



OUTLINE BUSINESS CASE

**YOU WOULDN'T
LET YOUR KIDS PLAY
WITH DIRTY TOYS**



**BUT EVERY DAY THEY'RE
BREATHING DIRTY AIR**

BREATHE

**YOU WOULDN'T
EAT ROTTEN FOOD**



**BUT EVERY DAY YOU'RE
BREATHING ROTTEN AIR**

BREATHE

SYSTRA

TYNESIDE AIR QUALITY FEASIBILITY STUDY

OUTLINE BUSINESS CASE

IDENTIFICATION TABLE	
Client/Project owner	Tyneside Authorities
Project	Tyneside Air Quality Feasibility Study
Study	Outline Business Case
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4. COMMERCIAL CASE

Please note, without having identified a Proposed Option it is not possible to give comprehensive details of the procurement strategy for the Proposed Option.

At this stage, the Tyneside Authorities have provided a high-level overview of the procurement strategy and assumed that the Tyneside Authorities will be required to implement some form of charging CAZ (class unknown).

This commercial case does not include details of the procurement of Clean Air Fund mitigation measures as these are dependent on the Proposed Option.

After the Proposed Option is identified, the procurement pack of tender documents will be drafted and the OBC Commercial Case will be updated.

4.1 Introduction

- 4.1.1 The purpose of the commercial case is to determine commercial viability by understanding the procurement and commercial arrangements relating to services and assets that are required to implement the Proposed Option.
- 4.1.2 The commercial case details the procurement strategy, which is informed by the strategic and economic cases and feeds into the costs, risk management and programme aspects of delivery, as set out in the financial and management cases.
- 4.1.3 As the project evolves from inception through to detailed awareness of design, implementation and operation, the commercial format will mature. This chapter details the commercial arrangements to ensure the successful delivery of the: Tyneside Clean Air Zone (CAZ) Implementation (Implementation, Operation and Monitoring Stage).
- 4.1.4 The commercial case provides detail on the actions that need to be taken by the Tyneside Authorities to deliver the project across all stages; what is the contracting and procurement strategy, how will risks be transferred, how was the procurement approach determined, is there a developed market for the procurement approach and what mechanisms are going to be in place to incentivise performance (positive and negative).
- 4.1.5 The procurement specifications will:
- Minimise the overall programme for the delivery of the Proposed Option, supporting the requirement to improve air quality in the shortest time practical;
 - Increase certainty of delivery through the selection of appropriate Contracts at the procurement stage;
 - Ensure supply chain input into the costs required for the delivery of the Proposed Option, this will ensure the funding requests are appropriate;
 - Enable risk management and mitigation through supply chain input to address interface risks and reduce the overall level of delivery and operational risk; and
 - Ensure supply chain input into the delivery sequence and programming of the actual construction works to ensure full co-ordination between civil construction related works and the technology works.

4.2 Output based specification

4.2.1 CAZ

4.2.2 The Tyneside Authorities have identified the 'Types of Purchase' for each deliverable. These are broadly split into:

- **Goods and services** – Items that need to be purchased and actions which need to be completed to deliver the Proposed Option.
- **Works** – installation or construction of physical aspects of the Proposed Option in the built environment. This encompasses all civil works.

4.2.3 A key element of the Proposed Option is the Charging CAZ. A list of the charge CAZ output requirements is shown in Appendix A3.1.

4.2.4 The charge CAZ requirement categories include both goods and services and works deliverables. These are itemised in Appendix A3.1. A summary of these requirements is shown in the below requirement categories:

- Design;
- Integration and project management;
- Cameras and installation;
- System IT and communications (wi-fi / fibre);
- Integration with Council systems, systems and databases;
- Integration with external and internal databases;
- Integration with government systems;
- Enforcement and Penalty Charge Notice (PCN) processing;
- Signs;
- Marketing and communications;
- Professional resource;
- Monitoring;
- Decommissioning.

