C2C Local Liaison Forum Technical Group

Review of Peter Blake's Report to Greater Cambridge Partnership Joint Assembly, dated 15 November 2018

G Fox Comment	GCP Response
1.2 This paragraph greatly overstates the effect of the current congestion on the A1303 between Madingley Mulch roundabout (MMR) and Grange Road (GR). In the westbound (outbound) direction, there is no significant delay or journey time variability, even in the evening peak hours. Table 1 in Section 7.5 of the report admits that the delay is only "up to 4 minutes". Real-time Vix data collected from Citi 4 bus journeys along the route in November 2016 shows the average westbound delay is in fact just 2 minutes between the Storey's Way and Inglewood bus stops (closest to GR and MMR, respectively) in the evening rush hour, with 95% of services running within 5 minutes of the average. Eastbound (inbound) congestion in the morning peak is worse, but still on average adds just 7 minutes to the off-peak average (14 minutes for services running between 7.00 and 9.00 am, compared to 7 minutes inter-peak). With respect to journey time reliability, currently more than 80% of inbound peak-time services run within 5 minutes of the average.	Current congestion is primarily inbound in the AM peak, and there can be significant delays, particularly at M11 Junction 13. Congestion is growing and will continue to grow in line with the planned housing growth along the corridor.
8.2-8 No methodology has yet been provided regarding wider economic benefits calculations, but it is extremely implausible that one transport scheme with no material benefits in terms of journey time, patronage or mode shift could possibly deliver wider economic benefits in excess of £500 million more than another. Given its superior connectivity to key employment sites and much greater public acceptability, it is in fact quite possible that an on-road scheme could have greater WEBs than an off-road scheme. [Note: WEBs methodology has been requested from transport officers and is still awaited.]	The methodology was published in 2017 with the End of Stage report and can be outlined further at a future Technical Group workshop. The WEBs are based on land-use changes associated with a segregated off-road scheme. Ad-hoc changes to the existing route would have a far more modest impact on economic development associated with the scheme. It is not accepted that the on-road scheme has superior access to key employment, as it fails to fully address challenges such as M11 J13. Greater public acceptability is not a factor in calculating wider economic benefits.

8.7 The “local WEBs ratio” (presumably intended to function as a kind of benefit-cost ratio) presented in Table 2 is highly speculative and misleading. It has no factual basis and is derived from assumptions and estimates with a very low level of inherent reliability. No sensitivity analysis is provided as to the effect of variations in the underlying assumptions. This is not an authorised analysis within standard transport assessment guidance. The “local WEBs ratio” is not even provided for the on-road option, to permit a comparison.	A comparative local WEBs ratio has been calculated and Figure 12 from the Interim Report compares on and off-road schemes. This is not an “authorised analysis” within standard transport assessment guidance because it is not a transport assessment exercise, it is an economic assessment.
8.10-12 The Design Manual for Road and Bridges (BD51/98) makes no mention of tidal lanes, for general traffic or buses. There is no guidance of any kind that dictates that gantries must be used. In fact, a full width gantry which included indication of the direction of travel for fixed-direction car lanes would seem pointless, since drivers already know very well which direction to drive in. Direction indicators specifically for the central tidal bus lane may be useful but could easily be incorporated with negligible impact. An alternative might be a simple form of segregation for large parts of the route. This has been envisaged for the “Green Route” option of the offroad scheme as it passes along Charles Babbage Road (see Figure 8 of the Report) and therefore should be feasible for the on-road option. These alternatives have not yet been evaluated.	As previously indicated, and as you have confirmed, BD51/98 sets out the standard required for gantries but doesn’t state exactly when they are needed. Guidance on the specification for Tidal Lanes is given in Chapter 3 of the traffic signs manual. This describes the requirement for a tidal flow system and is based on the use of gantries and lane control signals mounted above each lane as shown on P156: http://tsrgd.co.uk/pdf/tsm/tsm-chapter-03.pdf Chapter 3 also states ‘Signs and markings for bus lanes prescribed by the Regulations [TSRGD] are for near side lanes only. Where centre or off side with-flow lanes are required, advice should be sought from the Department [Department for Transport, DfT] before submitting an application for authorisation. As such, it is clearly indicated that there is no standard for a bus lane other than for a conventional near side lane. A non-tidal centre lane would require specific DfT approval, and there is no guarantee that such approval would be forthcoming for a tidal centre lane – even with gantries. If such a scheme were to be approved then it should be anticipated that, as a minimum, the signing of the tidal central bus lane would need to make use of a suitably varied version of the

