kmc transport planning

Cambridge Biomedical Campus

Travel & Transport Plan

2024-2029

Produced November 2024

Cambridge Biomedical Campus

Contents

1. Introduction, Context, Scope & Purpose

Introduction

Background

KMC Transport Planning Ltd (KMC) has been commissioned by Cambridge Biomedical Campus (CBC) to prepare the CBC Travel & Transport Plan for the period of 2024-2029.

Situated on the southern edge of Cambridge, the CBC is well known as an area of innovation that combines world-class bio-medical and technological research, patient care and education on a single Campus and is well renowned not only locally, but also on a national and global scale.

Context

The thriving and vibrant community of the CBC brings together experts from academia, business, research, health and a diverse range of other backgrounds to engage and collaborate to tackle some of the major healthcare and scientific issues that the world is faced with today.

Additionally, a great number of Cambridge residents and visitors from a-far are also acquainted with the CBC in some capacity whether through healthcare treatment at one of the hospitals located on the Campus, public event attendance, or passing by or though on various modes of travel.

The CBC is therefore a major destination and consequently a generator of travel demand. The CBC is currently host to approximately 23,000 workers within employer organisations including Abcam, AstraZeneca, Cambridge University Hospitals NHS Foundations Trust, GlaxoSmithKline, MRC Laboratory of Molecular Biology, Royal Papworth Hospital NHS Foundation

Trust, The University of Cambridge, Cambridgeshire and Peterborough NHS Foundation Trust alongside many other organisations.

In 2021, CBC Ltd and partners created the longer-term Vision 2050 for the CBC. The Vision 2050 captures how the CBC will remain at the forefront of globally significant healthcare research, innovation and technology as well as addressing the role it plays in a Cambridge context to enhance city life. The CBC does not operate in isolation. Alongside this growth, the surrounding infrastructure in Cambridge and the local area has and is planned to continue to grow.

The current travel demands in combination with the forecast growth and infrastructure developments laid out means that ensuring staff, patients, visitors and business representatives etc can travel sustainably to, from and within the Campus is vital. To facilitate this, appropriate travel demand management must be in place that not only manages CBC travel, but simultaneously, looks to reduce congestion within Cambridge and the surrounding areas, ensuring the continuation of the status of CBC to be a great place to visit, work, or live beside. Table 1 illustrates the forecast CBC growth by employment sector from 2025-2050 (Source: CBC Housing Study Report, Lichfields (2024)). The total growth of workers on the CBC is anticipated to increase from 22,000 to 40,000 by 2050.

Forecast Campus Growth By Sector

Number of staff forecast at the Campus to 2025-2050
Source: CBC Housing Study Report – CBC Ltd / Lichfields Analysis

Employment Sector	Jobs 2025 - 2050	% Of Employment
Health	+ 5,000	67%
Education and Research	+ 1,000	27%
Commercial Life Sciences	+ 12,000	6%

Table 1: Forecast CBC Growth By Sector

Introduction

Scope

Aspirational yet practically feasible travel demand management that considers both the operational needs of the CBC and surrounding areas today as well as considering the forecast growth and longer-term vision of the CBC is deemed essential. This will reduce congestion and improve journeys for staff, visitors and patients to, from and within the Campus, as well as nearby residents and the local community.

To facilitate travel demand management that reflects the existing status and committed growth, a Transport Strategy and 5-Year Implementation Plan for the CBC was prepared in October 2018 that built upon the foundational achievements made by CUH's "Access to Addenbrooke's Travel Plan" and consequently moved the CBC into what was deemed a new era of travel and transport, representative of its global status as an area of world class research. The 2018 "Transport Strategy and 5-Year Implementation Plan" provided the overarching Travel Plan for the CBC and detailed how this would be implemented over the 5-year period (2018-2023) through a mixture of physical infrastructure and softer behavioural changes.

The previous plan was an excellent document which provided transparency around the transport challenges of the Campus and set out a clear set of objectives and measures to try and manage transport demand and growth over time. The plan has successfully delivered measures to improve access and sustainable transport options over a 5-year period and the Implementation Plan contributed to many successes, including the reduction in staff car driver mode share to the Campus from 42% (2017) to 37% (2023).

The previous Transport Strategy and 5-year Implementation plan has now reached the end of the adopted lifespan, with the commitment for it to be refreshed every 5-years to ensure an updated and reflective Travel & Transport Plan pertinent to the ever changing- dynamic nature of the CBC and Cambridge. Additionally, ensuring sustainable and clean travel is a priority action within the NHS Green Plan 2021-2026.

This document, the updated Travel & Transport Plan, will further build upon the bedrock laid by the previous strategy and its respective achievements to date and provide stepping stones towards reaching the Vision 2050.

The updated Travel & Transport Plan will take account of the series of changes at the CBC since the previous 5-year Travel & Transport Plan was adopted and considers the new, committed and proposed, forecast growth as well as capturing the dynamic nature of the Campus. The Travel & Transport Plan has also been developed following engagement and consultation with Campus partners, local authorities, local services and infrastructure providers, as well as the local community through resident groups and parish councils. It is thoroughly envisaged that to achieve a successful Travel & Transport Plan at the CBC, strategic partnerships and detailed consultation / engagement are critical.

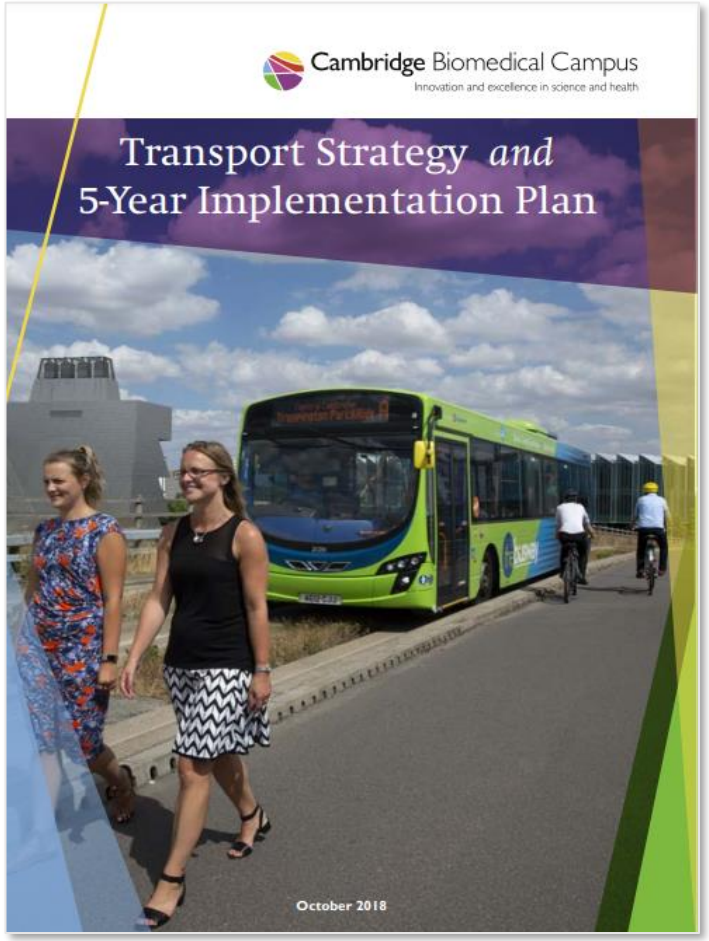


Figure 1: CBC Transport Strategy and 5-Year Implementation Plan (2018-2023)

Introduction

Purpose

This Travel and Transport Plan holds the all-encompassing aspiration to improve all journeys to, from and within the Campus for all users, whether it may be staff, visitors, and patients. However, the Travel & Transport Plan has also considered the wider community who may not be associated with the operations at the CBC but may be impacted by the existing challenges and constraints faced at the Campus and within the surrounding area.

This Travel & Transport Plan makes clear the roles and responsibilities for delivering the Plan. From this work, it is apparent that many of the more significant (and critical) transport schemes are the responsibility of 3rd parties. Whilst these parties can be positively influenced by CBC, the schemes which they are delivering are outside the responsibility of CBC. In such instances, CBC will work collaboratively with the wider Campus partners and occupants and the pertinent 3rd party to ensure timely delivery and alignment with the relevant objectives of this Plan.

This Travel & Transport Plan will set out and detail the key transport moves that should be made over the next 5-year period, to ensure the continued improvement on the day-to-day operations. These key moves over the next five years will consist of ‘quick’ wins but will also seek to tie into the CBC 2050 Vision, as well as take into consideration the range of transport investment that are being delivered into Greater Cambridge over the coming 5-year period.

2. Vision 2050

Vision 2050

Relationship with this Report

This report covers the Travel & Transport Plan for the period of 2024-2029. However, this report cannot and should not be written in isolation from any longer-term thinking and strategy. It is essential that this report provides a basis for travel and transport management in the shorter term but also provides for early moves which would facilitate the longer-term vision for the Campus.

This vision is based (and can only be fully achieved) on the presumption that current challenges and issues with access to and within the Campus are addressed. Without positive intervention, transport and access to the site has the potential to become a detriment to growth. Providing capacity and easier access for sustainable modes instead of cars is imperative. This shift is consistent with the policy objectives of stakeholders within the Campus and decision makers in local government.

CBC 2050 Vision

In 2021, organisations involved in the CBC, and the surrounding life science cluster, published the 2050 vision. The Vision set out shared ambitions for the CBC over the next three decades. The vision builds upon the successes of recent years, it shows aspirations for further development of the Campus to realise the aim of the Campus achieving global excellence in health, education and life sciences. More than this, it aims to make it a vibrant urban community. The headline of the vision is “By 2050 Cambridge Biomedical Campus will be globally leading and locally rooted, where healthcare, research, commercialisation, and real-world application of life sciences come together.” To achieve this vision, the CBC must enable the interaction of organisations which are based here.

Through the vision, the CBC will develop:

- A mature campus, with a wide range of complementary spaces for business, research and healthcare institutions.
- A connected place, with enhanced physical and digital links to other local and international centres of research and clinical excellence.
- A 20-minute neighbourhood, integrated into its community, where people can enjoy a healthy environment and a high quality of life.
- A fully functioning urban extension to Cambridge, with a mix of business, residential and supportive infrastructure in a sustainable development.
- An engine of economic growth, creating jobs and improving productivity locally and throughout the UK; delivering growth which is environmentally sustainable and inclusive.

To assist in achieving this vision, appropriate travel demand management must be in place that not only manages CBC travel, but simultaneously, looks to reduce congestion within Cambridge and the surrounding areas, ensuring the continuation of the status of CBC to be a great place to visit, work, or live beside.

3. Partner & Stakeholder Engagement

Campus Partner, Stakeholder and Community Engagement

Scope

During the development of this document, prior to the adoption of this Travel & Transport Plan, KMC has undertaken an extensive range of engagement and consultation with the Campus partners and stakeholders. The purpose of this engagement has been to gain understanding of the existing opportunities, constraints and challenges, from a travel and transport perspective, of the day-to-day operations of the Campus at a granular level as well those that may be anticipated in the longer term at a strategic scope.

Therefore, this engagement is envisaged to have provided the necessary insight and foundations to the existing situation at the Campus from a multitude of angles and perspectives, as well as the foundations that have assisted in the formation of the travel and transport planning measures contained within this Travel & Transport Plan. Prior to this engagement, KMC classified the Campus partners and stakeholders into four primary overarching groups, as illustrated in Figure 2. These disciplines are summarised as follows:

- Campus Occupants;
- Local Government and Authorities;
- Infrastructure and Service Providers; and
- External Community Stakeholders.

The categorisation of the Campus partners into disciplines ensured that engagement was suitability tailored to the needs of each individual discipline. Throughout the process, the perspectives and insights of all individual disciplines and entities involved were carefully balanced and given equal consideration at every stage, ensuring a comprehensive and inclusive approach to engagement.

To enhance this engagement, KMC conducted a series of comprehensive site visits to the Campus in 2024, spanning various times of the day. These visits were designed to provide an in-depth understanding of the Campus's daily operations and offer a thorough immersion into Campus life. During these visits, qualitative observations were systematically carried out at critical transport corridors and interchange points both within and surrounding the Campus, including Park and Ride locations.

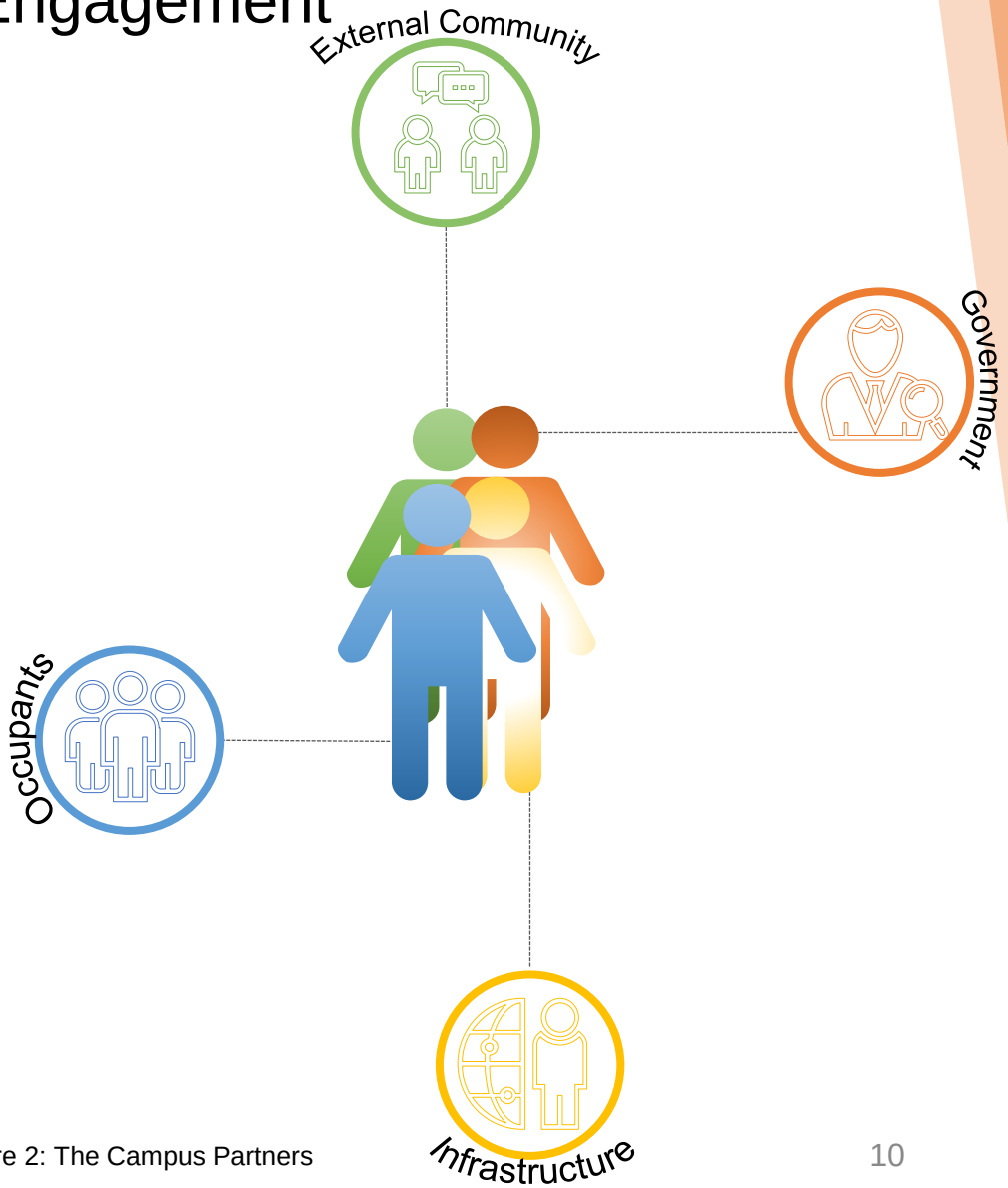


Figure 2: The Campus Partners

Campus Partner, Stakeholder, and Community Engagement

Engagement Methodology

Campus Occupants

The occupants of the Campus form not just a vital part of the CBC eco-system, but also form part of the existing, and emerging, Cambridgeshire health, life science and research & development sphere. The discipline 'Campus Occupants' comprises of a variety of entities, both public and private sector, and account for a considerable majority of the employment at the CBC, and thus a considerable majority of trips to, from and within the Campus. Therefore, understanding the day-to-day operations and the longer-term ambitions of the Campus occupants, as well as the challenges, opportunities and constraints they face is crucial to the success of this Travel & Transport Plan.

For Campus occupants, KMC were regular attendees at the CBC Travel and Transport Group Meeting as a point of contact should any matters related to this Plan be noted. Subsequently, a questionnaire was issues to individual Campus Occupants to establish a baseline of the current situation, the challenges and the opportunities each entity may face, respectively. Following receipt of these questionnaires back to KMC, follow up discussions were held with an occupant representative to build upon the questionnaire findings and discuss relevant matters further. A review of the CBC Annual Staff Travel Survey for the previous 5-year period was also undertaken.