4.3 Procurement strategy

4.3.1 Background

4.3.2 Centrally coordinated procurement across cities implementing air quality feasibility studies was explored, however no tangible options have been identified by the Tyneside Authorities. It is therefore assumed that the Tyneside Authorities will procure applicable deliverables independently of other cities undertaking CAZs. The procurement associated with the implementation of a charged CAZ will be undertaken by Newcastle City Council (NCC) on behalf of the Tyneside Authorities. This responsibility is listed in the Terms of Reference for CAZ Implementation Governance. Governance is explained within the Management Case.

4.3.3 To inform and develop the Proposed Option procurement strategy, the Tyneside Authorities undertook market testing between 12th November 2018 and 19th November 2018 with five suppliers. The Tyneside Authorities have also sought advice and guidance from Local Partnerships and JAQU as part of collaboration during the Tyneside Air Quality Feasibility Study.

4.3.4 **Assessment Criteria**

4.3.5 To ensure successful delivery, the right balance of the following criteria is essential:

- Time (including time certainty);
- Cost (including cost certainty); and
- Quality (including functionality certainty).

4.3.6 In adherence with the ministerial direction and subsequent guidance from JAQU, the primary spending objective for this study is to achieve compliance in annual exceedance of NO₂ in the shortest possible time. To achieve this, all aspects of delivery must be undertaken efficiently and with maximum effect on air quality. Therefore, the procurement emphasis for the Proposed Option is 'time' and 'quality', all procurement tenders will include weighting criteria in keeping with this strategy. Weighting criteria is anticipated to be 60% quality and 40% cost; however, this would be finalised as part of the drafting and sign-off of procurement pack of tender documents.

4.3.7 To avoid prolonged delivery timescales and minimise delivery complexity, the Tyneside Authorities will request 'tried-and-tested' goods and services where possible as part of the procurement strategy. This will improve the time and functionality certainty of delivery. This may include, where possible, learning from infrastructure deployed in 'Phase 1' cities.

4.3.8 **Procurement Methods**

4.3.9 Goods and services, and works can be delivered internally (within the Local Authority remit) or externally (by third party contractors). To enable maximum project control, the Tyneside Authorities are also proposing to maximise the amount of work which is delivered internally.

4.3.10 Deliverables which cannot be delivered internally will be procured through appropriate mechanisms. To procure new contracts, the Tyneside Authorities will undertake an appropriate tendering process using existing frameworks.

4.3.11 **Approval Process**

4.3.12 The procurement strategy will need to be developed by the CAZ Implementation Group (see Management Case for Governance Structure and Terms of Reference).

4.3.13 A summary of the procurement activities which require approval are as follows:

- Procurement strategy – signed off by the Steering Group;
- Procurement pack of tender documents – signed off by Procurement Commissioner from Newcastle City Council following input from legal, finance and technical officers;
- Response evaluation – tender evaluation undertaken by a selected evaluation panel decided by the CAZ Implementation Group. The evaluation panel will include technical specialists who understand the service / works / products being procured and who had involved in the preparation of the procurement pack. The evaluation panel will determine who has won the procurement exercise.
- Contract award - the award of the contract will need to be approved following a confidential Key Delegated Decision for contracts over £100,000. Contracts over £2million

will need approval through Cabinet. Note, the approval is simply to award or not (it's not Cabinet / approver changing or choosing a provider).

4.4 Sourcing options

4.4.1 As stated in the procurement strategy, the Proposed Option for delivery is internal where possible. Requirements which need to be delivered externally will be procured through appropriate sourcing mechanisms.

4.4.2 CAZ Requirements

4.4.3 Some '**Works**' will be delivered internally. The Tyneside Authorities have the Regional Traffic Signals Group and local Highways Maintenance departments who can:

- Install camera columns / mounting
- Enable power supply (with support from Northern Powergrid)
- Deliver other street works / equipment installation
- Undertake traffic management
- Install local signs
- Undertake minor works to road, kerbs or pavements

4.4.4 Some '**Goods and services**' can also be delivered internally:

- Charge CAZ design: Overall solution plan and planning and traffic regulations
- Management: Programme Management / Steering Group and Project Management - CAZ Implementation Manager
- Support staff: Enforcement staff, appeals, queries and complaint handling (except payment system queries which will be held centrally by UK Government¹) and technical, IT, legal and procurement services
- Delivery of communications activities
- Office costs and postage
- Monitoring activities

4.4.5 Recruitment will be required for the CAZ Implementation Manager and for additional enforcement staff to operate the charge CAZ PCN processing system. A new office location and supporting IT will also be required to operate a charge CAZ.

