

Cambridge Community Sporting Trust
Cambridge Sporting Village, Trumpington
WSP Transport Input to Matter 6A of South Cambridgeshire
District Council Examination in Public of Draft Local Plan

12/1/2015

Introduction

1. This note provides a strategic transport assessment relating to the benefits of reviewing of the Cambridge Green Belt and the potential release of part of that Green Belt for the Cambridge Sporting Village proposal south of Trumpington, Cambridge. These Green Belt issues are to be discussed under Main Matter 6A of the Examination in Public of South Cambridgeshire District Council's (SCDC's) Draft Local Plan 2011-2031.

Policy Context

2. The National Planning Policy Framework (NPPF) contains the Government's planning policies for England and how these are expected to be applied. The NPPF has a presumption in favour of sustainable development, which is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
3. The NPPF advises that transport policies have an important role to play in facilitating sustainable development, and that the transport system needs to be balanced in favour of sustainable modes, i.e. walking, cycling and public transport.
4. Decisions on developments that generate significant amounts of movement should take account of whether:
 - The opportunities for sustainable transport have been taken up to reduce the need for major transport infrastructure, depending on the nature and location of the site;
 - There is safe and suitable access to the site for all people; and
 - Improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe (NPPF paragraph 32).
5. The NPPF notes (at paragraph 35) that developments should be located and designed where practical to, amongst others:
 - Give priority to pedestrian and cycle movements, and have access to high quality public transport initiatives;
 - Create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians;

- Incorporate facilities for charging plug-in and other ultra-low emission vehicles.
6. Minimising journey lengths is a policy aim set out in the NPPF, and it notes that, for large scale residential developments, a mix of uses should be promoted so that there are opportunities to undertake day-to-day activities, including work, within the site. This includes locating facilities such as primary schools and local shops within walking distance of most properties.
 7. SCDC's Draft Local Plan includes Policy TI/2 'Planning for Sustainable Travel', which notes that development must be located and designed to reduce the need to travel, particularly by car, and promote sustainable travel appropriate to its location. It also advises that planning permission will only be granted for developments where the site has (or will attain) sufficient integration and accessibility by walking, cycling or public transport and community transport.

Existing Travel Patterns

8. While most of the Cambridge Sporting Village site is located within the administrative boundary of South Cambridgeshire, the eastern part of the site is located within the Trumpington ward of Cambridge City. The site would also be on the edge of the built-up area of Cambridge. Therefore, the travel patterns associated with development of the site are more likely to match those of existing Cambridge City residents rather than those in South Cambridgeshire. For instance, the population of South Cambridgeshire is more thinly dispersed compared to Cambridge City Council, at an average of only 1.9 persons per hectare living in South Cambridgeshire compared to 30.4 persons per hectare living in Cambridge, based on data from the 2011 Census. There are also fewer travel choices in South Cambridgeshire compared to Cambridge.
9. The 2011 Census journey to work data for Cambridge City residents has been obtained and analysed to help identify the travel patterns associated with the future development of the Cambridge Sporting Village site. Equivalent data has also been obtained for South Cambridgeshire District residents, so that the transport implications of locating new homes on the edge of the Cambridge built-up area (albeit in the current Green Belt) can be compared in transport terms to new homes being located outside Cambridge (and beyond the Green Belt).
10. The Census data on the distribution of workplaces for local residents is presented in Table 1 below.

Location of Workplace	Cambridge Residents	South Cambridgeshire Residents
Cambridge City	69%	38%
South Cambridgeshire	17%	38%
Elsewhere in East of England	9%	20%
London	5%	4%
Total	100%	100%

Table 1: Distribution of Workplaces for Cambridge and South Cambridgeshire Residents, from 2011 Census

11. The above data indicates a more dispersed distribution of workplaces for South Cambridgeshire residents compared to Cambridge City residents. About 69% of Cambridge City residents work within their local administrative boundary, with only 31% travelling outside of the City for work. This compares to only 38% of South Cambridgeshire residents working within their local administrative boundary, and about 62% travelling to work outside South Cambridgeshire, primarily to Cambridge.
12. This more dispersed pattern of workplace locations is further demonstrated by the Census data on average distance travelled to work. For Cambridge City residents, this was 15.8Km in the 2011 Census, while the average travel to work distance for South Cambridgeshire residents was 21.3Km. This greater distance for South Cambridgeshire is a consequence of the more dispersed pattern of workplace locations for South Cambridgeshire residents compared to Cambridge City residents.
13. The Census data on travel to work mode shares for local residents is presented in Table 2 below, including those in Trumpington ward in which the eastern part of the site is located.

Mode of Travel for Journeys to Work	Cambridge Residents	Trumpington Ward Residents	South Cambridgeshire Residents
Bicycle	32%	30%	9%
Car Driver	34%	36%	69%
Car Passenger	3%	2%	4%
Motorcycle	1%	1%	1%
Bus	7%	7%	5%
Train	5%	7%	4%
Walking	17%	16%	7%
Other	1%	1%	1%
Total	100%	100%	100%

Table 2: Mode of Travel for Residents of Cambridge, Trumpington Ward and South Cambridgeshire, from 2011 Census

14. The above Census mode share data illustrates that travel to work by non-car driver modes of travel for South Cambridgeshire residents is only 31%, compared to 66% for Cambridge City residents, and 64% for Trumpington ward residents. This data indicates that accessibility by non-car modes is significantly greater in the Cambridge City area compared to locations outside the Cambridge City area. This is because there are significantly more transport choices available to Cambridge City residents, for example high quality bus services within the city and a good quality network of routes for walking and cycling. The data shows that mode shares for Trumpington ward residents are comparable to those for Cambridge as a whole.

