

U&I

# Land South of Cambridge Road, Teardrop Site

Initial Transport Appraisal

Draft Report

104659

05 March 2021

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## Document Control

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# 1 Introduction

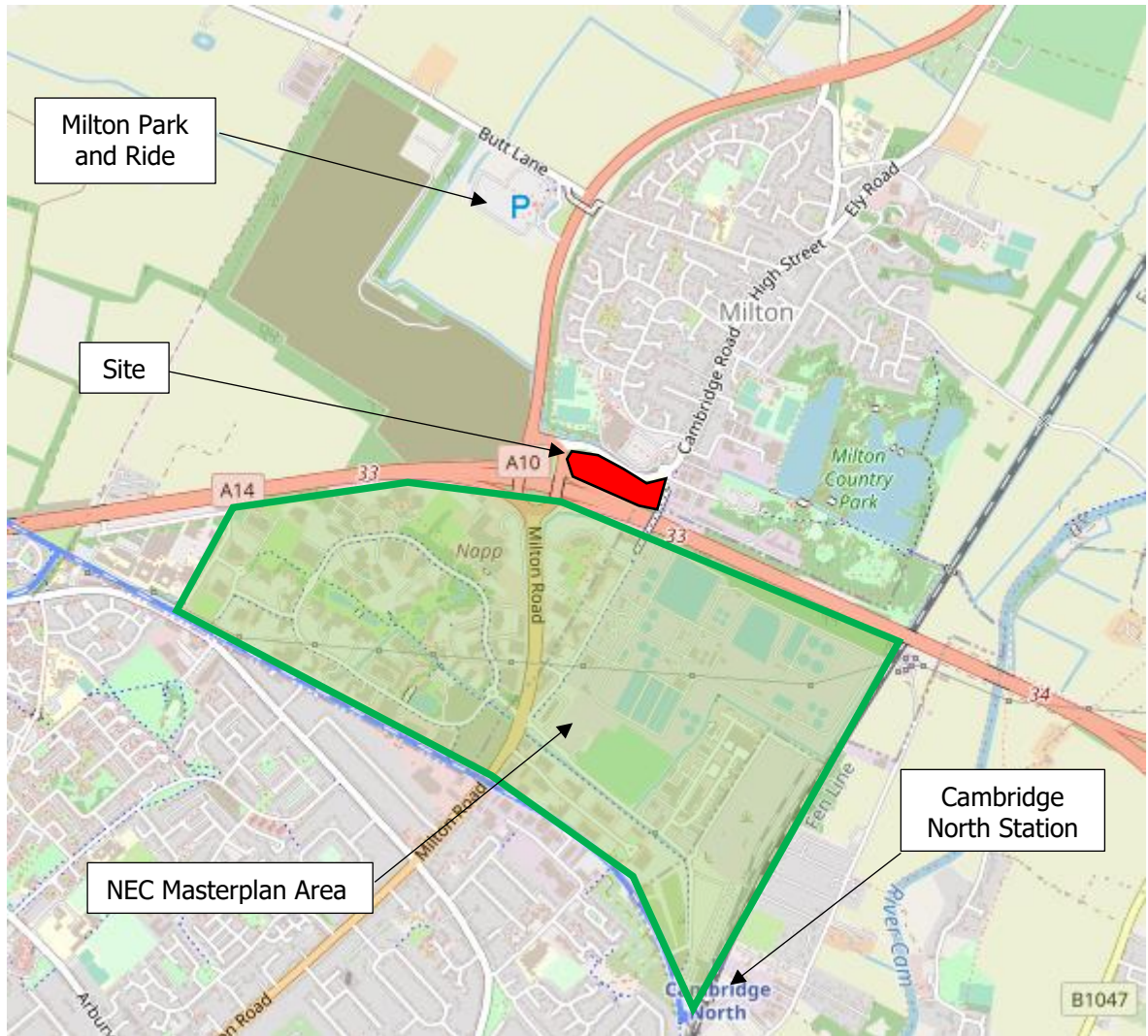
## Overview

- 1.1 Pell Frischmann (PF) has been appointed by the U&I (the 'Client') to provide highways and transportation consultancy services, and to prepare this Initial Transport Appraisal (ITA), in connection with the potential redevelopment of land south of Cambridge Road (the site). The local highways authority is Cambridgeshire County Council (CCC).
- 1.2 The purpose of this report is to provide an initial appraisal of the site in terms of potential future access options in the context of the overall development of the site to support an initial scoping package of information to be submitted to the council. This report will outline an indicative access option for the development site, subject to further detailed analysis. This report is also intended to provide a review of the local highway network and summarise potential public transport accessibility.
- 1.3 It is understood that the proposed development will likely be E Class (previously known as B1-B8) employment uses.