	stipulated bus lane signs and a gantry system to indicate individual lane use. In response to statements such as “In fact, a full width gantry which included indication of the direction of travel for fixed-direction car lanes would seem pointless, since drivers already know very well which direction to drive in.” Figure 18.1 of Chapter 3 indicates the recommended approach which does include such gantries. There is no UK precedent that a tidal bus-only lane would be accepted.
8.15 There are multiple issues with Table 3:	
• Journey time: a 17-minute journey time for an on-road option is completely unrealistic given that the current Citi4 service, with no bus priority measures, takes on average 7 minutes off-peak and 14 minutes at peak between MMR and GR. There is no good reason why a free-running bus lane along the A1303 would not allow a journey time of around 7 minutes even during the morning peak.	The question asked is not comparing like with like. From the Stagecoach website, the journey between the Coton, Inglewood Stop (just east of Madingley Mulch Roundabout) and the Cambridge, Storey’s Way (just west of Grange Road) takes 13 minutes during peak times, reducing to 7-9 minutes in off peak periods. The distance between these stops is approximately 2.75 miles. The journey times quoted as in our report for the on-road route which we state as 17 minutes start at the point the public transport vehicle leaves the A428 prior to Madingley Mulch Roundabout (i.e. the start of the slip road) and continues to the junction with Grange Road. It also incorporates the route through the Waterworks P&R site and into West Cambridge (through a 20mph zone) to the stop on Charles Babbage Way, and back onto Madingley Road. This is a distance of approximately 4.4 miles. This is to create an accurate comparison to the off road figures which were calculated from an equivalent point to the west of Madingley Mulch Roundabout, through the potential Waterworks site and via a stop in West Cambridge.

	As such the timings produced do confirm that the on-road route has a greater average speed than the Citi 4.
• AM peak journey time variation: although the methodology for calculating journey time variability has not been provided, it is extremely improbable that an on-road scheme incorporating a free-running bus lane would improve journey time variability by only 14%. During off-peak periods, when the A1303 is freely running, the Citi4 currently operates with very high journey time reliability. For example, the average MMR-GR journey time for services running between 10.00 and 15.00 is currently 6.7 minutes with a standard deviation of 1.0 minute, meaning that 95% of services run in less than 9 minutes; and less than 0.5% of services exceed a 10 minute journey time. This represents an exceptionally high level of reliability which would be matched both on and off-peak by a well designed on-road scheme.	Whilst it is accepted that journey time reliability is good at off- peak times, delays at peak times are significant and unpredictable. It is also accepted that a well-designed on-road scheme would also potentially offer good levels of reliability. The problem in this instance is that there is no scope to deliver a “well-designed” on-road scheme with significant land-take, and impacts on the Madingley Wood SSSI and American Cemetery as well as significant upgrade at M11 Junction 13. The optimised on-road scheme reflects these constrains and, as such, could not offer the reliability of the off-road scheme. As travel demand grows, this situation would worsen.
• CAM future proofing: an on-road option is compatible with any kind of roadgoing vehicle, including the “rubber-tyred tram” concept which has been mentioned in connection with a Cambridge metro system. There is nothing to prevent trams travelling from the on-road infrastructure into tunnels. As the details of a metro system have not yet been published, it is untrue to say that the on-road option is “not suitable for CAM or tunnels”.	Proposals for a CAM network are at an early stage. We continue to work closely with the Combined Authority and as more information is available, we can develop plans and provide further clarity. We can at this stage, however, be clear that there are a number of metro solutions which would not be compatible with the on-road option because of factors such as vehicle length and the potential to consider guidance systems which might not be compatible with general traffic. An off-road route provides a more easily navigated alignment and greater flexibility to accommodate CAM recommendations.