15. Cycling is a key mode of travel for local residents, with 32% of journeys to work by Cambridge residents being made by cycle. This is the highest cycle to work mode share across all local authorities in England and Wales, based on the 2011 Census. The next highest is Oxford with 19% of workers cycling to work.
16. The key employment destinations in Cambridge of the city centre, the northern fringe (encompassing the Science Park) and the southern fringe (encompassing the Cambridge Biomedical Campus), and the University's West Cambridge Campus are within easy walking and cycling distance of large areas of Cambridge. The walking accessibility of these key employment locations is indicated by walking isochrones shown on the figures attached at Appendix A, which show walking journey times from the centre of these parts at 5 minute intervals based on a typical walking speed of 3mph (about 4.8kph).
17. The walking isochrones demonstrate that an appreciable area of Cambridge is within a reasonable 25 minute walk of the city centre, northern and southern fringes and West Cambridge Campus, and this is reflected in the Census data that walking represents about 17% of all journeys to work by Cambridge residents.
18. Cycling isochrones from the centre of these key employment sites are shown on the figures in *Appendix A*, for journey times at 5 minute intervals up to 25 minutes, on the basis of an average cycling speed of 12mph (about 19kph), this speed being defined by the Cambridge Cycling Campaign as a 'cruising' cycling speed. The Department for Transport's Local Transport Note 2/08 'Cycle Infrastructure Design' advises that, for commuter journeys, cycling distances up to 12Km / 5 miles are not uncommon, which at an average cycling speed of 12mph is therefore equivalent to a 25 minute cycling journey time.
19. The vast majority of the Cambridge built-up area is within a commutable 12Km / 5 miles or 25 minute cycle ride of Cambridge City Centre, along with the northern and southern fringes, and the West Cambridge Campus, and in combination with the good quality network of cycle routes in Cambridge, this cycle accessibility is reflected in the Census data that cycling represents about 32% of all journeys to work by Cambridge residents.
20. The significantly lower walking and cycling mode shares for South Cambridgeshire residents' journeys to work are a function of the more dispersed pattern of workplace locations and the fewer non-car travel services, networks and infrastructure available in the District, compared to Cambridge City. Furthermore, the lower population density of South Cambridgeshire compared to Cambridge City means that there is less concentrated demand for and therefore provision of the quality of pedestrian and cycle infrastructure that exists in Cambridge.
21. The above Census evidence is clear that there is a much greater reliance on travel to work by car for South Cambridgeshire residents compared to Cambridge City residents. This is reflected in car availability as recorded in the Census. For South Cambridgeshire, about 1.5 cars on average were available for households in the 2011 Census, which compares to only about 0.9 cars on average being available for households in Cambridge City.

Assessment

22. The principal demand for transport is derived from the spatial patterns of employment activity and location of households. Locating new households further from key employment activity generates additional demand for transport, while at the same time tends to reduce the travel choices that are available to meet this demand.
23. This is apparent in the above analysis of existing travel patterns for Cambridge City residents and South Cambridgeshire residents in the 2011 Census. The greater dispersal of workplace locations for South Cambridgeshire residents and their lower population density results in a correspondingly greater average travel to work distance and greater reliance on private car for journeys to work. This is compared to Cambridge, where there is greater concentration of local employment for local residents, shorter average travel to work distances, greater travel choices and significantly less reliance on the private car.
24. Therefore, locating development at sites on the edge of Cambridge such as Cambridge Sporting Village would meet transport policy objectives because, in comparison to locations outside Cambridge:
 - There would be greater opportunities for sustainable travel;
 - Priority for the transport demand generated by such development could be easily given to pedestrians and cyclists, with good access given to public transport;
 - Journey lengths would be minimised; and
 - The need to travel particularly by car would be reduced.
25. In transport terms, delivery of transport objectives would be better secured by releasing development sites within the Green Belt on the edge of Cambridge such as the Cambridge Sporting Village site, rather than sites further away from Cambridge that are not within the Green Belt.
26. The number and length of vehicular trips into Cambridge would be less with development on sites released from the Green Belt compared to sites further afield outside the Green Belt, because the released Green Belt sites would provide a location for housing nearer the key employment locations in Cambridge. This means the need to commute into Cambridge from further afield would be reduced.
27. The closer proximity of the released Green Belt sites also enhances the potential for the associated transport demands generated to be met by non-car modes, because of the greater travel choices available in the Cambridge built-up area.

Conclusion

28. This note has been prepared by WSP and assesses strategic transport matters and benefits of releasing land from the Cambridge Green Belt.