## Site Location and Description

- 1.4 The site is located to the north of the A14 on green belt land. A site location plan, showing the location of the proposed site in the context of north Cambridge and local transport network, is provided in **Figure 1.1**.

**Figure 1.1 Site Location Plan**



## 2 Baseline Conditions

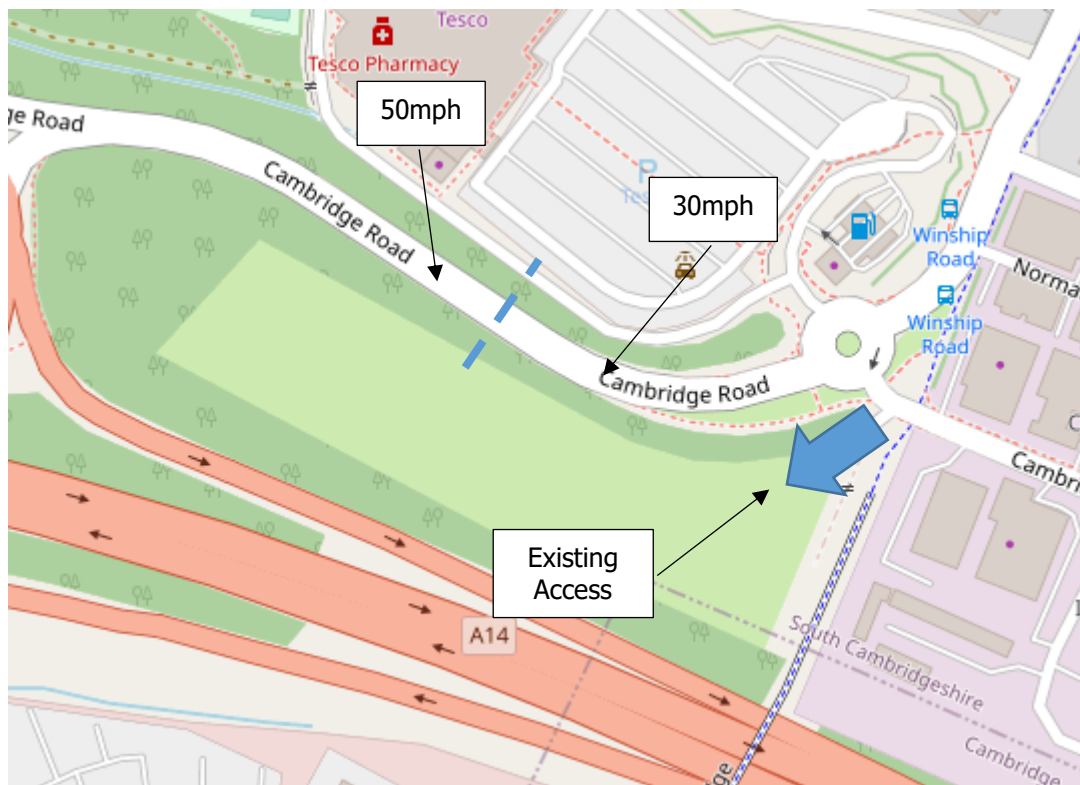
### Introduction

- 2.1 The purpose of this chapter is to provide a summary of the existing, or 'baseline', transport conditions currently in place in the vicinity of the site.

### Site Location

- 2.2 The site is located approximately 4km to the north east of Cambridge City Centre and is bounded by Cambridge Road to the north; the Jane Coston Cycle Bridge to the east; the A14 to the south; and the A10/A14 interchange to the west.
- 2.3 A site location plan is shown below in **Figure 2.1**.

**Figure 2.1 Site Location Plan**



- 2.4 There is an existing access off Cambridge Road, immediately to the south of the roundabout with the Tesco Supermarket.
- 2.5 The existing access is not considered safe due to its proximity to the roundabout and the potential for blocking back onto the highway. The access shown in **Figure 2.2**.

