

A stylized, light brown map of the North West Cambridge area is positioned on the left side of the cover, partially overlapping the light blue background. The map shows the irregular coastline and internal road network of the region.

NORTH WEST **cambridge**

Transport Assessment - Addendum
March 2012

TABLE OF CONTENTS

1.	Background and summary of discussions	2
1.1.	Introduction	2
1.2.	Correspondence with the Planning Authorities.....	2
1.3.	Form of the Addendum Report	3
2.	Correspondence with Cambridgeshire County Council.....	4
2.1.	Introduction	4
2.2.	Approval to the Transport Assessment and Framework Travel Plan	4
2.3.	Summary of outstanding issues.....	4
2.4.	Design of the Site Access Junctions.....	5
2.5.	Design of the on-site highways	7
	Highway cross sections	7
2.6.	Connectivity for walking / cycling to / from the Development	7
2.7.	Bus Strategy	8
2.8.	Other transport measures to be included in the Section 106 Agreement.....	8
3.	Correspondence with the Highways Agency.....	11
3.1.	Introduction	11
3.2.	Highways Agency acceptance of the Transport Assessment work	11
3.3.	TR110 Holding Objection.....	11
3.4.	Stage 1 Road Safety Audit – M11 J13 Southbound and Designer's Response	11
4.	Conclusions	13

1. Background and summary of discussions

1.1. Introduction

- 1.1.1 Peter Brett Associates LLP (referred to from here as Peter Brett Associates, or PBA) was commissioned by The University of Cambridge to prepare a Transport Assessment and Framework Travel Plan to accompany the application for planning permission relating to the proposed development of a site in North West Cambridge for residential, research, education, retail and various community uses. The application for planning permission (the Application) was submitted in September 2011.
- 1.1.2 This Addendum Report has been prepared to summarise the position reached following dialogue between the Joint Authorities - the highway authorities, Cambridgeshire County Council and the Highways Agency, and the planning authorities, Cambridge City Council and South Cambridgeshire District Council - and the University's Design Team - including URS (formerly URS-Scott Wilson) and Peter Brett Associates.

1.2. Correspondence with the Planning Authorities

- 1.2.1 The joint planning authorities, Cambridge City and South Cambridgeshire District Councils, issued a summary of the consultation responses to the Application in January 2012.
- 1.2.2 In relation to transport matters, the summary commented that the formative response was awaited from the Highways Agency. It identified areas of work on transport issues that were still being sought by the County Council as follows:
- design of the site access junctions;
 - design of the on-site highways;
 - adequacy of the connectivity for walking / cycling between the site and external destinations;
 - completion of the Bus Strategy; and
 - confirmation of the transport mitigation measures to be provided within the section 106 agreement.
- 1.2.3 The responses to these issues to the County Council, and other aspects, are included in Section 2 of this report.
- 1.2.4 Further discussions have been held with the Highways Agency relating to the Road Safety Audit of the M11 Junction 13, and implementation of the travel demand management measures across the University's facilities. These aspects are further considered in Sections 2 and 3 of this report.

1.3. Form of the Addendum Report

1.3.1 This Addendum Report contains the following:

- Section 2 relates to dialogue with Cambridgeshire County Council; and
- Section 3 relates to dialogue with the Highways Agency.

2. Correspondence with Cambridgeshire County Council

2.1. Introduction

- 2.1.1 This section considers the position reached in relation to the matters referred to in the previous section, for which Cambridgeshire County Council was seeking further work.

2.2. Approval to the Transport Assessment and Framework Travel Plan

- 2.2.1 Cambridge City and South Cambridgeshire District Councils, the joint planning authorities, issued a summary of consultation responses in January, 2012.
- 2.2.2 Within this summary, Cambridgeshire County Council conveyed the view that the Transport Assessment submitted with the application is a robust document, and completed to a standard acceptable to the County Council.
- 2.2.3 Similarly, the County Council has confirmed that the Framework Travel Plan has been accepted by the County Council.

2.3. Summary of outstanding issues

- 2.3.1 Following the application submission, discussions with Cambridge City and Cambridgeshire County Council, URS - Scott Wilson and Peter Brett Associates have:
- reviewed progress of the application;
 - discussed outstanding issues with the alignment and modelling of the three site access junctions;
 - discussed the adjacent JJ Thomson / Madingley Rise junction;
 - reviewed the design of streets within the proposed Development;
 - reviewed non-motorised connectivity;
 - discussed the WCMC building access; and
 - reviewed the adoption strategy and commuted sums.
- 2.3.2 The following were identified for further clarification:
- design of the site access junctions;
 - design of the on-site highways;
 - adequacy of the connectivity for walking / cycling between the site and external destinations;
 - completion of the Bus Strategy; and
 - confirmation of the transport mitigation measures to be provided within the section 106 agreement.
- 2.3.3 These five issues are considered individually in this Section, along with other matters raised separately.

2.4. Design of the Site Access Junctions

2.4.1 The matters considered in relation to the design of the Site Access Junctions may be summarised as follows:

- Stage 1 Road Safety Audits;
- responses from the CCC Traffic Signal Team;
- potential additional pedestrian / cyclist crossing of Huntingdon Road West junction;
- potential closure of the Park and Ride junction on the Madingley Road Corridor;
- assessment of an alternative staging of the Madingley Road Corridor;
- amendments to the proposed Site Access junction alignments; and
- junction capacity assessment of the revised Site Access junction arrangements.

Stage 1 Road Safety Audits and Designer's Responses

2.4.2 URS - Scott Wilson issued to the County Council Stage 1 Road Safety Audits for the three Site Access junctions. These Audits reviewed the then-current Site Access junction proposal arrangements (these alignments have been subsequently amended).

2.4.3 The Designer's Responses were also issued at the same time.

2.4.4 Although the designs have evolved since this process had been undertaken, the changes would not invalidate the conclusions of these Audits.

Responses from CCC Traffic Signal Team

2.4.5 The County Council's Traffic Signal Team provided comments relating to the Madingley Road Corridor traffic signal controlled junctions.

2.4.6 The Traffic Signals Team indicated that they were content with the TRANSYT assessment but the County Council still sought an alternative staging arrangement for the High Cross Junction. This is commented upon later in this section.

Huntingdon Road West junction - potential additional pedestrian / cyclist crossing

2.4.7 Additional information was requested by Cambridgeshire County Council Officers relating to the potential to include an additional pedestrian / cycle crossing facility on the eastern Huntingdon Road arm of the proposed Huntingdon Road West Site Access junction.

2.4.8 To cater for the additional phase, the cycle time would need to be extended. Whilst this would increase mean maximum queues, it does not create any significantly increased potential for queues to extend back and influence the A14 to the west.

2.4.9 It has therefore been concluded that the inclusion of a crossing facility on the western Huntingdon Road arm of the junction can be incorporated without significantly affecting the capacity of the junction.

Madingley Road Corridor - potential closure of the Park and Ride junction

- 2.4.10 Additional information was requested by Cambridgeshire County Council Officers relating to a possible alternative access arrangement option within the Madingley Road Corridor. This assumed that the Park and Ride Access was closed, and that an alternative access was formed from the North West Cambridge Site Access at the High Cross Junction. This assessment compared the results contained in the Transport Assessment against those obtained from this new assessment.
- 2.4.11 When the junction capacity assessment results of the alternative junction arrangement were compared to the results of the proposed junction arrangement, it was noticeable that the alternative junction arrangement operates significantly worse than the original proposal. The additional queuing from the alternative junction would potentially block back to the adjacent M11 J13 junctions, and the degrees of saturation would be in excess of the accepted threshold of 100%.
- 2.4.12 It has therefore been concluded that whilst the removal of the Park and Ride Access may have some benefit in terms of the urban land form, it would have a significant and detrimental impact upon the capacity of the High Cross Junction. It was therefore concluded that this alternative should not be considered further.

Madingley Road Corridor – assessment of an alternative staging

- 2.4.13 At the request of the Cambridgeshire County Council Traffic Signals Team Officers, an alternative signal setting for the High Cross junction along the Madingley Road Corridor was considered. This involved comparing the results contained in the Transport Assessment against those obtained from a new assessment.
- 2.4.14 It was concluded that both variations of the traffic signal settings - i.e. the original signal settings summarised in the Transport Assessment, and the proposed County Council signal settings - work within capacity. When the junction capacity assessment results of the alternative six stage signal settings are compared to the results of the proposed five stage settings, these are very similar, albeit the former having a marginally better performance.
- 2.4.15 It has therefore been concluded that either stage settings would be acceptable for the High Cross junction, this could be confirmed at detailed design stage based on the design and safety requirements.

Amendments to the Site Access junctions

- 2.4.16 In order to respond to changes requested by Cambridgeshire County Council officers, URS has revised the following Site Access junction drawings all dated February 2012:
- Huntingdon Road West - Illustrative Junction Plan 1;
 - Huntingdon Road East - Illustrative Junction Plan 2;
 - Madingley Road West - Illustrative Junction Plan 3; and
 - Madingley Road East - Illustrative Junction Plan 4.
- 2.4.17 These drawings are contained in Appendix 2.1.

Junction capacity assessment of the revised Site Access junction arrangements

- 2.4.18 An updated capacity assessment has been undertaken of the first three of the abovementioned revised North West Cambridge Development Site Access junctions. No further assessment has been undertaken of the changes to the Madingley Road East junction, as the proposals still reflect the junction form assessed in the Transport Assessment.
- 2.4.19 It was concluded that when the junction capacity assessment results of the revised junction arrangements are compared to the assessment results of the original junction arrangements, there are only minimal changes in queue lengths and degrees of saturation. These minimal changes can be accommodated within the revised junction arrangements.
- 2.4.20 It was therefore concluded that the revisions to the junction arrangements would have no impact in terms of capacity from the junction capacity assessment work previously reviewed and approved by Cambridgeshire County Council.

2.5. Design of the on-site highways

Highway cross sections

- 2.5.1 The Authorities sought amendments to the configuration of proposed on-site vehicle routes to reduce vehicle speeds.
- 2.5.2 The County Council also sought the reversal of the position of cycle lanes and parking / trees in order to permit trees and parking bays to be positioned adjacent to the carriageway and for cyclists to be afforded greater protection.
- 2.5.3 Aecom has prepared three typical illustrative road sections to respond to this (contained in Appendix 2.2) of the:
- Typical Primary Street Section;
 - Typical Secondary Street Section; and
 - Typical Tertiary Street Section.

WCMC Building Link

- 2.5.4 Further details were requested by the County Council relating to the proposed internal highway access route passing the World Conservation Monitoring Centre (WCMC) Building. These are provided on URS drawing D127313-SK-018, contained in Appendix 2.3.

2.6. Connectivity for walking / cycling to / from the Development

- 2.6.1 Further details were requested by the Authorities relating to the connections of the Ridgeway to the surrounding cycleway network. Further information is provided at:

North West Cambridge

Addendum Report – Response to matters raised by the Highways Authorities

- at the northern end of the Ridgeway, along Bunkers Hill – URS drawing D127313-SK-059;
- Link from Bunkers Hill towards Girton - URS drawing D127313-SK-059;
- at the southern end of the Ridgeway, along Storey's Way - URS drawing D127313-SK-060; and
- Huntingdon Road - improved cycle facilities between Girton Road and the Huntingdon Road West junction - URS Illustrative Junction Plan 1 Huntingdon Road West.

