



Bristol City Council Clean Air Plan Outline Business Case

Bristol City Council
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1. Introduction

The UK has in place legislation transposing requirements in European Union law, to ensure that certain standards of air quality are met, by setting Limit Values on the concentrations of specific air pollutants. In common with many EU member states, the EU limit value for annual mean nitrogen dioxide (NO₂) is breached in the UK and there are on-going breaches of the NO₂ limit value in Bristol. The UK government is taking steps to remedy this breach in as short a time as possible, with the aim of reducing the harmful impacts on public health. Within this objective, the government has published a UK Air Quality Plan and a Clean Air Zone Framework, both published in 2017. The latter document provides the expected approach for local authorities when implementing and operating a Clean Air Zone (CAZ).

Due to forecast air quality exceedances, in 2017 Bristol City Council has been directed by the Minister Therese Coffey (Defra) and Minister Jesse Norman (DfT) to produce a Clean Air Plan to achieve air quality improvements in the shortest possible time. In line with Government guidance, as part of the Plan, Bristol City Council has considered a range of options for the implementation of a Clean Air Zone (CAZ), including both charging and non-charging measures, in order to achieve sufficient improvement in air quality and public health and in line with legal requirements as set out below. Bristol City Council (BCC) have produced an Outline Business Case (OBC) for the delivery of an option including a package of measures which will be most likely to bring about compliance with the Limit Value for annual mean NO₂ in the shortest time possible in Bristol and reducing human exposure as quickly as possible.

In line with Government guidance BCC is considering implementation of the 'Hybrid Option' which includes a diesel car ban across a small area (from 7am - 3pm) and a charging scheme for non-compliant buses, taxis, HGVs and LGVs, alongside a number of other measures.

1.1 Purpose of This Report

This report has been written to support the OBC submitted to JAQU by BCC. It assesses a long list of potential options, provides reasoning and details for the chosen mitigation measures and explains the amount of funding requested from the Clean Air Fund (CAF).

Section 2 describes the process to determine the mitigation measures and provides a summary of the social distribution impact assessment and the public consultation.

Section 3 sets out proposed exemptions and concessions.

Section 4 describes and includes a long list of options considered for mitigating measures, comparing each to Critical Success Factors (CSFs) to determine the short list of measures which has been included in the CAF application. This section also sets out the proposed mitigation measures and an initial estimate of costs.

2. Process of Designing Mitigation Measures

2.1 Overview

In order to design mitigation measures that are important to the successful implementation of the CAZ. The following process was followed:

- 1) Key conclusions were drawn from the OBC-31 'Distribution and Equalities Impact Analysis Report (DEIA)' Appendix H of the OBC, to identify the groups most negatively impacted by the CAZ and, therefore, most in need of support. The impact on those with protected characteristics, was also considered to ensure they were not disproportionately impacted.
- 2) From the DEIA conclusions, a longlist of mitigation measures was created. A deliberately wide range of measures were considered which could mitigate the negative impacts identified in the DEIA so they could be investigated and analysed further.
- 3) The longlist measures were then assessed against the Critical Success Factors (CSF), as identified in the Strategic Outline Case (SOC). These are divided into:
 - Primary CSF: Whether the measure delays reaching compliance in the shortest possible timeframe. This is a pass/fail criterion as it is crucial to the overall project success, if this was not achieved the measure was rejected.
 - Secondary CSFs: These are required to undertake a comparative assessment of the best options relative to the project objectives, they have been grouped using the five-case model approach set out in the DfT's guidance on 'Transport Business Cases' (2013)¹ as a framework;

Strategic

- > All trip purposes treated equitably
- > Compliance with Defra Draft CAZ framework, including minimum requirements

Economic

- > Mitigate financial impact on low income groups
- > Maximise health improvements of low-income groups
- > Net economic benefit
- > Improve general public health

Commercial

- > Is the market able to supply in the time available?

Financial

- > Likelihood of revenue equating to implementation/operational costs²
- > Upfront capital required for scheme
- > Risk of financial penalty to the Council/s

Management

- > Public acceptability
- > Local, regional and national political acceptability

- 4) Upon comparison of the measures with the CSFs, a qualitative decision was made whether to progress the measure to the short list. During this process the details of the measure were finalised.
- 5) The short list of measures was then analysed and quantified before a final decision was made on the items taken forward for the funding request to the CAF.

¹ <https://www.gov.uk/government/publications/transport-business-case>

² Complying with the legal test which was set out by the High Court in November 2016 in R (ClientEarth) (NO₂) V Secretary of State for Environment Food and Rural Affairs [2016] EWHC 2740 (Admin), only shortlisted options which achieve compliance with the NO₂ Limit Value in the shortest possible time, are appraised across this criterion. The relevant analysis is presented in the Financial Case chapter.

2.2 Summary of Distribution and Equalities Impact Analysis Report

The outputs from the DEIA were the primary consideration when identifying the groups negatively impacted by the CAZ and in need of support in the form of mitigation measures. The following sections are a summary of the impact of the CAZ Hybrid option, on each of the socio-economic groups identified in JAQU's Options Appraisal Guidance (2017).

2.2.1 DEIA Report Conclusions

The conclusions from this report, shown in OBC-31 in Appendix H of this OBC, were used to design a longlist of mitigation measures. The main findings from this report are summarised below, as well as the decision process of whether to include a mitigation measure targeted at the affected group in the longlist of mitigation measures.

