

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

Glossary



Salford City Council



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Authorised by: Date:	Simon Warburton 28 th February 2019		

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Draft for approval

1 Acronyms & Abbreviations

Term	Description
ADMS	Air Dispersion Modelling System
AGMA	Association of Greater Manchester Authorities
ANPR	Automatic Number-Plate Recognition
AQ	Air Quality
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
BAME	Black, Asian and Minority Ethnic
BAU	Business As Usual
BC	Business Case
BCR	Benefit Cost Ratio
CAF	Clean Air Fund
CAP	Clean Air Plan
CAPEX	Capital Expenditure
CAZ	Clean Air Zone
CBA	Cost Benefit Analysis
CBTF	Clean Bus Technology Fund
CCG	Clinical Commissioning Group
CCS	Central Charging System
CCTV	Closed-circuit television (surveillance cameras)
CENTRO	Transport for West Midlands
CHD	Coronary Heart Disease
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide equivalent
COAD	Certification of Approved Decision
COMEAP	Committee on the Medical Effects of Air Pollutants
COPD	Chronic Obstructive Pulmonary Disease

Term	Description
CPZ	Controlled Parking Zones
CSF	Critical Success Factors
CSO	Charging Scheme Order
DBOM	Design Build Operate & Maintain
D-IRP	Delivery Independent Review Panel
Defra	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DI	Distributional Impacts
DM	Do Minimum
DT	Diffusion Tubes
DVLA	Driver and Vehicle Licensing Agency
ECI	Early Contractor Involvement
EEA	European Economic Area
EMIGMA	Emissions Inventory for Greater Manchester
EQIA	Equality Impact Assessment
EU	European Union
EV	Electric Vehicle
FBC	Full Business Case
FCA	Financial Conduct Authority
GBP	The Pound Sterling
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GM	Greater Manchester
GM CAP	Greater Manchester Clean Air Plan
GMAL	Greater Manchester Accessibility Levels
GMCA	Greater Manchester Combined Authority
GMEV	Greater Manchester Electric Vehicle (Network)
GMFM	Greater Manchester Forecasting Model

Term	Description
GMFRS	Greater Manchester Fire and Rescue Service
GMLEP	Greater Manchester Local Enterprise Partnership
GMP	Greater Manchester Police
GMPTE	Greater Manchester Passenger Transport Executive
GMSF	Greater Manchester Spatial Framework
GRP	Gateway Review Panel
GtL	Gas to Liquid
GVA	Gross Value Added
HEAT	Health Economic Assessment Tool
HGV	Heavy Goods Vehicle
IAAP	Integrated Assurance and Approvals Plan
IMD	Index of Multiple Deprivation
IMS	Integrated Management System
IRR	Inner Relief Route
IS	Information Systems
ITT	Invitation to Tender
JAQU	Joint Air Quality Unit
KMs	Kilometres
KPI	Key Performance Indicator
LA	Local Authority
LAQM	Local Air Quality Management
LE	Life Expectancy
LEPs	Local Enterprise Partnerships
LES	Low Emission Strategy
LEZ	Low Emission Zone
LGV	Light Goods Vehicle
LPG	Liquefied Petroleum Gas
LSOA	Lower Layer Super Output Area

Term	Description
LSTF	Local Sustainable Transport Fund
MCA	Multiple Criteria Analysis
M&E	Monitoring and Evaluation
NHS	National Health Service
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen
NPV	Net Present Value
O ₃	Ozone
O&M	Operations & Maintenance
OB	Optimism Bias
OBC	Outline Business Case
OGV	Other Goods Vehicle
OJEU	Official Journal of the European Union
OLEV	Office for Low Emission Vehicles
ONS	Office for National Statistics
PCM	Pollution Climate Mapping
PCN	Penalty Charge Notice
PEP	Project Execution Plan
PHE	Public Health England
PHV	Private Hire Vehicles
PM	Particulate Matter
PM ₁₀	Particulate Matter With An Aerodynamic Diameter Of Less Than 10 Microns
PM _{2.5}	Particulate Matter With An Aerodynamic Diameter Of Less Than 2.5 Microns
PMFDTS	Project Management & Full Design Team Services
PMM	Project Management Methodology
PMO	Project Management Office
PMP	Project Management Procedures
ProgMP	Programme Management Procedures

