

GCP MAKING CONNECTIONS – Appendix N Risk Register Review

DATE:	24 August 2023	CONFIDENTIALITY	Confidential
SUBJECT:	GCP Making Connections ...		
PROJECT:	GCP Making Connections	AUTHOR:	TB/DM
CHECKED:	MA	APPROVED:	MA

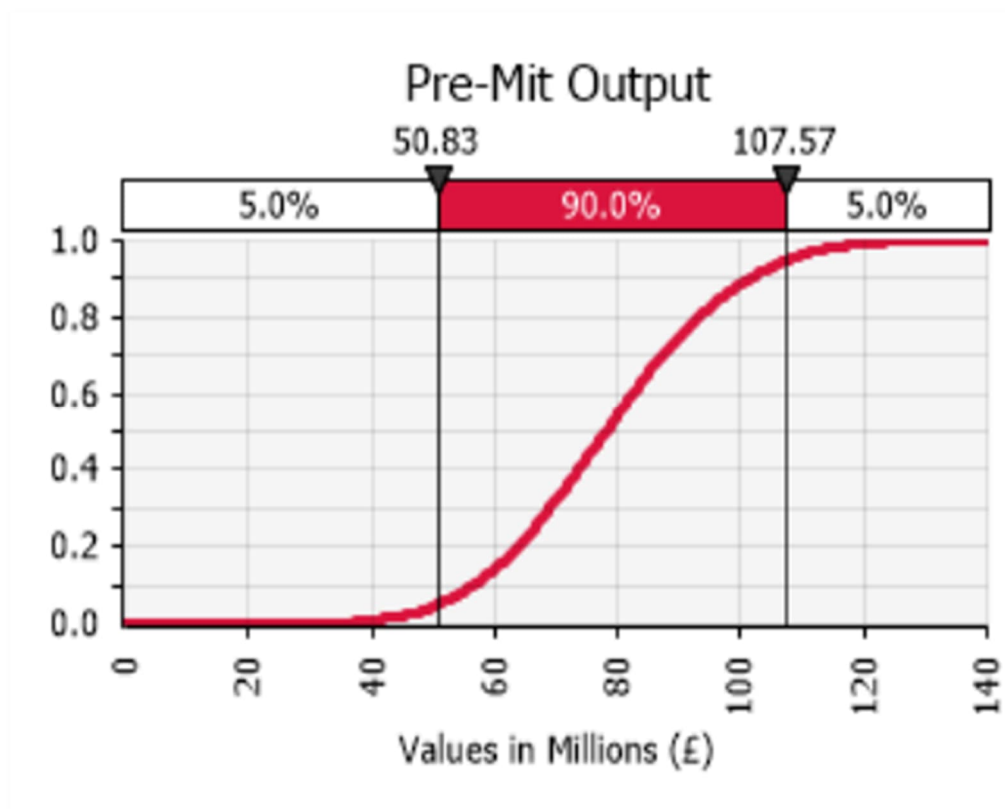
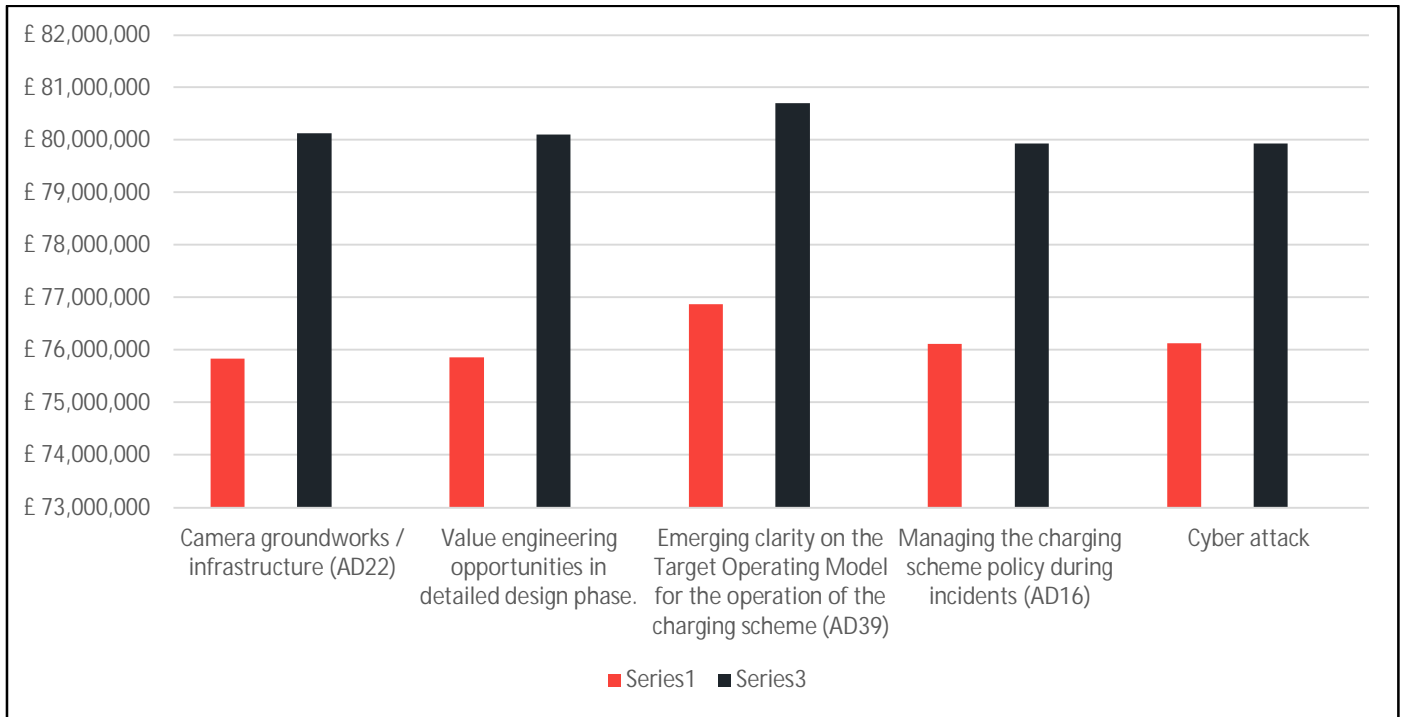
SECTION 1 – INTRODUCTION