2.6.2 These plans are contained in Appendix 2.4.

2.6.3 These measures would ensure quality connections between the Development and the existing local cycle facilities.

2.7. Bus Strategy

2.7.1 The proposed public transport strategy was summarised in Section 8 of the Transport Assessment, issued in September 2011 along with the Application.

2.7.2 To enable the County Council to approve this proposed strategy, the County Council sought evidence that the proposals were sustainable, and to inform the contribution proposed within the Section 106 Agreement.

2.7.3 A Bus Strategy Viability Report has been prepared by Peter Brett Associates, and is currently being considered by the highway authorities.

2.8. Other transport measures to be included in the Section 106 Agreement

Implementation of the University's Site Wide Travel Plan

2.8.1 Cambridgeshire County Council, the University of Cambridge, Cambridgeshire Travel to Work Partnerships, and Peter Brett Associates have discussed the implementation of the University's Site Wide Travel Plan. This is integral to the proposed mitigation strategy for the Development as identified in Section 19 of the Transport Assessment entitled "Further Travel Management Measures". The delivery of these measures reflected the fifth area of concern of the County Council.

2.8.2 A copy of the proposed University of Cambridge Site Wide Travel Plan 2011 was forwarded to the County Council. This Plan had been ratified by the University in July 2011. A copy of this document is contained in Appendix 2.5.

2.8.3 The University's Site-Wide Travel Plan will be implemented as the Academic and Commercial Research areas of the North West Cambridge Development are occupied.

2.8.4 The Highways Agency has indicated that it agrees with the transport strategy for the site and the concept of the 'trip banking' associated with additional University wide travel plan measures. Nevertheless, the Highways Agency has also indicated that if the trip banking measures contained within the University Site Wide Travel Plan do not deliver the mode shifts anticipated, the Agency will seek the delivery of improvements to the M11 J13 Southbound Enhancements – either the provision of ramp metering, or the physical enhancements to the slip road (or a combination of both) shown on Transport Assessment Figure 16.

2.8.5 In order to address the concerns of the Highways Agency:

- in the University's latest Travel Plan, the University identified that the Cambridgeshire Travel for Work Partnerships undertakes travel to work surveys of all staff members in their facilities throughout Cambridge on an annual basis in October, the start of the academic year. The Travel for Work Partnership, or another suitable organisation, would undertake this work in the future;
- to enable a comparison between the existing and future travel patterns, the University will endeavour to capture data from members of staff travelling along the A14 corridor to/from the north-west in October each year. The survey will be undertaken over the course of a week, to establish any day-to-day variation throughout the week;
- the first survey of staff travelling along the A14 corridor to/from the north-west will be undertaken in the first October after the consent, to provide the base line against which future year travel patterns will be measured;
- from the first October after the first occupation of the Academic and Commercial Research development, the University will repeat the survey each October until the anticipated Development completion in 2026;
- the delivery of the M11 Junction 13 Southbound Enhancements, either ramp metering, physical enhancements or a combination of both, would be triggered up to 2026 should the Future year number of University-related vehicles along the A14 to the north-west of the M11 Junction 14 (ignoring the generation from the North West Cambridge Development) in the AM peak be less than 200 vehicles lower than the number surveyed for the Base year for three surveys in succession.

Windsor Road / Oxford Road traffic management proposals

2.8.6 As reported in Section 19 of the Transport Assessment, the CSRM identified increases in vehicle trips through the Oxford Road / Windsor Road residential estate, presumably from vehicle trips reassigning around the Huntingdon Road / Victoria Road / Castle Street junction. The Transport Assessment reviewed these effects, and concluded that although the CSRM is resilient (indeed, potentially over-stating effects) in modelling the effects of the Development across the network area, the modelling of this particular small area is potentially insufficiently sensitive. To demonstrate that the University would manage any traffic impact of this Development, a cyclic monitoring strategy had been proposed, and should this monitoring work identify that an increase in vehicle trips is actually happening, a fund will be provided to be expended on enhancing the traffic calming scheme to ensure that any increase in movement can be contained.

2.8.7 Following discussions with the County Council, it was agreed that a scheme would be prepared identifying the potential traffic calming measures which could be implemented at the wish of the local residents without recourse to any traffic monitoring. This scheme, shown on drawing 23035/045/SK002 (enclosed in Appendix 2.6) includes for:

- enhanced traffic signing at the entries to Oxford Road / Windsor Road;
- reversing the priority of an existing give-way throttle; and
- the provision of four one-way throttles along Oxford Road.

Framework Parking Management Plan

2.8.8 As part of the travel management measures summarised in the Transport Assessment to reduce car usage, the Development included a parking strategy to provide a number of car parking spaces lower than the Area Action Plan requirements.

- 2.8.9 Whilst the Joint Authorities accept this strategy, concerns were expressed that failure to supply adequate parking within the site might lead to an overflow of parking in the surrounding uncontrolled streets, and give rise to people parking in locations which might harm the amenity of the Development.
- 2.8.10 In order to provide further information to the proposed parking regime on the Development, a Framework Parking Management Plan has been prepared. This identifies the parking regime to be applied for each land use, and the manner of control. It also highlights the University's commitment to delivering a Controlled Parking Zone across surrounding existing development to protect surrounding communities from overspill parking.
- 2.8.11 This Plan is contained in Appendix 2.7.

3. Correspondence with the Highways Agency

3.1. Introduction

- 3.1.1 This section considers transport-related correspondence between the University's Design Team and Cambridgeshire County Council.

3.2. Highways Agency acceptance of the Transport Assessment work

- 3.2.1 The Highways Agency has confirmed that the Transport Assessment is acceptable, albeit that there were issues to resolve relating to the Road Safety Audit of the proposed M11 Junction 13 Southbound mitigation enhancements, and a condition. This email is enclosed in Appendix 3.1.

3.3. TR110 Holding Objection

- 3.3.1 As usual while the Highways Agency is completing its consideration of application material, it has issued a TR110 Holding Direction to the planning authority.

3.4. Stage 1 Road Safety Audit – M11 J13 Southbound and Designer's Response

- 3.4.1 The Highways Agency requested a Stage 1 Road Safety Audit of the M11 Junction 13 Southbound mitigation enhancements. This was prepared by the independent URS – Scott Wilson Audit Team in November 2011.
- 3.4.2 The Audit identified two potential issues:
- potential restriction to forward visibility due to thick vegetation; and
 - that a Departure from Standard would potentially be required as there is inadequate weaving length between M11 Junctions 13 and 12.
- 3.4.3 Peter Brett Associates has provided a Designer's Response to the issues identified in the Stage 1 Road Safety Audit.
- 3.4.4 This response has confirmed that:

- full forward visibility can be provided within the existing paved area of the slip road. This therefore complies with the forward visibility standards as listed in TD9/06. As part of the works contract the University will remove any vegetation from the highway verge that could potentially interfere with the forward visibility, to a scheme agreed with the Highways Agency;
- when the Parallel Merge weaving length criteria is considered with reference to TD22/06 Figures 4/9A and 4/9B, the proposed notional merge taper is the equivalent of the existing merge taper, measured as approximately 1.36km. The proposals therefore do not reduce the existing weaving length. As the existing weaving length is the same, the Design Team suggested that a departure from standard would not be required.

4. Conclusions

- 4.1 This Addendum Report has been prepared to summarise the position reached following dialogue between the Joint Authorities - the highway authorities, Cambridgeshire County Council and the Highways Agency, and the planning authorities, Cambridge City Council and South Cambridgeshire District Council - and the University's Design Team - including URS (formerly URS-Scott Wilson) and Peter Brett Associates.
- 4.2 Both the Highways Agency and Cambridgeshire County Council have confirmed that they consider the Transport Assessment and Framework Travel Plan submitted with the application to be robust.
- 4.3 Following dialogue between the County Council and the University of Cambridge's Design Team following the submission of the application, five issues were raised for further clarification. The information subsequently submitted to the Joint Authorities would provide sufficient information for the Joint Authorities to respond positively to these matters.
- 4.4 Similarly, following dialogue between the Highways Agency and the University of Cambridge's Design Team, positive responses have been made to the matters raised by the Highways Agency.

North West Cambridge

Addendum Report – Response to matters raised by the Highways Authorities

North West Cambridge

Addendum Report – Response to matters raised by the Highways Authorities

Appendix 2.1

Huntingdon Road West - Illustrative Junction Plan 1

Huntingdon Road East - Illustrative Junction Plan 2

Madingley Road West - Illustrative Junction Plan 3

Madingley Road East - Illustrative Junction Plan 4

Staging At Huntington Road West

STAGE 1

STAGE 2

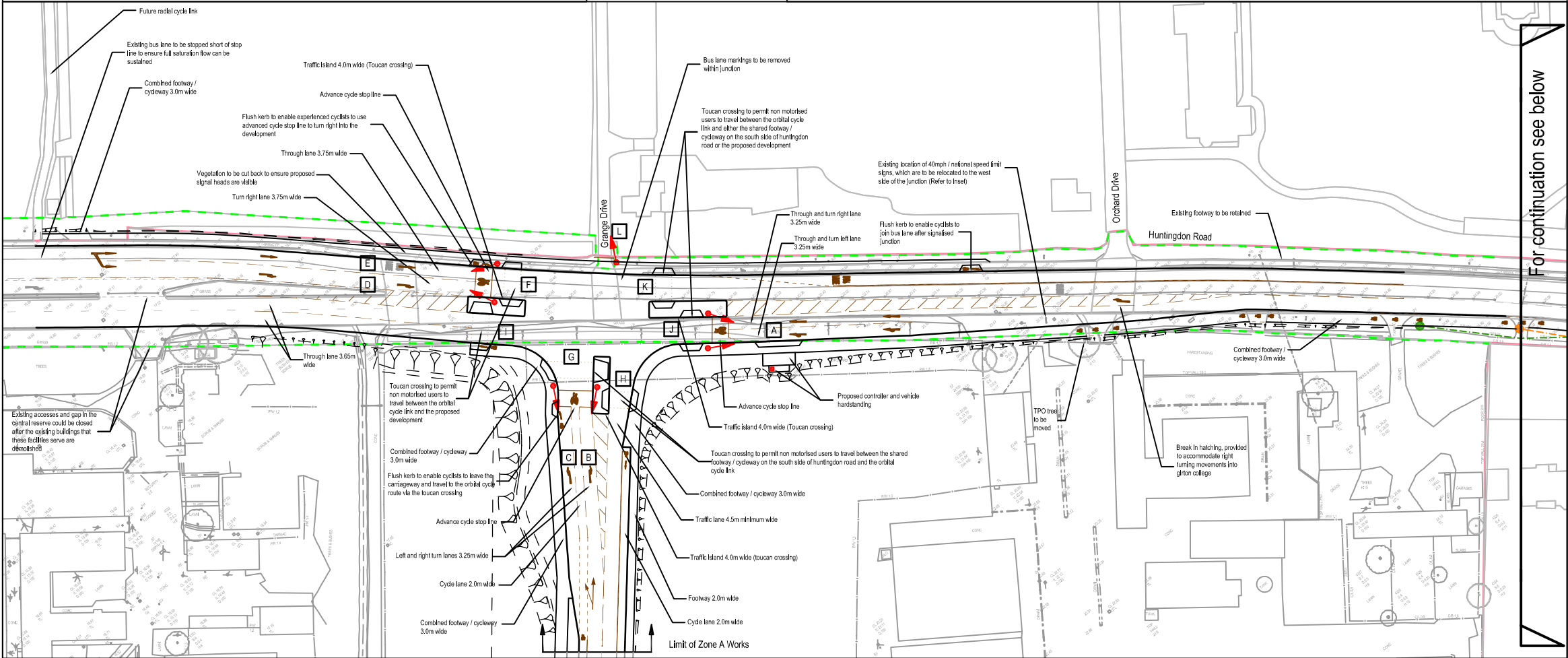
STAGE 3

STAGE 4

STAGE 5

DEMAND ACTIVATED STAGE TO
RELEASE GRANGE DRIVE

NOTE :- STAGE 5 TO BE CALLED BETWEEN STAGES 2 - 3 OR 3 - 1 ONLY.