Term	Description
PT	Public Transport
PVB	Present Value Benefits
PVC	Present Value Costs
PWLB	Public Works Loan Board
QC	Queen's Counsel
QCRA	Quantified Cost Risk Assessment
RMP	Risk Management Plan
RMS	Risk Management System
RPA	Risk Potential Assessment
SATURN	Simulation and Assignment of Traffic to Urban Road Networks
SMEs	Small and medium sized enterprises
SOC	Strategic Outline Case
SPV	Special Purpose Vehicle
SRN	Strategic Road Network
SRO	Senior Responsible Officer
T-IRP	Technical Independent Review Panel
TAG	Transport Analysis Guidance
TCF	Transforming Cities Fund
TfGM	Transport for Greater Manchester
TfGMC	Transport for Greater Manchester Committee
TNC	Transport Network Companies
TRO	Traffic Regulation Order
TUBA	Transport User Benefit Appraisal
UAZ	Urban Area Zone
UK	United Kingdom
ULEV	Ultra Low Emission Vehicles
ULEZ	Ultra Low Emission Zone
UNFCCC	United Nations Framework Convention on Climate Change

Term	Description
VCA	Vehicle Certification Agency
VfM	Value for Money
VOC	Vehicle Operating Costs
VOSA	Vehicle and Operator Services Agency
VPR	Vehicle Passage Records
WHO	World Health Organisation
$\mu\text{g}/\text{m}^3$	Microgramme per cubic metre

2 Glossary

Term	Description
Air Quality Action Plan	Development of a local Air Quality Action Plan (AQAP) to improve air quality is a statutory requirement once an air quality management area (AQMA) has been declared.
Air Quality and Environment Portfolio	A portfolio comprising all TfGM's programmes, projects and business as usual activities required to achieve its objective to reduce carbon emissions and improve air quality.
Air Quality Management Area	An area where the National Air Quality Objectives are unlikely to be achieved. The Air Quality Management Area (AQMA) in Manchester is declared for predicted exceedances of the annual nitrogen dioxide (NO ₂) air quality objective.
Automatic Number Plate Recognition	Automatic Number Plate Recognition (ANPR) is surveillance technology which uses optical character recognition on camera images to read a vehicle's number plate.
Background Maps	Maps of modelled background concentrations at 1 km x 1 km resolution for a range of pollutants including oxides of nitrogen (NO _x) and nitrogen dioxide (NO ₂), provided by JAQU. These will be used principally to define the contribution to ambient concentrations from non-local sources, such that only local sources need be modelled in detail. It is likely that road transport will be the most significant local source, although other local sources can be modelled if relevant.
Back Office	is the portion of a company made up of administration and support personnel who are not client facing. Back office functions include settlements, record maintenance, regulatory compliance, accounting and IS services.
Baseline Year	(As used in Options Appraisal) The projected outcomes under a no-action scenario, with no additional measures to improve air quality. This should draw on baseline projections for both air quality and transport models, with an appraisal period of 10 years from the scheme's implementation. Interpolation and/or extrapolation can be used if not all these years have been modelled.
Base year	The year used for validation of the transport and air quality dispersion models against recently collected real-world data. It is preferable for the same base year to be used in both transport and air quality models. The base year for the transport model should be no more than 5 years old and for the Air Quality model it should be 2015 or later (Local authorities should discuss with their account manager if you intend to use different base years for the models).
Benchmark option	A benchmark option is a policy that is likely to be effective at delivering compliance in the shortest possible time. A benchmark option is therefore an important tool in helping to define what 'shortest possible time' means for each local authority area and provides a tangible illustration of the minimum expected of other potential policy options.
Benefit Cost Ratio	An indicator used to show the relationship between the relative costs and benefits of a proposed project, expressed in monetary or qualitative terms.

