

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

Management Case



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5 Management Case

5.1 Outline Business Case Introduction

- 5.1.1 Since 2010 major urban areas in the UK, including the ten local authorities of Greater Manchester, have been in breach of the European Union Limit Values regarding levels of NO₂ as implemented through the Air Quality Standards Regulations (2010). These Regulations require the Secretary of State to develop and implement a national Air Quality Plan to achieve the relevant EU Limit Value within the “shortest possible time”¹.
- 5.1.2 As a result of the ClientEarth case in 2015, the UK Government was found to have produced inadequate plans and was directed by the UK Supreme Court to take action². Subsequent defeats for the UK Government in the UK High Court on the basis of inadequate planning and action, in 2016³ and 2018⁴, have further emphasised the need for an improved approach.
- 5.1.3 Government Air Quality Plans⁵ have subsequently required local authorities with persistent exceedances to undertake local action to consider the best option to achieve statutory NO₂ limit values in the “shortest possible time”, and this Outline Business Case investigates the feasibility of possible interventions that form the Greater Manchester Clean Air Plan (GM CAP).

¹ Department for Environment Food and Rural Affairs, Department for Transport, 'UK plan for tackling roadside nitrogen dioxide concentrations: Detailed plan: July 2017' (2017), available at: <https://www.gov.uk/government/publications/air-quality-plan-for-nitrogen-dioxide-no2-in-uk-2017>.

² *R (On the Application of Client Earth) v Secretary of State for the Environment, Food and Rural Affairs* [2015] UKSC 28.

³ *R (On the Application of Client Earth (No 2)) v Secretary of State for the Environment, Food and Rural Affairs* [2016] EWHC 2740.

⁴ *R (On the Application of Client Earth (No 3) v (1) Secretary of State for the Environment, Food and Rural Affairs (2) The Secretary of State for Transport and (3) Welsh Ministers* [2018] EWHC 315.

⁵ Department for Environment Food and Rural Affairs, Department for Transport, 'UK plan for tackling roadside nitrogen dioxide concentrations: Detailed plan: July 2017' (2017), available at: <https://www.gov.uk/government/publications/air-quality-plan-for-nitrogen-dioxide-no2-in-uk-2017>

- 5.1.4 It is vital to improve air quality because of the effect air pollution has on the health of people living, working and travelling in Greater Manchester. The Greater Manchester Strategy states that Greater Manchester should be ‘a place at the forefront of action on climate change with clean air and a flourishing natural environment’ including by ‘improving air quality’⁶. Greater Manchester’s ten local authorities have chosen to take a regional wide approach to producing a GM CAP to complement other GM-wide strategies such as the existing GM Air Quality Action Plan⁷ and GM Low-Emission Strategy⁸.
- 5.1.5 The proposed GM CAP is a package of measures to address the NO₂ levels in Greater Manchester aimed at and achieving compliance in the “shortest possible time”. Each of these elements is integral to the successful delivery of the GM CAP and protecting the health of the Greater Manchester population, and therefore these measures must to be considered as a whole package if compliance is to be achieved. The package comprises the following:
- Clean Air Zone across Greater Manchester
 - Phase 1: (assumed from 2021) buses, taxis, Private Hire Vehicles and Heavy Goods Vehicles (Clean Air Zone Category B)
 - Phase 2: (assumed from 2023) expanding to Light Goods Vehicles and minibuses (Clean Air Zone Category C)
 - **Vehicle Renewal Schemes** – to provide an affordable incentive to dispose/retrofit vehicles
 - Clean Freight Fund, Clean Taxi Fund, Clean Bus Fund, Loan Finance
 - Electric Vehicle Infrastructure and Promotion
 - **Sustainable Journeys** – an extensive behaviour change programme of travel planning with schools, workplaces and individuals
 - Supported by Local Authority and Greater Manchester Fleet Upgrades, a review of Parking Standards and Bus Capacity Network Planning.
- 5.1.6 Improving air quality and reducing emissions harmful to health is a key policy priority for Greater Manchester, and the Measures proposed in the GM CAP will also be complemented by ongoing activity arising from existing investment decisions by TfGM to improve Greater Manchester’s active travel and transport network.

6 Greater Manchester Strategy: our people our place, available at: <https://www.greatermanchester-ca.gov.uk/ourpeopleourplace>

7 Greater Manchester Air Quality Action Plan 2016-2021, available at <https://www.greatermanchester-ca.gov.uk/media/1272/air-quality-action-plan-2016-21.pdf>

8 Greater Manchester Low-Emission Strategy, available at <https://www.greatermanchester-ca.gov.uk/media/1276/low-emission-strategy-dec-2016.pdf>

5.2 Management Case Introduction

5.2.1 This Management Case forms part of the Outline Business Case (OBC) and sets out the approach to the delivery of the proposed Greater Manchester Clean Air Plan (GM CAP). The purpose of the Management Case is to provide confidence that robust arrangements are in place for the delivery of the proposed GM CAP. In line with UK Government's Joint Air Quality Unit (JAQU) guidance⁹, the Management Case builds on the Strategic Outline Case (SOC) by making recommendations about the optimal solutions relating to the following:

- governance structure;
- management arrangements;
- a project plan;
- arrangements for consultation and engagement with a wide range of stakeholders;
- risk management and mitigation; and
- a monitoring and evaluation plan

5.2.2 Transport for Greater Manchester (TfGM) has been co-ordinating the development of the proposed GM CAP on behalf of the ten Greater Manchester local authorities and the Greater Manchester Combined Authority (GMCA) under the statutory powers in relation to Air Quality and in accordance with the Greater Manchester Combined Authority Order 2011. Under the Greater Manchester Combined Authority Order, the powers of the ten Greater Manchester authorities in relation to specific sections only of the Environment Act 1995 are exercisable by the GMCA concurrently with the ten authorities. Section 101 of the Local Government Act 1972 and Section 19 of the Local Government Act 2000 enable the GMCA to sub-delegate activity and decisions to TfGM. The ten local authorities and TfGM have a history of collaboration across a range of policy areas and the delivery of major programmes. TfGM will be the central Delivery Body for the GM CAP throughout the development of the Full Business Case (FBC) and the delivery of the GM CAP, and will act as the contracting authority for any contracts required to be put in place. Further detail can be found in sections 5.3 and 5.12.

5.2.3 The development of the GM CAP has been directed by a Steering Group containing senior representatives from each of the ten local authorities, GMCA, Public Health England (PHE), Highways England and JAQU. This partnership working will continue throughout the detailed design, implementation and operation of the proposed GM CAP. TfGM has also worked closely with JAQU on behalf of the Steering Group to coordinate the activities to define and implement the GM CAP.

⁹ Department for Environment Food and Rural Affairs, Department for Transport, *UK plan for tackling roadside nitrogen dioxide concentrations: Detailed plan: July 2017* (2017), available at: <https://www.gov.uk/government/publications/air-quality-plan-for-nitrogen-dioxide-no2-in-uk-2017>

- 5.2.4 The GM CAP Programme comprises a suite of projects and work packages that will be implemented across Greater Manchester that will endeavour to deliver changes in process, organisation, technology and information management, to achieve compliance for NO₂ reduction in line with the requirements of EU Limit Value contained in **Directive** 2008/50/EC¹⁰. This Programme will be delivered within TfGM's Air Quality and Environment Portfolio.
- 5.2.5 Further details of the projects and work packages which form the Programme including an overview of costs, risks and dependencies, are provided in Appendix O.1.1.
- 5.2.6 It is anticipated that the activities which form the Programme will be delivered and operated by a combination of different Delivery and Operating Agents including TfGM, local authorities and other bodies; further information is provided in the tables in section 5.12.
- 5.2.7 Given the wide-ranging nature of the Measures proposed in the GM CAP, it is essential that the views of people living, working and commuting in and around Greater Manchester, including businesses and other key stakeholders, are sought as part of the development of the interventions within the Programme. Meaningful consultation and engagement with a wide range of stakeholders will help to build awareness and visibility of the proposed GM CAP and its impacts and will support ongoing detailed design of the associated policies and Measures. Section 5.11 and Appendix E.4.1 provide further detail on the proposed approach for engaging with stakeholders.