Table 2-1: Summary distributional impacts – potential mitigation targets

Potential mitigation target group ^a	4: Hybrid option
Residents	
Residents of the Medium CAZ area (outside the Small area car diesel ban area)	✘
Residents of the Small CAZ area	✓
Specific trip needs	
Disabled people – blue badge	✓ ^b
Disabled people – with specialist vehicle adaptations	✓ ^b
Out-patient access to hospital	✓ ^b
Car owners	
Low income non-compliant petrol car owners	✘
Low-income non-compliant diesel car owners	✓
Low-income compliant diesel car owners	✓
1-car households	✓
Businesses	
SMEs located in the Medium CAZ area (outside the Small area car diesel ban area)	✓
SMEs located in the Small area car diesel ban area	✓
LGV/HGV-dependent businesses, not specifically located in the Medium CAZ area (outside Small area car diesel ban area) but that need to travel into it	✓
LGV/HGV-dependent businesses not specifically located in the Small area car diesel ban area but that need to travel into it	✓
Taxi owners/drivers – BCC registered	✓
Taxi owners/drivers – other authority registration	✓

Note:

- Groups that could be potential mitigation targets are cross-referenced with the CAP options; '✓' indicates there is the potential for mitigation to be sought by or on behalf of the group, though not necessarily that it would be granted as part of implementing the CAP; '✘' indicates that it is less likely that any mitigation would be applicable to this group/option. However, both are indicative, and neither a positive nor negative indication in this table is a definitive indicator of future proposals.
- With a destination in the Small area car diesel ban area and owning/using a diesel car.

The relationship between the potential mitigation target groups and the proposed mitigation measures are shown in Table 4.2.

Note that the results of the DEIA accord with the Equalities Impact Assessment and were also broadly considered at this stage.

3. Exemptions and Concessions

The results from the DEIA shown in Section 2.2 were used to identify groups who should be offered an exemption or concession the CAZ charges. Exemptions are permanent exclusions from CAZ charges, whereas concessions are offered to allow disproportionately affected groups an extended period of time to adapt to the implementation of the CAZ and reduce negative impacts, a “sunset” period. It should be noted that JAQU stipulate that exemptions and concessions can only be provided if they do not prevent compliance with the Limit Values in the shortest possible time. Table 3-1 shows a summary of the proposed exemptions and concessions. It does not include those already exempted within Defra’s CAZ Framework or those not proposed as a result of the DEIA report.

Table 3-1: Exemptions/Concessions Offered

Exemption/ Concession	Description	DEIA	Length
Automatic exception in England	Historic Vehicles	n/a	n/a
Automatic exception in England	Diplomatic Vehicles, Military Vehicles, Government Security Services	n/a	n/a
Automatic exception in England	Disabled passenger vehicle tax class	Disabled people – with specialist vehicle adaptations	n/a
Local exception	Motorcycles	These are not affected by the scope of the hybrid option	n/a
Local exception	Petrol cars	These are not affected by the scope of the hybrid option	n/a
Local exception	Home to school transport buses and coaches	Not mentioned specially but needed to minimise the impacts to educational service provision	n/a
Local exception	Emergency service vehicles	Not mentioned specially but needed to minimise the impacts to essential services	n/a
Local exception	NHS Patient Transport ambulances	Out-patient access to hospital	n/a
Local exception	Community transport vehicles	Disabled people / community transport providers	n/a
Local exception	Specialist agricultural and construction vehicles (e.g. cranes, agricultural tractors)	Businesses with specialist vehicles	n/a
Local concession	Blue badge holders located in the small area, likely to be around 300	Disabled people – blue badge	Concession to 2023
Local concession	Low income households (less than £15k) in the small area, with diesel cars as their sole vehicle, likely to be around 350 household	Low-income diesel car owners	Concession to 2023
Local concession	Vehicles used by voluntary organisations in support of the emergency services (e.g. Wessex 4x4)	Voluntary services assisting the emergency services	Concession to 2023
Local concession	Recovery vehicles, showman’s vehicles, general haulage vehicles, other special vehicles (as defined in their tax class)	Businesses with specialist vehicles	Concession to 2023

Note - The above exemptions and concessions and others are to be considered further following JAQU workshop held on 09 Oct 2019 at Defra. JAQU are seeking consistency between exceptions and concessions for CAZ schemes.

BCC considers these exemptions and concessions as important measures to give specific vehicles and users, along with businesses unable to access financial support, an extended time frame to adapt to the Hybrid Option. BCC will also keep the exemptions and concessions under review to ensure they are not impacting or hindering the delivering of compliance.

Further work will be undertaken after the OBC to engage with the groups directly affected and refine the exemptions and concession to best minimise negative impacts of the scheme, whilst maintaining the planned compliance date. Following this, legal advice will be sought on the inclusion of the concession and completion in the charging Order.

However, BCC also recognise that the exemptions and concessions have restricted applicability, and do not help the majority of affected groups other than in some cases providing a longer period to adjust. In some cases, affected groups could be faced with the same issues following the concession period as they would have done in 2020 without a concession. To assist those groups affected by the hybrid option, BCC has devised a list of mitigation measures to be implemented alongside the exemptions and concessions. These are outlined in the next section.

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4. Mitigation Measures

4.1 Long list of mitigating measures

After the target groups were identified through the DEIA, a long list of measures was created. Shown below in Table 4-1 are the measures designed to aid the disadvantaged user groups in adapting to the Hybrid scheme. Marking against the Primary and Secondary CSFs is rated Good, OK or Poor fit. It should be noted that whilst a mitigating measure may be rated as a 'poor fit', it is likely to be because it is already being run by the council or others so wouldn't offer best value as part of the CAP, and not that the measure itself is of poor value to Bristol.