Term	Description
Bus capacity	Liaison with Bus Operators to agree routes with expected increase in demand for Bus Operators to plan increases to commercial services.
Business Case	A business case is a written or verbal value proposition that is intended to inform decision making.
Central Evaluation Programme	Evaluation Programme for Clean Air Plans nationally, commissioned and managed by JAQU.
Charging Scheme Order	An Order under the Transport Act 2000 and Road User Charging Scheme Regulations 2013, putting in law the imposing a charge for a defined class of vehicle and within a scheme.
Chronic obstructive pulmonary disease	Chronic obstructive pulmonary disease (COPD) is a type of obstructive lung disease characterized by long-term breathing problems and poor lung flow.
Clean Air Fund	A Clean Air Fund (CAF) allows local authorities to bid for additional money to support the implementation of measures to improve air quality. This could include interventions such as improvements to local bus fleets, support for concessionary travel and more sustainable modes of transport such as cycling, or infrastructure changes
Clean Air Plan	A Clean Air Plan (CAP) is a plan including targets and inputs designed to reduce congestion and improve air quality. Where an AQMA is designated, local authorities are required to produce a Clean Air Plan.
Clean Air Zone	A Clean Air Zone (CAZ) defines an area where targeted action is taken to improve air quality and resources are prioritised and coordinated in order to shape the urban environment in a way that delivers improved health benefits and supports economic growth.
Clean Air Zone - Non Charging	Defined geographic areas used as a focus for action to improve air quality. This action can take a range of forms including, but not limited to optimising traffic management, communications/publicising, traffic restrictions but does not include the use of charge based access restrictions.
Clean Air Zone - Charging	These are zones where, in addition to the Non-charge CAZ, vehicle owners are required to pay a charge to enter, or move within, a zone if they are driving a vehicle that does not meet the particular standard for their vehicle type in that zone. Clean Air Zone proposals are not required to include a charging zone, and local authorities may consider alternatives to charging such as access restrictions for certain types of vehicle.
Clean Bus Fund	Part of the Vehicle Renewal Scheme which would offer subsidies to retrofit the majority of existing Euro IV and V buses with flexibility for the move to an EV bus network, including financial assistance towards charging infrastructure, prioritised on Air Quality benefits and commercial contribution. In addition, coaches would be eligible under the Clean Freight Fund.

Term	Description
Clean Freight Fund	Part of the Vehicle Renewal Scheme which would offer local small, micro businesses, sole traders and the voluntary sector, registered in Greater Manchester, with a discount on the purchase of a compliant commercial vehicle from an approved supplier when scrapping a non-compliant vehicle or retrofitting to make compliant. Priority for funding will be based primarily on-air quality impact such that the most polluting vehicles can be targeted. Vans, minibuses, HGV, coaches would be in scope for this fund.
Clean Taxi Fund	A fund that would offer Greater Manchester registered taxi and private hire drivers support to upgrade their non-compliant vehicles. The establishment of a Clean Taxi Fund would offer taxi and private hire drivers a discount on the purchase of a compliant vehicle from an approved supplier when trading in a non-compliant taxi. It will also provide funding for the retrofitting of taxis. It should be noted that the scheme would only be open to vehicles and drivers licensed within Greater Manchester.
Client Earth	A charity containing lawyers and environmental experts that are focussed on tackling climate change and protecting nature and the environment.
Company Watch	Provides risk analysis and data modelling tools to organisations around the world to understand and predict exposure to financial risk.
Conversation	An initial phase of informal consultation activity, the outputs from which will inform the ongoing detailed design of the measures, and build the understanding around impacts of the 'best performing option' from a public and stakeholder perspective
Consultation	Formal/statutory consultation on the preferred option as required. In terms of statutory this is with specific reference to the Charging Scheme Order.
Critical Success Factors	Critical Success Factors (CSF) for the CAP are project objectives/considerations, which are used to conduct a high-level assessment of the longlist of options as part of the strategic outline case stage and informing outline business case. The Critical Success Factors should include a pass/fail criterion on whether the proposed option achieves NO2 compliance in the shortest possible time.
Crown Commercial Service	The Crown Commercial Service (CCS) brings together policy, advice and direct buying; providing commercial services to the public sector and saving money for the taxpayer.
Delivery Agent	A sub-contractor or other public sector body tasked with delivering a Measure in whole or in part.
Delivery Body	The organisation established or formally instructed to procure and deliver the GM CAP Programme with accountability for the building of the Service(s).
Department for Environment, Food and Rural Affairs	The Department for Environment, Food and Rural Affairs (Defra) is the UK government department responsible for safeguarding the natural environment and supporting food and farming and the rural economy.
Discounting	A method used to convert future costs or benefits to present values using a discount rate.