Scale :- 1:2500 at A3

Contextual Information :

- Roadmarkings
- Highway land boundary
- Visibility Splay
- Signal Heads
- Flush Kerbs

Carriageway works would be undertaken within the application site boundary wherever junction works are proposed and extend beyond the markings for junction works. The exact extent of carriageway works to be the subject of a condition.

For approval :

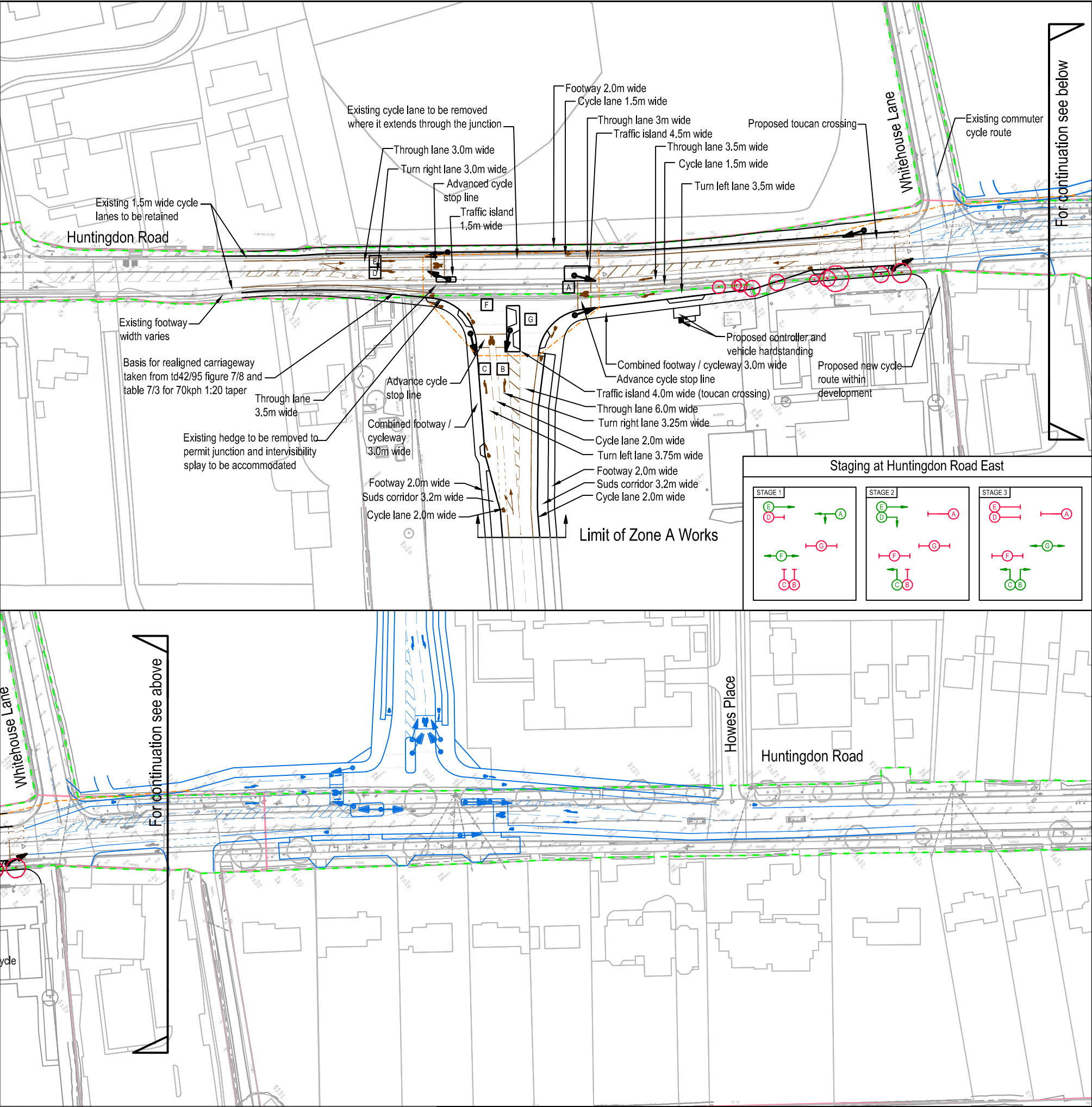
- Application site boundary
- Junction works

1. All dimensions are in metres unless noted otherwise.
2. Secondary signal heads and other associated traffic signal infrastructure omitted for clarity.


UNIVERSITY OF CAMBRIDGE



Reproduced from Ordnance Survey digital map data ©
 Crown Copyright 2011. All rights reserved. Licence Number 0100031673



KEY

Contextual Information :

- Roadmarkings
- Highway land boundary
- Visibility Splay
- NIAB site access
- Existing tree to be removed
- Signal Heads
- Flush Kerbs

Carriageway works would be undertaken within the application site boundary wherever junction works are proposed and extend beyond the markings for junction works. The exact extent of carriageway works to be the subject of a condition.

For approval :

- Application site boundary
- Junction works

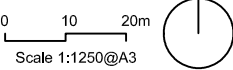
NOTES

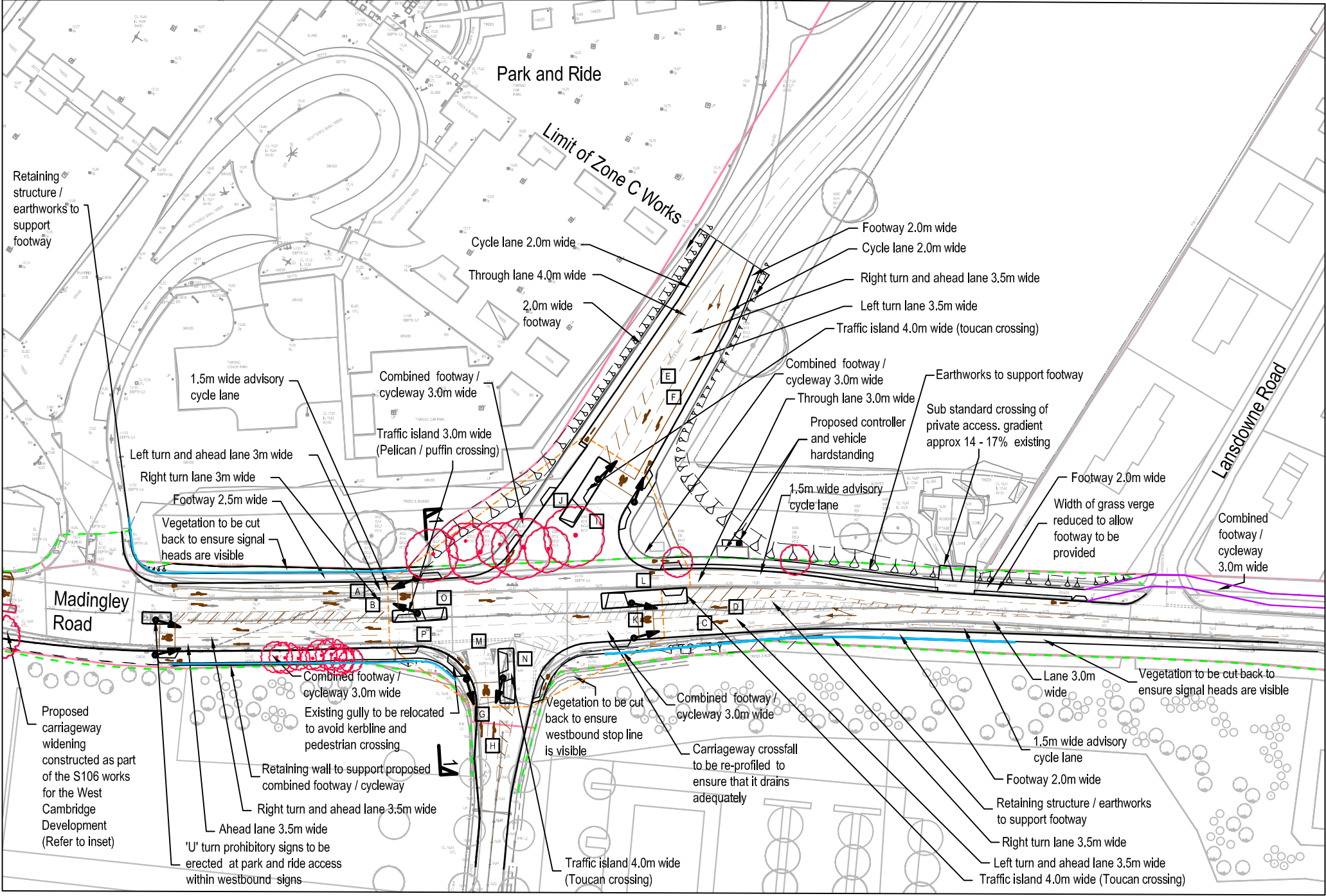
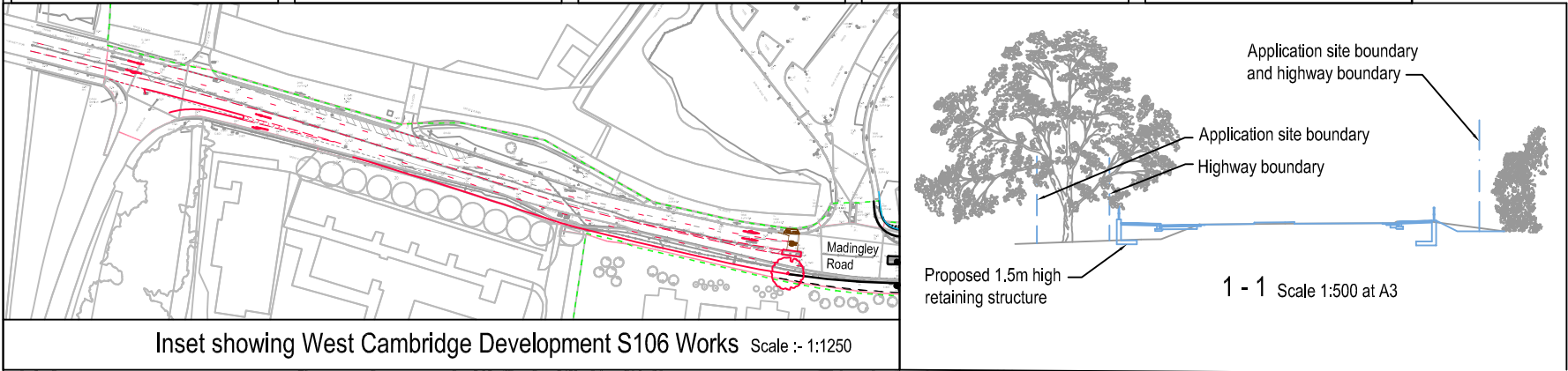
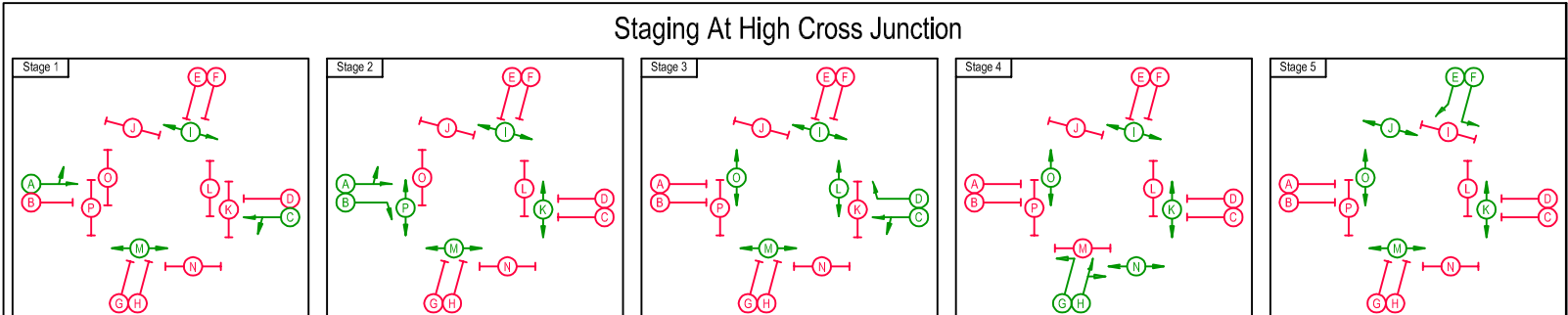
- All dimensions are in metres unless noted otherwise.
- Secondary signal heads and other associated traffic signal infrastructure omitted for clarity.