Table 4-1: Longlist of Mitigation Measures

Mitigation Measure	Primary CSF	Secondary CSF	Bring to Shortlist?
Financial Support:			
Provision of grants for taxi, private hire and LGV drivers to upgrade and / or retrofit their vehicles	N/A – Private hires can benefit from scrappage scheme. LGV vehicles can benefit from the interest free loans described below.	N/A – <i>see comments to the left.</i>	No
An interest-free loan scheme to assist businesses replace their vehicles	Good – Can be implemented in the short term and should provide air quality improvements.	Good – High capital cost, but will aid impacted groups, provide economic, health and air quality benefits and be acceptable locally.	Yes
A scrappage grant (non-repayable) scheme for diesel car drivers	Good – Can be implemented in the short term and should provide air quality improvements.	Good – High capital cost, but will aid impacted groups, provide economic, health and air quality benefits and be acceptable locally.	Yes
Business Rate Relief for SMEs	OK – Does not target air quality improvements.	Poor Fit – Not compliant with CAZ framework, will not provide direct air quality improvements and will not impact affected groups or economic benefits.	No
Additional funding for supported bus services to use Euro VI vehicles and avoid CAZ charges	OK – Can be implemented in the short term and should provide some air quality improvements.	Good – High public and politically acceptability. BCC shown to be leading the way in CAZ compliance, rather than paying the charge for non-compliance.	Yes
Infrastructure:			
Optimisation of traffic signal timings across the city	OK – this could see air quality improvements, though likely to be long term as a very large number of traffic signals across the city to optimise.	Poor Fit – concern over availability of enough specialist technical resource requirement (in-house, external, on-site technicians) could delay implementation timescale.	No
Review and reconfigure pedestrian crossing phase configurations	OK – unlikely to be very noticeable by pedestrians to effect major modal change	Poor Fit - concern over availability of specialist technical resource requirement (in-house, external, on-site technicians) could delay implementation timescale.	No
Introduction of further Bus Priority Schemes	OK – this could see air quality improvements and encourage modal shift to the bus.	Poor Fit – funding is currently available in other schemes for a number of bus priority schemes, separate to the CAZ.	No
Easton Way, completion from Stapleton Rd Junction to J3, M32	Good – will help encourage walking and cycling from an area on the CAZ boundary	Good – this will help mitigate the impact on low income groups, improve health and increase safety.	Yes

Mitigation Measure	Primary CSF	Secondary CSF	Bring to Shortlist?
Old Market Connections completing 'Temple Way Slip'	Good – will help encourage walking and cycling in a 'missing link' in the CAZ.	Good – this will help mitigate the impact on low income groups from the east of the city and improve health and increase safety.	Yes
Bedminster Bridges walking / cycling improvements	Good – will help encourage walking and cycling on the southern boundary of the CAZ.	Good – this will help mitigate the impact on low income groups from the south of the city and improve health and increase safety.	Yes
Extend footways on Upper Maudlin Street by BRI	Good – will help encourage walking and cycling on the very busy Upper Maudlin Street for the BRI	Good – this will help mitigate the impact users of the BRI, improve health and increase safety.	Yes
Hotwell Road shared cycleway and path	Good – will help encourage walking and cycling on the western boundary of the CAZ.	Good – this will help mitigate the impact on low income groups from the west of the city and improve health and increase safety.	Yes
Midland Road (bottom of Bristol to Bath Cycle Path)	Good – will help encourage walking and cycling in a 'missing link' in the CAZ.	Good – this will help mitigate the impact on low income groups from the east of the city and improve health and increase safety.	Yes
Newfoundland Road light segregation	Good – will help encourage walking and cycling on the north-eastern boundary of the CAZ.	Good – this will help mitigate the impact on low income groups from the north-east of the city and improve health and increase safety.	Yes
Redcliffe Hill filling in subway and walking and cycle improvements	Good – will help encourage walking and cycling on the southern boundary of the CAZ.	Good – this will help mitigate the impact on low income groups from the south of the city and improve health and increase safety.	Yes
Nelson Street segregated contraflow	Good – will help encourage walking and cycling in the city centre, in the centre of the CAZ.	Good – this will help achieve modal shift to sustainable modes, improve health and increase safety.	Yes
Dovercourt Road cycleway	Good – will help encourage walking and cycling from the north-east of the CAZ including a very low-income areas (Lockleaze)	Good – this will help achieve modal shift to sustainable modes, improve health and increase safety.	Yes
Additional Bristol to Bath cycleway improvements	OK – may help encourage walking and cycling from the east of the city but may be too far out to have major benefits for the CAZ	Poor Fit – relationship to the CAZ will be less clear to users than other walking and cycling improvements	No
More cycle stands / cycle hangers / cycle hubs / cobble treatment	OK – may help encourage cycling but other funding sources should be available.	Poor Fit – relationship to the CAZ will be less clear to users than other walking and cycling improvements	No
Increase, Improve, update Legible City Signage on key radials and in city centre	Good – will help encourage walking and cycling along some key radial routes and within the CAZ boundary	Good – this will help achieve modal shift to sustainable modes, improve health and increase safety.	Yes
Remove on-street clutter, e.g. North Street	OK – unlikely to be very noticeable by pedestrians and cyclists to effect major modal change	Poor Fit – relationship to the CAZ will be less clear to users than other walking and cycling improvements	No