Term	Description
Discount rate	The annual percentage rate at which the present value of a £, or other unit of account, is assumed to fall away through time.
Discount value	Current worth of a future sum of money.
Distributional Analysis	Distributional analysis looks at the degree to which policies impact upon different groups of people or businesses. Distributional analysis is necessary to understand whether a particular policy unduly favours or disadvantages particular groups in society.
Distributional Impacts	(As above) are impacts that are distributed across different social and economic groups and geographies.
Do Minimum	The minimum intervention required to deliver core objectives. This excludes any additional features that may also be possible and bring additional benefits.
Early Measures	This funding is to support small, ambitious, good value for money measures that deliver air quality improvements. These are complementary to the feasibility study and larger local plan that delivers compliance.
Economic assessment (cost benefit analysis)	The economic assessment is essentially the detailed appraisal of a policy's value for money, looking at the monetised costs and benefits to society. This looks more widely than simply the direct financial impacts of a measure, considering the wider societal impacts.
Early Contractor Involvement	Early contractor involvement (ECI) allows the Contractor to be appointed under a two-stage ECC contract before details of what is to be constructed have been fully developed and priced. This enables the Contractor to take part in the design development and construction planning stage of a project.
Elasticity	Elasticities measure how one variable responds to changes in another. For example a fuel elasticity of demand shows how the number of vehicle trips taken would change in response to a change in the price of fuel.
Electric Vehicle (EV) Infrastructure and Promotion	Delivery of 300 additional Rapid Charging Points (Dual Headed) across Greater Manchester, including a proportion ring-fenced for taxi and private hire vehicles (PHVs) only. In addition to the charging points, TfGM would deliver a targeted marketing and engagement campaign with Greater Manchester businesses and residents that will showcase the benefits of EVs, highlight the support that is available and provide an opportunity for EVs to be compared across a range of suppliers.
Emission Factor Toolkit	A tool to allow calculations of pollutant emissions from road transport, including for NOx, and other pollutants for a specified year, road type, vehicle speed and vehicle fleet composition.
Enterprise Zone	Enterprise zones are designated areas across England where the Government grant special tax or regulatory exemptions in order to promote local economic development.
Equality Impact Assessment	A process by which the impact of policies and services on communities, users and non-users is assessed.

Term	Description
European emission standards or Euro standards	EU-wide standards for exhaust emissions of air pollutants. Current standards for new vehicles are: 'Euro 6' for light duty vehicles (cars and vans) and 'Euro VI' for heavy duty vehicles.
Executive Board	The Executive Board is the ultimate decision-making body within TfGM and is responsible for determining strategic issues consistent with GMCA's policies.
Feasibility study	A feasibility study is the process from the local air quality assessment to the development of a final business case for the local plan.
Financial Conduct Authority	Conduct regulator for financial service firms and financial markets in the UK.
Full Business Case	Final iteration of the business case and the case that goes for Defra Secretary of State approval. This sets out the final preferred option in detail and include inputs from any consultation. The implementation and procurement route will be detailed, and how it will be managed and the benefits realised.
Gender pay gap	The gender pay gap is the difference in the average hourly wage of all men and women across a workforce.
Greater Manchester Highways Group	A forum for engagement by highways leads across the GM area, including key external Highways stakeholders, to drive the Highways element of the GM Transport Strategy and meet pan-GM Highways needs. Attended by senior level representatives from Highways England, TfGM, the 10 GMCA Local Authorities and Greater Manchester Police empowered with the authority of Highway Leads. The Group is accountable collectively to WLT and individuals are accountable to their WLT member for decisions taken.
Greater Manchester Passenger Transport Executive	The Greater Manchester Passenger Transport Executive (GMPTE) was the original name for the public body which is now Transport for Greater Manchester (changed in 2011).
Greater Manchester Spatial Framework	The Greater Manchester Spatial Framework (GMSF) is a joint plan for Greater Manchester that will provide the land for jobs and new homes needed across the city region up to 2035.
Greenhouse gases	The term Greenhouse gas (GHG) refers to carbon dioxide, nitrous oxide, methane, ozone and chlorofluorocarbons occurring naturally and resulting from human (production and consumption) that contribute to the greenhouse effect.
Gross Value Added	Gross Value Added (GVA) is the value generated by any unit engaged in the production of goods and services.
Heavy Goods Vehicle	A Heavy Goods Vehicle (HGV) is a large goods vehicle with a gross combination mass of over 3.5 tonnes.