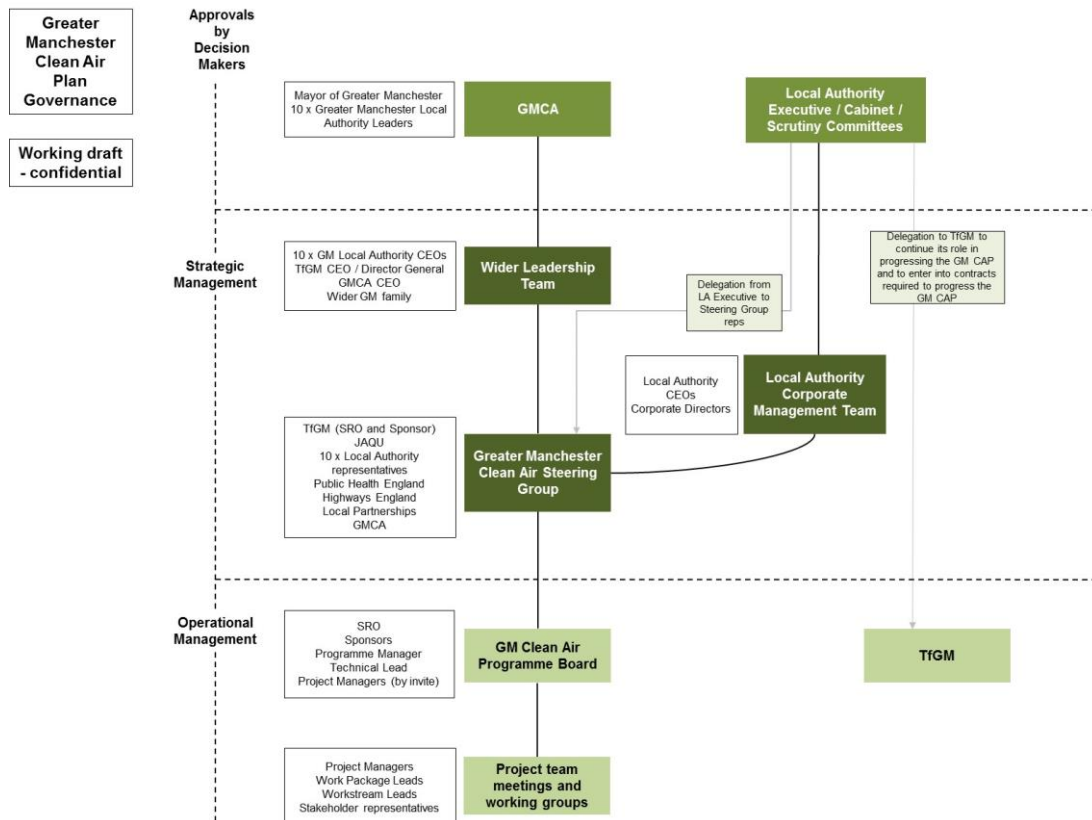
5.3 Governance and Reporting

Project and Programme Governance

- 5.3.1 Figure 5- 1 (see also Appendix E.1.1) sets out the proposed programme governance.

¹⁰ **Directive** 2008/50/EC, available at <https://eur-lex.europa.eu/eli/dir/2008/50/oj>

Figure 5- 1: GM CAP Programme Governance



5.3.2 In order to progress the GM CAP, and to develop and deliver the Programme it is anticipated that the local authorities will delegate formal authority to TfGM in order for TfGM to fulfil its role as Delivery Body for the Programme on behalf of the ten local authorities. The detail of this will be discussed and agreed with the local authorities in developing the FBC. Delegations are in place for TfGM to act as lead contracting authority to undertake any procurement and enter into any contracts necessary to develop the Programme.

5.3.3 TfGM has been responsible for producing the OBC. The chart below sets out the review and approval process for the OBC.

Figure 5- 2: OBC Review and Approval Process



- 5.3.4 Building on the OBC, TfGM will also be responsible for developing the FBC and it is envisaged that the review and approvals process would be broadly similar to the above. Additionally, it is proposed that TfGM is responsible for establishing the Operating Body as part of the operating model. This is described further in section 5.13.
- 5.3.5 TfGM has an excellent record of major programmes and operational improvements, both in its own right and on behalf of the GMCA. The delivery of the Programme has been delegated to TfGM by the local authorities. It is assumed that TfGM will also act as the contracting authority, and will be responsible for entering into any necessary contracts. Governance and approvals for entering into contracts will be in line with the levels of delegation set out in the constitutions of TfGM, GMCA and the ten local authorities and are likely to include approvals from TfGM's Executive Board dependent upon contract values.
- 5.3.6 The Steering Group has operated successfully throughout the development of the SOC and the OBC and is held on a monthly basis. It is chaired by the Senior Responsible Officer (SRO) and is attended by representatives from the 10 local authorities, representatives from Highways England, PHE and JAQU; delegations will be in place from the local authority executives to the Steering Group. The Steering Group structure is flexible and can change as required, as the Programme develops. The Steering Group will continue to guide and steer the direction of the Programme. Local authority Steering Group members will be responsible for liaison with officers and councillors within their respective authorities, to inform decisions being made at the Steering Group. The Terms of Reference for the Steering Group are attached at Appendix E.1.3.

- 5.3.7 Project governance has been established and has been operating successfully throughout the development of the SOC and the OBC. Following approval of the OBC, it is planned to establish a Programme Board, and meetings will take place at a minimum of once each month. The Programme Board will report to the Steering Group and will also be chaired by the SRO. This group will be responsible for the day to day management and overall delivery of each project within the Programme. Key updates and details of decisions required will be escalated from the Programme Board to the Steering Group.
- 5.3.8 Project teams will hold regular team meetings and working groups as required, which will report to the Programme Board and Steering Group.

Reporting

- 5.3.9 To monitor overall progress, programme reports shall be issued monthly to the Programme Board and the Steering Group and will include updates on delivery against the agreed schedule, resources, budget, risks, issues, dependencies and opportunities. Deviations from agreed programme or project tolerances (quality, cost or time) and any suggested changes to the scope will be subject to TfGM's Change Control process.
- 5.3.10 Ahead of the Steering Group meetings, monthly reports will be prepared by the Project Managers and Programme Manager and these will be reviewed and challenged at the Project Reporting Review Meeting. These review sessions have been established to bring about a consistent level of scrutiny and rigour across all of TfGM's projects and programmes and encourage debate from colleagues.
- 5.3.11 In addition to formal reporting, updates will be made to key groups to keep them engaged as the Programme develops. It is proposed that Greater Manchester Highways Group is one of these groups, which is attended by TfGM, local authorities, Highways England and Greater Manchester Police. Further Greater Manchester groups which will be updated at appropriate stages include the Air Quality Group, Heads of Planning, Chief Legal Officers, Treasurers, and the Association of Greater Manchester Authorities (AGMA) Procurement Group. These groups have been briefed on this OBC, and will continue to be updated at relevant points throughout the Programme. In addition, updates will also be provided on a monthly basis to TfGM's Transport Strategy Functional Board.

5.4 Programme Structure

- 5.4.1 The Measures required to deliver compliance will be delivered through the proposed GM CAP Programme. A programme has been developed as this enables projects and work packages to be delivered at the earliest possible opportunity, delivering the associated health and environmental benefits as soon as possible, in line with the legal requirement of achieving compliance with EU Limit Level in the shortest possible time.

