APPENDIX 17.1
TRANSPORT ASSESSMENT

Brookgate Land Limited

Cambridge North - Phase 2

Transport Assessment

May 2022

Project Code: 05425

PJA
50-60 Station Road
Cambridge
CB1 2JH
UK
pja.co.uk

Version Control and Approval

Version	Date	Main Contributor	Issued by	Approved by
WORKING DRAFT	31 January 2022	Julia Coonan	Eliot King	DRAFT
First draft for client review	12 April 2022	Julia Coonan/Eliot King	Eliot King	Mike Salter
Final draft for client review	23 May 2022	Julia Coonan/Eliot King	Eliot King	Mike Salter
For submission	27 May 2022	Julia Coonan/Eliot King	Eliot King	Mike Salter

Prepared for

Ivan Bennett
Construction Director
Brookgate Land Limited
Brookgate Land Ltd
2 Station Place
Cambridge
CB1 2FP

Contents

List of Tables

List of Figures

Appendices

1 Introduction

1.1 Background

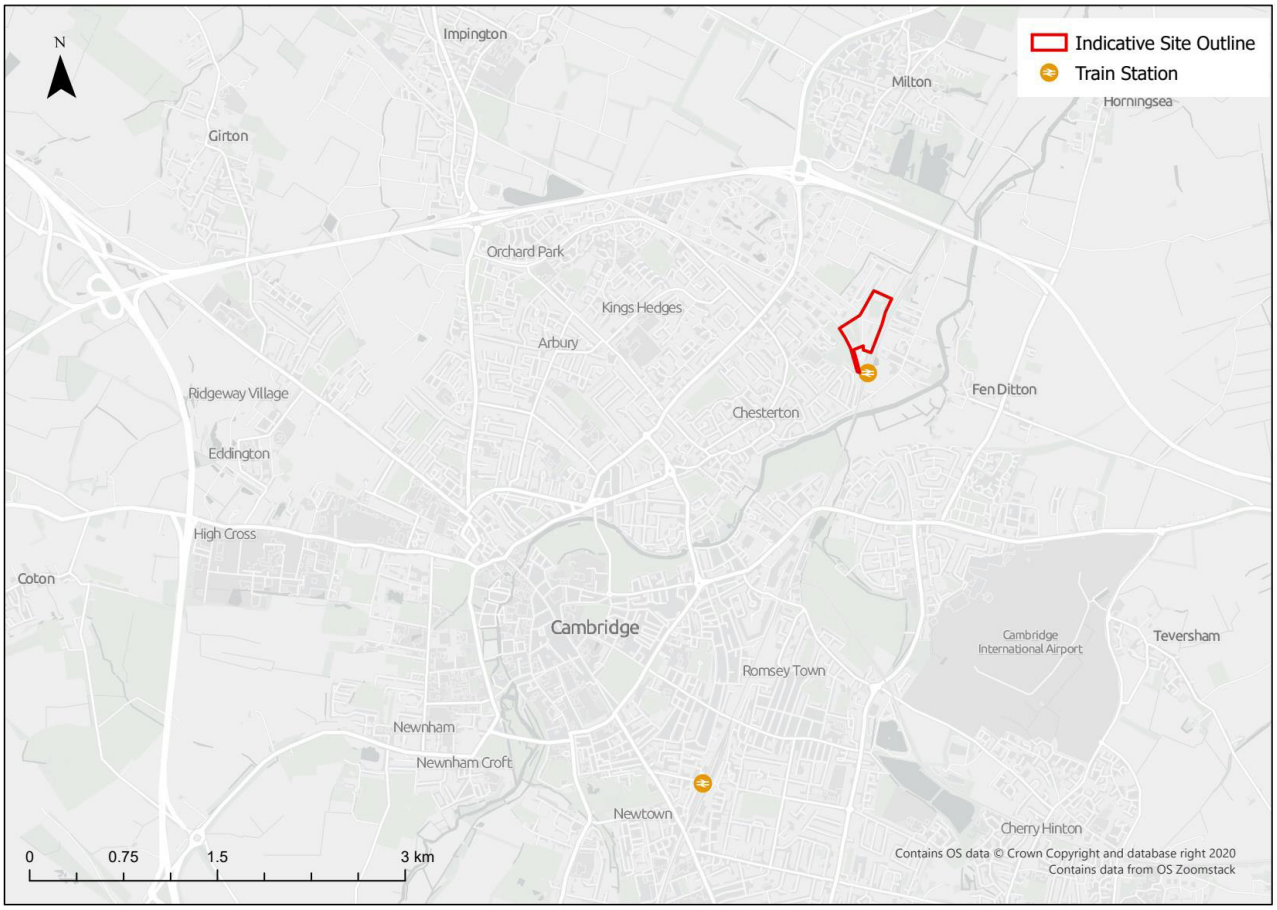
1.1.1 PJA has been appointed by Brookgate Land Limited to provide highways and transport advice and prepare a Transport Assessment (TA) to accompany a forthcoming planning application for the development of Cambridge North.

1.2 Site Context

1.2.1 The Site lies within South Cambridgeshire District and forms part of the former Chesterton Sidings site, adjacent to Cambridge North Station. It is located on the north-east edge of Cambridge, approximately 3km from the city centre, and lies to the east of the Cambridge Business Park.

1.2.2 The Site extends to approximately 9.7 hectares (ha). The location of the site is shown in Figure 1.1.

Figure 1.1: Indicative Site Location Plan



Source: PJA

1.2.3 This Transport Assessment focuses on development to the south of Cowley Road, known as 'Phase 2'. The planning application for Phase 2 follows on from the Cambridge North Railway Station

development which opened in 2017, Novotel which opened in 2020 and an office building known as One Cambridge Square which is currently under construction.

1.2.4 The development proposals comprise construction of five commercial buildings, all with retail, hospitality and amenity uses on the ground floor. In addition to the office and lab spaces, Phase 2 includes of the development of a Mobility Hub to the immediate north of the existing Novotel. This multi-functional building will serve as a central transport hub for the Cambridge North development and Cambridge North railway station, including car parking provision alongside other uses. The final element of the Phase 2 scheme is provision of 425 residential units of a mix of sizes and tenures on the western side of the site.

1.2.5 This Transport Assessment has been prepared in accordance with Cambridgeshire County Council's (CCC) Transport Assessment Guidance and the relevant policies of the adopted Cambridge Local Plan, and the South Cambridgeshire Local Plan, both of which are considered in Section 2 given the site's proximity to both Local Planning Authority areas.

1.3 Pre-application Engagement

1.3.1 Throughout the pre-application phase, PJA has engaged extensively with Cambridgeshire County Council (CCC) in its role as Local Highway Authority (LHA) and National Highways (NH), due to the proximity of the site to the A14 at Junction 33.

Local Highway Authority

1.3.2 An initial pre-application meeting between PJA and CCC was held on 28th October 2021. This built upon earlier discussions between CCC and Mott MacDonald, Brookgate's previous advisors on transport. A Transport Assessment Scoping Note was subsequently submitted to CCC in November 2021 setting out the principles for assessing the transport implications of the Proposed Development at Cambridge North.

1.3.3 CCC provided a response to the Scoping Note dated 14th December 2021. CCC's response confirmed the following:

- The Proposed Development should adhere to the trip budgets set out in the draft AAP for the peak hours, although CCC acknowledges the need for some flexibility around the figures. The key issue being whether the AM inbound and PM outbound flows are to be, "significantly exceeded with regards to the trip budget".
- Despite this flexibility, CCC would not support the principle of combining the directional peak hour trip budgets into a two-way budget. CCC has since suggested that, whilst the trip budget should be respected for the development end-state, they recognise that there might need to be

some interim flexibility on this as wider complementary measures for the wider draft AAP area are developed and delivered.

- The extent of the collision analysis was agreed.
- The principle of providing the full quantum of the Cambridge North car parking budget from the outset would not be supported by the Local Planning Authority (LPA).
- The use of lab trip rates from the Cavendish laboratory is acceptable to CCC.

1.3.4 Further to CCC's scoping response, and wider discussions with the LPA in December 2021, the parking strategy was reviewed, and a further Technical Note submitted to CCC in January 2022 detailing the updated strategy and the proposed approach to assessing the proposals against the trip budget.

1.3.5 A further meeting was held with CCC and the LPA on 24th January 2022 to discuss the revised parking strategy and principles of the TA methodology. There was broad agreement to the proposed approach to the car parking provision within the Proposed Development. Similarly, the LHA confirmed that the proposed approach of relating vehicle trips to car parking provision was acceptable.

1.3.6 CCC provided a second pre-application advice note dated 10th February 2022 following up on the meeting. The key points from this response and the meeting were:

- CCC confirmed its acceptance to the use of the lab trip profiles from the Cavendish laboratory but stated that consideration should be given as to whether there is any difference between commercial and academic lab trip profiles.
- The increase in vehicle trips associated with the proposed additional rail-related car parking is assumed to be outside of the development trip budget.
- The TA should demonstrate that the vehicle trip generation of the Proposed Development would be limited by the available car parking and address the potential that vehicles may seek to park off-site.

1.3.7 A meeting was held with CCC on 28th March 2022 to provide an update on the development of the scheme and also to discuss further the points raised in the earlier pre-application meetings. Agreement was reached on the approach to the following elements which were identified in the earlier pre-application engagement:

- Methodology for assessing the residential development vehicle trip impacts
- Data sources for establishing the non-car mode trips for both the residential and commercial elements of the scheme
- The principle of undertaking a sensitivity test for the lab uses, adopting survey data from the Peterhouse Technology Park

1.3.8 This TA has been prepared consistent with the pre-application discussions and feedback received from CCC.

National Highways

1.3.9 A meeting was held with National Highways (NH) on 1st February 2022 to present an overview of the Proposed Development and assessment methodology as presented to CCC.

1.3.10 There was broad agreement to the proposed assessment approach from NH, and no specific concerns were raised. NH requested that the TA present the traffic flow implications of the Proposed Development at the A10/A14 Milton Interchange. This is included within Chapter 6 of this report.

Summary

1.3.11 The preparation of this TA has been informed by extensive pre-application engagement with the LPA, LHA and NH. A formal TA scoping note was submitted to CCC and subject to subsequent discussion during pre-application meetings. As the Proposed Development evolved at pre-application stage, further meetings with CCC were held to keep them up-to-date and to agree any subsequent changes to the TA approach. The content and scope of this TA reflects the pre-application discussions held.

1.4 Transport Assessment Structure

1.4.1 The remainder of this report contains the following sections:

- Chapter 2: Policy Context;
- Chapter 3: Baseline Transport Conditions;
- Chapter 4: Development Proposals;
- Chapter 5: Development Trip Generation; and,
- Chapter 6: Summary and Conclusion.

2 Transport Policy Context

2.1 Introduction

2.1.1 This section sets out the transport policy context in relation to the site at a national, regional and local level and outlines how the Proposed Development at Cambridge North accord with these policies.

National Policy

- National Planning Policy Framework (2021); and,
- National Planning Practice Guidance (2014) - Travel Plans, Transport Assessments and Statements

Regional Policy

- Cambridgeshire and Peterborough Combined Authority Local Transport Plan (2020); and,
- Cambridgeshire County Council's Transport Assessment Requirements (2019)

Local Policy

- City Access Strategy (2020);
- South Cambridgeshire Local Plan (2018); and
- The Emerging North East Cambridge Area Action Plan (NECAAP)

2.1.2 The following section provides summary of the above policy documents with reference to the proposed development.

2.2 National Planning Policy

National Planning Policy Framework

2.2.1 The National Planning Policy Framework (NPPF), which was last updated on 20th July 2021, sets out the Government's planning policies for England and how these should be applied to new development. The principal requirements of the NPPF in relation to Transport Assessments are outlined below.

2.2.2 NPPF paragraph 113 states that *"all developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed".*

2.2.3 Chapter 9 of the NPPF, 'Promoting Sustainable Transport', states that sustainable transport, including active travel modes and public transport usage, should be considered at the earliest possible stage in the development process. Specifically, paragraph 104 of NPPF states that:

"Transport issues should be considered from the earliest stages of plan-making and development proposals". This is to ensure that "Opportunities to promote walking, cycling and public transport use are identified and pursued".

2.2.4 A robust Transport Assessment and Travel Plan will help to maximise the opportunities for sustainable travel following the redevelopment of Cambridge North by considering the accessibility and sustainability of the Proposed Development.

2.2.5 The objective of this TA is to ensure that the demand for travel is effectively managed and planned for, sustainable accessibility is maximised and appropriate mitigation measures are identified to address any residual impact.

National Planning Practice Guidance (2014) – Travel Plans, Transport Assessments and Statements

2.2.6 Under the heading 'Travel plans, Transport Assessments and Statements in decision-taking', the National Planning Practice Guidance (NPPG) states that:

"Travel Plans, Transport Assessments and Statements are all ways of assessing and mitigating the negative transport impacts of development in order to promote sustainable development. They are required for all developments which generate significant amounts of movements."

2.2.7 Under the heading 'Why are Travel Plans, Transport Assessments and Transport Statements important?' the guidance sets out the following:

"Travel Plans, Transport Assessments and Statements can positively contribute to:

- *Encouraging sustainable travel;*
- *lessening traffic generation and its detrimental impacts;*
- *reducing carbon emissions and climate impacts;*
- *creating accessible, connected, inclusive communities;*
- *improving health outcomes and quality of life;*
- *improving road safety; and*
- *reducing the need for new development to increase existing road capacity or provide new roads."*

2.2.8 The NPPG supports national planning policy, which states that the planning system should actively manage patterns of growth in order to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are, or can be, made sustainable.

2.2.9 This TA demonstrates how the location of the Proposed Development at Cambridge North is conducive to undertaking trips by sustainable modes of travel and, alongside the accompanying Travel Plan, could positively contribute to the transport environment and behaviours of the wider area.

2.3 Regional Policy

Cambridgeshire and Peterborough Combined Authority Local Transport Plan (2020)

2.3.1 The Cambridgeshire and Peterborough Combined Authority Local Transport Plan (CPCA LTP), which was adopted in January 2020, is the first combined LTP for Cambridgeshire and Peterborough.

2.3.2 The CPCA LTP describes how transport interventions can be used to address the current and future transport challenges and opportunities within Cambridgeshire and Peterborough. Specifically, the CPCA LTP sets out the policies and strategies required to secure growth and ensure that planned large-scale development can take place in a sustainable way.

2.3.3 A key focus of the CPCA LTP is to tackle the transport problems within the county including congestion and a lack of public transport connectivity in order to create a *"more attractive, less car-focused place to live and work[1]"*.

2.3.4 In Policy 7.2 - Promoting and raising awareness of sustainable transport options, the CPCA LTP states that the plan supports the development and implementation of sustainable travel measures: *"healthy, safe, low carbon travel for commuters is actively encouraged and supported"*. The CPCA LTP states that this vision should be supported through the *"promotion of existing and emerging walking and cycling routes and improving the availability, type and quality of information on sustainable modes, [and] ensuring health and air quality benefits are emphasised".*

2.3.5 This TA sets out the available public transport services and walking and cycling routes in the vicinity of the development. The accompanying site Travel Plan signposts how staff and visitors can access them.

2.3.6 The CPCA is developing a follow-up to the adopted LTP. The Local Transport and Connectivity Plan (LTCP) will set out the CPCA's long-term strategy to improve transport in Cambridgeshire and Peterborough. At the time of preparing this TA, the LTCP was subject to consultation running until early August 2022.

[1] CPCA LTP, Paragraph 3.49

Cambridgeshire County Council's Transport Assessment Requirements (2019)

2.3.7 CCC published its Transport Assessment Guidelines and Requirements document in September 2019. The document provides guidance on when a TA and Travel Plan is required and what it should contain.

2.3.8 The Guidance states that a TA is expected for business uses if including more than 2,500 sqm, the proposed development exceeds this threshold and therefore a TA is an appropriate level of assessment to accompany the planning submission.

2.3.9 The guidance states that a TA should include the following details:

- Background description and policy context;
- Existing networks and baseline conditions;
- Trip generation, distribution and assignment;
- Future year assessments;
- All-mode gap analysis / mitigation; and,
- A mitigation summary.

2.3.10 The requirements set out for TAs in the CCC Guidance document have informed the development of this document.

2.4 Local Policy

South Cambridgeshire Local Plan (2018)

2.4.1 The South Cambridgeshire Local Plan (SCLP) was adopted in September 2018 and is based on the three principles of sustainability comprising economic, social and environmental sustainability.

2.4.2 The SCLP sets out the planning policies and land allocations to guide future development of the District up until 2031. Pertinent polices to the development of Cambridge North are set out below.

Policy TI/2: Planning for Sustainable Travel

2.4.3 *Policy TI/2: Planning for Sustainable Travel* states that developments should promote sustainable travel options that could enhance connectivity to the site.

2.4.4 The policy states that, "*planning permission will only be granted for development likely to give rise to increased travel demands, where the site has (or will attain) sufficient integration and accessibility by walking, cycling or public and community transport. This includes:*

a *Provision of safe, direct routes within permeable layouts that facilitate and encourage short distance trips by walking and cycling between home and nearby centres of attraction, and to bus*

stops or railway stations, to provide real travel choice for some or all of the journey, in accordance with Policy HQ/1;

b *Provision of new cycle and walking routes that connect to existing networks, including the wider Rights of Way network, to strengthen connections between villages, Northstowe, Cambridge, market towns, and the wider countryside;*

c *Protection and improvement of existing cycle and walking routes, including the Rights of Way network, to ensure the effectiveness and amenity of these routes is maintained, including through maintenance, crossings, signposting and waymarking, and, where appropriate, widening and lighting;*

d *Provision of secure, accessible and convenient cycle parking in accordance with Policy TI/3;*

e *Securing appropriate improvements to public and community transport (including infrastructure requirements) in accordance with the aims of the Cambridgeshire Local Transport Plan and South Cambridgeshire Community Transport Strategy."*

2.4.5 *Policy TI/2* states that this includes demonstrating the provision of safe and direct pedestrian routes within permeable layouts that facilitate and encourage short distance trips by walking and cycling.

