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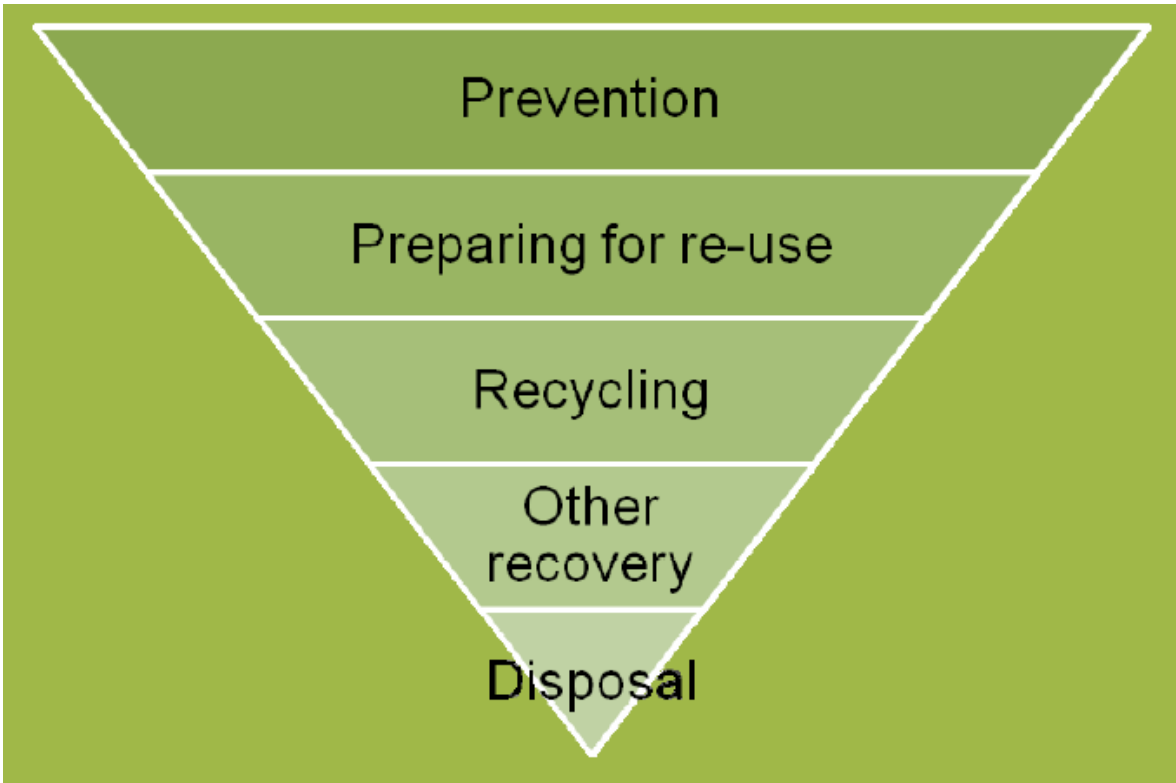
**DoW CoP: An opportunity
for sustainable materials
management...not a chore**

Welcome

We will look at...

- Sustainable management of soils
 - How the waste hierarchy applies to soils and excavation arisings
 - UK targets and the need for a circular economy in soil use
- How does waste legislation apply to excavation arisings and earthworks
 - What are ‘waste soils’
- Legal mechanisms that allow for a circular economy
 - How can developers reuse ‘waste soils’?
 - - What is the role of LA-EH
- - Why Local Authority engagement with the DoW CoP process enhances regulation ... and is not a chore

Sustainable management of soils



- “**Soil is a vulnerable and essentially non-renewable resource.** One hectare of topsoil, the most productive soil layer, can contain up to 5 tonnes of living organisms and because it can take more than 500 years to form a 2cm thickness, it is in practical terms non-renewable.”

- <https://www.gov.uk/government/publications/code-of-practice-for-the-sustainable-use-of-soils-on-construction-sites>

- Target: All soils to be managed sustainably by 2030
 - <https://www.gov.uk/government/publications/25-year-environment-plan>
- Landfill disposal is the least sustainable option for managing surplus soils
- UK must pivot from a “throw away society” to a “circular economy”; surplus soils are a resource not a waste

Will current regulation help or hinder?