4.4.6 The Tyneside Authorities do not have the capability to deliver the following '**Goods and services**':

- Camera install (including communications), supply and operation. The Tyneside Authorities have considered the existing contracts that are in place for ANPR cameras and operation. These contracts have been discounted as there is not sufficient contract flexibility to add on an additional task of this quantity or duration. Therefore, a contract for camera supply and operation will have to be procured.

¹ A central payment system is being supplied by the UK Government. It is also assumed that UK Government will supply a central database for taxis.

- CAZ system (core design and delivery) and integration (local systems and central systems):
 - Image processing / filtering system
 - PCN processing system
- Communications strategy and design works.

4.4.7 The above deliverables have been amalgamated into the following contracts:

Contract 1: Camera supply, operation and CAZ look-up system to initially filter vehicles.

Contract 2: PCN processing system.

Contract 3: Communications strategy and design.

4.4.8 Sourcing options were explored and evaluated as follows:

- Open market and OJEU - would not fit with the as quick as possible approach. There is a higher risk of receiving poorer standard tenders and added complexities for suppliers.
- Framework - ensures that some elements of quality assurance have been undertaken before procurement.

4.4.9 It was concluded that the approach of utilising an existing framework is a simplified and quicker route to market.

4.4.10 It is the intention that Contract 1 and 2 will be published to Traffic Management Technology 2 (TMT2) Crown Commercial Services framework reference RM1089, which is currently in place until the 31 October 2020. These contracts will be in place for up to five years.

4.4.11 Contract 3 will be via NCC framework 005431 – Corporate Design Contract. This contract will be in place for up to one year.

4.4.12 The procurement pack of tender documents for each Contract will contain:

- Specification;
- Tender Response Form;
- Pricing Schedule;
- Call – off details;
- NEC3 Contract (draft); and
- Other supporting documents.

4.4.13 At this stage, the Procurement Packs for each contract have not been drafted. The draft procurement pack of tender documents will be provided when the Proposed Option is identified.

4.4.14 After the procurement specification and response frameworks have been drafted, legal and finance colleagues, technical officers and procurement specialists meet to select and amend components of the NEC Contract. Key components which will need to be considered are:

- Core clauses;
- Main Option Clauses;
- Secondary Option Clauses; and

○ Z Clauses.

4.4.15 Change control, adherence to appropriate regulations and treatment of intellectual property rights will all be covered by clauses will be included in the NEC3 contract.

4.4.16 **Risk**

4.4.17 There is some risk regarding market capacity and capability (i.e. will the likely suppliers be able to cope with demand given other authorities will be wanting same kind of products on a similar timescale).

4.4.18 To minimise this risk, early engagement with the market has been undertaken and will continue through to FBC. Informal feedback from the market is that there is sufficient capacity in the market to deliver charging CAZs in the areas currently undertaking Air Quality Feasibility Studies, particularly as the FBC completion is in tranches with a year between tranche one and tranche two. The capability of the market to deliver these charging CAZs in the shortest possible time is dependent on swift procurement, finalisation of the FBC and prompt funding award to allow contract signing to take place.

4.5 Payment mechanisms

4.5.1 Payments will be linked to performance and contractors will be paid after delivery of milestones as set out in the procurement specification. The terms of these payment mechanisms will be finalised as part of the contract signing. Performance measures and quality attributes will be determined as part of the drafting of the procurement pack of tender documents.

4.5.2 Allocated risks will be tied-in to the payment approach: payments will be withheld if deliverables are not met and contractors will be required to hold appropriate levels of insurance provision in case of risks being realised.

4.5.3 The Tyneside Authorities will ensure value for money by requesting a pricing schedule which covers the duration of the Proposed Option. This will ensure that costs are confirmed for the delivery period and will mean that a decision can be made from the offset about value for money.