The survey provides data regarding existing travel behaviours, patterns and thoughts in relation to the existing operations of the Campus.

Government

"Government" encompasses a range of bodies who form the statutory local authorities responsible for transport and infrastructure policy and delivery. A range of meetings have taken place with local government bodies, such as Cambridgeshire County Council, the Greater Cambridge Partnership and the Cambridge & Peterborough Combined Authority.

Through this engagement, an understanding of the existing and future potential position of these bodies regarding not just the Campus, but also key external infrastructure that services the Campus (such as the local highway network and active travel routes) was explored.

Infrastructure and Service Providers

The importance of the existing and planned transport infrastructure and services at the Campus cannot be overstated, particularly given the development and expansion occurring both on-site and in nearby transport corridors. Therefore, the engagement with the key infrastructure and servicing groups is critical, particularly to ensure that their respective activities and plans are considered and incorporated. With regards to public transport operators, engagement has provided an understanding of the existing opportunities, constraints and challenges of operating at the Campus.

An understanding was gained of the critical improvements that may be required to create an improved public transport network. Meetings with representatives of the logistics and management groups of the Campus also provided detailed information into the constraints and ownerships of the Campus, and how the day-to-day operations take place.

External Community Stakeholders

The external stakeholders of the Campus are groups who are situated outside (either in a spatial or influential context) of the Campus, but are still affected by the decisions, day-to-day operations and strategic vision of the Campus. For example, in a Campus context, this includes groups such as local resident associations and educational facilities. Engagement with representatives of these groups has provided a valuable insight into the role, uses and view of the Campus from an external perspective. This information is considered equally important to that sourced from more internal Campus partners.

4. Current Situation

Existing Campus Situation

Strategic Context

The CBC is located on the southern edge of Cambridge and is abutted by the London to Kings Lynn railway corridor to the west, Long Road to the north and Hills Road and Babraham Road to the east. South of the CBC lies open landscape which forms part of Cambridge's Green Belt network. The CBC is situated at the heart of Cambridge's and the United Kingdom's (UK) existing and emerging life science cluster, forming part of the 30 existing life science, research, or biotechnological parks and Campuses within a 10-mile radius of Cambridge.

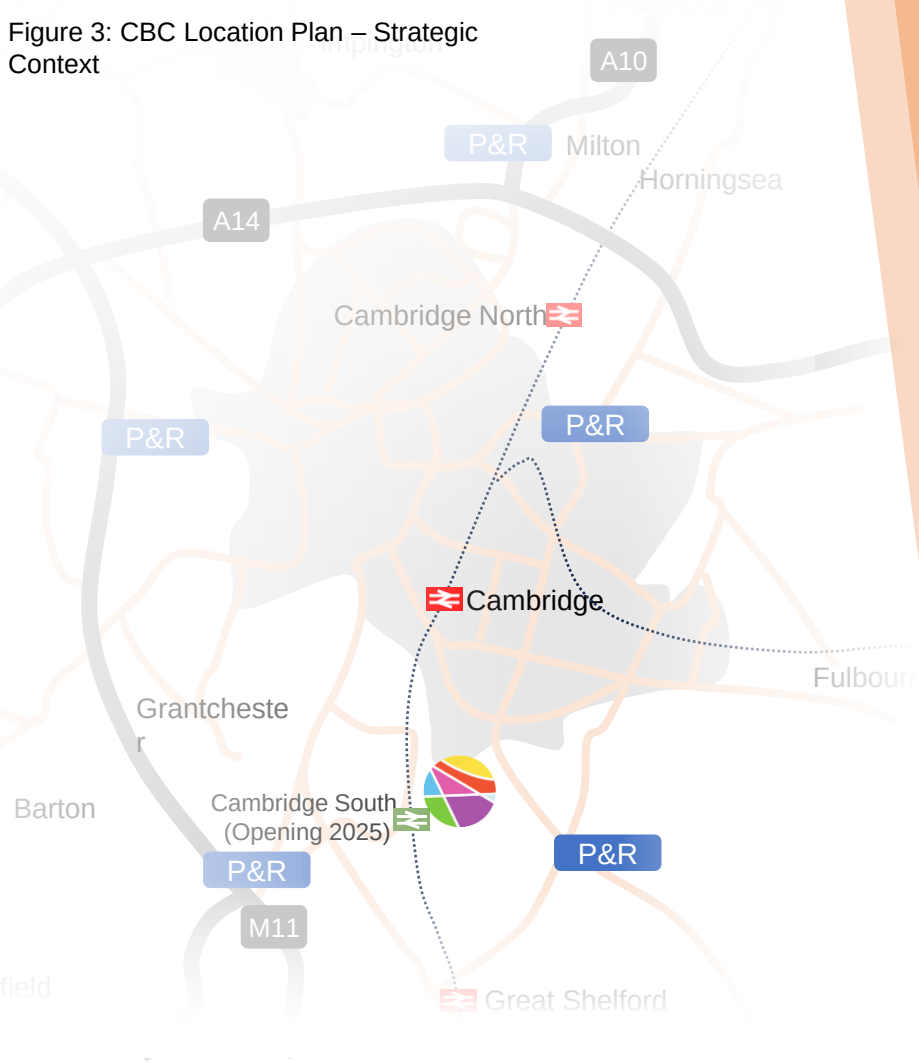
The existing CBC covers an area of approximately 65 hectares and is a major destination and consequently a generator of travel demand that has both local and regional significance. In 2017, it was estimated that a near 17,250 staff worked on-site and a further 14,500 visitors came to the CBC each day. By 2023, this has increased to approximately 23,000 staff and 18,200 visitors making it the largest single employment site in the Greater Cambridge area.

In a strategic transport context, the CBC is situated approximately 2.5km south of Cambridge Railway Station, and 2.0km north of Great Shelford Railway Station. Cambridge South Railway Station which is located immediately adjacent to the western border of the Campus, is currently under construction and scheduled to open in 2025. Several of Cambridge's Park & Ride (P&R) sites are also situated in proximity of the CBC, including Babraham Road P&R (located approximately 1.5km east) and Trumpington P&R (located approximately 2.0km to the west.). In a highway context, Junction 11 of the M11 is located approximately 2.2km southwest of the CBC. The location of CBC in a strategic context is illustrated in Figure 3.

This chapter of the Travel & Transport Plan provides an overview of the existing Campus situation, from a transport perspective. Details of the existing public transport, active travel and local highway infrastructure and connectivity are provided. This review is essential when considering the existing key opportunities, issues and constraints at the CBC.

There are a number of changes which are to take place within the Campus over the 5-year period covered by this report. It was therefore deemed important to document the current situation *at the time of writing*.

Figure 3: CBC Location Plan – Strategic Context



Existing Campus Situation

Active Travel Accessibility

Active travel connectivity is a vitally important component to the operations of the CBC, facilitating the movement of staff and visitors in, out and within the Campus on a daily basis. Recent data collected through the 2023 Staff Travel Survey indicates that approximately 28% of the 23,000 staff at the CBC use active travel to access the Campus.

The Campus is well situated to provide connectivity to key existing transport interchange zones (to provide last-mile connections) and neighbourhood hubs in all directions, with existing infrastructure and services in-situ to facilitate this movement as well as serving active travel users who are acquainted with the Campus but not direct users, such as local residents. The dedicated shared-use path running parallel to the Cambridge Guided Busway provides a northbound connection to Cambridge Railway Station, and southbound to Trumpington P&R as well as residential areas such as Trumpington Meadows. To the south-west of the CBC, the DNA path provides a shared use connection to a selection of the southern Cambridge villages, via Great Shelford. There is cycleway provision on Hills Road north towards Cambridge City Centre. Internal to the Campus, Figure 4 documents the active travel provision. East-west connectivity by active travel is inherently limited in comparison to north-south connection.

A wide range of open access cycle parking is present within the Campus, the majority of which is located to the east in close proximity to the NHS Hospitals. However, the majority of this cycle parking is of small quantity. Additionally, current micro-mobility provision (e.g., scooter and e-bike hire) is sparse.

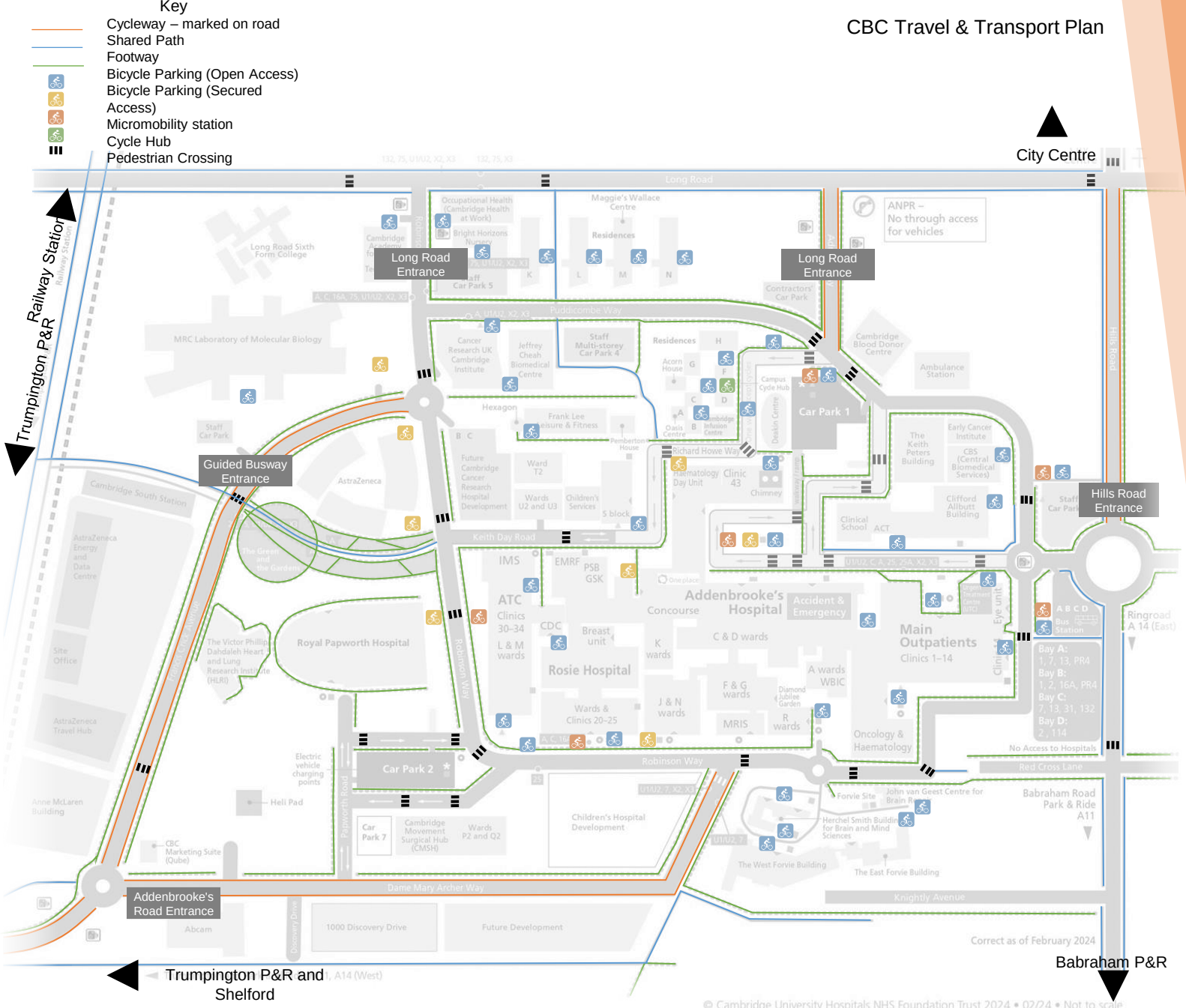


Figure 4: Existing CBC Active Travel Provision

Existing Campus Situation

Pedestrian Arrivals

The site has considerably more active travel access points than vehicular, with the following access points identified within the annual travel survey:

- Addenbrooke's Roundabout
- Adrian Way / Long Road
- Robinsons Way / Long Road
- Addenbrooke's Road
- Red Cross Lane
- Guided Busway
- Car Park 6 footpath
- Downing Footpath
- Nine Wells

40% of pedestrians arrived from the east using the accesses served from Babraham Road and Hills Road.

A further 27% of pedestrians arrived via Long Road to the north and 15% of people walk to the Campus using the Guided Busway which serves Trumpington, Trumpington P&R, and the station / city centre.

The full pedestrian arrival profile for the Campus is illustrated in Figure 5 opposite.

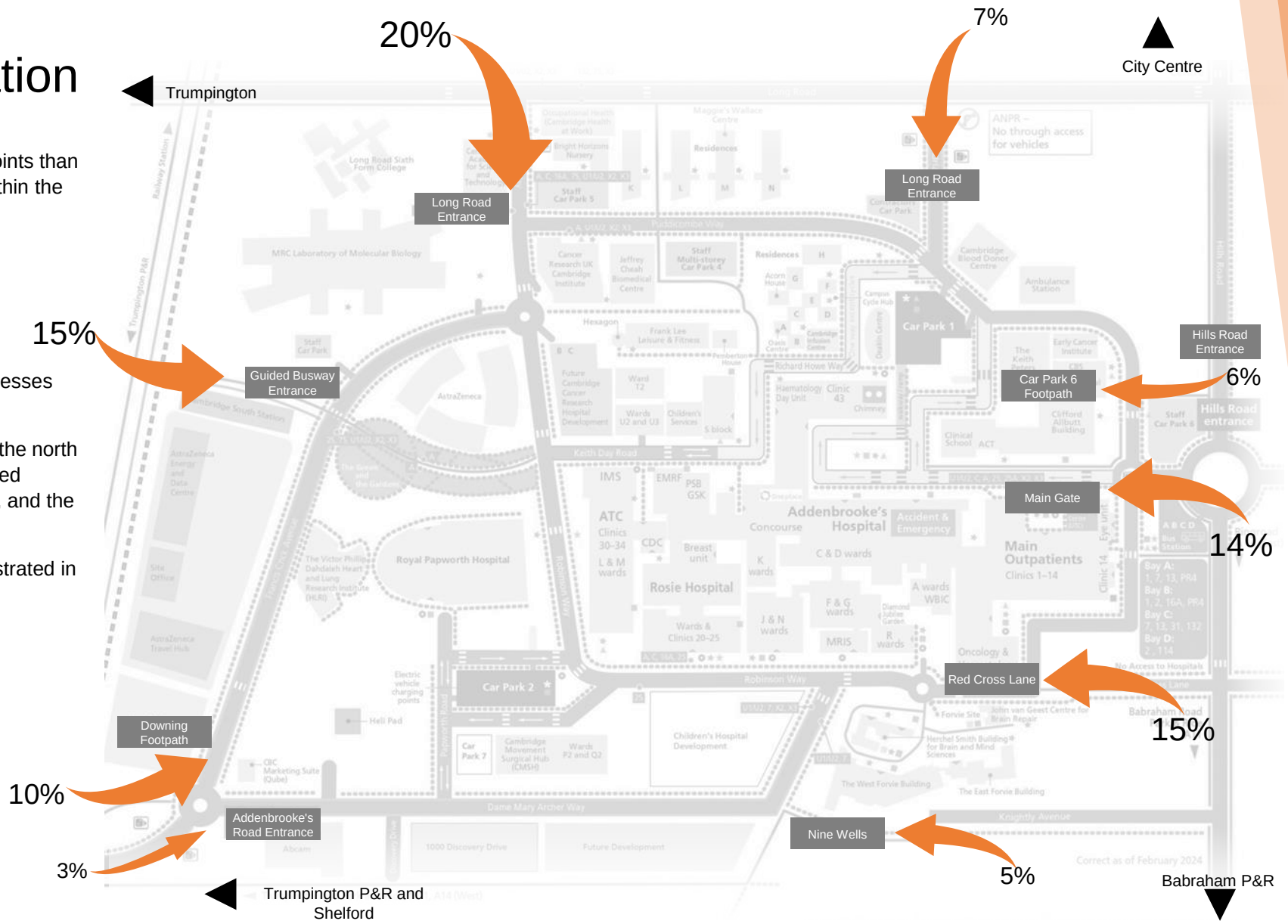


Figure 5: CBC Pedestrian Arrival Profile

Existing Campus Situation

Cyclist and Scooter Arrivals

The 2023 annual travel survey provides the percentage of cyclists entering the Campus over the course of a day, and unlike the pedestrian count, the most popular route into the Campus is via the guided busway, with 29% of people using this route. This highlights the importance of the Guided Busway for active travel as 15% of pedestrians also use this route.

Babraham Road / Hills Road combined serves 34% of people cycling or scooting into the Campus via Car Park 6 footpath, Nine Wells, Red Cross Lane, or Addenbrooke's Roundabout.

A further 28% of people cycle or scoot into the Campus via Long Road, either at the junction with Robinson Way or Adrian Way.