Waste Regulations & soil management

- Waste Framework Directive
 - Anything “*the holder discards or intends or is required to discard.*”
 - Clean naturally-occurring materials reused on site are exempt (Article 2)
 - UK implementation largely unchanged
- Environment Agency (EA) View:
 - Soils become ‘waste upon excavation’
 - ‘Surplus materials are a waste’
 - ‘Material not fit for purpose is a waste’
 - ‘Waste is waste whether contaminated or inert’
 - ‘Clean materials are waste when they leave site of production’.



Options for (re)use of excavation arisings

REUSE (on or off-site):

- WFD Exclusions – Article 2.1(c)
- CL:AIRE Definition of Waste Code of Practice (DoWCoP)
- Storage, treatment or reuse of wastes
 - EA Enforcement positions
 - Waste exemptions
 - Environmental permit (standard rules or bespoke permits)
- EA WRAP “End of Waste” protocol – aggregates only (currently being reviewed)
- Negotiate “end of waste” status with the Environment Agency

} Soils not considered waste

} Soils regarded as waste
(classification needed)

DISPOSAL:

- Dig and dump (disposal to a suitably licenced landfill)

} Soils regarded as waste
(classification **and WAC**
needed)

What is it? DoW CoP in a nutshell

A legal mechanism that facilitates sustainable and cost-effective reuse of soils, avoiding the need for them to be disposed of as waste

1.1 This Code of Practice (CoP) serves the following purposes:

- It sets out good practice for the development industry to use when:
 - i. Assessing on a site specific basis whether excavated materials are classified as waste or not; and
 - ii. Determining on a site specific basis when treated excavated waste can cease to be waste for a particular use.
- It describes an auditable system to demonstrate that this CoP has been adhered to.

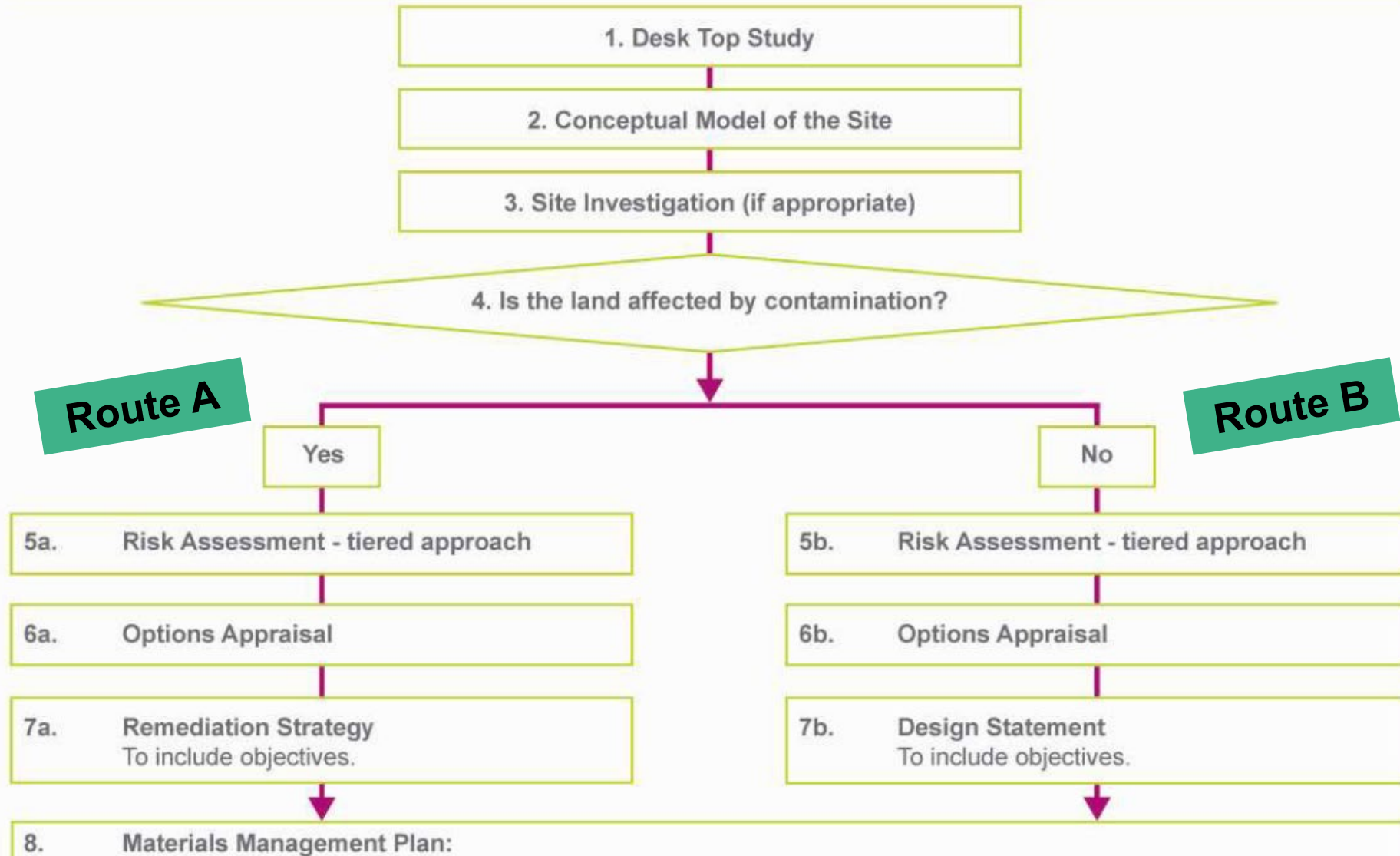
“If materials are dealt with in accordance with this CoP the EA considers that those materials are unlikely to be waste if they are used for the purpose of land development”

