

Bristol Clean Air Plan

Strategic Outline Case

19.07.2018



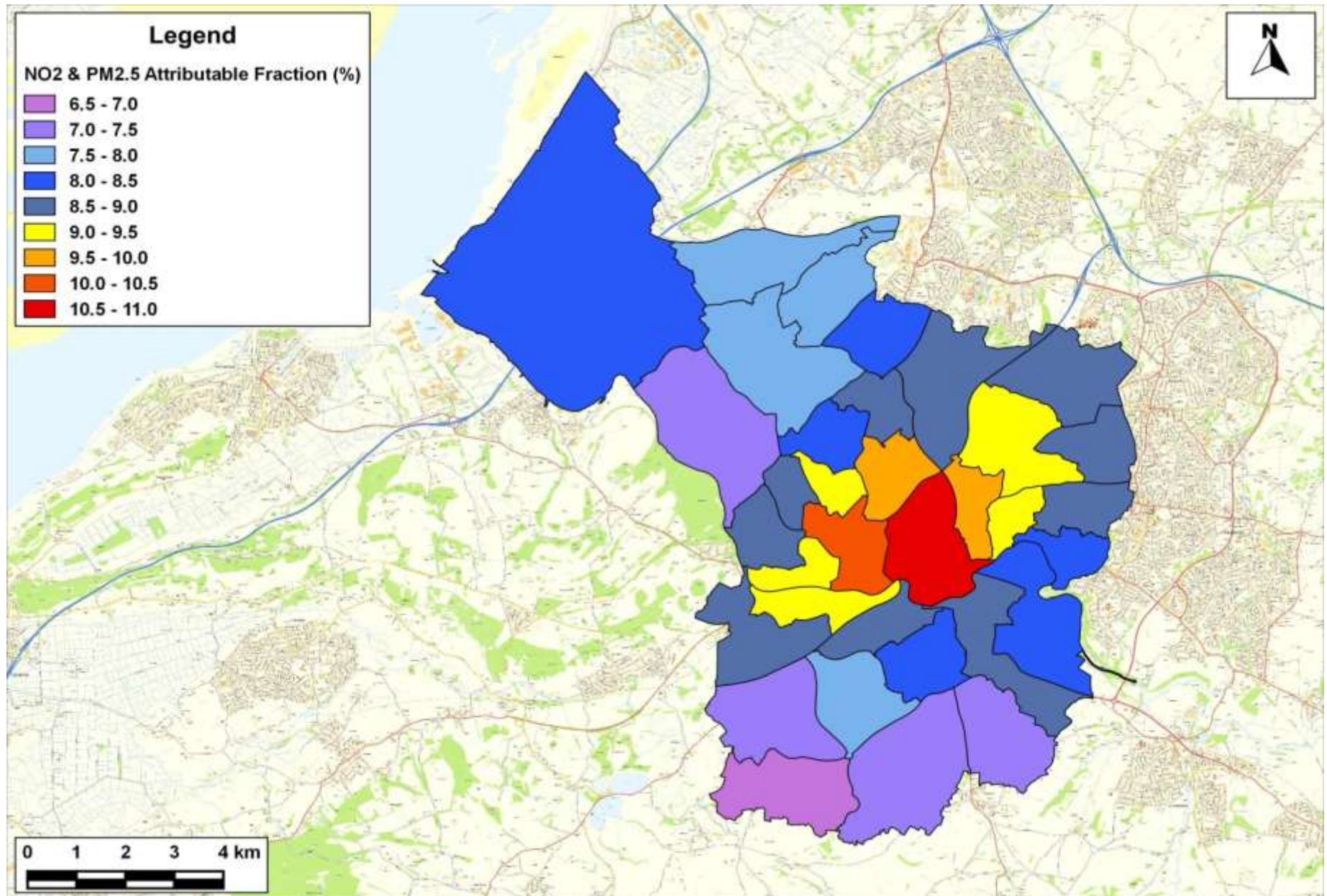
JACOBS[®]

ch2m[®]

Overview

- Background
- Project objectives
- Option selection - long list of options
- Option selection - short list of options
- Costings and funding
- Determining a preferred solution
- Engagement

Proportion of Deaths (%) Attributable to PM_{2.5} and NO₂



Legal Context

- UK Government challenged in High Court by Client Earth over failures to meet EU limit values for **Nitrogen Dioxide (NO₂)**
- In 2015 High Court ruled that Government must to take action to deliver compliance '**in shortest time possible**'
- Subsequent legal challenge in 2016, Mr Justice Garnham ruled in High Court:

*'I reject any suggestion that the state **can have any regard to cost in fixing the target date for compliance** or in determining the route by which the compliance can be achieved where one route produces results quicker than another. In those respects, the determining consideration has to be the efficacy of the measure in question and not their cost.'*



BCC and 27 other Local Authorities (including B&NES) directed to produce a plan

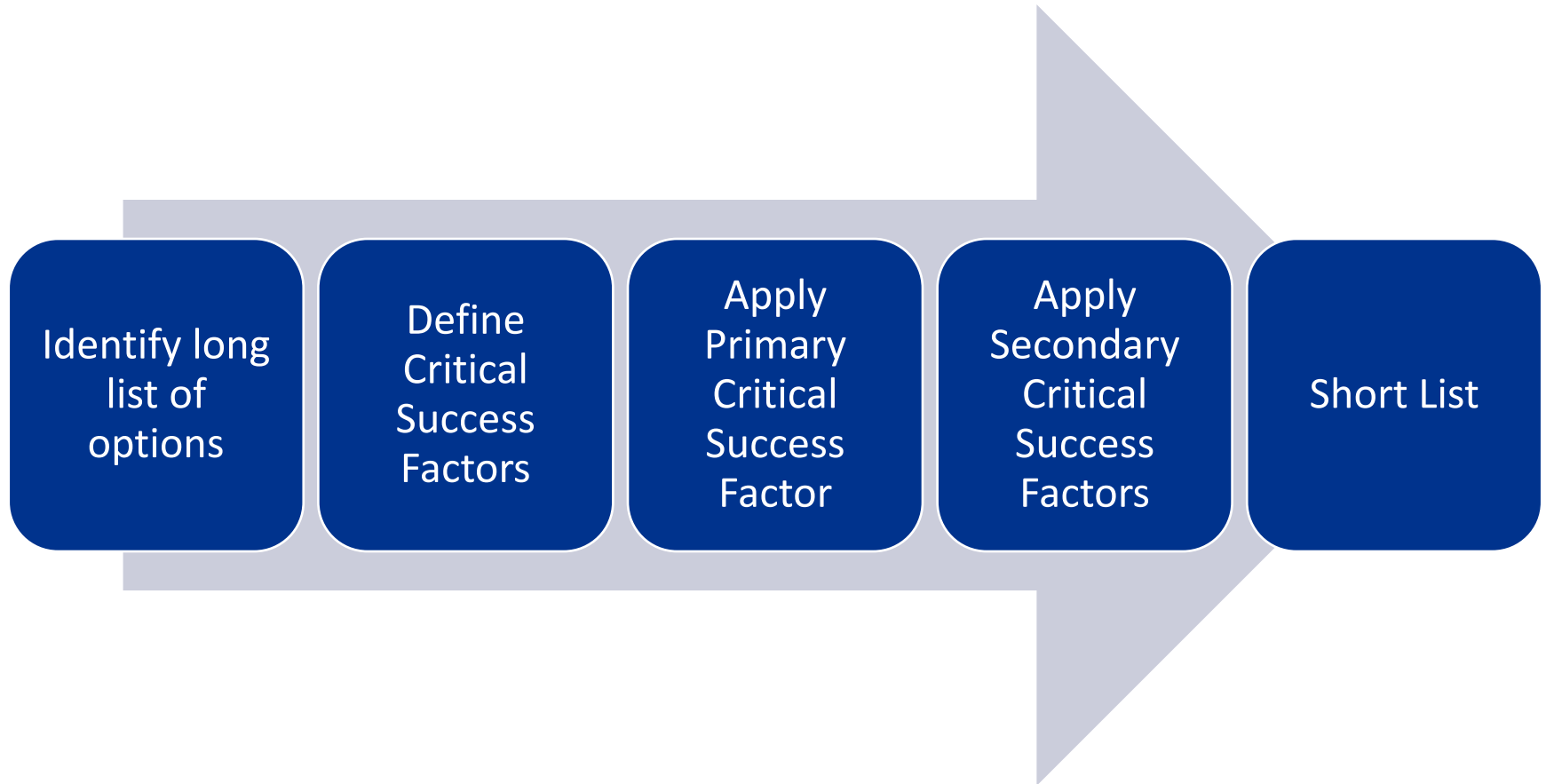
- Further legal challenge in 2017 resulted in 33 additional LA's being directed (including SGC)

Project Objectives

1. To deliver a scheme that leads to compliance with NO₂ concentration EU Limit Values in the shortest possible time
2. To deliver a scheme which leads to compliance with the UK Air Quality Objectives in the shortest possible time