29. Our note uses evidence from the 2011 Census and assesses that the release of land from the Green Belt, such as for the Cambridge Sporting Village site at Trumpington, would meet transport policy objectives in encouraging sustainable modes of travel, minimising travel distances and reducing the need for travel by private car. Delivery of these objectives would be better secured by development at sites on the edge of Cambridge such as the Cambridge Sporting Village, rather than sites further away from Cambridge that, although are not within the Green Belt, would have fewer travel choices and greater dependence on the private car. This would result in negative, potentially severe impacts of increased traffic congestion both within and around Cambridge, along with increased carbon emissions, threatening the continued success of the Cambridge economy.

APPENDIX A – WALKING AND CYCLING ISOCHRONES

Date Modified:

Drawn By:

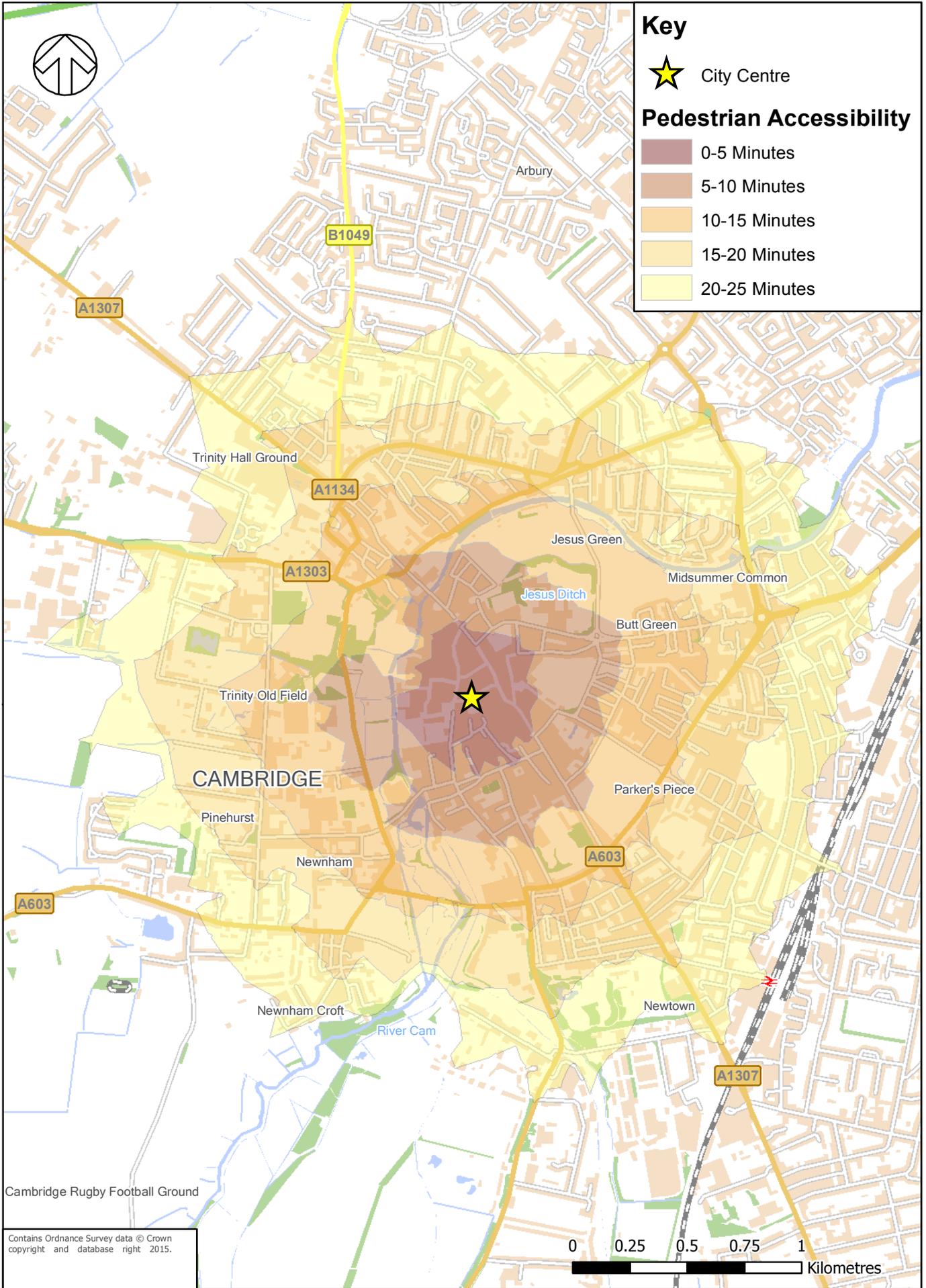


Key

★ City Centre

Pedestrian Accessibility

- 0-5 Minutes
- 5-10 Minutes
- 10-15 Minutes
- 15-20 Minutes
- 20-25 Minutes



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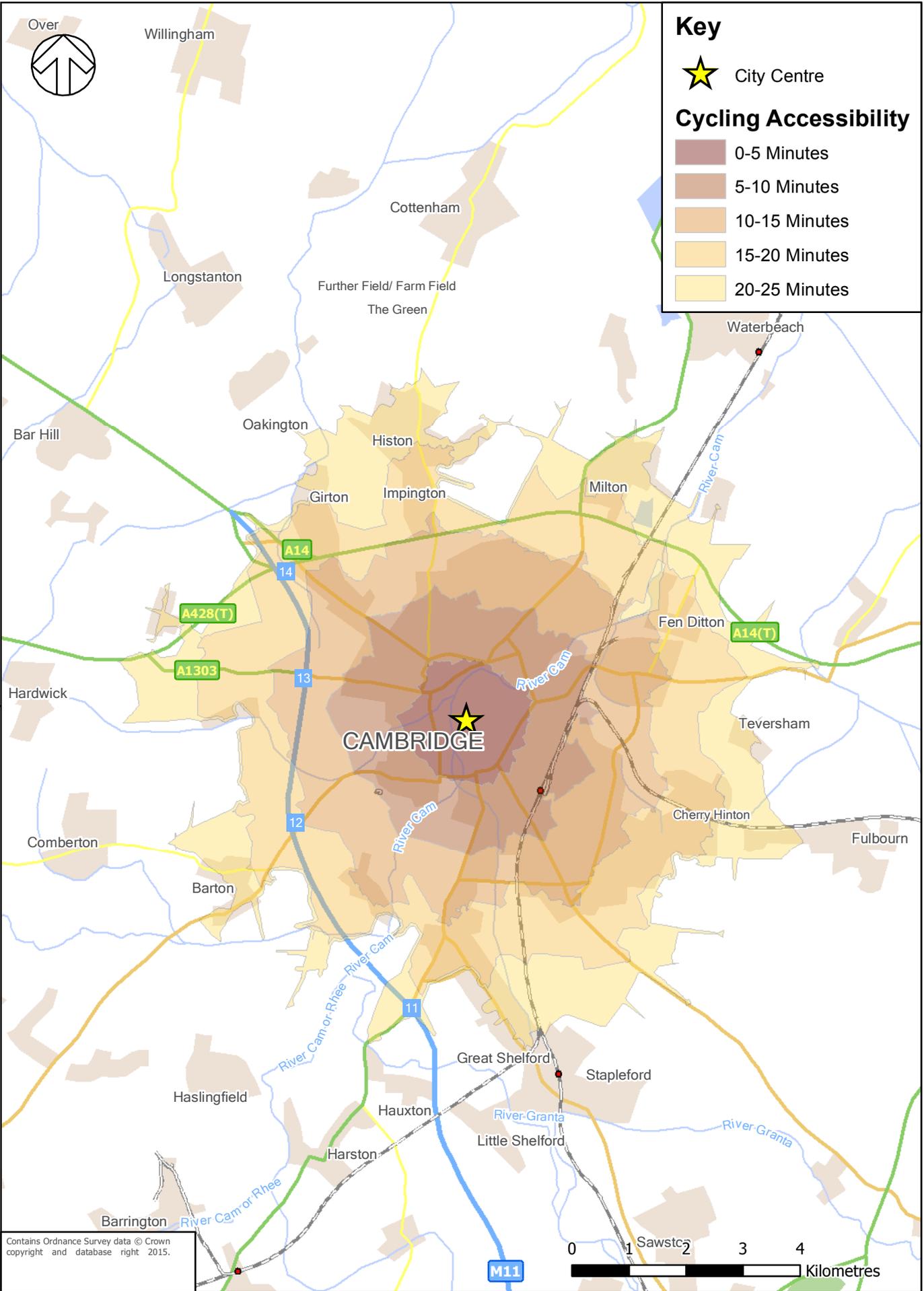
TITLE:
**WALKING ACCESSIBILITY @ 4.8 KPH
 (3.0 MPH) AT
 CAMBRIDGE CITY CENTRE**

FIGURE No:
FIGURE 1

File:

Date Modified:

Drawn By:



File:



TITLE:
CYCLING ACCESSIBILITY @ 19.0 KPH
(12.0 MPH) AT
CAMBRIDGE CITY CENTRE

FIGURE No:
FIGURE 2

Date Modified:

Drawn By:



Green Gates Farm

Fieldstead Farm

Milton

A14

A1309

Kings Hedges

Arbury

Chesterton

Ditton Meadows

Key

★ Science Park

Pedestrian Accessibility

- 0-5 Minutes
- 5-10 Minutes
- 10-15 Minutes
- 15-20 Minutes
- 20-25 Minutes

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TITLE:
**WALKING ACCESSIBILITY @ 4.8 KPH
 (3.0 MPH) AT
 CAMBRIDGE SCIENCE PARK**