– *Relies on:*

- *Materials Management Plan (MMP)*
- *Qualified Person (QP) review and Declaration*
- *Verification Report*

– *Administered by CL:AIRE*

DEFINITION OF WASTE: DEVELOPMENT INDUSTRY CODE OF PRACTICE SUMMARY OF PROCESS



8. Materials Management Plan:

- a) Includes tracking system;
- b) Contingency arrangements; and
- c) Verification Plan.



9. Person commissioning excavation works:

Ensures contracts adequately cover issues highlighted in the CoP, e.g. production and release of Verification Report are in place.

Ensures Qualified Person is appointed after checking status against Appendix 6 of the CoP. To include:

- a) Professional status and relevant qualifications;
- b) Independence; (should not be directly in management or execution of project);
- c) CV (demonstrating minimum of 5 years of relevant experience); and
- d) Attended relevant training course relating to the CoP.



10. Qualified Person:

- a) Reviews documentation (including Risk Assessment, Remediation Strategy or Design Statement, confirmation / evidence from relevant regulators, planning permission (if applicable);
- b) Advises person commissioning works regarding CoP "factors", and need for the completion of Verification Report; and
- c) Signs Declaration - submitted to the Environment Agency and copied to person who commissioned them.



11. Person commissioning excavation works:

- a) Ensures MMP is compiled with (including tracking system and contingency arrangements); and
- b) Records amendments to the MMP (e.g. unexpected materials, revised formally agreed quantities).

12. Verification Report completed:

- a) Records where materials have been placed;
- b) Identifies how remediation / design objective(s) have been furthered; and
- c) Kept for 2 years (submitted to EA upon written request).

The Qualified Person (QP)

No Declaration
Soils = Waste

- QPs are a critical part of the DoW CoP process
 - Independent chartered professionals
 - Ensure compliance (*in lieu* of EA involvement)
- QPs must be qualified and registered with CL:AIRE - [Qualified Person Register \(claire.co.uk\)](http://claire.co.uk)
- Process:
 - Developers produce the MMP
 - MMP submitted for QP scrutiny
 - If compliant, QP submits a Declaration to CL:AIRE
- It is the declaration that CL:AIRE registers – not the MMP
- No materials can be reused until:
 - Declaration has been submitted and acknowledged;
 - The relevant Declaration Fee has been paid.

What is the role of Local Authorities?