**Figure 2.2 Existing Access**



## Strategic Highway Network

- 2.6 The A14 is a nationally important dual carriageway running east-west to the north of Cambridge. Eastbound from the site the A14 continues to Felixstowe via Ipswich providing links to the A11 towards Norwich and the A134 towards Colchester.
- 2.7 Westbound from the site the A14 provides access to the M11, which continues towards London, and links the A1309 Milton Road, A1049 and A1307 which continue towards Cambridge City Centre. The A10, to the west of the site, is a single carriageway road which links Cambridge to Ely and Kings Lynn to the north.
- 2.8 Milton Road (A1309) provides access between the A14, A10 and Cambridge City Centre. At the A14 / A10 junction (Milton Interchange), the A1309 has three lanes of traffic running south into Cambridge and two lanes of traffic running north approaching the roundabout.
- 2.9 The A14 was recently subject to highway improvement works, which have now been largely completed although it is understood the improvements at Milton Interchange (bypass lane from the A14 EB to A10) are not yet finished.

## Cambridge Road

- 2.10 Cambridge Road is a two-way single carriageway road running in an east to west direction immediately to the north of the site. Heading west away from the junction with the Tesco Supermarket, there is change in speed from 30mph to 50mph, which is shown on **Figure 2.1** above.

## Road Safety Review

- 2.11 An initial review of the Crashmap website ([www.crashmap.co.uk](http://www.crashmap.co.uk)) has been undertaken to identify whether any traffic collisions resulting in personal injury have occurred within the vicinity of the site in the most recent five year period.
- 2.12 Initial assessments indicate that there were no incidents immediately along the frontage of the site. However, four incidents occurred to the east of the site, two noted as slight and two as serious. No fatal incidents have been recorded in the vicinity of the site during the assessed 5-year period.
- 2.13 Any additional transport work supporting a planning application would likely require further analysis of the causation factors of these collisions and details of the casualties involved. However, it is

considered that the proposed scheme would not present any alteration in current road safety. The number of incidents reported is considered low, which is in line with the volumes of traffic experienced in the area.

**Figure 2.3** Crashmap Collision Map



Source: Crashmap (2020)

## Accessibility by Non-Car Modes

### Public Transport

- 2.14 The nearest railway station to the site is Cambridge North, which is located approximately 2km (23 minute walk or 8 minutes cycling distance) to the southeast of the site.
- 2.15 Cambridge North Station is managed by Greater Anglia and is served by rail services operated by Thameslink, Greater Anglia and Great Northern, serving destinations including Cambridge Central, London King's Cross, London Liverpool Street, Norwich and Ely. The station benefits from a total of four rail services in each direction per hour during peak hours.
- 2.16 The station has 3 platforms, as well as parking for 450 cars and 1,000 bicycles.
- 2.17 As part of the station development, a number of transport infrastructure improvements were also provided around the station and these are summarised below:
  - An extension of the Cambridgeshire Guided Bus (CGB) route from Milton Road to Cambridge North Station;
  - A new cycleway linking the existing cycleway along the CGB with Cambridge North Station and south to Cambridge City Centre via a new link through Moss Bank;
  - A new cycleway running parallel to Cowley Road along a disused Network Rail access track linking Cambridge North Station with Milton Road, the Cambridge Science Park and Milton village;



- The provision of a new Station Access Road linking Cowley Road with Cambridge North Station, including the provision of a segregated footway and cycleway along the western side and a footway on the eastern side; and
- A new station square ('Cambridge Square') including disabled car parking, drop-off facilities and a taxi rank.

### **Local Bus Routes**

- 2.18 The closest bus stops to the site are located on Cambridge Road, approximately 50m to the east of the edge of the site, just past the junction with the Tesco Roundabout. These bus stops are served by Number 9 bus, which provides an hourly service from Cambridge to Ely.

### **Milton Road Park & Ride**

- 2.19 The Milton Road Park & Ride (P&R) is located approximately 800m north of junction 33 of the A14 and is accessed from the A10. The P&R provides a 792 space car park along with covered cycle parking to accommodate 50 bicycles. Services connect the P&R with Cambridge City Centre starting at 06:20 Monday to Friday, 07:20 on a Saturday and 09:00 on a Sunday.
- 2.20 Monday to Friday service frequency is one bus every 10 minutes in each direction after 07:00 every 10 minutes in each direction after 08:00 on a Saturday and every 15 minutes in each direction on a Sunday.
- 2.21 Services stop at Milton Road, adjacent to Cambridge Science Park during all hours of operation with southbound stops stopping on the Science Park access road, rather than Milton Road, before 09:00.