Mitigation Measure	Primary CSF	Secondary CSF	Bring to Shortlist?
Side Road priority / improve crossings	Poor Fit – unlikely to be very noticeable by pedestrians and cyclists to effect major modal change and could increase congestion / delays / reduce air quality	Poor Fit – in relation to the CAZ. Likely to difficult to deliver on large scale in the timescale required.	No
Additional electric vehicle charging points	Good – needed to support the encouragement of the uptake in electric vehicles.	OK – some already planned. More may favour more advantaged communities but would also help businesses and taxi / private hires	Yes
Work with new build developments to put in EV charging points	OK – this could help reach compliance, but likely to have a limited overall effect	Poor Fit – in relation to the CAZ. Already being led by a team in the council.	No
Expansion of Portway P&R site (550 spaces with 350 additional to be unlocked)	Good – needed to offer motorists from west/north-west of the city with an alternative to access the city centre.	Good – existing site, currently the smallest and large potential to increase use.	Yes
Promoting Sustainable Travel Choices:			
Mobility Credits and/or introduction of subsidised or free bus travel for certain demographic or income groups	Good - this will help compliance to happen more quickly	Good – will help mitigate the effects for low income groups and other demographics.	Yes
Loan bikes	OK – this could help reach compliance, but likely to have a limited overall effect	OK – could help improve overall public health, but a scheme is already in operation by the council and others that could be used.	No
Electric bike hire scheme	OK – this could help reach compliance, but likely to have a limited overall effect	Poor Fit – in relation to the CAZ. Recent local experience shows a lack of interest from the market and no clear user demand	No
Car clubs / electric vehicle car clubs	OK – this could help reach compliance, but likely to have a limited overall effect	Poor Fit – in relation to the CAZ. Experience has shown that this would be expensive to set up and would need to be commercial going forward.	No
Car club and charging points for Hartcliffe	OK – this could help reach compliance, but likely to have a limited overall effect	Poor Fit – in relation to the CAZ. Whilst this would target an area of low income, the need for this to be focused on Hartcliffe is not clear, would be expensive to set up and would need to be commercial going forward.	No
Targeted door knocking to explain about the CAZ and offer alternative travel solutions	Good - this has been demonstrated to be very effective and will help compliance to happen more quickly	Good – based on previous experience, this is good value for money and can have positive effects on the harder-to-reach parts of the community.	Yes
Targeted roadshows to explain about the CAZ and offer alternative travel solutions	Good - this has been demonstrated to be very effective and will help compliance to happen more quickly	Good – based on previous experience, this is good value for money and can have positive effects on the harder-to-reach parts of the community.	Yes

Mitigation Measure	Primary CSF	Secondary CSF	Bring to Shortlist?
Clean Air Zone helpline	N/A – some form of helpline will be needed, but this should be funded as part of the overall marketing and communications package.	N/A – see comments to the left.	No
Business support including personalised travel planning	Good – this will help compliance to happen more quickly.	Good – this will help the acceptability of the CAZ to businesses	Yes
Target main visitor destinations	Good – this will help compliance to happen more quickly.	Good – this will help the acceptability of the CAZ to main visitor attractions	Yes
TravelWest Challenges such as using apps to record miles travelled sustainably	OK – this could help reach compliance, but likely to have a limited overall effect	Poor Fit – in relation to the CAZ. Other measures are likely to have a greater effect and be more related to the CAZ. Also currently in place with others in the council.	No
CAZ / CAF scheme promotion. Leaflets / publicity etc	Good – this will be needed to promote the understanding and benefits of the CAZ, and of the complimentary measures.	Good – schemes and complimentary measures will have less benefit if they are not promoted to potential users.	Yes
Driver training for delivery fleets on green driving techniques	OK – this could help reach compliance, but likely to have a limited overall effect	Poor Fit – in relation to the CAZ. Other measures are likely to have a greater effect and be more related to the CAZ. Also currently in place with others in the council.	No
School engagement	OK – this could help reach compliance, but likely to have a limited overall effect	Poor Fit – in relation to the CAZ. other measures are likely to have a greater effect and be more related to the CAZ. Engagement with children on wider environmental / travel issues happens already. Also currently in place with others in the council	No
Green fleet events	OK – this could help reach compliance, but likely to have a limited overall effect	Poor Fit – in relation to the CAZ. Other measures are likely to have a greater effect such as the interest free loans and demonstration vehicles for small businesses. But be open to events promoted by the private sector if the opportunity arises.	No
Introduce variable parking tariffs in council owned car parks to discourage polluting / incentivise electric vehicles	OK – this could help reach compliance, but likely to have a limited overall effect	OK – it would show BCC's support for more environmentally friendly vehicles but at the same time as CAZ charges and diesel car ban could be seen as too much of a 'stick'.	No
Freight:			
EV Centre of Excellence (Demonstration vehicles for small businesses)	Good – this will help compliance to happen more quickly.	Good – this will help support businesses affected by the CAZ	Yes
Micro-consolidation with cargo freight bikes	Good – this will help reduce the number of commercial / delivery vehicles and build on the success of the existing Bristol Freight Consolidation Centre	Good – this will help support businesses affected by the CAZ and makes a positive statement about supporting businesses and reducing the effects of delivery vehicles.	Yes

Mitigation Measure	Primary CSF	Secondary CSF	Bring to Shortlist?
Freight Lockers	OK – this could help reach compliance, but likely to have a limited overall effect	Poor Fit – in relation to the CAZ. Not proven to have any significant effect and other measures are likely to have a greater effect and be more related to the CAZ.	No
Waste Consolidation	OK – this could help reach compliance, but likely to have a limited overall effect	Poor Fit – in relation to the CAZ. Not proven to have any significant effect and may have significant organisational and commercial barriers.	No
Others:			
Introduction and enforcement of anti-idling zones for buses in the city centre	OK – this could help reach compliance, but likely to have a limited overall effect	Poor Fit – in relation to the CAZ. newer buses will be a lot more environmentally friendly than the old buses, and many have stop-start technology fitted as standard. May be hard to enforce	No
Increased Euro Standard requirements for taxis and private hire vehicles in licensing agreements	N/A - Already happening due to recent changes in licensing arrangements	N/A – see comments to the left.	No
Enforcement of mandatory compliance for buses, taxis and private hire vehicles to access bus lanes and / or franchise routes	OK – Buses, taxis and private hires will be subject to other measures to ensure compliance.	Poor Fit – in relation to the CAZ. this would be difficult to set and enforce.	No
Retrofitting of Council and privately-owned waste vehicles	OK – Waste vehicles will be subject to other measures to ensure compliance.	Poor Fit – in relation to the CAZ. Council waste fleet is currently being upgraded under a separate initiative.	No
Restrictions on goods vehicles movements in the CAZ during peak hours	OK – Goods vehicles will be subject to other measures to ensure compliance.	OK – Key roads are already planned to have HGV bans	No
Funding to improve council fleets	OK – this could help reach compliance, but likely to have a limited overall effect	OK – Many parts of the council fleet are currently being upgraded under separate initiatives, but additional funding would be welcomed. .	No