4.5.4 It is anticipated that it will be a Priced Contract with an activity schedule. The activity schedule will be set out in the procurement documents and will remain in place unless changed in accordance with the NEC3 contract.

4.5.5 The contractor will likely be expected to provide regular information which shows how the activity on the activity schedule relates to operation of their programme. Again, this will be finalised as part of the procurement pack of tender documents.

4.6 Pricing framework and charging mechanisms

4.6.1 There is a high level of uncertainty regarding the effectiveness of the Proposed Option. Until the charging CAZ is operational, the Tyneside Authorities do not know for certain what level of change-response will be triggered (i.e. vehicle upgrades, mode shift, re-routing, pay the charge). This makes the incentivisation of a zone which will achieve air quality compliance in

the shortest possible time very difficult; the contractors will be implementing a measure which they have had little input into its design. For this reason, the Tyneside Authorities do not intend to incentivise delivery by impact on air quality.

- 4.6.2 Instead, the Tyneside Authorities will set KPIs which the contractors must achieve. If the contractor fails to meet these KPIs, consequences terms will be set out clearly in the contract Terms and Conditions.
- 4.6.3 It is the intention of the Tyneside Authorities to deliver very prescriptive specifications for Contract 1 and 2. More allowance for innovation will be made in Contract 3.
- 4.6.4 Contractors will be expected to provide unit rates for goods. Due to the framework approach, resource rates will be set. Contractors will be asked to provide a lump sum by task and will be expected to provide resource breakdowns for how this lump sum was determined.

4.7 Risk allocation and transfer

- 4.7.1 Consideration has been given regarding how risk will be apportioned between the public and private sector. The general principle is to allocate risks of the agreement between the parties to mitigate or manage them, including the consequence should a risk event arise. The degree to which risk may be transferred largely depends on the specific proposal under consideration.
- 4.7.2 A summary of the risks which we plan to contractually transfer, and risks which are likely to remain with the Authority are shown in Table 4-1². This table is likely to change when more is understood about the dependencies of various deliverables for the implementation of the Proposed Option.
- 4.7.3 To manage all project risks, the CAZ Implementation Manager and contractors (internal and external) will be asked to produce detailed priced risk registers which will be reviewed regularly.

Table 4-1 Risk Allocation Table

RISK	RISK ALLOCATION (%)		COMMENTS
	Public	Private	
Design	50	50	The Authority will hold responsibility to achieving NO ₂ reductions. Contractors will be responsible for achieving the output
Construction and works	50	50	

² Except deliverables outside of Authority or Contractor control: central payment system, taxi database, central payment customer service.

RISK	RISK ALLOCATION (%)		COMMENTS
Transition and implementation	25	75	Authorities must enable the implementation. Contractors must deliver the requirement.
Availability and performance	50	50	Authorities must deliver the resource to operate the system. Contractor must deliver the system
Operating	50	50	Authorities must deliver the resource to operate the system. Contractor must deliver the system
Variability of revenue	100		Authorities must monitor the revenue from the Charge CAZ and respond accordingly.
Termination	100		Authorities must hold the risk for contract termination.
Technology and obsolescence		100	For the duration of their contract, the contractor controls the risk of technology changes.
Residual value risks	100		Authorities must monitor the residual value of the Proposed Option and determine the benefits/costs of operation.
Financing risks	100		Although funded by the Implementation Fund, ongoing management of finance is the responsibility of the Authority by liaising with JAQU.
Legislative risks	75	25	Both authorities and contractors must ensure the Proposed Option is in accordance with legislation.

4.8 Contract length

- 4.8.1 Contract 1 and 2 will be in place for up to five years. Break clauses will be considered during the drafting of the NEC3 contract.
- 4.8.2 Contract 3 will be in place for up to one year. Break clauses will be considered during the drafting of the NEC3 contract.

4.9 Human Resource

4.9.1 Some ‘services’ required for the Charging CAZ are to be delivered internally. Staff requirements are summarised in Table 4-2. Grades are estimated using the Newcastle City Council Employment scales. New posts will undergo a job evaluation from Human Resources’ specialists.