• PT capacity: “high” and “limited” are not useful terms. In practice, the capacity of the on-road and off-road options would not be materially different as evidenced by lack of difference between the options in predicted patronage or mode share impact.	Public transport would have sole use of the off-road option whereas an on road link would sharer road space with other traffic. As such, the use of high and limited are accurate.
• Benefits/disbenefits for other modes: a disbenefit for car users resulting from bus priority is an overall benefit to the scheme as it is more likely to trigger mode change. Drivers who every day see a bus running freely past them in the morning peak will have a constant incentive to switch mode, whereas a bus on an offline route, not visible to drivers, will have to rely on other, less immediate, methods to encourage mode shift.	Whilst it is quite correct that delays to cars can encourage modal shift, the assessment of the disbenefit to car users is a conventional element in appraisal.
• Cycling: the construction of an off-road cycling route does not have to depend on the development of an off-road bus route. Therefore, the cycling benefits can accrue equally for either option. The Comberton Greenways project is one option. The huge cost saving afforded by the on-road option could provide funding for other options.	Construction of an off-road cycle route is not dependent on provision of an off-road bus route, but is a clear benefit of the proposals. There is significant demand for safe, segregated cycle routes in to the city from the west. Walking and cycling are proposed as an integral part of the recommended Cambourne to Cambridge route. In response to consultation concerns, further cycling and walking measures are proposed along Madingley Road as part of a separate scheme. Schemes will be developed to be complementary.
8.16 None of these statements is robustly supported by the available evidence:	
• Aligns better with transport policy: this is manifestly untrue. Current transport policies do not specify a need or even preference for off-road bus infrastructure. The Cambridgeshire Local Transport Plan 2011-2031 refers in many places to the introduction of on-road bus lanes and bus priority measures (e.g. pages 4-9, 4-44, etc) but not to new off-road bus routes. Furthermore, it includes a specific objective to “minimise the impacts of transport on the natural environment, heritage and	The on-road option cannot provide a coherent bus priority scheme because of the constraints of the corridor within the Phase 1 area. By comparison, the off-road route can provide the necessary priority.

landscape", with which the off-road option does not align. The Transport Strategy for Cambridge and South Cambridgeshire explicitly provides for "increasing the number of bus lanes" and, in respect of the Cambourne to Cambridge corridor, states "in the short term, this will involve measures on the existing highway to give increased priority for buses on the inbound trip into Cambridge on the A1303." Similarly the Local Plan describes on-line or off-line measures, without preferring one over the other.	
• More reliable journey: there is no reason to believe a free-running bus lane will be materially less reliable than an off-road route.	This is incorrect. A bus lane is part of the overall highway and whilst in theory restricted to use by buses, it is vulnerable to disruption by other traffic and to incursion. Bus lanes are typically used by Hackney Carriages and cycles. Statutory undertakers plant and equipment are often located in the highway and may require access. Existing roads such as Madingley Road require maintenance and at such times bus lanes may be suspended. An off-road route would be strictly restricted to use by buses alone, and if developed under Transport and Works Act powers maintenance access can be carefully managed.
• Less disruption to existing roads: A new bridge over the M11 would be highly disruptive to M11 traffic.	Construction of a complete new bridge is a relatively conventional solution which can be completed with minimal disruption. Bridges are pre-assembled and jacked into place to new abutments. This contrasts to the potential need to widen the J13 bridge which would require extensive lane closures.
• Policy compliance – Aligns with CAM: CAM is not currently a policy, nor have its specifications yet been published. There is therefore no evidence that an onroad option would not be compatible with CAM.	CAM is not currently a policy but it has been clearly defined as a Mayoral priority and is likely to become a policy within the forthcoming Local Transport Plan. CPCA are clear that CAM requires a prioritised or segregated route. As such, GCP need to follow that guidance to ensure that C2C is compliant with emerging policy.
• Better in terms of Heritage and biodiversity: there is no evidence that an off-road option would be superior to an on-road option. Indeed, the evidence in the report is that the impacts of an off-road scheme would be greater, but that those impacts may be mitigable to some extent.	In terms of Heritage, the on-road scheme has significant potential effects on the setting of the American Cemetery, which is a nationally protected site and has a high value assigned to it as a result. Given the proximity of the scheme to the cemetery boundaries, the effects would be extremely difficult to mitigate, if at all.