4.2 Shortlist of Mitigation Measures

As a result of the assessment, the following mitigation measures have been shortlisted for inclusion in the CAF bid. The shortlisted items are:

Financial Support:

- Provision of grants for taxi, private hire and LGV drivers to upgrade and / or retrofit their vehicles
- A loan scheme to assist businesses replace their vehicles
- A scrappage grant scheme for diesel car drivers
- Additional funding for supported bus services to use Euro VI vehicles and avoid CAZ charges

Infrastructure:

- Easton Way walking and cycle scheme, completion from Stapleton Rd Junction to J3, M32
- Old Market Connections completing 'Temple Way Slip' walking and cycling scheme
- Bedminster Bridges walking and cycle Improvements
- Other additional walking and cycling schemes, such as extended footways on Upper Maudlin Street; Hotwell Road; Midland Road; Newfoundland Road light segregation; Redcliffe Hill subways; Nelson Street; and/or Dovercourt Road / Concorde Way cycleway.
- Increase, Improve, update Legible City Signage
- Additional electric vehicle charging points
- Expansion of Portway P&R site (550 spaces with 350 additional to be unlocked)

Sustainable Travel Choices:

- Mobility credits and/or subsidised bus travel for certain demographic or income groups
- Targeted door knocking
- Targeted roadshows
- Business support including personalised travel planning
- Target main visitor destinations with travel plan support
- CAF scheme promotion. Leaflets / publicity etc.

Freight:

- EV Centre of Excellence
- Micro-consolidation with cargo freight bikes

Table 4.2 sets out a summary of shortlisted measures. The cost of measures proposed to support the Bristol Clean Air Zone hybrid option is £38.6 million. This cost is included in the cost estimate presented in the financial case and the economic assessment presented in the economic case.

4.3 Summary of Shortlisted Measures

Table 4-2: Summary of shortlisted measures

Measure	Group Impacted	Geographic Scope	Summary of Measure	DEIA	Broad Initial Estimates of Cost
Financial Support					
A loan scheme to assist businesses replace their vehicles	Businesses	City-wide, prioritisation given to SMEs and those located directly in affected areas	Interest-free loan to assist with upgrading of vehicle(s)	<ul style="list-style-type: none"> - SMEs located in the Medium CAZ area (outside the Small area car diesel ban) - SMEs located in the Small area car diesel ban area - LGV/HGV-dependent businesses, not specifically located in the Medium CAZ area (outside Small area car diesel ban area) but that need to travel into it - LGV/HGV-dependent businesses not specifically located in the Small area car diesel ban area but that need to travel into it 	£5.0m
A scrappage grant scheme for diesel car drivers	Diesel car driver	Applications accepted from throughout the city. Prioritisation given to those living in the small area diesel ban and those on low incomes.	£2,000 grant (not repayable) for scrapping diesels cars	<ul style="list-style-type: none"> - Residents of the Small area car diesel ban area - Low-income diesel car owners 	£10.1m
Additional funding for supported bus services to use Euro VI vehicles and avoid CAZ charges	BCC support for socially necessary bus services	City-wide for supported bus services that pass through the CAZ	£0.4m extra revenue support per year for 5 years for supported bus services to be operated by Euro VI vehicles.	<ul style="list-style-type: none"> - Low-income diesel car owners 	£2.0m

Measure	Group Impacted	Geographic Scope	Summary of Measure	DEIA	Broad Initial Estimates of Cost
Infrastructure					
Easton Way walking and cycle scheme, completion from Stapleton Rd Junction to J3, M32	People in or by the north-eastern boundary of the CAZ including low income groups	North-east boundary of the CAZ – Easton	Completion of the Easton Way walking and cycling scheme along the A4320 between Stapleton Way to the M32 junction 3 for links to the Frome Valley walkway	- Residents of the Medium CAZ area	£0.75m
Old Market Connections completing 'Temple Way Slip' walking and cycling scheme	People arriving at the edge of the city centre from the north-east of the city including low income groups	North-east boundary of the diesel car ban – Easton / City Centre	Completing the 'Temple Way Slip' walking and cycle routes from Old Market to Castle Park, under the temple Way underpass and along Narrow Plain and Counterslip to link up with developer-funded sections.	- Residents of the Medium CAZ area	£1.25m
Bedminster Bridges walking and cycle Improvements	People arriving at the edge of the city centre from the southern part of the city including low income groups	Southern part of the CAZ – Bedminster and Windmill Hill	Improvements to walking and cycling routes around the Bedminster Bridges / A38 East Street	- Residents of the Medium CAZ area	£3.5m
Other additional walking and cycling schemes, such as extended footways on Upper Maudlin Street; Hotwell Road; Midland Road; Newfoundland Road light segregation; Redcliffe Hill subways; Nelson Street; and/or Dovercourt Road / Concorde Way cycleway.	People arriving at various places on the north, western, north-eastern, eastern parts of the city centre and those travelling to/from the BRI	Various places on edges of both the CAZ and diesel car ban	A range of walking and cycling improvements, mostly improving connections to existing walking and cycle routes and developer funded schemes.	- Residents of the Medium CAZ area	£3.0m
Increase, Improve, update Legible City Signage	All people moving around the city, especially those on foot and by cycle.	Various routes to the centre of Bristol	Building on the success of the existing Bristol Legible City signage project, this would see new and updated signage and mapping.	- Residents of the Medium CAZ area	£0.5m