Table 4-2 Internal human resource requirements (Charging CAZ)

ROLE	GRADE	FTE	DURATION (YEARS)	COST PER YEAR PER FTE (£)	TOTAL COST (£)
CAZ Implementation Manager	N11	1	5 years	63,000	315,000
Charge CAZ design	N8	0.25	1 year	46,500	11,625
Image Review	N5	TBC	5 years	25,000	
IT	N7	1	5 years	37,500	187,500
Customer Service	N5	TBC	5 years	28,125	
Enforcement	N5	1	5 years	28,125	140,625
Supervisor	N7	1	5 years	37,500	187,500
Monitoring	N7	0.12	5 years	37,500	22,500
Procurement	N7	0.25	1 year	37,500	9,375
Legal	N11	0.1	5 years	63,000	31,500
Total					846,400

4.10 Contract Management

4.10.1 The responsibility of procurement associated with the implementation of a charge CAZ will be undertaken by NCC on behalf of the Tyneside Authorities. This responsibility is listed in the Terms of Reference for CAZ Implementation Governance, this can be found in the Outline Business Case Management Case.

4.10.2 Once appointed, the contractor will be appointed by NCC, therefore contract legalities and management will be directly controlled by NCC on behalf of the Tyneside Authorities. One of the primary responsibilities of the CAZ Implementation Manager will be managing Contracts 1, 2 and 3. Specialist support from NCC Procurement will be provided to support the CAZ

Implementation Manager. The amount of procurement support required is shown in Table 4-2.

- 4.10.3 The effectiveness of the Proposed Option will be monitored in accordance with the monitoring plan set out in the Management Case. If there is a failure on the part of the service provider to deliver the contracted services on time, to specification and price, the contract management will intervene. It is anticipated that any contract failures to deliver will be investigated thoroughly.
- 4.10.4 There is a required for arbitration through NEC3. Arrangements for the resolution of disputes and disagreements between the parties will be undertake in accordance with the arbitration process set out in the NEC3 contract.
- 4.10.5 If responsibility is found to be with the contractor, they may be required to offer some form of recompense such a reduced fee or some form of service credit. This will be finalised as part of the NEC3 contract drafting.
- 4.10.6 If there are persistent failures by the Contractor, the Tyneside Authorities may terminate the contract and procure through a new tendering process. This is expected to be unlikely given the procurement strategy is to go to organisations on recognised frameworks; these organisations must have fulfilled a required standard to be on the framework.

APPROVAL

Version	Name		Position	Date	Modifications
1	Author	Hannah Graham	Senior Consultant	16/11/2018	
	Checked by	Amy Sykes	Associate (SYSTRA)	26/11/2018	
		Huw Russell	Local Partnerships	11/12/2018	
		Chris Stevens	NCC Procurement	05/12/2018	
	Alistair Baldwin	NCC	03/12/2018		
2	Author	Hannah Graham	Senior Consultant	17/12/2018	
	Checked by			DD/MM/YY	
	Approved by	Graham Grant	Lead Officer	DD/MM/YY	
3	Author	Hannah Graham	Senior Consultant	17/12/2018	
	Checked by			DD/MM/YY	
	Approved by	Caroline Shield, Alistair Baldwin	NCC, GC	21/12/2018	

APPENDICES

APPENDIX A4.0 – Glossary

Additional Measures	Additional measures are measures which will be funded by any surplus revenue generated by the Proposed Option.
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.
Baseline	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.
Clean Air Fund (CAF)	Funding to allow 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.
Clear Air Fund (CAF) Mitigation Measures	Measures the Tyneside Authorities are proposing to deliver using CAF money.
Clean Air Zone	An area where targeted action is taken to improve air quality and resources are prioritised and coordinated in a way that delivers improved health benefits and supports economic growth. Clean Air Zones fall into two categories:

	<p>a. Non-charging Clean Air Zones – These are 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, those set out in Section 2 of the Framework but does not include the use of charge-based access restrictions.</p> <p>b. Charging Clean Air Zones – These are zones where, in addition to the above, 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 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.</p>
Critical Success Factor (CSFs)	Critical Success Factors are important project objectives/considerations, which are used to conduct a high-level assessment of the longlist of options at the strategic outline case stage. The Critical Success Factors should include a pass/fail criterion on whether the proposed option achieves NO ₂ compliance in the shortest possible time.
Discounting	A method used to convert future costs or benefits to present values using a discount rate.
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.
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 policy unduly favours or disadvantages groups in society.
Early Measure Funding (EMF)	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.
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.
Emission Factor Toolkit	A tool to allow calculations of pollutant emissions from road transport, including for NO _x , and other pollutants for a specified year, road type, vehicle speed and vehicle fleet composition.
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.

Evidence Methodology Review	The review of submitted evidence documents from local authorities. This is expected to be before the Strategic Outline Case.
Tyneside Air Quality Feasibility study	The process from the local air quality assessment to the development of a final business case for the Tyneside Air Quality Local Plan.
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 Proposed 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.
Implementation Fund	The Government has set up a £255m Implementation Fund 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.
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.
Review Panel	The Review Panel is the panel that reviews and approves local authority proposals and modelling outputs. It is the process to ensure the evidence for the local plans are robust and consider appropriate measures for the local area.
Initial Evidence Review	The review of air quality and transport modelling deliverables and target determination that ensures there is a robust evidence base to conduct detailed analyses of the options.
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.
Local authority key milestones	Key stages of the feasibility study related to funding, assurance and review processes that local authorities need to complete. These include: the proposal for a Feasibility Study; Evidence Methodology Submission; Strategic Outline Case; Initial Evidence Submission; Outline Business Case; Consultation (if required); Full Business Case and Implementation.
Tyneside Air Quality Local Plan	The plan local the Tyneside 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.
Net present value (NPV)	The discounted value of a stream of either future costs or benefits. The NPV is used to describe the difference between the present value of a stream of costs and a stream of benefits.
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 (OBC)	Second iteration of the business case. Provides additional detail and identifies the Proposed Option based on full analyses. It should set out the likely implementation and procurement route and demonstrate the affordability of the scheme.
Pollution Climate Mapping (PCM)	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 at roadside locations for around 9,000 urban major roads (A and M class roads).
Proposed Option	The Proposed 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. The Tyneside Proposed Option is: To be confirmed
Scenario modelling	Modelling which accounts for the measures proposed in the feasibility study (also known as 'with measures' modelling).
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 is 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.
Spending Objective	Main objective of the project, which the Green Book terms the 'spending objective.'
Strategic Outline Case (SOC)	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.

Target Area	The area which will be directly impacted by the measures under the Tyneside Air Quality 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 location to determine how soon compliance can be achieved.
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.
Tyneside Authorities	<p>Three local authorities in Tyneside (Gateshead, Newcastle and North Tyneside, collectively the Tyneside Authorities) were named in the UK Plan for Tackling Roadside nitrogen dioxide NO₂ Concentrations. This means that some roads in Tyneside were identified by the Department for the Environment, Food and Rural Affairs (Defra) as being currently non-compliant with regards to UK and EU air quality legislation which define a maximum limit for NO₂ at locations where there is a risk to public health from exposure.</p> <p>The Tyneside Authorities are therefore subject to a legal direction (Environment Act 1995 (Feasibility Study for Nitrogen Dioxide Compliance) Air Quality Direction 2017) from the Secretary of State for Defra. To adhere to this direction the Tyneside Authorities are undertaking a feasibility study to produce a Local Air Quality Plan. This must identify the preferred intervention (as part of a package of measures also known as a Proposed Option) that will reduce NO₂ pollution and deliver local compliance with legal limits in the shortest possible time.</p>
Uncertainty	An estimate characterising the range of values within which the true value of a measurement (or modelled output) lies.
WebTAG	Transport Analysis Guidance that provides information on the role of transport modelling and appraisal.