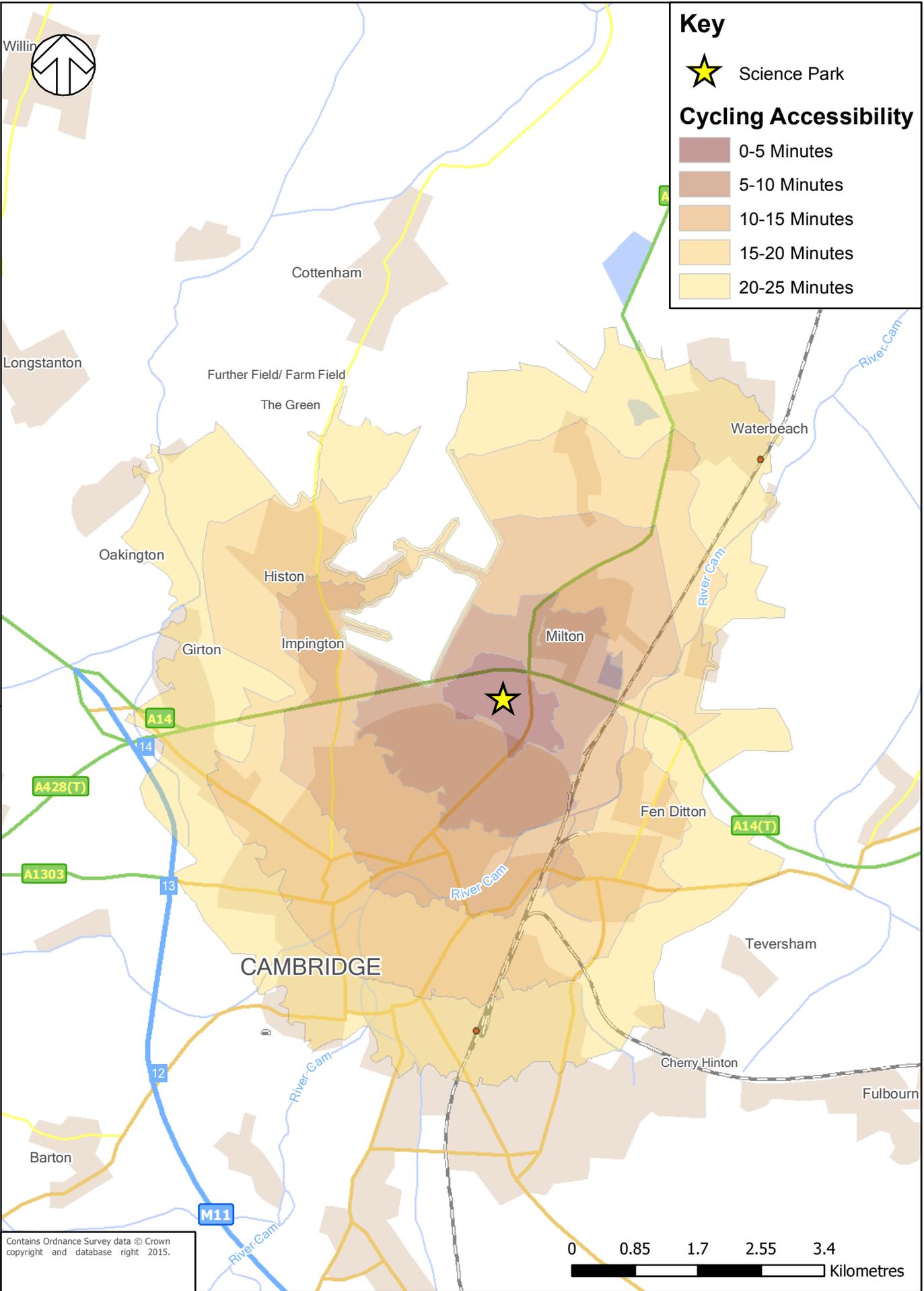
FIGURE No:
FIGURE 3

File:

Date Modified:

Drawn By:

File:



TITLE:
 CYCLING ACCESSIBILITY @ 19.0 KPH
 (12.0 MPH) AT
 CAMBRIDGE SCIENCE PARK

FIGURE No:
 FIGURE 4

Date Modified:

Drawn By:

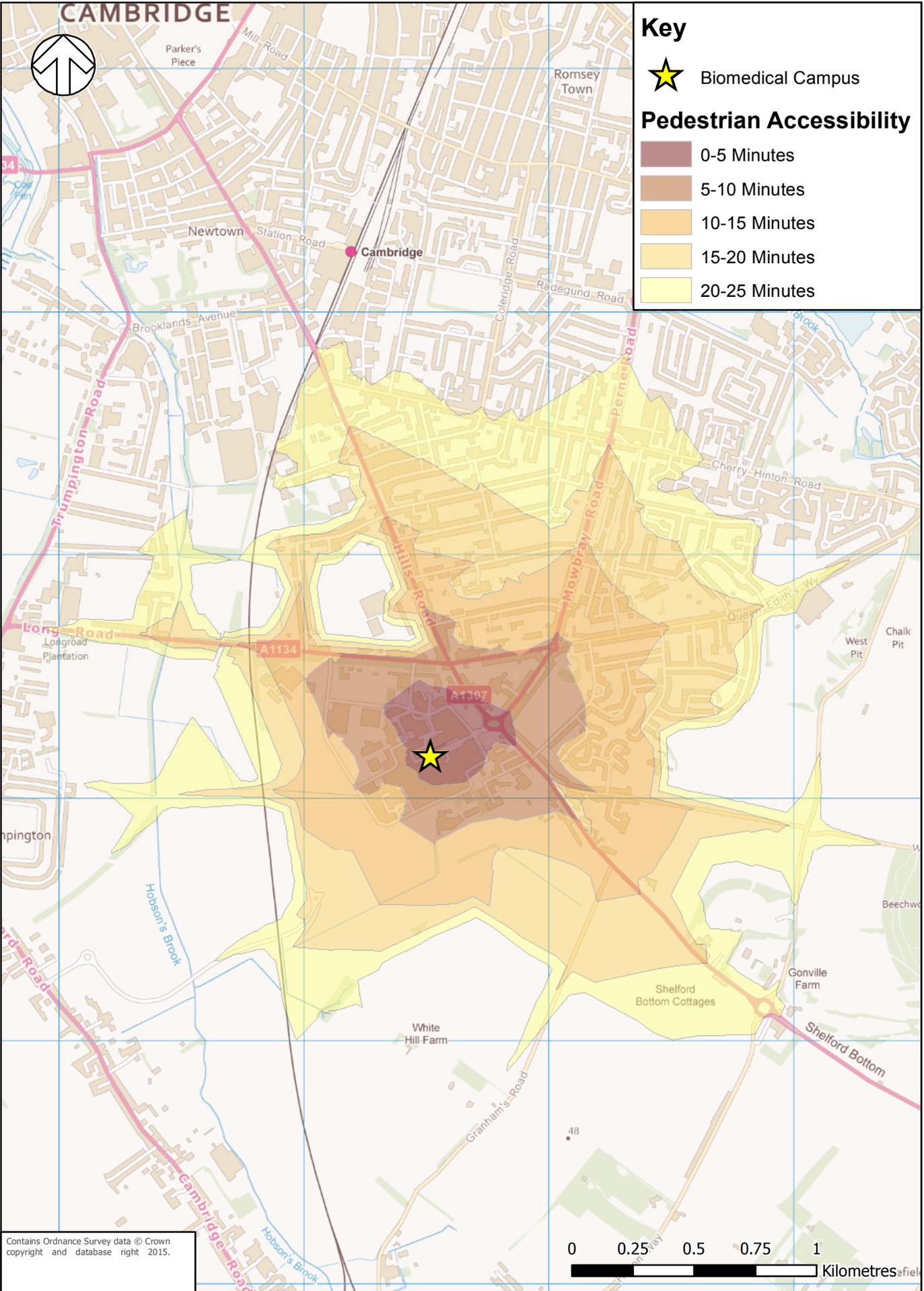


Key

★ Biomedical Campus

Pedestrian Accessibility

- 0-5 Minutes
- 5-10 Minutes
- 10-15 Minutes
- 15-20 Minutes
- 20-25 Minutes



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TITLE:
WALKING ACCESSIBILITY @ 4.8 KPH
(3.0 MPH) AT
CAMBRIDGE BIOMEDICAL CAMPUS