Compliance required by 2021 at the latest

Shortlisting Process



Long List of Options

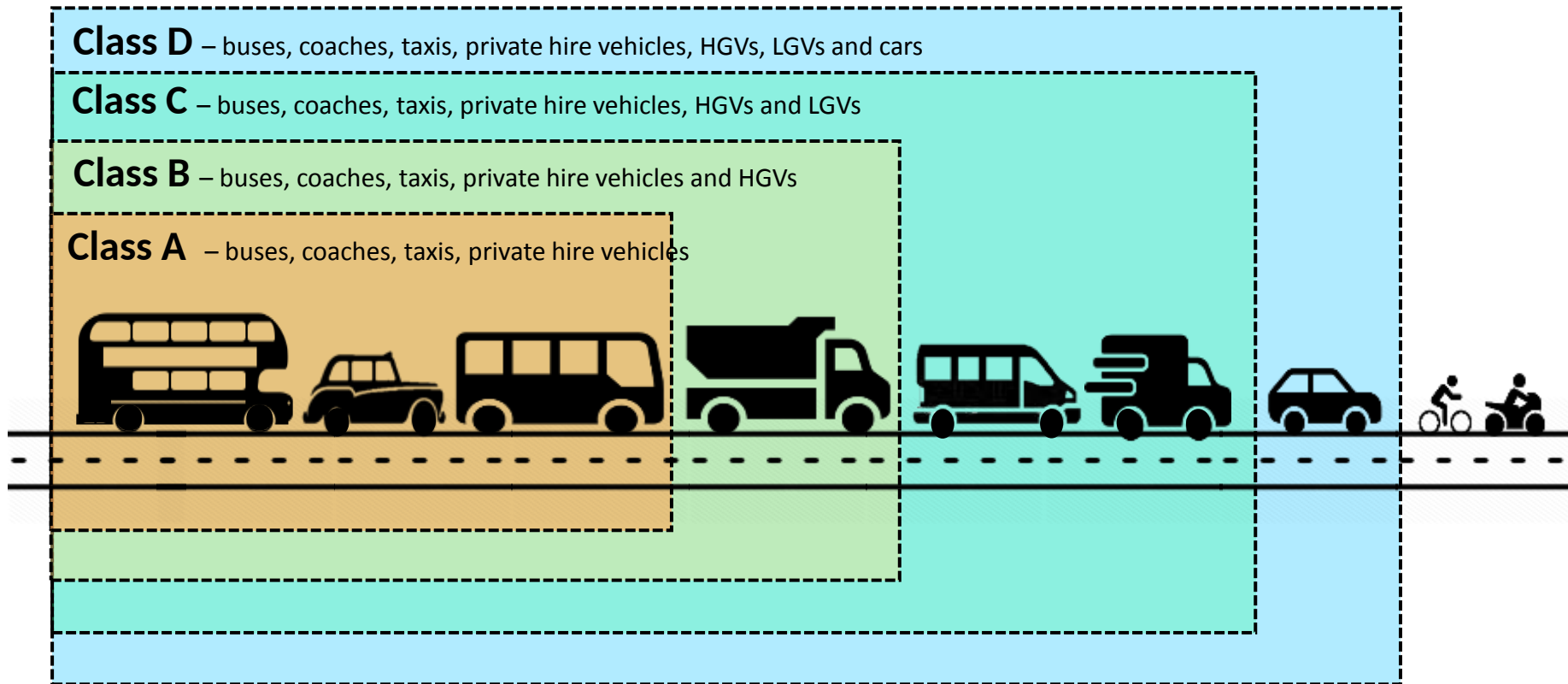
50 non-charging options including:

- Measures to encourage travel by walking, cycling, public transport and P&R
- Adjustments to resident and public parking to encourage electric cars, and discourage commuting by car
- Promotion of car clubs and car sharing
- Information improvements (variable message signs and apps)
- Prohibition of polluting vehicles
- Infrastructure improvements
- Measures to encourage electric vehicle uptake

Long List of Options

Clean Air Zones

Polluting vehicles within the zone are charged.