A total of 9% of people arrive at the Campus from the southwest via Addenbrooke's Road footway or via Downing Footpath.

The full cyclist and scooter arrival profile at the Campus is illustrated opposite in Figure 6.

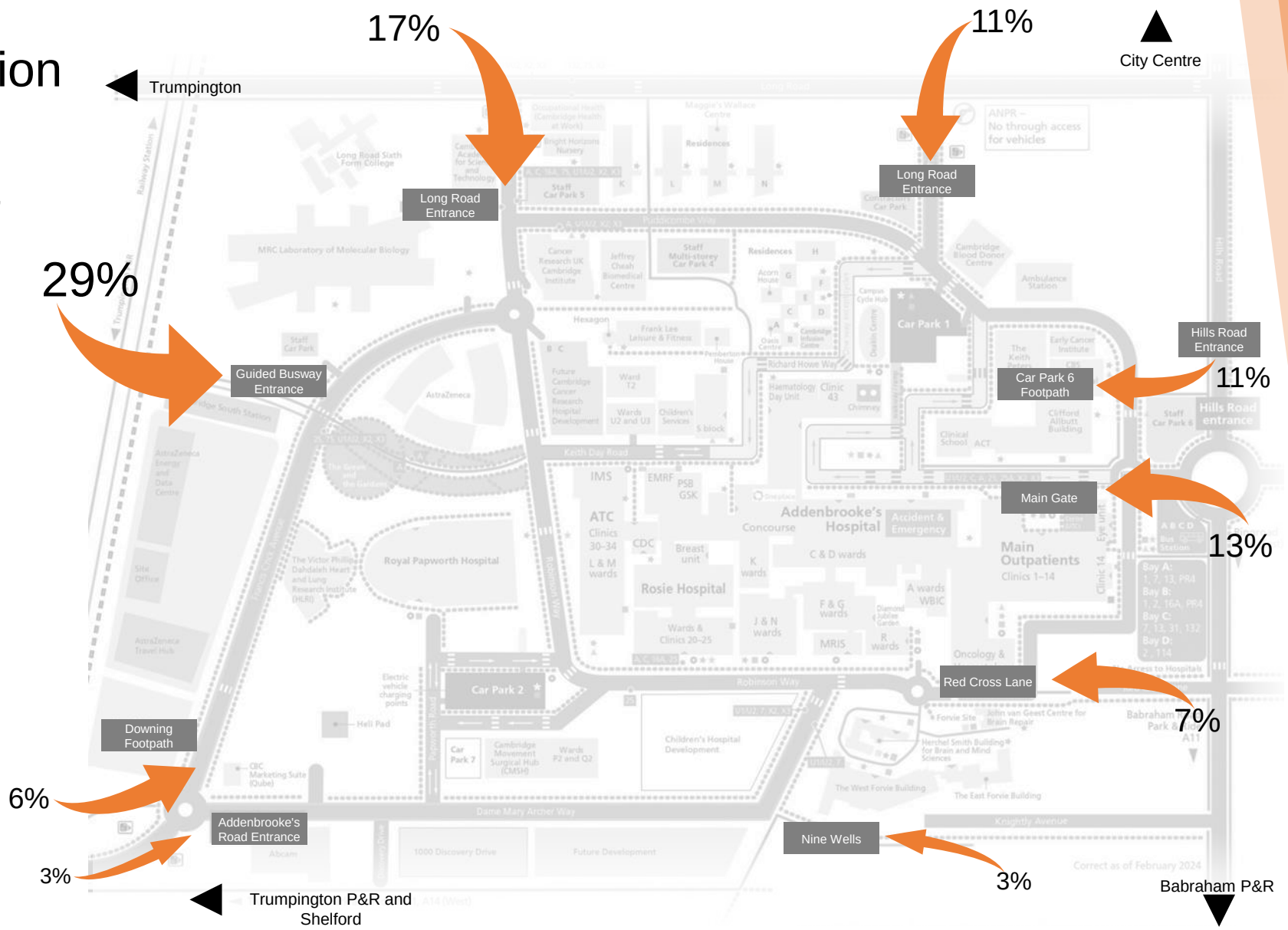


Figure 6: CBC Cycle and Scooter Arrival Profile

Existing Campus Situation

Public Transport Connectivity

Public Transport is important to the day-to-day functions of the CBC, facilitating the movement of staff and visitors in and out of the Campus. For some, public transport (buses) accounts for critical last-mile connections to and from the nearby transport interchanges (such as the five P&R sites within Cambridge), whereas for others it facilitates regional routes providing staff/visitors with accessibility to nearby settlements. The 2023 Staff Travel Survey indicates that approximately 14% of staff at the CBC use buses to access the Campus.

On the macro-scale, public transport infrastructure relative to the CBC is well established. The Cambridge Guided Busway (CGB) is situated adjacent to the west of the Campus, which provides a north-south traffic free route between Cambridge Railway Station and the CBC, as well as onwards southbound services to Trumpington P&R. Cambridge Railway Station is well served by numerous rail routes across the eastern-region. Notwithstanding the provision and benefits of the CGB, for bus services that do not use the CGB there are limitations to the extent of any other designated public transport infrastructure (e.g., bus lanes or priority signals) across Cambridge and the wider area, meaning bus services often experience delay and extended journey times in relation to general congestion on the network. East-west bus connectivity through the Campus is also limited, with services having to terminate or route around the perimeter. At a focused level, there are multiple bus stops, some fitted with real-time information (RTI), situated at the CBC servicing a range of routes with a conduit located at the bus station to the east, as shown in Figure 7. Whilst not all bus stops are fitted with RTI, real time information is accessible online via bus service providers. A 'patient courtesy bus' is also present, which provides a shuttle service between destinations within the Campus.

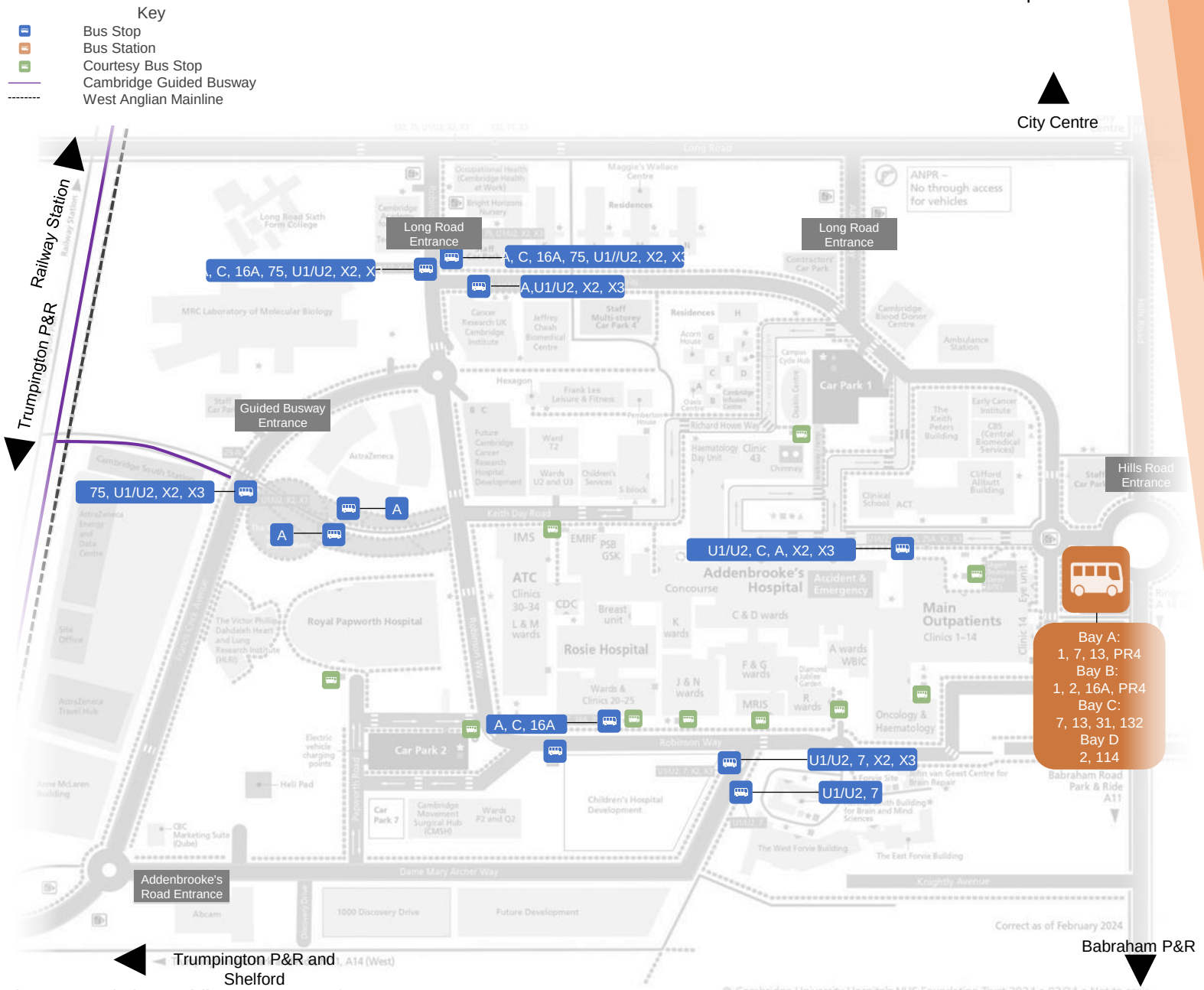


Figure 7: Existing Public Transport Infrastructure

Existing Campus Situation

Public Transport Connectivity

Eight different bus stops were surveyed as part of the 2023 annual travel survey at CBC to understand how people are using the public transport available. The bus stops surveyed include:

- The Main Bus Station
- Puddicombe Way
- Robinson Way
- Main Drive
- Dame Mary Archer Way
- Francis Crick Avenue
- The Green & the Gardens
- The Rosie

The primary bus station serving the Campus, located to the east of the Campus, adjacent to the Addenbrooke's Roundabout and Hills Road entrance, is the most utilised location for boarding and alighting bus services. This Addenbrooke's main bus station accounts for 60% alighting and boarding of those travelling to and from the Campus by bus.

The bus stop on Puddicombe Way is used by 11% of the Campus bus users. The Green & The Gardens Bus Stop also accounts for 11% of people arriving at the Campus by bus.

The Main Drive bus stop accounts for 7% of the bus patronage whilst the bus stop on Dame Mary Archer Way accounts for 4%. Other bus stops distributed across the Campus account for the remaining share of total bus usage. The full bus passenger arrival profile is shown in Figure 8.

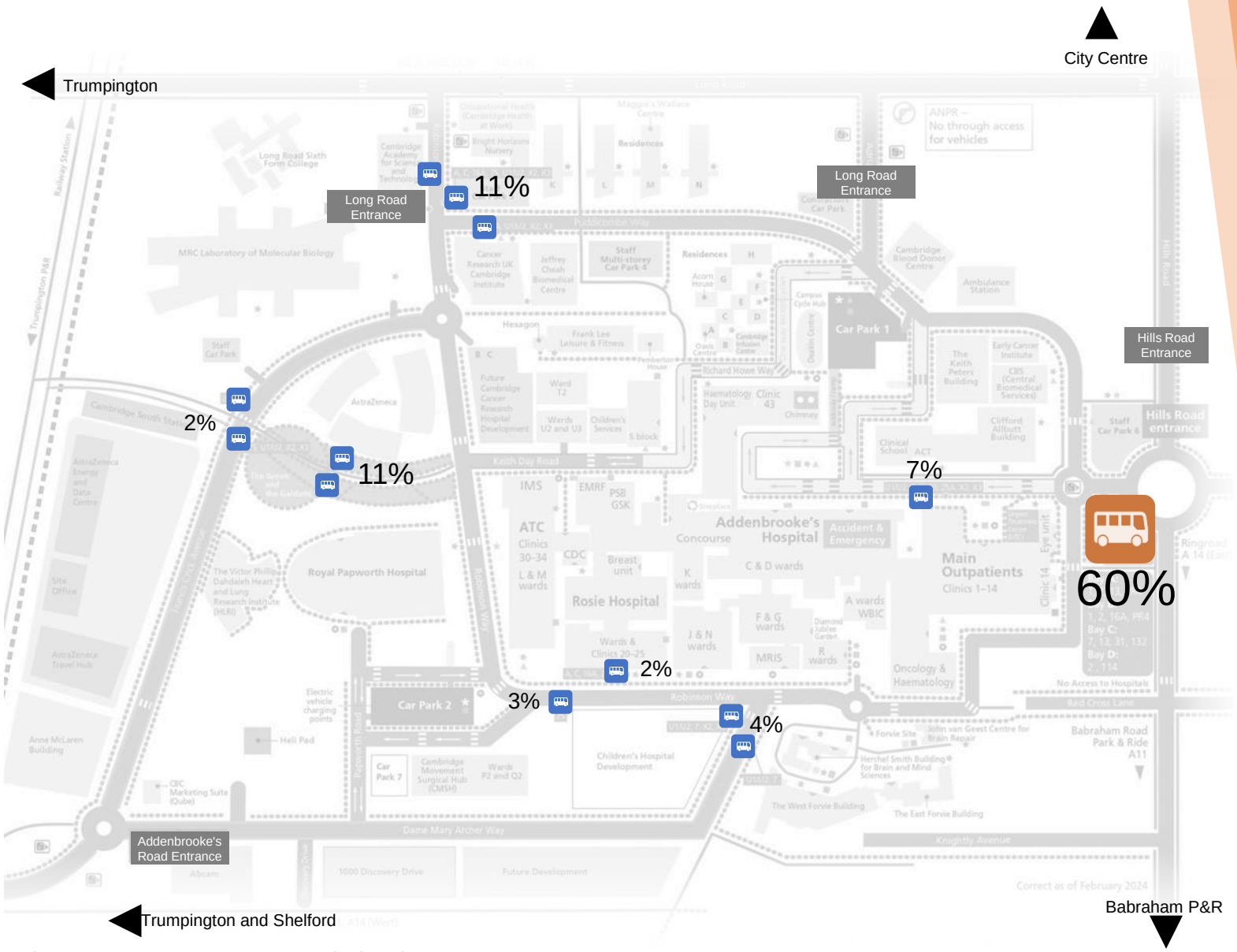


Figure 8: CBC Bus Passenger Arrival and Departure Profile

Existing Campus Situation

Vehicle Access & Car Parking

Whilst the importance of active-travel and public transport connectivity at the CBC cannot be overstated, the car and the local highway network form a large part of the day-to-day operations of the Campus. The 2023 annual travel survey detailed that 52.9% Campus users rely on car travel as a means of access (37% as private driver & 15.9% as passenger), although not all on staff onsite. Additionally, there is an array of delivery, visitors, and 'blue light' vehicles which are also reliant on vehicular access to/from the Campus. The Campus is accessible by vehicle via four key interchange points, with two situated on Long Road to the north, one at the Addenbrooke's Road entrance (south-west) and one on Hills Road (east), known as the 'Addenbrooke's Roundabout'. In a strategic context Junction 11 of the M11 is situated circa 2.2km southwest of CBC, which is a key entry point into Cambridge, not just for the CBC but for the city.

An Automatic Number Plate Recognition (ANPR) enforcement scheme is in-situ at the Campus, pertinent to planning conditions associated with the CBC expansion, which is intended to reduce the quantity of 'through routing' that has occurred historically.

Each occupier at CBC currently provides their own parking which is distributed around the Campus in a combination of multi-storey and surface car parks. Typically, staff and patients/visitors will be directed to park in specific locations depending on who they are visiting at the Campus as parking is generally not shared at CBC. Car parking is limited at the Campus with each occupier implementing differing methods to control parking and allocate spaces to staff and visitors.

Figure 9 displays the existing car parks and access points to the Campus.