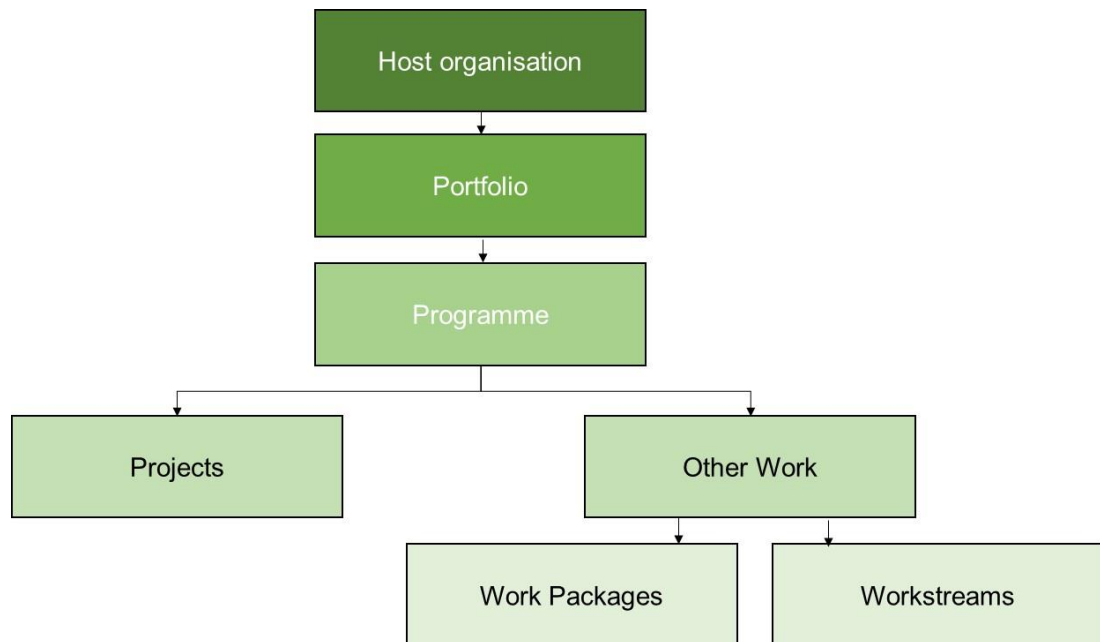
- 5.4.2 This approach is essential in enabling the proposed Clean Air Zone (CAZ) to be launched in 2021. Without investment from 2019 onwards in upgrading the regional fleet and supporting businesses to respond to the scheme, it will not be possible to launch a region-wide charging scheme without unacceptable negative consequences. Core assumptions in our modelling predictions relating to when compliance will be achieved, such as the level of compliance of the bus and taxi fleet and the scale of Electric Vehicle (EV) uptake, are predicated on the programme approach and would need to be revised if this cannot be achieved. The programme approach is therefore fundamental to delivering compliance in the shortest possible time.
- 5.4.3 A programme approach provides a structured framework through which complexities, risk and interdependencies can be managed effectively and conflicting priorities resolved where they may arise. The central Programme team will facilitate the effective coordination, direction and implementation of the activities. This approach will also allow a more efficient use of resources. Additionally, programmes will allow sufficient flexibility to respond to any internal or external changes. The Programme will be assessed to ensure that it remains linked to the objectives.
- 5.4.4 The Measures within the GM CAP Programme have been grouped into projects and work packages to facilitate further development and delivery. These have been categorised in line with the definitions set out in the Government's Project Delivery Functional Standard¹¹ (August 2018), which are as follows:
- A portfolio comprises part or all of an organisation's investment required to achieve its objectives
 - A programme is a temporary, flexible organisation created to coordinate, direct and oversee the implementation of a set of projects and other work components to deliver outcomes and benefits related to a set of strategic objectives
 - A project is a temporary management arrangement undertaken in stages, created for the purpose of delivering one or more business products or outcomes
 - Other work might include:
 - Support services (referred to in this Programme as workstreams, covered in section 5.6 below)
 - Ongoing improvement initiatives not run as projects, but using a defined approach
 - Service delivery, business as usual operations
 - A work package is a set of information relevant to the creation of one or more deliverables or outputs. It comprises a description of the outputs required work plan and details of any constraints

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746400/Project_Delivery_Standard_1.2.pdf (August 2018)

5.4.5 Figure 5- 3 is adapted from the Government’s Standard and provides a high level overview of the structure of the proposed GM CAP Programme.

Figure 5- 3: Overview of the Proposed Programme Structure



5.4.6 An organogram showing the Programme structure is attached at Appendix E.1.2. The activities will deliver the required outputs and capability, and will transition them into operations to achieve the required outcomes and ultimately deliver the benefits.

5.4.7 It is proposed that the Programme is initiated following OBC approval and continues to run throughout the development, implementation and operational phases, until compliance is delivered and demonstrably maintained. It is proposed that the Programme will be closed out following the decommissioning phase.

5.4.8 Each individual project and work package requiring Implementation Funding will be developed in accordance with its own timescale to enable an FBC to be developed and subsequent funding to be released. The proposed approach will expedite delivery of these elements and support the strategic intent of delivering compliance as early as possible. Several of the work packages are extensions to existing initiatives being progressed across Greater Manchester, therefore they will be able to be developed more quickly than the more innovative projects requiring complex detailed design work.

- 5.4.9 The Vehicle Renewal Schemes will be delivered as four projects:
- 1) Clean Freight Fund
 - 2) Clean Bus Fund
 - 3) Clean Taxi Fund
 - 4) Loan Finance
- 5.4.10 For the purpose of effective management, the Parking Standards measure has been divided into three work packages:
- 1) Parking Standards
 - 2) Short Stay Parking
 - 3) Local Authority Staff Parking
- 5.4.11 A central team will be put in place to coordinate development and delivery of the Programme. The implementation and operation of the projects within the Programme will be undertaken by one or more Delivery or Operating Agents; further detail on this is provided in section 5.12.
- 5.5 Programme and Project Methodology
- 5.5.1 TfGM has a robust established governance structure for the delivery of programmes and projects, which provides the appropriate level of governance and management oversight through each phase of the programme and project life-cycle.
- 5.5.2 The TfGM Programme Management Procedures (ProgMP) and Project Management Procedures (PMP) are the established corporate approach to managing programmes and projects within the organisation. They provide a consistent standard to manage projects and programmes minimising unexpected variation such that delivery is to the desired standard, on time and within budget. The procedures are based on Association for Project Management methodology. The stages within the ProgMP and PMP are provided in Appendix E.2.1. It is proposed that the digital/Information Systems (IS) and business change elements of the Programme are delivered in an agile manner utilising TfGM's process which is broadly in line with Government Digital Service's procedures.
- 5.5.3 The TfGM ProgMP and PMP provide a scalable approach, and have been tried and tested on a wide variety of TfGM and local authority schemes. TfGM is the GMCA's Delivery Agent for transport schemes and has recently delivered similar types of programmes working closely with the local authorities to meet common objectives, including the Local Sustainable Transport Fund programme and the Growth Deal programmes (overall value c. £400 million), as well as large capital programmes and highway improvements such as the bus priority package (£122 million), a programme of park and ride projects, and many business change projects and projects requiring the implementation of IS infrastructure, such as the SMART ticketing programme and the introduction of zonal fares.

5.5.4 Lessons learnt from these programmes will be applied to the GM CAP Programme where applicable. The table below shows some lessons learnt from previous programmes of a similar nature, and how they will be applied to the GM CAP Programme.

Table 5- 1:Lessons learnt from previous programmes

Lesson Learnt	Action to be taken for the GM CAP Programme
Governance arrangements have not always been proportionate to the value of delivery packages, which has impacted on the level of resources and timescales required to achieve Full Approval.	Review complexity of schemes within a programme and the proportionality of resources required to utilise Project/Programme Management Procedures in order to determine appropriate governance route. Risk Potential Assessment to be utilised at the outset in order to assist in informing proportionate governance routes.
Length of time required to draft, approve and update complex legal documentation ahead of scheme development/delivery has increased the risk of delays to key milestones.	Ensure that all parties involved in legal documentation are fully aware of milestones for the completion of documentation through proactive engagement. Resource to be procured at a programme level to support the progression of legal documentation.
Third party consultation and engagement requirements have differed across local authorities.	Ensure that consultation requirements are fully understood and build timescales into schedule. Resource to be utilised at a programme level to plan and undertake the Conversation and Consultation activities. Sufficient time to be allowed for the Steering Group to review Conversation and Consultation materials.
More parceling of delivery packages could lead to better economies of scale.	Consider how economies of scale may be achieved through the packaging of elements of works. Similar activities to be grouped together for procurement purposes, e.g. preparation of Traffic Regulation Orders (TROs) across the programme.
Steering Group became a secondary progress meeting once schemes entered the delivery phase.	Ensure Steering Group Terms of Reference are reviewed and updated throughout the programme lifecycle to ensure the Steering Group has a clear purpose.

5.5.5 Programme Execution Plans and Project Execution Plans will be developed following approval of the OBC updated as appropriate throughout the duration of the programme and projects.

5.6 Programme Team

Programme and Project Roles

5.6.1 A core Programme team has already been established, with further roles anticipated for the development and delivery of the projects and work packages within the Programme.