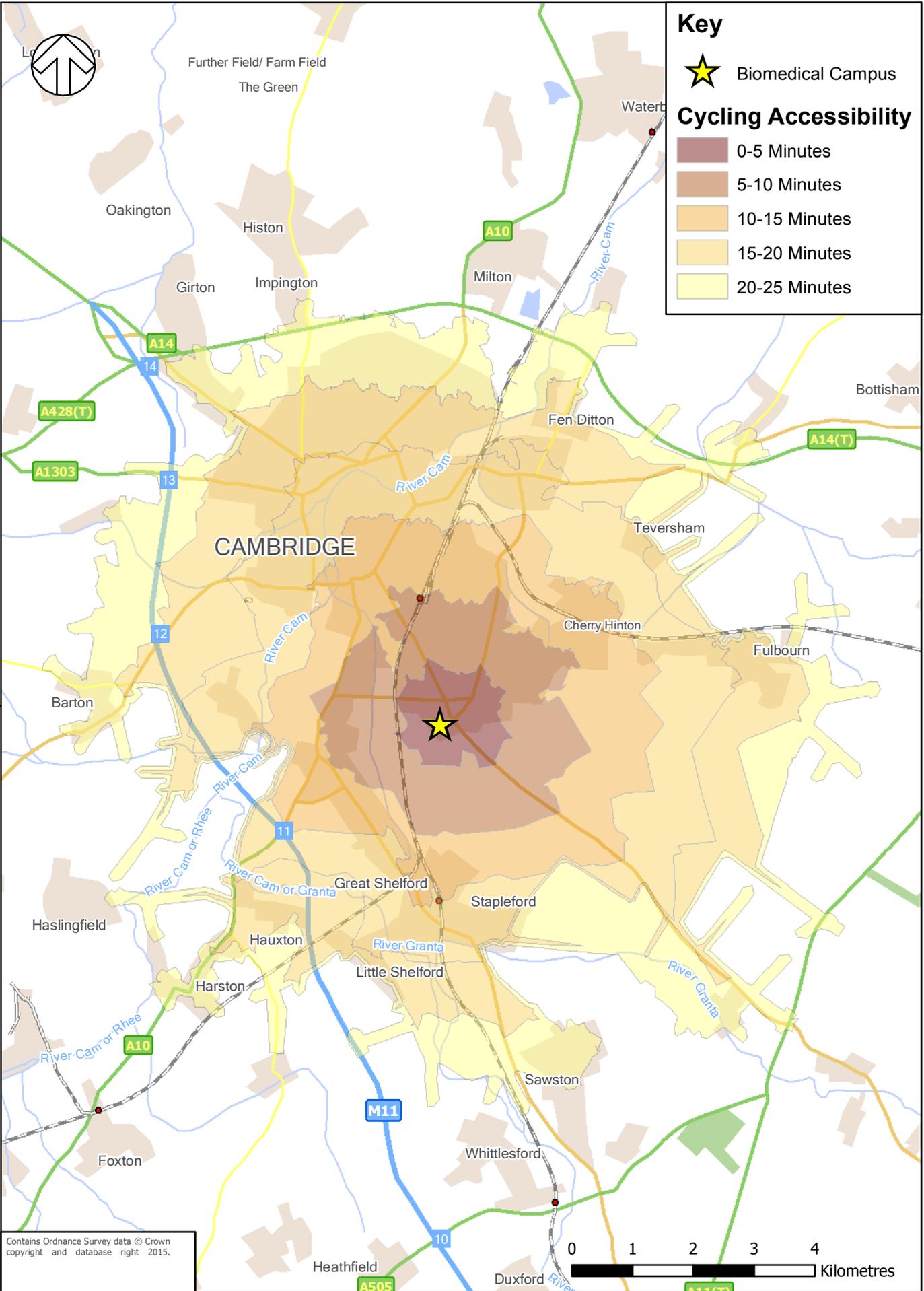
FIGURE No:
FIGURE 5

File:

Date Modified:

Drawn By:

File:



TITLE:
CYCLING ACCESSIBILITY @19.0 KPH
(12.0 MPH) AT BIOMEDICAL CAMPUS

FIGURE No:
FIGURE 6

Date Modified:

Drawn By:

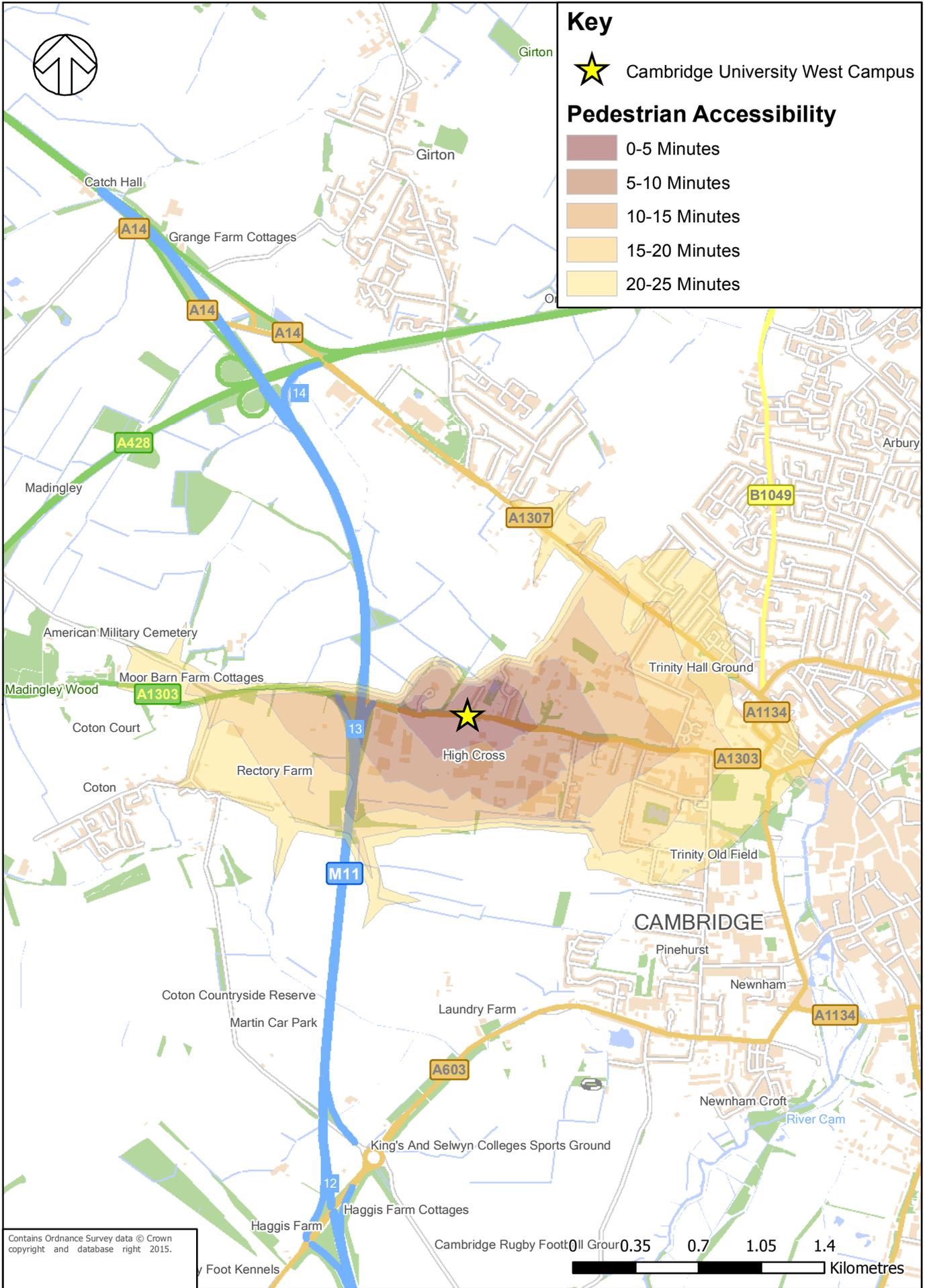


Key

Cambridge University West Campus

Pedestrian Accessibility

- 0-5 Minutes
- 5-10 Minutes
- 10-15 Minutes
- 15-20 Minutes
- 20-25 Minutes



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TITLE:
**WALKING ACCESSIBILITY @ 4.8 KPH
 (3.0 MPH) AT
 CAMBRIDGE UNIVERSITY WEST CAMPUS**