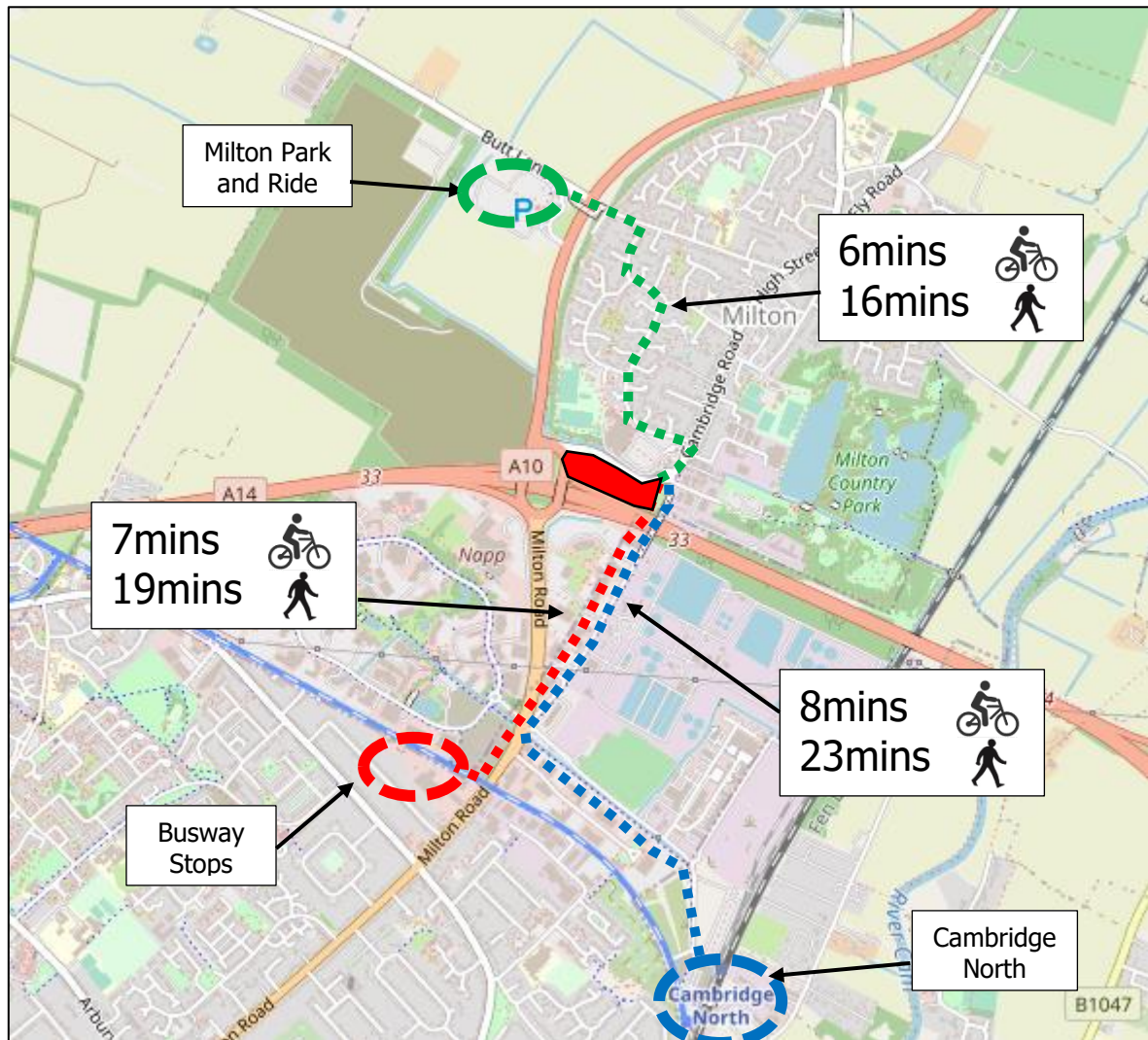
### **Cambridgeshire Guided Busway (CGB)**

- 2.22 The nearest CGB bus stops to the site are located approximately 1.5km to the south west of the site, approximately 130m west of the Milton Road / CBR junction.
- 2.23 The CGB provides connection between Cambridge and St Ives with the with guided (bus only) section running between St Ives and the A3109 Milton Road, Cambridge.
- 2.24 The busway incorporates an 875m separated section between Cambridge North Rail Station and Milton Road. Bus routes A and D provide a connection between St Ives and Cambridge City Centre via Cambridge Science Park with some services also stopping at Cambridge North Station. Route A continues to Addenbrook's Hospital with some services also continuing to Royston.
- 2.25 Routes A and D run on a combined Monday – Saturday frequency of 4 per hour in each direction. Service frequency on a Sunday is 2 per hour.
- 2.26 On a weekday, during the period 07:00 – 09:00 up to 10 services are provided per hour inbound to Cambridge and 5 services outbound. This is supplemented with 7 outbound services between 16:00 – 18:00.
- 2.27 Route C runs between St Ives and Cambridge City Centre. Services do not stop at Cambridge North Station. This route provides a Monday - Saturday service frequency of 1 - 2 buses per hour, in and outbound. Sunday frequency is one per hour in both directions.