3.5.1 Liaison

- 3.35 The intention is not to add any additional steps or consultation with any regulator that was not required prior to the adoption of the CoP.
- 3.36 However, compliance with the CoP does not remove the need to liaise with the relevant regulator regarding compliance with other legislation, e.g. where contamination is involved. This includes the Town and Country Planning regime, the Contaminated Land regime or the Water Resources Act. For sites where the development requires planning permission liaison with the Local Planning Authority will be expected. They in turn may consult with other organisations in assessing the environmental impact of any reuse proposals. Where planning permission is not involved contact with the EA or the Local Authority will be expected to take place to agree assessments of the risk to controlled waters and human health respectively.
- 3.37 In particular, the Qualified Person needs to be confident that sufficient evidence is presented for review to show that where contaminated materials are involved (i.e. materials with the potential to cause pollution and/or harm) via “Route A” projects, contact has been made with the regulator to agree risk based remediation or reuse targets. Proof will be required that there have been “no objections” to such proposals.

What is the role of Local Authorities?

Table 2: Examples of the types of evidence required for Routes A and B

Route	Type of Evidence
Route A: Where contamination is present or suspected	<ul style="list-style-type: none">Actual correspondence, e.g. letters, e-mails, minutes of a meeting showing that a remediation strategy has been agreed.Correspondence showing that the owner has declined to comment.Correspondence showing that the owner has agreed to remediate but the regulator but this could be a long time before the remediation is completed.The plan provides a clear link to an approved Remediation Strategy (where planning is applicable).
Route B: Where contamination is <u>not</u> present or suspected	<ul style="list-style-type: none">Actual correspondence, e.g. letters, e-mails, minutes of a meeting showing that it has been agreed that land contamination is not present.Correspondence showing that the owner has declined to comment.A Desk Top Study that states that no contamination is present and that the use of the materials is appropriate.A Design Statement that states how the materials are to be dealt with which has never the less been agreed with the regulator, e.g. correspondence, minutes or there is a clear link from a planning permission concerning the use of those materials (where planning is applicable).

Are you aware that contamination is present?
Are you happy that the proposed reuse is aligned with the agreed controls?

Do you agree that no contamination is present?
Are you happy that the proposed reuse is appropriate?

DoW CoP relies on YOU!

- The MMP **must** demonstrate to the QP that you have been consulted the local authority because
- LAs know if:
 - There are contamination concerns
 - They have been assessed appropriately
 - A remediation strategy has been agreed etc.

11. Provide Local Authority contact details (full address and named contacts) where excavated materials are to be reused →	α
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The following correspondence / documentation relating to the development and how that relates to the use of materials from:

- a) The Local Authority **[list]**;
- b) Environment Agency **[list]**; and
- c) Other relevant environmental regulatory body associated with the development, e.g. Defra, Natural England, Countryside Council for Wales **[list]**.

- **But can be assumed to be acceptable if no response received after 21 days**



Not another one!

- Consultants preparing an MMP will usually email a relevant Local Authority contact
 - Who is receiving these consultations in your authority?
- Many authorities/officers choose not to engage with DoW CoP
 - It is non-statutory/I don't have to do it
 - I don't have the time
- **But** a consultation means that earthworks are imminent
 - Have all risk assessments been submitted?
 - Has the Remediation Strategy been agreed?
 - Are there outstanding pre-commencement conditions?

Reasons to engage

- Get attention for developers and consultants to tie up loose ends
- To issue a Declaration, the QP needs to see evidence of consultation
 - Your comments can have a big impact
 - [But only if you respond within 21 days]
- **Remember - No response will be assumed to be agreement**
- Minimal effort – a few standard responses:
 - Everything is fine, I have no concerns or objections (or let it run to 21 days)
 - **I have concerns that the materials may not be suitable for reuse because:**
 - **Inadequate risk assessments have been submitted**
 - **The remediation strategy has not been agreed *etc.***