	The off-road route has potential effects on the setting of the Coton Conservation area and slightly less potential to affect the West Cambridge Conservation area. Conservation areas are designated at a district level and are assigned a medium value in the assessment methodology. The level of impact can be mitigated by sensitive siting and planting, more so than for the on-road scheme past the Cemetery. In terms of biodiversity – the on-road scheme involving a segregated public transport lane would require widening the road past Madingley Wood SSSI. This would likely remove the vegetation on the road verge along the SSSI boundary, and could result in the branches of some of the more mature trees on the SSSI boundary being lopped back. There could also be damage to the roots of large mature trees on the SSSI boundary. Traffic exhaust emissions could increasingly affect the diversity of plant species in the SSSI by nutrient loading and this issue is raised as a concern by Natural England. The Madingley Wood SSSI is an ancient and semi natural woodland that has the added scientific value of being a site where research has been undertaken by the University of Cambridge. Natural England classify ancient woodlands as woodland that "takes hundreds of years to establish and is defined as an irreplaceable habitat." Lost ancient woodland cannot be replaced and damage is exceptionally difficult to compensate. There are no readily identifiable measures to compensate for potential damage to the SSSI. The protected wild life sites in the area that would be directly impacted by an Off-Road scheme are the County Wildlife Site (Scrub East of the M11 Verge) and the City Wildlife Site (Bin Brook).

	The habitat value of the both sites is much lower than the SSSI. The County Wildlife Site is designated for scrub and hedgerows – which can be readily replaced and compensated for by suitable habitat creation as part of the landscape design for the scheme. Should a green bridge be constructed over the M11 there is opportunity to re-connect the areas of scrub habitat on either side of the M11 which would be a benefit to local species that may be present (surveys have shown there are badger and brown hare in the area). The City Wildlife Site is limited to the Bin Brook channel, and is designated to protect breeding water voles. Ecological surveys of Bin Brook in the vicinity of Rifle Range Road have not identified any water voles being present, but any design would be intended to minimise potential impacts of these mammals should be they be present in future. There is potential to improve the potential habitat along the Brook as part of flood compensation creation which would be required if this route was taken forward. The potential impacts have been taken into account in the appraisal works to date and ongoing ecological surveys will continue to enable updates to the appraisal works for the Outline Business Case.
8.18 It is untrue that the off road option is the “only solution” with the potential to meet development pressures along the corridor and be compliant with local transport plans and a possible metro. An on-road option could also offer mass rapid transit close to population centres (closer than an off-road solution, in fact, as it uses existing highway provision), with potential capacity to meet the development pressures along the corridor, while providing for delivery of the long term transport objectives of both the GCP and the Combined Authority and being compliant with what is currently known about the emerging CAM concept.	Mass rapid transit needs to offer greater capacity than can be achieved on-road on an already congested corridor.
8.19 The consultation responses of Natural England and Historic England have been quoted extraordinarily selectively and in a grossly	Our ongoing appraisal work since Historic England responded has recognised there is potential to cause harm to setting and some of