APPENDIX A4.1 – Charge CAZ Procurement Requirements

	Requirements	Type of Purchase	Internal/ External	Framework
1	Design / design support			
a	Overall solution / area plan	Goods and services	Internal/External	Structure: Internal To LA, Delivery:TMT2 CCS
b	Technical specs / interface requirements	Goods and services	External	TMT2 CCS
c	Planning and traffic regulations	Goods and services	Internal	LA
d	CAZ core system design	Goods and services	External	TMT2 CCS
e	CAZ core system project management	Goods and services	Internal	LA (CAZ Implementation Manager & IT)
2	Integration / management			
a	Integration of camera and installation (3) and CAZ system (4)	Goods and services	External	TMT2 CCS
b	Integration of 3&4 with 5-8	Goods and services	External	TMT2 CCS
c	Integration of 3&4 with 9	Goods and services	External	TMT2 CCS
d	Overall management of 3-11	Goods and services		CAZ Implementation Manager
e	Overall programme management 1-16	Goods and services		Steering Group/ /CAZ Implementation Manager
3	Cameras and installation			
a	CAZ Cameras (supply / maintenance)	Goods and services	External	TMT2 CCS
b	Camera columns / mounting	Works	Internal	Traffic Signals Group (North East)
c	Camera installation	Works	Internal	TMT2 CCS
d	Monitor cameras	Goods and services	External	TMT2 CCS
e	Power supply	Works	Internal/External	Traffic Signals Group (North East)/Northern Powergrid
f	Other equipment (street works, cabinets etc.)	Works	Internal	Traffic Signals Group (North East)/Highways Maintenance

g	Mobile camera (including vehicle)	Goods and services	External	TMT2 CCS
h	Minor works / traffic management	Works	Internal	Highways Maintenance/Traffic Management
i	Integration and management	Goods and services	External	TMT2 CCS
j	Location design	Goods and services		LA & TMT2CCS
k	Location project management	Goods and services	Internal	CAZ Implementation Manager
4	CAZ system IT and communications			
a	Camera links / communications (WIFI, fibre links)	Goods and services	External	TMT2 CCS
b	Other equipment	Goods and services	Internal	LA
c	CAZ control room	Goods and services	Internal	LA
d	CAZ system back office	Goods and services	External	TMT2 CCS
e	Licences	Goods and services	External	TMT2 CCS
f	Local and central back-up	Goods and services	External	TMT2 CCS
5	IT - CAZ system integration to council back-office or other systems			
a	Integration to council back office (e.g. finance/payments)	Goods and services	External	TMT2 CCS
b	Link to notice processing / bus lane system	Goods and services	External	TMT2 CCS
c	Link to central databases	Goods and services	External	TMT2 CCS
d	Link to LA online/web platform	Goods and services	External	TMT2 CCS
e	Link to back-up systems	Goods and services	External	TMT2 CCS
6	Local database(s) - set-up, access and links			
a	Local database(s)	Goods and services	External	TMT2 CCS
b	Feed/link to central payment infrastructure database	Goods and services	External	TMT2 CCS
	Link/uploads to or from DVLA / other databases	Goods and services	External	TMT2 CCS
7	IT - integration to central payment infrastructure	Goods and services		

a	CAZ system link to central system	Goods and services	External	TMT2 CCS
b	LA website links to central system	Goods and services	External	TMT2 CCS
8	Enforcement and PCN / payment processing			
a	Enforcement staff	Goods and services	Internal	LA
b	Mobile enforcement staff	Goods and services	Internal	LA
c	Office costs	Goods and services	Internal	LA
d	Stationary	Goods and services	Internal	LA
e	Postage	Goods and services	Internal	LA
f	Appeals, queries and complaints handling	Goods and services	Internal	LA
g	Central payment system fees	Goods and services	External	TMT2 CCS
h	DVLA query costs	Goods and services	External	TMT2 CCS
i	Payment system set-up/licences	Goods and services	External	TMT2 CCS
j	Traffic Penalty Tribunal fees	Goods and services	Internal	LA
k	Enforcement system set-up/licences	Goods and services	Internal	LA
l	Foreign vehicle enforcement	Goods and services	External	TMT2 CCS
m	Other enforcement resources	Goods and services	External	TMT2 CCS
9	Signs			
a	Local sign design	Goods and services	Internal	National Standard – LA will follow design set by JAQU
b	Local sign supply (main)	Goods and services	Internal	LA
	Local sign supply (minor)	Goods and services	Internal	LA
c	Local sign installation, including power	Works	Internal	Traffic Signals Group
d	Highways England / Strategic Road sign supply	N/A	N/A	N/A
	Highways England sign installation	N/A	N/A	N/A