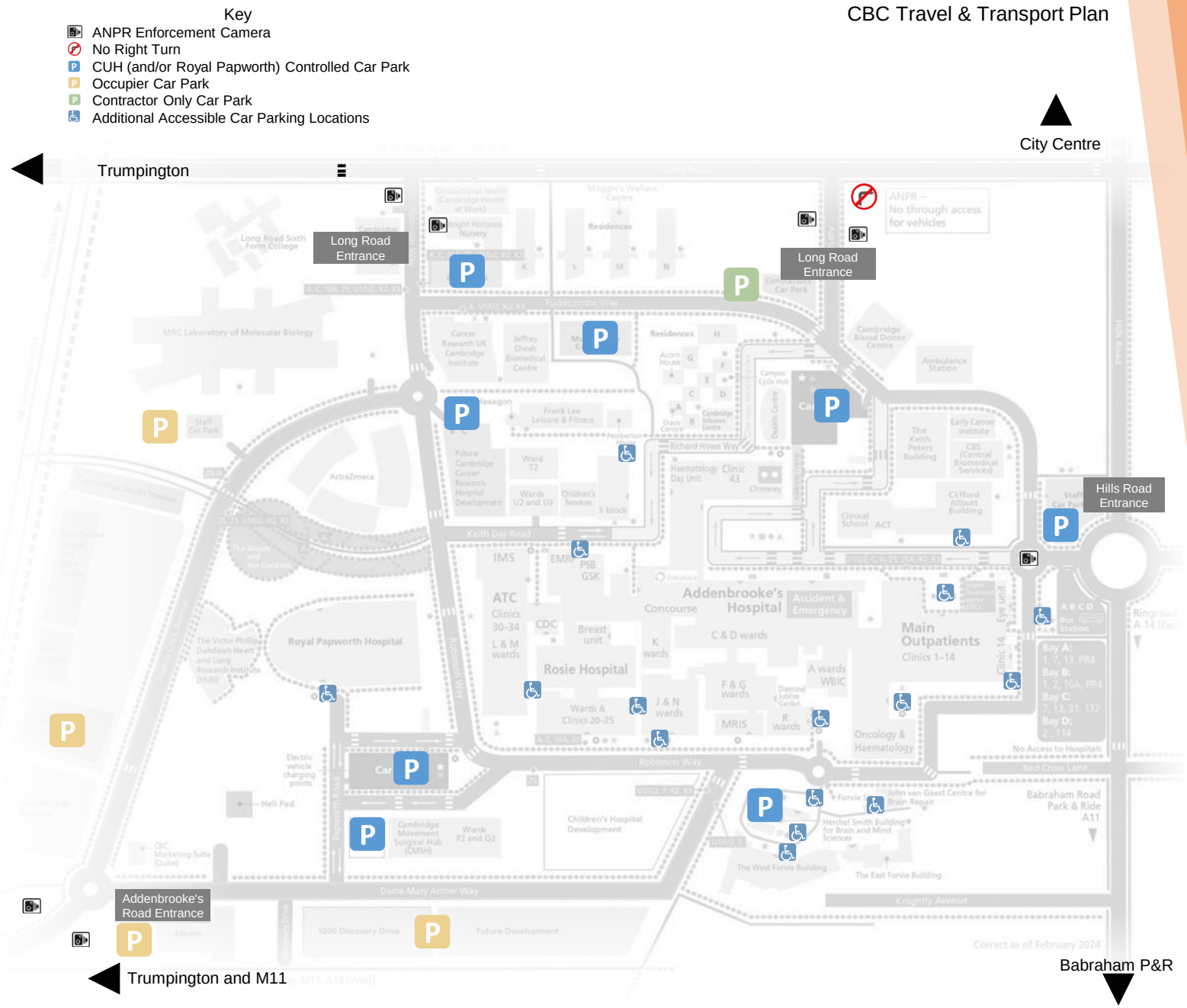


Figure 9: Existing Car Parks and Access Points

Existing Campus Situation

Car Users

The annual travel survey has collected data on the four access locations for general vehicles (excluding the busway as this is not open to general traffic) with these being:

- Long Road / Robinson Way junction = 14%
- Long Road / Adrian's Way junction = 5%
- Addenbrooke's Roundabout = 39%
- Addenbrooke's Road = 43%

Figure 10 shows the percentage of vehicles arriving at CBC over the course of a typical day as reported as part of the 2023 annual travel survey.

The two access points from Long Road will capture vehicular traffic travelling from within or that travels through Cambridge itself, whereas traffic entering the Campus via Addenbrooke's Road will primarily be arriving from Trumpington and Great Shelford or via the M11 and A10.

The other access point into the Campus is via Addenbrooke's Roundabout which connects Babraham Road, Hills Road, and Fendon Road. Of the people who arrive at CBC via the city, those who do not enter using one of the Long Road accesses will more than likely enter the site via Addenbrooke's Roundabout. Fendon Road connects into most of east Cambridge and Fulbourn. Babraham Road connects large parts of southeast Cambridgeshire such as Haverhill, Newmarket, and Saffron Walden.

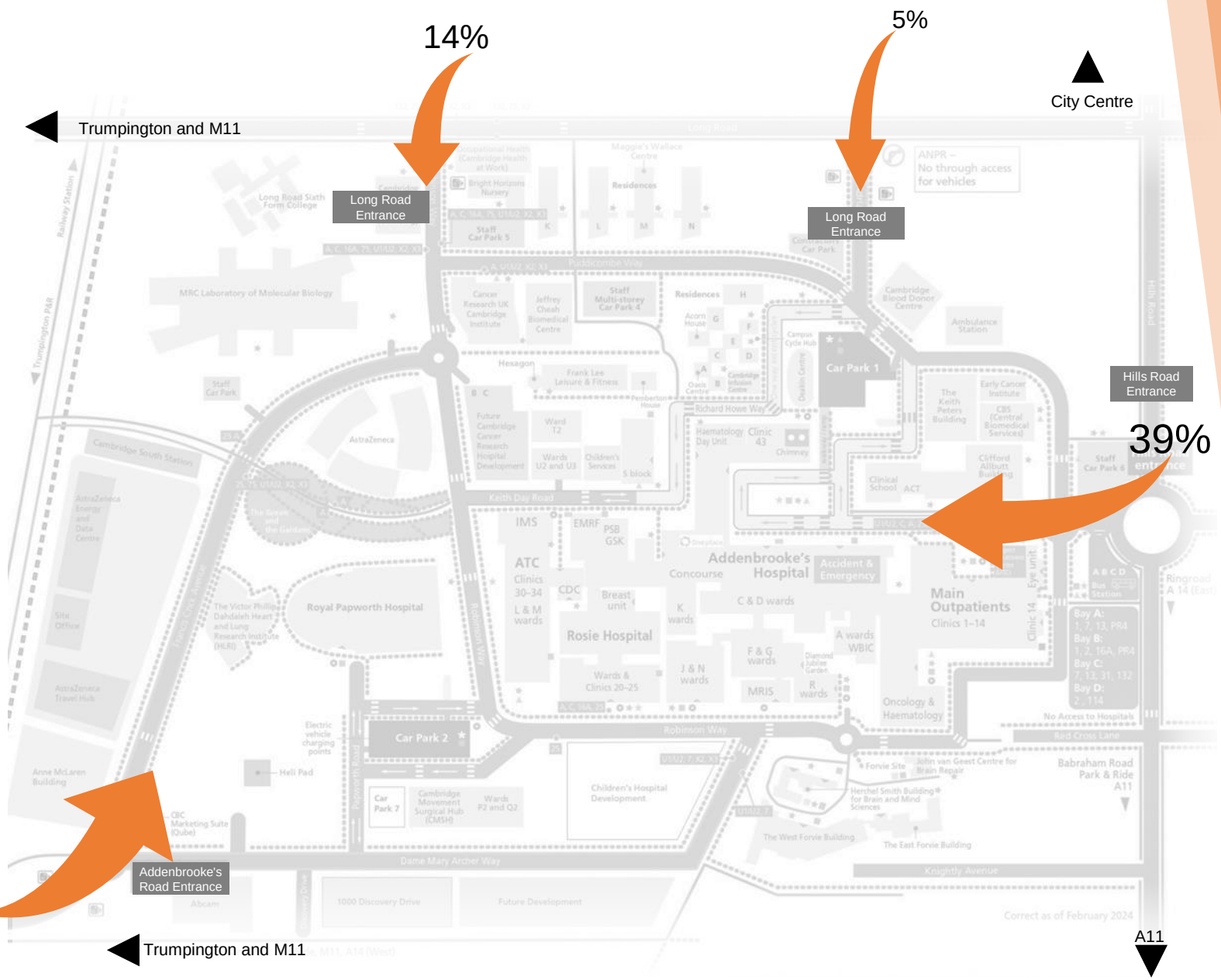


Figure 10: CBC Car User Arrival Profile

Existing Campus Situation

Summary of Travel Behaviours and Patterns

To provide insight into the existing staff travel behaviour and patterns at the Campus, an annual travel survey (including staff questionnaires, and traffic counts) is currently conducted on the CBC for a one-week period. The survey, undertaken by Campus occupants, has been historically undertaken once per year. Survey information since 2017 provides information into the travel patterns and behaviours and demonstrates changes that have occurred in recent history, however the traditional caveats of undertaking any travel survey must be considered.

The survey captures satisfaction levels and preferred mode of transport. A selection of key statistics providing an indicative insight into staff travel behaviours and patterns is provided in Figures 11 and 12, respectively. It should be noted that the 2023 travel survey at CBC was undertaken in a period of unfavourable weather, which may have impacted behaviour and travel choices, and it is acknowledged that this is an inherent limitation of the survey. On the other hand, the travel surveys conducted in 2017 were undertaken on days when the weather conditions were deemed more favourable. The COVID-19 pandemic has impacted travel behaviours between 2017-2022, including increased levels of working from home (WFH). The 2023 travel survey showed that on average, approximately 20% of staff work from home on weekdays.

It is important to consider not just travel habits and trends in isolation, but also the variety of shift patterns and occupancy rates seen at the CBC for staff. Numerous tenants have varying needs for "unconventional" shift schedules (e.g., night shifts), which may affect travel choices and habits.

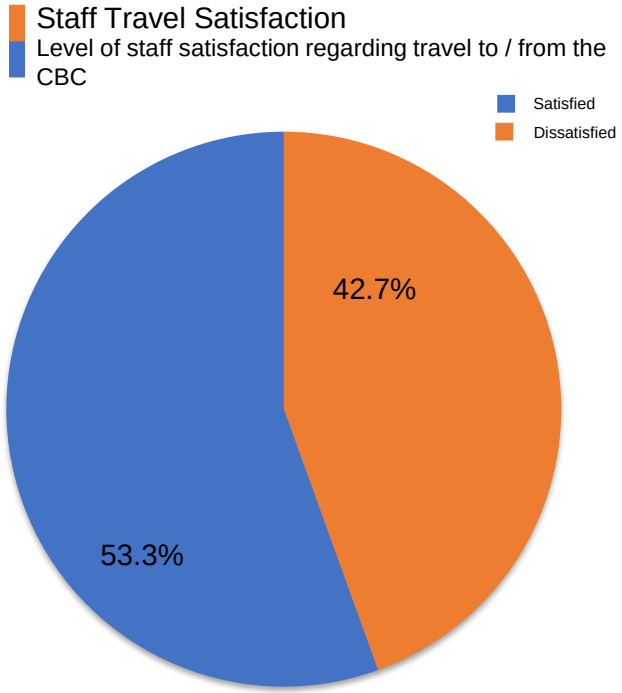


Figure 11: Staff Travel Satisfaction (2023)

Source: 2023 CBC Annual Staff Travel Survey

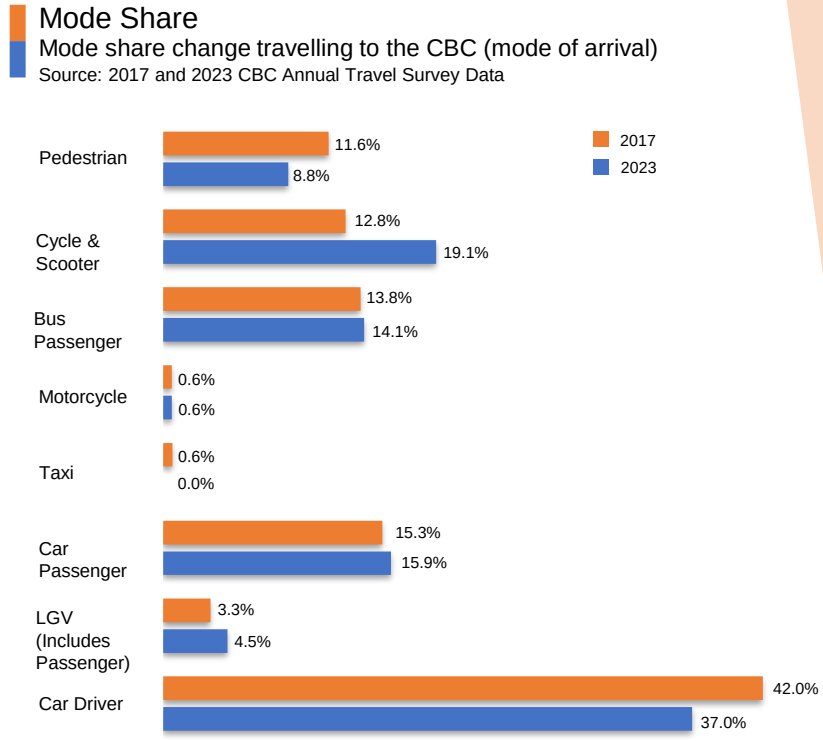


Figure 12: Mode Share Change (2017-2023)

Existing Campus Situation

Key Challenges and Constraints

There are several transport-related challenges and constraints that have been recognised as a result of the wide range of engagement and consultation with the Campus partners and stakeholders, in addition to a review of the existing situation at the Campus with regards to existing infrastructure and services.

The key identified challenges and constraints are illustrated in Table 2. Whilst it is acknowledged the challenges and constraints illustrated in Table 2 are the 'key' issues, there is also a range of more granular and specific issues (e.g., specific footway issues) that have been identified through the engagement, consultation and review process.

The measures contained within this Travel & Transport Plan (Section 7) have been developed to mitigate these challenges and constraints. Subsequently, the measures, informed by these challenges, will help achieve the vision, aim, objectives and targets for the CBC but also provide external benefits, both on a local scale and at the Cambridge level.

Table 2: Key Challenges and Constraints at the CBC

Reference	Challenge / Constraint	Mode(s)	Description
1	Cycle parking capacity	Active Travel	Convenient and secure cycle parking capacity at the Campus is constrained for both staff and visitors, with bikes often parked in informal positions (e.g., fences or railings) creating a potential hazard and is often aesthetically unpleasing . Additionally, there is limited cycle parking at the Campus for larger bikes such as cargo bikes or bikes with trailers. Nearby P&R sites also often reach their capacity for convenient and secure cycle parking.
2	Cycle infrastructure conditions and environment	Active Travel	The surfacing, lighting and ambience of many cycle routes connecting to the Campus is substandard in areas. For example, the 'DNA Path' connecting Cambridge with Shelford. Frequent reports of street clutter, overgrown vegetation and potholes are also noted. Some cycle routes are also indirect.
3	Cycle theft and anti-social behaviour	Active Travel	Cycle theft on the Campus and at nearby P&R sites have been recorded, acting as a detriment to cycle uptake. Reports of minor anti-social behaviour on key active travel links.
4	Micromobility provision	Active Travel	Currently a sparse network of micromobility provision (e.g., E-Scooters) on the Campus for staff or visitors.
5	Inclusive mobility	Active Travel	A selection of areas within the Campus have a constrained movement network for disabled users.
6	Last mile connections	Active Travel	Last mile connections between the Campus and public transport interchange points is currently limited, particularly if a user does not own a bicycle. Walking and cycling connections between the Campus and P&R sites have limited lighting, which can deter cyclists in winter months.
7	Wayfinding	Active Travel	Existing wayfinding provision on routes within and nearby to the Campus are substandard, and often confusing for visitors.
8	Cycle and pedestrian congestion	Active Travel	The Guided Busway entrance to the Campus often experiences unsegregated pedestrian and cycle congestion in the peak hours, with frequent near miss reports recorded.
9	Informal car parking	Active Travel	Reports of car drivers parking in cycle lanes, requiring cyclists to move into mixed-traffic.
10	East-west active travel connectivity	Active Travel	East-west connectivity within the Campus is limited for cyclists, who often have to dismount or travel around the perimeter.
11	Roadworks, utilities and restrictions	Public Transport / Car Users	Insufficiently managed roadworks and utility-works with a lack of prior engagement can cause delays to bus journeys, particularly on Long Road and Hills Road. Within Cambridgeshire, there are certain infrastructural constraints (e.g., bridge heights) that limits bus services.
12	Bus priority	Public Transport	Notwithstanding the guided busway, there are limited bus priority measures for other access points to the Campus (e.g., bus priority signals or lanes).
13	East-west public transport connectivity	Public Transport	Bus penetration between the east and the west of the Campus is constrained.
14	Bus waiting facilities	Public Transport	A selection of bus passenger waiting areas are insufficient for the current demand in the busy periods. This includes a lack of seating or shelter area.

Existing Campus Situation

Key Challenges and Constraints Cont.

