exercises cut across other engagement undertaken by the Locality	Medium / Medium	Potential overlaps and issues to be considered by GCP Team, and any changes to timing / scope discussed with the IEP
Project managers not able / willing to participate in case studies (project-up and process)	Low / Medium	Dedicated GCP Team to lead implementation of the evaluation, working closely with project managers Case studies identified at LEF stage to ensure early buy-in and agreement to participation
Cross-cutting		
Capacity constraints limit delivery of evaluation to required time / quality	Medium / High	Dedicated GCP Team to lead implementation of the evaluation, with senior-level input to ensure priority and oversee delivery Independent provider appointed by GCP following a competitive tender exercise to deliver the evaluation to inform the Gateway Review. Capacity to deliver and relevant experience key factors in provider selection
Changes in evaluation team at GCP	Medium / Low	GCP Team including several experienced and senior representatives to mitigate risk of individual changes

Risk	Likelihood / Impact	Mitigating actions
		Clear audit trail and project management systems established to ensure smooth handover
Quality of evaluation research and evidence delivered by the independent provider	Low / High	Competitive tender exercise undertaken Regular meetings between GCP Team and independent provider throughout the evaluation period to ensure quality of delivery Close engagement with the IEP throughout and early identification of any risks / issues in evaluation progress / quality to identify mitigating actions

Annex B: Intended interviewees for the capacity development and partnership research

Strategic consultations

B.1 It is expected that there will be up to 20 strategic-level consultations taken place, which will involve individuals in the followingorganisations:

- Combined Authority
- Strategic Partners
- Local Authorities (as above)
- Research and innovation assets
- Business networks
- Voluntary or third sector organisations

E-survey

B.2 The e-survey is a separate exercise to the strategic consultations. Whilst the same people could be nominated as both a strategic consultee and an e-survey recipient, previous experience has found that these people are unlikely to respond to the e-survey.

B.3 The survey will be sent to around 50 individuals from the following types of stakeholder groups and ensuring breadth across the geographical area:

- Combined Authority, Local Authority representatives involved primarily in delivery/operational (rather than strategic) roles
- **Private sector** – e.g., from business representative organisations, major businesses, and other businesses with a role in economic development (e.g. major property developers)
- **Other key stakeholder representatives**, such as from universities, colleges, NHS organisations, transport organisations
- Members of Combined Authority / Business Boards not covered above.

Annex C: Intervention level changes since Gateway Review 1

C.1 The Gateway Review 1 evaluation process set out expected/achieved expenditure and output profiles for each intervention which was in scope at that point. In some cases, these profiles have been updated to reflect changes in intervention delivery. The table overleaf summarises any changes in intervention level expenditure or timescale.

Table C-1: Intervention level expectation at Gateway Review 1 compared to the latest position at April 2023[28]

	Expectations at Gateway Review 1			Latest position		
Name of intervention	**Approved IF expenditure – total**	**Approved IF expenditure – by end of GR2**	**Intervention end year**	**Approved IF expenditure – total**	**Approved IF expenditure – by end of GR2**	**Intervention end year**
Group A: Interventions which started before Gateway Review 1 and were complete by Gateway Review 1						
Cross City Cycling	£8.55m	£8.55m	2019	£8.55m	£8.55m	2019
Group B: Interventions which started before Gateway Review 1 and were in delivery after Gateway Review 1						
Chisholm Trail Phase 1	£8.4m	£8.4m	2019	£11.59m	£11.59m	2021
Histon Road	£7m	£7m	2020	£10.36m	£10.36m	2022
Skills Phase 1	£0.38m	£0.38m	2020	£0.38m	£0.38m	2020

[28] It should be noted that the table includes significant changes since Gateway Review 1. In some instances, the cost to the Infrastructure Fund (for example Cambourne to Cambridge) has reduced, the reason for this is that external funding has been secured to reduce the amount of IF required. In addition, other schemes are now significantly more developed, for example the budget for the Greenways Programme did not previously include for anything other than 'quick wins' and some initial development costs. A number of programme dates have gone back, the reasons for this are specific to each project but also include delays caused by the Covid 19 pandemic.

Expectations at Gateway Review 1				Latest position		
Name of intervention	**Approved IF expenditure – total**	**Approved IF expenditure – by end of GR2**	**Intervention end year**	**Approved IF expenditure – total**	**Approved IF expenditure – by end of GR2**	**Intervention end year**
Cambridge SW Travel Hub	£42.00m (SW + Foxton Hubs)	£42.00m (SW + Foxton Hubs)	2023	£42.00m (SW + Foxton Hubs)	£30.65m (SW + Foxton Hubs)	2026
CSETS Phase 1 and 2	£140m	£140m	2024	£146.27m	£48.8m	2026
Milton Road	£23.04m	£23.04m	2021	£22.13m	£22.13m	2024
Chisholm Trail Phase 2	NA	NA	NA	£5.00m	£5.00m	2024
Cambourne to Cambridge	£157.24m	£157.24m	2024	£119.01m	£40.06m	2026
Greenways Programme	£4,186m	£4,186m	NA	£73.75m	£43.33m	2025
Foxton Travel Hub	£42.00m (SW + Foxton Hubs)	£42.00m (SW + Foxton Hubs)	2024	£42.00m (SW + Foxton Hubs)	£30.65m (SW + Foxton Hubs)	2026
Madingley Road	NA	NA	NA	£0.99m	£0.99m	2025
Waterbeach to Cambridge	NA	NA	NA	£44.05m	£5.06m	2027
City Access	£9.64m	£9.64m	2021	£19.171m	£19.171m	2027