2.4.6 Further to the above, Policy TI/2 states that, "developers of 'larger developments' or where a proposal is likely to have 'significant transport *implications*' will be required to demonstrate they have maximised opportunities for sustainable travel and will make adequate provision to mitigate the likely impacts through provision of a Transport Assessment and Travel Plan. All other developments will be required to submit a Transport Statement. Where a Transport Assessment / Statement or Travel Plan is required, a Low Emissions Strategy Statement should be integrated"

Policy T1/3: Parking Provision

2.4.7 Developments should adhere to the parking standards set out in Figure 11 of the SCLP.

2.4.8 Policy T1/3 states that "Car parking provision will take into consideration the site location, type and mix of uses, car ownership levels, availability of local services, facilities and public transport, and highway and user safety issues, as well as ensuring appropriate parking for people with impaired mobility*."*

2.4.9 Furthermore, "The Council will encourage innovative solutions to car parking, including shared spaces where the location and patterns of use permit, and incorporation of measures such as car clubs and electric charging points*."*

2.4.10 The proposals for the redevelopment of Cambridge North include a car parking budget. The NECAAP Transport Evidence Base (TEB) report and subsequent Transport Position Statement (May 2020) establish a proposed overall car parking budget for the North East Cambridge area (4,800

spaces). This budget has subsequently been apportioned among the development sites, with the quantum of car parking for Cambridge North identified as 873 spaces.

2.4.11 This Transport Assessment illustrates how the Proposed Development is already situated within proximity to excellent existing sustainable transport links, including public transport hubs and walking and cycling networks. The TA also sets out more detail on the car parking budget for the Proposed Development.

Greater Cambridge Partnership (2020) – Cambridge City Access Strategy ('Making Connections')

2.4.12 The Cambridge City Access Strategy (henceforth, City Access) has been developed by the Greater Cambridge Partnership (GCP) to reduce congestion, deliver a step-change in public transport, cycling and walking, and significantly improve the air quality in Greater Cambridge.

2.4.13 In January 2020, the GCP's Director of Transport presented a Paper[2] to the GCP Joint Assembly, which summarises technical and analytical work undertaken since 2016, alongside the recommendations of the Cambridge Citizens' Assembly, to inform the City Access Strategy.

2.4.14 The GCP Paper highlights that *"traffic conditions in, and on the approach to Cambridge are bad, and worsening"*. As a result, the Paper states that existing traffic conditions not only *"cause delay and misery for the people of Greater Cambridge*" but also prevent business and leisure trips from being made into and around Cambridge quickly and reliably.

2.4.15 In light of the traffic conditions and air quality issues discussed above, the Paper recommends that substantial changes are required. The Paper states that *"we need significantly more people travelling by public transport, cycling and walking and significantly fewer people travelling by car"* and that this should be facilitated through the development of a *"world-class public transport system"* in the area.

2.4.16 More recently, the GCP has consulted on their City Access 'Making Connections' programme. The consultation sought feedback on three key aspects, these being a new bus network, better cycling and walking routes and high quality public spaces, and designing a potential charging zone to potentially raise revenue and create space for public transport. The consultation responses are currently being analysed and reviewed.

2.4.17 This TA sets out the potential impact of Proposed Development in terms of vehicular trips. Although the AAP is not adopted, the development will operate within a pre-determined trip budget which has been apportioned from the overall NEC trip budget established by the AAP TEB. The

[2] GCP. Public Transport Improvements and City Access Strategy: Update on Technical Work and Next Steps. 30 Jan 2020.

accompanying Travel Plan also aims to encourage staff and visitors to travel by public transport, cycle or on foot.

2.5 Emerging Policy

Draft North East Cambridge Area Action Plan

2.5.1 The Proposed Development is located within the North East Cambridge area. North East Cambridge comprises 182 hectares of brownfield land which has been identified to accommodate a new city district. An Area Action Plan (NECAAP) has been developed by South Cambridgeshire District Council (SCDC) and Cambridge City Council and will, once adopted, form the planning framework to guide development in the area.

2.5.2 The Proposed Submission version of the emerging NECAAP (Regulation 19) was reported to the respective decision-making committees of the Councils over December 2021 to January 2022 and was approved for public consultation. However, the Proposed Submission Plan is not able to progress to public consultation until the Development Consent Order (DCO) process for the relocation of the Cambridge Waste Water Treatment Plant has concluded.

2.5.3 At the time of writing this Statement, the DCO is due to be submitted to the Planning Inspectorate in Autumn 2022 and could take 18 months to process. Therefore, consultation on the Proposed Submission version of the emerging NECAAP is not likely to take place until 2024.

2.5.4 In light of the above, the NECAAP remains at an early stage in its preparation and can only be afforded negligible weight in the determination of planning applications. .

2.5.5 The NECAAP vision for the area is for "*North East Cambridge to be a healthy, inclusive, walkable, low-carbon new city district with a vibrant mix of high quality homes, workplaces, services and social spaces, fully integrated with surrounding neighbourhoods.*"

2.5.6 Chapter 7 of the NECAAP addresses connectivity and describes the area as, *"15-20 minute cycle ride from the city centre. It already has good public transport links, and there are many walking, cycling and public transport improvements already planned for this area."*

2.5.7 Chapter 7 includes seven policies relating to connectivity and transport, summarised below:

- Policy 16 Sustainable Connectivity
  - All new development should be designed around the principles of walkable neighbourhoods.
  - New development should facilitate the delivery of a comprehensive network of high-quality links and connections between and within sites.
  - A series of pedestrian and cycle connections external to the AAP area are identified.

  - The design of streets and spaces should consider the needs of those walking, cycling and using other sustainable modes, minimising conflict between users.
  - Planning applications should demonstrate how solutions to internalising trips and reducing motor vehicle use have been explored.
- Policy 17 Connecting to the Wider Network
  - Development will be required to contribute to new and improvements to existing connections for non-motorised users as set out in the policy.
- Policy 18 Cycle and Micro-mobility Parking
  - Cycle parking must be provided in excess of the minimum standards outlined.
  - At least 5-10% of cycle parking provision must be designed to accommodate non-standard cycles.
  - Provision should be made to store and charge micro-mobility options and mobility scooters.
- Policy 19 Safeguarding for Public Transport
  - An area to the south of the proposed development site will be safeguarded for a transport interchange. Development proposals within the safeguarded area must demonstrate how they will support or enhance this function and engaged with key transport bodies.
- Policy 20 Last Mile Deliveries
  - Delivery and consolidation hubs are identified for Cambridge Science Park and a location close to Milton Road. The hubs should be designed to receive goods from larger vehicles and enable last-mile delivery by sustainable modes.
- Policy 21 Street Hierarchy
  - Development should be designed to manage vehicle movements in accordance with the street hierarchy shown in Figure 42. This includes primary streets providing the main vehicular accesses, secondary streets and consideration of car-free zones.
- Policy 22 Managing Motorised Vehicles
  - Introduces the concept of vehicle trip budgets to limit vehicular trips from development on Milton Road and Kings Hedges Road.
  - By complying with the trip budgets, major highway mitigation is not required.
  - Investment in enhancing sustainable travel options and restrictions on parking are required to support compliance with the vehicle trip budgets.
  - On-street parking should be limited through prohibitive design.
  - A monitoring strategy for the vehicle trip budget and car parking should be developed by landowners and the highway and planning authorities.

NECAAP Transport Evidence Base (2019)

2.5.8 The draft NECAAP has been informed by a suite of background technical studies, one of which, prepared by Mott MacDonald in September 2019, is the Transport Evidence Base (TEB).

2.5.9 The TEB introduction refers to highway congestion issues around Milton Interchange and Milton Road in the peak hours stating, "*it will be necessary for any further development to be delivered in a way that does not result in peak-period highway trip levels increasing above existing levels to the extent of creating a severe impact.*"

2.5.10 The TEB includes a modelling exercise which establishes a vehicular trip budget for the NECAAP area that it suggests could take place without creating a severe impact on local highway conditions; 3,900 to-way vehicle trips in the AM peak hour and 3,000 two-way vehicle trips in the PM peak hour. The TEB states that this level of trips is similar to existing levels, therefore requiring car driver mode share to decrease in order for any development growth to be accommodated.

2.5.11 Subsequent work by the authorities, working with the various transport consultants in the area, has sought to disaggregate the peak hour totals into development-specific allocations. Although a work-in-progress and having no formal planning status, it is these values which have informed this TA.

2.5.12 The TEB also addresses car parking and states that, in order for the employment-based AM peak vehicle trip budget not to be exceeded, no more than 4,185 'business-based' parking spaces should be provided.

2.5.13 Subsequent to the TEB, a Transport Position Statement was prepared in May 2020 (revised February 2022) setting out an Approach to Planning Applications on the A10 Northern Corridor. This document also addresses car parking provision, referring to the 4,185 spaces identified by the TEB, but highlighting that this is at an assumed 85% utilisation rate, and that the total number of spaces across the NEC is 4,800.

2.6 Policy Summary

2.6.1 In summary, the requirement for a TA is recognised within national, regional and local policy, and it is within this context that this document has been prepared.

3 Baseline Transport Conditions

3.1 The Site

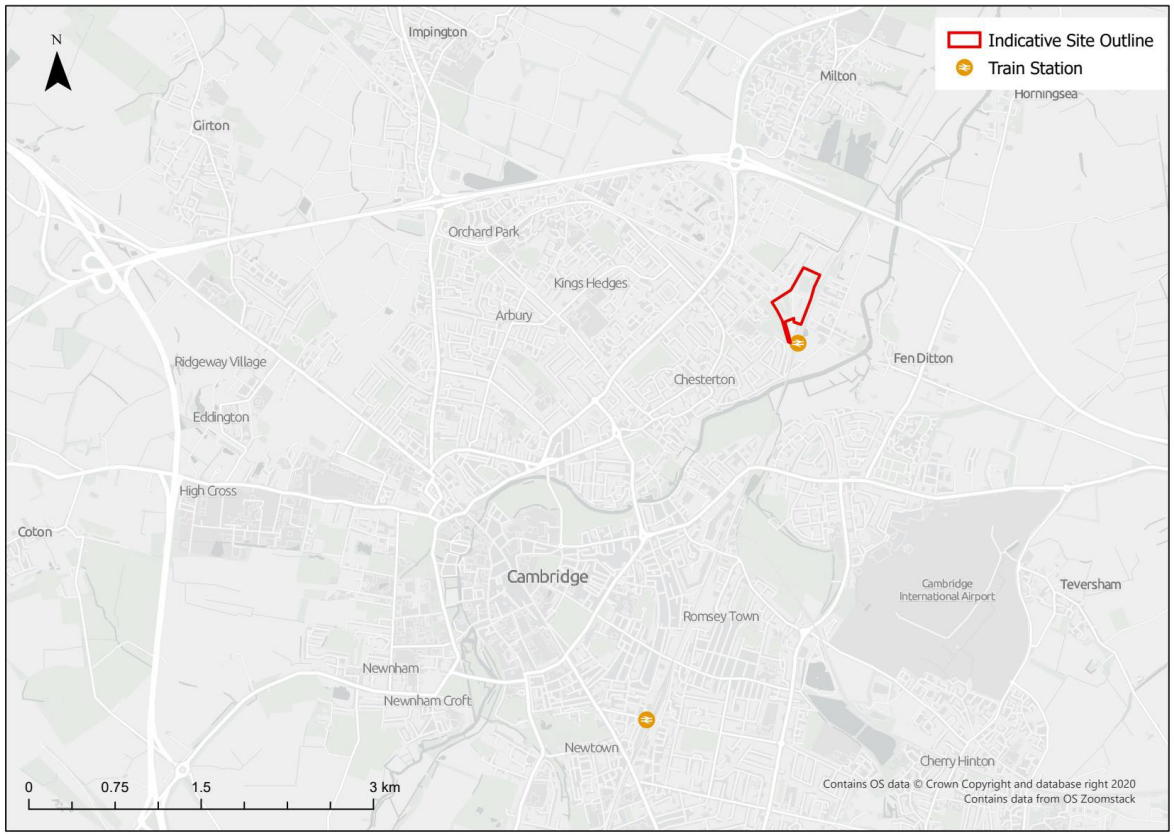
3.1.1 The Proposed Development site is located within an area known as North East Cambridge (NEC) which is subject to an emerging Area Action Plan (AAP).

3.1.2 The existing site comprises of brownfield land and former railway infrastructure.

3.1.3 The site is bounded by the Novotel hotel to the south, an existing estate road which forms an extension to the Cambridgeshire Guided Busway to the west, the railway to the east and former rail land to the north.

3.1.4 The location of the Proposed Development site in relation to Cambridge City Centre and the wider Cambridge area is shown in Figure 3.1.

Figure 3.1: Indicative Site Location Plan



Source: PJA

3.1.5 Works on the first phase of development at Cambridge North have already commenced. This includes a Novotel hotel located to the immediate south of the site which opened in 2021, Cambridge North Railway Station which opened in 2017 and an office development known as One

Cambridge Square to the northwest of the station (planning application S/4478/17) which is currently under construction.

3.2 Walking and Cycling Accessibility

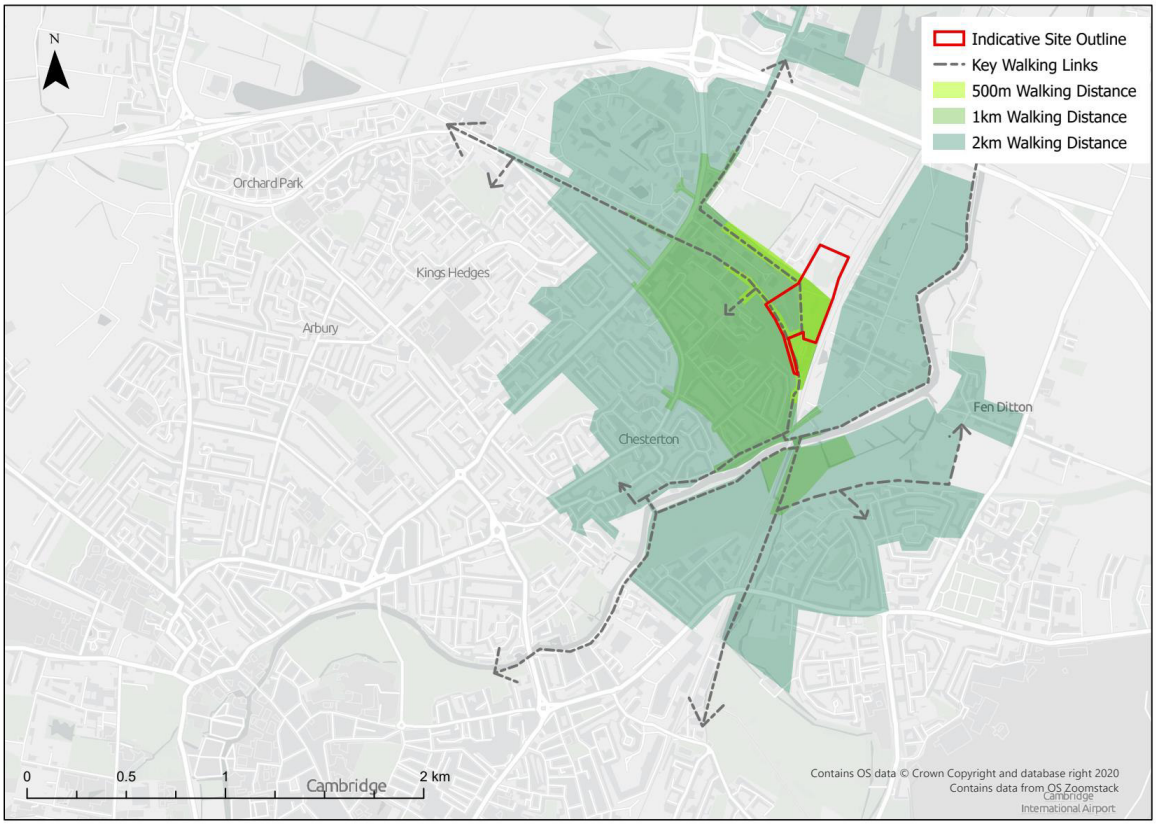
3.2.1 The Proposed Development is well located in terms of its proximity to existing high-quality pedestrian and cycle infrastructure, providing access to a range of local facilities, sustainable transport infrastructure and surrounding residential areas via modes of active travel.

Walking

3.2.2 Guidance provided by the IHT in their publication 'Providing for Journeys on Foot' (2000) suggests that in terms of commuting on foot, walk distances of up to 2km can be considered as a preferred maximum with 'desirable' and 'acceptable' distances being 500m and 1000m, respectively.

3.2.3 Using this IHT guidance, pedestrian isodistances of 500m, 1000m and 2000m have been plotted from the centre of the Proposed Development as actual walk distances (not crow-fly). The result of this exercise is presented below in Figure 3.2, with key local walking routes overlaid.

Figure 3.2: Pedestrian Isochrones and Key Walking Links



Source: PJA

Immediate Pedestrian Environment

3.2.4 The Proposed Development is situated within an existing high-quality pedestrian environment. This includes:

- Footways of 2.0-3.0m on both sides of Milton Avenue, connecting the Proposed Development to both the Cambridgeshire Guided Busway and to Cambridge North station. The footways are separated from the carriageway by a grass verge of approximately 2.0-4.0m.
- A 4.0m-wide shared-use route that links from Cambridge North Station to the residential street of Moss Bank, to the south of the development, for onwards travel to Cambridge City Centre and the towpath along the River Cam;
- A 5.0m-wide shared-use footway/cycleway following the alignment of the western estate road which connects with the Cambridgeshire Guided Busway link between Milton Road and Cambridge North station to the north west of the site; and,
- A 5.0m-wide shared-use footway/cycleway following the alignment of Cowley Road between the Proposed Development and Milton Road. This route is screened from Cowley Road by approximately 10-15m of vegetation.