Reference	Challenge / Constraint	Mode(s)	Description
15	Bus stop accessibility	Public Transport	Accessibility to public bus stops from certain Campus occupiers is insufficient and outside of a 400m walking distance.
16	Limited public transport network	Public Transport	The current bus network servicing the Campus is limited. A selection of bus services have also been removed from service in 2024, including bus service 25 (between P&R sites). Bus services travelling west, towards Cambourne, operate relatively infrequent routes. Services also operate at a lower frequency from mid-evening which restricts staff, particularly those who work later/earlier shifts, and some patients from using public transport. There is a lack of data-transparency between the Campus occupants and bus service groups to understand where staff reside.
17	Bus journey times	Public Transport	Buses, particularly in the AM and PM peak hour, are unsegregated from general traffic and therefore get caught in the high levels of congestion surrounding the Campus. This increases journey times and can delay subsequent services along Hills Road, Long Road, the M11, Babraham Road as well as in the internal Campus network.
18	COVID-19 impact recovery	Public Transport	The bus network and subsequent patronage within Cambridge, that ultimately serves the CBC, has been impacted by the COVID-19 pandemic. Whilst recovery is underway, patronage has not fully recovered.
19	Bus passenger capacity	Public Transport	The capacity of buses into or out of the Campus, notably in the AM and PM peak hours, is often at its potential maximum. Staff are therefore required to remain waiting at bus stops for the following services, which may experience delay due to congestion surrounding the Campus.
20	Congestion	Car Users/ Public Transport	There is significant congestion surrounding the Campus, notably on Hills Road, Trumpington Road, Long Road and Babraham Road with long queues forming on a frequent basis. In a strategic context, there is significant peak hour congestion on the A14 and M11. Congestion causes unreliable, unpredictable and delayed journeys for those travelling to / from the Campus, including those travelling on the bus network. This is a challenge that not only affects campus staff and visitors, but also other users of the local highway network such as the surrounding communities. Congestion within the Campus, such as at car-parking entrances, can often cause additional delays. There is also a recognised relationship between air pollution associated with congestion and public health consequences.
21	Car parking accessibility	Car Users	Access to car-parking spaces has got increasingly more challenging for staff, especially for staff of Campus occupants who do not have a dedicated car park and must use the shared staff car parks. Car parking accessibility for visitors can also be challenging.

Table 2: Key Challenges and Constraints at the CBC cont.

Existing Campus Situation

Key Challenges and Constraints Cont.

Reference	Challenge / Constraint	Mode(s)	Description
22	Electric vehicle parking	Car Users	There is a lack of electric vehicle (EV) charging stations for staff on the Campus, or at adjacent P&R sites. EV's are becoming increasingly prominent in the landscape. With UK-wide incentives to remove the sale of new petrol cars, the Campus must be future-proofed for a potential uptake of EV vehicles both in terms of parking availability and grid resource.
23	Through routing	Car Users	Multiple instances recorded of through-routing through the Campus, often as 'rat-run' between the City centre from Long Road to Trumpington, which can have adverse impacts on road safety and congestion within the Campus. There is an existing ANPR system in place that intends to mitigate this, with penalties reported by the police.
24	Car sharing	Car Users	15.9% of staff currently travel to the Campus as a car passenger. However, there is no Campus-wide car share scheme implemented at present. Whilst it is acknowledged there are sensitivities around this, a successful car-sharing scheme on a Campus-wide scale may assist in the alleviation of congestion in peak hours.
25	Air quality	Car Users	All of central Cambridge is currently in an Air Quality Management Area (AQMA). Air quality has an inherent relationship with increasing traffic and congestion.
26	Road safety	All	There are frequent reports of near misses or personal injury collisions on the local highway network surrounding, and at times within, the Campus. Notable areas of frequent near miss reports include areas where active-travel (pedestrians and cyclists) mix unsegregated with traffic, such as the Addenbrooke's roundabout, Puddicombe Way and Long Road.
27	Cambridge and Campus growth	All	Current growth forecasts at the Campus anticipate that by 2031 there will be upwards of 26,000 staff and 25,000 visitors at the CBC daily, representing significant growth from the current 2023 estimated 23,000 staff and 18,200 visitors at the CBC per day. Additionally, Greater Cambridge is one of the fastest growing areas in the UK, with an increasingly expanding life-science and research ecosystem that shows no sign of slowing down. This growth may put additional pressures on the transport network that serves the Campus, resulting in increased levels of congestion and delays to journey times unless appropriate mitigation is applied. Increases in active-travel and public transport use will also require infrastructural and service changes to keep pace with this forecast growth.
28	Housing affordability	All	The cost of housing within Greater Cambridge and surrounding neighbourhoods is historically high and demand is increasing with growth. Consequently, staff must live further away and travel to and from the Campus. Where an area is poorly served by public transport or sufficient active travel links, staff must drive. As a result, congestion increases. A recently commissioned housing report by Lichfields commissioned by the CBC also found that up to half of the current staff cohort cannot afford market rate housing in the local area surrounding the CBC this was notably an issue that particularly affects staff working in the NHS hospitals and other publicly funded organisations on Campus.

Table 2: Key Challenges and Constraints at the CBC cont.

Existing Campus Situation

Key Challenges and Constraints Cont.

Through Campus partner engagement and consultation, along with a review of the existing Campus situation, there are several transport-related opportunities for the CBC that have been considered throughout this Travel & Transport Plan.

Geographically speaking, the Campus is ideally located to take benefit from the broad spectrum of development- and transport-related enhancements that are anticipated to be made in the South Cambridge area's principal interchange and corridors during the life-span of this Travel & Transport Plan.

In a governance context, the CBC is well situated to be able to work in strategic partnership with other organisations and government bodies outside of the Campus sphere, including the Greater Cambridge Partnership (GCP), Cambridge City Council and many more. Additionally, the nature of the CBC's range of occupants residing on the Campus means travel and transport innovation, technology and ideas can be shared and distributed.

A summary of the key and strategic opportunities that have informed the development of this Travel & Transport Plan are illustrated in Table 3.

Reference	Opportunity	Description
1	Technological advancements	Numerous advancements in technology have emerged since the last five-year Travel & Transport Plan , which could potentially have a further profound impact on the travel patterns and travel behaviours of both staff and visitors. This includes the rise of travel management 'app-based' technology for smartphones, real-time traffic sensor-based monitoring that uses artificial intelligence (AI), and Mobility as a Service (Maas) platforms all present real and feasible opportunities that could be of benefit to the Campus. Additionally, autonomous and demand responsive vehicle trials are scheduled to be undertaken in Cambridge and at the CBC in January 2025. Given the scale of the CBC, it is in a unique position to take advantage of these developments and implement them on a Campus-wide scale as a form of travel-demand management, to support access and connectivity within and to the Campus.
2	Travel hub status	With no clear east-west active travel or public transport link at the CBC, it can often be considered a barrier to access and movement within Cambridge. With the widescale strategic transport infrastructure investments anticipated in the area, there is the opportunity for CBC to address this constraint and act as a 'travel hub' for movement within Cambridge, supporting staff, visitors and the local community.
3	Strategic transport investments in Cambridge	The Campus is well situated to take advantage of the range of external strategic growth and investment placed in the south Cambridge hemisphere over the course of the next 5-years, and further beyond. A range of transport investments are proposed to encourage a mode shift towards more sustainable and environmentally friendly travel, such as active travel and public transport. This includes a series of potentially multi-million-pound investments, that vary in progress and status, such as Cambridge South Railway Station, East-West Rail, Cambridge South-East Travel Hub (CSET) and GCP Greenway Schemes. These projects have the potential to significantly help address the challenges and constraints at the CBC.
4	Partnerships and cross-organisation collaboration	The scale and significance of external transport investments in the local area provides the opportunity for the CBC to contribute and assist with the delivery of these. Working with the delivery groups for this infrastructure can ensure the CBC's best interests are maintained and the benefits of these investments are materially felt at the CBC. Additionally, there is the opportunity to work with local community and resident groups, who are acquainted with the day-to-day operations and longer-term vision of the Campus, to support the uptake of the sustainable travel options nearby to the CBC. There are existing groups and forums and relationships in place that provide a background to this (e.g., Local Voices Group, Open Forum and Councillor briefing sessions) that are essential routes for working with local people. From a Campus scale, the diverse and unique range of Campus occupants provides the opportunity to work together to support the up-take of sustainable transport. This includes the exploration of cross-organisation collaboration for travel management measures, initiatives and infrastructure to achieve the Campus-wide goals. The existing relationships developed with local public transport operators, travel groups, other employment organisations and other organisations should be maintained.
5	Cambridge growth and development	Large-scale growth and development is anticipated across Cambridge over both the next 5-year period and further beyond. This provides the opportunity for an increased quantity of key worker housing and affordable housing, that leads to an increased number of staff living within Cambridge. Consequently, this would reduce the need to travel by car, with active travel and public transport being the most attractive options of travel.
6	Upgrade existing infrastructure on CBC	The development of new infrastructure and enhancement of current infrastructure to connect desire lines, support and promote more sustainable and active travel, and enable additional bus service provision.

Table 3: Key Opportunities at the CBC

5. Transport Infrastructure Investment Context

Transport Infrastructure Investment Context

Transport Investment Schemes

In contrast to the previous Travel & Transport Plan and 5-Year Implementation Plan, there are now a number of substantial public-sector led transport investments which could be operational during the course of the next 5 years or at least be being constructed. These schemes are therefore of material consideration to this plan and any subsequent Campus led measures which would relate to them. These public-sector led schemes are summarised within this section of the report.

Cambridge South Railway Station (Network Rail – Programmed opening 2025)

Cambridge South Railway Station is a new railway station that is located to the west of and adjacent to the Campus. It will be accessed via Francis Crick Avenue to the east for drop offs, taxi, walking and cycling, and via Hobsons Park to the west on foot and by bicycle only. The development of Cambridge South and associated infrastructure is estimated to cost over £200 million, which represents a significant government investment towards this scheme. Currently, it is estimated that following full operation the station will accommodate 1.8 million passengers per year.

There is to be cycle parking provided to both east and west of the railway, adjacent to the entrances, and bus stops are located on Francis Crick Avenue and on the Green and the Gardens where access to the existing Cambridge Guided Busway is provided. These stops and interchange will be enhanced through a Primary Mobility Hub proposed in this area. Direct rail access will transform transport accessibility for the Campus which will be enhanced further through longer-term rail investments such as East West Rail and Ely Area Capacity Enhancement Funding is in place and construction has begun. It is anticipated that the station will open to passengers in 2025.

Cambridge Southeast Transport Study (Phase 2) (GCP – Programmed Opening TBC)

The Cambridge Southeast Transport (CSET) project will offer better public transport and active travel options for the A1307 and A1301 area. It will improve journey times, reliability and link communities and employment sites in the area southeast of Cambridge.

Phase 1 of the CSET project focused on the safety of walking, cycle, and bus routes between Haverhill and Cambridge along the A1307 and will encompass part of the Linton Greenway.

Phase 2 includes a new segregated public transport route from a new Park & Ride at the A11 to Campus via stops in Sawston, Stapleford and Great Shelford. After serving CBC and Cambridge South Railway Station the route would continue via the Cambridge Guided Busway to central Cambridge.

A transport works act order (TWAO) has been submitted in 2024 to progress the next stages of the scheme.

Planned On-Street Parking Controls (GCP Scheme – Mid 2020s)

As part of the GCP City Access Strategy, it is proposed to extend the On-street Parking Controls, already in place in the City Centre to areas around CBC, amongst others. In combination with existing parking restrictions at the CBC, this will encourage drivers to make alternative travel choices such as making use of a Park and Ride site.

Figure 13: Cambridge South Railway Station CGI (Source: Network Rail)

Figure 14: Cambridge Southeast Transport (CSET) CGI (Source: GCP)

Transport Infrastructure Investment Context

Transport Investment Schemes Cont.

Cambridge Southwest Travel Hub (GCP – Programmed Opening 2026)

Junction 11 of the M11 is a key entry point into Cambridge from the south, north and west, with a substantial amount of traffic entering the Campus travelling through this junction. A new 'travel hub' is proposed by the GCP, thus intercepting traffic and helping reduce the number of cars travelling into the city. The draft layout of the Cambridge Southwest Travel Hub (CSWTH) is shown in Figure 15. A planning application for the hub was submitted in 2020 and the proposals include for 2,150 car parking spaces and a segregated public transport route which will link the Travel Hub west of the M11 with the A1309/Hauxton Road north of the M11, bypassing the M11 Junction.

The application was passed to the Secretary of State for final approval, which was granted in July 2022 (ref: CCC/20/040/FUL). At this stage, an opening year of 2026 is anticipated.

The CSWTH is expected to provide significant benefits to the Campus with car trips able to be intercepted at Junction 11 and then a fully segregated public transport trip to the heart of the Campus or a fully segregated cycle trip alongside the busway.

Greenway Routes (GCP – Programmed opening date 2025)

The Sawston Greenway will provide a safer and better route for people using active travel modes between Sawston and CBC. The Sawston Greenway will connect into Stapleford, and Great Shelford.

The Sawston Greenway will include a new high-quality pedestrian and cycle crossing at the junction of Long Road and Robinson Way and safer, more direct cycle routes on Robinson Way through the CBC. This will transform this existing hostile gateway.

Further to this the Linton Greenway, Melbourn Greenway, and the Chisholm Trail will connect into CBC. The Linton Greenway is under construction and partially completed, with full completion expected by 2025. The Melbourn Greenway will run from Royston and connect into the Foxton Railway Station, Trumpington and then branch off to CBC. The Chisholm Trail will connect the current two train stations in Cambridge and then connect via the guided busway into CBC.

The Greater Cambridge Greenways will follow offroad paths, along quiet streets or provide improved facilities along busier roads to provide more people with safer, easier and more direct routes in and out of Cambridge.

Figure 15: Cambridge Southwest Travel Hub (Masterplan) (Source: GCP)

Figure 16: Sawston Greenway Route (Source: GCP)

Transport Infrastructure Investment Context

Transport Investment Schemes Cont.

Cambourne to Cambridge (GCP – Programmed opening 2027)

The Cambourne to Cambridge (C2C) scheme is one of four major corridor schemes that form part of the GCPs Sustainable Transport Program. The route is to link Cambourne to Cambridge via the new Bourn Airfield development and a new Travel Hub at Scotland Farm, Hardwick and West Cambridge Campus. Outside of the city the route will be segregated from general traffic. The proposals include 6 buses per hour to the city center and two per hour to CBC. The route is made up of three key elements:

- A dedicated public transport route between Cambourne and Cambridge, providing reliable and sustainable services bypassing general traffic congestion.
- A new travel hub at Scotland Farm, off the A428/A1303.
- New cycling and walking links.

A Transport & Works Act Order (TWAO) is being prepared to approve the route and authorise the scheme to be built. The draft application documents for the TWAO were presented and discussed at the full council meeting at Cambridgeshire County Council on 21 March 2023.

Fendon Road Cycle Plus (GCP – Programmed Opening 2027)

The Fendon Road Cycle Plus scheme will see much improved cycle infrastructure provided along the Fendon Road corridor from CBC towards the east of the city. It will also include upgrades to the Addenbrooke's Roundabout.

The new design will also remove the two stage crossings on the Addenbrooke's Roundabout and proposes to replace them with single stage crossings allowing pedestrians and cyclists to cross in one movement. The new design aims to make it safer and easier for all road users to access Addenbrooke's Hospital and CBC. The GCP has secured the funding from the Cambridgeshire and Peterborough Combined Authority (CPCA) and aims to deliver the scheme in 2027.

Hills Road Cycle Plus (GCP – Programmed Opening 2027)

Hills Road is a key route into the center of Cambridge as well as connecting into CBC, but the active travel infrastructure is suboptimal. The consultation was undertaken in July 2024. The proposals include CYCLOPS junctions, extended cycle lanes, and floating bus stops to provide cyclists with a continuous route. Some of the aims of the scheme are to improve pedestrian and cycle safety along Hills Road and reduce bus journey times wherever practicable.