Expectations at Gateway Review 1				Latest position		
Name of intervention	**Approved IF expenditure – total**	**Approved IF expenditure – by end of GR2**	**Intervention end year**	**Approved IF expenditure – total**	**Approved IF expenditure – by end of GR2**	**Intervention end year**
Smart Cambridge	£2.27m	£2.27m	2030	£4.82m	£4.57m	2030

Source: [GCP]

Annex D: Performance Indicators

D.1 This Annex presents the Performance Indicators defined by HMG for all of the Investment Funds covered by the National Evaluation Framework. There are three high level indicators:

- Intervention progress and process
- Intervention impact
- Capacity development and partnership working

D.2 GCP's Fund is approaching its second Gateway Review. The following performance indicators will apply.

Performance Indicators for the second Gateway Review

#	Performance Indicator
	Intervention progress and process
A1	Explanation of the approval process you followed for the intervention, including: • (a) how the intervention was agreed by the MCA, City Board or Cabinet, including a description of how challenge or disagreement was handled effectively, where applicable • (b) how the views of stakeholders were considered during intervention development • (c) how the intervention aligns with pre-existing investment programmes in the area • (d) how the business case process was appraised (N.B. Robust appraisal should demonstrate value for money and potential for positive economic impact, developed in line with the HM Treasury Green Book) • (e) how the intervention fits with pre-existing stakeholder frameworks, strategies and plans
A2	Explanation of the delivery process to date, including: • (a) intervention milestones agreed at Board level that are likely to result in successful delivery of the intervention • (b) delivery of the intervention against agreed intervention milestones with evidence of adjusting project/programme plans to mitigate the impact and to ensure value for money and successful delivery • (c) an agreed spending profile for the intervention • (d) evidence of keeping to the spending profile, mitigating overspend or delays and the effective reallocation of underspends; including evidence of adjusting spending and project/programme plans to mitigate the impact and to ensure value for money and successful delivery • (e) outputs generated to date by intervention activities • (f) evidence of how areas have adapted to changing circumstances and managed any necessary change – including in response to Covid-19.
A3	Delivery of Local Evaluation Frameworks as agreed with Independent Evaluation Panel and evidence of commitment to Investment Fund evaluation activities, including working with the Independent Evaluation Panel.

#	Performance Indicator
	Intervention impact
2B1	Description and evidence that all evaluation activities set out in an area's evaluation plan have been completed. This includes the transfer of the results of any survey, interview transcripts, any data collected, and the code used to perform any statistical analysis. Further advice and engagement should be available to ensure that an independent evaluator can replicate any empirical work.
2B2	Evidence that each element of an intervention's logic model (i.e., inputs, activities, outputs and outcomes) has been delivered or materialised. As noted in Section 4 of the NEF, whilst the default assumption is that all interventions should be subject to impact evaluation, this is not always possible (e.g., as interventions vary in terms of scale, time to deliver and time to generate impact). The Area will propose which projects are to be considered "in-scope" and agree this with the IEP. Evidence can be quantitative or qualitative, but preference should be given to providing robust, quantitative evidence where possible.
2B3	Empirical evidence that the logic model has functioned as expected (i.e., that increases in the desired outcomes and impacts can be causally attributed to the intervention). At minimum this will include the use of baselines to compare outputs and outcomes pre and post intervention. Ideally it will include an experimental or quasi-experimental approach to estimate the intervention's impact, with a clear explanation of how a counterfactual was developed and why it is credible. Where practical, efforts should be made to return to projects from GR 1 which were not fully evaluated. These projects should be evaluated as set out here using similar principles as to projects in GR 2.
2B4	The rationale for the majority of Investment Funds is to generate local economic growth – the two core metrics for measuring the impact, of interventions supported by the Funds are 1) Net additional Gross Value Added (GVA), and 2) Net additional output (GVA) per hour. If it is not possible to measure either of these, then alternative metrics are acceptable provided their appropriateness can be demonstrated (a list of illustrative, alternative economic growth metrics is provided in the NEF).
	Capacity Development and partnership working
2C1	Description of changes to leadership roles and responsibilities assigned within the locality during the Gateway Review period, providing reasons for changes to roles and evidence of impact of following the changes.
2C2	Evidence and examples of how engagement between local authorities within the locality on development and decision-making has matured/improved/progressed over the Gateway Review period, in relation to the Investment Fund as a whole.
2C3	Evidence that stakeholders feel it continues to be beneficial to engage with the City, MCA or Cabinet.
2C4	Description of any changes to governance structures since the last Gateway Review, reasons for the changes and evidence of improvement with the new processes.