Key Walking Routes To/From Cambridge North

3.2.5 The other key pedestrian links to and from the site, which are shown in Figure 3.3 as dotted lines are summarised below:

- A 5.0m-wide shared-use footway/cycleway following the alignment of the Cambridgeshire Guided Busway. This route provides pedestrian access within 2km to Cambridge Science Park and parts of Kings Hedges;
- A 5.0m-wide shared-use footway/cycleway following the alignment of Cowley Road between the junction with Milton Road and the Jane Coston bridge over the A14;
- Jane Coston bridge over the A14, providing safe and segregated pedestrian and cycle access to Milton, which is within 2km of the proposed development and Milton Country Park;
- A 1.5-2.0m shared use towpath which follows the alignment of the River Cam to the north of Cambridge North. This route provides access to Bait's Bite Lock within 2km of the proposed development;
- A 2.5-3.0m shared use route – the Chisholm Trail – which routes north-south between Cambridge North and Coldham's Lane. The route, which opened in Winter 2021, is well signposted and lit via solar studs. The routes include a new, lit pedestrian and cyclist underpass under Newmarket Road and a new purpose built pedestrian/cyclist bridge over the River Cam, located to the immediate south of Cambridge North. Other upgrades as part of the Chisholm

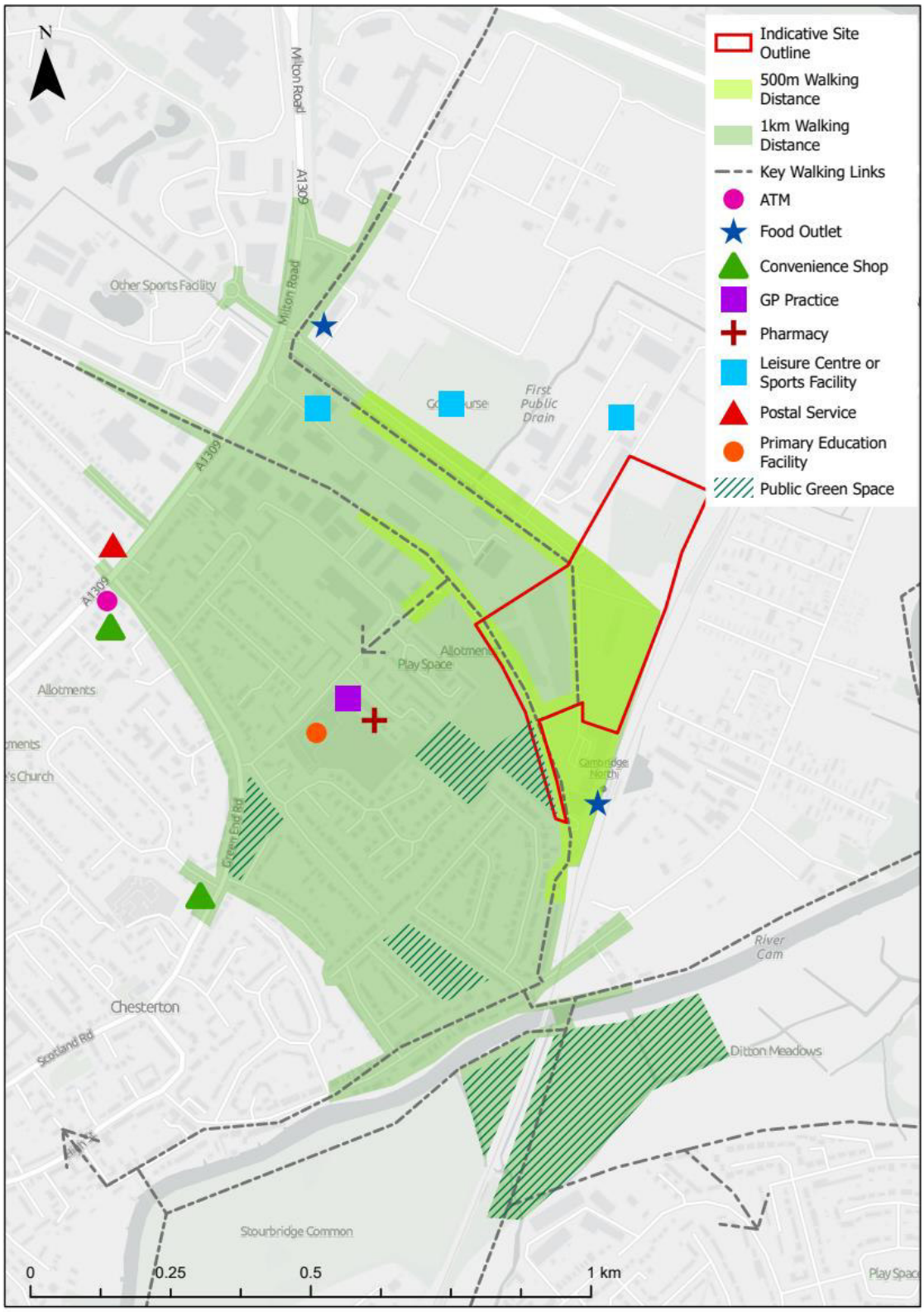
Trail include improvements to crossing facilities on Fen Road and improvements to the towpath adjacent to the Chisholm Trail bridge;

- A 2.0m shared use route across Ditton Meadows between the Chisholm Trail and Fen Ditton, with access to the village of Fen Ditton within 2km of the proposed development; and
- A 2.0-4.0m signposted shared use route following the alignment of the river Cam between Cambridge North and Cambridge City Centre. Crossing points across the River Cam are available via either the Chisholm Trail bridge or the Green Dragon Bridge.

Amenities

3.2.6 A walking isochrone distance map showing the number of accessible amenities within a 500m and 1km walk of Cambridge North is included in Figure 3.3.

Figure 3.3: Amenities within 500m and 1km walk of Cambridge North



Source: PJA

3.2.7 As can be seen in Figure 3.3, there is a good range of existing local services and facilities located within or just beyond 1km of the Proposed Development.

3.2.8 Table 3.1 summarises the range of local services and facilities and their walking distance from the proposed development. The distances presented are based upon actual walking routes, rather than crow-fly.

Table 3.1: Distance of Existing Key Amenities from Cambridge North

Type of amenity	Nearest amenity	Walking distance (metres)
Food shop (convenience shop)	Co-op, Milton Road	1,200 m
ATM (cash machine)	Co-op, Milton Road	1,200 m
Outdoor Space	Bramblefields, Chesterton	1,100 m
	River Cam Towpath	700m
Leisure/Fitness Facility	Golf Driving Range, Cowley Road	500m
	RP Fitness, Cambridge Business Park	900m
Post Office	Post Office, Kings Hedges Road	1,200 m
Pharmacy	Lloyds Pharmacy, Nuffield Road Medical Centre, Pippin Drive	750 m
GP / Medical Centre	Nuffield Road Medical Centre, Pippin Drive	750m
Childcare / School	Shirley Community Primary School	800m

Source: PJA

3.2.9 It is worth noting that the Proposed Development includes a range of ancillary uses including retail and therefore the walking distance to a number of key amenities will reduce as the site is developed and new units are occupied as part of the Cambridge North masterplan.

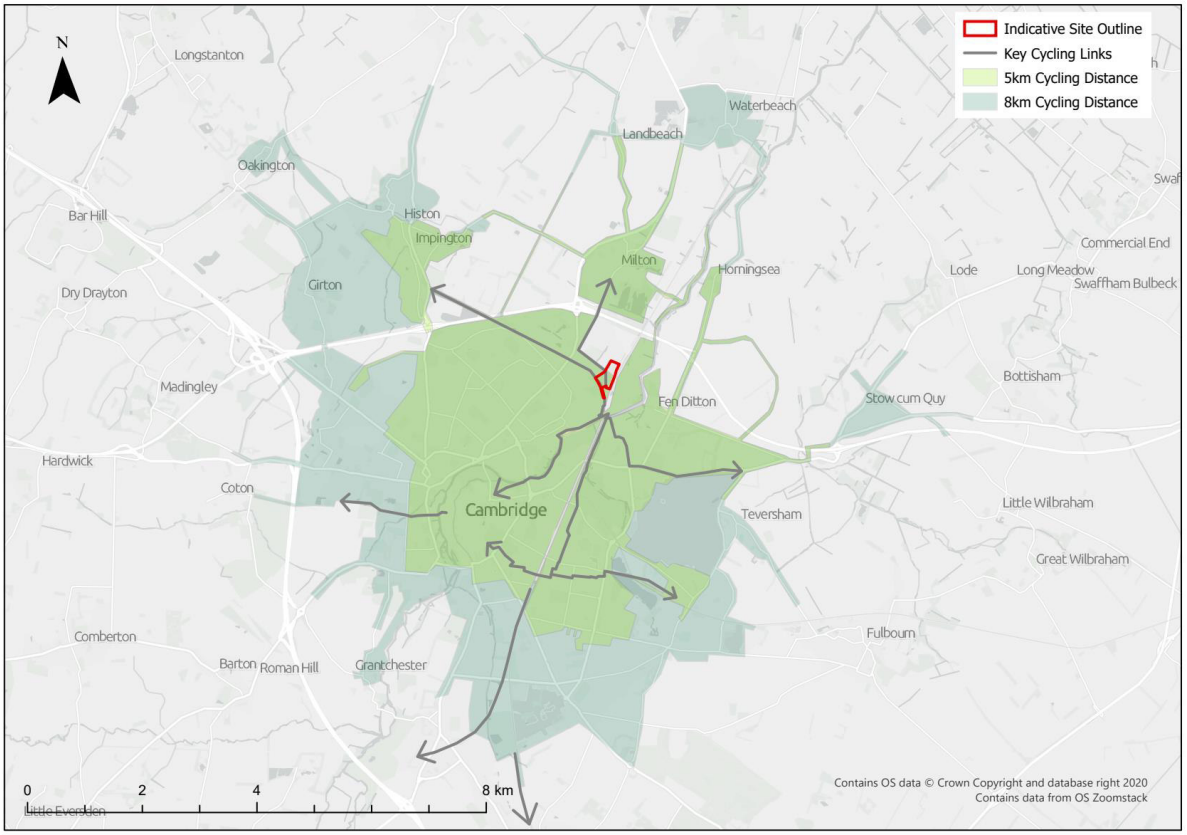
Cycling

3.2.10 Various existing high-quality cycle routes are provided local to the development site.

3.2.11 It is generally considered that 5km is an acceptable cycling distance to work for commuting purposes, although this will vary according to individual mobility and fitness. However, the Department for Transport's (DfT) Local Transport Note 2/09 'Cycle Infrastructure Design' notes that for commuter journeys, cycling distances of up to 5 miles [8km] are not uncommon.

3.2.12 Given these anticipated cycle distances, the cycling isochrones for 5km and 8km and key cycling links to and from the site are shown in Figure 3.4.

Figure 3.4: Cycling Isochrones and Key Cycling Routes



Source: PJA

Immediate Cycle Environment

3.2.13 There are a number of high-quality cycling links in the immediate vicinity of the proposed development. This includes:

- A 3.0m cycleway on the western side of Cowley Road, connecting to Cambridge North station. The cycleway is separated from the footway by a Cambridge Kerb and both routes are separated from the carriageway by a grass verge of 2.5-m;
- A 4.0m-wide shared-use route that links to the residential street of Moss Bank, to the south of the development, for onwards travel to Cambridge City Centre, the towpath along the River Cam and the Chisholm Trail;
- A 5.0m-wide shared-use footway/cycleway following the alignment of the western estate road which connects with the Cambridgeshire Guided Busway link between Milton Road and Cambridge North station to the north west of the Proposed Development; and,

- A 5.0m-wide shared-use footway/cycleway following the alignment of Cowley Road between the Proposed Development and Milton Road. This route is screened from Cowley Road by approximately 10-15m of vegetation and connected to onwards links at the western end via a staggered toucan crossing point of Milton Road.

Key Cycling Routes To/From Cambridge North

3.2.14 The other key cycle links from the Proposed Development, which are shown in Figure 3.4 as arrows are summarised below:

- A 5.0m-wide shared-use footway/cycleway following the alignment of the Cambridgeshire Guided Busway. This route provides cycle access within 8km to destinations within Cambridge Science Park and communities in Histon/Impington and Oakington
- A 5.0m-wide shared-use footway/cycleway following the alignment of Cowley Road between the junction with Milton Road and the Jane Coston bridge over the A14;
- The Jane Coston bridge over the A14 provides pedestrian and cycle access to the village of Milton and onward cycle routes towards Waterbeach and Landbeach which are accessible within 8km;
- Milton Park & Ride can be accessed within 3km of the Proposed Development along the aforementioned Cowley Road link, over the Jane Coston bridge, along quiet roads through Milton and via a pedestrian bridge over the A10;
- A 1.5-2.0m towpath which follows the alignment of the River Cam to the north of Cambridge North. This route provides access to Waterbeach and Horningsea within 8km of the proposed development;
- A 2.5-3.0m shared use route – the Chisholm Trail – which routes north-south between Cambridge North and Coldham's Lane via Ditton Meadows. Phase 1 of the route, which opened in Winter 2021, provided a new lit pedestrian and cyclist underpass under Newmarket Road and a new pedestrian/cyclist bridge over the River Cam, located to the immediate south of Cambridge North. The route is well lit and signposted throughout;
- A 2.0m shared use route between the Chisholm Trail and Fen Ditton across Ditton Meadows, with onward signposted cycle routes to Stow-cum-Quy within 8km of the Proposed Development;
- A 2.0-4.0m signposted shared use route between Cambridge North and Cambridge City Centre following the alignment of the River Cam, with crossing opportunities via either the Chisholm Trail or the Green Dragon Bridge; and
- Other destinations accessible within an 8km cycle of the Proposed Development on good quality cycle routes include The Shelfords via the Cambridgeshire Guided Busway (southern link) and

the DNA path, Cherry Hinton and Fulbourn via The Tins Path and West Cambridge and Coton via a shared-use cycle route.

Future Baseline Cycle Routes

Waterbeach Greenway

3.2.15 The Waterbeach Greenway forms one of the 12 proposed Greater Cambridge Greenways, a network of new or upgraded routes to provide direct and safe access between Cambridge City Centre and surrounding villages.

3.2.16 The Waterbeach Greenway aims to link the village of Waterbeach to Cambridge City Centre via Cambridge North. The current proposals include two branches of the Greenway route from Cambridge North station – one using the existing aforementioned Jane Coston Bridge to Milton, then using improved routes through Milton Country Park and the other, a new route through the wider North East Cambridge site including a new underpass under the A14. The proposals from GCP state the anticipated, travel time between Waterbeach and Cambridge North as 21 minutes once the route is complete[3].

Chisholm Trail

3.2.17 To the south of Cambridge North station, a 4.0m wide shared-use pedestrian and cycleway links Station Square to Fen Road via Moss Bank. From here users can connect to cycle routes through Chesterton and along the River Cam to access Cambridge City Centre.

3.2.18 This route forms part of National Cycle Route 51 and National Cycle Route 11 and provides a connection between Cambridge North and the Chisholm Trail.

3.2.19 The recently opened Abbey-Chesterton Bridge, and associated links via Ditton Meadows/Stourbridge Common including the underpass beneath Newmarket Road, have further enhanced the cycling-related provision in the area and expanded the accessibility of Cambridge North by bike.

3.2.20 The Chisholm Trail is part of the first tranche of schemes to be delivered by GCP as part of the Cambridge City Deal. The Chisholm Trail provides a direct cycle route from Cambridge North station to Cambridge station on purpose-built cycleways and quiet roads.

3.2.21 Phase 2 of the Chisholm Trail will link from Cambridge Station to Coldhams Common via a combination of segregated cycle routes and quiet roads. The exact specification of the route is yet

[3] Greater Cambridge Partnership (2019) https://www.greatercambridge.org.uk/transport/transport-projects/greenways/waterbeach-greenway

to be determined but it will provide a fast and safe link between south Cambridge and Cambridge North.

Horningsea Greenway

3.2.22 The Horningsea Greenway, also part of the Greater Cambridge Greenways programme, is proposed to link to the Chisholm Trail at Ditton Meadows and use upgraded routes across Ditton Meadows, through Fen Ditton and along an improved segregated route parallel to the B1047 Horningsea Road.

3.3 Cycle Parking

3.3.1 The existing cycle parking in the area of the proposed development is provided at Cambridge North Station Cycle Park.

3.3.2 The cycle parking facility has 1,000 cycle parking spaces, provided as a mixture of Sheffield cycle parking stands and double-stacker spaces.

3.3.3 This facility located to the immediate south of Cambridge North Station, approximately 200m from the Proposed Development.

3.3.4 The facility is a covered unit with open sides, with CCTV in operation.

3.3.5 Currently there is a private cycle hire system set up at Cambridge North called 'Bizbike'. In conjunction with the Cambridge Science Park and Cambridge Biomedical Campus, subscribing companies can access free daily electric cycle hire to travel between sites, plus an additional hub at Longstanton Park & Ride.

3.4 Public Transport

3.4.1 The site benefits from access to a range of public transport services which connect the site with Cambridge City Centre, local regional destinations and national destinations via the rail network.

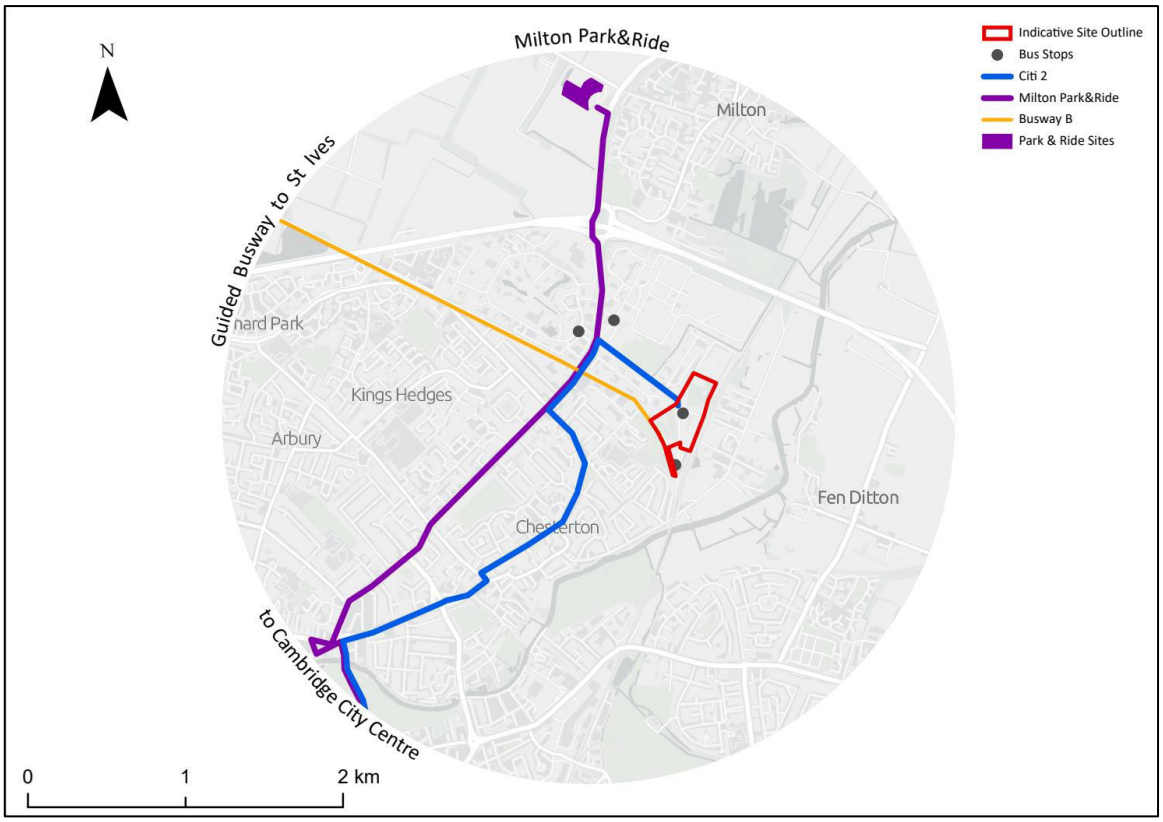
3.4.2 Planning for Public Transport in New Development (Institution of Highways and Transportation, 1999, para 5.21) advises that, *"New developments should be located so that public transport trips involving a walking distance of less than 400m from the nearest bus stop or 800m from the nearest railway"*. These accepted walking distances are also supported by the Chartered Institution of Highways & Transportation (CIHT) *Planning for Walking (2015)* paper.