Measure	Group Impacted	Geographic Scope	Summary of Measure	DEIA	Broad Initial Estimates of Cost
Additional electric vehicle charging points	People with electric vehicles who will need places to charge their vehicles.	Various places in the CAZ boundary	Extra electric vehicle charging points in the CAZ, in addition to those currently being implemented as part of the Go Ultra Low project.	<ul style="list-style-type: none"> - Residents of the Medium CAZ area - SMEs located in the Medium CAZ area - Taxi owners/drivers 	£2.0m
Expansion of Portway P&R site (550 spaces with 350 additional to be unlocked)	Motorists from the west / north-west including	Users from the west / north-west including Avonmouth, Shirehampton, Portishead and the M5	An additional 350 spaces at the current 550 space park and ride site at Portway to cater for increased demand	<ul style="list-style-type: none"> - Low-income diesel car owners 	£2.0m
Sustainable Travel Choices					
Mobility credits and/or subsidised bus travel for certain demographic or income groups	People within the CAZ and surrounding areas		Mobility credits and/or subsidised bus travel for certain demographic or income groups	<ul style="list-style-type: none"> - Residents of the Medium CAZ area - Low-income diesel car owners 	<i>(see below)</i>
Targeted door knocking	People within the CAZ and surrounding areas	CAZ boundary and surrounding areas	A programme of targeted door-knocking by experienced sustainable travel champions to explain sustainable travel options. Experience has shown this can be very effective in engaging hard-to-reach groups in disadvantaged areas.	<ul style="list-style-type: none"> - Residents of the Medium CAZ area - Low-income diesel car owners - SMEs located in the Medium CAZ area 	<i>(see below)</i>
Targeted roadshows	People within the CAZ and surrounding areas	CAZ boundary and surrounding areas	A programme of targeted roadshows in the local community by experienced sustainable travel champions to explain sustainable travel options. Experience has shown this can be very effective in engaging hard-to-reach groups in disadvantaged areas.	<ul style="list-style-type: none"> - Residents of the Medium CAZ area - Low-income diesel car owners - SMEs located in the Medium CAZ area 	<i>(see below)</i>
Business support including personalised travel planning	Businesses within the CAZ	CAZ boundary and surrounding areas	Support for businesses, both large and small, in terms of visits, roadshows, customised travel information and personalised travel planning.	<ul style="list-style-type: none"> - SMEs located in the Medium CAZ area - LGV/HGV-dependent businesses, not specifically located in the Medium CAZ area but that need to travel into it 	<i>(see below)</i>

Measure	Group Impacted	Geographic Scope	Summary of Measure	DEIA	Broad Initial Estimates of Cost
Target main visitor destinations with travel plan support	Main visitor destinations	Visitor destinations in the CAZ and surrounding areas	Support for main visitor destinations in the city, in terms of visits, customised travel information and personalised travel planning.	- External diesel car owners contributing to local businesses	(see below)
CAF scheme promotion. Leaflets / publicity etc.	All	Bristol City Council area	Promotion of all the measures as part of the CAF to ensure people know about them and they are used effectively.	<ul style="list-style-type: none"> - Residents of the Medium CAZ area - Low-income diesel car owners - SMEs located in the Medium CAZ area - LGV/HGV-dependent businesses, not specifically located in the Medium CAZ area but that need to travel into it 	£4.5m for all Sustainable Travel Choice measures (£1.5m/yr for 3 years)
Freight					
EV Centre of Excellence	Businesses within and serving the CAZ	CAZ area and surrounding areas	Demonstration electric vehicles for small businesses including short-term loans and help and advice on charging points and scheduling. Working with Highways England.	<ul style="list-style-type: none"> - SMEs located in the Medium CAZ area - LGV/HGV-dependent businesses, not specifically located in the Medium CAZ area but that need to travel into it 	£2.0m
Micro-consolidation with cargo freight bikes.	Businesses within the CAZ	CAZ / city centre area	Set up a micro-consolidation facility in or near the city centre for small deliveries, including 'last mile' delivery by electric carts and/or cargo cycles. This will build upon the success of the existing Bristol Freight Consolidation scheme, based at Avonmouth but serving the city centre.	<ul style="list-style-type: none"> - SMEs located in the Medium CAZ area - LGV/HGV-dependent businesses, not specifically located in the Medium CAZ area but that need to travel into it 	£2.0m
Total (Assuming Upper Uptake for financial support schemes)					£38.6m

5. Clean Air Zone Consultation

The feedback detailed in this Section is intended to give an **overview** of the range of comments received in relation to possible mitigating measures, concessions and exceptions. It does not detail every comment but lists the key themes arising from the consultation.

It also does not include any comments about:

- Support for any of the options / scheme / mitigations;
- Measures that would go further than the current proposed options - e.g. to close certain roads or introduce a work-place parking levy; and
- Non-CAP related measures such as banning wood burning stoves or to charge diesel trains.

The consultation report (Appendix N to the OBC) described the consultation undertaken for the CAP and gives a detailed analysis of the results. However, and as expected, the consultation also raised certain concerns about the impacts of the CAP and suggestions for mitigating measures, as well as suggestions for exceptions and concessions. These are summarised below in Table 5.1.

Comments are not specific to either option, unless otherwise stated.