Term	Description
Impact Factor	Impact factors are provided by JAQU and capture the value in GBP per person of a 1 µgm-3 change in concentration of a pollutant. The impact factors represent the pathway between exposure to a pollutant and the ultimate health or environmental outcome.
Impact pathway	The impact pathway approach is a methodology recommended by Defra for the estimation of the health and environmental costs and benefits of air pollution. The approach depends on standard estimates of impacts and their valuation (impacts factors).
Impact variable	The variables that change as a result of the option (e.g. air quality or affordability).
Implementation Costs	Unit costs for land, construction, vehicles etc.
Implementation Fund	A Government fund of £255m to support local authorities to prepare their plans and deliver targeted action to improve air quality. This funding will support the immediate work to conduct feasibility studies, implement early measures and deliver local plans.
Inner Relief Route	The Inner Relief Route (IRR) is the geographic area which covers the city centre of Manchester and sits within the Manchester and Salford council areas. The IRR zone extends to Manchester Victoria station in the north, the Ring Road to the east and the A57 Mancunian way leading onto Trinity way to the south and east respectively.
Integrated Assurance Strategy	An effective framework to provide assurance across the TfGM portfolio of change activity, which builds on the existing TfGM Gateway Review Process, combined with nationally accepted best practice.
Joint Air Quality Unit (JAQU)	JAQU is the joint unit between two Government Departments, the Department of Environment, Food and Rural Affairs (Defra) and the Department for Transport (DfT) which has responsibility to deliver and implement the UK plan for tackling roadside nitrogen dioxide concentrations.
Loan Finance	In addition to centrally funded swappage or scrappage schemes which would be funded by JAQU, a Loan Finance scheme will provide loans at preferential rates for those who are taking advantage of the Vehicle Renewal Scheme-this could be through a loan for a vehicle or subsidy of a lease plan.
Local Air Quality Management	Through the Local Air Quality Management (LAQM) system local authorities are required to assess air quality in their area and designate Air Quality Management Areas (AQMA) if improvements are necessary.
Local Enterprise Partnerships	Local Enterprise Partnerships (LEPs) are locally-owned partnerships between local authorities and businesses. They play a central role in deciding local economic priorities and undertaking activities to drive economic growth and create local jobs.

Term	Description
Low Emission Zone	A Low Emission Zone (LEZ) is a geographically defined area where the most polluting vehicles in the fleet are restricted or discouraged from entering.
Limit Value	European Union Limit Value regarding levels of NO ₂ in major urban areas (40 micrograms per cubic metre (µg/m ³)) set by the European Ambient Air Quality Directive (2008/50/EC) as implemented into UK law by the 2010 Air Quality Standards Regulations (SI. 2010 No. 1001)
Light Goods Vehicle	A Light Goods Vehicle (LGV) is a goods vehicle weighing no more than 3.5 tonnes.
Local Authority Fleet Upgrade	Upgrade of the Local Authority and Greater Manchester family fleets to the lowest emitting vehicles. This will include all Local Authority operated cars/vans, refuse collection vehicles, HGVs, contracted services and the TfGM provided bus fleet.
Local Plan	The plan local authorities are developing as part of their feasibility studies. It is the local authorities plan to bring an area of exceedance into compliance required by government and does not refer to any already established local air quality action plans within a local authority area.
Longlist	A broad range of options, created to ensure that all realistic alternatives have been adequately considered, thereby justifying the selection of an option. The list should include a 'do nothing' (baseline) option (which will help to show why taking action is necessary) which is taken forward as the baseline.
Lower Layer Super Output Areas	Lower Layer Super Output Areas (LSOA) are geographical definitions used for the mapping of social and economic characteristics. Lower Super Output Areas typically have a resident population of around 1,500 people.
Main public transport modes	The combination of all public transport modes within the transport model. In choice hierarchy, this is mainly the composite mode modelled in higher choice level in the choice tree above public transport sub-modes.
Maintenance/Renewal Costs	Unit rates or simple models.
Major Projects Association	A membership association for organisations engaged in the delivery and the development of major projects, programmes and portfolios. The central aim is to share experience, knowledge and ideas about major projects – both successes and failures – to help others to avoid mistakes and to incorporate good practice, in order that future projects would be better initiated and delivered.
Marginal external costs	Change in the total cost incurred by households or businesses, associated with a unit-change in the consumption or output of other households or businesses.
Multiple Criteria Analysis	Multiple Criteria Analysis (MCA) aims to compare different actions or solutions according to a variety of criteria and policies.
Net Present Value	Net Present Value (NPV) is the sum of the discounted benefits of an option less the sum of its discounted costs, all discounted to the same base year.