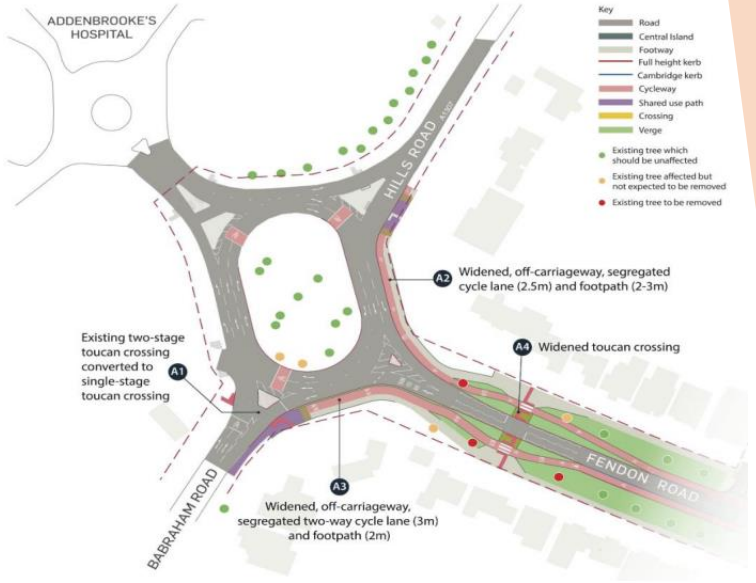


Figure 17: Fendon Road Cycle Plus Programme Plan (Source: GCP)

Transport Infrastructure Investment Context

Summary of Transport Infrastructure Schemes

Scheme	Status	Lead	Programmed Opening Date	CBC Relationship
Cambridge South Railway Station	Under Construction	Network Rail	2025	Located to the western boundary of the CBC, Cambridge South Railway Station will offer direct rail access which will transform transport accessibility for the Campus which will be enhanced further through longer-term strategic rail investments such as East West Rail.
Cambridge Southeast Transport Study (Phase 2)	Submitted for TWAO Inquiry	GCP	TBC	CSET will offer better public transport and active travel options for the A1307 and A1301 area. It will improve journey times, reliability and link communities and employment sites in the area southeast of Cambridge. After serving CBC and Cambridge South Station the route would continue via the Cambridge Guided Busway to central Cambridge.
On-Street Parking Controls	Proposed	GCP	Mid 2020's	It is proposed to extend the On-street Parking Controls, already in place in the City Centre to areas around CBC, amongst others. In combination with existing parking restrictions at the CBC this means that existing on-street parking is displaced, forcing drivers to make alternative travel choices.
Cambridge Southwest Travel Hub (CSWTH)	Committed	GCP	2026	The CSWTH is expected to provide significant benefits to the Campus with car trips able to be intercepted at Junction 11 and then a fully segregated public transport trip to the heart of the Campus or a fully segregated cycle trip alongside the busway. In addition to the delivery of the SWTH, the GCP plans to expand the existing Trumpington Park & Ride site, thus increasing car parking capacity and helping to reduce the number of cars travelling into the CBC or further into the city.
Greenways	Committed	GCP	2025	The Sawston Greenway will provide a safer and better route for people using active travel modes between Sawston and CBC, via Stapleford, and Great Shelford. Proposals include a new high-quality pedestrian and cycle crossing at the junction of Long Road and Robinson Way and safer, more direct cycle tracks on Robinson Way through to the CBC. Further to this the Linton Greenway, Melbourn Greenway, and the Chisholm Trail will connect into CBC. The Linton Greenway is under construction and partially completed, with full completion by 2025/26. The Melbourn Greenway will run from Royston and connect into the Foxton Travel Hub, Trumpington and then branch off to Campus.
Cambourne to Cambridge (C2C)	Proposed	GCP	2027	The C2C scheme will link Cambourne to Cambridge via the new Bourn Airfield development and a new Travel Hub at Scotland Farm, Hardwick and West Cambridge Campus. Outside of the city the route will be segregated from general traffic. The proposals include six buses per hour to the city centre and two per hour to Campus.
Fendon Road Cycle Plus	Proposed	GCP	2027	The Fendon Road Cycle Plus scheme will see much improved cycle infrastructure provided along the Fendon Road corridor from CBC towards the east of the city. It will also include upgrades to the Addenbrooke's Roundabout.
Hills Road Cycle Plus	Proposed	GCP	2027	Hills Road is a key route into the centre of Cambridge as well as connecting into CBC, but the active travel infrastructure is suboptimal. The proposals include CYCLOPS junctions, extended cycle lanes, and floating bus stops to provide cyclists with a continuous path. Some of the aims of the scheme are to improve pedestrian and cycle safety along Hills Road and reduce bus journey times along Hills Road wherever practicable.

Table 4: Transport Infrastructure Investment Summary

6. Ambition Statement, Objectives and Targets

Ambition Statement, Objectives and Targets

The Ambition Statement

One of the overarching strategic goals of the CBC is to meet the healthcare demands of the continuously growing local population, whilst simultaneously expanding and evolving into one of the largest internationally competitive clusters of healthcare-related talent and enterprise in Europe and contribute on the global stage. To achieve this goal, ensuring that the Campus is readily accessible to all, and contributes to the wider Greater Cambridge environment, whilst facilitating healthy and sustainable travel to the Campus is crucial.

This Travel & Transport Plan will contribute to this goal, which is encompassed in the ambition statement opposite. The ambition statement provides a clear and concise encapsulation of the CBC's long-term goals, aspirations and intentions from a transport perspective. It outlines what the CBC hopes to achieve, and the guiding principles, focus and direction on how to achieve the desired outcome.

The CBC ambition statement has remained consistent, pertinent to the previous iteration of the CBC Travel & Transport Plan as this yields a consistent goal that should be strived to be achieved as it is a continuous vision and not bound by any metrics. Therefore, no matter what changes or development occur in relation to the CBC there will be a continued ambition for betterment of access to the Campus for all.

Underpinning this ambition statement are ten transport-related objectives. The objectives, built upon the foundations of the previous Travel & Transport Plan and 5-Year Implementation Plan, are the specific goals that the CBC will aim to achieve within the lifespan of this Travel & Transport Plan over the next five-year period.

Subsequently, each objective is accompanied by a selection of targets, which form the key performance indicators (KPI's). The KPI's are the quantifiable measures that will ultimately be used to evaluate the success of this Travel & Transport Plan over the proceeding five-year period.

"The ambition of the Cambridge Biomedical Campus Travel & Transport Plan is to support all to be able to access the Campus easily, efficiently and sustainably whilst supporting the day to-day operations of one of the largest and best-known hospitals and biomedical campuses in the country. This Travel & Transport Plan will support the creation of an exemplar 'sustainable travel' Campus environment, which encourages active, healthy and sustainable travel. All organisations on the Campus will work in partnership to help deliver this Travel & Transport Plan, making a positive contribution to the development of CBC and Greater Cambridge."

- Travel & Transport Plan Ambition Statement

Ambition Statement, Objectives and Targets

5-Year Objectives

The ten objectives of this Travel & Transport Plan for the CBC are defined as follows:

TS Objective 1: Access & Connectivity - Facilitate convenient, predictable, and where possible, cost-effective travel to CBC for staff, patients, business representatives and visitors.

TS Objective 2: Transport Infrastructure - Provide supportive transport infrastructure on the CBC to seamlessly support people to arrive at their destination and move intra-site in an effective, efficient and safe way.

TS Objective 3: Contribution to Greater Cambridge -Make a positive contribution to the Greater Cambridge area through the expansion of the CBC and promotion of sustainable travel modes

TS Objective 4: Strategic Partnerships - Work with city and regional partners to make a positive contribution to the growth of the Cambridge economy, the quality of life for new and existing communities, and the development and delivery of transport and planning policies and schemes for the city and surrounding area.

TS Objective 5: Affordable Housing - Support and influence the development of affordable housing and staff accommodation located close to CBC, both reducing travel demand and reliance on motorised travel.

TS Objective 6: Air Quality - Minimise the CBC's environmental impact from transport and improve air quality.

TS Objective 7: Future Technologies - Support the above objectives by exploiting emerging and future technologies effectively and making the best use from world-class research from our partner organisations.

TS Objective 8: Campus Collaboration - Continue to ensure cross-Campus collaboration amongst partners and collective empowerment for best practice, outcomes and efficiency.

TS Objective 9: Strategic Investments - Make the best use of external transport investments and opportunities within the next five years.

TS Objective 10: Wider Movement, Access and Interchange - Ensure that wider transport interchange and access is achieved at a Campus level. CBC having responsibility and a role for city-wide movement.

Ambition Statement, Objectives and Targets

5-Year Objectives

Each of the ten objectives of the Travel & Transport Plan are underpinned by a range of targets that have been tailored specifically to the aims of each objective.

The targets are the KPI's for the ten objectives. Put more simply, the targets are the measurable goals that will be used to evaluate, monitor, and review the progress of this Travel & Transport Plan over the next 5-year period. Where feasible, these targets have been designed to be SMART (Specific, Measurable, Achievable, Relevant, Time-Based).

The targets build upon the achievements of the previous Transport Strategy and 5-Year Implementation Plan (2018-2023) and have also considered results of the 2023 CBC Travel Surveys to establish a baseline.

Table 5 illustrates the 5-year targets of this Travel & Transport Plan relative to the ten objectives.

Reference	Objective	Target(s)
TS 1	Access & Connectivity - Facilitate convenient, predictable, and where possible, cost-effective travel to CBC for staff, patients, business representatives and visitors.	TS 1.1 - Collectively reduce arrivals by single car occupancy driver mode share of the Campus to 30% by 2029 during peak hours. (An aspiration of this plan is to introduce absolute numbers as opposed to percentages as a metric to evaluate measures). TS 1.2 - Continue to increase the number of people using bus, rail (including Cambridge South Station), Park & Cycle, and Park & Walk as part of a multi-modal journey to CBC by 2029. TS 1.3 - Maintain or increase the number of walking and cycling journeys to CBC by 2029.
TS 2	Transport Infrastructure - Provide supportive transport infrastructure on the CBC to seamlessly support people to arrive at their destination and move intra-site in an effective, efficient and safe way.	TS 2.1 - Improve wayfinding around the Campus for pedestrians and cyclists. TS 2.2 - Improve wayfinding around the Campus for public transport users with the aim of turning CBC into a transport interchange. TS 2.3 - Further develop the creation of a CBC accident log to record both near misses and injuries sustained as part of collisions to identify high risk areas of CBC.
TS 3	Contribution to Greater Cambridge - Through the expansion of the CBC and the promotion of sustainable travel modes, make a positive contribution to the Greater Cambridge area.	TS 3.1 - Continue supporting emerging travel options with the aim of increasing staff satisfaction levels regarding their journeys to work by 2029.
TS 4	Strategic Partnerships - Work with city and regional partners to make a positive contribution to the growth of the Cambridge economy, the quality of life for new and existing communities, and the development and delivery of transport and planning policies and schemes for the city and surrounding area.	TS 4.1 - Demonstrate active involvement, participation and contribution to the Greater Cambridge Partnership scheme development and other partner discussions.
TS 5	Affordable Housing - Support and influence the development of affordable housing and staff accommodation located close to CBC, both reducing travel demand and reliance on motorised travel.	TS 5.1 - To collectively influence, lobby, and support development of affordable housing and staff accommodation in and around CBC and Cambridge. TS 5.2 - Monitor and manage the trips to CBC in the morning and evening peak hours to ensure that traffic does not increase beyond current levels and seek to reduce overall trips by 2029.
TS 6	Air Quality - Minimise the CBC's environmental impact from transport and improve air quality.	TS 6.1 - To see an improvement in air quality at CBC by 2029.
TS 7	Future Technologies - Support the above objectives by exploiting emerging and future technologies effectively and making the best use of world-class research from our partner organisations.	TS 7.1 - Engage with and trial real-time traffic management technology with the aim of monitoring and managing traffic levels within the Campus. This will help refine the metric against which various measures within the Travel & Transport Plan are assessed. TS 7.2 - Use latest technology to assist in identifying potential accident near-misses that are currently not recorded and use this to create a CBC accident log to record both near misses and injuries sustained.
TS 8	Campus Collaboration - To ensure cross-Campus collaboration amongst partners and collective empowerment for best practice, outcomes and efficiency.	TS 8.1 - Continue to track and evaluate the adoption of best practices identified through cross-Campus collaboration efforts. TS 8.2 - Gauge the feedback from Campus partners on satisfaction levels of any cross-collaboration processes and outcomes.
TS 9	Strategic Investments - Make the best use of external transport investments and opportunities within the next five years.	TS 9.1 - Monitor the incremental growth of mode shares relative to external transport investments.
TS 10	Wider Movement, Access and Interchange - Ensure that wider transport interchange and access is achieved at a Campus level. CBC having responsibility and a role for city-wide movement.	TS 10.1 - Ensure all transport schemes and proposals within and local to CBC have the principles of interchange and connectivity considered. TS 10.2 - Monitor the quantity of through trips in the Campus. Overtime, data should be collected that demonstrates interchange of modes at the Campus.

Table 5: CBC Travel & Transport Plan Targets

7. Travel& Transport Plan Measures

Travel & Transport Plan Measures

Introduction

A comprehensive set of transport measures delineating the key strategic moves to be executed over the proceeding five years is considered essential to achieve the transport objectives and targets outlined in this report, as well as contributing towards the broader goals and objectives of Greater Cambridge. All measures presented marked with an Asterix (*) within this document are those which are within the CBC's control and remit. Therefore, measures not marked with an Asterix are considered to be those outside of CBC's direct ability to deliver and for example may be the responsibility of public bodies.

The key moves are encapsulated in transport measures, which represent the strategic actions and critical steps designed to support the implementation of the Travel & Transport Plan over the next five years. These measures are designed to ensure they are aligned with the objectives and subsequent targets of the Travel & Transport Plan.

Methodology

During the engagement, consultation, and baseline review process of this Travel & Transport Plan, a broad and granular range of emerging measures that covered all transport modes were identified or recommended to enhance the current CBC and surrounding area transport network.

To establish this, a weighted prioritisation approach that considers a variety of priority led-criteria has subsequently been utilised to determine whether individual measures fully address the needs of the Campus users over the next 5-year period, and thus brought forward into this plan. The primary prioritisation criteria used are depicted within Figure 18 opposite.

Within this report an overarching summary of the transport measures is provided that encompasses all the key transport moves that are deemed to have the highest level of suitability, technical feasibility and synergistic relationship with the objectives and targets of this Travel & Transport Plan.

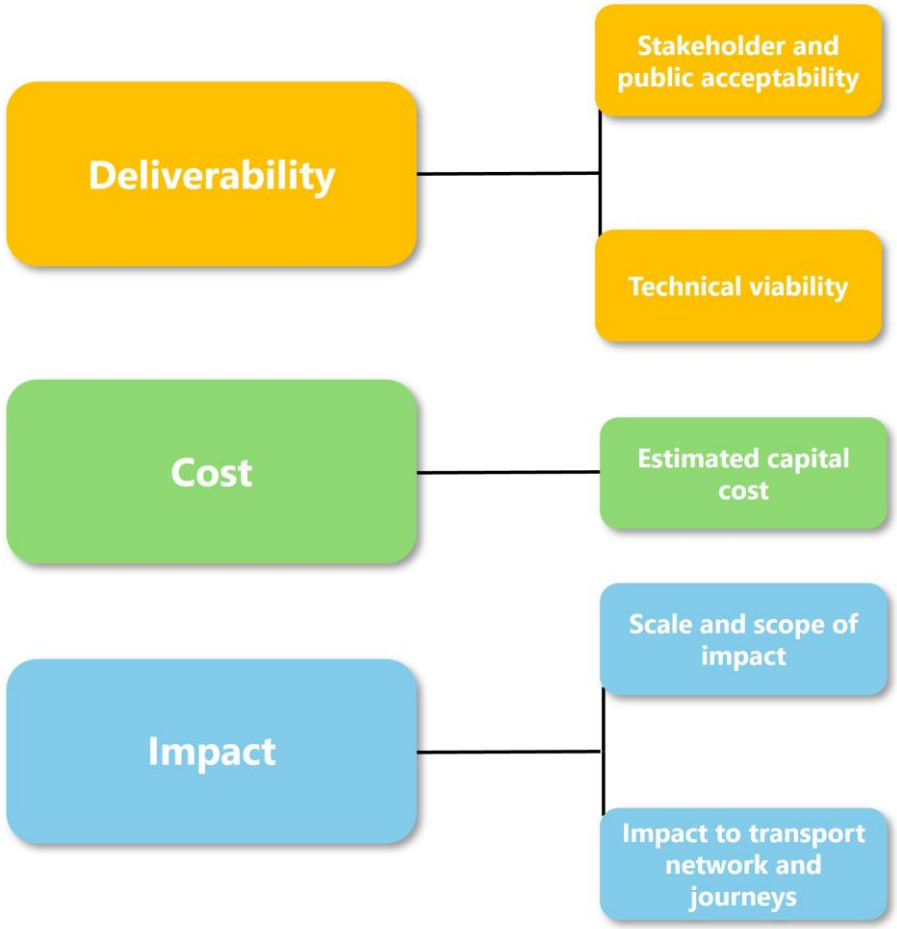


Figure 18: 5-Year Implementation Plan Measure Prioritisation Criteria

Travel & Transport Plan Measures

Methodology Cont.

A description for each sub-criteria presented as follows:

- Stakeholder and Public Acceptability
  - Low Acceptability - Significant potential concerns from stakeholders and public.
  - Medium Acceptability - Moderate support, or neutral view, from stakeholders and public.
  - High Acceptability - Significant support from stakeholders and public.
- Technical Viability
  - Low Viability - Significant challenges and constraints (e.g., need to acquire land or rights).
  - Medium Viability - Some challenges and constraints (e.g., significant works within highway, trade-offs potentially required.
  - High Viability - Few, if any challenges and constraints (e.g., minor works within highway).
- Estimated Capital Cost
  - Low Cost - Inexpensive solutions that are affordable and involve minimal financial capital.
  - Medium Cost - Moderate financial investment and planning is required.
  - High Cost - Significant investments is required.
- Impact
  - Low Impact - The measure is envisaged to yield minimal improvements or changes to the CBC transport network and environment. The measure is anticipated to positively benefit a statistically low number of persons.
  - Medium Impact - The measure is envisaged to yield noticeable improvements or changes to the CBC transport network and environment and may have minor beneficial impacts to neighbouring areas.
  - High Impact - The measure is envisaged to yield substantial improvements or changes to the CBC transport network and environment as well as subsequent beneficial impacts to neighbouring areas. The measure is anticipated to positively benefit a statistically significant number of persons.