### **Walking and Cycling**

- 2.28 The key walking and cycling routes connecting the site to public transport infrastructure are shown in **Figure 2.4**.

**Figure 2.4 Walking and Cycling Routes**



- **Route 1 Milton Park and Ride** – The site has good links from Milton Park and Ride, with a bridge over the A10 connecting to quiet residential roads through to the site. This provides a safe and direct route to the site for people who arrive at the Park and Ride and then wish to continue their journey on foot or by bike.
- **Route 2 Cambridge North** – The site is adjacent to Jane Costain bridge, which provides a link onto Cowley Road, which then connects to a pedestrian and cycle road leading directly to the site. Whilst this is a direct and coherent link, it is more viable for cyclists due to the distance of 2km to the station.
- **Route 3 Busway Stop** – The route follows the route across the Jane Costain bridge down Cowley Road and onto Milton Road, where it turns off to the Busway. This is a direct and coherent route, although the distance for pedestrians may preclude some people from making this journey.

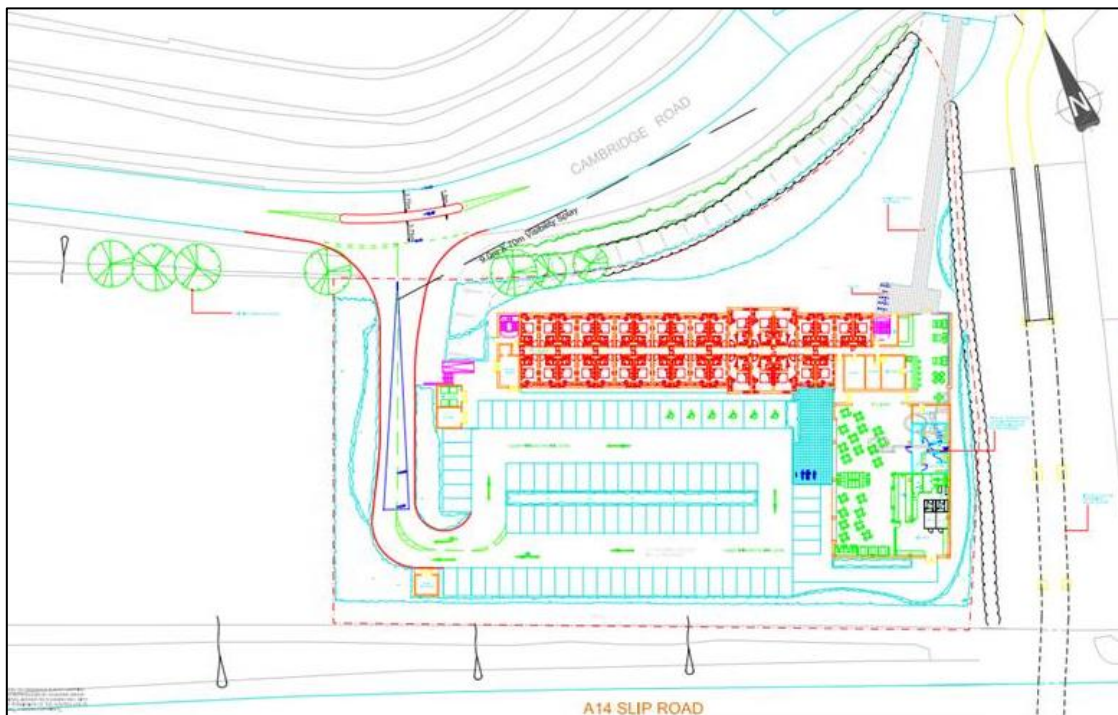
### 3 Vehicle Access

- 3.1 As previously noted, the existing vehicle access is not considered appropriate due to the location adjacent to the existing roundabout.
- 3.2 It is therefore proposed that any new development will require a revised access into the site.

#### Previous Scheme Access Design

- 3.3 A previous planning application submitted in 2008 provided a new access off of Cambridge Road, shown in **Figure 3.1** below.