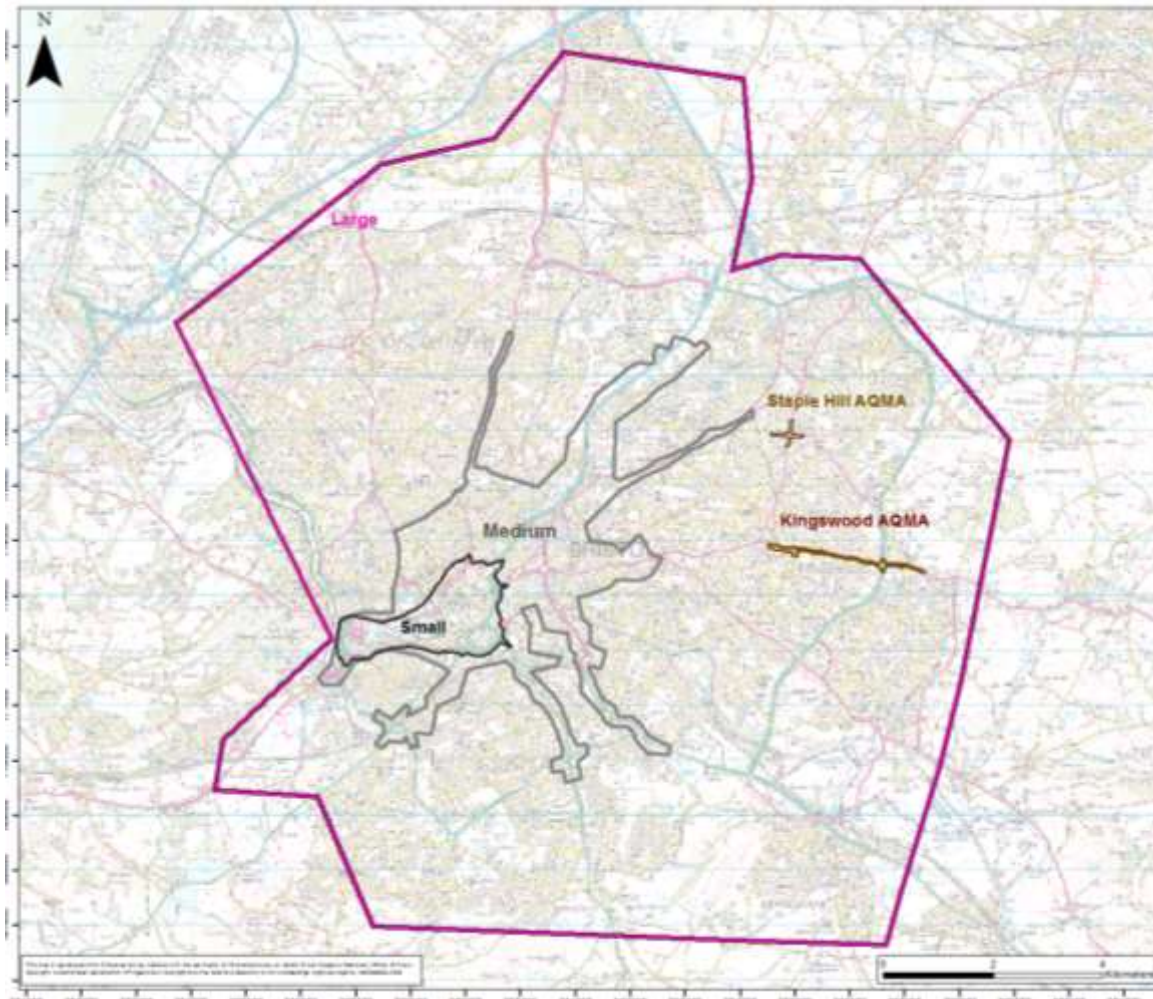
National Clean Air Zone Framework

Vehicles Exempt from Charge

Vehicle type	NO _x Emissions limit
Bus/coaches	Euro VI
HGV	Euro VI
Van (1305-3500kg)	Euro 6 (diesel) Euro 4 (petrol)
Car/light commercial (up to 1305kg)	Euro 6 (diesel) Euro 4 (petrol)