As part of the development of the Outline Business Case (OBC) for Making Connections a draft Quantitative Cost Risk Assessment (QCRA) has been developed as part of a robust Risk Management Framework to ensure effective management of risks. This Appendix summarises the key dashboard and presents the top 15 risks to the programme.

SECTION 2 - DASHBOARD

As part of the development of the QCRA the following summary has been produced as a dashboard of the QCRA.

QCRA Pre Mitigation Top 5 sensitivity/Fat Tail Risks



QCRA Post Mitigation Sensitivity/Fat Tail Risks

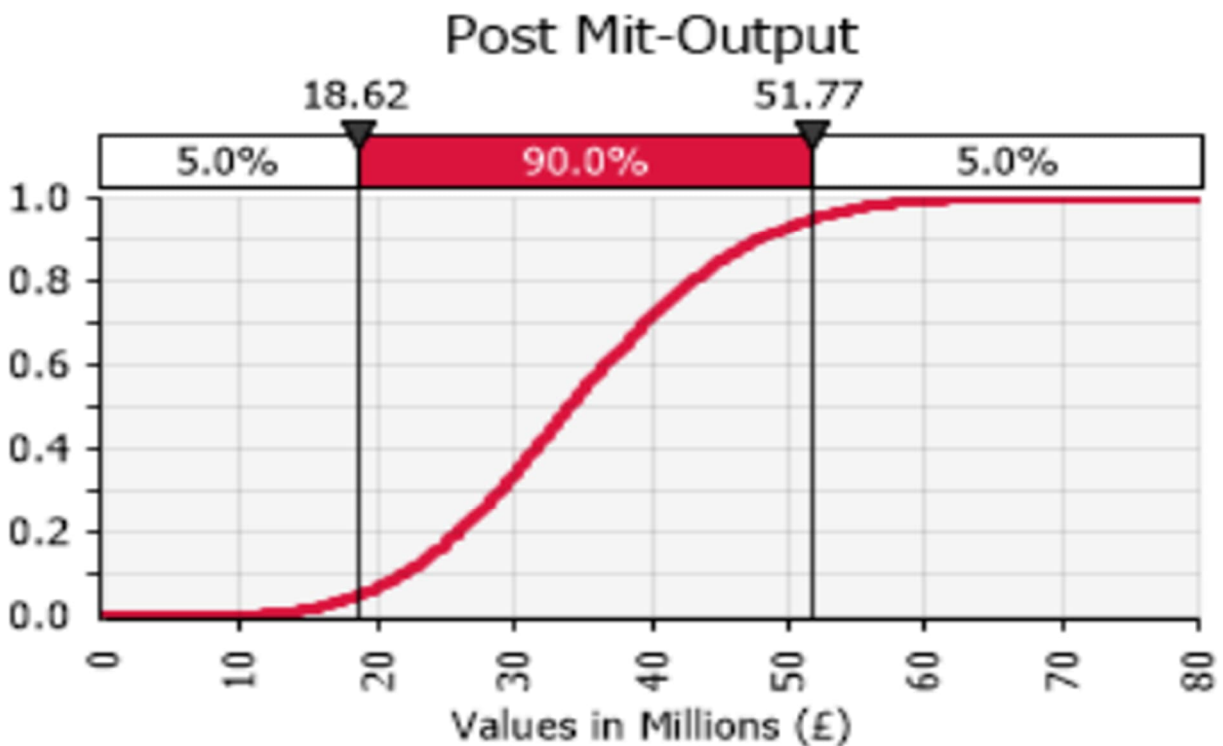
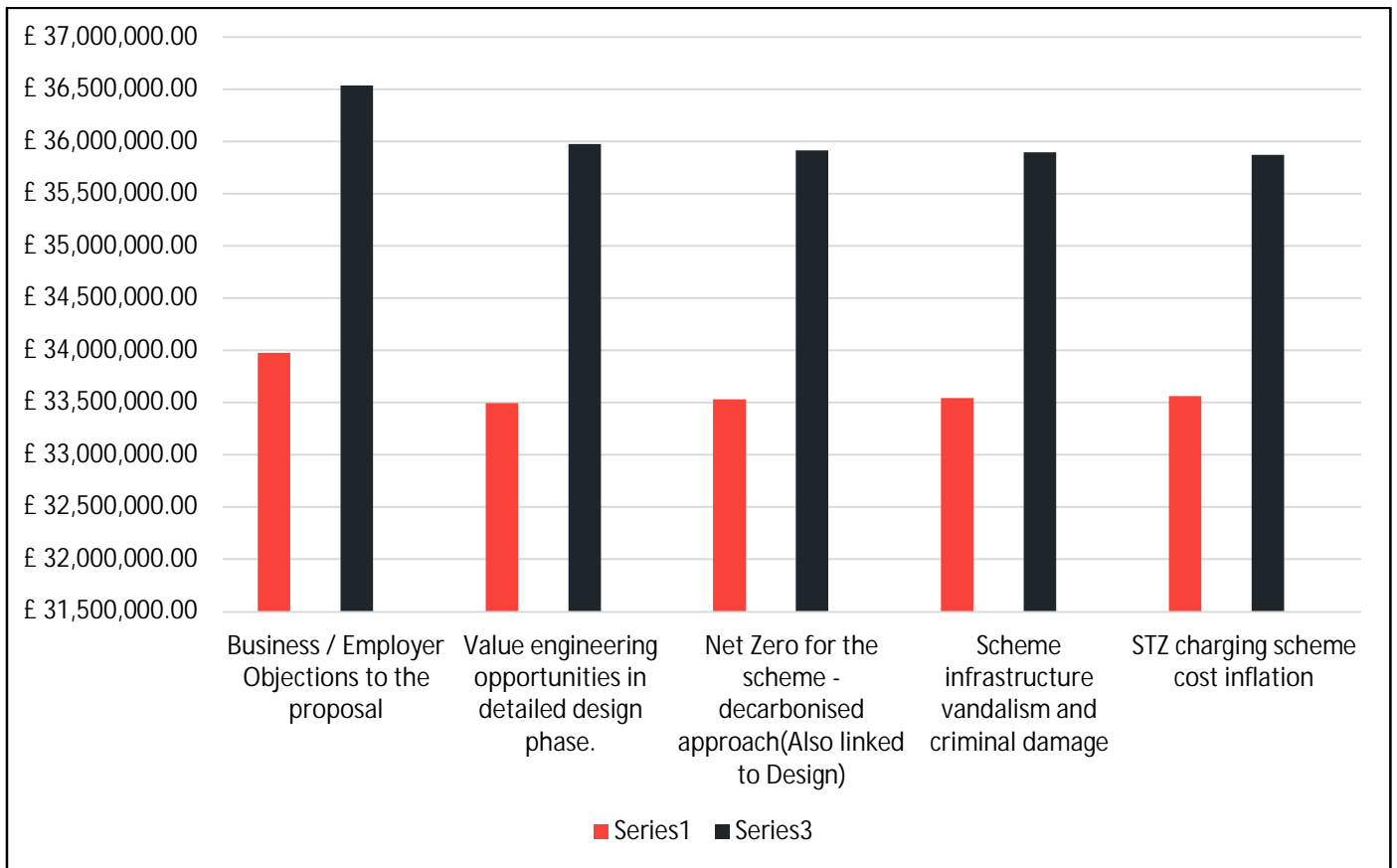