Contextual information only not forming part of application

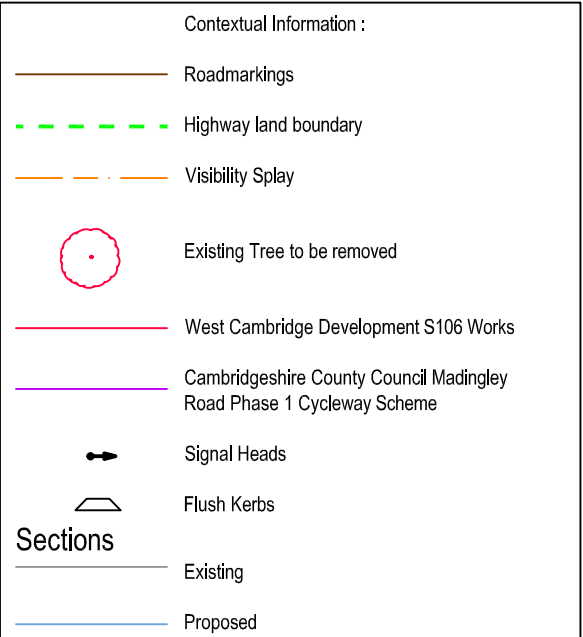
North West Cambridge
Illustrative Junction Plan 2 - Huntingdon Road Junction East

February 2012





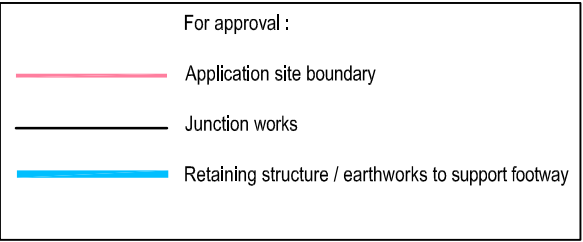
KEY



Carriageway works would be undertaken within the application site boundary wherever junction works are proposed and extend beyond the markings for junction works. The exact extent of carriageway works to be the subject of a condition.

The footway/cycleway shown on this drawing includes (and seeks permission for) elements already forming part of Cambridgeshire County Council Madingley Road Phase 1 Cycleway Scheme. It is envisaged that those elements will be constructed by the County Council as currently proposed and that footways and/or cycleways newly proposed by the University will be tied into elements provided under that scheme. Details of any tie in would be for approval under condition.

The traffic signal infrastructure for the park and ride junction will be replaced as part of the proposals.



NOTES

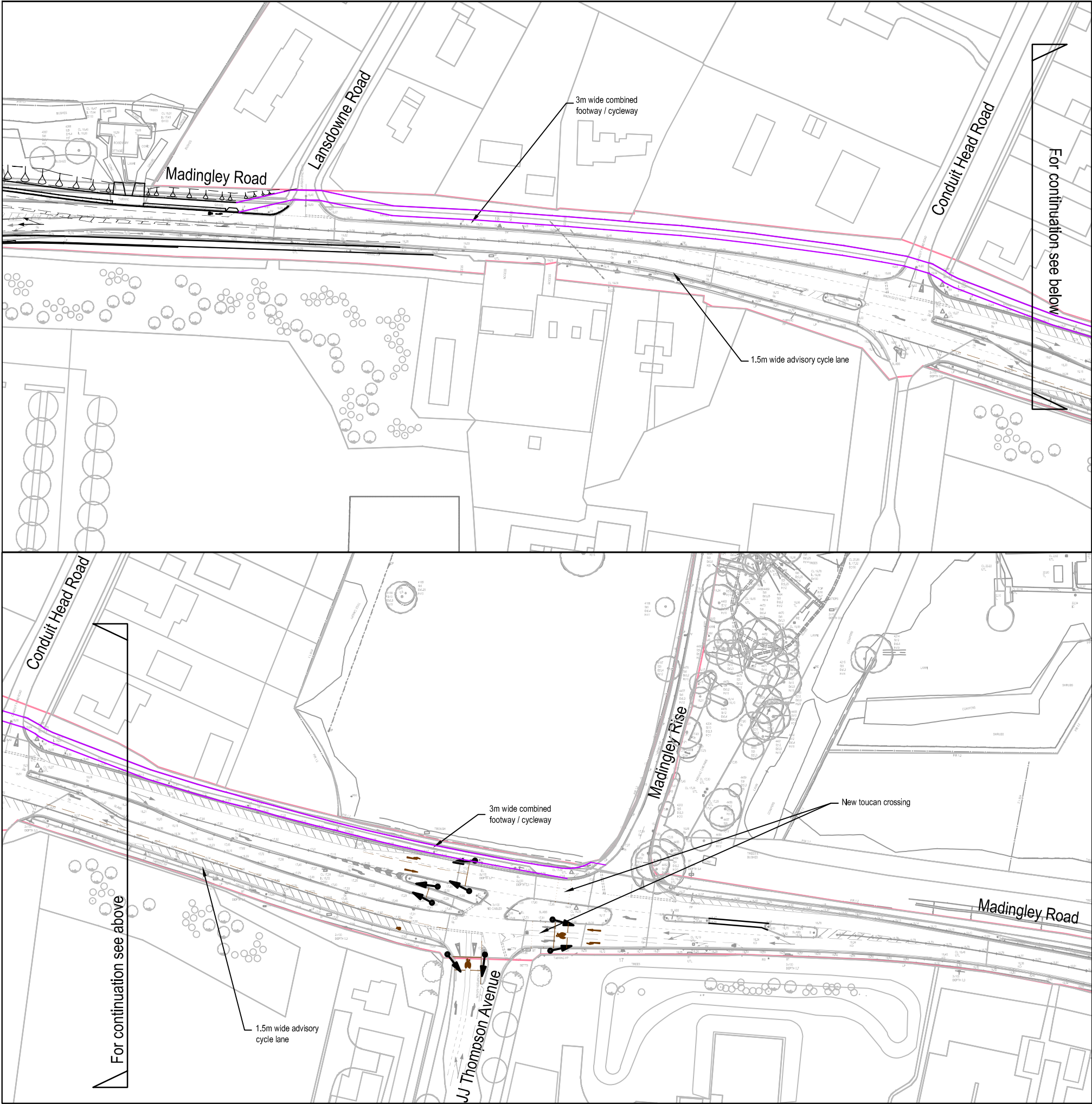
- All dimensions are in metres unless noted otherwise.
- Secondary signal heads and other associated traffic signal infrastructure omitted for clarity.
- All movements will be select vehicle detection capable, to generate a green aspect to oncoming buses.

Contextual information only not forming part of application

North West Cambridge

Illustrative Junction Plan 3 - Madingley Road Junction West

February 2012



KEY

Contextual Information :

Roadmarkings

Cambridgeshire County Council Madingley Road Phase 1 Cycleway Scheme

Signal Heads

Carriageway works would be undertaken within the application site boundary wherever junction works are proposed and extend beyond the markings for junction works. The exact extent of carriageway works to be the subject of a condition.

The footway/cycleway shown on this drawing includes (and seeks permission for) elements already forming part of Cambridgeshire County Council Madingley Road Phase 1 Cycleway Scheme. It is envisaged that those elements will be constructed by the County Council as currently proposed and that footways and/or cycleways newly proposed by the University will be tied into elements provided under that scheme. Details of any tie in would be for approval under condition.

Pedestrian crossings and traffic signals to be provided by the University, unless provided beforehand by West Cambridge.

For approval :

Application site boundary

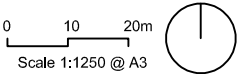
Junction works

Contextual information only not forming part of application

North West Cambridge

Illustrative Junction Plan 4 - Madingley Road Junction East

February 2012



North West Cambridge

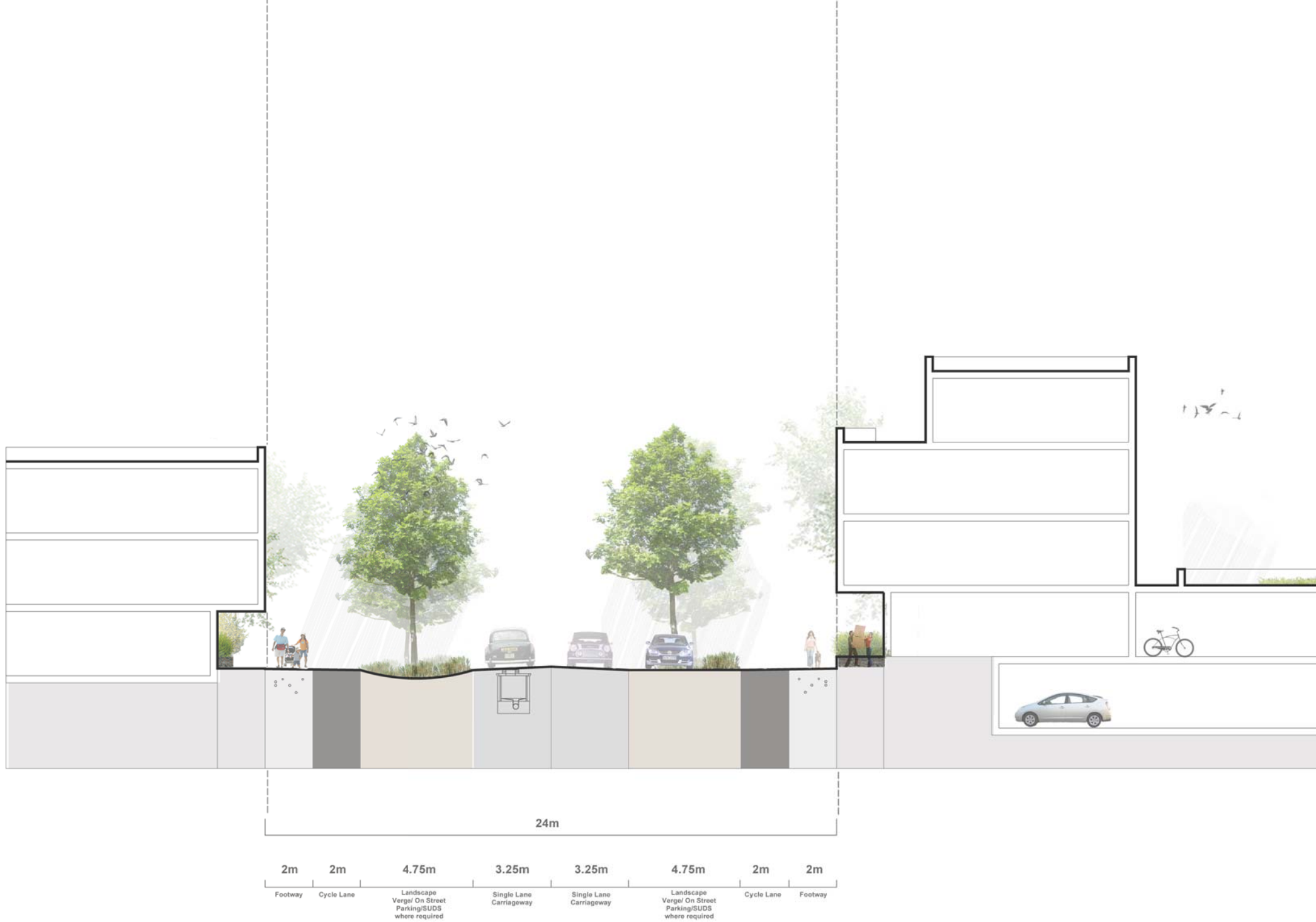
Addendum Report – Response to matters raised by the Highways Authorities

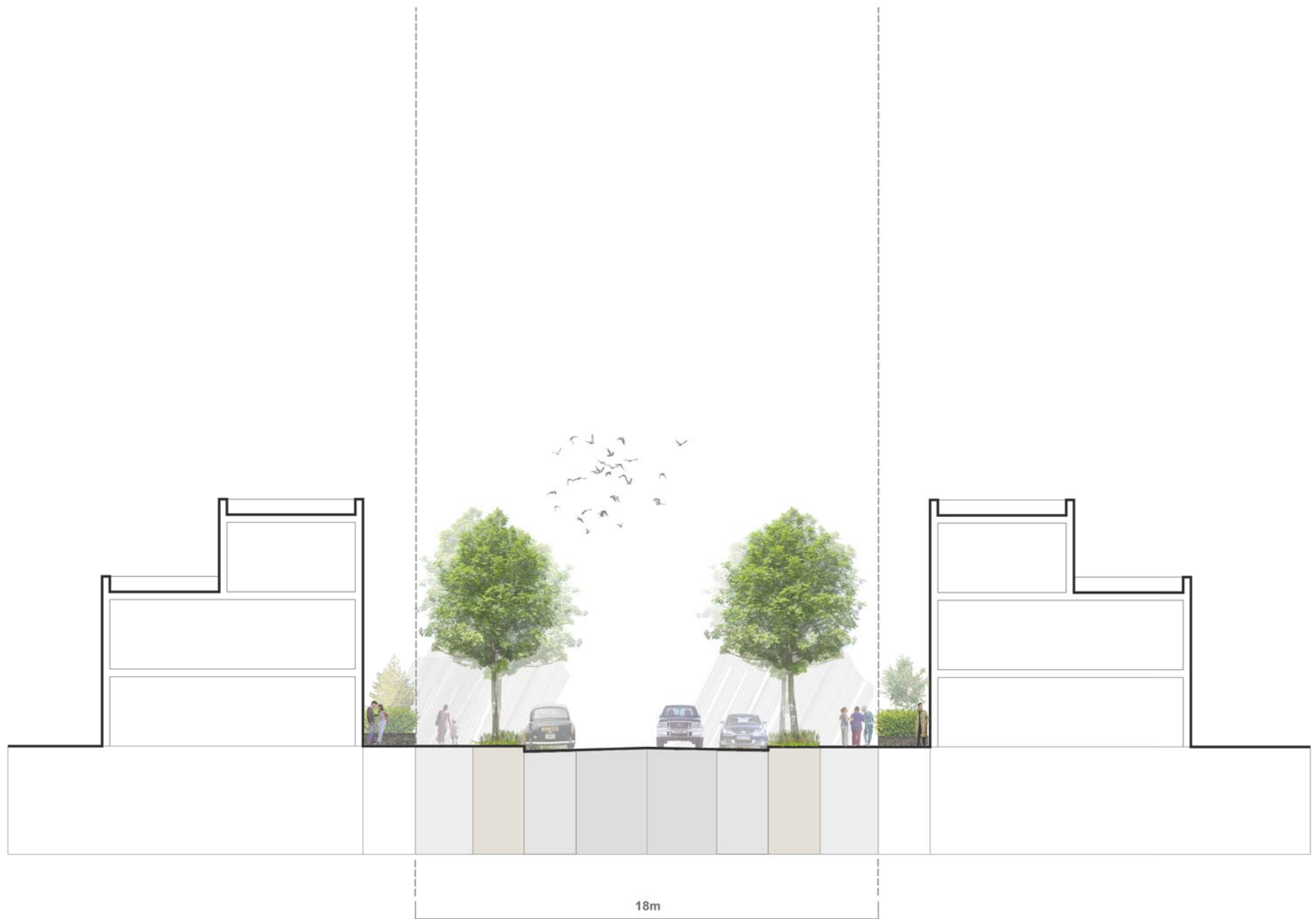
Appendix 2.2

Typical Primary Street Section

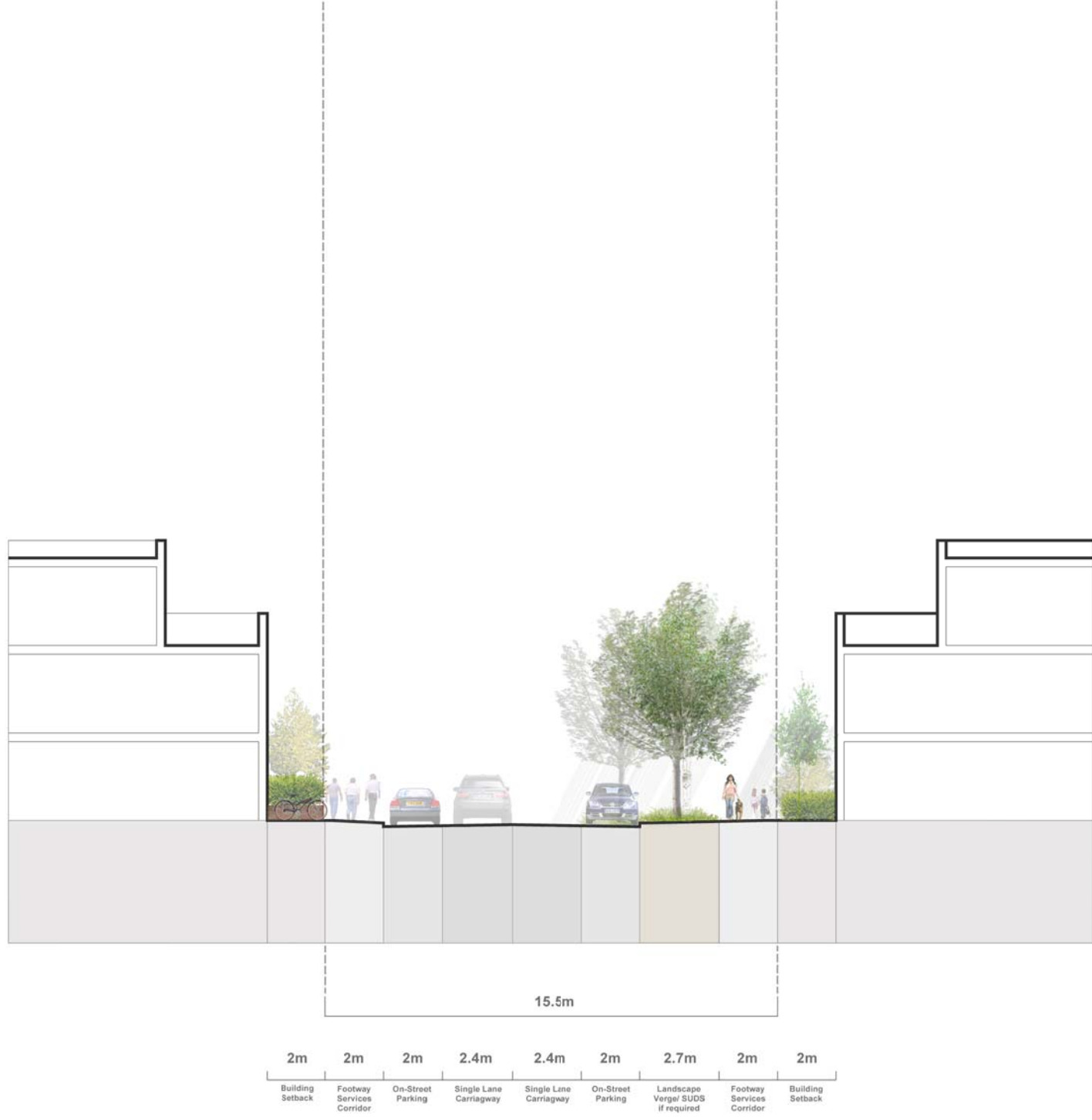
Typical Secondary Street Section

Typical Tertiary Street Section





2m	2.25m	2m	2m	2.75m	2.75m	2m	2m	2.25m	2m
Front Garden/ Setback	Footway Services Corridor	Landscape Verge	On-Street Parking	Single Lane Carriageway	Single Lane Carriageway	On-Street Parking	Landscape Verge	Footway Services Corridor	Front Garden/ Setback