Long List of Options

20 Clean Air Zones Options

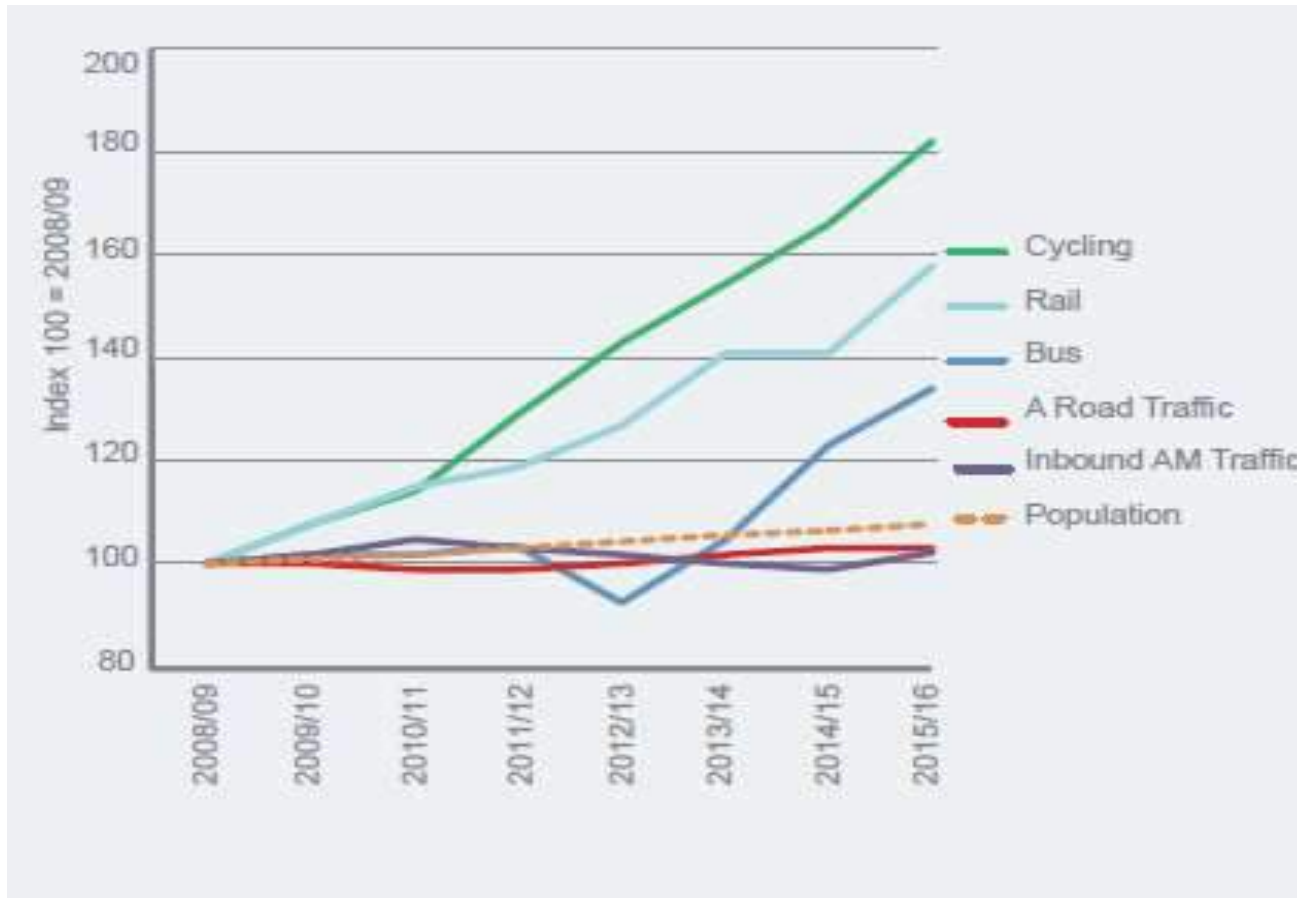


Critical Success Factors

Cases	ID	Evaluation Criteria	Priority
Strategic	1	Deliver compliance with NO ₂ air quality Limit Values and Air Quality Objectives in the shortest possible timescales	Pass/Fail
	2	Provide equity across different vehicle types and trip purposes	Low
	3	Compliance with the CAZ framework	High
Economic	4	Mitigate financial impact on low income households	Very High
	5	Improve health of low income households	Very High
	6	Economic effects	Medium
	7	Improve public health	Very High
Commercial	8	Delivery timescale risks of procurement	Low
Financial	9	Likelihood of revenue equating to implementation/operational costs	n/a
	10	Upfront capital required for scheme	n/a
	11	Risk of financial penalty to the Council/s	Low
Management	12	Public acceptability	Medium
	13	Political acceptability	Medium

Justification for Considering Charging

Recent uptake in sustainable travel options has not sufficiently reduced air pollution.



Justification for Considering Charging

Large infrastructure scheme like Metrobus...