Table 2-1 Risk Exposure Summary Table pre and post mitigation

	Pre-Mit EMV		Post-Mit EMV	
Category	Pre-Mit Value	Pre-Mit Percentage	Post Mit Value	Post Mit Percentage
Funding	£9,417,716	12%	£7,385,966	21%
Project/task dependencies	£17,910,346	23%	£6,399,480	19%
Legal/Regulatory	£5,496,399	7%	£3,821,306	11%
Environmental	£3,664,266	5%	£3,402,532	10%
Stakeholder	£8,390,559	11%	£3,006,240	9%
Processes & procedures	£7,380,878	9%	£2,983,759	9%
Constructability	£7,526,840	10%	£2,378,080	7%
Commercial	£2,064,000	3%	£2,064,000	6%
Political	£2,460,293	3%	£1,963,000	6%
Procurement/Contract	£6,618,159	8%	£1,373,633	4%
Consultation / Engagement	£3,114,626	4%	£1,073,106	3%
Survey & graphical information	£2,355,599	3%	£942,240	3%
Resources	£1,792,873	2%	£523,467	2%
Design	£3,376,440	4%	-£134,600	0%
Benefits realisation	-£3,376,359	-4%	-£2,669,679	-8%
Grand Total	£78,192,634	100%	£34,512,529	100%

SECTION 3 - RISK REGISTER - TOP 15 RISKS

The risk register sets out the following:

- Details of the risk
- The likelihood of the risk
- The impact of the risk.
- The mitigation strategy, including risk owners. The anticipated reduction in exposure to risk, as a result of those mitigations, the target score, is provided in Appendix N.
- An overall assessment of the current status of the risk or issue which would be one of the following categories:
 - **Red** – significant and live risk with high potential to occur and to impact programme delivery either at the strategic or technical level;
 - **Amber** – risk and issue that has lower potential to occur and lower impact; and,
 - **Green** – risk is unlikely to occur and or has no major impact.

The top 15 risks, identified at this stage in the programme's evolution, are listed the table below; these risks all fall into the red risk category. A more comprehensive risk register is available for review.

Top 15 by Estimated Mean Value - These are the key drivers for the project as a whole.