Table 5-1: Comments on possible mitigations, concessions and exclusions

Theme	Comment
Public transport:	Subsidised bus travel for certain demographic and income groups
	Provide free public transport
	Provide free public transport to all over-60s
	More, improved and cheaper public transport services are required
	Public transport needs to be provided 24 hours a day, 7 days a week
	Bus services would still be caught up in congestion and remain unattractive to users
	Anti-idling zones for buses
	Bus lanes and tendered bus services to exclude the most polluting buses and taxis
	Further bus priority schemes
	Increase Euro standard requirements for taxis / private hire in licencing agreements
	Taxis to upgrade to electric vehicles
	Subsidised taxi service for people with limited mobility
	Expansion of Portway park and ride
	Expansion of other park and ride sites
	New park and ride sites, especially in the north of the city
	Buses need to be upgraded, including a focus on bio or other alternative fuels; introduction of all-electric or hybrid buses; retirement of older buses.
	Tackling the school run via designated school transport
	Implementation of a tram system
	More provision to allow bikes onto public transport
Nationalise the public transport system	
Oyster style card for Bristol public transport	
Promoting smarter choices	More and improved walking and cycling infrastructure are required
	Expansion of smarter choices programme

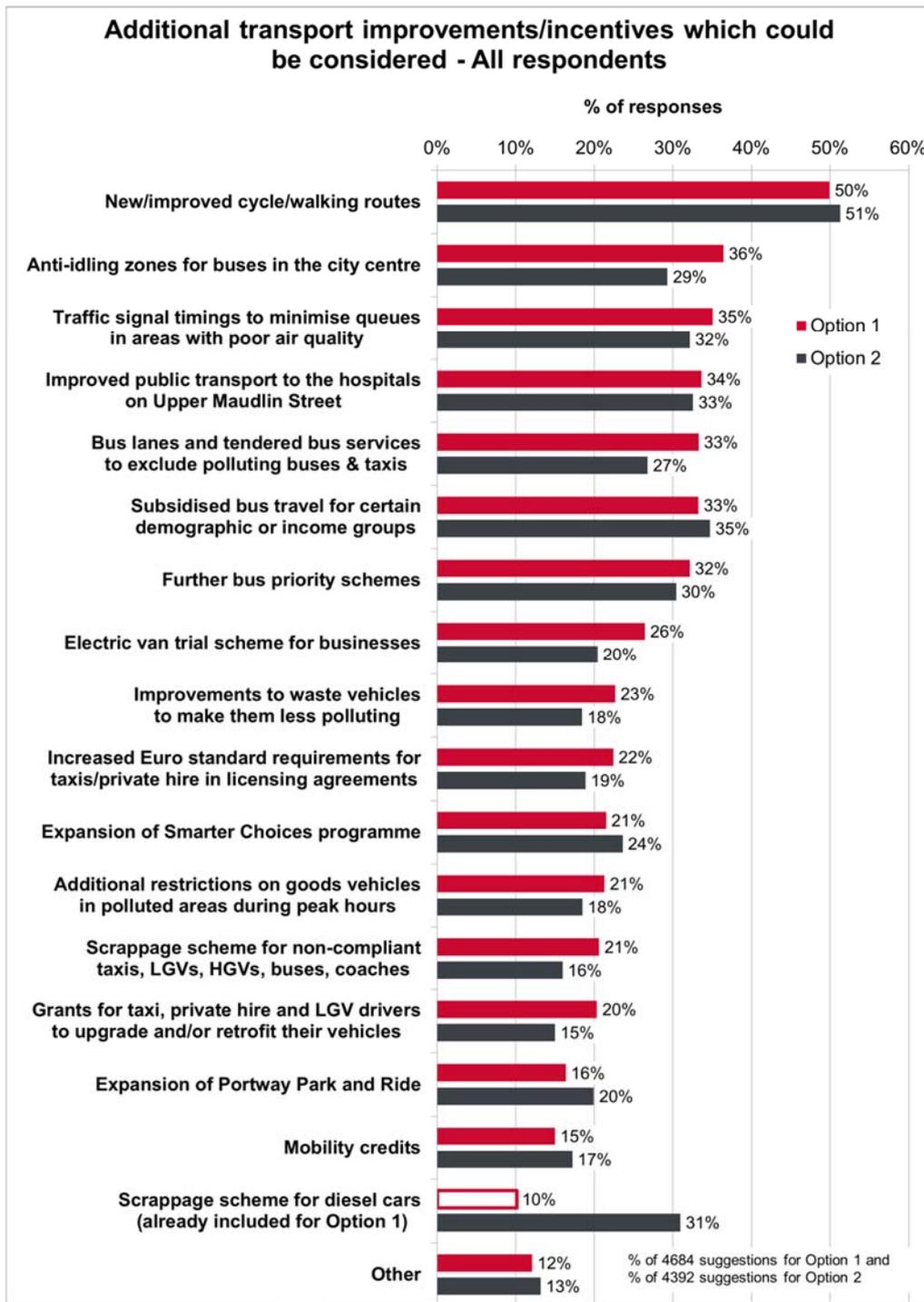
Theme	Comment
	Give higher priority to cycling within the city, over vehicles
	A focus on tackling single occupancy within cars
	Encouraging businesses to think about what they can change to help, for example staggered peak times, shift times to reduce traffic congestion, also by encouraging employees to share vehicles or driving less
	encourage staff to work from home/flexible working hours to spread traffic flow
	More, and promote existing, car clubs, including electric car clubs
	Wider push to lower car use, especially for short journeys
	Implementation of dedicated, segregated walking and cycling routes as seen within other European cities such as Amsterdam;
	Aim for a more joined up cycle network
	Improve the security of bikes to allow for peace of mind for users
	Encouragement for all school children to walk/cycle to school
	Introduction of a subsidised bike purchase scheme.
	Need a major promotion of active travel
Cleaner modes:	Need investment in cleaner modes of transport
	Concern that people will exchange diesel cars for petrol cars (still polluting) – rather than electric because there is no real charging infrastructure in the city centre
	Upgrading of other vehicles including the use of biofuels with introduction of infrastructure to accommodate this
	Incentives for businesses and people to switch to electric vehicles
	Allowing electric vehicles to use bus lanes to promote and encourage the upgrade
	The infrastructure for electric vehicles in Bristol needs to be invested in and expanded, to include more rapid charging points and more on-street charging points
	Introduce free electric charging and free parking as introduced in Norway
Businesses / fleets:	Businesses will think twice about locating somewhere where they are punished for getting goods delivered
	Electric van trial scheme for businesses
	Improvements to waste vehicles to make them less polluting
	Additional restrictions on goods vehicles in polluted areas during peak hours
	Freight consolidation centres
	Have fleets of cargo-bikes for local deliveries
	Council vehicle fleet should be electric
Scrappage scheme, grants and other financial incentives:	Scrappage scheme for diesel cars (already included for option 1)
	Scrappage scheme for non-compliant taxis, LGVs, HGVs, buses and coaches
	The scrappage scheme is only applicable for people using vehicles to get to their place of work. The scheme does not include residents or the retired
	People who are retired (on a small pension), on a low income, or unemployed do not have the resources to just buy a different vehicle. Scrappage schemes therefore only help those who can afford to buy new cars
	The scrappage scheme does not offset the cost of an electric car enough to initiate change
	The scrappage scheme will not help those who bought a new diesel recently in good faith, as these vehicles will still have a value greater than the £2,000 available
	The scrappage scheme is not suitable for lease and contract drivers
	£2000 would not be enough to help businesses or individuals to change their vehicles
	Scrappage does not cover those who have work based outside of the zone but often travel inside (such as community health workers)