Term	Description
Office for Low Emission Vehicles	The Office for Low Emission Vehicles (OLEV) is a team working across government to support the early market for ultra-low emission vehicles (ULEV).
OJEU	The Official Journal of the European Union is the publication in which all tenders from the public sector which are valued above a certain financial threshold according to EU legislation must be published.
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.
Operating Body	The body accountable for the ongoing delivery of the Service(s) and to manage, govern and provide oversight of GM CAP Programme outputs.
Operating Costs	Models of the costs of operating public transport and charging systems.
Operations Board	The Operations Board will replace the Programme Board in the operational phase and will be responsible for the overall operations of the Programme.
Optimism bias	The demonstrated systematic tendency for appraisers to be over-optimistic about key project parameters, including capital costs, works duration and benefits realisation.
Options Appraisal	The process of defining objectives, examining options and weighing up the costs, benefits, risks and uncertainties of those options before a decision is made.
Outline Business Case	Second iteration of the business case. Provides additional detail and identifies the preferred option based on full analyses. It should set out the likely implementation and procurement route and demonstrate the affordability of the scheme.
Parking Standards and Local Authority Parking	Encompasses two key processes that can enable a mode shift to more sustainable transport options. A parking standards review that incorporates new developments, with the aim of replacing minimum with maximum standards in high density, accessible locations. In terms of Local Authority staff parking a review is to be undertaken on the provision of staff car parking and usage. The effort of Local Authorities is assumed to be a significant promoting force for the public.
Particulate matter	Airborne particulate matter is made up of a collection of solid and/or liquid materials of various sizes that range from a few nanometres in diameter (about the size of a virus) to around 100 micrometres.

Term	Description
PM2.5/PM10	<p>PM2.5 Airborne particulate matter with an aerodynamic diameter of 2.5µm (micrometres or microns) or less</p> <p>PM10 Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less</p> <p>Their potential for causing health problems is directly linked to the size of the particles. A growing body of research has pointed towards the smaller particles, in particular PM2.5, as a metric more closely associated with adverse health effects.</p>
Penalty Charge Notice	<p>Most councils have the power to enforce parking penalties under the Traffic Management Act 2004, which are often known as a 'Penalty Charge Notice' (PCN).</p>
Project Execution Plan	<p>The project execution plan (PEP) is the governing document that establishes the means to execute, monitor, and control projects. The plan serves as the main communication vehicle to ensure that everyone is aware and knowledgeable of project objectives and how they will be accomplished.</p>
Project Management & Full Design Team Services	<p>Project Management & Full Design Team Services (PMFDTS) will enable customers to access project management, design and advisory services to support delivery of property and construction projects. PMFDTS provides strategic, broad based advice across a wide range of disciplines and functions to support, guide and provide innovative solutions to public sector customers.</p>
Pollution Climate Mapping	<p>The PCM model is the UK's national air quality model and provides outputs of pollutant concentrations in the UK at a 1x1 km resolution and also at roadside locations for around 9,000 urban major roads (A and M class roads).</p>
Programme Board	<p>The Programme Board will report to the Steering Group and will be chaired by the Senior Reporting Officer. This group will be responsible for the day to day management and overall delivery of each project within the Programme.</p>
Preferred option for a scheme	<p>The preferred option is the one that fits the strategic aims of the intervention whilst delivering best value for money. This is from the shortlist of options modelled.</p>
Primary Critical Success Factor	<p>A pass/fail scoring mechanism for the assessment of options, or combination of options in the Clean Air Plan development. Any option that does not satisfy this criterion is automatically be excluded from the assessment. This specifically is: 'Delivery of compliance within the shortest possible time'</p>
Project Management Methodology	<p>A project management methodology is essentially a set of guiding principles and processes for managing a project.</p>