Once the criteria for each individual measure had been defined, a multi-criteria options assessment framework toolkit was employed to evaluate the overall viability of each measure. This framework utilised a clear quantitative scoring mechanism, enabling a systematic ranking of options based on their assessed merits. A ‘weighted priority’ (high, medium and low) which considers all four above was then assigned to each summary measure.

The resultant measures, which have been appropriately selected for their suitability, technical viability, and alignment with the strategic aims and objectives, are detailed in the following section of the Travel & Transport Plan.

KMC recommend these transport measures are implemented where feasible over the next 5-year period. The tables overleaf provides an overview of the key summary measures, that provides reference to the key challenges, opportunities and constraints identified in Section 3.

Measures marked with an Asterix (‘*’) are those which are considered to be within the CBC’s control and remit. Therefore, measures not marked with an Asterix are considered to be those that may be partially outside of CBC’s remit (e.g., require cross collaboration).

The measures outlined overleaf along with associated objectives and targets seek to deliver increased levels of sustainable travel at the Campus over the next five-years, but further transport infrastructure investment by local and national government that is beyond the measures is still required.

kmc transport planning

Travel & Transport Plan Measures

Measures – Active Travel

Reference	Measure	Description	Linked Objectives	Weighted Priority	Challenge, Constraint or Opportunity Addressed (Reference)	Assessment of Measure
Measure 1*	Internal active travel route Improvements	Audit, monitor and improve existing active travel route infrastructure on-Campus on key movement corridors. Continued Campus growth may lead to increased active travel congestion at pinch points. Ensure all improvements are pertinent to best practice and are inclusive of all needs.	TS 1 TS 2 TS 10	High	Challenge and Constraint Reference: 2, 6, 7, 8, 9, 10 Opportunity Reference: 5	Database set up of Campus issues. Regular review of the database undertaken. (See long list of measures which includes initial issues raised).
Measure 2	Off-site active travel improvements	Collaborate with external bodies to ensure improvements to key off-site active travel routes. Improvements could include matters such as surfacing, lighting and widening. Explore off-site active travel infrastructure improvements such as cycle parking storage and security at nearby Park and Ride sites. Where there are proposals for off-site infrastructure improvements, monitor their status and explore improvements should these not come forward.	TS 1 TS 2 TS 3 TS 9	High	Challenge and Constraint Reference: 1, 2, 6, 8 Opportunity Reference: 4	Database of off-site improvements with their current status. Review against key challenges/constraints identified.
Measure 3*	Cycle parking and micromobility audit	Conduct and implement a Campus-wide cycle parking, micromobility and shared-pool bike strategy that includes a monitoring process.	TS 1 TS 2 TS 8	Medium	Challenges and Constraint Reference: 1, 3	Strategy prepared and implemented. Regular monitoring of cycle and micromobility demand, infrastructure and provision.
Measure 4*	Near miss register	Implementation of a live, near miss register to establish near miss hotspot areas on the Campus. Where hotspots of frequent near-misses are identified, ensure proactive design mitigation is enabled. Explore whether real-time sensor-based monitoring can assist with this.	TS 1	Medium	Challenges and Constraint Reference: 2, 6, 8	Near miss register established.
Measure 5*	Cycle promotional scheme	Encourage Campus occupants to engage in shared schemes such as BUGWAG and promotional schemes such as cycle to work, Dr Bike and Bikeability.	TS 1	Medium	Challenges and Constraint Reference: 26	Number and uptake of schemes and promotions offered by CBC partners

Table 6: Measures – Active Travel

* Within CBC Control & Remit

Travel & Transport Plan Measures

Measures – Public Transport

Reference	Measure	Description	Linked Objectives	Weighted Priority	Challenge, Constraint or Opportunity Addressed (Reference)	Assessment of Measure
Measure 6*	Campus-wide bus Strategy	Occupants should collaboratively work and engage with bus service operators to ensure a co-ordinated bus strategy is provided to best cater for the need of all staff travel demands and behaviours (e.g. off-peak & shift-patterns) at a Campus wide level. The strategy needs to consider bus services, journey times and coverage. Travel and Transport Group to agree key expectations in level of service from a future bus network. This can be provided to CPCA in the event of bus franchising. Establish a Public Transport User Group to assist with creation of a Campus-wide Bus Strategy.	TS 3 TS 4 TS 8	High	Challenges and Constraint Reference: 13, 15, 16, 17, 18, 19, 20	Travel & Transport Group to lead. Establishment of Public Transport User Group.
Measure 7	Public transport facility improvements	Review existing public transport facilities and amenities and work closely with public transport providers to understand where improvements are required and ensure safe routes to bus stops are provided and public transport information is easily accessible and waiting facilities are appropriate.	TS 2 TS 10	Medium	Challenges and Constraint Reference: 13, 14, 15, 18	Database of public transport facilities and improvements required. Prioritise improvements & record changes when implemented.
Measure 8	Off-site public transport Improvements	Work with strategic partners to explore where further off-site public transport improvements (e.g., bus priority signals or segregation) can be implemented.	TS 1 TS 3 TS 4	Medium	Challenges and Constraint Reference: 11, 12, 20 Opportunity Reference: 4	Communicate key challenges and constraints identified by Campus users with strategic partners.

Table 7: Measures – Public Transport

* Within CBC Control & Remit

Travel & Transport Plan Measures

Measures – Car Users

Reference	Measure	Description	Linked Objectives	Weighted Priority	Challenge, Constraint or Opportunity Addressed (Reference)	Assessment of Measure
Measure 9*	Car park monitoring	Car parking monitoring of utilisation across the Campus of improper and informal car parking following the opening of Cambridge South Railway Station to inform an annual review of the CBC car parking strategy. Liaise with Network Rail regarding parking associated with the Railway Station. Also ensure accessibility and equality are considered and maintain a minimum of 6% total car parking spaces are disabled on the Campus.	TS 8 TS 9	Medium	Challenges and Constraint Reference: 22 Opportunity Reference: 5	Car park monitoring process in place. Monitoring regularly undertaken and reported on. Live car park utilisation data.
Measure 10*	Campus-wide car sharing	Investigate car sharing across occupiers to maximise the potential to find a car share match, which should include a guaranteed lift-home policy. Undertake a workshop to identify and overcome potential barriers to this. Each organisation currently offers their own closed system, which limits the effectiveness of the scheme.	TS 1 TS 8	Medium	Challenges and Constraint Reference: 25 Opportunity Reference: 5	Car share take up at a Campus-wide level.
Measure 11*	Electric vehicle car parking strategy	Ensure there is appropriate provision of EV charging for staff , visitors and operational vehicles on Campus that considers national policies on EV vehicles and supports greener travel where car access is necessary.	TS 2 TS 8	Low	Challenges and Constraint Reference: 23 Opportunity Reference: 1	Monitor EV parking provision and take up.

* Within CBC Control & Remit

Table 8: Measures – Car Users

Travel & Transport Plan Measures

Measures – Goods and Logistics

Reference	Measure	Description	Linked Objectives	Weighted Priority	Challenge, Constraint or Opportunity Addressed (Reference)	Assessment of Measure
Measure 12*	Construction, roadworks and utilities forum and database	Ensure all Campus occupants and partners are signed up to a construction, roadworks and utilities forum and are aware of Construction sub-group meetings where information and contact details can be provided regarding any planned roadworks that may impact CBC access. Provide a contact to new and existing external stakeholders so they can provide details of any construction activities both at the micro and strategic scale (e.g., East-West Rail). Consider the consequence and impact of roadworks on the implementation of other measures. A regularly updated database that contains all proposed, planned and complete roadworks should continue to be developed that regularly monitors any changes enabling Campus users to be made aware at the earliest possible date.	TS 8	Medium	Challenge and Constraint Reference: 11 Opportunity Reference: 5	Number of occupants involved in the forum and establishment of database.
Measure 13	Last mile delivery strategy and consolidation	Establish a cross-Campus shared last mile freight / delivery strategy that can be a 'Logistics Hub', including understanding the feasibility of e-bike and cargo-bike deliveries. This strategy could also include the consolidation of deliveries at an off-site centre to limit the number of delivery vehicles accessing the CBC, particularly during peak hours.	TS 8	Low	Opportunity Reference: 5	Completion and delivery of Logistics Project. Phase 1 – 2024/25 Phase 2 – 2025/26 Phase 3 – 2026/27 Subsequent phases are subject to progress of previous phases.

** Within CBC Control & Remit*

Table 9: Measures – Goods and Logistics

Travel & Transport Plan Measures

Measures – Technology

Reference	Measure	Description	Linked Objectives	Weighted Priority	Challenge, Constraint or Opportunity Addressed (Reference)	Assessment of Measure
Measure 14*	App based technology	Establishment of a Campus-wide 'App' that helps plan and facilitate easier, greener journeys and provides robust travel planning information to users. The app will be an online up-to-date travel portal for staff and visitors that provides multi-modal real time information and updates for journeys. The provision of personalised travel planning through the app will also be explored. The Campus-wide app could integrate public transport ticketing, subject to feasibility and demand.	TS 7 TS 8	High	Opportunity Reference: 1	App procured & rolled out. Monitor the uptake of the app.
Measure 15*	Real-time monitoring	Using real-time & live sensor-based technology to monitor travel to, from and within CBC and provide data to help inform decisions. The provision of sensor-based monitoring would also provide real time data capture throughout the year, reducing the effect of weather on overall mode share data collection, and provide more frequent monitoring. The data would enhance the annual staff travel survey, which would be continued but reduced in scope as required.	TS 7	High	Opportunity Reference: 1	Sensor monitoring procured. Regular data review. The sensor-based monitoring will enable a review of the metric against which measures are assessed, moving away from percentages to absolute numbers.
Measure 16*	Air quality monitoring	Continued monitoring of air quality at the CBC. Establish an integrated and streamlined reporting mechanism for air quality data that ties into the monitoring framework for this Travel & Transport Plan. Promote greener ways of working. Support UK objective that from 2027 all new vehicles owned and leased by NHS (excluding ambulances) will be zero emission vehicles.	TS 6	Medium	Challenges and Constraint Reference: 26	Establish an integrated reporting mechanism.
Measure 17	Future technological innovation	Continue to explore and trial the implementation of autonomous vehicles at the CBC.	TS 7	Medium	Opportunity Reference: 1 Opportunity Reference: 6	Begin trials and evaluate success.

Table 10: Measures – Technology

* Within CBC Control & Remit

Travel & Transport Plan Measures

Measures – Travel Behaviours

Reference	Measure	Description	Linked Objectives	Weighted Priority	Challenge, Constraint or Opportunity Addressed (Reference)	Assessment of Measure
Measure 18*	Flexible Staff Working Patterns	Engage with Campus Occupants and Partners to understand if, where feasible, the demand for travel in peak times can be reduced (e.g., flexible start / finish times and continuation of working from home). Additionally, understand if any initiatives can be implemented or shared at a Campus-wide level (e.g., crèches, gyms or other activities) to encourage travel outside of peak hours.	TS 8	Medium	Opportunity Reference: 5	Sensor-based monitoring will record daily demand and hourly profiles across any given day to record the success of this measure.
Measure 19*	Visitor Travel Surveys	Conduct visitor travel surveys on an annual basis to ensure the demand and views of visitors of the CBC are captured and considered. 'Visitors' includes visitors to the hospital and visiting staff associated with many of the Campus partners.	TS 1	Low	Opportunity Reference: 5	Surveys undertaken on an annual-basis.

Table 11: Measures – Travel Behaviours

* Within CBC Control & Remit

Travel & Transport Plan Measures

Measures – Other

Reference	Measure	Description	Linked Objectives	Weighted Priority	Challenge, Constraint or Opportunity Addressed (Reference)	Assessment of Measure
Measure 20	External transport infrastructure	Ensure a streamlined arrival of all external transport infrastructure (e.g., Cambridge South Railway). As new proposals arise, assist and support where possible whilst ensuring the CBC's best interests are maintained.	TS 9	High	Opportunity Reference: 5	Review of infrastructure delivery within the Travel Plan. Lessons learnt going forward. Compliance with infrastructure delivery obligations.
Measure 21	Affordable housing	Lobby for the longer-term requirement to provide additional housing within Cambridge to address the growing imbalance between jobs and housing supply so that economic growth can continue without placing too much pressure on the transport network	TS 5	High	Challenges and Constraint Reference: 29 Opportunity Reference: 6	Number of employees living in affordable housing within a 45-minute sustainable commute to the Campus. Monitor provision of key worker / affordable housing in new developments within local area.
Measure 22*	Updated CBC Travel and Transport Plan (2029-2034)	Draft an updated CBC Travel and Transport Plan for proceeding five-year period.	TS 2	High	-	Progress towards updated CBC Travel and Transport Plan
Measure 23*	Ensure regular success of measures is monitored and documented	Undertake a six-monthly review of measures and communicate progress to Campus partners and stakeholders. Produce a 5-year summary report in 2029 to review the success of the measures identified.	-	High	-	Monitoring is undertaken that is regularly recorded and transparent.
Measure 24	Review of CBC transport network for impaired individuals	Work with external partners to conduct audit to improve conditions and ensure specific consideration is made for people with disabilities.	TS 1	Medium	Challenge and Constraint Reference: 5	Audit undertaken.
Measure 25	Sustainable meanwhile uses	Utilise unoccupied spaces for meanwhile uses of a sustainable nature (e.g., mobility hubs, recreation & delivery lockers), helping to spread travel demand.	TS 2	Medium	-	'Meanwhile' uses established.

Table 12: Measures – Other

* Within CBC Control & Remit

8. Governance, Responsibility & Delivery (including Funding)

Governance, Responsibility & Delivery (including Funding)

Governance

This Travel & Transport Plan has been prepared in conjunction with, and is supported by, Campus partners. The Aims and Objectives contained within this document are mutually shared, and its Targets are agreed.

However, the Travel & Transport Plan can only ever be successful if the governance structures for managing it are appropriate, the responsibilities clear and the delivery process understandable and achievable. These three key elements are set out within this chapter of the Travel & Transport Plan. The overarching structure of these three elements is shown alongside in Figure 19.

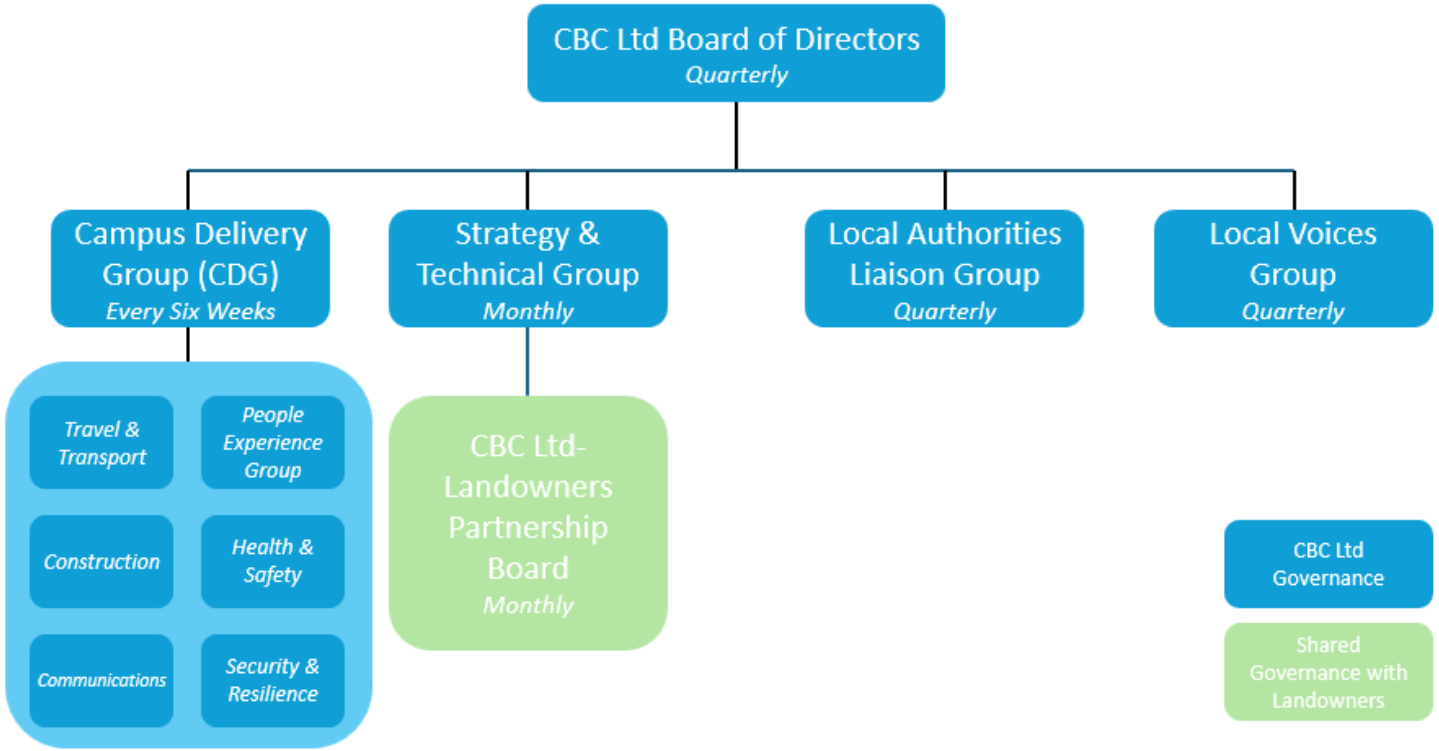


Figure 19: Travel & Transport Plan Governance, Delivery and Responsibility Structure

Governance, Responsibility & Delivery (including Funding)

Governance

In 2021 Cambridge Biomedical Campus Ltd was formed as a collaboration between the main Campus occupiers. In 2023, CBC Ltd took on the formal responsibility for the Campus Delivery Group and its subgroups. The CBC Ltd Directors are responsible for the formal approval of the Travel & Transport Plan.