FIGURE No:
FIGURE 7

File:

Date Modified:

Drawn By:



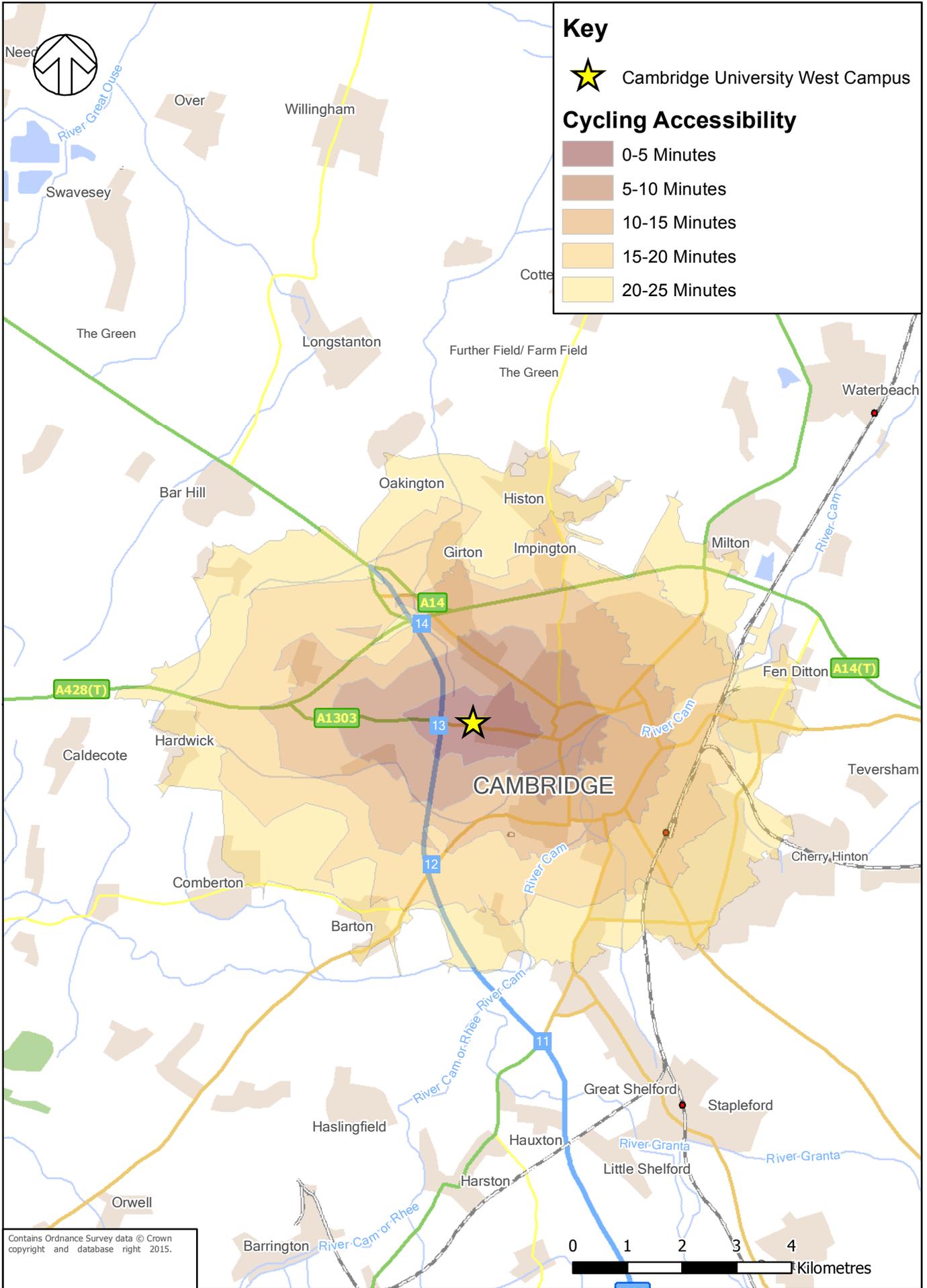
Key



Cambridge University West Campus

Cycling Accessibility

-  0-5 Minutes
-  5-10 Minutes
-  10-15 Minutes
-  15-20 Minutes
-  20-25 Minutes



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TITLE:
 CYCLING ACCESSIBILITY @ 19.0 KPH
 (12.0 MPH) AT
 CAMBRIDGE UNIVERSITY WEST CAMPUS

FIGURE No:
 FIGURE 8

File:

