

Greater Manchester's Outline Business Case to tackle Nitrogen Dioxide Exceedances at the Roadside

E5 Registers

E5.1 – Programme Risk Register



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Version Status:	DRAFT FOR APPROVAL	Prepared by:	Transport for Greater Manchester on behalf of the 10 Local Authorities of Greater Manchester
Authorised by: Date:	Simon Warburton 28 th February 2019		

Title:		Appendix E.5.1 - OBC Programme Risk Register (Qualitative) CONFIDENTIAL WORKING DRAFT																							
Review Date:		2/25/2019																							
Category/ Workstream	Risk ID	Risk Name	Risk Description	Risk Cause	Risk Consequence	Risk Owner	Pre-Mitigation (VL-VH)						Risk Score (Pre-Mit)	Assessment Assumptions	Action ID	Action Name	Action Description	Action Owner	Post-Mitigation (VL-VH)						Risk Score (Post-Mit)
							Likelihood	Project Cost	Schedule	Reputation & Legal	Service Disruption	Policy / Benefit realisation							Likelihood	Project Cost	Schedule	Reputation & Legal	Service Disruption	Policy / Benefit realisation	
Governance & Policy	Prog-2	Delays with the Local Authority approval process	Ten Local Authorities with differing constitutional arrangements need to reach agreement on the preferred option.	Approval process, number of interfaces. New interventions being introduced by stakeholders.	Delays to decision making resulting in AQ compliance not being achieved in the mandated timescales. Additional legal advice may be required.	Programme Manager	H	H	H	-	-	H	19	Cost impact is additional resource or resource extension.	A-4	Agree alignment and hold regular meetings	Agree strategic alignment within the Steering Group, Chief Legal Officers, Council Leaders and regular meetings to address.	SRO	M	M	H	-	-	H	15
	Prog-2														A-5	Investigate and confirm whether the option to apply non-uniform solutions is feasible	Although an holistic approach is planned, investigate and confirm whether the option to apply non-uniform solutions across the Local Authorities is feasible.	Project Sponsor							
	Prog-2														A-6	Early and continued engagement	Early and continued engagement with elected members at each local authority	SRO							
	Prog-2														A-7	Provide sufficient support	Provide sufficient support to members of the steering group to brief key stakeholders in a timely fashion.	SRO							
	Prog-2														A-8	COMPLETE- sought specialist legal advice to agree governance route.	COMPLETE- sought specialist legal advice to agree governance route.	Project Sponsor							
Governance & Policy	Prog-3	Public consultation/ decision making in Pre-Election Periods	Potential for delays to the schedule if consultation or governance is required during Pre-Election Periods causes issues.	Internal/ external (e.g. Local Authorities) governance requirements, additional rework. JAQU advice/ requirements are subject to change.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	L	VH	-	-	H	18	Cost impact is resource extension for delivery teams.	A-9	Schedule appropriately and monitor	Schedule established which avoids clashes with Pre-election period and this to be monitored weekly to track progress and ensure no delays.	Governance & Policy Lead	M	L	H	-	-	H	15
Governance & Policy	Prog-4	Additional decisions/ governance required throughout the development of the business case & programme delivery	Additional decisions/ governance required or takes longer than anticipated - internal, local authority (High level governance, not specific powers or consents - the required governance could vary significantly depending on the content of the business case and/or the scope of the preferred option.).	Varied governance processes, uncertainty around governance, overlap with other strategies. Unforeseen government requirements	AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	M	VH	-	-	H	18	Cost impact is resource extension.	A-10	Regular communication and engagement	Regular communication with all political stakeholders.	Governance & Policy Lead	M	M	H	-	-	H	15
	Prog-4														A-11	Agreement w/ JAQU & Government as to flexibility to scope requirements/ timescales	Continued liaison with JAQU and Government regarding decisions and governance requirements.	Governance & Policy Lead							
	Prog-4														A-12	COMPLETE - Develop a detailed schedule to ID all formal & informal approvals required	Develop a detailed schedule to identify all formal & informal approvals required and agree with all stakeholders.	Governance & Policy Lead							
	Prog-4														A-13	Ask for appropriate delegations	Appropriate delegations to officers will be sought in order to expedite.	Governance & Policy Lead							
	Prog-4														A-14	Briefing sessions being held with councillors	Briefing sessions being held with councillors	Governance & Policy Lead							
Governance & Policy	Prog-5	Political mandate	Political changes impact on schedule or vary scope.	Outcome of the 2019 local & Euro elections, changes nationally.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	M	H	H	-	M	15		A-15	Regular communication and engagement	Regular communication with all political stakeholders.	Governance & Policy Lead	M	M	H	H	-	M	15
	Prog-5														A-16	Develop a handover Briefing & Comms plan.	Develop a handover Briefing & Comms plan, ready for if/ when this risk impacts.	Governance & Policy Lead							
Programme & Project Business Case	Prog-6	JAQU guidance changes	Guidance not available within the required timescales, insufficient JAQU guidance or changes to the guidance.	The guidance is not issued, is insufficient, or changed by JAQU. Potential difference between drafts and advice because of timescales of submissions.	AQ compliance not being achieved in the desired timescales and impact on costs. Reputational impact to Greater Manchester authorities	Programme Manager	M	M	M	-	-	M	11		A-17	Regular review of requirements (every 2 weeks)	Regular review of requirements within the project team and communication with JAQU for any potential areas of concern.	Programme Manager	L	M	M	-	-	M	8
	Prog-6														A-18	Understanding of the 'fixed' documentation	Understanding of the 'fixed' documentation, despite requirements being addressed.	Programme Manager							
	Prog-6														A-19	Agree pragmatic working agreements with JAQU	Agree pragmatic working agreements with JAQU without the need for retrospective amendments.	Programme Manager							
	Prog-6														A-20	Additional briefing sessions	Additional briefing sessions are to be provided by JAQU, as required, which should help mitigate the delays to the issuing of full documented guidance.	Programme Manager							
	Prog-6														A-21	Concerns to be raised with JAQU	Concerns should be documented in writing to JAQU.	Programme Manager							
	Prog-6														A-22	Provide meeting minutes to JAQU	Provide meeting minutes to JAQU	Programme Manager							
	Prog-6														A-23	Communicate updates on Huddle	Ensure updates on the Huddle portal are communicated around the project team.	Programme Manager							
Marketing, Communications, Stakeholder Engagement & Consultation	Prog-7	Low public awareness of the issue of air pollution.	Low public awareness of the impact of air pollution may increase objections to the implementation of the GM CAP.	Current level of public understanding and awareness.	Reluctance to change travel behaviour and adopt sustainable, clean, transport options. AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	L	L	-	-	M	11	Consultation may increase.	A-24	Raise awareness of the issue of air pollution.	Raise awareness where possible through media campaigns, early and continued engagement with all stakeholder (including the general public) to promote the importance of clean air. Highlight Public Health benefits of cleaner air.	Communications Lead	L	L	L	-	-	L	6

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Legal	Prog-8	Legal challenge	Legal challenge about the approach taken	Objections to the approach and/ or timescales.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	VH	H	H	-	M	18		A-25	Tolerate	Ensure compliance with all legal requirements.	Legal Lead	M	H	H	-	-	M	15
	Prog-8														A-26	Potential areas for challenge to be raised to JAQU	Potential areas for challenge to be raised to JAQU for their consideration.	Legal Lead							
	Prog-8														A-27	Determine realistic timescales for public consultation.	Determine realistic timescales for public consultation. Engage with JAQU. Engage with legal advisors.	Legal Lead							
Legal	Prog-9	Impact to climate change strategy	Changes in fleet composition impacts ambitions related to climate change strategy.	Clean Air Plan (as defined by Government) is focussed on reduction of NO ₂ .	Impacts Carbon Plan and other emission reduction strategies	Programme Manager	VL	L	L	M	-	M	4		A-28	Preferred option to consider all potential negative implications.	Preferred option to consider all potential negative implications.	Legal Lead	VL	L	L	M	-	M	4
Data, Evidence & Modelling	Prog-10	Target Determination is not agreed in the required timescales	Target Determination is not agreed.	Differences between JAQU and local data	AQ compliance not being achieved in the desired timescales or impact on costings.	Programme Manager	M	M	H	-	-	H	15		A-29	COMPLETE - Consult with JAQU	Consult with JAQU to ensure accurate guidance is available for Target Determination.	Programme Manager	L	M	H	-	-	H	10
Data, Evidence & Modelling	Prog-11	Modelling / information	Predictive nature of modelling leading to potential uncertainty	Predictive nature of modelling leading to potential uncertainty	AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	VH	H	H	-	H	18		A-30	Use experienced resources, input of Technical Leads, independent verification & check JAQU assumptions	Experienced in-house capability, added input from the Technical Lead, independent verification and cross check against JAQU data.	Modelling Lead	L	VH	H	H	-	H	17
Programme & Project Business Case	Prog-12	Effectiveness of GM CAP following implementation	Implementation of the preferred option does not reduce NO ₂ to levels predicted within the model. This risk cannot be determined to have impacted immediately - it is a long-term risk, over several years.	Behaviour change expected in modelling process is not achieved in real life.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	VH	-	-	-	VH	18		A-31	Robust modelling and engagement with partner organisations and other areas of work during implementation	Further modelling and identification of interventions that can have the greatest impact or combinations of interventions. Engagement with partner organisations such as Highways England and Public Health England (PHE). Alignment with other relevant areas of work, such as the development of the congestion plan.	Programme Manager	L	VH	-	-	-	VH	17
	Prog-12														A-32	Implement appropriate monitoring	Implement appropriate monitoring for compliance and evaluation.	Monitoring and Evaluation Lead							
	Prog-12														A-33	Review feedback from monitoring	Feedback from monitoring should inform the effectiveness of the solutions implemented and give an opportunity to address any shortcomings.	Monitoring and Evaluation Lead							
	Prog-12														A-34	Review sensitivity ranges	Consider flexibility or sufficient sensitivity ranges to improve effectiveness.	Modelling Lead							
	Prog-12														A-35	Consider further projects	Consideration may be given to including further projects within the programme if compliance is not achieved.	Monitoring and Evaluation Lead							
	Prog-12														A-36	Ensure robust process and adequate assurance	Ensure the modelling design process is robust with adequate assurance during implementation	Modelling Lead							
	Prog-12														A-37	Ensure competent designer is appointed.	Ensure competent designer is appointed and that adequate checks and assurance are in place during the design phase, and that procurement process assigns liability appropriately. Appointments will be made under the existing Transport Professional Services framework.	Procurement Lead							
Governance & Policy	Prog-13	Positioning of Greater Manchester approach impacts working relationship with Highways England.	Lack of Highways England direction to act is highlighted by Greater Manchester AQ issue.	Highways England are operating under a different statutory framework and are not working under the same direction as Local Authorities.	Impact to working relationship with Highways England and partnership with the wider Steering Group.	Programme Manager	M	M	L	-	-	M	11		A-38	Highways England included in the Steering Group.	Highways England included in the Steering Group.	Governance & Policy Lead	M	L	L	-	-	L	7
	Prog-13														A-39	Close liaison with Highways England	Continued and on-going liaison with Highways England to ensure that any interventions are included within the modelling process.	Governance & Policy Lead							
	Prog-13														A-40	Close liaison with JAQU	Close liaison with JAQU.	Governance & Policy Lead							
	Prog-13														A-41	COMPLETE - Political escalation to highlight this situation.	Political escalation to highlight this situation.	Governance & Policy Lead							

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Project & Work Package Development	Prog-14	Interaction with other Greater Manchester initiatives	Interfaces with other near-term Greater Manchester initiatives. Unforeseen impacts of Greater Manchester initiatives, or of the proposed solutions to the Greater Manchester initiatives.	Extent and wide-range of scope and interfaces.	Unforeseen complexities around interfaces and/or interactions may result in AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	L	M	H	-	M	15		A-42	GM CAP to consider all Greater Manchester policies, strategies and initiatives.	GM CAP to consider all Greater Manchester policies, strategies and initiatives and amend if necessary.	Programme Manager	L	L	M	H	-	M	10
	Prog-14														A-43	Early engagement to ensure alignment of initiatives.	Early engagement to ensure alignment of initiatives, with on-going monitoring, updates and briefings to Local Authorities.	Programme Manager							
	Prog-14														A-44	Representatives from Strategy and Policy to lead on the interfaces with other Greater Manchester initiatives	Representatives from Strategy and Policy to lead on the interfaces with other Greater Manchester initiatives as soon as possible, to ensure that this risk is mitigated.	Programme Manager							
	Prog-14														A-45	2040 Delivery Plan	The 2040 Delivery Plan will need to be updated to reflect the CAP work.	Programme Manager							
Project & Work Package Development	Prog-15	Decision makers require a level of information that is not feasible to produce	Additional research and evaluation of preferred option is required (and possibly at multiple stages), but may prove to be insufficient to support decision makers	Insufficient information is available to make key decisions.	Delays to achieving AQ compliance. Further investigation and research required leading to delays and additional costs.	Programme Manager	H	H	H	H	-	M	19		A-46	Consider research and evaluation requirement for each intervention.	FBC research and evaluation requirement for each intervention as they are developed.	Programme Manager	M	H	H	H	-	M	15
	Prog-15														A-47	Early feedback, through Public conversation activity.	Drawing out of early feedback through Public conversation activity.	Programme Manager							
	Prog-15														A-48	Liaison with JAQU	Liaison with JAQU around the scope of their central evaluation to ensure that Greater Manchester are aware of any requirements that may need to be met.	Programme Manager							
Project & Work Package Development	Prog-16	Technology required within timescales available	Technology required to deliver the required improvements is not available within the timescales to support the preferred option.	Technology required is not defined and still needs to be confirmed.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	VH	M	-	-	M	18	Cost impact assumes technology is across CAZ infrastructure and back office technology, EV's and bus retrofit.	A-49	Work with academia and technology development organisations.	Work with academia and other technology development organisations to support and accelerate innovation.	Programme Manager	L	VH	M	-	-	M	17
Legal	Prog-17	Public Inquiry	A Public Inquiry may be required during the development and implementation of the GM CAP	Local Authority discretionary decision. Feedback by local resident groups, local businesses etc. identifying significant objection to proposed measures	AQ compliance not being achieved in the mandated timescales. Cost/schedule implications	Programme Manager	M	M	VH	VH	-	VH	18		A-50	Seek advice as required.	As the GMCAP develops, seek advice from Legal Advisers, Technical Lead, other authorities and JAQU.	Legal Lead	M	M	VH	VH	-	VH	18
	Prog-17														A-51	On-going engagement with Districts	On-going engagement with Districts to determine their position and take further legal advice as required.	Legal Lead							
Human Resources	Prog-18	Resources	Uncertainty around resourcing requirements - extent of work / teams is underestimated, increasing costs / duration of activities. Availability of internal/ external resources with competing demands for time. Capability of internal/ external resources to meet the requirements. Retention of critical staff - Key/ Critical/ Specialist resources may become unavailable, at short notice.	Uncertainty around the resource requirements. Emerging requirements. Experience of available staff. Market forces/ staff churn.	AQ compliance not being achieved in the desired timescales costings are not credible.	Programme Manager	H	M	M	-	-	L	14		A-52	Monitor costs and schedule	Costs monitored on a weekly basis and schedule monitored on a weekly basis, so any trends can be identified and mitigations implemented. Issues escalated to JAQU and included in reassessment.	Programme Manager	M	M	M	-	-	L	11
	Prog-18														A-53	Consider procurement strategy	Consider the procurement strategy during development of interventions to identify where risk can be transferred if appropriate.	Procurement Lead							
	Prog-18														A-54	Proactively manage the resource levels within the team	Proactively manage the resource levels within the team	Programme Manager							
	Prog-18														A-55	Continue monthly Project Leads meetings.	Continue the monthly Project Leads meetings to assess and prioritise resource requirements.	Programme Manager							
	Prog-18														A-56	Utilise external resource	Utilise external resource if internal resource is not available.	HR Lead							
	Prog-18														A-57	Consider recruitment of new dedicated internal resource	Consider recruitment of new dedicated internal resource	HR Lead							
	Prog-18														A-61	Appropriate resource planning.	Pay due consideration to potential availability of resources during the development and delivery of GM CAP.	Programme Manager							

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	Prog-18													A-78	On-going engagement of staff	On-going engagement of staff, fostering good working environment and team atmosphere. Regular resource reviews to ensure that workload is appropriate.	HR Lead								
Project & Work Package Development	Prog-20	Highways England Interventions	Interventions / changes by Highways England that impact the GM CAP.	Highways England is a separate entity who may implement their own interventions to meet their requirements, within the prescribed timescales. Alternatively, Highways England may undertake significant infrastructure changes and influence flows, and therefore vehicles move to Local Authority roads and cause unforeseen exceedances.	AQ compliance not being achieved in the desired timescales or impact on costings.	Programme Manager	L	H	M	-	H	10		A-58	COMPETE - Include Highways England in the Steering Group.	Ensure Highways England included in the Steering Group and establish regular engagement.	Programme Manager	L	H	M	-	-	H	10	
Finance	Prog-23	Whole life costs	Whole life costs have yet to be finalised and JAQU have yet to review the funding proposal.	How whole life costs are to be managed has yet to be confirmed at this stage.	Unexpected potential financial liabilities flowing to GM.	Finance Manager	M	VH	L	-	L	18		A-62	Gain confirmation from JAQU around whole life costs.	Gain confirmation from JAQU as to how whole life costs are expected to be managed.	Finance Lead	L	VH	L	-	-	L	17	
Data, Evidence & Modelling	Prog-24	Fleet redeployment	Older fleet being redeployed in Greater Manchester from other areas because of the differences in approach and timescales between different authorities that may be taken.	If solution implemented in Greater Manchester is more favourable than other areas.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	L	L	L	VH	-	H	17		A-63	Lobby Government	Lobby Government for funding for Green Buses in the Greater Manchester area	Modelling Lead	L	L	L	H	-	H	10
Audit and Assurance	Prog-25	Assurance requirements	Additional assurance may be required, depending on the scope of the programme as it develops.	Full scope of the programme/ projects is yet to be determined.	Additional resource requirements. Potential delays to meet assurance requirements - AQ compliance not being achieved in the mandated timescales.	Programme Manager	H	M	L	-	L	14		A-64	Undertake a further Risk Potential Assessment (RPA).	RPA arrangements will be confirmed once the preferred option is agreed and assurance plans developed.	Assurance Lead	M	M	L	-	-	L	11	
Procurement	Prog-26	Procurement strategies	Procurement Strategies are developed in isolation from similar schemes across the UK and obvious areas of synergy are missed.	Lack of national framework leads to multiple frameworks being utilised.	AQ compliance not being achieved in the mandated timescales. Increased costs due to market demand	Procurement Manager	M	H	H	-	H	15		A-65	Share procurement strategy across work streams	The Procurement team will share the Scope and Procurement Strategy for each work stream across each of the other Clean Air work streams and with JAQU – in order that dependencies/ synergies can be identified and managed effectively and to facilitate the development of effective procurement strategies/ frameworks.	Procurement Lead	M	M	H	-	-	H	15	
Finance	Prog-27	Commodity price increases	Rise of commodity prices as a result of Brexit or other unforeseen exchange rate fluctuations drives significant cost increases.	Market forces	Impact on costings.	Finance Manager	M	M	L	-	L	11		A-66	Contractual arrangements	Wherever practicable, contractual arrangements will be drafted to favour 'fixed-price' or 'manage risk' agreements with contractors.	Finance Lead	L	M	L	-	-	L	8	
Programme & Project Business Case	Prog-28	JAQU reviews and governance requirements	JAQU reviews and governance requirements not achieved within the scheduled time scales/ requiring multiple iterations.	JAQU guidance unavailable at the time of drafting. JAQU estimation of the level of work required to close out.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	L	VH	-	H	18		A-67	Liaise with JAQU	Liaise with JAQU to agree submission requirements in advance of drafting documents and have discussion at submission and review stages in addition to formal submission. Allow JAQU to have early sight of documentation, for review.	Programme Manager	M	L	H	-	-	H	15	
Project & Work Package Development	Prog-30	Local Authority may be responsible for managing Highways England attributable emissions.	Some Local Authority exceedances may be attributable to emissions from the Strategic Road Network (SRN) (Highways England), where the exceedance is measured on the LA road but attributable to emissions from the SRN. Compliance cannot be delivered because emissions from the SRN cannot be reduced sufficiently.	Clarification/ confirmation from JAQU indicate that where some exceedances are on the Local Authority network and are partly attributable to SRN emissions, the expectation is that the Local Authority proposals will be expected to deliver compliance on that link.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	H	VH	L	-	H	20		A-69	COMPLETE - Modelling to identify if there are any examples of this situation.	Modelling to identify if there are any examples of this situation, and discuss with JAQU and Highways England.	Modelling Lead	H	H	L	-	-	H	19	
	Prog-30													A-70	COMPLETE - Political escalation to highlight this situation.	Political escalation to highlight this situation.	Governance & Policy Lead								
	Prog-30													A-71	Engage with Highways England.	Engage with Highways England to collaborate on a suitable approach.	Stakeholder Lead								
Procurement	Prog-31	Implementation funding not secured prior to procurement.	Good quality tenders will not be received, or prices will be inflated because funding will not be secured before the procurement exercise needs to begin.	Procurement exercise must be undertaken before funding can be secured to be able to pay suppliers.	AQ compliance not being achieved in the desired timescales and impact on costing.	Procurement Manager	M	VH	H	-	H	18		A-72	Funding for Suppliers	Seek clarification from JAQU as to whether there is any flexibility over this. Ensure JAQU are in broad agreement with procurement approach before going to market.	Procurement Lead	M	VH	H	-	-	H	18	
	Prog-31													A-116	SRO to agree approach with JAQU and gain approval	SRO to discuss and agree approach with counterpart at JAQU and gain approval to procure as part of OBC approval	SRO								
Legal	Prog-32	Developing information is released early.	Early release of developing information to the public domain may impact plans for consultation, engagement, and reputation, leading to delays to GM CAP development or consultation plans.	Early release of developing information to public domain e.g. press, social media.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	H	L	M	H	-	M	19		A-73	Contractual Arrangements	Ensure appropriate contractual arrangements are in place (Non Disclosure Agreements etc.) and follow information management processes.	Procurement Lead	M	L	M	H	-	M	15

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Legal	Prog-33	Legal scope	Legal scope is unclear at this stage. If the legal scope is not understood, then Greater Manchester risk not complying with the remit of the programme, or having to change the scope of the programme/ projects to address any shortcomings.	Lack of clarity around the full legal scope - due to the timescales to-date.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	H	M	-	-	L	14		A-74	Engagement of QC	Engagement of legal expertise to clarify legal questions and on-going engagement with JAQU	Legal Lead	M	-	M	-	-	L	11	
Procurement	Prog-34	Procurement of the next phase Lead Advisor	Schedule is delayed as a result of delays in the procurement of the next phase Lead Advisor.	Procurement process takes longer than anticipated.	AQ compliance not being achieved in the mandated timescales.	Procurement Manager	M	M	H	-	-	M	15		A-76	COMPLETE - Issue tender documentation	Tender documentation is scheduled for release in Dec-18, with return Jan-19 in-line with the procurement timetable.		M	M	H	-	-	M	15
	Prog-34													A-111	Liaise with JAQU regarding procurement process.	Liaise with JAQU regarding procurement process of the next phase Lead Advisor and revise procurement timescale estimates accordingly.									
Finance	Prog-35	JAQU may not agree the revised cost plan	JAQU may not agree the revised cost plan. Time taken to reach agreement may cause funding issues for Greater Manchester.	Long-term costs are difficult to estimate until scope is fully clarified.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	H	VL	M	-	-	M	14	Assumes that JAQU pressure will be to reduce costs.	A-77				H	VL	M	-	-	M	14
Programme & Project Business Case	Prog-37	Outline Business Case (OBC) not approved by Government	OBC not approved by Government, leading to delays.	OBC not approved by Government.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	M	VH	-	-	VH	18		A-79				M	M	VH	-	-	VH	18
Programme & Project Business Case	Prog-38	Full Business Case (FBC) not approved by Government	FBC not approved by Government, leading to delays.	FBC not approved by Government.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	M	VH	-	-	VH	18		A-80				M	M	VH	-	-	VH	18
Programme & Project Business Case	Prog-39	Timescales of Greater Manchester submission of approved FBC for Implementation/ Clean Air Fund	As per the schedule, Greater Manchester will be submitting an approved FBC for funding towards the end of the JAQU funding deadline.	Proposed scheme is complex to deliver and may not meet JAQU's expectations with regard to the FBC submission (the point at which funding is released).	AQ compliance not being achieved in the mandated timescales.	Programme Manager	H	VL	H	VH	-	H	20		A-81	Review schedule	Review schedule and optimise to comply with JAQU deadlines	Programme Manager	M	VL	M	VH	-	H	18
	Prog-39													A-112	Seek agreement from JAQU	Seek agreement from JAQU to extend deadline.	Project Sponsor								
Finance	Prog-40	Optimism Bias	As recommended, HM Treasury Green Book guidance is followed, but does not prove appropriate for this scheme.	Clean Air Plans are novel and there are few 'lessons learned' to inform the guidance. There are no available case studies for reference.	Differing cost of Implementation - a request for more funding is required	Finance Manager	M	VH	M	-	-	L	18		A-82	Cost refinement	Costs and revenue will be refined, alongside the scope of the scheme, as part of the Financial Case for FBC	Finance Lead	M	H	M	-	-	L	15
Customer	Prog-41	Public Transport Capacity/ Active travel infrastructure	Limited public transport capacity/ active travel infrastructure to compliment a modal shift, as a result of potential CAZ schemes	Insufficient timescales to implement.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	L	VL	M	H	-	H	10		A-83	Liaison with Bus Operators	Liaison with Bus Operators about routes where extra capacity may be required.	Programme Manager	VL	VL	M	H	-	H	8
	Prog-41													A-84	Liaison with Mayors Challenge Fund	Liaison with Mayors Challenge Fund cycling and walking team to ensure infrastructure is targeted at appropriate locations.	Programme Manager								
	Prog-41													A-85	Targeted interventions by Sustainable Journeys team	Targeted interventions by Sustainable Journeys team to make people aware of alternative options for travel.	Programme Manager								
Finance	Prog-42	Inflation forecasts	Inflation forecasts for 10 years are incorrect and this leads to increased operational costs.	Various, including uncertainty around Brexit.	Increased operational costs	Finance Manager	VH	VH	-	-	-	L	25		A-86	Gain confirmation from JAQU around whole life costs.	Gain confirmation from JAQU as to how whole life costs are expected to be managed.	Finance Lead	M	VH	-	-	-	L	18
Programme & Project Business Case	Prog-43	JAQU funding	JAQU require Greater Manchester Combined Authority (GMCA) to reduce ongoing operational cost	Decision by JAQU	Greater Manchester have to absorb some costs as part of their Business As Usual (BAU) Reputational risk if spending on other areas is impacted.	Programme Manager	L	VL	-	H	-	H	10	Assumes that JAQU pressure will be to reduce costs. However, the impact to district affordability could be significant.	A-87				L	VL	-	H	-	H	10
Programme & Project Business Case	Prog-44	FBC activities are to be run in parallel.	Streamlining of the FBC schedule requires activities to be run in parallel.	Timescales for delivery of the GM CAP. (see related threat Prog-39 and the requirement to meet funding timescales).	AQ compliance not being achieved in the mandated timescales. Re-work and increased costs.	Programme Manager	VH	H	VH	-	-	M	25		A-88	On-going programme and project reviews	On-going programme and project reviews to ensure that this is being managed effectively.	Programme Manager	H	H	VH	-	-	M	20

Title:		Appendix E.5.1 - OBC Programme Risk Register (Qualitative) CONFIDENTIAL WORKING DRAFT																							
Review Date:		2/25/2019																							
Category/ Workstream	Risk ID	Risk Name	Risk Description	Risk Cause	Risk Consequence	Risk Owner	Pre-Mitigation (VL-VH)						Risk Score (Pre-Mit)	Assessment Assumptions	Action ID	Action Name	Action Description	Action Owner	Post-Mitigation (VL-VH)						Risk Score (Post-Mit)
							Likelihood	Project Cost	Schedule	Reputation & Legal	Service Disruption	Policy / Benefit realisation							Likelihood	Project Cost	Schedule	Reputation & Legal	Service Disruption	Policy / Benefit realisation	
Programme & Project Business Case	Prog-45	Availability of affordable compliant vehicles.	The cumulative effect of multiple schemes across the UK drives up the cost of new/second hand vehicles considerably and/or causes delay to compliance due to lengthy wait times (new vehicles).	National approach influences whole market	Costs to upgrade fleet are higher or upgrade process takes longer than anticipated. AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	VH	-	H	-	H	18		A-89				M	VH	-	H	-	H	18
Programme & Project Business Case	Prog-46	Leaving the European Union (BREXIT)	Risk due to potential outcomes of the consultation regarding the plans for European Union Withdrawal; unknown at this stage whether this will have impact on the GM CAP.	Change of Governmental priorities.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	VH	M	M	-	-	M	17		A-90	Stay abreast of consultations	Stay abreast of consultations; unknown at this stage whether there will be impact on the GM CAP.	Governance & Policy Lead	VH	M	M	-	-	M	17
Procurement	Prog-47	Framework Agreements	Complexity of using various framework agreements and uncertainty over whether full scope of proposals will be covered by existing frameworks.	Complexity of using a number of existing frameworks.	AQ compliance not being achieved in the mandated timescales.	Procurement Manager	L	L	H	H	-	M	10		A-91	Early engagement with the Legal team.	Legal review and involvement in the procurement process.	Procurement Lead	L	L	H	M	-	M	10
	Prog-47														A-92	Engagement with the procurement team	The procurement team to undertake a review of the most suitable frameworks to use for goods/services that need to be procured.	Procurement Lead							
Procurement	Prog-48	Risk that a supplier/ preferred supplier goes into administration	Risk that a supplier/ preferred supplier goes into administration.	Market forces	AQ compliance not being achieved in the mandated timescales.	Procurement Manager	L	L	VH	-	-	H	17		A-93	Implementation of procurement process	Review the tender list, seek financial statements/references, manage Contractor watch lists, formulate a robust procurement strategy on the best available data at the time and before contracts are let, insert suitable clauses regarding step-in rights and termination rights if the supplier/contractor goes into administration. Existing frameworks will be utilised as much as possible.	Procurement Lead	VL	L	VH	-	-	H	13
Marketing, Communications, Stakeholder Engagement & Consultation	Prog-49	Further Consultation work required	Risk that further consultation required above the level currently anticipated	Timescales do not support serial development.	Retrospective changes may be required, increasing the cost to the LA's.	Programme Manager	L	M	VH	-	-	M	17		A-94	Robust stakeholder engagement strategy.	Robust stakeholder engagement strategy; regular updates/reviews of the budgets and efforts required for the consultation	Communications Lead	L	M	H	-	-	M	10
Procurement	Prog-50	Returned tenders are over the estimated Cost Plan.	Risk that the returned tenders are over the estimated Cost Plan or do not represent appropriate Value for Money (VfM).	Market forces/ demand. Procurement timescales for the implementation.	AQ compliance not being achieved in the desired timescales and impact on costing.	Procurement Manager	H	H	-	-	-	H	19		A-95	Competitive tendering/ framework utilisation	Market engagement for competitive tenders and use of framework as much as possible.	Procurement Lead	M	H	-	-	-	H	15
	Prog-50														A-96	Liaison with JAQU	Liaise with JAQU with regard to developing national frameworks.	Programme Manager							
Finance	Prog-51	Maintenance of assets	Maintenance costs of assets are higher than anticipated.	Underestimation of maintenance requirements/ market forces	Increased operational costs	Finance Manager	M	M	-	-	-	M	11		A-97	Work with asset owners and suppliers	Work with asset owners and suppliers to understand the maintenance requirements and include this within cost plans.	Finance Lead	M	L	-	-	-	M	11
Programme & Project Business Case	Prog-52	GM CAP exacerbates AQ issues on the Highways England network	GM CAP interventions impact AQ issues on the Highways England network.	Interventions planned lead to re-routing onto Highways England network.	AQ compliance not being achieved in the mandated timescales.	Programme Manager	L	VL	-	-	-	M	8	VL cost impact as outside the scope of this programme.	A-98	Highways England included in the Steering Group.	Highways England included in the Steering Group.	SRO	L	VL	-	-	-	M	8
	Prog-52														A-99	Close liaison with Highways England	Continued and on-going liaison with Highways England to ensure that any interventions are included within the modelling process.	Governance & Policy Lead							
Programme & Project Business Case	Prog-53	Clean Air Fund - fund provision	Clean Air Funding is not adequately supported by the Government	Funds not available to support the Programme	AQ compliance not being achieved in the mandated timescales.	Programme Manager	H	H	H	VH	-	VH	20		A-100	Clean Air Fund scoping	Ensure during FBC the Clean Air Funds are fully scoped and work with JAQU to establish fund availability.	Programme Manager	H	H	H	VH	-	VH	20
Finance	Prog-54	Cost estimation uncertainty across all projects	Cost of design and implementation of proposals are inaccurate	Scope development at OBC stage	AQ compliance not being achieved in the mandated timescales.	Finance Manager	M	VH	M	M	-	M	18		A-101	Robust financial model	Robust financial model with robust assumptions and strategy is in place to deal with the costs outcome being higher than anticipated.	Finance Lead	M	H	M	M	-	M	15
	Prog-54														A-102	Parking costs	Review scope and associated costs at FBC stage	Finance Lead							
Data, Evidence & Modelling	Prog-55	Fleet mix	Fleet mix changes ahead of proposed scheme being implemented are not accounted for in Clean Air Fund incentives	Greater Manchester ends up with an old fleet of vehicles	AQ compliance not being achieved in the mandated timescales.	Modelling Lead	M	H	M	H	-	H	15		A-103	Benchmarking of fleets	Build on fleet composition analysis already undertaken to establish an indication of number of retrofits required. Consider imposing a limit or restriction on bringing older vehicles into Greater Manchester service network against the incentives funds	Modelling Lead	VL	L	L	H	-	H	8
Project & Work Package Development	Prog-56	National approach to Clean Air Projects	Inconsistencies between different cities policies with regard to exemptions/approaches with proposed CAZs	No clear national approach to charging and national modes of transport	AQ compliance not being achieved in the mandated timescales.	JAQU	M	H	-	M	-	H	15		A-104	Engagement on national strategy	Liaise with JAQU to understand national approach to charging and Heavy Good Vehicles (HGV) strategy	Programme Manager	L	M	-	M	-	M	8
Project & Work Package Development	Prog-57	Infrastructure technology	Life extension of scheme results in infrastructure installed becoming redundant (technologically)	Upgrade costs not currently factored for could be significant (e.g. ANPR)	AQ compliance not being achieved in the mandated timescales.	Programme Manager	L	M	-	-	-	M	8		A-105	Infrastructure Innovation	Keep abreast with technology changes and market trends on key infrastructure	Programme Manager	L	L	-	-	-	L	6
Project & Work Package Development	Prog-58	Technological changes	Technology develops in market impacting the chargers/ connections	Innovation in market	AQ compliance not being achieved in the mandated timescales.	Programme Manager	L	-	-	M	-	H	10		A-106	Innovation	To ensure best value for money the GMEV contract includes a requirement for bidders to keep pace with technological changes and provide a rate card for varying types of EV infrastructure	Programme Manager	L	-	-	L	-	L	6

Title:		Appendix E.5.1 - OBC Programme Risk Register (Qualitative) CONFIDENTIAL WORKING DRAFT																							
Review Date:		2/25/2019																							
Category/ Workstream	Risk ID	Risk Name	Risk Description	Risk Cause	Risk Consequence	Risk Owner	Pre-Mitigation (VL-VH)						Risk Score (Pre-Mit)	Assessment Assumptions	Action ID	Action Name	Action Description	Action Owner	Post-Mitigation (VL-VH)						Risk Score (Post-Mit)
							Likelihood	Project Cost	Schedule	Reputation & Legal	Service Disruption	Policy / Benefit realisation							Likelihood	Project Cost	Schedule	Reputation & Legal	Service Disruption	Policy / Benefit realisation	
Project & Work Package Development	Prog-59	Lack of network capacity	Electricity North West unable to meet demand of proposed scheme	Electricity NW does not have the capacity to supply scheme	AQ compliance not being achieved in the mandated timescales.	Programme Manager	L	M	-	L	-	M	8		A-107	Engage with Electricity North West	Engage with Electricity North West to establish network capacity and scope for growth in future years	Programme Manager	L	M	-	L	-	L	8
Project & Work Package Development	Prog-60	Emissions	The current focus of the UK plan and direction for the GM CAP is achieving the EU Limit Value based solely on NO ₂ . There may be unintended consequences on CO ₂ and Particulate Matter (PM) concentrations in Greater Manchester.	GM CAP focus is solely on NO ₂ .	AQ compliance not being achieved in the mandated timescales.	Programme Manager	M	L	L	H	-	H	15		A-108	To be considered during GM CAP and FBC development.	To be considered and taken into account during the development of the GM CAP and FBC.	Programme Manager	L	L	L	H	-	H	10
Programme & Project Business Case	Prog-61	Unforeseen economic effects	Implementing the GM CAP may have unforeseen economic effects.	Uncertainty around the economic effects of the implementation of the GM CAP	Effects will vary depending on area and sector. This may alter economic activity in a number of ways: investment, employment, and business viability (incl. HGV/ LGV). These effects may be both positive and negative, creating some opportunities whilst making others less attractive.	SRO	M	H	H	H	-	M	15		A-109	To be considered during GM CAP and FBC development.	Consultation and engagement with stakeholders to be considered and taken into account during the design development of the GM CAP and FBC. Economic Impact mitigated through current scheme where possible. Thorough further Distributional Impact assessments required in FBC to inform potential schemes and reduce socio-economic impact Review through Monitoring and Evaluation Plan	Programme Manager	M	L	L	H	-	L	15
Project & Work Package Development	Prog-63	Data management	GDPR compliance	Back office interfaces are not clear and are not scoped appropriately.	Reputational challenges Increased operational costs	Programme Manager	M	H	-	H	-	L	15		A-113	Establish clear policies and requirements.	Ensure that there is a clear scope, identified interfaces, policies and contractual requirements are established for GDPR compliant processes and behaviours.	Programme Manager	L	M	-	H	-	L	10
Procurement	Prog-64	Procurement responses	Proposed packages of work are not seen as attractive by the market and responses from tenderers/ bidders are not forthcoming.	Lack of market interest.	Re-tenders may be required, or a change to the procurement strategy. AQ compliance not being achieved in the mandated timescales.	Procurement Manager	L	H	H	M	-	H	10		A-114	Early engagement with the supply chain.	Engage with the supply chain to ensure that packages of work will be attractive to the marketplace.	Procurement Manager	VL	H	H	M	-	H	8
Procurement	Prog-65	Supplier capacity	Risk that due to a high level of national demand on a limited number of suppliers, a lack of supplier capacity could lead to long-lead times or increased costs.	Market forces	AQ compliance not being achieved in the mandated timescales.	Procurement Manager	L	M	H	H	-	H	10		A-115	Early engagement with the supply chain.	Early engagement with the supply chain to inform levels of anticipated demand and allow suppliers to plan for this.	Procurement Manager	VL	M	H	H	-	H	8

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PreMit Rank	PostMit Rank	Risk Score (Pre-Mit)	Risk Score (Post-Mit)	Category/ Workstream	Risk ID	Risk Name	Risk Description	Risk Cause	Risk Consequence
1	1	25	20	Programme & Project Business Case	Prog-44	FBC activities are to be run in parallel.	Streamlining of the FBC schedule requires activities to be run in parallel.	Timescales for delivery of the GM CAP. (see related threat Prog-39 and the requirement to meet funding timescales).	AQ compliance not being achieved in the mandated timescales. Re-work and increased costs.
1	4	25	18	Finance	Prog-42	Inflation forecasts	Inflation forecasts for 10 years are incorrect and this leads to increased operational costs.	Various, including uncertainty around Brexit.	Increased operational costs
3	1	20	20	Programme & Project Business Case	Prog-53	Clean Air Fund - fund provision	Clean Air Funding is not adequately supported by the Government	Funds not available to support the Programme	AQ compliance not being achieved in the mandated timescales.
3	3	20	19	Project & Work Package Development	Prog-30	Local Authority may be responsible for managing Highways England attributable emissions.	Some Local Authority exceedances may be attributable to emissions from the Strategic Road Network (SRN) (Highways England), where the exceedance is measured on the LA road but attributable to emissions from the SRN. Compliance cannot be delivered because emissions from the SRN cannot be reduced sufficiently.	Clarification/ confirmation from JAQU indicate that where some exceedances are on the Local Authority network and are partly attributable to SRN emissions, the expectation is that the Local Authority proposals will be expected to deliver compliance on that link.	AQ compliance not being achieved in the mandated timescales.
3	4	20	18	Programme & Project Business Case	Prog-39	Timescales of Greater Manchester submission of approved FBC for Implementation/ Clean Air Fund	As per the schedule, Greater Manchester will be submitting an approved FBC for funding towards the end of the JAQU funding deadline.	Proposed scheme is complex to deliver and may not meet JAQU's expectations with regard to the FBC submission (the point at which funding is released).	AQ compliance not being achieved in the mandated timescales.
6	16	19	15	Governance & Policy	Prog-2	Delays with the Local Authority approval process	Ten Local Authorities with differing constitutional arrangements need to reach agreement on the preferred option.	Approval process, number of interfaces. New interventions being introduced by stakeholders.	Delays to decision making resulting in AQ compliance not being achieved in the mandated timescales. Additional legal advice may be required.
6	16	19	15	Project & Work Package Development	Prog-15	Decision makers require a level of information that is not feasible to produce	Additional research and evaluation of preferred option is required (and possibly at multiple stages), but may prove to be insufficient to support decision makers	Insufficient information is available to make key decisions.	Delays to achieving AQ compliance. Further investigation and research required leading to delays and additional costs.
6	16	19	15	Legal	Prog-32	Developing information is released early.	Early release of developing information to the public domain may impact plans for consultation, engagement, and reputation, leading to delays to GM CAP development or consultation plans.	Early release of developing information to public domain e.g. press, social media.	AQ compliance not being achieved in the mandated timescales.
6	16	19	15	Procurement	Prog-50	Returned tenders are over the estimated Cost Plan.	Risk that the returned tenders are over the estimated Cost Plan or do not represent appropriate Value for Money (VfM).	Market forces/ demand. Procurement timescales for the implementation.	AQ compliance not being achieved in the desired timescales and impact on costing.
10	4	18	18	Legal	Prog-17	Public Inquiry	A Public Inquiry may be required during the development and implementation of the GM CAP	Local Authority discretionary decision. Feedback by local resident groups, local businesses etc. identifying significant objection to proposed measures	AQ compliance not being achieved in the mandated timescales. Cost/schedule implications
10	4	18	18	Procurement	Prog-31	Implementation funding not secured prior to procurement.	Good quality tenders will not be received, or prices will be inflated because funding will not be secured before the procurement exercise needs to begin.	Procurement exercise must be undertaken before funding can be secured to be able to pay suppliers.	AQ compliance not being achieved in the desired timescales and impact on costing.
10	4	18	18	Programme & Project Business Case	Prog-37	Outline Business Case (OBC) not approved by Government	OBC not approved by Government, leading to delays.	OBC not approved by Government.	AQ compliance not being achieved in the mandated timescales.
10	4	18	18	Programme & Project Business Case	Prog-38	Full Business Case (FBC) not approved by Government	FBC not approved by Government, leading to delays.	FBC not approved by Government.	AQ compliance not being achieved in the mandated timescales.
10	4	18	18	Programme & Project Business Case	Prog-45	Availability of affordable compliant vehicles.	The cumulative effect of multiple schemes across the UK drives up the cost of new/second hand vehicles considerably and/or causes delay to compliance due to lengthy wait times (new vehicles).	National approach influences whole market	Costs to upgrade fleet are higher or upgrade process takes longer than anticipated. AQ compliance not being achieved in the mandated timescales.
10	11	18	17	Data, Evidence & Modelling	Prog-11	Modelling / information	Predictive nature of modelling leading to potential uncertainty	Predictive nature of modelling leading to potential uncertainty	AQ compliance not being achieved in the mandated timescales.
10	11	18	17	Programme & Project Business Case	Prog-12	Effectiveness of GM CAP following implementation	Implementation of the preferred option does not reduce NO2 to levels predicted within the model. This risk cannot be determined to have impacted immediately - it is a long-term risk, over several years.	Behaviour change expected in modelling process is not achieved in real life.	AQ compliance not being achieved in the mandated timescales.
10	11	18	17	Project & Work Package Development	Prog-16	Technology required within timescales available	Technology required to deliver the required improvements is not available within the timescales to support the preferred option.	Technology required is not defined and still needs to be confirmed.	AQ compliance not being achieved in the mandated timescales.
10	11	18	17	Finance	Prog-23	Whole life costs	Whole life costs have yet to be finalised and JAQU have yet to review the funding proposal.	How whole life costs are to be managed has yet to be confirmed at this stage.	Unexpected potential financial liabilities flowing to GM.

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PreMit Rank	PostMit Rank	Risk Score (Pre-Mit)	Risk Score (Post-Mit)	Category/ Workstream	Risk ID	Risk Name	Risk Description	Risk Cause	Risk Consequence
10	16	18	15	Governance & Policy	Prog-3	Public consultation/ decision making in Pre-Election Periods	Potential for delays to the schedule if consultation or governance is required during Pre-Election Periods causes issues.	Internal/ external (e.g. Local Authorities) governance requirements, additional rework. JAQU advice/ requirements are subject to change.	AQ compliance not being achieved in the mandated timescales.
10	16	18	15	Governance & Policy	Prog-4	Additional decisions/ governance required throughout the development of the business case & programme delivery	Additional decisions/ governance required or takes longer than anticipated - internal, local authority (High level governance, not specific powers or consents - the required governance could vary significantly depending on the content of the business case and/or the scope of the preferred option.).	Varied governance processes, uncertainty around governance, overlap with other strategies. Unforeseen government requirements	AQ compliance not being achieved in the mandated timescales.
10	16	18	15	Legal	Prog-8	Legal challenge	Legal challenge about the approach taken	Objections to the approach and/ or timescales.	AQ compliance not being achieved in the mandated timescales.
10	16	18	15	Programme & Project Business Case	Prog-28	JAQU reviews and governance requirements	JAQU reviews and governance requirements not achieved within the scheduled time scales/ requiring multiple iterations.	JAQU guidance unavailable at the time of drafting. JAQU estimation of the level of work required to close out.	AQ compliance not being achieved in the mandated timescales.
10	16	18	15	Finance	Prog-40	Optimism Bias	As recommended, HM Treasury Green Book guidance is followed, but does not prove appropriate for this scheme.	Clean Air Plans are novel and there are few 'lessons learned' to inform the guidance. There are no available case studies for reference.	Differing cost of Implementation - a request for more funding is required
10	16	18	15	Finance	Prog-54	Cost estimation uncertainty across all projects	Cost of design and implementation of proposals are inaccurate	Scope development at OBC stage	AQ compliance not being achieved in the mandated timescales.
25	11	17	17	Programme & Project Business Case	Prog-46	Leaving the European Union (BREXIT)	Risk due to potential outcomes of the consultation regarding the plans for European Union Withdrawal; unknown at this stage whether this will have impact on the GM CAP.	Change of Governmental priorities.	AQ compliance not being achieved in the mandated timescales.
25	31	17	13	Procurement	Prog-48	Risk that a supplier/ preferred supplier goes into administration	Risk that a supplier/ preferred supplier goes into administration.	Market forces	AQ compliance not being achieved in the mandated timescales.
25	36	17	10	Data, Evidence & Modelling	Prog-24	Fleet redeployment	Older fleet being redeployed in Greater Manchester from other areas because of the differences in approach and timescales between different authorities that may be taken.	If solution implemented in Greater Manchester is more favourable than other areas.	AQ compliance not being achieved in the mandated timescales.
25	36	17	10	Marketing, Communications, Stakeholder Engagement & Consultation	Prog-49	Further Consultation work required	Risk that further consultation required above the level currently anticipated	Timescales do not support serial development.	Retrospective changes may be required, increasing the cost to the LA's.
29	16	15	15	Governance & Policy	Prog-5	Political mandate	Political changes impact on schedule or vary scope.	Outcome of the 2019 local & Euro elections, changes nationally.	AQ compliance not being achieved in the mandated timescales.
29	16	15	15	Procurement	Prog-26	Procurement strategies	Procurement strategies are developed in isolation from similar schemes across the UK and obvious areas of synergy are missed.	Lack of national framework leads to multiple frameworks being utilised.	AQ compliance not being achieved in the mandated timescales. Increased costs due to market demand
29	16	15	15	Procurement	Prog-34	Procurement of the next phase Lead Advisor	Schedule is delayed as a result of delays in the procurement of the next phase Lead Advisor.	Procurement process takes longer than anticipated.	AQ compliance not being achieved in the mandated timescales.
29	16	15	15	Programme & Project Business Case	Prog-61	Unforeseen economic effects	Implementing the GM CAP may have unforeseen economic effects.	Uncertainty around the economic effects of the implementation of the GM CAP	Effects will vary depending on area and sector. This may alter economic activity in a number of ways: investment, employment, and business viability (incl. HGV/ LGV). These effects may be both positive and negative, creating some opportunities whilst making others less attractive.
29	36	15	10	Data, Evidence & Modelling	Prog-10	Target Determination is not agreed in the required timescales	Target Determination is not agreed.	Differences between JAQU and local data	AQ compliance not being achieved in the desired timescales or impact on costings.
29	36	15	10	Project & Work Package Development	Prog-14	Interaction with other Greater Manchester initiatives	Interfaces with other near-term Greater Manchester initiatives. Unforeseen impacts of Greater Manchester initiatives, or of the proposed solutions to the Greater Manchester initiatives.	Extent and wide-range of scope and interfaces.	Unforeseen complexities around interfaces and/ or interactions many result in AQ compliance not being achieved in the mandated timescales.
29	36	15	10	Project & Work Package Development	Prog-60	Emissions	The current focus of the UK plan and direction for the GM CAP is achieving the EU Limit Value based solely on NO2. There may be unintended consequences on CO2 and Particulate Matter (PM) concentrations in Greater Manchester.	GM CAP focus is solely on NO2.	AQ compliance not being achieved in the mandated timescales.
29	36	15	10	Project & Work Package Development	Prog-63	Data management	GDPR compliance	Back office interfaces are not clear and are not scoped appropriately.	Reputational challenges Increased operational costs

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PreMit Rank	PostMit Rank	Risk Score (Pre-Mit)	Risk Score (Post-Mit)	Category/ Workstream	Risk ID	Risk Name	Risk Description	Risk Cause	Risk Consequence
29	45	15	8	Data, Evidence & Modelling	Prog-55	Fleet mix	Fleet mix changes ahead of proposed scheme being implemented are not accounted for in Clean Air Fund incentives	Greater Manchester ends up with an old fleet of vehicles	AQ compliance not being achieved in the mandated timescales.
29	45	15	8	Project & Work Package Development	Prog-56	National approach to Clean Air Projects	Inconsistencies between different cities policies with regard to exemptions/approaches with proposed CAZs	No clear national approach to charging and national modes of transport	AQ compliance not being achieved in the mandated timescales.
39	30	14	14	Finance	Prog-35	JAQU may not agree the revised cost plan	JAQU may not agree the revised cost plan. Time taken to reach agreement may cause funding issues for Greater Manchester.	Long-term costs are difficult to estimate until scope is fully clarified.	AQ compliance not being achieved in the mandated timescales.
39	32	14	11	Human Resources	Prog-18	Resources	<p>Uncertainty around resourcing requirements - extent of work / teams is underestimated, increasing costs / duration of activities.</p> <p>Availability of internal/ external resources with competing demands for time.</p> <p>Capability of internal/ external resources to meet the requirements</p> <p>Retention of critical staff - Key/ Critical/ Specialist resources may become unavailable, at short notice.</p>	<p>Uncertainty around the resource requirements. Emerging requirements.</p> <p>Experience of available staff.</p> <p>Market forces/ staff churn.</p>	AQ compliance not being achieved in the desired timescales costings are not credible.
39	32	14	11	Audit and Assurance	Prog-25	Assurance requirements	Additional assurance may be required, depending on the scope of the programme as it develops.	Full scope of the programme/ projects is yet to be determined.	Additional resource requirements. Potential delays to meet assurance requirements - AQ compliance not being achieved in the mandated timescales.
39	32	14	11	Legal	Prog-33	Legal scope	Legal scope is unclear at this stage. If the legal scope is not understood, then Greater Manchester risk not complying with the remit of the programme, or having to change the scope of the programme/ projects to address any shortcomings.	Lack of clarity around the full legal scope - due to the timescales to-date.	AQ compliance not being achieved in the mandated timescales.
43	32	11	11	Finance	Prog-51	Maintenance of assets	Maintenance costs of assets are higher than anticipated.	Underestimation of maintenance requirements/ market forces	Increased operational costs
43	45	11	8	Programme & Project Business Case	Prog-6	JAQU guidance changes	Guidance not available within the required timescales, insufficient JAQU guidance or changes to the guidance.	The guidance is not issued, is insufficient, or changed by JAQU. Potential difference between drafts and advice because of timescales of submissions.	AQ compliance not being achieved in the desired timescales and impact on costs. Reputational impact to Greater Manchester authorities
43	45	11	8	Finance	Prog-27	Commodity price increases	Rise of commodity prices as a result of Brexit or other unforeseen exchange rate fluctuations drives significant cost increases.	Market forces	Impact on costings.
43	54	11	7	Governance & Policy	Prog-13	Positioning of Greater Manchester approach impacts working relationship with Highways England.	Lack of Highways England direction to act is highlighted by Greater Manchester AQ issue.	Highways England are operating under a different statutory framework and are not working under the same direction as Local Authorities.	Impact to working relationship with Highways England and partnership with the wider Steering Group.
43	55	11	6	Marketing, Communications, Stakeholder Engagement & Consultation	Prog-7	Low public awareness of the issue of air pollution.	Low public awareness of the impact of air pollution may increase objections to the implementation of the GM CAP.	Current level of public understanding and awareness.	Reluctance to change travel behaviour and adopt sustainable, clean, transport options. AQ compliance not being achieved in the mandated timescales.
48	36	10	10	Project & Work Package Development	Prog-20	Highways England Interventions	Interventions / changes by Highways England that impact the GM CAP.	<p>Highways England is a separate entity who may implement their own interventions to meet their requirements, within the prescribed timescales.</p> <p>Alternatively, Highways England may undertake significant infrastructure changes and influence flows, and therefore vehicles move to Local Authority roads and cause unforeseen exceedances.</p>	AQ compliance not being achieved in the desired timescales or impact on costings.
48	36	10	10	Programme & Project Business Case	Prog-43	JAQU funding	JAQU require Greater Manchester Combined Authority (GMCA) to reduce ongoing operational cost	Decision by JAQU	Greater Manchester have to absorb some costs as part of their Business As Usual (BAU) Reputational risk if spending on other areas is impacted.

GM CAP Top Risks Report (Confidential Working Draft)

PreMit Rank	PostMit Rank	Risk Score (Pre-Mit)	Risk Score (Post-Mit)	Category/ Workstream	Risk ID	Risk Name	Risk Description	Risk Cause	Risk Consequence
48	36	10	10	Procurement	Prog-47	Framework Agreements	Complexity of using various framework agreements and uncertainty over whether full scope of proposals will be covered by existing frameworks.	Complexity of using a number of existing frameworks.	AQ compliance not being achieved in the mandated timescales.
48	45	10	8	Customer	Prog-41	Public Transport Capacity/ Active travel infrastructure	Limited public transport capacity/ active travel infrastructure to compliment a modal shift, as a result of potential CAZ schemes	Insufficient timescales to implement.	AQ compliance not being achieved in the mandated timescales.
48	45	10	8	Procurement	Prog-64	Procurement responses	Proposed packages of work are not seen as attractive by the market and responses from tenderers/ bidders are not forthcoming.	Lack of market interest.	Re-tenders may be required, or a change to the procurement strategy. AQ compliance not being achieved in the mandated timescales.
48	45	10	8	Procurement	Prog-65	Supplier capacity	Risk that due to a high level of national demand on a limited number of suppliers, a lack of supplier capacity could lead to long-lead times or increased costs.	Market forces	AQ compliance not being achieved in the mandated timescales.
48	55	10	6	Project & Work Package Development	Prog-58	Technological changes	Technology develops in market impacting the chargers/ connections	Innovation in market	AQ compliance not being achieved in the mandated timescales.
55	45	8	8	Programme & Project Business Case	Prog-52	GM CAP exacerbates AQ issues on the Highways England network	GM CAP interventions impact AQ issues on the Highways England network.	Interventions planned lead to re-routing onto Highways England network.	AQ compliance not being achieved in the mandated timescales.
55	45	8	8	Project & Work Package Development	Prog-59	Lack of network capacity	Electricity North West unable to meet demand of proposed scheme	Electricity NW does not have the capacity to supply scheme	AQ compliance not being achieved in the mandated timescales.
55	55	8	6	Project & Work Package Development	Prog-57	Infrastructure technology	Life extension of scheme results in infrastructure installed becoming redundant (technologically)	Upgrade costs not currently factored for could be significant (e.g. ANPR)	AQ compliance not being achieved in the mandated timescales.
58	58	4	4	Legal	Prog-9	Impact to climate change strategy	Changes in fleet composition impacts ambitions related to climate change strategy.	Clean Air Plan (as defined by Government) is focussed on reduction of NO2.	Impacts Carbon Plan and other emission reduction strategies

GM CAP Risk Probability Impact Grid Report (Confidential Working Draft)

Pre-Mitigation

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Probability	Low	Medium	High	Critical	
Very High			1		2
High			4	4	3
Medium			5	10	15
Low			3	7	3
Very Low			1		
Impact	Very Low	Low	Medium	High	Very High

Post-Mitigation

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Probability	Low	Medium	High	Critical	
Very High			1		
High			1	1	2
Medium		1	4	14	7
Low		3	5	9	4
Very Low			1	4	1
Impact	Very Low	Low	Medium	High	Very High

TfGM Risk Assessment Criteria

Likelihood criteria	Very Low (VL)	Low (L)	Medium (M)	High (H)	Very High (VH)
	≤5%	6-25%	26-50%	51-75%	>75%

Impact Criteria	Very Low (VL)	Low (L)	Medium (M)	High (H)	Very High (VH)
Project Cost					
T1 = < £1m	£0 - £5k	>£5k - £10k	>£10k - £30k	>£30k - £50k	>£50k
T2 = £1-10m	£0 - £30k	>£30k - £75k	>£75k - £200k	>£200k - £500k	>£500k
T3 = £10-50m	£0 - £50k	>£50k - £300k	>£300k - £500k	>£500k - £1m	>£1m
T4 = £50-400m	£0 - £100k	>£100k - £400k	>£400k - £1m	>£1m - £5m	>£5m
T5 = >£400m	£0 - £1m	>£1m - £5m	>£5m - £25m	>£25m - £50m	>£50m
Schedule	<2 weeks delay OR no impact on end date/ deadline.	2-4 weeks delay OR low impact on key activities; no impact on the end date (occurs at development stage and can be accommodated in schedule).	4-8 weeks delay OR significant impact to key milestones or activities but no impact on end date (requires changes to schedule to meet end date).	8-12 weeks delay OR significant impact to key milestone or activities and delays to the end date. No knock-on effect on other schemes / activities/ revenues.	>12 weeks delay OR significant impact to key milestone or activities and delays to the end date. Knock on effects on other schemes / activities/ revenues.
Health & Safety	Minor injuries; cuts and bruises (First Aid Case).	RIDDOR Reportable (Over Three Day Injury)	Serious Injury (Non Life Threatening)	Major injury (Life Threatening)	Fatality
Reputation & Legal	Isolated local complaints e.g. noise complaints; unlikely to lead to a loss in customer patronage / affect scheme. No legal concerns.	Local complaints by a local group: will reduce affection for TfGM in that locality. Minor legal concerns.	Serious local poor publicity that curtails TfGM's ability to operate effectively in that area without active stakeholder engagement OR region-wide poor publicity from not meeting additional customer expectations (e.g. cleanliness, ticketing & information accuracy); will reduce affection for TfGM network wide. Manageable legal concerns.	Region-wide poor publicity from not meeting minimum customer expectations (e.g. journey times and reliability); will seriously reduce affection for TfGM, gradually erode network patronage or ability to attract funding & customers from other modes (car). Potentially serious legal concerns.	Serious poor publicity and legal concerns: will affect public trust in TfGM, likely to have an immediate impact on customer patronage, or lead to the closure of a route or voiding of a scheme. E.g. serious H&S incident or violation of competition or other laws.
Service Disruption	Up to 1 day disruption to a non-critical route or system outside peak period.	> 2 days disruption to a non-critical route or to an IS system with restricted usage (e.g. SAP Financials) outside peak period.	> 1 day disruption to a restricted IS system or to a widely used but non-critical IS system (e.g. Intranet) during peak period. Up to 3 hours disruption to a critical route outside peak period.	Up to 3 hours disruption to a critical IS system (e.g. Hardrives/ Signalling) during peak usage. Up to 1 hour disruption to a critical route during peak period.	> 3 hours disruption to a critical IS system or > 1 hour disruption to a critical route during peak period.
Policy / Benefit realisation	Minimal delay or interruption to the realisation of a benefit / objective or loss of less than 10% of predicted benefits	Minor delay or interruption to the realisation of a benefit / objective or loss of 10-25% of predicted benefits	Reduces viability/ impacts on efficiency, output, and quality of benefits / objectives or loss of 25-50% of predicted benefits	Major impact on objectives. Serious impact on output and/or quality or loss of 50-80% of predicted benefits	Critical impact on the achievement of objectives and overall performance or loss of more than 80% of predicted benefits

TfGM Risk Assessment Criteria

Risk Matrix: Probability X Impact

Probability	Low	Medium	High	Critical	
Very High	5	10	15	20	25
High	4	8	14	19	20
Medium	3	7	11	15	18
Low	2	6	8	10	17
Very Low	1	2	4	8	13
Impact	Very Low	Low	Medium	High	Very High

Showstopper

Risk Scores>>	Score 19 - 25	Zone 1	Critical
	Score 14 - 18	Zone 2	High
	Score 7 - 13	Zone 3	Medium
	Score < 6	Zone 4	Low

Dotted line is Risk Tolerance score.