CBC Ltd also has formal arrangements in place for partnership working with local government, through a quarterly Local Authorities Liaison Group. This provides a route for communicating plans and agreeing collaborative efforts on implementation. CBC Ltd also has formal governance to engage the perspectives of local residents. These include the CBC Ltd Local Voices Group and the biannual community forum. Additional arrangements are in place for engaging local political representatives to ensure an effective dialogue is in place to address the priorities being represented on behalf of local people as part of our local democracy.

Consistent with the 2018-2023 Transport Strategy and Implementation Plan, the CBC Travel and Transport subgroup is the specific subgroup which is responsible for the commissioning, management and implementation of this 2024-2029 Travel Plan. The Travel and Transport subgroup will be responsible for escalating and reporting delivery to the CBC Ltd Board of Directors.

Governance, Responsibility & Delivery (including Funding)

Responsibility

The distinction between Governance and Responsibility is that the governance structure empowers those with responsibility for managing, progressing, and implementing the Travel & Transport Plan to execute their responsibilities by defining delegated limits of authority and establishing effective escalation routes for issues and change requests.

In this context, the responsibility for the Travel and Transport Plan sits with the Travel and Transport Subgroup which includes the Travel and Transport Coordinator and on-site Partner Travel Coordinators. The Transport and Travel Coordinator will be expected to review progress, conduct periodic refreshes of the Travel & Transport Plan and monitor and evaluate progress. To support the Transport and Travel Co-ordinator each on site partner, prior to occupation, will have an identified Transport Co-ordinator who will also take the leading role in implementing the Travel Plan and its associated measures in coordination with the other Campus partners.

It is important to recognise that a number of the measures in the Travel and Transport Plan are outside the direct control of CBC Ltd and its member organisations. CBC Ltd and the partners therefore seek to work as a partner with key delivery agencies, such as partners across local and national government. Landowners outside of CBC Ltd.'s membership, also have an important role in delivering across a range of priorities and these two distinct entities (External Partner Agencies and the CBC Landowner Collaboration Group (LOGC)) will also play a positive and proactive role in the Travel and Transport Plan by feeding into the Travel and Transport Coordinator as part of the Travel and Transport Subgroup. These working arrangements are already established and already productive.

Governance, Responsibility & Delivery (including Funding)

Delivery

The distinction between Responsibility and Delivery is that delivery can often be a significant and time-consuming undertaking which may involve several external professional services, partners and different funding streams. It is therefore proposed that the delivery of measures contained within this Travel and Transport plan sits outside of the responsibility and governance groups but with a clear overlap with both. The Travel and Transport Plan has been designed to facilitate decisions and actions required for delivery. This includes:

- Costs: estimating the broad range of cost associated with implementing specific deliverables.
- Benefits: estimating the magnitude of quantitative and nature of qualitative benefits associated with deliverables.
- Prioritisation: derived from the initial understanding of costs and benefits, and indication of prioritisation for delivery.
- Responsibility: identifying the organisation(s) responsible for successful implementation of given deliverables.

However, to provide focus around the delivery of the measures in the Travel and Transport Plan, it is proposed that the Campus Delivery Group would continue to own the delivery process. The core membership of the Group would be CBC Ltd, the Travel and Transport Sub-Group Travel and Transport Coordinator, representatives from the LOCG and representatives from External Partner Agencies and Local Authorities such as Cambridgeshire County Council, the Cambridgeshire and Peterborough Combined Authority, the Greater Cambridge Partnership and East-West Rail. Consultants supporting these organisations including CBC may be required to attend the Campus Delivery Group.

The aim of the Campus Delivery Group is to agree which of the measures in the Travel and Transport Plan need to be progressed and how. Subject to the nature of the measure there will likely be the requirement for building the business case for funding and enabling cross partner support, discussion, and the sharing of good practice. Projects which require additional approval such as large infrastructure schemes will be reported directly to other Groups as required.

However, to move these measures to delivery an indication of Campus Delivery Group

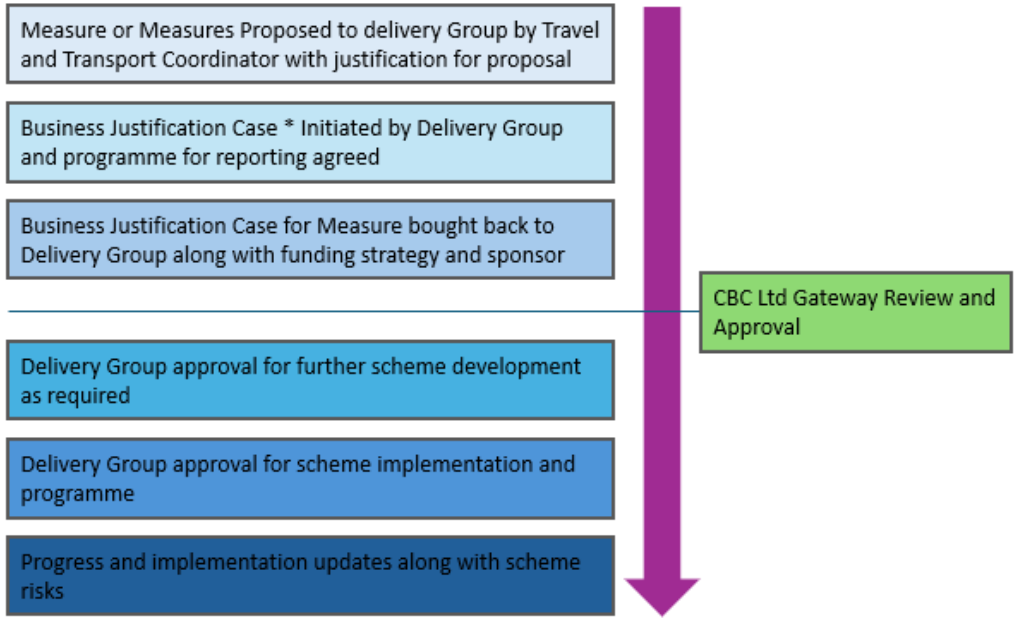


Figure 20: Campus Delivery Group Process

Governance, Responsibility & Delivery (including Funding)

Delivery Cont.

Within CBC Ltd, there are two potential routes to agreeing funding for specific deliverables where Campus organisations are identified as the responsible authority.

1. For items below £100,000 value, the Campus Delivery Group are able to determine whether the project can be supported through its allocation for Campus projects. These decisions can be made at any point during the financial year and are subject to the governance of the Campus Delivery Group.
2. For items greater than £100,000, CBC Ltd Directors will be able to consider proposals for investment, typically as part of the annual business planning cycle and in some exceptional cases as the subject of standalone business cases for investment (either through CBC Ltd or through individual members).

A significant proportion of deliverables will be the responsibility of other organisations, separate to CBC Ltd. For example:

- Estate management company: where deliverables relate to investments which are the responsibility of organisations owning roads, footpaths and common spaces, the relevant landowners will lead on delivery.
- External transport: where deliverables relate to infrastructure and services to improve access to the Campus, these will be the responsibility of relevant authorities (often in local government) and service providers (such as bus and train companies).

9. Monitoring & Evaluation

Monitoring & Evaluation Framework

Introduction

Effective monitoring and evaluation are critical components of this Travel & Transport Plan for the CBC. They will ensure not only the progress towards but also the achievement of the specific objectives and targets (KPI's) previously set out within this document. By systematically and efficiently tracking performance metrics and assessing the impact of the implemented measures with an assured framework and protocol, there will be a clear and transparent understanding of how well the Travel & Transport Plan is functioning and where adjustments may be necessary. This approach will enable continuous alignment with the transport objectives and aims for the Campus, ultimately supporting the creation of a highly responsive and adaptive transport system for the Campus. This section outlines the approach and framework to monitoring and evaluation.

Sensor-Based Monitoring

The principal approach to monitoring the progress and success of this Travel & Transport Plan should be undertaken by the procurement and implementation of real time sensor-based traffic and transport monitoring at the Campus. By leveraging sensor-based technology, an efficient and long-term monitoring process can be established, offering numerous benefits such as:

- Trend and Intervention Analysis: Identification of correlations between the day of the week and traffic patterns (by mode) on individual days or over extended periods. These data can be analysed both before and after the implementation of various schemes or measures.
- Qualitative Mode Shift Evidence: Insights into existing mode shares at different times of the day or over time. This information can also be reviewed before and after implementing specific schemes or measures.
- Travel Patterns and Behavioural Insights: Detailed information on arrival and departure profiles throughout the day.
- Visual Behavioural Insights: A clear understanding of how specific spaces within the environment are used by different modes of transport, helping to identify desire lines.

In addition to collecting primary data such as modal shares and entry-distribution, the sensors can also provide critical information on other key metrics like road safety (e.g., identifying 'near-miss' hotspot areas). These data will enable appropriate actions to be taken and implement necessary mitigation.

The sensor-based technology will produce live, real-time outputs that can be used to inform decisions and future proposals on the CBC. This continuous stream of up-to-date data will provide a robust evidence base, ensuring that all decisions are grounded in accurate and current information.

Additionally, the real-time 'live' nature of these outputs allows for dynamic adjustments and timely interventions, making the monitoring process not only informative but also highly responsive. This level of responsiveness will enhance the ability to address emerging issues promptly, optimise transport strategies, and ultimately contribute to a more efficient and effective transport network at the CBC.

Travel Surveys

Whilst the implementation of real time sensor-based technology and subsequent access to this data will be advantageous to better understand the transport network and travel behaviours at the CBC, the importance of collecting qualitative data and information cannot be overstated. The existing staff travel surveys at the CBC collect non-quantifiable information and data, such as thoughts and feelings of staff with regards to various aspects of travel to, from and within the Campus. For example, this may include a specific issue with an active travel route (e.g., lighting), anti-social behaviour or constraints to certain aspects outside the Campus boundary. This approach should also be extended to visitors and/or patients, as well as staff as occurring at present.

Therefore, as part of the monitoring and evaluation process for this Travel & Transport Plan, it is proposed that, while the scope of existing traffic and transport surveys can be reduced, a selection of the travel surveys and car parking counts (along with other aspects subject to agreement) in their existing form shall be maintained. This approach ensures that the value of qualitative information is captured, complementing the quantitative data obtained through sensor-based technology. By integrating these methodologies, it is envisaged that an optimal approach to monitoring is achieved.

Monitoring & Evaluation Framework

Real Time Database

The proposed monitoring and evaluation framework for the Travel & Transport Plan and will involve the collection of a comprehensive range of both qualitative and quantitative data. This approach will likely uncover and raise a variety of challenges, issues, and constraints at the CBC on a granular level. Examples of this may include the absence of pedestrian crossings on certain roads, increased frequency of near-miss incidents, or reports of staff and visitors feeling unsafe in specific areas.

It is crucial to capture and store these data appropriately to facilitate the identification and continuous monitoring of these issues in a real time and up-to-date database (or 'digital library'), that also has a spatial aspect and functionality to it (e.g., an up-to-date Geographical Information System (GIS) map). For instance, a trend of near misses reported at a specific junction over time will be evident within the real-time data log, prompting appropriate mitigation.

Furthermore, the integration of these data with other Campus-related activities such as roadworks, construction, and utility operations is essential. By linking these activities and issues within the database, a level of spatial and temporal situational awareness and thus considered and appropriate planning can be achieved.

Monitoring and Evaluation Reports

Regular monitoring and evaluation of the progress and success of this Travel & Transport Plan over the five-year life span against the objectives and targets (KPI's) is critical. However, monitoring provides little use if it is not regularly documented and provided to Campus partners and occupants. At present, the predominant method for travel and transport monitoring at the CBC is through the Annual Staff Travel Survey / Questionnaire and the Annual Travel Count, as detailed within Section 3 of this document. Whilst the Travel Survey / Questionnaire and Travel Count yields valued information, it has inherent weaknesses (such as only being undertaken for a one-week period per annum which only provides a snapshot of one day on the Campus) that given the progress of technology and data collection methodologies in the previous five-years, there is scope for this to be drastically improved.

Continuation of the existing air quality monitoring scheme, while distinct from transport monitoring, remains a critical component of this Travel & Transport Plan due to the inherent relationship between transport and air quality. It should be ensured that collaboration with Cambridgeshire County Council for air quality monitoring continues and develops. Although the air quality monitoring is already in place, the reporting and evaluation process should be streamlined and implemented into the monitoring and evaluation. A revised outline framework for monitoring and evaluation is proposed and is illustrated in Figure 21 below.

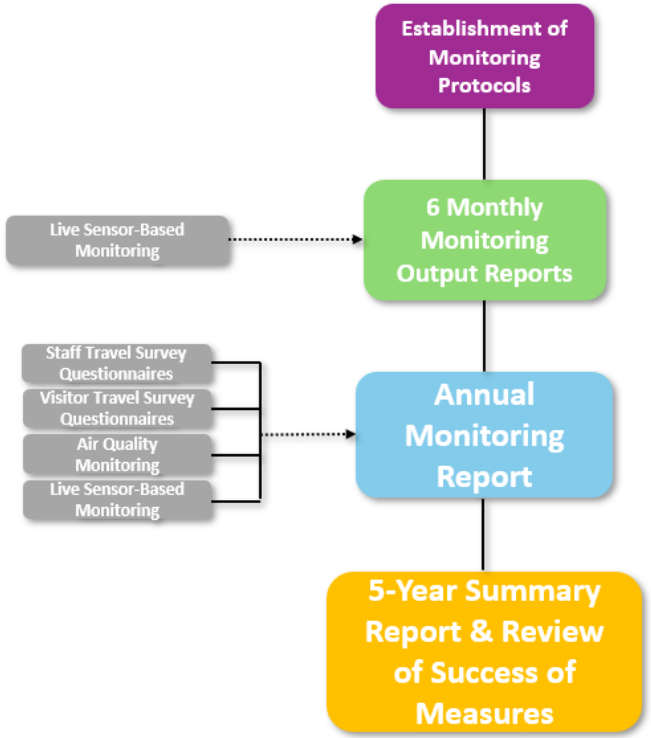


Figure 21: Outline Monitoring Framework

Monitoring & Evaluation Framework

Monitoring and Evaluation Reports Cont.

As depicted in Figure 21, three key monitoring reports will be produced to evaluate the success of this Travel & Transport Plan. Following the establishment of the monitoring framework at the CBC, a 6-monthly monitoring report will be produced that is informed, subject to implementation, by the sensor-based monitoring. For the initial 6-month period, a bi-monthly monitoring report should be produced to validate all monitoring techniques. This will outline the overarching travel patterns and behaviours at the CBC and provide a high-level progress overview to the relevant objectives. Prior to the monitoring and evaluation process beginning, an initial baseline assessment will be undertaken.

A more comprehensive monitoring report should also be produced on an annual basis, that will also be informed by the live sensor-based technology, as well as:

- Staff travel questionnaires;
- Visitor travel questionaries; and
- Air quality monitoring.

This annual monitoring report will evaluate the progress of each objective and its corresponding target, identifying areas necessitating further attention or resource allocation.

Upon the conclusion of the next 5-Year period, before the production of a revised document, a comprehensive summary report will be produced. This report will outline the status and success of each measure, the trajectory towards achieving objectives and targets, and the overarching 5-year travel patterns and behaviours observed across the Campus. These metrics will serve as valuable insights informing the subsequent Travel & Transport Plan, thereby establishing the framework for its formulation.

Resilience Planning

It is recognised that there are potential scenarios where the proposed external transport infrastructure investment schemes may face delays, or not come forward altogether within the next 5-year period.

Therefore, it is imperative that a resilience planning mechanism is put in place within the monitoring framework for this Travel & Transport Plan.

As part of the transport monitoring, the nearby transport infrastructure schemes detailed within this report will be monitored. Should it become apparent that schemes may face delays or be withdrawn, this will be discussed by the CBC Travel and Transport group and interim solutions or measures will be discussed. This pro-active response will ensure any potential disruptions to the progress of achieving the objectives and aims will be minimised.

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