e	Minor works to roads / kerbs / pavements	Works	Internal	Traffic Signals Group
10	Marketing and communications			
a	Development of communications plan	Goods and services	External/Internal	NEPO Framework / LAs
b	Local media / advertising	Goods and services	Internal	LA
c	National / regional media	Goods and services	Internal	LA
d	Direct engagement awareness	Goods and services	Internal	LA
e	Mail campaign(s)	Goods and services	Internal	LA
f	Social media	Goods and services	Internal	LA
g	Other awareness	Goods and services	Internal	LA
h	Website updates	Goods and services	Internal	LA
i	General CAZ enquiry handling / customer service	Goods and services	Internal	LA
11	Any External resourcing			
a	technical	Goods and services	External	TMT2 CCS
b	IT	Goods and services	External	TMT2 CCS
c	legal	Goods and services	External	External chambers / advisors
d	procurement	N/A	N/A	N/A
12	Any internal resourcing for LA activities			
a	technical	Goods and services	Internal	LA
b	IT	Goods and services	Internal	LA
c	legal	Goods and services	Internal	LA
d	project management	Goods and services	Internal	LA
e	procurement	Goods and services	Internal	LA
13	Decommissioning activity	Works		

14	Linked monitoring activities	Goods and services		
a	CAZ scheme monitoring	Goods and services	Internal	LA
b	Air quality	Goods and services	Internal	LA
c	Traffic levels	Goods and services	Internal	LA
d	Economics / benefits	Goods and services	Internal/External	LA
e	Other	Goods and services		N/A

APPENDIX A4.2– Charging Clean Air Zone Process

SYSTRA provides advice on transport, to central, regional and local government, agencies, developers, operators and financiers.

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For more information visit www.systra.co.uk

Birmingham – Newhall Street

5th Floor, Lancaster House, Newhall St,
Birmingham, B3 1NQ
T: +44 (0)121 393 4841

Birmingham – Edmund Gardens

1 Edmund Gardens, 121 Edmund Street,
Birmingham B3 2HJ
T: +44 (0)121 393 4841

Dublin

2nd Floor, Riverview House, 21-23 City Quay
Dublin 2, Ireland
T: +353 (0) 1 566 2028

Edinburgh – Thistle Street

Prospect House, 5 Thistle Street, Edinburgh EH2 1DF
United Kingdom
T: +44 (0)131 460 1847

Glasgow – St Vincent St

Seventh Floor, 124 St Vincent Street
Glasgow G2 5HF United Kingdom
T: +44 (0)141 468 4205

Glasgow – West George St

250 West George Street, Glasgow, G2 4QY
T: +44 (0)141 468 4205

Leeds

100 Wellington Street, Leeds, LS1 1BA
T: +44 (0)113 360 4842

London

3rd Floor, 5 Old Bailey, London EC4M 7BA United Kingdom
T: +44 (0)20 3855 0079

Manchester – 16th Floor, City Tower

16th Floor, City Tower, Piccadilly Plaza
Manchester M1 4BT United Kingdom
T: +44 (0)161 504 5026

Newcastle

Floor B, South Corridor, Milburn House, Dean Street, Newcastle, NE1
1LE
United Kingdom
T: +44 (0)191 249 3816

Perth

13 Rose Terrace, Perth PH1 5HA
T: +44 (0)131 460 1847

Reading

Soane Point, 6-8 Market Place, Reading,
Berkshire, RG1 2EG
T: +44 (0)118 206 0220

Woking

Dukes Court, Duke Street
Woking, Surrey GU21 5BH United Kingdom
T: +44 (0)1483 357705

Other locations:

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