5.6.2 The core Programme team will comprise the following roles:

- **Senior Responsible Officer (SRO) – a member of TfGM’s Senior Leadership Team** – accountable for ensuring that the GM CAP Programme delivers its objectives and projected benefits within an agreed timeframe and cost parameters. The SRO will oversee all phases of the Programme.
- **Programme Sponsors** – responsible for mobilising and resourcing the delivery team, delivering the benefits proposed to be realised from this investment. They will provide the overall direction and leadership for the Programme. They will resolve major issues and escalate to the SRO as appropriate. They will be responsible for ensuring alignment with the Air Quality and Environment Portfolio.
- **Programme Management Team** – The roles within the Programme team will include the following key roles:
 - **Programme Manager** – responsible for leading the Programme and Project Management team. Responsible for identifying, managing and gaining agreement to Programme scope, objectives and constraints; completing the Programme documentation which sets out the overall programme scope, and expected outcomes, and identifies the key benefits and how these will be measured; and managing progress against the Programme Plan, in terms of quality, schedule and budget. They will support the individual members of the team in the delivery of their projects and responsibilities and ensure that the team works together to enable delivery of the Programme objectives, will manage the interfaces between projects and work packages within the programme. They will manage the workstreams across the Programme, will be responsible for the contract management of the Lead Advisor and any other services provided across the Programme, and will manage senior stakeholders at a programme level.
 - **Risk Manager** – responsible for developing the appropriate processes and tools to support risk and issue management. Will lead risk review sessions and update programme and project risk registers.

- **Project Control Engineer** – responsible for providing project control services to the Project Managers to support the delivery of the project to time, quality (standard) and budget. One of their key roles is to assist the Programme and Project Managers through the production and maintenance of timely reporting information on the schedule of tasks within the project plus all costs, planned and actuals.
- **Project Coordinator** – responsible for providing project support and administration across the programme and projects.
- **Project Information Manager/Controller** – responsible for ensuring all information is managed effectively, and providing document control support across the programme and projects.
- **Commercial/Cost Engineer** – responsible for providing commercial support across the programme and projects.
- **Project Managers** – responsible for identifying project scope, objectives and constraints (working with technical specialists), and planning the projects. Responsible for managing the Lead Advisor and suppliers to ensure that the projects are being delivered to the required quality, time and budget. They will supply regular progress reports on funding and finance (in conjunction with finance representative), issues for escalation and general progress on each of the projects. They will be responsible for managing and engaging in communications and liaison between all stakeholders and ensuring that any issues that arise are dealt with in a timely manner and do not adversely impact on the project and programme deliverables; and for actively managing the project risk and issue registers.
- **Work Package Leads** – responsible for managing their work packages and activities to ensure delivery in line with Programme objectives, budget and timescales. Responsible for organising workload and resources within their areas of responsibility and reporting to the Programme Management team and Programme Board (refer to section 5.5 for further detail on the Programme Board).

5.6.3 It is proposed that Project Managers will be allocated to each project as appropriate; the level (Senior Project Manager, Project Manager, Assistant Project Manager) and quantity of project management resource required will be in line with the complexity and value of the projects. There is the possibility that some of the work packages will become projects in the future, depending on the outcome of the Risk Potential Assessment (RPA) and the policy design components. In order to ensure consistency of approach, some project management resource is also likely to be required across the work packages.

5.6.4 These roles will be supported by other functions and departments whose support and input will be required across the Programme. These are defined as workstreams and an overview of the responsibilities of each workstream is outlined below.

Workstreams

- 5.6.5 To develop the OBC, eight workstreams were set up, which have supported and serviced the Programme to date. Each of these have terms of reference, aimed at monitoring progress, change, risks, opportunities, decisions and providing agreements to proceed.
- 5.6.6 The current workstreams have been modified and supplemented to reflect the requirements of managing the programme through to the FBC development and implementation. Workstream leads are accountable for ensuring that their workstream provides effective support to the Programme and Projects. The scope for each workstream is summarised in the table below.

Table 5- 2: Workstreams

Workstream	Description
Policy design	Manage the policy design requirements to support the design and appraisal activities for the programme, projects and work packages.
Data, evidence and modelling	Commissioning and collection of additional data and further development of the underpinning information for modelling the GM CAP. Building on the data and assumptions from the OBC stage to produce a refined and defensible traffic, emissions and air quality model for the future case (using the Target Determination data). Updating and re-running of models to help optimise and determine the final scope of the projects and work packages.
Project and work package development	Development and detailed assessment of the GM CAP against the Critical Success Factors (CSFs). Coordination of development across various workstreams to optimise and determine the final scope and required outputs of the projects and work packages in order to achieve compliance.
Programme and project business case	Production of the FBC for the programme, projects and work packages, to meet JAQU guidance.
Monitoring and evaluation	Development of the monitoring and evaluation requirements during the FBC stage, to align with the Central Evaluation Programme. Establishment of the baseline data and ongoing monitoring and evaluation through to the operational and decommissioning stages.
Marketing, communications, stakeholder engagement and consultation	Immediate and on-going communication and engagement with internal and external stakeholders to ensure consistent, timely and efficient delivery of information. Facilitation of views and input from stakeholders where required. Marketing, communications and events to promote the benefits of clean air, the impact of travel and vehicle choices on air quality, the nature of the preferred option and what people need to do to prepare themselves, and how to make choices that help clean up GM's air. Management and delivery of the Conversation and Consultation.

Workstream	Description
Governance and policy	Manage the governance, policy and internal and external approval process for the Programme, projects and work packages.
Legal	Manage the legal requirements for the Programme, projects and work packages. Work across the Programme to ensure legal compliance. Update Chief Legal Officers on a regular basis.
Procurement	Manage the procurement requirements for the programme, projects and work packages.
Finance	Manage the financial requirements for the programme, projects and work packages.
Human resources	Manage the recruitment requirements for the programme, projects and work packages.
Audit and assurance	Risk Potential Assessments, Gateway Reviews and audits across the programme, projects and work packages.
Safety and compliance	Adherence to safety management systems and progressions through safety review committees for the programme, projects and work packages.
Customer	Manage the customer-facing components of the programme, projects and work packages, including customer interfaces, queries and complaints.

5.6.7 The workstreams will be reviewed by the Programme and Project Managers at key stages to ensure that appropriate support is provided to the Programme throughout the FBC, implementation, decommissioning and close-out phases. For example, input from the first four workstreams listed in the table above would be expected to reduce following the FBC stage, others, such as the finance workstream would be relevant throughout the Programme lifecycle and others, such as safety and compliance, would become more important in the implementation stage.

Use of Specialist Advisors and Third-Party Suppliers

5.6.8 To develop the Programme up to OBC, several specialist advisors have been engaged. This is due to the specialist nature of the requirements, and therefore the lack of capability in-house. These advisors are as follows:

- modelling, feasibility, technical advice, business case production - interim delivery partner;
- legal advice – Queen’s Counsel; and
- specialist technical advice – Miscellaneous consultants.

- 5.6.9 Due to the complexity of the GM CAP, external legal services will continue to be required to provide ongoing support to develop and implement the proposed Measures; this will include legal advice along with the drafting of Traffic Regulation Orders (TROs) and the Charging Scheme Order (CSO), support with the public consultation process and support to understand the legal risks associated with any proposed implementation of the Programme. Additionally it is envisaged that specialist technical advice will be an ongoing requirement.
- 5.6.10 Due to the evolving nature of the requirements, additional specialist advisors may be required and will be fully discussed with JAQU.
- 5.6.11 Through the FBC and early implementation stages, it is planned to engage the following specialist advisors:
- Lead Advisor (A multi-disciplinary consortium that can provide strategic leadership across the programme, and accountable for delivery of significant elements of the projects and work packages)
 - Legal Advisor (to provide independent legal advice across the programme)
 - Communications (consultation specialist)
- 5.6.12 The detail of the scope and the proposed procurement approach for each of these advisor roles is set out in the Commercial Case.
- 5.6.13 Additionally, it is expected that support will need to be provided by specific teams within the local authorities (for development of the design, gaining powers and consents, consultation etc.); these requirements will be further defined once the individual projects are initiated following approval of the OBC. This approach will benefit from utilising inherent knowledge of the authorities' processes and more local issues that can then facilitate the decision-making process and potentially expedite the delivery of the Programme.