3.4.3 Bus stops served by the Busway B and Citi 2 services lie significantly within the 400m threshold when measured from the site centre, and Cambridge North Station is well within 800m of the development site.

Bus

3.4.4 The bus routes which serve stops located within the 800m of the development site are shown in Figure 3.5.

Figure 3.5: Bus Routes Located Close to Cambridge North



Source: PJA

3.4.5 The southern end of the Cambridgeshire Guided Busway (northern section) is located to the immediate west of the development site. The route runs southeast-northwest- from Cambridge North to St Ives and is around 20km in length.

3.4.6 The Cambridgeshire Guided Busway connects to St Ives at the northern end and provides stations for access to the communities of Histon/Impington, Oakington, Northstowe/Longstanton and Over/Swavesey en-route.

3.4.7 The nearest bus stop to the development site is located adjacent to the Cambridge North Station cycle parking to the immediate south of the site.

3.4.8 The bus stops located at Cambridge North station are currently directly served by the following services:

- Citi 2: **Cambridge Biomedical Campus – Cherry Hinton Hall – Perne Road – Mill Road – Cambridge City Centre – Chesterton – Water Lane – Milton Road – Cambridge North**
  - Service terminates at Cambridge North Station in peak hours.
  - High-frequency service (every 15 minutes).
  - Services at peak hours route towards Ely.
- Cambridgeshire Guided Busway (CGB) 'B' Service: **Huntingdon – St Ives – Longstanton – Histon – Cambridge Regional College – Cambridge Science Park – Cambridge North**
  - Regular service throughout the day (every 20 minutes).

3.4.9 A summary of the timetable for the above services on Monday – Friday is provided in Table 3.2.

Table 3.2: Existing Local Bus Services (Monday – Friday)

Stop Reference	Bus No.	Route	First Bus arriving at Cambridge North	Frequency (buses per hour)	Last Bus leaving Cambridge North
The Busway Cambridge North (Stop 1)	Busway B	Huntingdon - St. Ives – Longstanton - Cambridge North – Cambridge Central	0628	2 bph	2258
The Busway Cambridge North (Stop 1)	Busway B	Cambridge Central – Cambridge North – Longstanton – St. Ives	0712	2 bph	2337
The Busway Cambridge North (Stop 2)	Citi 2	Waterbeach - Milton - Cambridge North – Chesterton – City Centre – Addenbrooke's	0540	3 bph	2200
The Busway Cambridge North (Stop 2)	Citi 2	Addenbrooke's – City Centre – Chesterton – Cambridge North –Milton – Waterbeach - Ely	0724	3 bph	2330

Source: Stagecoach (Accessed March 2022)

3.4.10 The majority of the aforementioned bus services also run on weekends, but a number operate a reduced frequency in line with demand, as can be seen in Table 3.3. Inbound refers to services that route towards Cambridge City Centre from Cambridge North and vice versa for outbound.

Table 3.3: Existing Local Bus Services (Saturday – Sunday)

Stop Reference	Bus No.	Saturday			Sunday		
		First Bus	Frequency (buses per hour)	Last Bus	First Bus	Frequency (buses per hour)	Last Bus
The Busway Cambridge North (Stop 1)	Busway B Inbound	0628	2 bph	2258	0803	1 bph	2203
The Busway Cambridge North (Stop 1)	Busway B Outbound	0712	2 bph	2337	0837	1 bph	2237
The Busway Cambridge North (Stop 2)	Citi 2 Inbound	0540	3 bph	2200	0914	2 bph	1814
The Busway Cambridge North (Stop 2)	Citi 2 Outbound	0724	3 bph	2330	0940	2 bph	1840

Source: Stagecoach (Accessed March 2022)

3.4.11 In addition to the above services, there are further bus stops located on Milton Road including:

- Milton Park & Ride service between Milton Park & Ride and Cambridge City Centre with 6 buses per hour;
- #9 service between Ely and Cambridge City Centre with 1 bus per hour with some extensions to Littleport and Chatteris across the day.

Rail

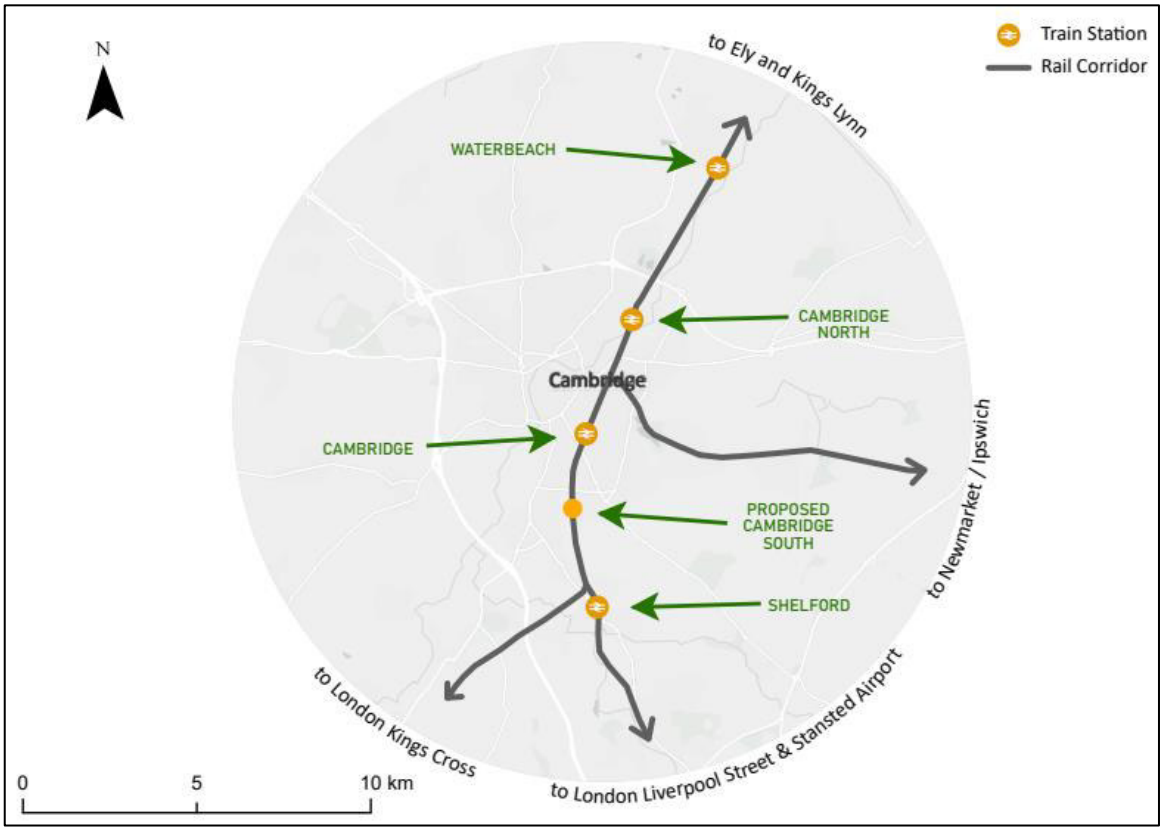
3.4.12 Cambridge North Station opened in May 2017 and is located approximately 100m to the south of the proposed development site.

3.4.13 Cambridge North has a pick-up/drop-off area combined with a taxi rank and designated Blue-Badge car parking spaces located to the north of the public realm space in front of the station entrance.

3.4.14 Facilities at Cambridge North station include ticket machines, a Costa Coffee kiosk, sheltered seating and toilets.

3.4.15 The rail routes which operate from Cambridge North Station are illustrated in Figure 3.6.

Figure 3.6: Rail Links from Cambridge North



3.4.16 Cambridge North is served by a number of key rail routes through the region, which are summarised in Table 3.4.

Table 3.4: Approximate Journey Time to Key Rail Destinations from Cambridge North

Destination	Approximate Journey Time	Trains Per Hour
Cambridge	6 minutes	5
London Kings Cross via Stevenage	60 minutes	2
London Liverpool St via Bishops Stortford	90 minutes	2
Ely via Waterbeach	15 minutes	4
Kings Lynn via Ely	50 minutes	2
Stansted Airport	45 minutes	1
Norwich via Newmarket	75 minutes	1
Bury St Edmunds	60 minutes* via Cambridge Interchange	1
Gatwick Airport via London St Pancras	120 minutes* via Cambridge Interchange	1
Birmingham via Peterborough	180 minutes* via Ely Interchange	2

Source: National Rail *Requires Interchange

3.4.17 Table 3.5 summarises the peak hours services that call at Cambridge North station. For the purposes of this report, the AM peak for train travel is considered to be 0700-0800 and the PM peak is considered to be 1700-1800. Full timetables are available using https://www.nationalrail.co.uk/.

3.4.18 All southbound services towards London from Cambridge North also call at Cambridge; a journey which takes approximately 5 minutes.

Table 3.5: Peak Hour Rail Services To/From Cambridge North station (Monday – Friday)

Peak Hour	Destination	Train Operator	Departure Times	Arrival Times	Peak Hour Frequency
AM Peak Services	Cambridge North – London King's Cross	Great Northern	0729	0833	2 services per hour
		Great Northern	0801	0903	
	London King's Cross - Cambridge North	Great Northern	0712	0807	2 services per hour
		Great Northern	0742	0839	
	Cambridge North – London Liverpool Street	Greater Anglia	0707	0825	2 services per hour
		Greater Anglia	0741	0920	
	London Liverpool Street – Cambridge North	Greater Anglia	0728	0900	2 services per hour
		Greater Anglia	0758	0934	
	Cambridge North - Ely	Greater Anglia	0704	0716	4 services per hour
		Great Northern	0717	0734	
		Greater Anglia	0729	0742	
		Great Northern	0740	0754	
	Ely – Cambridge North	Great Northern	0714	0728	4 services per hour
		Greater Anglia	0729	0741	
		Greater Anglia	0735	0747	
		Great Northern	0744	0800	
PM Peak Services	Cambridge North – London King's Cross	Great Northern	1701	1803	2 service per hour
		Great Northern	1732	1835	
	London King's Cross - Cambridge North	Great Northern	1712	1814	2 services per hour
		Great Northern	1742	1840	
	Cambridge North – London Liverpool Street	Greater Anglia	0713	1846	1 service per hour
	London Liverpool Street – Cambridge North	Greater Anglia	1737	1858	1 service per hour
	Cambridge North - Ely	Great Northern	1710	1724	4 services per hour
		Greater Anglia	1727	1740	
		Greater Anglia	1734	1747	
		Great Northern	1741	1756	
	Ely – Cambridge North	Great Northern	1717	1731	3 services per hour
		Greater Anglia	1728	1739	
		Great Northern	1745	1759	

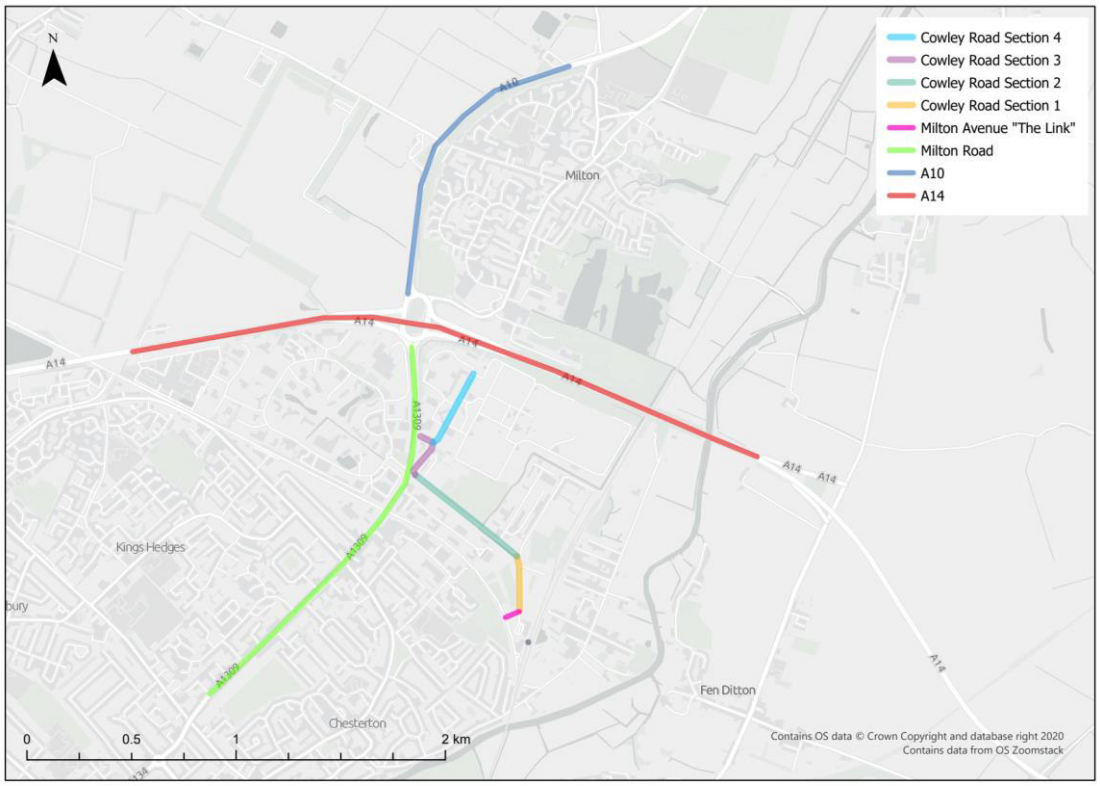
Source: National Rail (accessed March 2022)

3.4.19 Table 3.5 demonstrates that Cambridge North station is well connected into the local and regional rail network by frequent train services that serve, or can connect with, London, other key destinations in East Anglia, cross-country services to the East and West Midlands, and Stansted Airport . For the majority of routes, rail services call at Cambridge North at least every 30 minutes with key services towards Cambridge and Ely for interchange purposes available approximately every 15 minutes.

3.5 Local Highway Network

3.5.1 The existing local highway network links discussed in this section are illustrated in Figure 3.7.

Figure 3.7: Local Highways Network



Source: PJA

Cowley Road

3.5.2 As illustrated in Figure 3.7, Cowley Road has been divided into the following four sections for the purposes of describing the characteristics:

- **Section 1:** North-south link between Cambridge North station and the northern boundary of the Proposed Development;
- **Section 2**: Northwest-southeast link between the northern boundary of the Proposed Development and the exit-left-only junction with Milton Road;
- **Section 3:** North-south and east-west link between the exit-left-only junction with Milton Road and a signalised T-junction with Milton Road;
- **Section 4:** North-south link providing access to St John's Innovation Park, a number of other light industrial units and the Jane Coston Bridge for pedestrian and cycle access only.

3.5.3 As part of the existing development of Cambridge North Railway Station, Cowley Road has been extended to the south towards the Station through the proposed development site (Section 1). It

is proposed in the future that this section of the road will be known as Milton Avenue once the Proposed Development is complete.

3.5.4 Section 2 of Cowley Road is a single carriageway link that is 7.3m in width. There are currently several access points forming priority junctions from the northern side of the carriageway. These currently provide access into a light industrial park, Cambridge Golf Driving Range, Veolia Waste Management Depot and the Cambridge City Council Depot. The road is subject to a 30mph speed limit. A 2m footway is provided adjacent to the carriageway on the northern side of the road, and street lighting is present.

3.5.5 Section 3 of Cowley Road includes two junctions with Milton Road. The recently redeveloped southern junction permits left-turn movements from Cowley Road onto Milton Road only. Whilst the vehicle movement onto Milton Road is unsignalized, the junction does feature a staggered toucan crossing point for pedestrians and cyclists.

3.5.6 The northern junction, approximately 200m further north, is a signalised T-junction with all movements permitted.

3.5.7 Section 4 of Cowley Road interfaces with Section 3 at a priority T-junction. To the north of this junction, Cowley Road routes north-south and is a no-through road for vehicles, providing access into St John's Innovation Park and Cambridge Waste Water Treatment Works.

Milton Avenue "The Link"

3.5.8 "The Link" routes northeast-southwest from between the Cambridgeshire Guided Busway and Cowley Road. The link, created as part of the wider Cambridge North works, is a single carriageway subject to a 30mph speed limit.

Milton Road

3.5.9 Milton Road (A1309) is a key arterial road into Cambridge City Centre from Junction 33 of the A14. The section between the A14 Junction 33 and access to the Cambridge Science Park is a dual carriageway with a 40mph speed limit.

3.5.10 Milton Road to the south of the Cowley Road junction is scheduled for highways improvements in late 2022. Promoted by the GCP, the scheme include changes to signalised junctions, implementation of bus lanes and cycling infrastructure.

The Primary Route Network: A14 and A10

3.5.11 The A14 is accessed from Junction 33, the Milton Interchange. This is a signalised grade-separated junction with access on/off the A14 in both directions. The A14 is a Trunk Road for which National Highways is the highway authority. It provides access east to Newmarket, Bury St Edmunds, Ipswich

and Felixstowe, and west to the West Midlands and the M1 and M6 at the Catthorpe Interchange, and the A1/A1(M) at the Brampton Interchange west of Huntingdon.