**Figure 3.1 Previous Application Site Access**

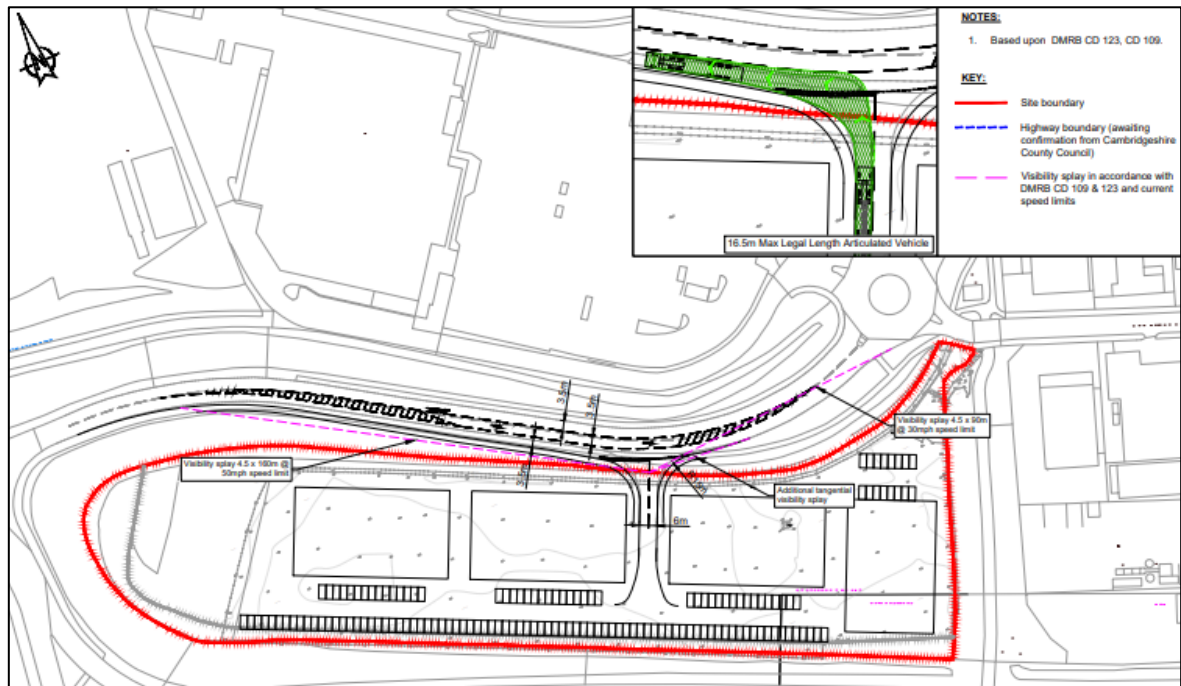


- 3.4 The access was proposed as left in and left out, which has the benefit of only requiring visibility to be achieved looking to the right where the speed limit is lower (30mph). The disbenefit of this arrangement is that it will result in traffic having to pass the site and U-turn at the roundabout to the east before returning to the site.
- 3.5 The previous assessment demonstrated that there was spare capacity at the roundabout and therefore the main disbenefit of this arrangement is the inconvenience for drivers approaching from the west, rather any capacity issues at the roundabout.
- 3.6 Subject to modelling, it is likely that this arrangement would work for any future proposals.

#### Alternative Proposed Access

- 3.7 As an alternative to the junction proposed in the previous scheme, an all access movement junction has been designed.
- 3.8 The proposed layout has a right turn ghost island designed to accommodate maximum legal articulated vehicles and is shown in **Figure 3.2** below.
- 3.9 The full drawing is provided in **Appendix A** for information.

**Figure 3.2 All Movements Junction**



3.10 It is noted that this access design is indicative at the moment and is subject to the receipt of speed surveys as well as highway boundary.

## 4 Transport / Traffic Impact

4.1 This section of the Report considers the transport / traffic impact of the proposed site.

### Road Capacity

4.2 The previous 2008 scheme received objections from the Highways Authorities regarding the impact on the Milton Interchange. The previous scheme was relatively modest in size, including a 120-bed hotel with an ancillary restaurant.

4.3 Whilst the Milton Interchange does have planned improvements these are yet to be defined and are predicated on the A10 duelling scheme which is currently being considered (consultation in early 2021).

4.4 It is also noted that “*the future design of the project and its fit within a wider package of multi-modal transport measure*”. As such it is expected that both the Local Highway Authority and Highways England will look to minimise any impact upon the both the A10 and the Milton Interchange by limiting vehicle trips from any new developments.

4.5 This is consistent with the approach that the Local Authority has taken for the main Area Action Plan for the NEC site, whereby they have proposed a net-zero traffic impact on new developments, restricting traffic levels on the Milton Road corridor (which includes the Milton Interchange) to that seen in 2017 when the transport evidence base was prepared.