Risk ID	Risk Title	Risk owner	Risk Description	Cause	Consequence	Current Score	Residual Score	Mitigation	Probability	Min	Max	EMV
6	Development and delivery of the bus network upgrade may delay introduction of STZ charging	CPCA and CCC (Cambridgeshire County Council)	The Cambridge and Peterborough Combined Authority (CPCA) are at an early stage of progression towards the key milestones to deliver bus franchising OR enhanced partnership (not yet determined) across the network.	Independent review of the franchising business case - the independent review may not agree progression of this business case to public consultation Delayed of delivery of bus network improvements / bus offer is not sufficiently attractive and/or believed to be deliverable Both organisations have their own approval processes – scope for delivery timescales to be misaligned and hence delays	Auditor may reject the bus franchising business case, leading to circa 3-6 months to formulate an alternative strategy and ratify through governance. In the worst case this could be a showstopper. Acceptability of the scheme - Charging cannot be imposed	High	Medium	Early strategy work to shape delivery model, programme and options in franchised or enhanced partnerships. Explore easy to implement bus improvements. Develop clear and simple comms on the bus offer - What and When. Establish a Bus Integration working group to provide closer working with CPCA and bus operators Effective communication between CPCA and GCP to manage the sequencing of the bus network upgrade and the introduction of the STZ charging infrastructure upgrades and the mechanism via which funding can be transferred.	40%	£ 7,740,000	£ 12,900,000	£ 4,128,000
27	Bus service franchising OR enhanced partnership (not yet determined) may not be implemented in time to support delivery of Making Connections / adequate interim measures available	CPCA	Bus service franchising OR enhanced partnership (not yet determined) may not be implemented in time to support delivery of Making Connections / adequate interim measures available	The Cambridge and Peterborough Combined Authority (CPCA) are at an early stage of progression towards the key milestones to deliver bus franchising OR enhanced partnership (not yet determined) across the network. Independent review of the franchising business case - the independent review may not agree progression of this business case to public consultation	This would necessitate the implementation of interim measures, however there is no certainty around what these would be or the potential cost and schedule impact.	High	Medium	Actively develop contingency plan for franchising including potential interim measures if there's a delay in implementation.	40%	£ 2,580,000	£ 7,740,000	£ 2,064,000
33	Behavioural change may increase congestion outside of hours in which STZ charging applies.	CPCA	Introduction of STZ charging may drive changes in travel behaviour that increase pressures on travel outside of times within which the STZ charge applies.	Highways network is very sensitive and can become very congested on Saturdays. Currently charge does not apply on Saturdays	It may be more costly to operate buses on Saturdays including revised timetables to account for longer journeys, cost of operation will increase impact on net revenue.	Medium	Medium	No discrete mitigation, other than a potential decision to apply the STZ charge on Saturdays. Further to this a wider sustainable travel measures document is being developed GCP to identify and encourage opportunities for behavioural measures and infrastructure schemes to encourage and enhance the existing mode shift of STZ	40%	£ 2,580,000	£ 7,740,000	£ 2,064,000
39	Zero-emission bus technologies	CPCA	Zero-emission bus technologies may not be able to deliver daily bus service mileages required	Bus strategy calculations assume 1 ZEB can replace one diesel bus. Caveats in strategy highlights that the ZEBs will not have the capacity to complete some journeys currently done by buses.	Could be mitigated by partial sourcing of hydrogen buses however this could have a significant cost impact. Alternatively the implementation of opportunity charging at the end of service, but this would need the introduction of charging equipment in locations where we could receive objections, and might need to install additional substations to provide sufficient power for fast charging. This could also impact service frequency.	High	Medium	Could be mitigated by partial sourcing of hydrogen buses Alternatively the implementation of opportunity charging at the end of service, but this would need the introduction of charging equipment in locations where we could receive objections, and might need to install additional substations to provide sufficient power for fast charging Accept continued operation of diesel buses.	40%	£ 2,580,000	£ 7,740,000	£ 2,064,000
12	Post OBC approval change in political appetite for this scheme.	GCP, County, City, CPCA	If there is significant change in Political parties there could be a reduced appetite for this scheme may change post OBC approval. Particularly as Political parties, MPs or wider political groups may use it as an election pledge.	Some parties believe their opposition to the scheme could be a major factor in winning elections such as the recent the by election for the ex-deputy leader of the Council's seat. National government policy is moving away from prioritisation of net zero. Significant risks and change were incurred during the OBC stage this support could be challenged - this could be a General Election (2024) issue similar to ULEZ impact on Uxbridge by-election Public objections, loss of political support, national government getting involved Potential call for referendum on proposal.	Further consultation required as a result of significant changes to scheme in line with political requirements Political pressures do not lead to sub-optimal allocation of funding between services / fares or different types of bus service This would result in lower revenue for buses. A change of administration leads to the project being halted (this would be a showstopper and is excluded from risk modelling.	High	High	Cross party briefings, political champion and wider stakeholder champions/third party advocates Monitor MP activity Strong messaging packs and FAQs for consultation/engagement	60%	£ 1,832,133	£ 2,617,333	£ 1,334,840
23	Demand data for vehicle journeys through the sustainable travel zone may be inaccurate	GCP, CCC, CPCA	Demand data may be inaccurate as the assumptions to fill gaps in demand forecast may be incorrect.	There is little available data on UK road user charging schemes and their impact on the number and type of journeys through charging zones (e.g. congestion, ULEZ). Demand can be driven by external growth, economic development, social behaviours (changes to hybrid working). Current demand modelling only incorporates inflation on the charge rather than the wider impact of inflation on the economy.	Potentially insufficient funding to deliver the bus network enhancements or operations. Potentially significant variance would reduce funding available for enhancements to bus services, and impact the benefits of the scheme.	High	High	Refer to DfT appraisal guidance. Systra will be covering the assurance mitigation role using a fully validated compliance model (signed off by DfT) Also sensitivity testing is being undertaken to assess robustness of proposition under different scenarios.	60%	£ 1,832,133	£ 2,617,333	£ 1,334,840