Theme	Comment
	Scrappage scheme should be used for replacement with electric vehicles only
	Scrappage scheme money should only be used to buy electric bikes/cargo bikes
	A scrappage scheme should be means tested
	Generous grants need to be made available for people to buy second hand compliant cars
	Grants for taxi, private hire and LGV drivers to upgrade and/or retrofit their vehicles
	Interest free loans for electric vehicles and development of charging infrastructure
	Mobility credits
	Financial help is needed and should be extended to residents of B&NES, North Somerset and South Gloucestershire as many of these residents' commute in
Tourist destinations / visitors:	There will be lost income from car parks as visitor numbers deplete due to charges inflicted upon vehicles.
People affected:	Lower income groups
	Healthcare / hospital patients
	Healthcare / hospital professionals
	Carers
	Diesel car owners
	Bristol residents
	Consumers
	Commuters
	Disabled / Blue badge holders
	Owners of Motability vehicles
	Elderly
	Churchgoers
	Business and commercial organisations
	Small businesses / traders
	Tradesmen
	Construction industry
	Shift workers
	Children
	Families with children who need bigger vehicles
	Musicians
	Charity / voluntary workers
	Schools / students within the area
	Students
	Tourists / visitors
	Women who work-part and have child-care requirements
Journey purposes:	Trips to visit relatives
	Trips to certain supermarkets
	Trips needing wheelchair accessible vehicles
	Trips with vehicles needed for certain for leisure activities (e.g. motorhomes, camper vans, vehicles for towing, 4x4s etc.)
Exclude trips via certain roads / areas / destinations:	Through routes, such as north – south across Bristol

Theme	Comment
	Avon Meads / St Phillips Marsh / Winterstoke Road / Ashton Vale / South Liberty Lane commercial & industrial areas
	St Phillips household waste recycling centre
	Temple Meads
	Access to other railway stations, such as Stapleton Road, Redland, Bedminster, and Parson Street.
	Key traffic routes such as the M32, A4 Bath Road, A4 Portway, A3029, A370, A38 in Bedminster, A4044, A4032, A4174.
	Ashton Gate stadium
	The BRI and nearby car parks
	The bus station / Broadmead / Cabot Circus / Park Street
	Anchor Road / Hotwells / the Harbourside / Cumberland Basin / Cumberland Road
	The SS Great Britain
	The Kent Street Royal Mail (Bristol South) delivery depot
	Bristol Grammar School
	Temple Quay
Vehicle types:	Buses
	Diesel cars
	Those who choose to have car leases so are tied in for a period of time
	Diesel hybrid cars
	Modern diesel vehicles
	Taxis
	Commercial or Business Vehicles
	LGVs / vans
	HGVs
	Emergency vehicles
	Community transport
	Heritage / classic cars
	Cars used in car clubs or car share schemes
Transport policy and traffic management:	Develop a more coherent transport strategy for Bristol and the surrounding area that gets people out of their private vehicles and walking/cycling/on public transport more
	Change traffic signal timings to minimise pollution
	Improving traffic flows within the city
	Improve the flow of vehicles through construction areas
Charges:	Sliding scale of charges such as depending on vehicle emissions; fairer to those on low incomes
	Discount for deliveries made off-peak
	Charges to single occupancy car journeys
	Permits available to businesses at a cost
	Phase in the charging for private vehicles
	(Option 2) There should be an option to pay to enter the zone or for permits to use if required for trips such as to the hospital in emergencies

A summary of the level of support for different themes of improvements/incentives are set out below:

Figure 5-2: Options 1 & 2: Summary of additional improvements and incentives



The results of the consultation work became available during the CAF development process. The consultation work is broadly aligned to the CAF proposal, but analysis is required after the OBC to refine the CAF proposal in line with the feedback consultation work.