3.5.12 West of Junction 33, the A14 is dual-3 lane standard with a lane gain/lane drop arrangement. East of Junction 33 the carriageway is of dual-2 lane standard.

3.5.13 The A14 Junction 33 also provides access to the A10 north, part of the Primary Route Network, which is a key corridor connecting Cambridge to Kings Lynn via Ely and providing vehicular and bus access to Milton Park & Ride.

3.6 Car Parking

3.6.1 Cambridge North Station has a surface level car park operated by NCP on behalf of Greater Anglia.

3.6.2 The car park is operated 24 hours a day with charges applicable varying across the course of the day. The charges are illustrated in Table 3.6.

3.6.3 The car park currently has 428 spaces including 24 designated Blue-Badge spaces.

Table 3.6: Cambridge North Station Car Parking Charges

Time Period / Length of Stay	Charge
Monday – Friday peak rate if parked between 0400-1000	£8.50 flat rate
Monday – Friday off-peak rate if parked between 1000-1600	£5.50 flat rate
Monday – Friday overnight rate if parked between 1600-0000	£4.00 flat rate
Weekend daily rate per hour	£4.00 per day
Monday – Friday weekly rate	£35.00 flat rate
Bank Holiday rate	£4.00 per day

Source: NCP (Accessed March 2022)

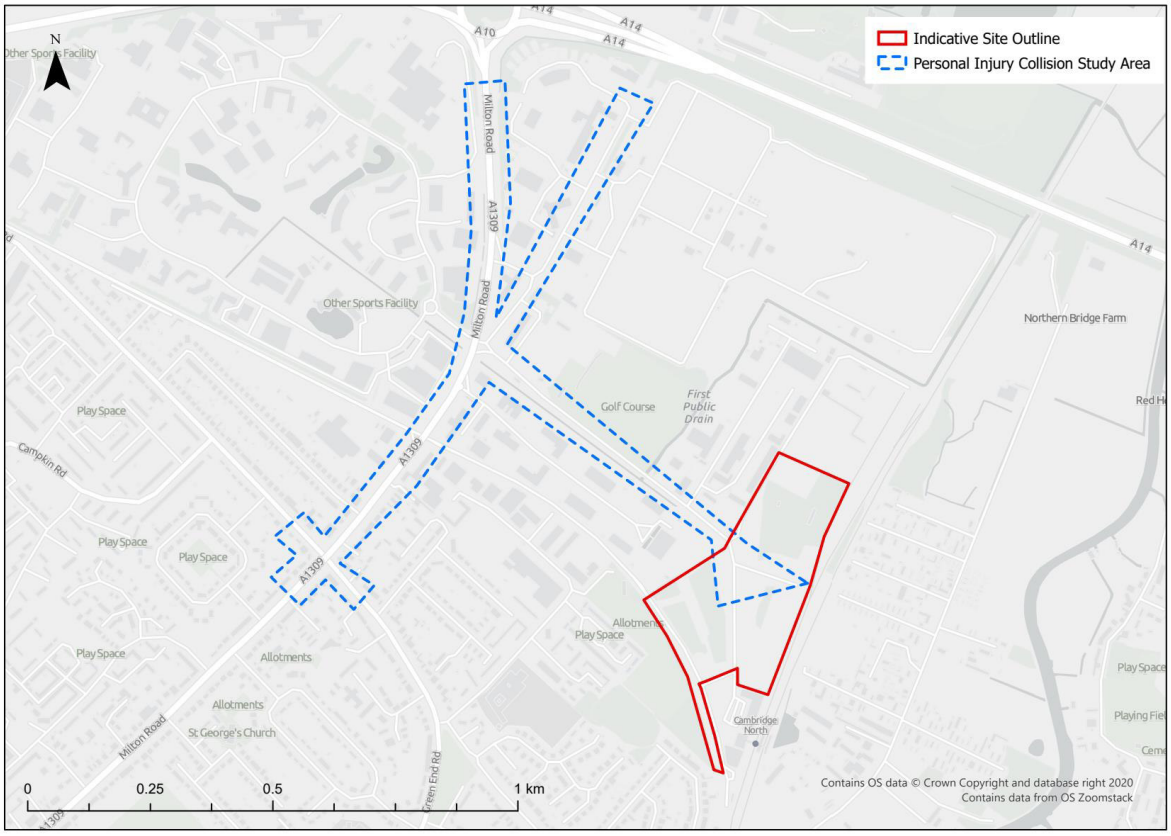
3.6.4 It should also be noted that Cowley Road and The Link are subject to parking restrictions marked by double yellow lines, in order to prevent informal parking.

3.7 Highway Safety Record

3.7.1 Personal injury collision (PIC) data has been obtained from Crashmap, in order to provide an understanding of the highway safety record in the immediate vicinity of the site.

3.7.2 The extent of the road safety study area adopted for the five-year study period is shown in Figure 3.8. The area for PIC analysis has been agreed with CCC as local highway authority at pre-application stage.

Figure 3.8: Personal Injury Collison Study Area



Source: PJA

3.7.3 The road safety study area extends along Milton Road between the junction with Green End Road/Kings Hedges Road and the section of Milton Road to the south of A14 J33. Cowley Road, including the north-south section to St Johns Innovation Park and the east-west section to Cambridge North, is also included.

3.7.4 A summary of the Crashmap road safety analysis is provided in Table 3.7.

Table 3.7: Recorded Personal Injury Collisions in the Vicinity of the Proposed Development

Location	Severity			Total
	Slight	Serious	Fatal	
Cowley Road (between Jane Coston Bridge and Milton Road)	4	0	0	4
Cowley Road (between Milton Road and Cambridge North Station)	1	0	0	1
Milton Road	11	2	0	13
Milton Road / Green End Road / Kings Hedges Road	5	1	0	6
Total	21	3	0	24

Source: Crashmap (Accessed March 2022)

3.7.5 Table 3.7 shows that a total of 24 collisions occurred within the study area during the latest five-year period, of which only 3 were classified as serious. No collisions have been recorded as fatal.

3.7.6 The low number and severity of PICs in the immediate vicinity of the site on Cowley Road/Milton Avenue and associated local junctions suggests that there is not a significant highway safety issue proximate to the site.

3.7.7 In total, 9 of the 24 collisions involved a pedal cycle casualty and 2 of the serious collisions resulted in a pedestrian casualty.

3.7.8 It should also be noted that the improvements to the Milton Road corridor, as part of the Greater Cambridge Partnership's scheme, may further improve road safety.

3.8 Summary

3.8.1 This chapter has provided an overview of the baseline transport conditions in the vicinity of the Proposed Development including active travel routes, public transport links and the highway network.

3.8.2 This chapter has demonstrated that the Proposed Development is situated within an area benefitting from a network of high-quality walking and cycle routes, providing both local and connectivity, and links into the wider Cambridge sub-region.

3.8.3 In terms of public transport access, the Proposed Development is located adjacent to to a bus/rail interchange. Cambridge North Station provides fast and frequent local, regional and national rail links into Cambridge and more widely within East Anglia, and towards London including Stansted Airport, with a wider range of further destinations available from Cambridge Station or Ely as interchanges.

3.8.4 The Proposed Development is adjacent to the Cambridge north bus interchange from where the northern section of Cambridgeshire Guided Busway provides a direct, bus-only, link to several settlements to the north of Cambridge. The interchange also provides Cambridge-bound bus routes including services towards Cambridge Biomedical Campus and the city centre. Milton Park & Ride buses can be accessed via Milton Road.

3.8.5 An assessment of collision data for the local highway network over the latest 5-year period has not indicated any clusters of collisions. The analysis has concluded that there is not a significant existing highway safety issue in the vicinity of the site.

4 Development Proposals

4.1 Development Mix and Layout

4.1.1 The overall development site includes five new commercial buildings totalling circa 65,000m^2 GIA, a mobility hub and 425 residential dwellings. An extract of the development masterplan indicating the commercial building names for reference is provided in Figure 4.1.

Figure 4.1: Masterplan Extract

4.1.2 A number of new streets are proposed within the masterplan and are referred to within this TA. Figure 4.2 provides an extract of the masterplan marked up to identify the working street titles for ease of reference.

4.1.3 A copy of the full masterplan is included at Appendix A.

Figure 4.2: Masterplan Street Names

4.1.4 The new commercial buildings and their respective above ground GIAs are as follows:

- One Milton Avenue – 13,952m^2 Office space
- One Station Row – 10,720m^2 Commercial laboratory space
- Three Station Row – 11,345m^2 Commercial laboratory space
- One Chesterton Square – 18,814m^2 Commercial laboratory space
- Two Milton Avenue – 10,838m^2 Commercial laboratory space

4.1.5 In addition to the main office and lab land uses, a number of small ancillary uses are proposed at ground floor level in each of the buildings throughout the site. These uses are intended to support the overall vibrancy, sustainability and placemaking of the scheme. Ground floor uses are subject to confirmation/market conditions but would be a mix of retail/workspace and flexible uses within the E use class to accommodate for example bars, cafes, restaurants, pharmacy and bike shops.

4.1.6 The residential dwellings comprise a mix of studio, 1, 2 and 3-bed accommodation. Of the total 425 units, 270 units would be build-to-rent and the remaining 155 a mix of private, affordable and shared ownership dwellings. Overall, 40% of the private units would be affordable and 20% of the build0to-rent units would be affordable, in line with policy requirements.

4.2 Vehicular Access Arrangements

4.2.1 The site would be accessed from the eastern extent of Cowley Road, via the road which has already been constructed and serves Cambridge North station, the Novotel hotel, and office building at One Cambridge Square currently under construction. Within the site, the road is known as Milton Avenue.

4.2.2 The carriageway of Milton Avenue would remain unchanged in connection with the development proposals. However, the footway/cycleway spaces on the western side are proposed to be switched from the current situation so that the cycleway is located closest to the carriageway to tie into the masterplan proposals. Additionally, space within the verges would be provided to accommodate disabled parking and loading bays.

Proposed Cowley Road/Milton Avenue Junction

4.2.3 In the north of the site, at the point at which Cowley Road turns southwards and continues as Milton Avenue a new junction arrangement is proposed, referred to as Cowley Circus. An extract of the masterplan showing the arrangement is provided at Figure 4.3 and the junction general arrangement is included at Appendix B. Currently, two priority junctions adjoin the northern side of Milton Avenue in this location. One leads north providing access to the adjacent concrete batching plan and a service road leading to the aggregate facility and rail head, and the second, further to the south, provides access to the railway station car park.

Figure 4.3: Masterplan Extract of Proposed Cowley Road/Milton Avenue Junction Arrangement

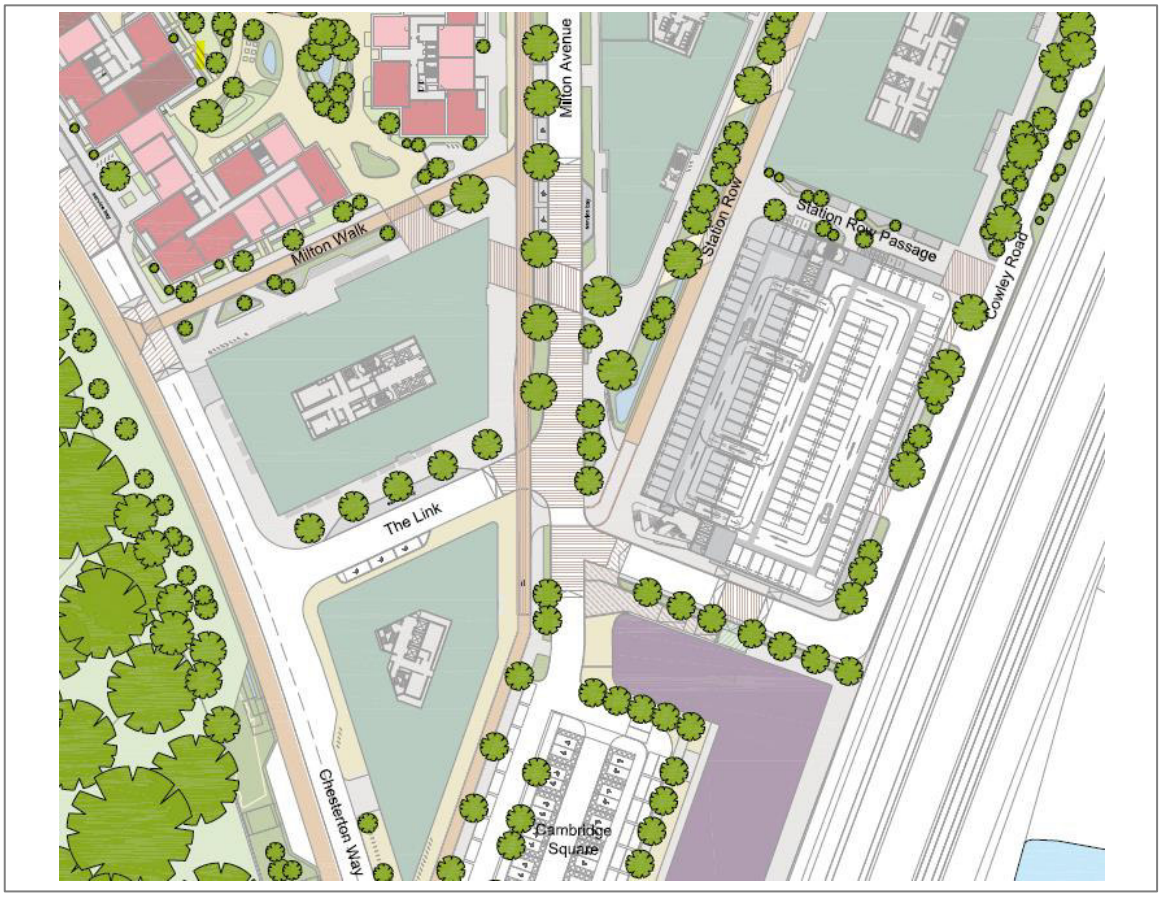
4.2.4 The proposed arrangement comprises a crossroad design. The two priority junctions currently to the north of Milton Avenue would be rationalised, with a single priority junction to the north. The minor arm would provide access to the basement car parking within Three Station Row and One Chesterton Square. This arm would also provide access to the retained Network Rail compound on the eastern boundary of the site. This requirement to retain operational access to the compound was a key constraint in informing the junction design as access for large abnormal loads is required to be maintained. The existing service road would form a priority junction on the northern side of the new estate road identified as Cowley Road on the masterplan extract in Figure 4.3.

4.2.5 A one-way eastbound street along the northern boundary of the residential parcel, known as Bramblefields Way, will form the western arm of the proposed junction. The footway and cycleway along Milton Avenue are proposed to be continuous across Bramblefields Way at the junction to form a blended or Copenhagen crossing giving pedestrians and cyclists priority over vehicles.

Proposed Milton Avenue/The Link/Cowley Road East Junction

4.2.6 Further to the south on Milton Avenue, a new junction arrangement is proposed at the junction with The Link as shown in the masterplan extract in Figure 4.4. A plan showing the junction general arrangement is included at Appendix C.

Figure 4.4: Masterplan Extract of Proposed Milton Avenue/The Link Junction Arrangement



4.2.7

4.2.8 The junction of Milton Avenue and The Link already exists however it is proposed to be amended to incorporate an extended raised table to slow vehicle speeds and also to emphasise pedestrian and cycle priority across the minor arm. The junction arrangement would incorporate a new arm to the east, north of the hotel, providing access to the mobility hub, and for servicing vehicles to access the rear of One and Three Station Row. This new road is referred to on the masterplan as Cowley Road East. The junction arrangement also accommodates a crossing of the Station Row cycle route over Milton Avenue to tie in with the route along the western side which provides connections north and south. The junction design would incorporate give-way markings to emphasise the pedestrian and cyclist priority crossing the minor arms and also Milton Avenue as shown at Appendix C.

4.3 Pedestrian and Cyclist Access

Cowley Road

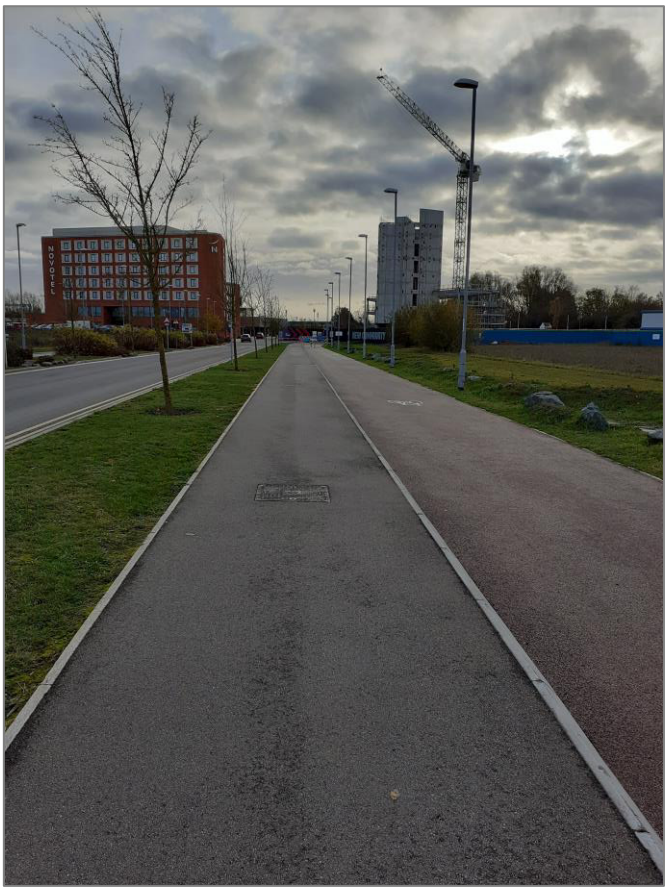
4.3.1 Pedestrian and cycle access to the site is gained from a number of locations. A segregated footway/cycleway runs parallel to the south of Cowley Road, accessing the site in the north west. The route provides a high-quality connection between Cambridge North and Milton Road and

beyond to Cambridge Science Park. This route is separated from the carriageway of Cowley Road by First Public Drain which routes through a bank of vegetation along the length of Cowley Road. A footway is also provided along the northern side of Cowley Road between Milton Road and the existing industrial estate to the north west of the site.