misleading way. Natural England prefaced all its observations by stating: “the level of detail provided for the proposed route options is too indicative for us to provide any detailed comments or advice. Based on the detail currently available Natural England is unable to make any judgement regarding likely impact of the proposed options.” With regard to on-road options, comments were provided on the basis that the A1303 would be widened in the vicinity of the SSSI, which is in fact not necessary for a viable on-road scheme. With regard to the off-road scheme, in addition to its comment about the designated sites, Natural England provided a number of comments about the threat to other wildlife sites which were not referenced. In particular, any further development of the off-road route “should ensure that impacts to CWSs [e.g., Coton Path Hedgerow County Wildlife Site] and other locally designated sites and Priority Habitat are avoided.” Historic England judged that the two on-road routes in the consultation would result in “less than substantial harm” to the American Cemetery. They then devoted seven paragraphs to the harm that the off-road option would cause to Coton, the West Cambridge conservation area and Grange Road, concluding “it is difficult to comment as to how harmful such a route could be as the harm could vary greatly depending on the final detail of the proposal”. Remarkably, no mention of their concerns has been made in the Report, nor is any reference made to their overall conclusion: “we consider that all three potential routes and their sub-options are likely to cause harm to heritage significance, either to the American Military Cemetery or to the significance of the village of Coton.”	the historic environment assets in the area - especially to the setting of the nationally important American Cemetery, but also to the Coton Conservation area, and less so to the West Cambridge Conservation area. Since Historic England wrote their letter, the project has carried out geophysical surveys along areas agreed with the County Archaeologist along the off route option (for information there is no point in trying to do geophysics on the on-route option, as agreed with the County Archaeologist, due to the fact that the highway verges will have already caused damage or loss of any buried archaeology). Nothing of major significance has been identified along the off-route options from the geophysical surveys, although a number of potential buried archaeology features are now known to exist in some areas and are accounted for in the route appraisals. A detailed desk study on built heritage has also been completed and used to inform our optioneering to date. These potential effects are fully accounted for in the optioneering and will continue to inform the final decision of a preferred route. Nevertheless, the report summarises the most salient points from the much longer responses received. If those responses are reviewed carefully, the conclusions drawn are reasonable. We would be happy to discuss further in an upcoming Technical Group workshop. The Natural England response clearly states: • *“As mentioned previously we are supportive of the aims of the scheme to achieve improved connectivity and reduced congestion between residential and employment areas while improving the quality of life in Greater Cambridge.”*

	Moreover the introductory paragraphs when considering the alternatives are also very clear that Options A and B raise a concern whilst Option C does not. • *"Options A and B are located in close proximity to this nationally designated site and proposals could have an adverse impact, through direct and indirect effects, on the notified features of the ancient woodland."* • *"Route Option C This off-line route option appears to be sufficiently distanced from designated sites and therefore unlikely to have any adverse impact on these. Potential indirect impacts will need to be assessed in detail."* Once again, following lengthy discussion of the issues Heritage England conclude whilst both options may cause harm: • *"The proposal, (Option A) by reason of the proximity of the highway to the cemetery and loss of verge, would result in irreversible, adverse impacts upon the approach, setting and layout of the cemetery site. This harm would be compounded by the associated intensification of the road which would further erode the experiential significance of this nationally important contemplative space both in terms of noise, pollution, vibration, and visual intrusion. It is acknowledged that planting would be retained along the boundary of the highway with the cemetery in an effort to differentiate space, but this planting is unlikely to be successful in mitigating the harm which has been identified to the designated heritage asset and it is recommended that mitigation measures are explored further"* And

	• *"Overall, we consider that Route B as presently illustrated would cause a moderate level of harm to the appreciation of the heritage asset within its setting and from within the asset itself. This would be caused by encroachment of the carriageway into the existing verge truncating its principal entrance, as well as the placement of the proposed signal gantry. There would be long term and permanent impacts to the setting of the cemetery as a result of the additional carriageway, and the intensification of the road use."* whereas • *"We consider that, the harm associated with either of the options for Route C could be minimised or avoided subject to a robust mitigation strategy/ to ensure that the route appears as a rural feature in an existing landscape."* Whilst we recognise that both schemes have negative environmental impacts we stand by our view, as substantiated by Natural England and Heritage England, that the on-road options have greater adverse impact on the mostly sensitive nationally designated sites, and that the off-road option is easier to mitigate. The off-route route passes through primarily agricultural land where the environment has been degraded over the years. Our extensive ecological surveys have identified locations which retain ecological value and our proposals will include mitigation measures to ensure a net increase in ecological value and biodiversity as a result of the scheme. Moreover, environmental appraisal covers a wide range of issues and we will assess each of these in turn in the Environmental Impacts Assessment supporting any proposed scheme.
8.20 There are numerous issues with Table 4:	