Term	Description
Project Management Procedures	Defining the processes that are performed throughout the life of a project to ensure the efficient and effective management of projects.
Public Contracting Regulations	The rules on the purchasing of goods and services by public sector bodies in the UK as set out through the Public Contract Regulations 2015.
Quantified Cost Risk Analysis	A process as part of cost estimation that helps decision makers to understand not only the potential funding exposure but also the nature of risks for a particular project or programme and possible responses to them.
Quintile	A quintile is one of five values that divide a range of data into five equal parts whereby quintile one represents the first fifth (0-20%) of the data and quintile five represents the last fifth (80-100%) of the data.
Receptors	The hypothetical points in the air quality dispersion modelling at which the concentrations of NO ₂ are calculated. These will include a grid of points across the model domain, and additional points as specified in the evidence package that enable comparisons with the national model and are consistent with the siting criteria defined in the Air Quality Directive.
Re-mode	To change travel mode from private vehicle use to active travel (walking or cycling) or public transport.
Risk	Specified uncertainties that arise in the design, planning and implementation of an intervention.
Risk Potential Assessment	Used to assess the strategic risk potential of programmes and projects and well as emerging policies and initiatives that are expected to be delivered through a programme or project.
Risk Register	A tool used to record the risks specified to a proposal, their likelihood and value and the assignment of risk management responsibility.
Routes	Roads outside the Inner Relief Route (IRR) and Urban Centres
Rule of Half	The Rule of Half is a restatement of the meaning of 'median' in statistics - in any population, and using any measure, half the people will be on one side of the median, half on the other.
Social Value	Net measure of total welfare resulting from an option or intervention. Alternatively, it is the sum of total benefits and total costs of an intervention, including private and social costs and benefits.
Scenario modelling	Modelling which accounts for the measures proposed in the feasibility study (also known as 'with measures' modelling).

Term	Description
Secondary Critical Success Factors	Options that meet the primary CSF (above) are scored against the following CSFs in order to determine which option would be best relative to other considerations, these include: Value for Money Distributional Impacts Strategic and wider air quality fit Supply side capacity and capability Affordability Achievability
Senior Leadership Team	TfGM Executive management activity is co-ordinated through the Senior Leadership Team, which meets at least monthly and comprises the Chief Executive; the Director of Finance and Corporate Services; the Chief Operating Officer and other Senior Leaders.
Sensitivity testing	Testing which aims to determine the degree to which a model's outputs vary in response to 'plausible changes in individual assumptions.
Shortlist	A smaller range of options which have been assessed against the critical success factors and judged to be the options most likely to achieve the objectives of the project. The shortlist of options are then taken forward for more in-depth air quality, transport and economic modelling. The shortlist should include a 'do nothing' (baseline) option (which will help to show why taking action is necessary) and a benchmark option.
Small and medium sized enterprises	The definition of small and medium sized enterprises (SMEs) encompasses any business with fewer than 250 employees.
Social Benefits	The total increase in the welfare of society from an economic action – the sum of the benefit to the agent performing the action plus the benefit accruing to society as a result of the action (external benefits).
Social Cost	The total cost to society of an economic activity – the sum of the opportunity costs of the resources used by the agent carrying out the activity, plus any additional costs imposed on society from the activity (external costs).
Spending Objective	Main objective of the project, which the Green Book terms the 'spending objective.' See options appraisal package.
Steering Group	Developed as part of the GM CAP, the group contains senior representatives from each of the ten GM local authorities, GMCA, Public Health England, Highways England and JAQU.
Strategic Outline Case	First iteration of the business case. This presents a strong case for change, and will confirm the strategic content of the proposal to do this. Initial analysis should be used to refine a long list to a short list of options to take forward. It should include indicative management, procurement and costs.