Contract Management / Monitoring

- 5.6.14 Where the supply chain is commissioned, monitoring arrangements will be agreed on a contract by contract basis. Close contract management will be undertaken which will include regular reporting. Progress meetings will be held at pre-agreed intervals to ensure adherence to the Programme Plan, and costs and risks will be carefully monitored.
- 5.7 Assurance
- 5.7.1 TfGM has long established assurance and approval plans in place. At the core of the plans is the 'Four Lines of Defence' model, as shown in Appendix E.2.2. This is based around a multi-layered model of increasing assurance levels.

- 5.7.2 The programme and projects will be aligned with TfGM's Integrated Assurance Strategy, which establishes an assurance framework across the TfGM portfolio. The RPA process is one of the tools which supports the Assurance Strategy and is applied to programmes and projects. To realise this, the RPA gives a standard set of high level criteria for assessing the strategic risk potential of projects and is based on the guidance of the Major Projects Authority.
- 5.7.3 The RPA is a process which draws the identified risk potential of a project to establish a suitable level of assurance and is enabled by assessing the following:
- Consequential impacts, comprising:
 - Political
 - Public
 - Financial
 - Operational business and commercial change
 - Dependencies
 - Programme / project Complexity:
 - strategic profile – political, public, business performance and organisational objectives
 - delivery challenge – policy / legal, security, requirements for business change, technology development, commercial and supplier delivery, financial provision, governance, stakeholders, dependencies and change and implementation
 - capacity and capability – programme or project team, stakeholders and organisation, suppliers and strategic leadership and business culture
 - scale – time, budget, benefits and quality
- 5.7.4 This is used to define the level of assurance required by the project, inform key decisions and provide an understanding of the impact of any significant changes. An RPA has been undertaken for the GM CAP and the outcome was that the risk potential was deemed to be very high. The risk management approach is detailed further in section 5.7. The assurance approach is based on members of TfGM's Portfolio Office attending the Project Board and Steering Group meetings, and the production of an Integrated Assurance and Approvals Plan (IAAP) which documents all required assurance and approval activities. An IAAP will be produced for the Programme and for each project, which will set out the assurance and approval activities required throughout the project lifecycle, along with the responsibilities and planned timescales.

- 5.7.5 Following approval of the OBC, the RPA process shall be followed for the Programme and each project and work package and repeated subsequently at key stages during the development of the projects to ensure the most appropriate assurance and reporting approach is applied. For example, projects that are identified as high risk are likely to require Full PMP, including Gateway Reviews and other assurance activities throughout the lifecycle, whereas for work packages which are extensions of current TfGM activities and are deemed to be lower risk, these may not require such stringent assurance activities, and reporting may be at Programme level.
- 5.7.6 A key process in the ProgMP and PMP is the Gateway Review Panel (GRP) which examines projects and programmes at key stages during their lifecycle to ensure they are being developed and delivered in accordance with the TfGM's established procedures, and submissions to this panel are mandatory for all major projects and programmes.
- 5.7.7 The criteria used for the GRP reviews are commensurate with the expected stage of development for the project. Each project/programme is reviewed by an independent third party reviewer, with relevant experience and a similar level of seniority as the project team member. The review panel may include specialist technical experts, as required.
- 5.7.8 The feedback from the reviews is compiled into a report and all outstanding recommendations form an Action Plan that is presented to the programme team for agreement/timely implementation. This assurance approach has been agreed by the Department for Transport (DfT) for the Growth Deal programmes, which had an overall value of c. £400 million.
- 5.7.9 Additionally, up to and including the FBC stage, the quality assurance process will be supported by both bespoke technical reviews and by JAQU's review panels; the Technical Independent Review Panel and Delivery Independent Review Panel.
- 5.8 Programme Plan
- 5.8.1 This Management Case focuses on ensuring the right governance, resources and plans are in place to implement the new arrangements in line with the programme plan. The critical path for the current programme has also been developed and will continue to be monitored to assess programme progress.
- 5.8.2 It is recognised that the required timescales for the delivery of the FBC and the GM CAP are challenging, and therefore the programme plan that has been developed demands a substantial amount of parallel working to expedite activities. It should be noted that there are risks associated with this method of working, for example, as design work is scheduled to be undertaken in parallel with public consultation activities, there is a risk that re-work will be required, dependent upon the outcome of the Conversation and Consultation processes, which may put the delivery of the plan in jeopardy.

5.8.3 The plan on a page is attached at Appendix E.3.1 which covers the overall GM CAP Programme, the project which is on the critical path for delivery of the Programme (the Clean Air Zone project) and the other Measures.

5.8.4 The Programme FBC will be split in to two stages as follows:

- An Initial FBC that will be developed from the scheme design including feedback from the Conversation and the Consultation, to be submitted to JAQU in Winter 2019
- A Final FBC that will include updates following the conclusion of the procurement exercises for the implementation stage, to be submitted to JAQU in Summer 2020

5.8.5 The detailed delivery programme shall be further developed for the FBC and updated during the execution of the programme and projects. In summary the overall anticipated key milestones are set out in the table below.

Table 5- 3:Milestone Summary Table

Programme	Projects / Work Packages	Activity	Forecast Date (by)
Programme Approval	-	Strategic Business Case Approval Outline Business Case Approval	April 2018 (complete) Spring 2019
Funding Agreement	-	Initial Full Business Case Submission Full Business Case Approval	Winter 2019 Summer 2020
-	Sustainable Journeys Local Authority and Greater Manchester Fleet Upgrade Clean Bus Fund Electric Vehicle Infrastructure and Promotion Clean Freight Fund Clean Taxi Fund Clean Air Zone Loan Finance	Initial Full Business Case*	Winter 2019
Implementation	-	Implementation	Winter 2019 – Summer 2021

Programme	Projects / Work Packages	Activity	Forecast Date (by)
Decommissioning	-	Operation ceases – decommissioning commences	One year post date of agreed compliance
Close Out	-		TBC

* Business case requirements to be agreed with JAQU

5.8.6 The supporting work packages (where funding is not being requested from JAQU) will be progressed at the relevant time and will be considered through appropriate local authority governance.

Interdependencies

5.8.7 The proposed projects and work packages have a number of internal, intra-, and external dependencies across the GM CAP programme. The detail of the dependencies relating to each project and work package can be found in the Appendix O.1.1. Following approval of the OBC, the interdependencies will be evaluated in detail and documented (e.g. type, source, specification, and timeline). The scope and timescales of each interdependency will be aligned and agreed to ensure clarity and complementary specifications and timings with the source of the interdependency.

5.8.8 The interdependencies will be monitored and controlled throughout the Programme lifecycle through regular updates of the programme and project plan which will be managed by the Programme Manager and Project Managers.

5.9 Powers and Consents

5.9.1 Under section 168 Transport Act 2000, a CSO is required to allow the development and operation of the proposed CAZ project. It is proposed that this is coordinated centrally and time has been factored into the schedule for local authorities to approve the draft scheme order and consultation materials ahead of the planned consultation. Several of the projects and work packages have been identified as requiring Traffic Regulation Orders (TROs) including the CAZ, EV infrastructure and short stay parking. Again, it is planned that the TROs are coordinated and developed centrally in conjunction with the relevant local authorities. The local authorities have the required powers as Highway Authorities to make the TROs, therefore the TROs will be subject to the local authorities' governance processes. Timescales for the TRO process have been factored into the programme and project plans.

5.9.2 It is also envisaged that highways and/or planning consents may be required in relation to infrastructure being placed on the highway or other land, e.g. CCTV and EV infrastructure; these consents will be dependent on the proposed locations for the infrastructure and will be considered during the next phase.

5.10 Risk and Contingency Management

Risk Management Plan

- 5.10.1 A Programme Risk Management Plan (RMP) has been developed which is attached at Appendix E.4.2. Each project will require an RMP which aligns with the programme and is tailored to the specific project requirements; it is envisaged that these project RMPs will be produced following initiation of the projects.
- 5.10.2 A multi-level approach to risk management will be required. This is summarised in the following table.