Risk ID	Risk Title	Risk owner	Risk Description	Cause	Consequence	Current Score	Residual Score	Mitigation	Probability	Min	Max	EMV
35	Bus operating cost inflation	CPCA	Bus operating cost inflation and CPI out-turn may not be consistent with CPI forecasts	Uncertainty around salary increases, fuel etc. This is built into the cost plan. We have assumed that all of the cost headings will be increased by CPI, except for bus drivers and engineers who are modelled as increasing by CPI plus an additional 20% in 2026 (one-off additional increase).	Costs may be over or understated. Probability is 100% BC - Forecast overstated, savings against operating cost forecast, ML value represents zero deviation from forecast on assumption that forecast is accurate. Max value forecast is understated, additional costs incurred CPI forecasts were predicting that inflation would have fallen by Quarter 2 2023, and that by quarter 2, 2024 inflation would be practically zero. However inflation may continue to increase and revised forecast may show this trend continuing for longer than expected.	High	High	Monitor costs as they are available and build in lessons learned into the forward procurement programme.	100%	-£ 2,580,000	£ 7,740,000	£ 1,720,000
2	Legal challenge to design and implementation of Ph3b scheme	GCP	Due to the political nature of the project there are a number of groups that may look to raise challenges to various aspects of the scheme, potentially including judicial review. Mitigating legal challenge and/or the outcome of a judicial review, would cause programme delay or additional cost. In the worst case this would be a showstopper.	A potential judicial review, and the outcome of it, may cause delays to the programme or prevent its progress. Protected characteristic groups / social communities may believe they have not been fully consulted, and/or that the scheme disproportionately disadvantaged their specific group. The Equality Officers have flagged potential groups that might raise challenge.	Potential delays, further consultation to mitigate, risks of legal challenges, possible protest obstructing or delaying design and or delivery, Go Live deadline missed. Further financial costs incurred. Additional Discounts and exemptions may be required reducing scheme revenue.	High	Medium	Client has sought legal advice on the robustness of the process needed and will procure additional legal advice where required e.g. scheme order. Need to ensure that governance is established setting out roles and responsibilities, and any specific agreements or decisions required to enact are identified and programmed.	40%	£ 1,832,133	£ 2,617,333	£ 889,893
54	Scheme infrastructure vandalism and criminal damage	CCC	Scheme infrastructure may be targeted and damaged to avoid payment of scheme and demonstrate public dissatisfaction, and for theft of materials	Infrastructure targeted by dissatisfied parties and criminals	Increased costs in maintenance and operational blackspots when sites are out of action (repair). Damage reputation for the scheme in the media Plus other equipment could be effected.	High	Medium	Positive public engagement campaign required Early Supplier/Maintain engagement to understand the vandalism balance and risks. Well thought-out SLA's within maintenance agreement Media campaign	40%	£ 1,832,133	£ 2,617,333	£ 889,893
69	Managing the charging scheme policy during incidents	CCC	Customers are inadvertently caught during the charge period within the boundary as a direct result of a major or significant incident affecting traffic flow	Incident outside the control of the charging operator	Loss of revenue and successful challenge to PCNs	High	High	Set a clear policy for how to manage charging fees during incidents. Manage Comms through social media, radio.	70%	£ 1,308,666	£ 1,832,133	£ 1,099,280