Term	Description
Study Area	The area expected to be affected significantly by measures to be implemented under the local plan. This should include the target area of the measures themselves and the additional surrounding area that is expected to be impacted by measures (e.g. such as diversion routes). We anticipate this will be a larger area than the road(s) in exceedance of 40µg/m3.
Sustainable Journeys	Package of engagement and education measures and incentives targeted using behavioural insights techniques and data to a range of different audiences designed to influence and enable a shift to more sustainable transport options. It adds value to the overall Clean Air Plan package by providing practical and targeted assistance to facilitate behaviour change, filling the gap between the wider communications activities and infrastructure / regulatory measures in order to lower emissions.
Target Area	The area which will be directly impacted by the measures under the local plan. This could be limited to a stretch of road, for individual road based measures, or the area where implementation occurs, for measures impacting a series of locations.
Target Determination	A process involving comparison of the outputs of the local and PCM air quality modelling, then agreeing the most appropriate concentration assessment to be compared to the limit value. This is needed to understand how big and improvement needs to be made in a particular location in order to determine how soon compliance can be achieved.
Terms of Reference	A description of the objectives and structure of a group or meeting; the GM CAP Steering Group Terms of Reference are attached to the OBC as an appendix.
Transaction Costs	Expenses incurred when buying or selling a good or service.
Transport for Greater Manchester Committee	The Transport for Greater Manchester Committee (TfGMC) is a joint committee of the Greater Manchester Combined Authority (GMCA) and the ten local authorities in Greater Manchester. It is responsible for advising the GMCA on transport policy, recommending how much money is spent on supporting public transport and monitoring the quality and performance of transport services. TfGM (formerly the GMPTE) carries out the decisions of GMCA and TfGMC.
TG16	Local Air Quality Management (LAQM) Technical Guidance developed by Government to support local authorities in carrying out their duties under the Environment Act 1995, the Environment (Northern Ireland) Order 2002, and subsequent regulations.
The Plan	Government's UK plan for tackling roadside nitrogen dioxide (NO ₂) concentrations (the Plan). This set out how Government would bring UK NO ₂ concentrations within the statutory annual limit of 40 micrograms per cubic metre (µg/m ³) in the shortest possible time. The Plan sets out a number of national and local measures that need to be taken. Local authorities should note the UK plan for tackling roadside nitrogen dioxide (NO ₂) concentrations is Government's UK Plan and not Defra's Plan and so should be referred as such throughout the business cases.
Transport User Benefit Appraisal	TUBA (Transport User Benefit Appraisal) is a software tool that performs transport scheme economic appraisals in accordance with the Department for Transport (DfT) guidance.

Term	Description
Ultra-low-emission vehicle	An ultra-low-emission vehicle (ULEV) is a car or van that emits 75g/km CO ₂ or less.
Uncertainty	An estimate characterising the range of values within which the true value of a measurement (or modelled output) lies.
UNFCCC	The United Nations Framework Convention on Climate Change (UNFCCC or FCCC) is an international environmental treaty negotiated at the United Nations Conference on Environment and Development (UNCED). The objective of the treaty is to "stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."
Urban centres	Areas that met a definition used for the purposes of air quality modelling
V5C	Vehicle Registration Document registers a vehicle with the Driver and Vehicle Licensing Agency and contains information about the vehicle.
Vehicle and Operator Services Agency	The Vehicle and Operator Services Agency (VOSA) was an executive agency granted trading fund status in the United Kingdom sponsored by DfT. VOSA merged with the Driving Standards Agency into a single agency in 2014.
Vehicle Certification Agency	The Vehicle Certification Agency (VCA) is the designated UK national authority for approving new road vehicles, agricultural tractors, off-road vehicles and components. VCA is an executive agency, sponsored by the Department for Transport.
Vehicle Operator Costs	Vehicle Operator Costs (VOC) refer to costs that vary with vehicle usage, including fuel, tires, maintenance, repairs, and mileage-dependent depreciation costs.
WebTAG	Transport Analysis Guidance that provides information on the role of transport modelling and appraisal.
Welfare Loss	A loss of economic efficiency that can occur when the equilibrium for a good or a service is not achieved.