4.3.2 The S106 agreement for the One Cambridge Square office building currently under construction (S/4478/17/FL) included a contribution towards CCC to footway links to the site including two bridges linking the Cowley Road shared footway/cycleway with the carriageway. It is understood from discussions with CCC that work is progressing on determining the locations for the proposed crossing points.

4.3.3 Within the site, a segregated footway/cycleway is currently provided to the west of Milton Avenue connecting with the route along Cowley Road to the north, and Cambridge Square to the south as shown in Figure 4.5.

Figure 4.5: View Along Milton Avenue Looking South Showing Existing Footway/Cycleway Provision



4.3.4 The footway and cycleway are proposed to be switched from the current situation so that the cycleway is located closest to the carriageway to tie into the masterplan proposals. The cycleway is proposed to be widened from its current width to 3.5m. To the east of Milton Avenue, a footway is

currently provided from Cambridge Square in the south to the service road junction with Cowley Road in the north western corner of the site. This route is proposed to be retained within the masterplan.

Cambridgeshire Guided Busway

4.3.5 A segregated footway/cycleway is provided alongside the Cambridgeshire Guided Busway which enters the site in the north western corner. This route provides a further, high-standard connection towards Milton Road to the west of the site. The route also provides access to Discovery Way and Nuffield Close into the Nuffield Road Industrial Estate to the west. The footway/cycleway continues adjacent to Chesterton Way along the western boundary of the site as shown in Figure 4.6, providing a connection to Moss Bank in the south.

Figure 4.6: View Along Chesterton Way Looking North Showing Existing Shared Footway/Cycleway

4.3.6 The masterplan proposes to incorporate traffic calming raised tables and surface treatments on Chesterton Way within the site to reinforce the residential character of the street. Alongside this, two informal crossings would be provided, the southern of which is proposed to align with the cycle route connection between the residential parcel and One Milton Avenue along Milton Walk.

Moss Bank

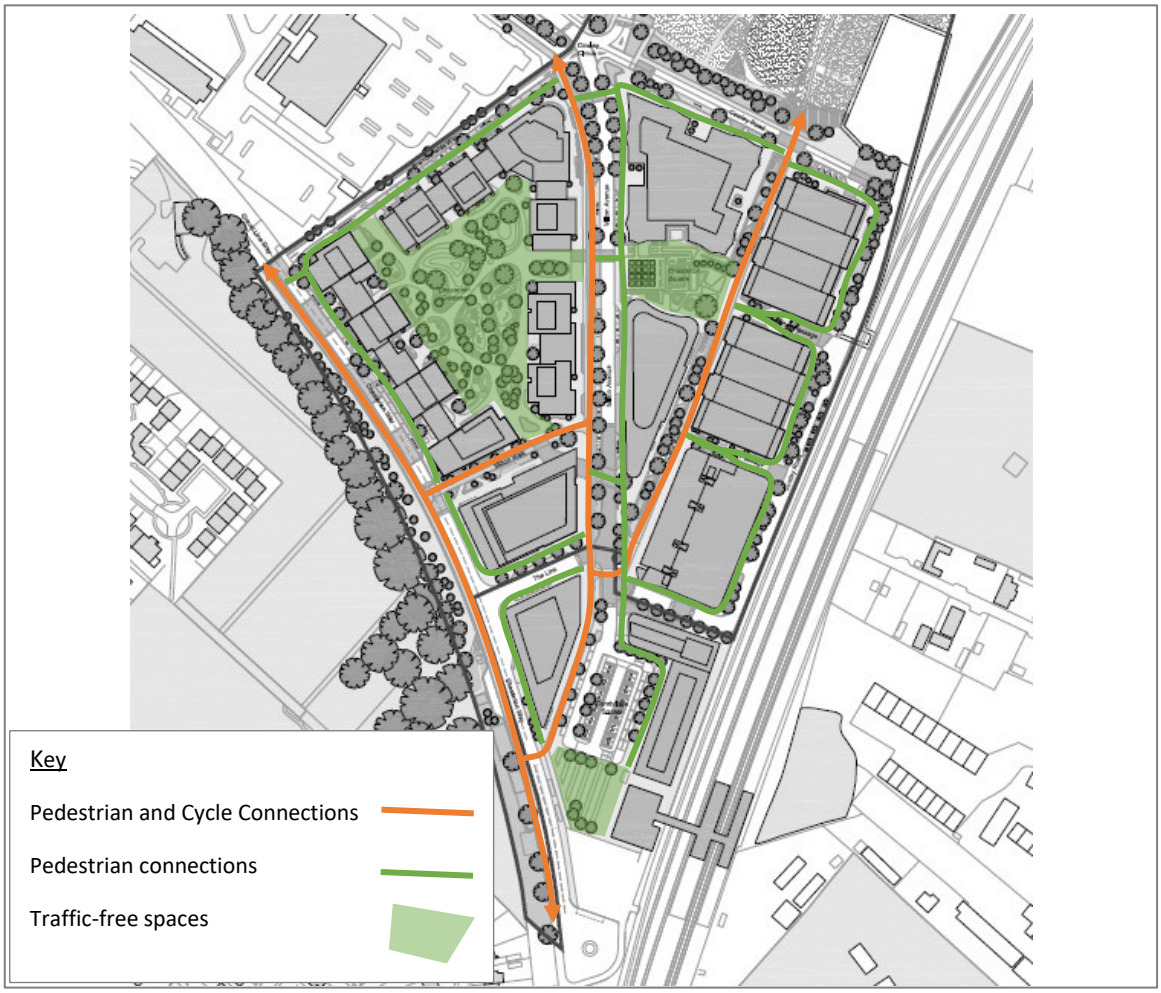
4.3.7 An existing pedestrian/cycle only connection is provided to Moss Bank to the south of Cambridge North Station. This route connects into the segregated route running alongside the western estate road within the site.

Figure 4.7: View Along Shared Footway/Cycleway Connection to Moss Bank Looking North and South

Masterplan Connections

4.3.8 In addition to the enhancements to the existing pedestrian and cycle connections described above, further routes are also incorporated into the masterplan as illustrated in Figure 4.8.

Figure 4.8: Masterplan Pedestrian and Cycle Connections and Spaces



4.3.9 Station Row forms a significant new route running on a north to south alignment in the eastern part of the site. Station Row would accommodate a segregated cycle route parallel to the pedestrian route along a traffic-free spine which would connect with the Milton Avenue cycle route at its southern extent and provide a connection to future phases of development to the north. The proposed cycle route would be 3.5m wide and provide a high standard of connection to the proposed buildings of One and Three Station Row and Two Milton Avenue.

4.3.10 A series of traffic-free streets and spaces would also facilitate pedestrian movement east to west within the masterplan such as the passages proposed between One and Three Station Row, Chesterton Square, between Milton Avenue and Station Row, and Milton Walk between the residential parcel and One Milton Avenue.

Future Connections

4.3.11 The masterplan has been designed to facilitate future pedestrian and cyclist permeability of the site by providing a number of opportunities to connect into future phases of the NECAAP development

to the north of the site. The cycle route within the site along Station Row is intended to provide a connection to the north of the site, offering the potential to form the alignment of the Waterbeach Greenway route and providing a direct, traffic free connection through the site to link up with the Chisholm Trail to the south.

4.4 Mobility Hub

4.4.1 A mobility hub is proposed to the north of the Novotel building. The mobility hub would accommodate 725 car parking spaces across 5 levels (including ground floor).

4.4.2 622 of these spaces would be provided for rail users, re-providing the existing 428 surface car parking spaces, and accommodating a further 194 spaces for future growth. The remaining 103 spaces of the parking capacity would be provided at basement level of the mobility hub. 20 of these spaces would re-provide the existing provision for the hotel, with the remaining 83 spaces for the use of the commercial development.

4.4.3 The mobility hub also provides three flexible 'E' use class units at ground floor level on the western frontage of the building providing the opportunity for the co-location of mobility services and facilities for the benefit of future residents, employees and visitors to Cambridge North.

4.4.4 In developing the proposals, the developer has entered discussions with providers of hire bikes and e-scooters with a view to accommodating provision for these forms of shared mobility within the site.

Car Club

4.4.5 Within the mobility hub, four Car Club parking bays are proposed initially. Early discussions have taken place with a prospective operator and it is envisaged that car club vehicles would be introduced on a phased basis as the development becomes occupied. The operating model would enable the number of cars to be increased according to demand.

Rail-related Car Parking

4.4.6 The site currently accommodates 428 surface car parking spaces for Cambridge North Station. This provision will be maintained throughout the construction period of the proposed development through providing temporary surface level parking on the 'triangle site' to the east of Milton Avenue and to the north of Cowley Road.

4.4.7 Once complete, the mobility hub will accommodate the existing quantum of rail-related car parking, plus an additional 194 car parking spaces for rail use as requested by the rail industry. The development of the site will prevent the provision of further rail-related car parking in the future, and therefore it will be capped at 622 spaces.

4.5 Development Car Parking

Parking Budget

4.5.1 The NECAAP TEB report and subsequent Transport Position Statement (May 2020) propose an overall car parking budget for the North East Cambridge area. This budget has been apportioned among the development sites, with the quantum of car parking for the proposed development site identified as 873 spaces.

4.5.2 It has been confirmed with CCC that the Novotel hotel and One Cambridge Square office building sit outside of the Cambridge North trip and parking budgets as these were consented schemes at the time of the preparation of the NECAAP TEB.

Commercial Development

4.5.3 Car parking for the commercial development is proposed to be accommodated across the site with the majority accommodated at basement level, with a portion of the disabled car parking provision provided at surface level. Table 4.1 provides a breakdown of the car parking spaces within each of the basements.

Table 4.1: Commercial Development Basement Car Parking Provision

Location	Number of Spaces
One Milton Avenue basement	60
One Station Row basement	60
Three Station Row basement	60
One Chesterton Square/Two Milton Avenue basement	141
Mobility Hub basement	83
Surface level disabled car parking	13
Total:	**417**

4.5.4 The car parking within each building's basement would relate to the building in question. The One Chesterton Square and Two Milton Avenue car parking would be split between the two buildings. The car parking within the mobility hub basement does not relate to a specific building but is intended as flexible provision that could be leased by occupiers on an individual basis as necessary.

4.5.5 Access to the car parking would be provided as follows:

- One Milton Avenue – the basement would be accessed by a pair of car lifts served from the western estate road. Space would be provided in front of the lifts to enable a vehicle to wait off the carriageway if necessary.

- One and Three Station Row – access to the combined basement would be gained via a ramp from Cowley Road to the north. The ramp would be contained within the building and access would be controlled.
- One Chesterton Square and Two Milton Avenue – access to the combined basement would be gained via a ramp from Cowley Road to the north. The ramp would be contained within the building and access would be controlled.
- Mobility Hub – access to the Mobility Hub would be gained from Cowley Road on the eastern boundary of the site. The commercial development parking would be located in the basement, with access managed within the mobility hub.

Disabled Parking Provision

4.5.6 Disabled car parking provision is proposed at a rate of at least 5% of the proposed car parking allocation for each building, consistent with recommendations in *Inclusive Mobility* (Dec 2021), and would be provided through a combination of surface level provision and within basements to ensure that bays are accessible within 50m of building entrances and equality of provision. Table 4.2 provides a summary of the disabled parking requirement as 5% of the allocated spaces alongside a description of the proposed provision and its location.

Table 4.2: Summary of Disabled Car Parking Provision

Location	Required Number of Spaces	Proposed Number of Spaces	Location of Provision
One Milton Avenue	3	4	Three on-street spaces provided on Milton Avenue to the east of the building, one space provided within the basement car parking
One Station Row	3	3	Accommodated within the basement car parking
Three Station Row	3	5	Four on-street spaces provided on Cowley Road to the north of the building, one space provided within the basement car parking
One Chesterton Square/ Two Milton Avenue	7	9	Two groups of three on-street spaces provided on Milton Avenue to the west of the buildings, three bays provided within the basement car parking
Total:	**16**	**21**	

4.5.7 Disabled parking bays have been designed in accordance with the requirements of Inclusive Mobility.

Car Share bays

4.5.8 Due to the ambitious levels of car parking provision proposed, the designation of car share bays within the car parking areas assigned to the commercial building is not proposed from the outset

however, individual occupiers may choose to implement such a system themselves as a Travel Plan measure.

Electric Vehicle Charging

4.5.9 Within the commercial car parking areas, it is proposed that EV charging points be installed between parking bays to enable each bay access to an EV charger. An electrical management system would be in place to regulate and share the load across each connected vehicle within each parking area. This approach reflects that approved within the One Cambridge Square office building to the south of the Proposed Development (application ref: S/4824/18/COND30).

Comparison with Parking Standards

4.5.10 The car parking standards applicable to the proposed commercial development are summarised in Table 4.3.

Table 4.3: Local Car Parking Standards – B1 Use Class

Source	Standard	Notes
South Cambridgeshire Adopted Local Plan 2018, Figure 11	1 space per 30m^2 gross floor area	'Indicative' parking provision
Cambridge Local Plan 2018, Appendix L	1 space per 40m^2 gross floor area	Standard outside Controlled Parking Zone

4.5.11 Considered overall, the Proposed Development car parking provision equates to a rate of 1 space per 157m^2 floor space (based upon above ground GIA). This level of provision is akin to that currently provided in the CB1 area of Cambridge and, whilst highly challenging, demonstrates the proactive and forward-thinking approach of the developer. This ambitious low level of car parking provision also follows the spirit of the emerging NECAAP which suggests that new development to take a restrictive approach to car parking (Policy 22).

Residential Development

4.5.12 The residential development within the site is proposed to operate effectively as car-free, with the exception of a quantum of parallel disabled and short stay car parking spaces provided around the perimeter of the residential part of the site.

4.5.13 The level of car parking provision has been informed by the Building Regulation requirements for Access to and Use of Buildings (Part M). From occupation, six disabled car parking spaces will be allocated, equivalent to 5% of the affordable dwellings and the build to rent dwellings being offered with discounted market rent. Capacity for a further 16 spaces has been provided (bringing the total number of bays to 22) to allow for conversion at a future date in accordance with Future Accessible

Housing Provision M4(2) Standard. The additional 16 spaces reflects provision equivalent to 5% of the total number of dwellings, less the provision at the outset.

Electric Vehicle Charging

4.5.14 It is proposed that all of the parking bays around the residential part of the site would be enabled for electric vehicle charging.

4.6 Car Parking Management

4.6.1 A series of measures are proposed for the car parking provision within the site in order to manage its use and to ensure that it operates effectively, serving to manage vehicle trips to and from Cambridge North.

4.6.2 The masterplanning of the site has sought to ensure that the streets and public realm are designed in such a way as to prevent opportunities for indiscriminate car parking to take place across the site.

4.6.3 Different management measures will be required for the residential and commercial parts of Cambridge North, summarised in Table 4.4.

Table 4.4: Summary of Proposed Car Parking Management Measures

Commercial Development	Residential Development
Spaces for commercial users would be allocated within the designated car parking within the building basement or mobility hub.	Initial allocation of parking provision would only be made available for disabled residents.
Commercial occupiers would choose how access to its car parking bays would be allocated. From experience elsewhere in Cambridge, internal booking systems are typically adopted.	Use of parking bays would be charged for, with residents leasing bays as necessary.
Access to basement car parks would be controlled by building security (barrier/gated access) to prevent unauthorised use.	The remainder of spaces would be reserved for future use by disabled residents should the demand arise. In the interim, use of the spaces would be as pay and display bays for visitor use.
	Use of spaces would be monitored by the developer to ensure no inappropriate use.

4.6.4 It is not anticipated that the development will lead to significant increases in off-site parking pressures. However, alongside the on-site management measures, it is envisaged that monitoring of levels of on-street car parking within the local area would be conditioned to any consent, with a contribution made within the Section 106 agreement for this purpose, to reassure the local planning and highway authorities.

4.6.5 It is envisaged that a detailed car parking management plan will form a separate document that could be the subject of a suitably worded planning condition.

4.7 Cycle Parking

4.7.1 Policy TI/3 of the South Cambridgeshire Local Plan details the cycle parking requirements for new development in the district, referring to Figure 11 of the Local Plan for the standards. Given the location of Cambridge North close to the boundary with Cambridge City Council, reference has also been made to the City Council's standards contained at Appendix L of the Local Plan 2018, in addition to National guidance contained within LTN 1/20.

4.7.2 In respect of cycle parking, Policy 18 of the emerging NECAAP includes a requirement to provide cycle parking in excess of the minimum standards included at Appendix 2 of that document. For commercial development, these standards reflect those of the City Council and for residential development, reference is made to the Council's Cycle Parking Guide for New Residential Developments.

4.7.3 The cycle parking provision for the commercial and residential elements of the development are summarised in the following sections, referring to the parking standards outlined above.

Commercial Development

4.7.4 The minimum cycle parking standards set out in the various adopted and emerging local policy documents, and National guidance are summarised in Table 4.5.

Table 4.5: Commercial Development Cycle Parking Requirements

Document Reference	Minimum Cycle Parking Standards
South Cambridgeshire District Council Local Plan 2018 Figure 11	1 space per 30sqm GFA
Cambridge City Council Local Plan 2018 Appendix L	Offices: 2 spaces for every 5 members of staff of 1/30sqm GFA (whichever is the greater). Some Visitor parking on merit
Emerging NECAAP Appendix 2	Offices: 2 spaces for every 5 members of staff of 1/30sqm GFA (whichever is the greater). Some Visitor parking on merit
LTN 1/20 Table 11-1	Long Stay: 1 space per 200sqm, Short Stay: 1 space per 1000sqm

4.7.5 Further guidance on the form of cycle parking provision is included within the supporting text accompanying the various standards. This includes the following requirements:

- Cycle parking should be covered and in a convenient secure location
- Visitor parking should be located as near as possible to the main entrance of buildings
- A minimum of 20% of the cycle parking spaces should be Sheffield Stands

- Parking should avoid being located in the basement unless it can be shown to be convenient and easy to use, with ramps of a gradient of no more than 1 in 4 on both sides of any stepped access
- Any basement cycle parking must also provide alternative parking on the ground floor for less able users and those with non-standard cycles
- At least 5-10% of cycle parking provision must be designed to accommodate non-standard cycles

4.7.6 The layout of cycle parking spaces within the commercial elements of the development have been informed by guidance contained within Cycle Parking Guide for New Residential Developments and LTN 1/20 for non-standard cycles.