North West Cambridge

Addendum Report – Response to matters raised by the Highways Authorities

Appendix 2.3

WCMC Link – D127373-SK-018 Revision D

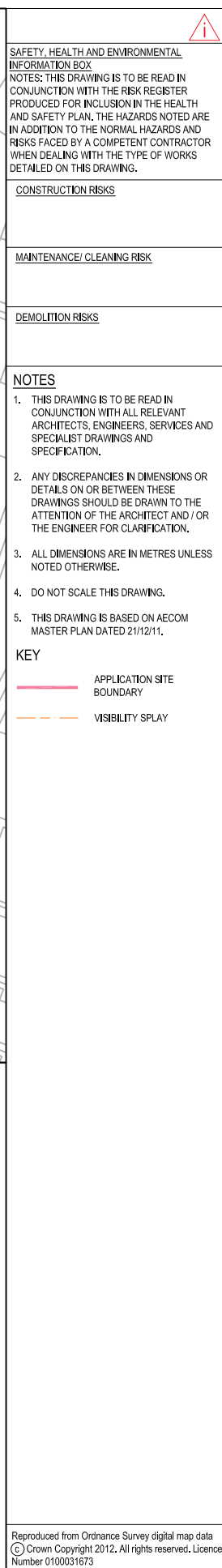
North West Cambridge



Addendum Report – Response to matters raised by the Highways Authorities

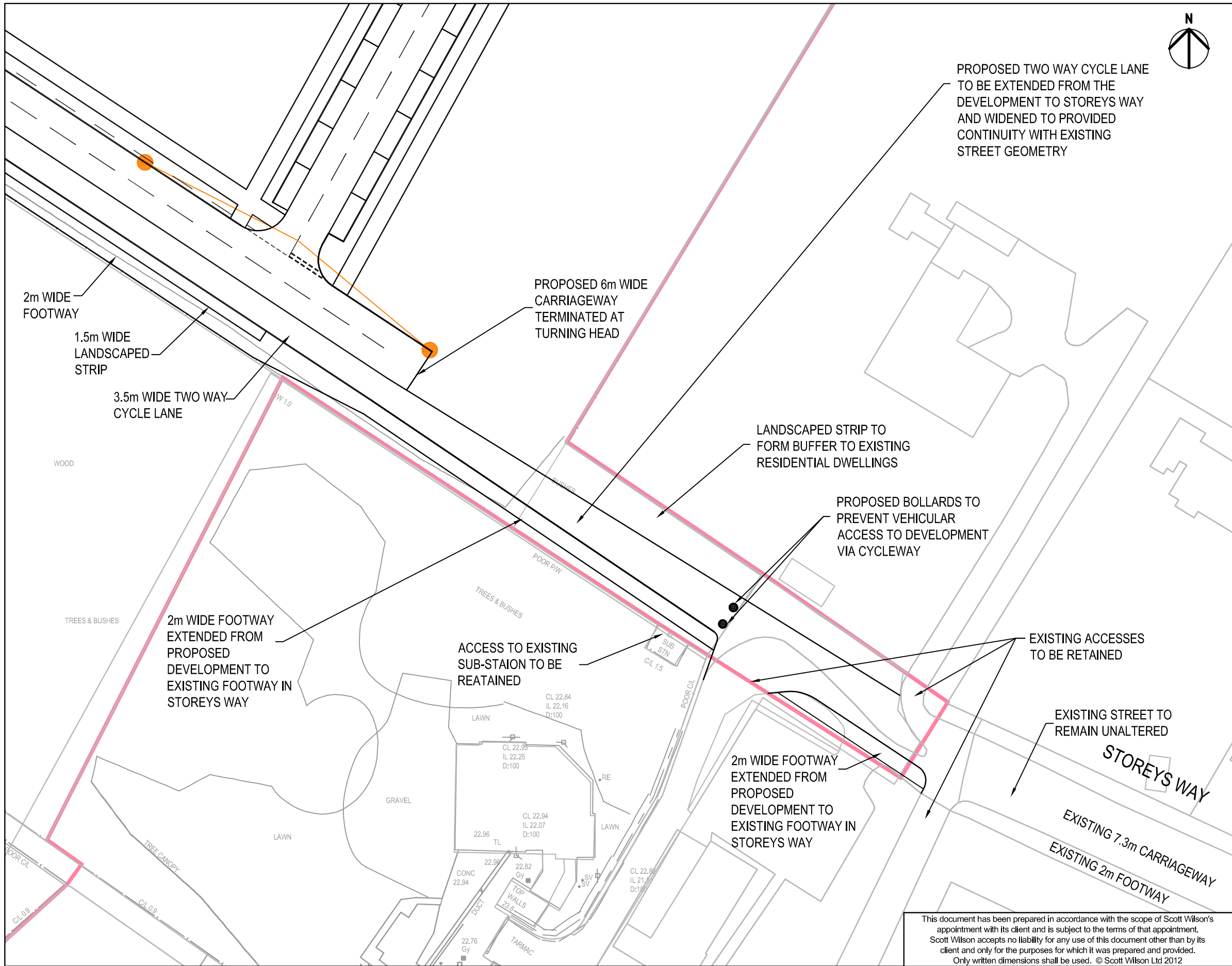
Appendix 2.4

Ridgeway Link around Bunkers Hill - D127313-SK-059 Revision B

Southern End of the Ridgeway - D127313-SK-060 Revision A



Client	Job Title	Drawing Title	Scale at A1 1:500 AND 1:1000 AT A3	URS Scott Wilson Ltd	URS		
 <div>UNIVERSITY OF CAMBRIDGE</div>	NORTH WEST CAMBRIDGE	BUNKERS HILL PROPOSED NON MOTORISED USER ROUTE	Drawn SH	Approved DAJS	Scott House Alençon L'Park, Basingstoke Hampshire, RG21 7PP Telephone (01256) 310200 Fax (01256) 310201 www.urs-scottwilson.com		
			Stage 1 check JR	Stage 2 check -	Originated BAS		Date JAN 12
			This document has been prepared in accordance with the scope of URS Scott Wilson Ltd appointment with its client and is subject to the terms of that appointment. URS Scott Wilson Ltd accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided. Only within dimensions shall be used. © URS Scott Wilson Ltd 2012				
			Drawing Number D127313-SK-059				Rev B



- Reproduced from Ordnance Survey digital map data
 © Crown Copyright 2012. All rights reserved. Licence
 Number 0100031673

Client

UNIVERSITY OF
CAMBRIDGE

Drawing Title

NORTH WEST CAMBRIDGE

STOREYS WAY
PROPOSED JUNCTION NON MOTORISED USER ROUTE

D127313-SK-060

Scale at A3 : 1:500

Drw SH

	App	BM
1	1.00	1.00
2	0.99	0.99
3	0.98	0.98
4	0.97	0.97
5	0.96	0.96
6	0.95	0.95
7	0.94	0.94
8	0.93	0.93
9	0.92	0.92
10	0.91	0.91
11	0.90	0.90
12	0.89	0.89
13	0.88	0.88
14	0.87	0.87
15	0.86	0.86
16	0.85	0.85
17	0.84	0.84
18	0.83	0.83
19	0.82	0.82
20	0.81	0.81
21	0.80	0.80
22	0.79	0.79
23	0.78	0.78
24	0.77	0.77
25	0.76	0.76
26	0.75	0.75
27	0.74	0.74
28	0.73	0.73
29	0.72	0.72
30	0.71	0.71
31	0.70	0.70
32	0.69	0.69
33	0.68	0.68
34	0.67	0.67
35	0.66	0.66
36	0.65	0.65
37	0.64	0.64
38	0.63	0.63
39	0.62	0.62
40	0.61	0.61
41	0.60	0.60
42	0.59	0.59
43	0.58	0.58
44	0.57	0.57
45	0.56	0.56
46	0.55	0.55
47	0.54	0.54
48	0.53	0.53
49	0.52	0.52
50	0.51	0.51
51	0.50	0.50
52	0.49	0.49
53	0.48	0.48
54	0.47	0.47
55	0.46	0.46
56	0.45	0.45
57	0.44	0.44
58	0.43	0.43
59	0.42	0.42
60	0.41	0.41
61	0.40	0.40
62	0.39	0.39
63	0.38	0.38
64	0.37	0.37
65	0.36	0.36
66	0.35	0.35
67	0.34	0.34
68	0.33	0.33
69	0.32	0.32
70	0.31	0.31
71	0.30	0.30
72	0.29	0.29
73	0.28	0.28
74	0.27	0.27
75	0.26	0.26
76	0.25	0.25
77	0.24	0.24
78	0.23	0.23
79	0.22	0.22
80	0.21	0.21
81	0.20	0.20
82	0.19	0.19
83	0.18	0.18
84	0.17	0.17
85	0.16	0.16
86	0.15	0.15
87	0.14	0.14
88	0.13	0.13
89	0.12	0.12
90	0.11	0.11
91	0.10	0.10
92	0.09	0.09
93	0.08	0.08
94	0.07	0.07
95	0.06	0.06
96	0.05	0.05
97	0.04	0.04
98	0.03	0.03
99	0.02	0.02
100	0.01	0.01

Rev A

Chk	JR
-----	----

Date JAN 12

Date FEB 12



www.urs-scottwilson.com

Appendix 2.5

University of Cambridge Travel Plan 2011

UNIVERSITY OF CAMBRIDGE

TRAVEL PLAN 2011

1. **Background**

Introduction

- 1.1 A travel plan is a package of measures aimed at promoting sustainable travel within an organisation, with an emphasis on reducing reliance on single occupancy car travel.
- 1.2 This Travel Plan sets out objectives, a target and measures to manage the demand for travel and promote sustainable travel within the University. It was approved by the University's Planning and Resources Committee at its meeting on 13 July 2011. The University Travel plan is supported by site-specific travel plans that are prepared for new buildings.

Organisational Context

- 1.3 Cambridge is a collegiate University and is organised around 31 Colleges (the Colleges), central teaching and administrative functions (the central University), and academic & research institutions.
- 1.4 The central University and related institutions occupy more than 20 sites, mainly situated in central, western and southern Cambridge. Teaching and research is organised through schools, faculties and departments.
- 1.5 The Colleges also mainly occupy sites in central and western Cambridge. Each College is an independent institution with its own property, income and staff. A College is the place where students live, eat and socialise. It is also the place where they receive small group teaching sessions.
- 1.6 There are 17,700 students and 9,000 central University staff. The University also attracts a significant number of visitors, for academic and research work, to its museums and historic buildings, to open days and to graduation ceremonies.
- 1.7 The University therefore generates a large number of trips to and within Cambridge. Managing that travel demand in favour of sustainable modes is challenging.

Reasons for Adopting a Travel Plan

- 1.8 As an aid to securing planning permission.

There is an increasing need to managing the University's trip impact on the highway network, at a time when commuter routes are at or near full capacity, Government funding for capacity enhancement on the A14 has been withdrawn, and public funding for highway improvements is generally limited. The University

continues to bring forward proposals for the development of its sites and the impact of trips on the network needs to be minimised in order to secure planning permission for development. Travel plans help to demonstrate the University's commitment to managing the demand for travel to the local planning authorities. Site travel plans are included with planning applications for major University development. The site travel plans complement the University Travel Plan.

- 1.9 To demonstrate the University's commitment to travel planning for other purposes, for example in order to secure EcoCampus Gold Standard in the University's Environmental Management System.
- 1.10 To provide a context for the future coordination development and prioritisation of travel measures across the University.
- 1.11 To provide a basis from which to tackle Scope 3 emissions in the Carbon Management Plan. This will be important in dealing with future HEFCE CIF2 targets for Scope 3 emissions.
- 1.12 To communicate with staff and students on a package of travel measures.

