TECHNICAL NOTE

Subject: **Review of Greater Cambridge Partnership Madingley Road Cycling and Walking Project**

1 Introduction

1.1 Stantec UK Ltd has been commissioned by the University of Cambridge to assist with all transport-related matters concerning an outline planning application for permission relating to the intensification of development of an extant site at West Cambridge for academic and commercial research, and various associated facilities.

1.2 The Greater Cambridge Partnership (GCP) Madingley Road Cycling and Walking Project ("The Scheme") is a strategic project with the aim of improving the Madingley Road Corridor, to make walking and cycling more attractive along this route.

1.3 As well as enhancing the existing walking and cycling facilities to accommodate the likely significant increase in non-car movements from the Local Plan Allocation Sites at Bourn Airfield and West Cambourne Developments, The Scheme would also assist these movements to the existing, consented and proposed uses at the University's North West and West Cambridge Developments.

1.4 The GCP has issued two alternative options for consultation as part of this Scheme. Whilst some initial comments are provided, further discussions would be required to enable a more detailed response.

1.5 Whilst the University of Cambridge welcomes and is supportive of the GCP strategic approach to improving non-car movements along the Madingley Road Corridor, the University has concerns regarding the impact of The Scheme on the University's consented and allocated development aspirations in this area. As such, the University seeks the following to be considered.

2 General Comments

2.1 The University makes the following comments to both options.

Item	Comment
Highway conditions on the Madingley Road Corridor	Whilst the UofC supports the non-car enhancement aspirations of The Scheme, the needs of all road users have to be met – this may not be the case. To understand future conditions along the Madingley Road Corridor, UofC seeks that the GCP undertake micro-simulation highway modelling of the entire Madingley Road Corridor, informed by a suitable capacity-constrained highway model - such as the Cambridgeshire Sub-Regional Model (CSRM). This modelling should include all Consented and Local Plan Allocation sites. Further, the University seeks to review these future year flows to ensure these are reflective of the West Cambridge assessment work currently being undertaken. Additional signal-controlled stop lines have been incorporated onto Madingley Road in both Options. Whilst benefit would be certainly be offered to walking and cycling movements, the impact of these additional stop lines would need to be considered to understand the negative impact on vehicle movements.

Item	Comment
Capacity of proposed Junctions	The University has an obligation under the Adaptive Phased Approach to deliver necessary highway capacity mitigation along the Madingley Road Corridor, reflecting future conditions. The additional infrastructure delivered as part of The Scheme would occupy currently available highway land for The Scheme measures, hence would increase the costs to the UofC of any later capacity enhancement obligations. The University seeks that the GCP works with the University to understand and agree the scale of these future schemes. To minimise future disruption to walkers and cyclists that any necessary utility diversion would engender, the University seeks that the finished footpaths and cyclepaths be delivered to these agreed final locations – albeit that that it is not recommended that any highway enhancement be delivered until proven to be required in the future.
Outdated highway boundary information	The highway boundary shown near the Western Access Road should be updated to reflect the revised 2015-16 highway works boundary.
Future highway boundary	The future revised highway boundary has to include all earthworks and drainage requirements, so that the impact of these works on the University tenants and occupiers land be understood.
Scheme integration with on and off-site proposals	On- and off-site infrastructure proposed by the University at West Cambridge would offer significant benefit, would operate collaboratively with The Scheme measures, and would increase the general attractiveness of The Scheme. These include measures such as the Clerk Maxwell Road on-street cycle route, and the enhancements to the West Cambridge accesses and the routes through the development to the Coton Path. These should be shown, to ensure compatibility and consistency of approach of these junctions.
Programme	The University seeks that the programme for the GCP works on the western end be agreed with the University, to ensure that both GCP / West Cambridge projects may progress without constraining the other. Further, it is suggested that this Scheme be delivered from the eastern (City) end towards the western end (M11 end), thus ensuring that any final destination is served without a drop in route quality in mid-journey in the interim.

2 Initial comments to Option 1

3.1 Acknowledging that the above strategic issues have to be resolved first prior to the University commenting in detail, we make the following initial comments to Option 1.

Ref	Item	Comment
1.	Western Access Road (WAR) Junction	The Scheme Plan needs to reflect the proposed Western Access Road junction being developed as part of the West Cambridge Masterplan Review.