• Designated Environmental Sites: while an on-road option would pass by the SSSI, it would do so on a road that is already there and already carries bus, car and other traffic. No mention is made of the fact that such a bus service would decrease car traffic and therefore deliver an overall improvement in noise, air quality etc on an existing road.	If there is no improvement to the A1303 past the SSSI then there will be no impact on the SSSI, but to provide bus priority such as a bus lane will require widening and this will damage vegetation adjacent to the SSSI with consequential damage to the SSSI. The off-road route will provide a greater reduction in car traffic past the SSSI whilst removing bus traffic: the on-road will not.
• Ecology: there is no necessity for road-widening in an on-road scheme. The threat to wildlife sites from an off-road scheme (as highlighted by Natural England) has been omitted.	On-road solutions require widening. The previous response covers assessment of the potential impacts on wildlife sites.
• Noise/Air Quality: while an on-road route would constrain any impacts to an existing highway (and may result in overall improvement, as noted above), the off-road route would introduce new noise and potential air quality issues to locations, some very close to residential homes and amenities as well as wildlife sites, where there is currently no vehicular traffic. These are qualitatively hugely different impacts.	Current expectations would be that the off-road route will carry perhaps up to 20 vehicles per hour. This is a very small traffic flow in environmental terms and if electric vehicles are used, as is the current intention for CAM, noise and air quality impacts would be insignificant.
• Visual impact: there is no absolute requirement to install gantries. A single inbound bus lane certainly does not need gantries, as accepted elsewhere in the report; and it is not yet known if a tidal lane would require gantries. In any event, the visual impact of modifications to an existing highway is qualitatively hugely different from that on areas with no vehicular traffic. The fact that there is more scope for mitigation only reflects the fact that the potential impact is so much greater.	Chapter 3 of the Traffic Signs Manual is clear that gantries are needed for tidal flow traffic schemes. An inbound bus lane does not need gantries because the direction of travel is unambiguous, does not create conflict with other traffic and can be indicated with static signing. In relation to the gantry question, the presence of permanent elevated structures adjacent to residential properties would be far more intrusive than any impact of the off-road route.
• Landscaping: the potential requirement for loss of trees on an on-road route is extremely small, whereas the potential is much greater for an off-road route.	This is not correct. The potential for loss of trees and the impact on the landscape from such loss is potentially greater for the on-road scheme than for the off-road scheme. The widening of the A1303 to accommodate a new segregated lane would impact many of the mature trees along the road verge between the American Cemetery and the M11 crossing. Depending on the precise location of trees, there would be wholesale removal or significant damage to root balls and overhead branches. Replacement would take a considerable time to re-introduce the same level of mature trees along a road that is locally recognised in landscape terms. Whilst it has no statutory status, Madingley

	Road is one of seven important approaches to the City identified by Cambridge City Council (https://www.cambridge.gov.uk/suburbs-and-approaches). The City Council only considers the length of the road within the City Council area (to about 600m west of the M11) but it is described as a principal route into the City that retains its green and open quality closer to the City Centre to a larger extent than other approaches. The loss of trees in this section would alter this aspect of the landscape and setting of the approach to the city. The off-road scheme would result in loss of trees of mixed age and value along the Rifle Range Road and where the route would cross Bin Brook. There would be loss of scrub on either side of the M11, some lost orchard trees and some trees at the Waterworks site. The Green Lane concept for the landscape design of the off-road scheme would permit the replacement of lost trees in a manner that added to the landscape value over time, providing another a green and open approach to the city.
• Social benefits: there is no evidence that an off-road route from MMR to GR would be more accessible. For most of its route, the off-road option passes through uninhabited areas. The only community to which it would be closer than an on-road route would be the village of Coton; however, the only realistic site for a stop, were one to be provided, would be on Cambridge Road, about 50 metres from the current Citi4 stop on Madingley Road, which would not represent any significant enhancement of accessibility.	Were a stop to be provided in Coton, this would offer a hugely improved bus service, compared to the Citi4. The Cambourne to Cambridge route will serve a new P&R facility and other stops identified following further engagement with the local communities.
• Community Impacts: As noted above, the difference between the off-road and on-road options in terms of accessibility for Coton residents is negligible and is reflected by the fact that Coton residents overwhelmingly oppose the off-road option. The on-road option does not need to run anywhere near Clare Hall, so “concerns regarding the impact on Clare Hall” are illogical.	The fact that some Coton residents oppose the scheme does not change the potential benefit of improved access. The challenge is correct re Clare Hall which is on the off-road. The Executive Board paper incorrectly suggested a negative impact associated with the on road. This will be corrected for future Board Reports.
• Heritage: while the on-road option does pass the American Cemetery, it does so on an existing highway which already carries buses and	This is not correct. Historic England have raised concerns over the impact of the on-road option to the setting of the cemetery as