### Car and Cycle Parking

4.6 The car parking standards set out in the South Cambridgeshire Local Plan (2018) are set out below in **Table 4.1**.

**Table 4.1 Car Parking Standards**

Use Class	Car Parking	Cycle Parking	Notes
B1 Business	1 space per 25sqm (under 2,500sqm) 1 space per 30sqm (over 2,500sqm)	1 space per 30sqm	
B2 General Industrial	1 space per 50sqm	1 space per 40sqm	
B8 Storage and Distribution	1 space per 100sqm	On Merit	Provision should take account of duration of storage

4.7 However, as previously noted the A10 and Milton Interchange have already been identified as over capacity and the Local Highway Authority will likely look to limit the traffic impact of any new development which further exacerbates congestion issues.

4.8 Therefore, they will likely look to enforce a more stringent level of car parking upon the proposed site. For comparison, the approach to car parking in the NEC AAP area is for 1 space per 85-125sqm of employment space, which is considerably lower than the Local Plan.

## 5 Conclusions and Next Steps

- 5.1 Pell Frischmann (PF) has been appointed by the U&I (the 'Client') to provide highways and transportation consultancy services, and to prepare this Initial Transport Appraisal (ITA), in connection with the potential redevelopment of land south of Cambridge Road (the site). The local highways authority is Cambridgeshire County Council (CCC).
- 5.2 The purpose of this report is to provide an initial appraisal of the site in terms of potential future access options in the context of the overall development of the site to support an initial scoping package of information to be submitted to the council.
- 5.3 The existing access is not fit for purpose and a new access will be required off of Cambridge Road. This will need to be in the form of either a left in / left out only junction or will require a right turn ghost island into the site.
- 5.4 Capacity issues exist at the Milton Interchange to the west of the site. This is likely to be the main route in for vehicles to / from the site and could limit quantum of development if more sustainable modes of transport are not promoted at the site.

### Next Steps

- 5.5 The following next steps are proposed:
  - 1) Determine preferred scheme and confirm access design;
  - 2) Provide trip generation / trip distribution assessment for preferred scheme; and
  - 3) Prepare Scoping Note for discussion with County / Highways England.