Table 5- 4: Risk Management Approach

Risk Management Plan Hierarchy	Plan Owner	Risk Management Process
Primary - Risk Potential Assessment	TfGM – Portfolio Office	
Secondary - Programme RMP	TfGM – Programme Manager	
Tertiary - TfGM Project RMP	TfGM – Project Manager	
<p>Note: Risks related to Health and Safety are managed in accordance with the TfGM Integrated Management System (IMS).</p>		

Risk Register and Key Risks

- 5.10.3 Programme and project delivery risks are managed throughout the lifecycle. For each project these are captured in the Project Risk Register, and these can also inform the Programme Risk Register as well as the Strategic Risk Register. This relationship is illustrated in the following diagram.

Figure 5- 4: Risk Management Pyramid



- 5.10.4 TfGM maintains a central Risk Decisions Risk Management System (RMS), using Predict! Software which holds the information relating to its project and programme level risks. Each risk register is a live document and the inclusion of these documents within the OBC is a snap-shot in time.
- 5.10.5 TfGM's approach to risk management is proactive and focuses on avoidance, transfer or taking mitigating action, rather than solely making financial provision for risk impacts. Throughout the OBC stage, risks have been identified, recorded and actively managed. Risk owners have been allocated and tasked with eliminating risks or identifying mitigation measures for residual risks. This will continue through the FBC, implementation and operational stages of the programme/projects and any activities to facilitate risk avoidance, transfer or mitigation will be included within the planned activities and incorporated into the appropriate cost plans.
- 5.10.6 Risks are being and will continue to be actively managed. Risk review sessions will be held for the Programme and projects on a monthly basis, with wider stakeholder risk review sessions when required.
- 5.10.7 The current programme risk register is provided in Appendix E.5.1. This contains overarching risks which may impact the Programme as a whole. The top ten programme risks are set out in Table 5- 5.

Table 5- 5: Programme Risk Register – Top Ten Risks

(For further details about these risks, including consequences, risk owners, pre- and post-mitigation scores and details of the mitigating actions, see the Programme Risk Register at Appendix E.5.1)

Risk ID	Risk Description	Risk Cause	Risk Consequence
Prog-44	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.
Prog-42	Inflation forecasts for 10 years are incorrect and this leads to increased operational costs.	Various, including uncertainty around Brexit.	Increased operational costs
Prog-53	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.
Prog-30	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.
Prog-39	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.
Prog-2	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.
Prog-15	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.
Prog-32	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.
Prog-50	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.
Prog-17	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

5.10.8 A risk register has been developed for the projects and work packages and is provided in Appendix E.5.2.

5.10.9 The top ten project risks are set out in Table 5- 6. These risks relate to specific projects and work packages and are considered to be the top risks across the projects and work packages, if all of the projects and work packages are progressed. It is envisaged that these risks will form the basis of the individual project risk registers and will be reviewed and updated once the projects have been formally initiated following OBC approval.

Table 5- 6: Project Risk Register – Top Ten Risks

(For further details about these risks, including consequences, risk owners, pre- and post-mitigation scores and details of the mitigating actions, see the Project Risk Register at Appendix E.5.2)

Project Category	Risk ID	Risk Description	Risk Cause	Risk Consequence
Clean Air Zone (CAZ)	PROJ-1	Feedback on the proposed Greater Manchester Clean Air Plan (GM CAP) design during consultation(s) and through stakeholder/political engagement significantly impacts project costs and schedule	Feedback on the scheme results in revisions to the design	Scheme design revision Reputational challenges Delays to implementation Air Quality (AQ) compliance not achieved in desired timescales
Clean Bus Fund	PROJ-2	Some buses cannot be retrofitted due to the age of vehicles within the Greater Manchester bus fleet	The proposed age of vehicle which is valid for retrofit only applies to part of the total Greater Manchester bus fleet.	AQ compliance not achieved in desired timescales Reputational challenges Disruption to services/customers Potentially charges passed to customers
Clean Freight Fund	PROJ-3	Lack of availability for affordable second hand compliant LGVs	Affordability of new and second hand LGVs	AQ compliance not achieved in desired timescales Economic impact on businesses/customers
Clean Bus Fund	PROJ-4	Greater Manchester Bus fleet cannot be retrofitted in desired timescales	Lack of market capacity to carry out retrofits on the Greater Manchester bus fleet within the required timescales	AQ compliance not achieved in desired timescales Disruption to services/customers Delays to schedule Reputational challenges
Clean Air Zone (CAZ)	PROJ-5	Interface between local system and Defra's Central Charging System (CCS) is unclear and therefore local system cannot be scoped	Uncertainty of scope from JAQU for FBC/implementation with regard to IT infrastructure	AQ compliance not achieved in desired timescales Delays to schedule
Clean Taxi Fund	PROJ-6	Lack of compliant vehicle availability in second hand hackney carriage market. Vehicles entering second hand market drop in value.	Hackney manufacturers have stopped making Euro 6 vehicles - now focuses on Electric Vehicle (EVs)	AQ compliance not achieved in desired timescales Delays to schedule Increase in project costs
Loan Finance	PROJ-7	Unable to collect payments and cover costs associated with repaying capital	Payment stops from those who have taken out the loan	Increased operational costs
Clean Air Zone (CAZ)	PROJ-8	The scale of a proposed CAZ IS infrastructure is significant and causes unforeseen delays and additional costs associated with implementation.	Scale of proposed scheme to achieve compliance	AQ compliance not achieved in desired timescales Delays to implementation Increase in project costs
Electric Vehicle Infrastructure and Promotion	PROJ-9	Uptake of EV is lower than predicted in models	Lack of second hand market or attractiveness for vehicle users. Public perception of EV, results in reduced uptake	AQ compliance not achieved in desired timescales
Loan Finance	PROJ-10	Operational costs are not covered by scheme	Admin costs are higher than anticipated Unable to recover costs from those taking out the loan	Increased operational costs

5.10.10 The programme and project risks are currently assessed qualitatively but will be assessed quantitatively once the projects have been formally initiated. The risks will be modelled using Monte Carlo Simulation¹² to provide a Quantified Cost Risk Analysis (QCRA) assessment of risk exposure on the programme and projects, and a measure of the capital risk allowance required.

5.10.11 In the interim, appropriate contingency and allowances for optimism bias have been made within the Financial Case of the OBC based on experience of delivery of similar schemes and the stage of development of the various projects and work packages.

5.11 Stakeholder Management

Approach and Objectives

5.11.1 The Measures proposed in the GM CAP take many forms, from a CAZ to other Measures such as Sustainable Journeys. As such, the supporting communications, engagement and consultation activities will operate at both the programme and project level.

5.11.2 The OASIS model¹³ has been used for the planning and implementation of communications and stakeholder activity around the GM CAP. Cross-cutting objectives for the activity are to:

- build awareness and visibility of air pollution as a public health issue, and the actions that can be taken to tackle it;
- help the public and stakeholders understand the specific requirements of the GM CAP (aligned to Government guidance¹⁴);
- provide relevant and timely information and updates on the development of the GM CAP;
- provide meaningful opportunities for the public and stakeholders to share feedback and engage in dialogue in support of the GM CAP development; and
- support the public and stakeholders in understanding the potential impacts of the GM CAP and how they can positively respond.

5.11.3 As a public health issue, it is important that public communications about air pollution carry out the following:

- explain what air pollution is;
- help people understand how they can protect themselves;

¹² Monte Carlo method: https://en.wikipedia.org/wiki/Monte_Carlo_method

¹³ OASIS campaigns guide: <https://gcs.civilservice.gov.uk/wp-content/uploads/2015/09/OASIS-Campaigns-Guide-.pdf>

¹⁴ Clean Air Zone Framework: <https://assets.publishing.service.gov.uk/government/.../clean-air-zone-framework.pdf>

- explain the health impacts;
- make it local;
- explain how individuals can make a difference; and
- demonstrate leadership and empower communities.

Communications and Stakeholder Approach

5.11.4 Communications and stakeholder activity will be aligned to the objectives set out in paragraph 5.11.2 above. A management process has been developed to support the effective delivery of coordinated public-facing communications and stakeholder engagement for the GM CAP, and is included at Appendix E.4.1. This reflects the GM-wide strategic approach that is being taken for the development of the FBC and is further supported through local communications and engagement plans.

5.11.5 Greater Manchester will utilise all appropriate communications channels to ensure targeted, timely and easy-to-understand information is promoted to a variety of audiences.