- expected to produce 4 $\mu\text{g}/\text{m}^3$ change
- Taken 6 years from initial planning to completion

We have to consider the alternatives to infrastructure

Clean Air Zone Assessment

Compliance expected to be achieved in 2021 with:

- Small zone, Class C and D CAZ
- Medium zone, Class C and D CAZ

A large CAZ is unlikely to be deliverable before either a small or medium zone could achieve compliance

Complementary Measures

A 5th non-CAZ option is proposed, including the following vehicle restrictions:

- Stricter licensing policy for taxis and private hire vehicles
- Restrictions on goods vehicles movements during peak hours
- Prohibition of diesel cars from polluted parts of the city
- Only compliant vehicles allowed to use bus lanes

..and the following general transport measures

- Adapting Council and privately-owned waste vehicles to meet improved emissions standards
- New and / or improved cycle paths to encourage more active travel
- Anti-idling zones for buses in the city centre
- Grants for taxi, private hire and LGV drivers to upgrade and / or retrofit their vehicles
- Traffic management measures on Newfoundland Way southbound to M32 north of Junction 2
- Retrofitting of Council and privately-owned waste vehicles
- Expansion of Car Club to areas of the City with high level of 'uncompliant' vehicles
- Optimisation of traffic signal timings across the city
- Introduction of further Bus Priority Schemes
- Introduction of subsidised (e.g. free) bus travel for certain demographic or income groups
- Targeted traffic management measures on Rupert Street and Bedminster Down Road
- Real time traffic management across the city
- Variable parking tariffs in the Council owned car parks to discourage polluting vehicles and/or incentivise take up of electric vehicles

Shortlist

1. Package of Non-charging Interventions
2. Medium Zone Class C + non-charging measures
3. Medium Zone Class D + non-charging measures
4. Small Zone Class C + non-charging measures
5. Small Zone Class D + non-charging measures

Costs

Main cost drivers:

- Number and location of ANPR Cameras
- Costs associated with road signs, road markings, back-office operational costs, maintenance, communication links, power supply and publicity requirements

Estimated Cost for Small Zone = £5m-£10m

Estimated Cost for Medium Zone = £50m-£60m

Funding Sources

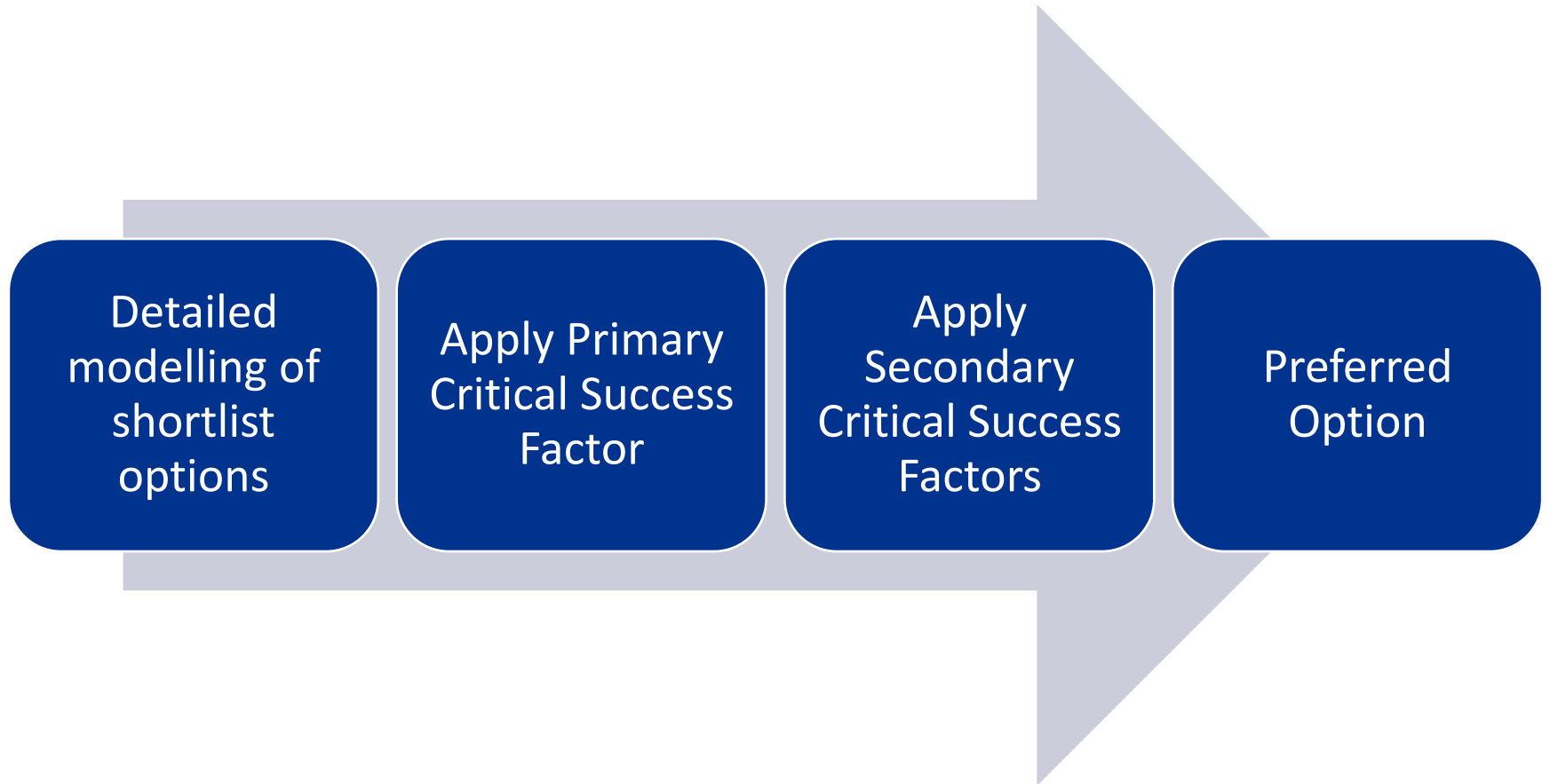
Central Government Funding:

- Early Measures Fund
- Low Emission Bus Fund
- Clean Bus Technology Fund
- Go Ultra Low Fund
- £255 million Implementation Fund (for CAZ and other abatement measures)
- £220 million Clean Air Fund (for mitigation measures)

Surplus revenue from CAZ charges?

WECA?

Selecting a Preferred Option

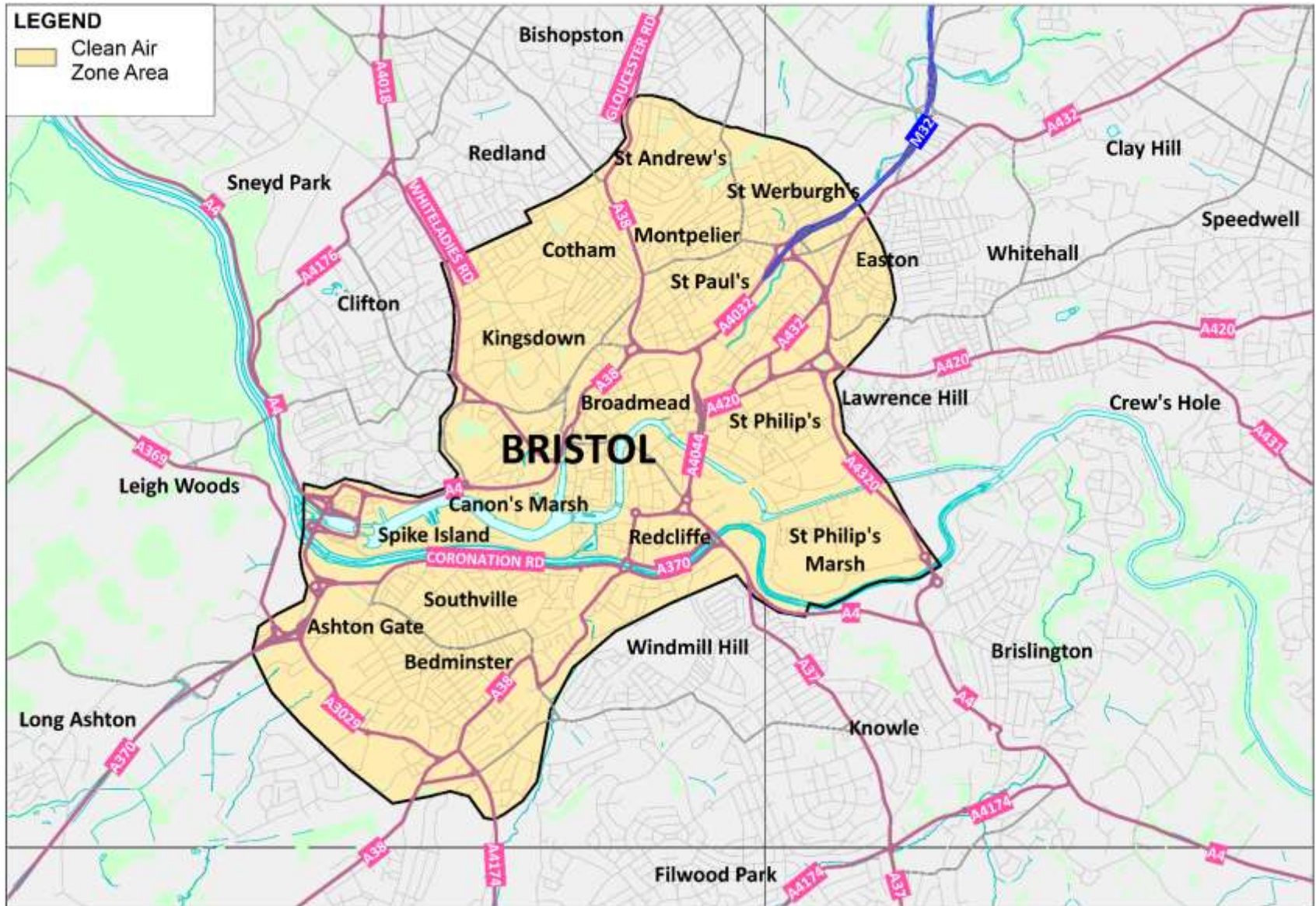


Refining the Boundaries

Work underway to consider:

- Ease of understanding
- Opportunities to avoid zone in advance
- Signage requirements
- Impact on rat-runs
- Infrastructure requirements

Medium Zone



Exemptions

Work underway to consider what exemptions / discounts / sunset periods might be appropriate

Critical: cannot impact year in which compliance is achieved

Complementary measures (mitigation)

Government has announced criteria for funding of complementary measures (Clean Air Fund):

- Competitive bidding process against other authorities based on need
- Justification must focus on alleviating any dis-benefits to low income households and local businesses

List of complementary measures being reconsidered in light of this

Clean Air for Bristol

We all want clean air and a healthy city.

Find out what we're doing to reduce air pollution in Bristol.

Join the conversation

www.bristol.gov.uk/airquality

#CleanAirForBristol

@BCC_Clean_Air

Mark Leach, project manager for CAP engagement programme

Bristol City Council

JACOBS[®] **ch2m**[®]



What are we consulting on?

We **can not** consult on*:

- Which size of zone to adopt - medium or small
- Which classes of vehicles to charge

We **are** going to be asking people about:

- How it might effect you, your family, your business etc, mitigation, tweaks to boundaries, rat-runs and other knock-on impacts from the zone

* Unless there are two front runner options from the technical analysis

Engagement programme - audiences

- Professional drivers – taxis, HGVs, LGVs, deliveries
- Emergency Services and other key road users, carers
- The business community
- Individuals and families
- Seldom heard communities and groups
- Inner city, urban fringe
- Commuters from outside Bristol
- Young people, schools



Asda, Bedminster, 29th May