2. Roles and Responsibilities

- 2.1 Estate Management leads on the co-ordination of the Travel Plan and implementation of most actions (Paul Milliner (Senior Planning Officer) and Catrin Darsley (Environmental Assistant)).
- 2.2 Some actions are implemented by others, as follows:

Car Parking Management	Steve Matthews, Estate Management
Cycle to Work Scheme	Human Resources
Interest Free Loan Scheme	Human Resources
Student Car Use	University Motor Proctor

3. Objectives

Objective 1: Reduce The Need To Travel

This is a long standing objective of Government that is expressed through transport planning policy.

Objective 2: Manage Carbon Emissions From University-Generated Travel

The University's Carbon Management Plan sets a target for the absolute reduction in total Scope 1, 2 and 3 emissions from 2005 levels by 2020 (Scope 3 includes business and commuting travel) through measures including:

- a. parking management schemes
- b. public transport incentives to reduce commuting
- c. revision of University travel expenses policy

Objective 3: Manage The Demand For Travel By Car, Especially By Single Car

Objective 4: Increase Travel Options By Non-Car Modes

Objective 5: Improve Travel Affordability

Objective 6: Support Development At North West Cambridge By Removing Current Trips On The Highway Network

The highways authorities have stated that development of the University's development proposal at North West Cambridge will require measures to be brought forward to mitigate the impact of car trips on the strategic highway network. This will require action across the wider University estate.

4. Target

- 4.1 The 2010 Staff Travel Survey results show that 23% of University staff journeys to work are made by car (single occupancy). It will be challenging to maintain that level as the University develops more space outside central Cambridge at West and North West Cambridge and at Addenbrooke's. Sites outside central Cambridge tend to have higher percentages of single occupancy car commuting, due to car parking density and fewer public transport options.
- 4.2 A target that **no more than 25% of journeys to work should be made by car (single occupancy)** is therefore considered to be appropriate.

5. University Travel Measures

- 5.1 Travel measures are set out in Table 1. Each measure relates to one or more objectives.
- 5.2 Potential future measures are set out in Table 2. Many have been identified in order to support the North West Cambridge development. This is to meet a target to remove 200 daily morning peak-hour car trips from the A14 and a general requirement to remove car trips across the highway network. Relevant measures are likely to be included in a S106 planning obligation for North West Cambridge. One or more of the S106 measures would be implemented as and when necessary in relation to the delivery of academic and research space at that site.
- 5.3 Car park charging is identified as a potential future measure. Implementation of charging will be subject to the recommendations of a consultative group to be established by PRC.

6. Monitoring

- 6.1 A survey of University staff journeys to work is carried out annually, through the Cambridgeshire Travel for Work Partnership's survey of member organisations. The 2010 survey covered the period 9-15 October, and generated 1441 returns (a response rate of around 16%). The survey measures the main mode of travel

by distance travelled.

- 6.2 The modal split results compare favourably with other participating organisations: only 23% of University staff weekday journeys to work are made in single occupant vehicles, compared with 47% collectively for other organisations. Forty percent of journeys were made by bicycle (21% for other organisations), 9% walking (7%), 9% public bus (6%), and 7% train (5%). Only with car sharing does the University perform worse than the collective results for other organisations.
- 6.3 Trends show a steadily decreasing proportion of journeys to work made by car (single occupants), down from 32% in 2001.
- 6.4 The average distance travelled by people driving alone was 20km.

7. Review

- 7.1 The University Travel Plan will be reviewed every 2 years.

TABLE 1 - EXISTING MEASURES

		Objective(s)	Lead	Timescale
1. Uni4 Bus Service, with discounted fares for University Card Holders		3, 4, 5	EM – Estate Development	2011-14/16
2. Arrange special bus services for University events (e.g. University Open Days, Science Festival)		3, 4	EM – Estate Development Event organisers	When required
3. Cycle to Work Scheme		3, 5	Human Resources	Ongoing
4. Provide showers, changing rooms, drying rooms and lockers in all new buildings		3, 4	EM – Estate Development	Ongoing
5. Provide cycle parking at all new developments		3, 4	EM – Estate Development	Ongoing
6. Park and Cycle facility, Madingley Road		3, 4	EM – Facilities Management	On-going
7. Train season ticket discounts		3, 5	EM – Estate Development	Ongoing
8. Interest free loan scheme for travel by bus, rail and bicycle		3, 5	Human Resources	Ongoing
9. Car park charging – prepare proposals		3, 6	Consultative Group reporting to PRC	2011-12
10. Manage the use of centralised University car parks through a badge system <i>On-line system introduced summer 2011</i>		3	EM – Facilities Management	Annually
11. On-line car sharing scheme (CamShare)		2, 3, 5	EM – Estate Development	On-going
12. Car Club scheme (StreetCar)		2, 3	EM – Estate Development and Facilities Management	On-going
13. Proctorial control on student use of cars		3	University Motor Proctor	On-going
14. Revise University travel expenses policy <i>Action contained in the Carbon Management plan</i>		2, 3		
15. Develop proposals for the provision of affordable staff housing at North West Cambridge		1	NWC Project Director	
16. Potential additional staff housing at West Cambridge <i>Through a future master plan review</i>		1	EM – Estate Development	

TABLE 2 – POTENTIAL NEW MEASURES

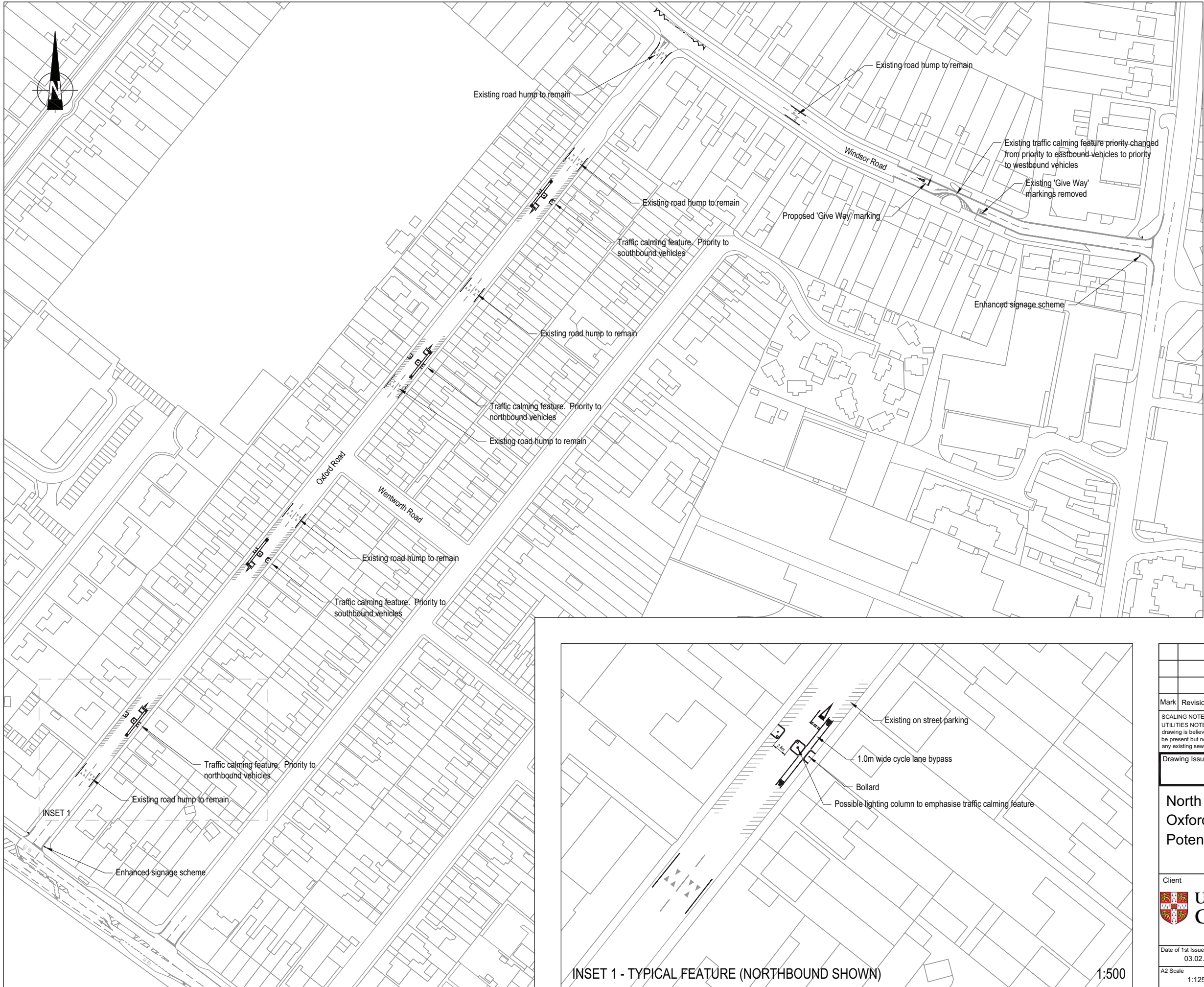
	Objectives	Lead
17. Designate car-sharing only spaces in centrally managed car parks	2, 3, 5, 6	EM – Facilities Management
18. Introduce a car sharing badge for University Car Parks	2, 3, 5, 6	EM – Facilities Management
19. A targeted approach to stimulate car sharing amongst staff living in the A14 corridor.	2, 3, 5, 6	EM – Estate Development & Facilities Management
20. Proactive management of car sharing through CamShare, on a frequent basis, to encourage more people to join the scheme and to prompt an increase in search activity.	2, 3, 5, 6	EM – Estate Development
21. Subsidised bus season tickets	3, 5, 6	EM – Estate Development & Facilities Management
22. Free/discounted bus season tickets (for staff living in the A14 corridor)	2, 3, 5, 6	NWC Project
23. Implementation of car park charging <i>Subject to the recommendations of the Consultative Group and decision by PRC</i>	2, 3, 6	EM – Facilities Management

North West Cambridge

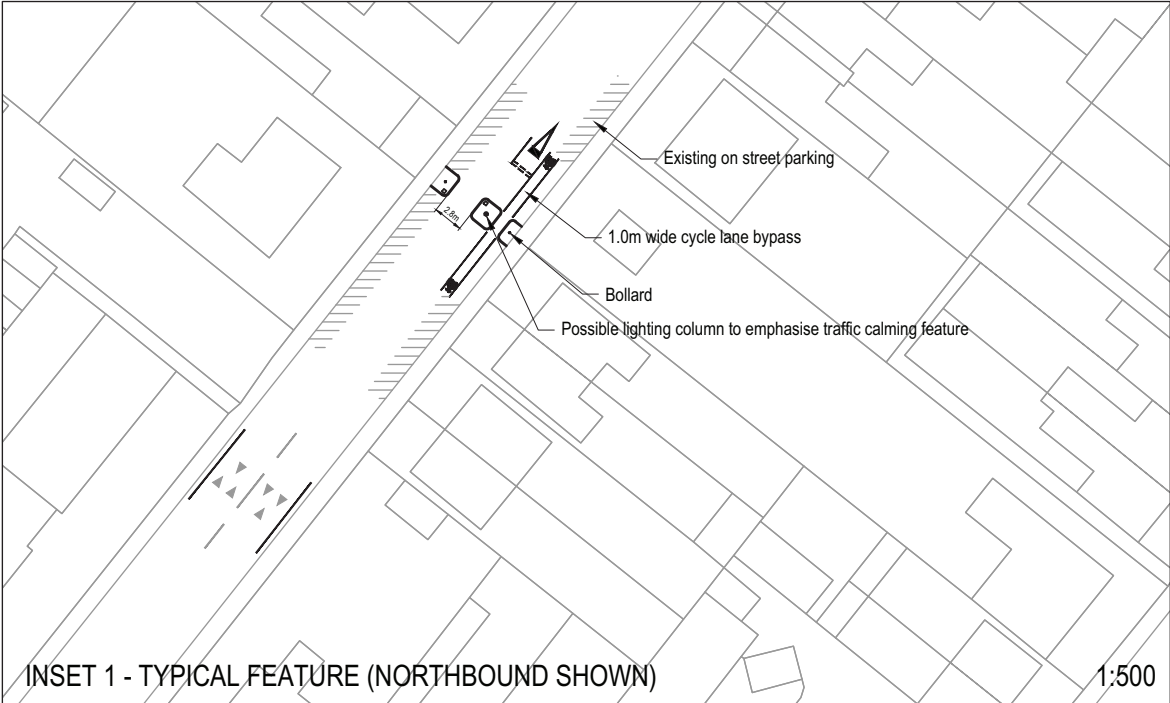
Addendum Report – Response to matters raised by the Highways Authorities



Appendix 2.6

Windsor Road – Oxford Road Traffic Calming Measures - 23035/045/SK002



- NOTES
1. Each feature removes 3-4 parking spaces.
 2. The traffic islands and build-outs could be used to plant trees or site lighting columns.
 3. Vehicle priority at the traffic calming features are arranged to reduce the risk of vehicles queuing back into downstream junctions and speeds on the approach to the Wentworth Road junction.