4.7.7 Table 4.6 summarises the cycle parking provision across the commercial development for each of the proposed buildings against the requirements of the standards. The development has adopted the 1 space per 30m^2 standard.

Table 4.6: Summary of Commercial Development Cycle Parking Provision

Building	Total Spaces	Sheffield Stands	Non-Standard Cycles	Ground Floor Provision
	1/30sqm	20%	10%	5%
One Milton Avenue	465	93	46	23
One Station Row	357	71	36	18
Three Station Row	378	76	38	19
One Chesterton Square	619	124	62	31
Two Milton Avenue	372	74	37	19

4.7.8 The provision for each of the buildings as detailed in Table 4.6 would be provided through a combination of ground floor and basement parking within each of the respective buildings.

4.7.9 The commercial buildings would accommodate showers, changing facilities and locker provision for the benefit of, and to facilitate, future employees choosing active modes of travel to work.

4.7.10 In addition to the provision within the buildings themselves, surface level cycle parking is proposed across the site, located close to building entrances. This parking would take the form of Sheffield stands, also incorporating some stands spaced at 2m to accommodate non-standard cycles. The local cycle parking standards suggest provision of visitor parking on merit however, LTN 1/20 provides suggested levels of visitor provision for various land uses at Table 11-1. In general, across all land uses LTN 1/20 suggests 5% of total capacity be provided for visitors and for office/finance (A2/B1) uses specifically, it suggests a rate of one space per 1,000m^2. Across the site, 151 stands are proposed, accommodating 302 spaces. This exceeds the level of provision suggested by both the standards within LTN 1/20.

Residential Development

4.7.11 The minimum cycle parking standards set out in the various adopted and emerging local policy documents, and National guidance are summarised in Table 4.7.

Table 4.7: Residential Development Cycle Parking Requirements

Document Reference	Minimum Cycle Parking Standards
South Cambridgeshire District Council Local Plan Figure 11	1 space per bedroom
Cambridge City Council Local Plan 2018 Appendix L	1 space per bedroom up to 3-bedroom dwellings Then 3 spaces for 4-bedroom dwellings, 4 spaces for 5-bedroom dwellings etc. Visitor cycle parking next to main entrances to blocks of flats.
Emerging NECAAP Appendix 2	1 space per bedroom up to 3-bedroom dwellings Then 3 spaces for 4-bedroom dwellings, 4 spaces for 5-bedroom dwellings etc. Visitor cycle parking next to main entrances to blocks of flats.
LTN 1/20 Table 11-1	1 space per bedroom

4.7.12 Further guidance on the form of cycle parking provision is included within the supporting text accompanying the various standards. This includes the following:

- Cycle parking should accord with Cycle Parking Guide for New Residential Developments
- Cycle parking should be within a purpose built, covered lockable enclosure
- Cycle parking should be at least as convenient as the car parking provided

4.7.13 The residential development would provide cycle parking at a rate of one space per bedroom. The spaces would be provided within secure dedicated cycle stores located at ground floor across the residential part of the site. The cycle stores would be directly accessed from the street and the central garden.

4.8 Servicing Access

Commercial Development

One Milton Avenue

4.8.1 A servicing bay is proposed on the southern boundary of the site on 'The Link' to accommodate refuse and delivery vehicles. The bay has been designed to accommodate an 11m refuse vehicle and 12m rigid delivery vehicle. Vehicle swept path has been undertaken and is included at Appendix D.

Station Row

4.8.2 The lab buildings fronting Station Approach would share a servicing space between the buildings, accessed from Cowley Road East on the eastern boundary of the site. The space has been designed

to accommodate a 12m rigid delivery vehicle which is the largest vehicle required to service the lab buildings. Vehicle swept path has been undertaken and is included at Appendix D.

One Chesterton Square

4.8.3 The One Chesterton Square servicing is proposed to be undertaken from Cowley Road to the north of the building. A servicing bay is proposed on the southern side of the road, adjacent to the building. Turning space for vehicles is provided at the eastern end of Cowley Road, to the north of Three Station Row. Vehicle swept path analysis has been undertaken of a 12m rigid delivery vehicle and is included at Appendix D.

Two Milton Avenue

4.8.4 A delivery bay is proposed on Milton Avenue to the west of Two Milton Avenue for the purposes of accommodating vehicles serving the building.

Residential Development

4.8.5 Refuse collection for the residential development would be undertaken by private collection from the kerbside. Bin store locations have been designed to limit bin carry distances. Vehicle swept path analysis of a refuse vehicle circulating the residential part of the site has been undertaken. Drawings at Appendix D demonstrate the swept path of a refuse vehicle turning into and out of Bramblefields Way along the northern boundary of the residential part of the site.

4.8.6 Five bays have been provided around the perimeter of the residential development to accommodate parking for delivery vehicles.

4.9 Summary

4.9.1 The development proposals comprise commercial floorspace of circa 65,700m^2 above ground GIA which would be a mix of office and commercial laboratory space. The site also accommodates 425 residential dwellings, of which 61 would be provided as affordable or shared ownership.

4.9.2 Vehicular access to the site would be gained from Cowley Road. Amendments are proposed to Milton Avenue, the road which serves Cambridge North station, to accommodate disabled parking provision, servicing bays and to re-align the cycleway to connect into the masterplan.

4.9.3 The site benefits from numerous points of access into existing pedestrian and cycle networks, and the masterplan proposals facilitate future connections into the wider NECAAP areas to the north of the site, including the potential to accommodate the route of the Waterbeach Greenway.

4.9.4 Car parking provision is accommodated within the mobility hub and basement spaces under the commercial buildings with only limited provision at surface level for disabled parking and resident

spaces. The residential element would be largely car-free, with 22 spaces available for residents of the 425 dwellings to lease on an annual basis. The overall level of car parking proposed (417 spaces for the commercial + 22 for the residential) sits well within the parking budget assigned to Cambridge North (873 spaces) in the draft NECAAP. The car parking provision on site would be actively managed by the developer to prevent unauthorised use.

4.9.5 The developer has been in discussions with car club providers with a view to accommodating car club provision within the mobility hub. Discussions are also progressing with providers of hire bikes and e-scooters with a view to accommodating provision for these forms of shared mobility within the site.

4.9.6 Cycle parking provision is accommodated within the commercial buildings for the benefit of future employees. The parking accommodates provision for non-standard cycles, including spaces at ground floor level and within the basements. Showers, changing spaces and lockers would be provided within the commercial buildings. Further visitor cycle parking is proposed throughout the site, close to building entrances.

4.9.7 Cycle parking for the residential element would be provided at a rate of 1 space per bedroom and accommodated within secure storage areas within each building. As with the commercial development, visitor cycle parking is proposed close to the residential building entrances.

4.9.8 Servicing provision has been accommodated within the design of the masterplan, with dedicated service bays and turning provision adjacent to the commercial buildings. Bays for delivery vehicles are also proposed around the perimeter of the residential development.

5 Travel Demand

5.1 Overview

5.1.1 This Chapter quantifies the forecast travel demand arising as a result of the development proposals. The methodology detailed has been subject to substantial pre-application discussion with CCC as local highway authority.

5.2 Trip Budget

5.2.1 As discussed at Section 2.5, the TEB that accompanies the emerging NECAAP introduces the concept of a vehicular trip budget for the area. The overall trip budget proposed in the TEB has been allocated across the various development sites through work undertaken by the North East Cambridge Transport Task and Finish Group – a group of transport consultants working on behalf of the developers along with representatives from the local planning and highway authorities and National Highways.

5.2.2 The Cambridge North allocation of the vehicle trip budget for the AM and PM peak hours is summarised in Table 5.1. This represents a proportional split of the overall draft NECAAP vehicle trip budget, based upon an assumed development quantum in 2020.

Table 5.1: Cambridge North, Brookgate Peak Hour Vehicle Trip Budget

	Arrivals	Departures	Two-way
AM Peak (08:00-09:00)	214	142	356
PM Peak (17:00-18:00)	92	182	274

5.2.3 The principle of sharing residential and employment trip budgets across the site as a whole has been established by the North East Cambridge Transport Task and Finish Group, and was confirmed with CCC at the highway pre-app meeting on 28th October.

5.3 Assessment Methodology

5.3.1 There is a strong relationship between vehicle trip generation and car parking provision associated with the proposed land uses. The development proposals comprise ambitiously low levels of car parking provision for the commercial and residential uses. Car parking provision has therefore formed the basis of the assessment of the vehicle trip generation, with the numbers of arrivals and departures being informed by previously published data sources on parking accumulation.

Commercial

5.3.2 For consistency with the work undertaken to date which established the overall NECAAP trip budget, this assessment has adopted the trip profiles presented within Table 26 of the NECAAP

Transport Evidence Base report prepared by Mott MacDonald (September 2019) for the purposes of assessing the development impact for the proposed office use.

5.3.3 The nature of lab operations differs from that of conventional office space and therefore, for the proposed lab space, the methodology adopts the observed trip profile surveyed at the University of Cambridge Department for Material Sciences and Metallurgy which has informed other lab planning applications (16/1811/FUL and 17/1799/FUL). CCC confirmed this approach as being acceptable in its pre-app advice dated 14th December 2021. In the subsequent pre-app meeting on 24th January 2022 CCC questioned whether there may be a difference in the trip making profile of academic and commercial labs. It was subsequently proposed by PJA at the meeting with CCC on 28th March 2022 to adopt the surveyed trip profile of the Peterhouse Technology Park for the purposes of a sensitivity test.

5.3.4 For vehicle trips, the assessment methodology has adopted the car parking accumulation profile for each land use and established the relationship between the accumulation and the level of arrivals and departures throughout the day. The accumulation profile has been applied to the proposed car parking provision allocated to each use (office/lab). As the data is provided for a 12-hour period, 07:00-19:00, an allowance has been made for 2.5% of spaces to be occupied prior to 07:00. This level was determined from a review of the TRICS sites included within the NECAAP TEB site selection. Consistent with the NECAAP TEB work, it has also been assumed that the peak car park occupancy would equate to 85% of spaces being utilised. A copy of the spreadsheet model including the calculations setting out the base data and trips arrivals, departures and parking accumulation is included at Appendix E.

5.3.5 A number of ancillary land uses are proposed throughout the site, intended to support the overall vibrancy and sustainability of the scheme. Ground floor uses will likely include a mix of café, restaurant, gym etc. uses. These uses are proposed to support the main employment uses on site and would not be trip generators in their own right (except for a negligible level of delivery and servicing movements). These uses have therefore been excluded from the overall trip generation assessment of the proposed development.

Residential

5.3.6 The methodology adopted for the residential development is similar to that used for the employment elements and uses the TRICS data from the NECAAP TEB assessment to establish the car parking accumulation profile, and the related trip arrivals and departures.

5.3.7 Adopting the NECAAP TEB TRICS-based data is considered robust as the TRICS site selection comprises typical suburban residential development without the same kind of restrictions on car parking provision as is proposed at Cambridge North. Furthermore, the calculation methodology has assumed a starting point of 100% occupancy/utilisation of the car parking spaces at the start of

the day. Given that a proportion of the spaces are proposed for disabled users, and that all bays would be leased, it is anticipated that actual levels of use would likely be at a lower level.

5.3.8 The residential trip profile data and calculations setting out the arrivals, departures and parking accumulation is included at Appendix E.

5.4 Rail-Related Trips

5.4.1 The vehicle trips associated with Cambridge North station, and the associated car parking provision were discussed at the highway pre-app meeting on 28th October 2021. It was agreed that rail-related trips sit outside of the vehicle trip budget defined for the Brookgate site at Cambridge North, this view was echoed in the CCC pre-ap response dated 10th February 2022.

5.5 Multi-modal Trip Generation

5.5.1 The trip budget addresses the *vehicle* trips generated by the proposed development. An assessment of the multi-modal impact of the proposals has been undertaken in order to consider the number of trips to and from the site by other modes of transport.

5.5.2 The accessibility characteristics and levels of car parking provision at the proposed development draw parallels to the characteristics of CB1 adjacent to Cambridge station. It was agreed with CCC at pre-application stage that CB1 provides a suitable comparator location from which information on mode share could be drawn.

Commercial

5.5.3 Smart Journeys[4] survey data from October 2019 has been obtained for commercial occupiers in CB1 to establish a mode share for the proposed commercial uses. The data was captured over a one-week period, prior to the Covid pandemic. The five-day average mode share is summarised in Table 5.2.

[4] Smart Journeys is a not-for-profit commercial enterprise hosted by Cambridgeshire County Council that advises and supports employers, residential developers and schools in Cambridgeshire to implement and promote sustainable active travel. As part of its services, Smart Journeys undertakes Travel Plan monitoring surveys.

Table 5.2: Smart Journeys October 2019 Data for CB1

Mode of Travel	5-day Average Mode Share
Car Driver	11.3%
Car Passenger	0.3%
Taxi	0.3%
Train	22.9%
Bus	4.1%
Park and Ride	1.4%
Walk/Run	13.0%
Cycle	46.8%
Total:	**100%**

5.5.4 The Smart Journeys data highlights the significance of cycling and train as modes of choice for travel to work. Walk/run is the third most popular mode and car driver trips make up just over 11%.

Residential

5.5.5 The assessment methodology discussed in Section 5.3 sets out how the forecast level of vehicle trips from the residential component of the site has been established. In order to determine the trips by all modes for the residential development, the total people trips needed to be established. The total people trips generated by the NECAAP TEB TRICS data has been used for this purpose as it also forms the basis of the vehicle trip generation calculations. A copy of the calculations, including an extract of the TRICS total people trip rates, is included at Appendix E.

5.5.6 Table 5.3 summarises the total people trip rates and forecast trip generation associated with the proposed residential development for the AM and PM peak hours.

Table 5.3: NECAAP TEB TRICS Total People Trips

Time Period	Total People Trip Rates (per dwelling)		Total People Trips (425 dwellings)	
	Arrivals	Departures	Arrivals	Departures
AM Peak (08:00 – 09:00)	0.185	0.791	79	336
PM Peak (17:00 – 18:00)	0.507	0.231	215	98

5.5.7 To forecast the residential mode share, Census 2011 data on Method of Travel to Work has been adopted for the Lower Super Output Area adjacent to Cambridge Station (E01017987: Cambridge 008A). A copy of the Census mode share data is contained within the spreadsheet model at Appendix E. Car driver trips have already been established through the methodology presented at Section 5.3 and therefore Table 5.4 provides a summary of the mode share for non-car driver trips, also adjusted to remove those not travelling for work, and those modes not applicable.

Table 5.4: Census 2011 Mode Share Data for Cambridge 008A Lower Super Output Area

Mode of Travel	E01017987: Cambridge 008A Adjusted Mode Share
Car Passenger	2%
Taxi	0%
Train	19%
Bus	7%
Walk/Run	34%
Cycle	38%
Total:	**100%**

5.5.8 The Census data identifies walking and cycling as the most significant modes of travel to work for residents. Train also comprises a significant share of trips.

5.6 Overall Travel Demand

5.6.1 Drawing upon the methodology set out in Section 5.3 and Section 5.5, Table 5.5 presents the resultant peak hour multi-modal trip generation for the proposed commercial development, Table 5.6 for the proposed residential development and Table 5.7 for the total development.

Table 5.5: Commercial Development Forecast Multi-modal Trip Generation

Mode	AM Peak (08:00 – 09:00)		PM Peak (17:00 – 18:00)	
	Arrivals	Departures	Arrivals	Departures
Car Driver	116	12	14	119
Car Passenger	4	0	0	4
Taxi	4	0	0	4
Train	236	25	29	241
Bus	42	5	5	43
P&R	14	2	2	14
Walk/Run	134	14	16	137
Cycle	483	51	59	493
Total:	**1,033**	**110**	**125**	**1,055**

Table 5.6: Residential Development Forecast Multi-modal Trip Generation

Mode	AM Peak (08:00 – 09:00)		PM Peak (17:00 – 18:00)	
	Arrivals	Departures	Arrivals	Departures
Car Driver	3	8	7	3
Car Passenger	1	6	4	2
Taxi	0	0	0	0
Train	14	61	39	18
Bus	5	22	14	6
Walk/Run	26	112	71	32
Cycle	29	126	80	36
Total:	**79**	**336**	**215**	**98**

Table 5.7: Total Development Forecast Multi-modal Trip Generation

Mode	AM Peak (08:00 – 09:00)		PM Peak (17:00 – 18:00)	
	Arrivals	Departures	Arrivals	Departures
Car Driver	119	20	21	122
Car Passenger	5	6	4	5
Taxi	4	1	1	4
Train	250	86	67	259
Bus	47	26	19	50
P&R	14	2	2	14
Walk/Run	160	126	87	169
Cycle	512	177	139	530
Total:	**1,112**	**446**	**341**	**1,153**

5.7 Comparison Against Vehicle Trip Budget

5.7.1 Table 5.8 provides a comparison of the total forecast vehicle trip generation against the proportion of the draft NECAAP vehicle trip budget assigned to Cambridge North.

Table 5.8: Comparison of Vehicle Trips Against Trip Budget

Time Period	Forecast Vehicle Trip Generation		Vehicle Trip Budget		Remaining Trip Budget	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
AM Peak (08:00 – 09:00)	119	20	214	142	95	122
PM Peak (17:00 – 18:00)	21	122	92	182	71	60

5.7.2 The proposals are forecast to operate well within the draft vehicle trip budget assigned to Cambridge North, with a significant 'headroom' level of trips remaining in both direction in both the AM and PM peak hours for subsequent phases of development.

5.8 Lab Sensitivity Test

5.8.1 As discussed at paragraph 5.3.3, a trip generation sensitivity test has been undertaken for the proposed labs, adopting an alternative trip accumulation profile derived from survey data from the Peterhouse Technology Park presented within the Transport Assessment that accompanied planning application S/0404/16/FL for the Bradfield Centre. The uses on the Peterhouse Technology Park include a proportion of commercial labs and therefore provide a comparative assessment to the Cavendish Lab data adopted within the assessment.

5.8.2 A copy of the data is included at Appendix E and replicated in Table 5.9 for the AM and PM peak hours. The data presented represents vehicle trips. For comparison purposes, Table 5.10 presents

the same data adopted within the assessment from the survey of the Department for Material Sciences and Metallurgy presented within the planning application for the Cavendish Labs.