A photograph of a National Clean Air Day event. In the foreground, a blue and white electric car is parked on a paved area. The car has a large white circular logo on its side with the text "Zero emissions" and "100% Electric" partially visible. The car's license plate area says "Improving Air Quality". In the background, a large Gothic-style building with two prominent towers and a flag on top is visible under a blue sky with scattered white clouds. To the left of the car, there are several people gathered around a dark blue tent and a white tent. A flower bed with colorful flowers is in the middle ground. The overall scene is bright and sunny.

National Clean Air Day 21st June



Air pollution and health

Air pollution is often invisible, but has serious implications for our health. Evidence shows that spending time in areas with high levels of air pollution can worsen asthma symptoms, damage lung function and harm cardio – vascular health.

Air pollution is estimated to cause 40,000 premature deaths in the UK every year.

A recent [report into the health effects of air pollution in Bristol](#) concluded that around 300 deaths each year in the City of Bristol can be attributed to exposure to nitrogen dioxide and fine particulate matter (PM 2.5), with roughly an equal number attributable to both pollutants. This represents about 8.5% of deaths in the administrative area of Bristol being attributable to air pollution.

The government's Committee on the Medical Aspects of Air Pollution (COMEAP) is reviewing the mortality factors for key pollutants.

Other known health effects which could affect people from before birth to old age include:

- low birth weight of babies

Search ...

- > AIR POLLUTION AND HEALTH
- > WHAT IS AIR QUALITY LIKE IN BRISTOL?
- > MONITORING AIR POLLUTION
- > LEGAL REQUIREMENTS

Recent Tweets

Clean Air For Bristol @BCC_Clean_Air

Thursday 21st June: We'll be on College Green 12:30 - 18:30 with information on air



Air pollution and health



What is air quality like in Bristol?



Monitoring Air Pollution



Legal Requirements

Share this:

- [Twitter](#)
- [Facebook](#)
- [LinkedIn](#)
- [Google](#)
- [Pinterest](#)
- [Print](#)



Questions?