**Appendix A**  
PROPOSED SITE ACCESS DRAWING

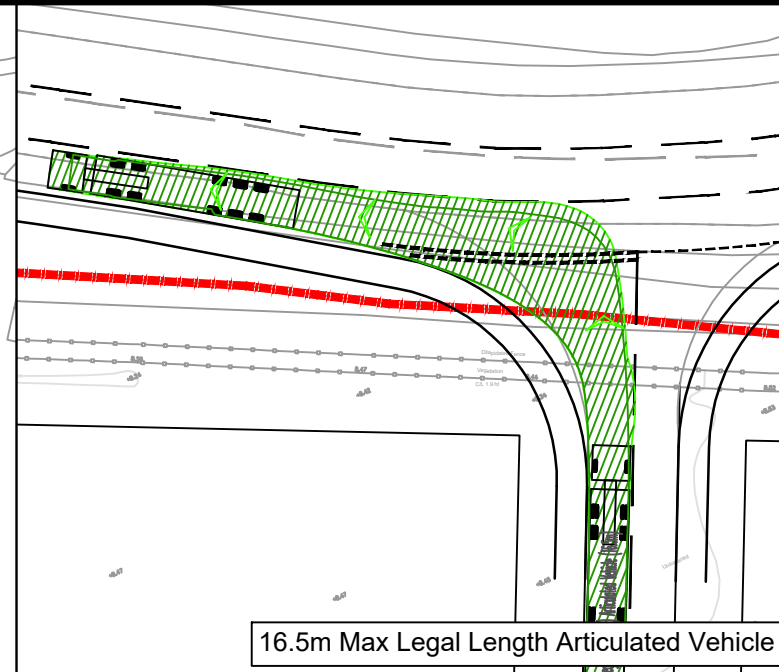


**NOTES:**

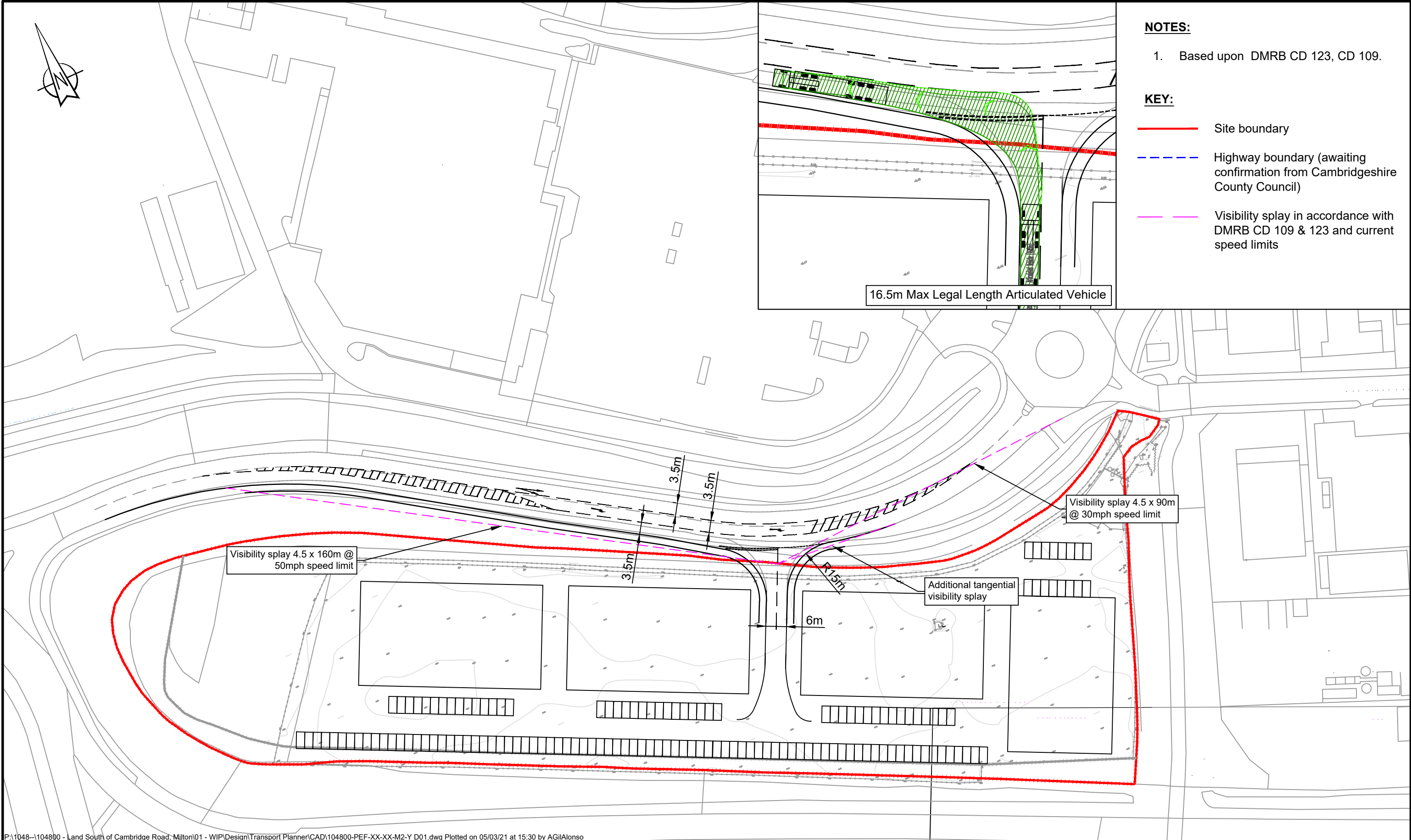
- Based upon DMRB CD 123, CD 109.

**KEY:**

- Site boundary
- - - Highway boundary (awaiting confirmation from Cambridgeshire County Council)
- - - Visibility splay in accordance with DMRB CD 109 & 123 and current speed limits



16.5m Max Legal Length Articulated Vehicle



Visibility splay 4.5 x 160m @ 50mph speed limit

Visibility splay 4.5 x 90m @ 30mph speed limit

Additional tangential visibility splay

P:\1048-1\104800 - Land South of Cambridge Road, Milton\01 - WIP\Design\Transport Planner\CAD\104800-PEF-XX-XX-M2-Y D01.dwg Plotted on 05/03/21 at 15:30 by AGI\Alonso

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Project

Land South of Cambridge Road, Milton

Drawing Title

Proposed Site Access - Right Turn Ghost Island

	Name	Date
Drawn	AGA	05/03/21
Designed	AGA	05/03/21
Checked	DW	05/03/21
Approved	PS	05/03/21

Scale	1:1000 @ A3
File No.	104800-PEF-XX-XX-M2-Y D01.dwg
Drawing Status	DRAFT

Drawing No.	Revision
104800-PEF-XX-XX-M2-Y-000001	D01