#	Performance Indicator
2C5	Description of how evidence has been used in the development of strategies and new projects.
2C6	Evidence and examples that the City, MCA or Cabinet have built up the required capacity to deliver their projects.

Source: DLUHC (2023)National Evaluation Framework for Investment

Annex E: Evidence Assessment Criteria

E.1 SQW (as lead of the Independent Evaluation Panel) will review the quality of evaluation evidence provided by Areas for inclusion in the mid-term and final Gateway Review reports. The review will be conducted when evidence is supplied to SQW, and be undertaken separately for each element of the evidence provided. For example, if an Area provides three impact evaluation reports, each of the three reports will be reviewed separately.

E.2 The use of ratings is intended to help:

- Areas to understand where it may be possible to strengthen the evidence presented, especially where early drafts are made available to the IEP for review and comment, after which changes could be possible if time allows.
- Those in Government who will use the material as part of the Gateway Review process to understand the confidence they should have in the evidence presented. As such, these indicators do not replace the Performance Indicators set out in the National Evaluation Framework and repeated in the preceding Annex. It is performance against the KPIs in the NEF that will be assessed at the Gateway Review.

E.3 Each criterion in the table below has been RAG rated by the IEP. The assessment of the robustness of the method follows NESTA's Standards of Evidence[29] with 1= red, 2= amber and 3 and above rated as green.[30] As set out in the NEF, Areas should look to use robust evaluation methods but we understand that the nature of the projects and data will restrict what is possible in some cases.

Assessment at LEF stage

Table E-1: Assessment at LEF stage – Chisholm Trail Phase 1

Issues	Criteria	RAG
Approach / method	Does the method selected aligned with the National Evaluation Framework	
	Is the method selected appropriate to the intervention and stage of development	
	Does the method include development of a counterfactual	There is no formal counterfactual, though the evaluation will use before and after evidence to help inform what would have happened without the intervention. Counterfactuals have been

[29] See Standards of Evidence | Nesta
[30] It is unlikely that impact evaluations in this process will achieve above Nesta Level 3

		considered, but ruled out due to feasibility issues.
	How robust is the method chosen (Nesta rating)	Method proposed is Level 2 - evidence on change with causality inferred rather than from a counterfactual. Related to row above, Level 3+ was considered, but not feasible.
	Have appropriate data sources been identified	
	Is the sampling approach appropriate	
	Are proposed sample sizes, interview numbers appropriate	
	Has quality assurance and independence been built in to the process	
	Are there any concerns about the approach	

Source: IEP

Table E-2: Assessment at LEF stage – Skills Phase 1

Issues	Criteria	RAG
Approach / method	Does the method selected aligned with the National Evaluation Framework	
	Is the method selected appropriate to the intervention and stage of development	
	Does the method include development of a counterfactual	Scoping stage will consider feasibility of a counterfactual using ILR data. There are acknowledged challenges to doing this, but if feasible, credible and proportionate, then this could result in 'green' rating for final assessment
	How robust is the method chosen (Nesta rating)	Should be Level 2 (positive change with causality inferred). Scope to move to Level 3 if feasible comparison group can be identified from the ILR - though this may be difficult given the issues in establishing a credible counterfactual.
	Have appropriate data sources been identified	

	Is the sampling approach appropriate	
	Are proposed sample sizes, interview numbers appropriate	Low response rates and response bias are acknowledged as risks. This may reduce the confidence with which evidence can be presented.
	Has quality assurance and independence been built in to the process	
	Are there any concerns about the approach	Approach is sound and proportionate given scale of intervention. Note: there are risks, in particular in relation to obtaining a representative set of responses to build a fair evidence base. These can be overcome.

Source: IEP

Table E-3: Assessment at LEF stage – Histon Road

Issues	Criteria	RAG
Approach / method	Does the method selected aligned with the National Evaluation Framework	
	Is the method selected appropriate to the intervention and stage of development	
	Does the method include development of a counterfactual	There is no formal counterfactual, though the evaluation will use before and after evidence to help inform what would have happened without the intervention. Counterfactuals have been considered, but ruled out due to feasibility issues.
	How robust is the method chosen (Nesta rating)	Method proposed is Level 2 - evidence on change with causality inferred rather than from a counterfactual. Related to row above, Level 3+ was considered, but not feasible.
	Have appropriate data sources been identified	
	Is the sampling approach appropriate	

Are proposed sample sizes, interview numbers appropriate	
Has quality assurance and independence been built in to the process	
Are there any concerns about the approach	

Source: IEP