Mark	Revision	Drawn	Date	Chkd
SCALING NOTE: Do not scale from this drawing. If in doubt, ask.				
UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.				
Drawing Issue Status				
For Review				
North West Cambridge Oxford Road / Windsor Road Potential Enhanced Traffic Calming Scheme				
Client				
 UNIVERSITY OF CAMBRIDGE				
				
Offices throughout the UK, continental Europe, Africa and Asia www.peterbrett.com © Peter Brett Associates LLP				
Date of 1st Issue 03.02.12		Drawn by S.j.L		
A2 Scale 1:1250		Checked by G Daugherty		
Drawing Number 23035/045/SK002		Revision		
		READING Tel: 0118 950 0761 Fax: 0118 959 7498		

Appendix 2.7

Framework Parking Management Strategy

**NORTH WEST CAMBRIDGE DEVELOPMENT
FRAMEWORK CAR PARKING MANAGEMENT PLAN**

1. Introduction

- 1.1 This Plan has been prepared to summarise the initial proposals for the Car Parking Management regime that would be delivered at North West Cambridge. A detailed Car Parking Management Plan will be considered further, and agreed with the Joint Authorities as part of the detailed design process.
- 1.2 The University is committed to delivering a high quality development. As part of this responsibility, the University is committed to delivering quality parking for all users within the development. To ensure this commitment is delivered, the University has considered in initial terms the manner of management.
- 1.3 The proposed car parking provision is summarised in Table 19. 1 of the Transport Assessment, submitted in support of the planning application. This is enclosed in Appendix 1. The levels of parking provided are not considered further in this Initial Plan.
- 1.4 The management issues are considered in outline by each of the major land uses in the following sections.
- 1.5 For completeness, this Framework Parking Management Plan also identifies the potential Controlled Parking Zone in the neighbourhood that may be delivered in conjunction with the highway authorities.

2. Housing

- 2.1 For Market housing, the majority of car parking spaces are anticipated as being provided by a combination of on-plot spaces and designated, linked, off-plot spaces. The University would identify within all Market housing unit sales the allocated car parking provision, and to include contractually obligatory clauses for the occupiers not to keep further cars within the Development or surrounding areas. Off-plot spaces will be allocated by permit on an annual basis, and will be subject to control by the Development Management Company.
- 2.2 Key Worker housing will remain in the ownership of the University, and would be provided solely for the use of University and College employees. The University will identify within the Key Worker unit leases the allocated car parking provision, and to include contractually obligatory clauses for the occupiers not to keep further cars within the Development or surrounding areas, and to identify the penalties for transgressions. Spaces are anticipated as being provided by a combination of on-plot spaces and designated, linked off-plot spaces. All off-plot spaces will be identified by permit. Off-plot spaces will be allocated by permit on an annual basis, and will be subject to control by either the Development Management Company or the University's Motor Proctor (to be confirmed).
- 2.3 Additional visitor parking will be provided across the residential areas off-plot. This is likely to be provided on-street, and would be controlled either by a site-wide permit scheme, or by some form of pay-and-display - the manner is to be agreed. These spaces will be clearly identified and controlled by either the Development Management Company or the University's Motor Proctor (to be confirmed).
- 2.4 To accommodate the Car Club scheme cars that would be delivered, additional dedicated parking will be provided across the Development. These spaces will be clearly identified and controlled by the University's Motor Proctor.

3. Research Areas

- 3.1 The research areas consist of both Academic and Commercial Research. The car parking demand for these two research land uses would differ significantly depending upon the occupier.
- 3.2 The University proposes to incorporate within all Research land deals contractually obligatory clauses to ensure that the occupiers control the generation of car-based trips to / from the Development - by applying the Travel Plan etc.
- 3.3 To provide greater flexibility to cater for the variation in the building occupancy rates, the following initial strategy for the delivery of the car parking spaces for Academic and Commercial Research areas is proposed:
 - i) around 20% of car parking spaces relating to the Research areas would be allocated for the car sharing high occupancy vehicles, located closest to the entrances of the Academic / Commercial Research buildings;
 - ii) around 10% of these car parking spaces would be allocated on-plot for visitors, located close to the individual businesses;
 - iii) around 40% of these car parking spaces would be provided on-plot in the less convenient areas of the car park for general use by the occupants;
 - iv) around 30% of these car parking spaces would be provided off-plot for general use by the occupants, in shared car parks appropriately located for each Academic or Commercial Research area. These would be legally designated to particular buildings.
- 3.4 The University's centrally-controlled existing car parking permit scheme will be extended to include all Academic Research areas, and, along with the off-plot spaces, will be subject to control by the by either the Development Management Company or the University's Motor Proctor (to be confirmed).

4 Collegiate Accommodation

- 4.1 Limited parking will be provided for the Collegiate areas, and will be provided at designated, linked off-plot spaces. These spaces will be allocated on a needs basis on an annual basis, and will be controlled by permit.
- 4.2 Areas that can be used as temporary drop-off areas will be provided to enable students to unload and load at either end of term. These will be more conveniently located to the accommodation than the permanent car parking spaces.
- 4.3 These areas will be controlled by the University's Motor Proctor.

5 Local Centre / PCT / Community Use / Food Store

- 5.1 The combined local centre / PCT / community use / food store would be served with on-plot car parking spaces within the food store, and further parking spaces on-street around the local centre area.

- 5.2 The parking spaces within the food store will be controlled by pay-and-display, the precise details of the scheme are yet to be agreed. One pay and display scheme that works effectively is for the price of the parking ticket to be refunded if a voucher is offered whilst paying for purchases over a minimum amount. These spaces will be clearly identified and controlled by the Food Store operator.
- 5.3 The on-street parking spaces would be controlled in a similar manner to the on-street visitor parking either by a site-wide permit scheme, or by some form of pay-and-display - the manner is to be agreed. These spaces will be clearly identified and controlled by either the Development Management Company or the University's Motor Proctor (to be confirmed).

6 Neighbourhood controlled parking zone

- 6.1 Whilst the University will endeavour to provide an appropriate level of parking to minimise the chance of inappropriate parking on site or "overflow" parking off-site, there remains a risk that Development-related vehicles could park off-site. To provide reassurance to local residents, the University will fund the design of a controlled parking zone, the consultation with the surrounding community, and implementation by the highway authority if a positive consultation response is gained.

APPENDIX 1 – PROPOSED CAR PARKING PROVISION

Table 19.1: Proposed car parking provision for the Development

Residential Spaces				
	2, 3, 4 and 5 bed Semi- and Detached Houses	1, 2, 3,4 bed flats and apartments	2, 3 and 4 bed Terrace	Total
Unit numbers (approximate)	249	1,812	941	3,002
Residents' parking	484	1,257	1,114	2,855
Additional visitor parking	3	293 (including 17 No. Car Club spaces)	192	488
Total Residents Parking	487	1,550	1,306	3,343
Non-Residential Uses				
Land-use		Size (m2)	Spaces	
Academic Research		60,000m ²	1,000	
Commercial Research		40,000m ²	1,000	
Collegiate		2,000 units	250	
PCT		700m ² (assumed to be 9 professionals, 8 rooms)	25	
Local Centre Community Hall		500m ²	26	
Local centre store		1,100m ² GFA	22	
Food Store – GFA		2,900m ² GFA	147	
University Mensa		800m ² GFA (assumed to be 500m ² drinking / dining area)	25	
Police Office		200m ²	5	
Hotel		130 bed spaces (assuming 25 resident staff)	111	
Nursery		Assuming 62 staff	41	
Senior Care		75 units (assuming 1 member of staff)	20	
School		60 staff	40	
Total Non Residential			2,712	
Total across the Development			6,055	

Appendix 3.1

Highways Agency response dated 3rd January 2012.

John Hopkins

Subject: FW: NWC outstanding issues
From: Abbott, David [mailto:david.abbott@highways.gsi.gov.uk]
Sent: 03 January 2012 11:21
To: John Hopkins
Subject: NWC outstanding issues

John

I picked up your voicemail this morning. Firstly, happy new year to you too!

I thought I should let you know that I've issued a new TR110 extending the holding direction until the end of February. This was solely a procedural issue but, hopefully, we will not necessarily need to maintain it for that long.

In answer to your message, I consider the TA to be acceptable. I've been re-checking the latest version against the earlier concerns raised on our behalf by AECOM. It seems that there are still a few potential niggles but none of which I believe to be enough to result in variations sufficient to change the overall outcomes.

I feel instead that any potential for variation in things like mode shares and trip making patterns would be better managed by a monitoring/compliance regime designed to self-correct the sustainable transport strategy as it is rolled out. This would also be suitable for determining the timing for delivery of infrastructure-based measures i.e. works at M11 J13. We've increasingly sought to adopt this approach in recent years both here in the East of England and across the country - I would think that given the client, the location and the nature of the development it has every prospect of working here. The main trick is developing the right set of planning conditions.

I would like to develop this as cooperatively as possible so might I suggest we have a brief chat about this?

David

David Abbott, Asset Manager: Area 8
Highways Agency | Woodlands | Manton Lane | Bedford | MK41 7LW
Tel: +44 (0) 1234 796221 | **Mobile:** + 44 (0) 7771 677 517
Web: <http://www.highways.gov.uk>
GTN: 3013 6221

Safe roads, reliable journeys, informed travellers
Highways Agency, an executive agency of the Department for Transport.

The original of this email was scanned for viruses by the Government Secure Intranet virus scanning service supplied by Cable&Wireless Worldwide in partnership with MessageLabs. (CCTM Certificate Number 2009/09/0052.) On leaving the GSi this email was certified virus free.

Communications via the GSi may be automatically logged, monitored and/or recorded for legal purposes.

This message has been scanned for viruses by Websense

—

02/02/2012