other traffic. Therefore, the impact on the cemetery is neutral. In fact, to the extent that the scheme reduces overall car traffic and congestion, the impact on the cemetery would be positive.	the widening of the road for a segregated lane would require the segregated lane to be on the same side as the cemetery. Therefore, there would be an impact on the setting of the cemetery.
• Land & Property: it is not yet known if an on-road option would require the acquisition of garden from one or two of the very few houses along the route; however, the acquisition of entire properties would certainly not be required. On the other hand, an off-road option would require acquisition of substantial parcels of land, including land currently bearing a National Trust covenant, land deemed important to the setting of Cambridge and land with substantial wildlife habitats.	The point being made here is not clear. However the inference that the off-road route is more intrusive is not correct. Removal of a small strip of land from a domestic garden has a far greater impact than the compulsory purchase of agricultural land.
8.21-23 These paragraphs appear to relate only to an off-road option. No balancing narrative is provided for an on-road option.	There is little scope for mitigation on-road and hence little to say on the topic other than to reiterate that point.
8.24 There is no evidence in the report that an off-road route "will provide significant transport benefits" over an on-road route. The patronage and mode shift are predicted to be the same. According to the report itself, the difference in MMR-GR journey time between an off-road and on-road would be only 5 minutes. In reality, the difference would be much less and quite possibly nothing at all when meaningful final destinations (e.g., city centre or Addenbrooke's) are taken into consideration.	There are strong benefits in terms of journey time and reliability. Patronage and mode shift are predicted to be the same on the basis of the modelling work undertaken to date. More detailed modelling to be prepared in support of the OBC may differentiate between the options but GCP has not sought to anticipate and additional potential benefits at this stage hence the assumption that Park and Ride intercept rates are similar.
There is no evidence of material journey time reliability benefits. If an off-road route really does have "higher potential for mitigation measures and environmental enhancement", an unproven assertion, it would only be because there is so much more impact requiring mitigation. 9.1 The strategic and business case for an off-road route has not been established and is not supported by the available evidence.	It is difficult to provide "evidence" of journey time reliability benefits as no robust data addresses these. However it is clear that a segregated route would offer greater reliability than a route which shares significant sections of road with general traffic.
12.1-3 It is not made clear in the Report, but the proposed cycling and pedestrian improvements on Madingley Road are completely compatible with an optimal on-road solution, which would not extend beyond the West Cambridge site and would therefore not conflict, in terms of road space, with the proposed cycling/pedestrian requirements.	This is incorrect. There is a choice to be made within constraints of Madingley Road between allocated road space to cycles and pedestrians or to buses. Walking and cycling are proposed as an integral part of the recommended Cambourne to Cambridge route. In response to

	consultation concerns, further cycling and walking measures are proposed along Madingley Road as part of a separate scheme. Schemes will be developed to be complementary, considering consultation responses, as planning progresses.
13.2 Table 8 is misleading as it relates to an entire off-road scheme from Cambourne, rather than the disproportionately expensive section from MMR to GR. The developer contributions relate only to the Cambourne to MMR section. The cost of the MMR-GR section would not be defrayed by developer contributions, as no development has been proposed along that section, which runs through Green Belt landed specifically excluded from development.	This is not correct. In fact, Cambridge University has submitted a planning application for expansion of the West Cambridge campus which lies on the MMR-GR section. It is anticipated that developer contribution would be a requirement of that development. Calculations also include anticipated developer contribution from the Cambourne West and Bourn Airfield Developments. These contributions apply to the scheme as a whole since the MMR-GR section of the scheme serves those developments. The idea that developer contributions only apply to the section of the scheme adjacent to the development is incorrect.