5.11.6 This includes strategies to best utilise:

- web – a new website, CleanAirGM.com, has been developed and launched as the public home for the Greater Manchester Clean Air Plan and wider air quality-related information. This includes
 - Real-time Greater Manchester air quality monitoring station readings
 - Air pollution public health information
 - Advice on what people can do to limit their exposure to, and reduce their contribution to, air pollution
 - Details of what Greater Manchester is doing to tackle air pollution, including the Clean Air Plan
 - An air pollution forecasting and alert service for the region;
- social media (organic and paid-for content);
- marketing channels (including digital, outdoor, radio, TfGM and partner free-of-charge assets);
- national, regional, local and trade media; and
- community assets

5.11.7 Key stakeholders have been identified and will be engaged throughout the development of the GM CAP. Initial targeted activity was carried out to support the technical feasibility work around the Measures, and a plan for ongoing engagement with the wider stakeholder audience has been developed. Full details can be found at Appendix E.4.1.

Consultation Approach and Requirements

- 5.11.8 Given the wide-ranging nature of the Measures proposed in the GM CAP, it is essential that the views of people living, working and commuting in and around Greater Manchester, including businesses, are sought as part of an assessment to discover the best package of interventions.
- 5.11.9 An initial phase of informal consultation activity – referred to as a ‘Public Conversation’ – will seek wide-ranging feedback on the options for achieving compliance in Greater Manchester and the identified ‘preferred option’ whilst at a formative stage. The outputs from this initial engagement activity will be used to inform the ongoing detailed design of the Measures and build the understanding around impacts of the preferred option from a public and stakeholder perspective.
- 5.11.10 Further phases of activity will be aligned to any statutory consultation requirements. Detailed plans will be developed at each stage of activity; however, the overarching aim of any informal or formal consultation periods is to support the FBC that will be presented to JAQU.
- 5.11.11 All activity will be planned to ensure compliance with the key legal principles for consultations, as captured in the ‘Gunning Principles’ which are as follows:
- consultation must take place when policies are at a formative stage;
 - sufficient reasons must be provided to allow for intelligent consideration;
 - adequate time must be allowed for consultees to consider and respond to proposals; and
 - responses must be conscientiously taken into account.¹⁵
- 5.11.12 Additionally, the requirements of the Freedom of Information Act 2000; the Environmental Information Regulations 2004; the General Data Protection Regulation 2016/679; the Data Protection Act 2018, and the public sector equality duty as set out in section 149 of the Equality Act 2010 will also be taken into account.
- 5.11.13 Further stages of stakeholder engagement beyond the OBC and FBC development will be informed by feedback from the Public Conversation, Consultation, continuing stakeholder engagement and research. Together, these activities will provide a better understanding of the impacts and requirements for each stakeholder group and will enable a longer-term approach to be developed for the implementation of the GM CAP. Alongside this, there will be close working with JAQU to ensure activity is aligned to the national approach for stakeholder engagement and public communications.

¹⁵ See *R v Brent London Borough Council, Ex p Gunning* (1985) 84 LGR 168. See also *Moseley, R (on the application of) v London Borough of Haringey* [2014] UKSC 56

5.12 Delivery Strategy

- 5.12.1 As set out in section 5.3.2, it is anticipated that the local authorities will delegate formal authority to TfGM in order for TfGM to fulfil its role as Delivery Body for the Programme on behalf of the ten local authorities. The detail of this will be discussed and agreed with the local authorities in developing the FBC. The Delivery Body is the organisation established or formally instructed to procure and deliver the GM CAP Programme and will be accountable for the building of the Service(s). TfGM will continue with the activity to produce the FBC on behalf of the ten Greater Manchester local authorities.
- 5.12.2 As described in section 5.6, a core Programme team will be put in place to coordinate Programme development and delivery. The implementation of the projects within the Programme will be undertaken by one or more Delivery Agents which are set out in the tables below. Delivery Agents are sub-contractors or other public sector bodies tasked with delivering a Measure in whole or in part. The first table shows the projects and components of each project, and the second table shows the work packages.
- 5.12.3 To ensure that the Programme is appropriately resourced, a combination of the following resources will be drawn upon:
- Lead Advisor;
 - TfGM resource;
 - local authority resource; and
 - supplementary resources from the independent consultant market, where appropriate, e.g. where Project Management resources are required. Further detail on the procurement approach for securing this resource is detailed in the Commercial Case.

This will be a bespoke approach to ensure that the required skillsets are provided in order to deliver and manage the Programme.

- 5.12.4 The proposed Delivery Agents for each of the components throughout the phases in the project lifecycle are set out in the tables below, where it has been possible to determine them at this stage. In determining the best-placed Delivery Agent for each activity, the rationale was applied that where TfGM or the local authorities currently have the responsibilities for delivery/operation of the activities relating to the relevant components, it is proposed that this continues. With regard to EV infrastructure, it is proposed that the contractor currently utilised for installation and operation of this infrastructure continues. Where the legal service provider is included as the lead body, this is due to acknowledgement that a specialist central resource will be required to coordinate and develop the CSO and TROs. The components allocated to the Lead Advisor reflect the scope of services that was set out in the Invitation to Tender (ITT).

5.12.5 Improving air quality and reducing emissions harmful to health is a key policy priority for Greater Manchester and the Measures proposed will also be complemented by Greater Manchester's existing programme of ongoing major investment in public transport and active travel. Throughout the GM CAP Programme, a dedicated work package will ensure that the interfaces with wider programmes, strategies and studies across Greater Manchester are managed.

Table 5- 7: Projects and Lead Bodies

Project Name	Component	Lead Body			
		Design Phase	Implementation Phase	Operation Phase	Decommissioning Phase
Clean Air Zone (CAZ)	Policy Design	Lead Advisor	N/A	N/A	N/A
	Highway Infrastructure	Lead Advisor	Delivery Agent	Operating Agent	Operating Agent
	Customer	Lead Advisor	Delivery Agent	Operating Agent	Operating Agent
	Technology	Lead Advisor	Delivery Agent	Operating Agent	Operating Agent
	Estates	Lead Advisor	TfGM	Operating Agent	Operating Agent
	Charging Scheme Order and Traffic Regulation Order	Legal Service Provider	Legal Service Provider	Operating Agent	Operating Agent
	Consultation	TfGM	N/A	N/A	N/A
Clean Freight Fund	Policy Design	Lead Advisor	N/A	N/A	N/A
	Consultation	TfGM	N/A	N/A	N/A
	Customer	TfGM	Delivery Agent	Operating Agent	Operating Agent
	Technology	Lead Advisor	Delivery Agent	Operating Agent	Operating Agent
	Estates	Lead Advisor	Delivery Agent	Operating Agent	Operating Agent
Clean Taxi Fund	Policy Design	Lead Advisor	N/A	N/A	N/A
	Consultation	TfGM	N/A	N/A	N/A
	Customer	TfGM	Delivery Agent	Operating Agent	Operating Agent
	Technology	Lead Advisor	Delivery Agent	Operating Agent	Operating Agent
	Estates	Lead Advisor	Delivery Agent	Operating Agent	Operating Agent
Clean Bus Fund	Policy Design	TfGM	N/A	N/A	N/A
	Consultation	TfGM	N/A	N/A	N/A
	Customer	TfGM	TfGM	TfGM	TfGM
	Technology	TfGM	TfGM	TfGM	TfGM
Loan Finance	Policy Design	TfGM/GMCA	TfGM/GMCA	TfGM/GMCA	N/A
	Consultation	TfGM/GMCA	N/A	N/A	N/A
	Customer	TfGM/Delivery Agent	TfGM/Delivery Agent	TfGM/Operating Agent	N/A
	Technology	TfGM/Delivery Agent	TfGM/Delivery Agent	TfGM/Operating Agent	Operating Agent
Electric Vehicle Infrastructure and Promotion	Policy Design	TfGM	N/A	N/A	N/A
	EV Infrastructure	TfGM	Greater Manchester Electric Vehicle Electric Charging Infrastructure (GMEV ECI) operator	Greater Manchester Electric Vehicle Electric Charging Infrastructure (GMEV ECI) operator	Greater Manchester Electric Vehicle Electric Charging Infrastructure (GMEV ECI) operator
	Traffic Regulation Order	Legal Service Provider	Legal Service Provider	Highway Authority	Highway Authority
	Consultation	TfGM	N/A	N/A	N/A
	Experience Days	TfGM	TfGM	TfGM	TfGM

Key:

Delivery Agent* – A sub-contractor or other public sector body tasked with delivering a Measure in whole or in part.