30	Scheme clean air and noise pollution benefits may be overstated.	GCP	The Demand Model may overstate the clean air and noise impacts of the scheme	Cambridge has several park and ride sites on the edge of the STZ. Because the model does not constrain park and ride users it does not reflect the limitations of parking space. This could potentially over estimate the behavioural change and environmental impact.	The modelled assumptions may be challenged during or after OBC stage gate review, necessitating redesign of certain elements.	Low	Medium	Model sensitivity tests have been undertaken to assess impacts of different levels of vehicular demand in the STZ.	60%	£ 1,308,666	£ 1,832,133	£ 942,240
52	Modelling may not capture realistic carbon benefit.	GCP	If so we need to account for variations between the modelling output and what we believe may be feasible.	Carbon management team brought into develop the carbon case which is now a key strategic benefit for the scheme. Variation in modelling scenarios.	Mis-capture results = scheme doesn't make the carbon case appropriately which is the key justification for the unpopularity. This would lead to programme delay and additional costs. Any significant delays would have a commensurate impact on programme and costs.	Medium	Medium	Carbon implications will be assessed for a range of scenarios including sensitivity tests on different levels of demand; provides reassurance that carbon case is robust under a range of (higher and lower) demand scenarios	60%	£ 1,308,666	£ 1,832,133	£ 942,240
71	System Scaleability	CCC	Opportunity to reduce or increase scheme parameters - eg Boundary, charge period, DER. Or to be expanded to support other LA's with similar plans. Or a CAZ	Scheme design is bespoke for current proposed rules only	Lack of opportunity for continual improvement, or the opportunity to share the cost of operating a scheme	High	Medium	Early engagement GCP/CCC to understand future strategic aspirations	60%	£ 1,308,666	£ 1,832,133	£ 942,240
53	Camera groundworks / infrastructure	CCC	Cameras cannot be installed at the stated locations due to power and comms links	Camera locations have been located from desktop routine exercise. Site audits and investigation must be undertaken to complete assessment for comms / power provisions.	Ideal locations cannot be obtained. Possible leakage to the scheme. May also affect zone boundary.	High	Medium	Currently investigating mobile comms (5G). Vary locations for cameras (e.g. bus shelters) to cater for minimum infrastructure. Site visits will be required to ascertain the risk level.	60%	£ 1,308,666	£ 1,832,133	£ 942,240

Risk ID	Risk Title	Risk owner	Risk Description	Cause	Consequence	Current Score	Residual Score	Mitigation	Probability	Min	Max	EMV
13	Business / Employer Objections to the proposal	GCP	Business / Employer Objections to the proposal	Consultation report has been published, and it is under a level of scrutiny from public and stakeholders. There is some uncertainty around options development and this may allow an avenue for these anti-scheme campaigns to ramp up. Failure to adequately engage the public and or stakeholders or objections raised to the	Decision to relocate Influences political decision making triggering political risk	Medium	Medium	Robust business impact assessment, including benefits of the complementary package. Engagement with businesses and business groups: both pre-consultation and during. Communication package for all businesses.	20%	£ 1,832,133	£ 2,617,333	£ 444,947