Ref	Item	Comment
		This WAR Junction includes for a toucan on the eastern approach to the WAR junction, which needs to be considered as part of the non-car facilities on Madingley Road.
2.	New toucan crossing on the western arm of the Park & Ride Junction	This toucan is a new facility, and would have an adverse effect on the highway network capacity due to the pedestrians crossing the entire width of Madingley Road in a single phase of long duration. As this facility is a duplication of the proposed WAR toucan facility immediately adjacent (see above), it is suggested that only one of these two crossings should be bought forward.
3.	High Cross Junction	The reduction from a two-lane to a single-lane approach from West Cambridge would significantly reduce the highway capacity for the Proposed West Cambridge Development. Further, the West Cambridge Transport Assessment has identified that in the 2031 Future Year scenario a mitigation scheme could be needed. We seek that GCP and the University work together to ensure this junction can operate with the future year flows whilst accommodating pedestrian and cycle movements, and that the cycleway / footpath locations be realigned to this agreed scheme to accommodate any such mitigation without significant reconstruction. This could be bought forward in a phased manner.
4.	Vet School Access Junction	Whilst currently closed, this junction is being re-opened and reconstructed as a left in – left out service road to provide service access to the Cav III Development immediately adjacent to Madingley Road. The Scheme proposals need to accommodate the likely users.
5.	JJ Thomson Avenue / Madingley Rise Junction	The West Cambridge Transport Assessment identifies that signalisation of this junction may be needed. Whilst a signal scheme proposal is supported in principle, significant changes may be required. Distances between the Madingley Road stop lines, and from the JJTA stop line would result in very long intergreens – significantly reducing the highway network capacity of this junction. We seek that GCP and the University work together to ensure this junction can operate with the future year flows whilst accommodating pedestrian and cycle movements. This could be bought forward in a phased enhancement scheme.
6.	Clerk Maxwell Junction	The West Cambridge Development mitigation proposals include the removal of on-street parking along Clerk Maxwell Road, and its conversion to a two-way on-street cycle route. This would provide significant betterment for residents and cyclists, and improve the quality of the public realm on this link. As the combination of the GCP and Clerk Maxwell Road measures would increase cycling movements - increasing the need for a crossing of Madingley Road which could tie into the signalisation scheme - the Scheme proposals at this junction are insufficient, and a signal enhancement of this junction is sought:

Ref	Item	Comment
		- to resolve the east-west crossing movements of the wide Clerk Maxwell Road junction - a toucan could be incorporated; and - the University already has a car park off Clerk Maxwell Road – which may be extended. This would increase vehicle / vulnerable road user conflicts which would need to be resolved with a formal crossing here.

3 Option 2

3.2 Acknowledging that the strategic issues in Section 2 have to be resolved first prior to the University commenting in detail, we make the following initial comments to the GCP Option 2 scheme.

Ref	Item	Comment
7.	Western Access Road	The Scheme Plan needs to reflect the proposed Western Access Road junction being developed as part of the West Cambridge Masterplan Review. This WAR Junction includes for a toucan on the eastern approach to the WAR junction, which needs to be considered as part of the non-car facilities on Madingley Road. The Scheme need to be amended to show how the proposed shared-use footpath / cycleway would join the WAR.
8.	New toucan crossing on the western arm of the Park & Ride Junction	This toucan is a new facility, and would have a significant adverse effect on the highway network capacity due to the pedestrians crossing the entire width of Madingley Road within a single phase of long duration. As this facility is a duplication of the proposed WAR toucan facility (see above), it is suggested that only one of these two crossings should be bought forward.
9.	High Cross Junction	The reduction from a two-lane to a single-lane approach from West Cambridge would reduce the highway capacity for the Proposed West Cambridge Development. The additional cross-junction crossings for cyclists would require an all-red phase, significantly reducing capacity at this junction: previous proposals identified that pedestrians and cyclists could previously "walk with" the signals to minimise this lost time. Further, the West Cambridge Transport Assessment has identified that in the 2031 Future Year scenario a mitigation scheme could be needed. We seek that GCP and the University work together to ensure this junction can operate with the future year flows whilst accommodating pedestrian and cycle movements, and that the cycleway / footpath locations be realigned to this agreed scheme to accommodate any such mitigation without significant reconstruction. This could be bought forward in a phased manner.

Ref	Item	Comment
10.	Vet School Access Junction	Whilst currently closed, this junction is being re-opened and reconstructed as a left in – left out service road to access the Cav III Development immediately adjacent to Madingley Road. The Scheme proposals showing the off-set footpath / cycleway crossing of the access provide no indication of priority, and are not acceptable.
11.	JJ Thomson Avenue / Madingley Rise Junction	Whilst the junction shown is innovative, it would seriously impact upon the available and future highway network capacity along the Madingley Road Corridor. Further, the reduction from a two-lane to a single-lane approach from West Cambridge would reduce the highway capacity for the Proposed West Cambridge Development. We seek that GCP and the University work together to ensure this junction can operate with the future year flows whilst accommodating pedestrian and cycle movements. This could be bought forward in a phased enhancement scheme.
12.	Toucan to the west of the Observatory Drive Junction	This toucan is a new facility, and would have an adverse effect on the highway network capacity due to the pedestrians crossing Madingley Road in a single movement. This would be a duplication of the suggested Clerk Maxwell Road toucan facility immediately adjacent (see below). It is suggested that only one crossing should be bought forward.
13.	Clerk Maxwell Junction	The West Cambridge Development mitigation proposals include the removal of on-street parking along Clerk Maxwell Road, and its conversion to a two-way on-street cycle route. This would provide significant betterment for residents and cyclists, and improve the quality of the public realm on this link. As the combination of the GCP and Clerk Maxwell Road measures would increase cycling movements – increasing the need for a crossing of Madingley Road which could tie into the signalisation scheme, the Scheme proposals at this junction are insufficient, and a signal enhancement of this junction is sought: - to resolve the east-west crossing movements of the wide Clerk Maxwell Road junction - a toucan could be incorporated; and - the University already has a car park off Clerk Maxwell Road – which may be extended. This would increase vehicle / vulnerable road user conflicts which would need to be resolved with a formal crossing here.