Table 5.9: Peak Hour Summary of Survey Data for the Peterhouse Technology Park

Time Period	Arrivals		Departures		Parking Accumulation	
	No. Trips	% of Daily Arrivals	No. Trips	% of Daily Departures	No. Parked Vehicles	% of Peak
AM Peak (08:00 – 09:00)	44	25%	10	6%	72	64%
PM Peak (17:00 – 18:00)	4	2%	39	22%	41	37%

Table 5.10: Peak Hour Summary of Survey Data for the Cavendish Labs – Total Person Trips

Time Period	Arrivals		Departures		Accumulation	
	No. Trips	% of Daily Arrivals	No. Trips	% of Daily Departures	No. People on Site	% of Peak
AM Peak (08:00 – 09:00)	341	14%	37	2%	394	33%
PM Peak (17:00 – 18:00)	50	2%	391	17%	420	35%

5.8.3 The data in Table 5.9 and Table 5.10 show a slightly different profile to the AM peak hour arrival trips as the Peterhouse Technology Park, with a higher percentage of arrivals occurring within the peak hour, and a slightly higher percentage of departures. In the PM peak hour, the trip profiles match more closely.

5.8.4 Table 5.11 presents the forecast peak hour trip generation when the analysis is run adopting the Peterhouse Technology Park trip accumulation and arrival and departure profiles.

Table 5.11: Lab Use Sensitivity Test Vehicle Trip Generation Comparison

Time Period	Lab Vehicle Trip Generation		Sensitivity Test Vehicle Trip Budget		Difference	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
AM Peak (08:00 – 09:00)	83	9	115	26	32	17
PM Peak (17:00 – 18:00)	12	96	10	102	-2	6

5.8.5 If factored into the total development vehicle trip generation, Table 5.12 provides a summary of the peak hour trips against the vehicle trip budget, replicating the data provided in Table 5.8, but for the sensitivity test scenario.

Table 5.12: Sensitivity Test Scenario, Comparison of Vehicle Trips Against Trip Budget

Time Period	Forecast Vehicle Trip Generation		Vehicle Trip Budget		Remaining Trip Budget	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
AM Peak (08:00 – 09:00)	151	38	214	142	63	104
PM Peak (17:00 – 18:00)	19	128	92	182	73	54

5.8.6 The results of the sensitivity test show that the Peterhouse Technology Park data exhibits a slightly higher proportion of arrivals in the AM peak hour than the data adopted within the assessment. The PM peak is more closely aligned. When factored into the overall assessment, the development is shown to continue to operate well within the vehicle trip budget assigned to Cambridge North.

5.9 Summary

5.9.1 This Chapter has set out the details of the assessment methodology adopted for the purposes of forecasting the quantum of trips to and from the proposed development. The methodology reflects that which was discussed with CCC at pre-application stage and draws upon existing data from the NECAAP TEB, local survey data on trip accumulation and mode share and Census data.

5.9.2 The analysis has demonstrated that the proposals are forecast to operate well within the portion of the NECAAP vehicle trip budget assigned to Cambridge North. This remains the case in the sensitivity test scenario which has adopted an alternative trip and accumulation profile for the lab vehicle trips.

6 Impact Assessment

6.1 Overview

6.1.1 At the highway pre-app meeting with CCC of 28th October, it was agreed that no junction capacity testing would be required on the basis of the development operating within the allocated vehicle trip budget for Cambridge North. The principle of the vehicle trip budget is stated in the NECAAP TEB as, *"the maximum level of external vehicular peak-hour development trips in a future full build-out year which would not result in a deterioration in the performance of the surrounding highway networks over existing levels."*

6.1.2 By according with the trip budget, the development impacts are not considered to result in a severe residual impact on the highway network in reference to the terms of the NPPF.

6.1.3 However, to assist with the highway authority and National Highway's consideration of the planning application, the peak hour development vehicle trips on Milton Road have been forecast.

6.2 Impact on Milton Road

6.2.1 For the purposes of this assessment, development trips have been assumed to follow patterns observed from base traffic counts undertaken in 2017 in connection with the work included in the NECAAP TEB.

6.2.2 All vehicle trips travelling to and from the site would do so via Cowley Road. Cowley Road forms two junctions with Milton Road. The southern junction is subject to restricted movements, allowing vehicles to exit southbound onto Milton Road only. The northern junction permits all movements. It has therefore been assumed that all development traffic departing this site and travelling south would do so via the southern junction with Milton Road, and that northbound traffic would use the northern junction.

6.2.3 The directional split of traffic turning to/from Cowley Road at the Milton Road junctions established from the 2017 NECAAP TEB data is summarised in Table 6.1 and the resultant vehicle trip distribution for the proposed development at Table 6.2.

Table 6.1: Cowley Road/Milton Road Traffic Turning Proportions

	Milton Road North		Milton Road South	
	Arrival	Departure	Arrival	Departure
AM Peak (08:00-09:00)	78%	67%	22%	33%
PM Peak (17:00-18:00)	59%	79%	41%	21%

Table 6.2: Cowley Road/Milton Road Peak Hour Development Traffic Turning Movements

	Milton Road North		Milton Road South	
	Arrival	Departure	Arrival	Departure
AM Peak (08:00-09:00)	93	14	26	7
PM Peak (17:00-18:00)	12	96	8	26

6.2.4 The majority of AM arrivals and PM departures are forecast to be to/from the north and junction 33 of the A14. The highest flow is in the AM peak hour where this equates to an average of one arrival every minute and a half. Flows to/from the south are much lighter with an average of one arrival every two minutes in the AM peak and a similar level of departures in the PM peak.

6.3 A14/A10 Milton Interchange

6.3.1 Further to the pre-application discussions with National Highways, Table 6.3 provides a summary of the forecast flows at the Milton Interchange for the AM and PM peak hours. These have been established from the 2017 turning count flows within the TEB. Traffic flow diagrams setting out the 2017 flows, distribution of trips to/from Cowley Road and the resultant development assignment are included at Appendix F.

Table 6.3: A14/A10 Milton Interchange Peak Hour Development Traffic Turning Movements

	Cambridge Rd		A14 East		A14 West		A10	
	Arrival	Departure	Arrival	Departure	Arrival	Departure	Arrival	Departure
AM Peak (08:00-09:00)	7	3	36	2	27	4	24	4
PM Peak (17:00-18:00)	4	13	4	26	2	31	3	26

6.3.2 Table 6.3 demonstrates a broadly even split of arrivals in the AM peak hour from the A14 west and the A10. A slightly higher level of trips is forecast to arrive from the A14 east, equating to approximately one trip every two minutes on average. In the PM peak hour, departure trips are forecast to be split approximately equally between the A14 east and west and the A10.

6.3.3 Overall, the two-way development trips in each of the peak hours equate to around 2% of the base traffic flows through the A14/A10 Milton Interchange and, as noted above, overall flows sit well within the overall allocated trip budget for the site.

6.4 Mitigation Measures

6.4.1 Cambridge North is already a highly accessible location. The site:

- Is adjacent to Cambridge North railway station from where a range of local, regional and national destinations are accessible;

- Benefits from proximity to the Cambridge North bus interchange which is currently well-served by both guided busway and conventional bus routes;
- Is highly accessible by active travel modes, with high quality connectivity available via various facilities including the busway cycleway and the Chisholm Trail.

6.4.2 Cambridge North is therefore already well-placed to develop into a vibrant, highly accessible, and attractive component of the proposed new city district for North East Cambridge.

6.4.3 Consideration has however, also been given to a range of other transport measures, both on-site within the masterplan, and off-site that would further facilitate trips to and from the site by non-car modes of transport. Alongside existing transport provision which already makes the site highly accessible, these measures can further support future residents, employees and visitors' travel choices, and to reinforce the low car strategy proposed for the development.

6.4.4 The NECAAP TEB document identifies a comprehensive list of transport interventions considered necessary by the authorities to support their wider development aspirations for the North East Cambridge area. A number of the measures outlined below, and proposed to accompany the Cambridge North development, reflect those identified within the NECAAP TEB and could potentially be subject to a S106 obligation or Planning Condition.

- Mobility hub
  - Car club provision
  - Cycle/e-scooter hire provision
- Milton Park and Ride shuttle bus
- On-site network of cycle routes connecting the wider area
- Crossing provision on Milton Avenue
- Package of traffic calming measures along Chesterton Way as the busway enters Cambridge North Off-site works to Cambridgeshire Guided Busway to remove vehicle traps and replace with ANPR
- Cowley Road highway improvement works to enhance the route to/from Cambridge North station
- Monitoring of local car parking
- Wayfinding
- Public transport information terminal
- Extended bus shelter provision at Cambridge North station
- Lighting improvements to Station Square and Milton Avenue

6.4.5 The developer is also willing to consider a reasonable, and proportionate, contribution towards wider measures proposed for North East Cambridge, where these have a link to the development, and would welcome further discussion on these aspects with the County Council.

6.5 Summary

6.5.1 Cambridge North is located in a highly sustainable location with access to bus, rail, and active modes. Low levels of car parking provision are proposed to further embed sustainable travel behaviours.

6.5.2 As a result, the scheme is forecast to operate well within the site's allocated portion of the NECAAP vehicle trip budget. The principle of the trip budget, established by the local authorities, is to avoid development resulting in a deterioration in the performance of the surrounding highway network. By virtue of operating within the trip budget, the proposals would not result in a severe residual impact in the safe operation of the highway network.

6.5.3 The forecast distribution of vehicle trips in the peak hours has been presented for the highway authorities' information for Milton Road. Despite operating within the vehicle trip budget, and being located in an already highly accessible location, a package of additional measures is proposed to facilitate trips to and from the site by sustainable modes of transport and to further support the low car strategy proposed for the development.

7 Summary and Conclusions

7.1 Summary

7.1.1 This TA has been prepared by PJA on behalf of Brookgate to accompany a hybrid planning application for development at Cambridge North.

7.1.2 The preparation of the TA has followed an extensive period of pre-application engagement with Cambridgeshire County Council as local highway authority and National Highways as the national highway authority for the trunk road network (A14). The pre-application feedback received has influenced this assessment.

7.1.3 Cambridge North is located within the NECAAP area. Whilst not yet adopted, this TA has been prepared to accord with the proportions of the overall vehicle trip and car parking budgets that have been assigned to Cambridge North.

7.1.4 Cambridge North benefits from excellent existing walking and cycling connections providing for local and city wide access via segregated infrastructure.

7.1.5 Cambridge North station is located immediately to the south of the Proposed Development and provides fast and frequent local and regional rail links into Cambridge, across East Anglia and into London. Existing bus stops at Cambridge North serve the northern Cambridgeshire Guided Busway and other core bus routes within Cambridge providing access across the city.

7.1.6 A review of collision records for the latest available 5-year period has not indicated any clusters of collisions. It is concluded that there is not a significant existing highway safety issue in the vicinity of the site.

7.1.7 The masterplan has been developed to connect to, and extend, existing foot and cycleways through the Proposed Development and to provide further links to enable future connections to the subsequent phases of the NECAAP development.

7.1.8 Levels of car parking provision within the Proposed Development would be well within the site's parking budget figure. The levels proposed are akin to those in the CB1 area of Cambridge and demonstrate the proactive and forward-thinking approach of the developer. This ambitious low level of car parking provision follows in the spirit of the emerging NECAAP which suggests a restrictive approach to car parking.

7.1.9 Car parking within the Proposed Development would be carefully managed to ensure that it operates effectively, and to avoid any negative consequences within Cambridge North, and also neighbouring areas.

7.1.10 Extensive covered and secure cycle parking is proposed within the development for the commercial and residential uses, and also for visitor use. The layout and provision has been informed by local and national guidance and includes ground floor parking and provision for non-standard cycles.

7.1.11 The assessment methodology adopted within the TA has been subject to substantial pre-application discussion with CCC. The approach adopted has drawn upon existing data from the NECAAP TEB, local survey data on trip accumulation and mode share, and Census data. The analysis has demonstrated that the proposals are forecast to operate well within the portion of the NECAAP vehicle trip budget assigned to Cambridge North.

7.1.12 Despite the highly sustainable location of the site, this TA has presented a package of accompanying measures aimed at further enhancing the conditions for travel to, from and in the vicinity of the site by sustainable modes of transport. Alongside the Travel Plan for the Proposed Development prepared in parallel with this TA, these measures would further support the low car strategy proposed.

7.2 Conclusions

7.2.1 Cambridge North is an extremely sustainable location from a transport perspective, benefitting from an established network of connections for walking, cycling, bus and rail travel. The Proposed Development would capitalise on these connections, and deliver further infrastructure on-site to connect to future phases of development.

7.2.2 The Proposed Development is forecast to operate well within the portion of the NECAAP vehicle trip budget assigned to Cambridge North. The principle of the trip budget is to establish, *"the maximum level of external vehicle peak-hour development trips which would not result in a deterioration in the performance of the surrounding highway networks over existing levels."* As a result, it can be concluded that the traffic impact of the Proposed Development would not be severe.

7.2.3 It is therefore concluded that there are no highway or transport related matters which should prevent the Proposed Development from being consented.

Appendix A Proposed Development Masterplan

KEY

- TRAIN STATION
- HOTEL
- CYCLE PARKING
- RECREATION
- OFFICE / LABORATORY
- GENERAL RETAIL
- F&B
- SERVICES
- PARKING
- PLANT
- STORAGE
- 1 BEDROOM APARTMENT
- 2 BEDROOM APARTMENT
- 3 BEDROOM APARTMENT

FOR INFORMATION

rev no	date	issue description	drawn	checked
revisions				

notes

Dimensions govern. Do not scale drawings.
All dimensions are in millimeters unless noted otherwise.
All dimensions shall be verified on site before proceeding.
All discrepancies to be notified in writing to ACME.
This drawing is to be read in conjunction with all relevant architectural and engineers information.

Area measurements must not be taken to represent contractual documentation.

This drawing may contain data under lease from Ordnance Survey. Unauthorised reproduction infringes crown copyright.

architect
acme
76 Tabernacle Street, London, EC2A 4EA
T: +44 20 7251 5122
M: mail@acme.ac W: www.acme.ac

client
BROOKGATE
Two Station Place, Cambridge CB1 2FP
T: +44 1223 465769
M: info@brookgate.eu

project	CAMBRIDGE NORTH
number	239
drawing title	MASTERPLAN GROUND FLOOR PLAN
scale	1:1250
format	A1
status	PLANNING APPLICATION
date	20 MAY 2022
drawn by	LLZ
checked by	LH
drawing no	239-ACME-S00-0100
rev no	S

Appendix B Proposed Cowley Road/Milton Avenue Junction Arrangement

A2 1:250 4 6 8 10 12 14 16 18

N

One-way route

R6.000

R10.000

R1.000

R5.000

3.500

7.300

6.0

Residential Building

Office Building

Cowley Road

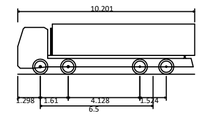
Cowley Road

NOTES

These drawings have been produced with reference to the CDM Regulations 2015. Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9

KEY

- Kerbline
- Proposed Road Markings
- Existing Road Markings
- Carriageway
- Footway
- Cycleway



Large Tipper	
Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

Until Technical Approval has been obtained from the relevant Local Authorities or Statutory Bodies, it should be understood that all drawings are issued as preliminary and NOT for Construction. Should the Contractor and / or Employer commence work prior to approval being given, it is entirely at their own Risk

REV	DATE	REVISION NOTE	BY
P2	27/04/2022	Junction give way markings straightened, Tracking adjusted to avoid clash with Kerb	OB
P1	08/04/2022	Amended to suit latest Masterplan	GD

PJA

Seven House • High Street
Longbridge • Birmingham
B31 2UQ • Tel: 0121 475 0234

Birmingham • Bristol
Exeter • London • Reading
pja.co.uk

CLIENT

Brookgate Ltd

PROJECT

Cambridge North

DRAWING TITLE

Cowley Road/
Cowley Circus
Highway Improvement

DRAWING ISSUE STATUS

INFORMATION

PJA JOB No.	SUB-CODE	DRAWING NO.	REVISION
05425	C	2113	P2

Revision Letter : P - Prelim / A - Approval / T - Tender / C - Construction

BIM DRAWING REFERENCE

SCALE	DRAWN	REVIEWED	DATE
A2@1:250	RAH	GD	09.12.21

Appendix C Proposed Milton Avenue/The Link Junction Arrangement

A3 1:250 4 6 8 10 12 14 16 18

Tie in to cycleway shown on Masterplan

R50.0

R50.0

3.0

Existing ramp to be retained

Urban Realm Build ups outside of highway boundary

Relocate existing ramp to allow space for pedestrian tactile paving

R4.0

R4.0

3.2

Tie in to existing cycleway

Tie in to cycleway shown on Masterplan

Proposed ramp

Relocate existing ramp to allow for new juncton to the east

MOTORCYCLES

Milton Avenue

Fowley Road

Flower Bed

LOCATION PLAN (1:5000)

NOTES

These drawings have been produced with reference to the CDM Regulations 2015. Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9

KEY

- Kerbline
- Proposed Road Markings
- Existing Road Markings
- Carriageway
- Footway
- Cycleway
- Proposed Uncontrolled Tactile Paving

Until Technical Approval has been obtained from the relevant Local Authorities or Statutory Bodies, it should be understood that all drawings are issued as preliminary and NOT for Construction. Should the Contractor and / or Employer commence work prior to approval being given, it is entirely at their own Risk

REV	DATE	REVISION NOTE	BY
P2	24/05/22	Amended to suit updated masterplan	GD
P1	07/04/2022	Amended to suit RMA masterplan	GD

PJA
Seven House · High Street
Longbridge · Birmingham
B31 2UQ · Tel: 0121 475 0234
Birmingham · Bristol
Exeter · London · Reading
pja.co.uk

CLIENT
Brookgate Ltd

PROJECT
Cambridge North

DRAWING TITLE
Milton Avenue
Highway Improvement
Southern Access

DRAWING ISSUE STATUS
INFORMATION

PJA JOB No.	SUB-CODE	DRAWING NO.	REVISION
05425	- C -	2110	- P2

Revision Letter : P - Prelim / A - Approval / T - Tender / C - Construction

BIM DRAWING REFERENCE

SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:250	JAL	GD	09.12.21

Appendix D Service Vehicle Swept Path Analysis