Operating Agent* – A sub-contractor or other public sector body tasked with operating (and decommissioning) one or more of the Measures in whole or in part over their lifetime.

*detail to be confirmed in the FBC.

Table 5- 8: Work Packages and Lead Bodies

Work Package Name	Component	Lead Body			
		Design Phase	Implementation Phase	Operation Phase	Decommissioning Phase
Sustainable Journeys	Business Engagement (including public and third sector)	TfGM	TfGM	TfGM	N/A
	School and Education Engagement	TfGM	TfGM	TfGM	N/A
	Community Engagement	TfGM	TfGM	TfGM	N/A
Local Authority & Greater Manchester Fleet Upgrade	Fleet Changes	Local / GM Authority	Local / GM Authority	Local / GM Authority	N/A
Parking Standards	Policy Design	Local Authority	N/A	N/A	N/A
	Parking Changes	Local Authority	Local Authority	Local Authority	N/A
Short Stay Parking	Policy Design	Local Authority	N/A	N/A	N/A
	Highway Infrastructure	Highway Authority	Highway Authority	Highway Authority	Highway Authority
	Traffic Regulation Order	Highway Authority	Highway Authority	Highway Authority	Highway Authority
	Consultation	Local Authority	N/A	N/A	N/A
Local Authority & Greater Manchester Staff Parking	Policy Design	Local / GM Authority	Local / GM Authority	Local / GM Authority	N/A
	Parking Infrastructure	Local / GM Authority	Local / GM Authority	Local / GM Authority	N/A
Bus Capacity	Bus Partnerships	TfGM	Bus Operators	Bus Operators	N/A

NB. As noted in section 5.4.10, the work packages Parking Standards, Short Stay Parking and Local Authority & Greater Manchester Staff Parking all relate to the Measure 'Parking Standards'

Key Delivery Challenges

5.12.6 There are a number of key challenges in relation to the implementation of the GM CAP, including:

- securing the necessary approvals, powers and consents;
- securing the necessary funding at the required time;
- stakeholder management and engagement;
- interface with Highways England;
- cross-Greater Manchester political agreement;
- balancing local and strategic priorities;
- ensuring the design of schemes is at a sufficient level of maturity to facilitate efficient delivery/construction/operation;
- development of IS elements and interface with central Government systems;
- undertaking procurement activities to the required timescales;
- minimising disruption to public transport; and
- consideration of other initiatives and programmes to ensure alignment.

5.12.7 The above challenges will be mitigated through robust risk management processes and a comprehensive stakeholder and communications strategy, as set out in this Management Case.

5.13 Operating Model

5.13.1 Previous sections in the Management Case describe the proposed approach for the implementation of the GM CAP Programme and how it will be governed and delivered. Part of the implementation phase will include establishing an operating model to govern, manage and maintain the outputs of the projects and work packages, until either the EU Limit Value has been met or the funds utilised (incentive funds). The establishment of the operating model will include:

- An Operating Body – a body that is accountable for the ongoing delivery of the Service(s) and to manage, govern and provide oversight of GM CAP Programme outputs. A proposal in relation to the Operating Body will be developed as part of the FBC.
- Operating Agents – sub-contractors or public sector bodies tasked with operating (and decommissioning) one or more of the Measures in whole or in part over their lifetime.

Operating Body

5.13.2 The role of the Operating Body will include:

- accounting activities for all of the Measures including the allocation of funds on behalf of the GMCA (this role will commence during the delivery phase and continue into operations);
- maintaining oversight on the operation of the GM CAP;
- reviewing and responding to the outputs from the Monitoring and Evaluation;
- tracking the performance and progress of the individual elements of the GM CAP;
- reporting to the Operations Board and Steering Group;
- making recommendations to the Steering Group for the implementation of additional measures if required to ensure the EU Limit Value is met;
- developing and making proposals to the Steering Group for the reinvestment of any revenue surpluses from the proposed CAZ back into additional clean air measures; and
- assessing when sustained compliance has been achieved and authorising the decommissioning.

5.13.3 The Operating Body will follow the governance approach detailed at Appendix E1.1. However, during the operating and decommissioning phases the Programme Board will be replaced by an Operations Board which would report to the Steering Group.

5.13.4 The Operating Body will report into the Operations Board. The Operating Body will be wound down at the end of the decommissioning phase.

Operating Agents

5.13.5 Table 5- 7 Projects and Lead Bodies and Table 5- 8 Work Packages and Lead Bodies describe, in the column entitled Operations Phase areas, where processes, organisation, systems and data will be required to support the operational management, delivered by the Operating Agents.

5.13.6 The guiding principles for the design of the operating model for the Operating Agents are:

- it is to be an organisation to operate the day to day activities of the measures and will need to be shut down when sustainable compliance with the EU Limit Value has been achieved;
- decommissioning costs of the Operating Agent(s) should be minimised, e.g. avoiding redundancy costs;
- there needs to be a mechanism to be able to cost effectively vary the length of time that the operating agent is in operation; and
- the most cost effective way of running the GM CAP should be sought whilst considering social value including local employment opportunities.

Full Business Case (FBC) Design

5.13.7 During the FBC the detailed design of the Operating Body and Agents will be undertaken and will consider the following:

- development of the blue print (process, organisation, technology and information);
- methods of delivering e.g. temporary organisation, expanded existing capacity, outsourcing or a combination);
- development of detailed operating cost plan;
- development of a detailed implementation plan; and
- property requirements.

5.14 Monitoring and Evaluation

Benefits Realisation

- 5.14.1 The Strategic Case highlighted that poor air quality damages health. The primary benefits of reducing NO₂ and particulate matter (PM) emissions are improvements to the health of residents and those travelling within Greater Manchester due to reduced exposure to harmful concentrations of NO₂ and PM. A further benefit is the reduction in environmental impacts associated with poor air quality.
- 5.14.2 This will in turn reduce healthcare spending, increase productivity as illness is reduced, and prevent premature death. Long-term sustainable growth goals are more likely to be achieved with improvements to infrastructure and Measures that encourage less impactful and more efficient modes of travel.
- 5.14.3 The logic mapping identifies the interventions that make up the projects and work packages, the likely consequences of providing these interventions and the routes to realising the expected benefits. The logic map is located in Figure 1-19 of the Strategic Case. Benefits registers have been produced for each element of the programme and are included within Appendix O.1.1.
- 5.14.4 Benefits realisation management will ensure that the programme benefits are maximised. The schemes within the proposed GM CAP programme are large-scale, innovative and present the risk of unintended negative consequences for people's wellbeing. Therefore, the monitoring requirements will be proportional to the scale and type of the scheme to ensure benefits are realised. In order to clearly demonstrate all benefits from the Programme and component projects and subsequently ensure that they are all fully realised, a full benefits assessment will be undertaken at FBC to identify all benefits and disbenefits, allow presentation of benefits to stakeholders and ensure plans are in place for benefits realisation once the project is transferred to business as usual.

5.14.5 Benefits will be realised only once the projects within the programme enter their operational phases. Benefits are anticipated to continue increasing post implementation as modal shift occurs and modern, less polluting, vehicles and technologies become more prevalent.

Monitoring and Evaluation Plan

- 5.14.6 An outline monitoring and evaluation plan is attached at Appendix E.4.3; this plan proposes a method of measurement to assess the success of the interventions in realising the benefits identified. The monitoring and evaluation plan considers the impacts of the GM CAP on the environment, society and the economy. In addition to the proposed monitoring of NO₂ levels, the monitoring plan also includes monitoring of the outcomes in relation to traffic volumes and traffic composition. It also proposes to capture customer attitudes and behaviours through undertaking surveys and the monitoring of responses to incentives.
- 5.14.7 JAQU has appointed a contractor to develop and deliver a central evaluation programme. The Programme will engage with the contractor to further develop Greater Manchester's monitoring and evaluation plan to reflect the scope and requirements of the central evaluation programme. A detailed evaluation plan will be produced ahead of the FBC.
- 5.14.8 The post-programme evaluation will be undertaken to reflect on the completed implementation and benefits realisation. This will commence once compliance has been reached. The scope of this evaluation will encompass examination of benefits realisation, actual cost comparison against planned, lessons learnt throughout programme delivery and any opportunities to increase the benefits through further works.