*** Thank You**

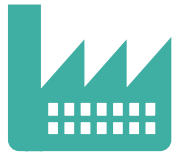
The Joint Air Quality Unit



THE NO₂ PROGRAMME: PLAN AND PROGRESS

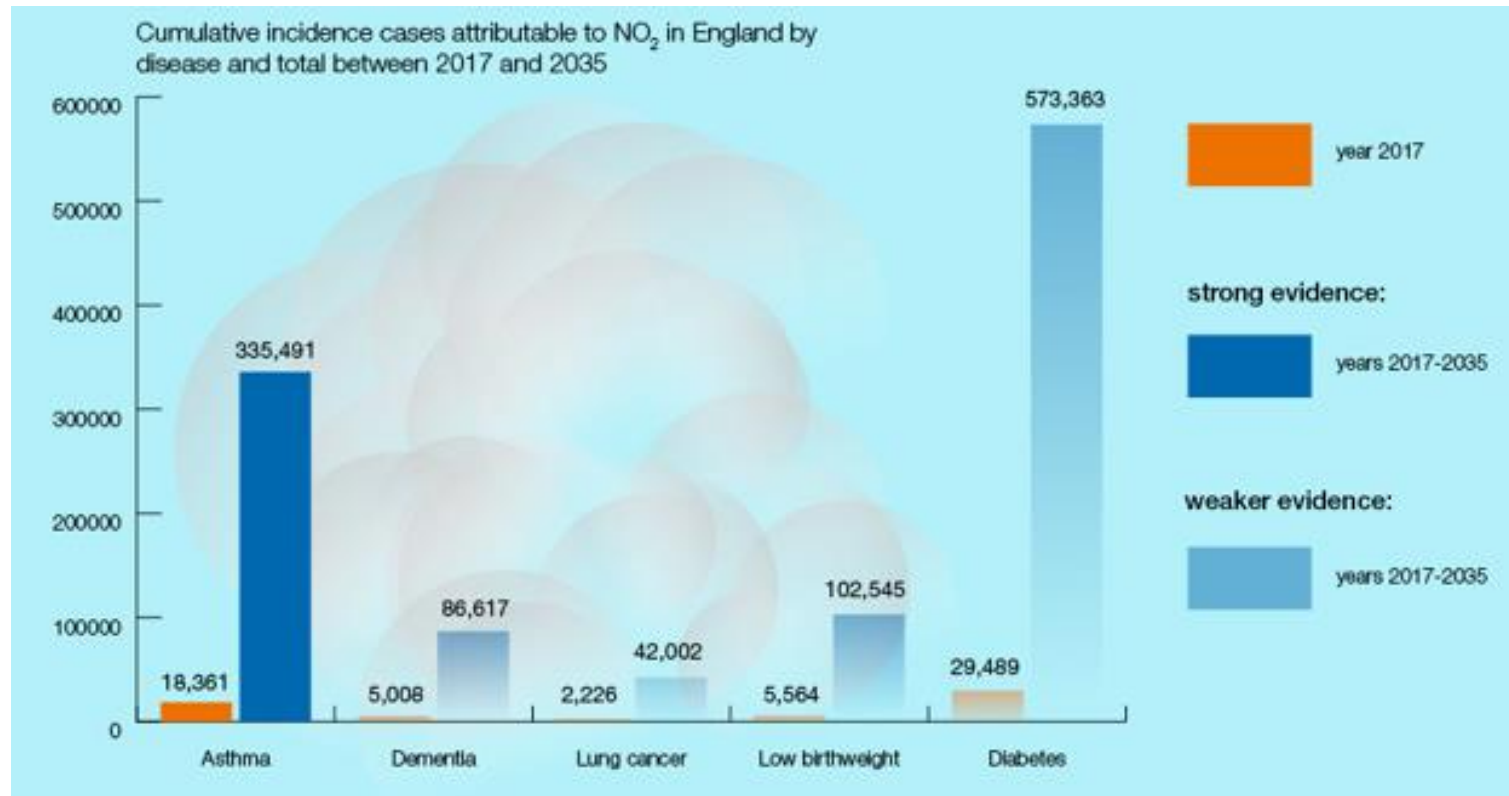
9 May 2024

UK Government approach to Air Quality



- The **Clean Air Strategy** was published in Jan 2019 and sets out how we will meet international commitments to **reduce emissions of five damaging air pollutants by 2020 and 2030** (*nitrogen oxides; particulate matter; sulphur dioxide; non-methane volatile organic compounds; ammonia*).
- The **Transport Decarbonisation Plan** was published in July 2021, setting the government plan to **transition to zero emission road transport** and reduce emissions.
- Alongside these sits a targeted delivery programme on the UK's most immediate air quality challenge: **tackling roadside NO₂ concentrations** - the only statutory air quality limit that the UK currently fails to meet.

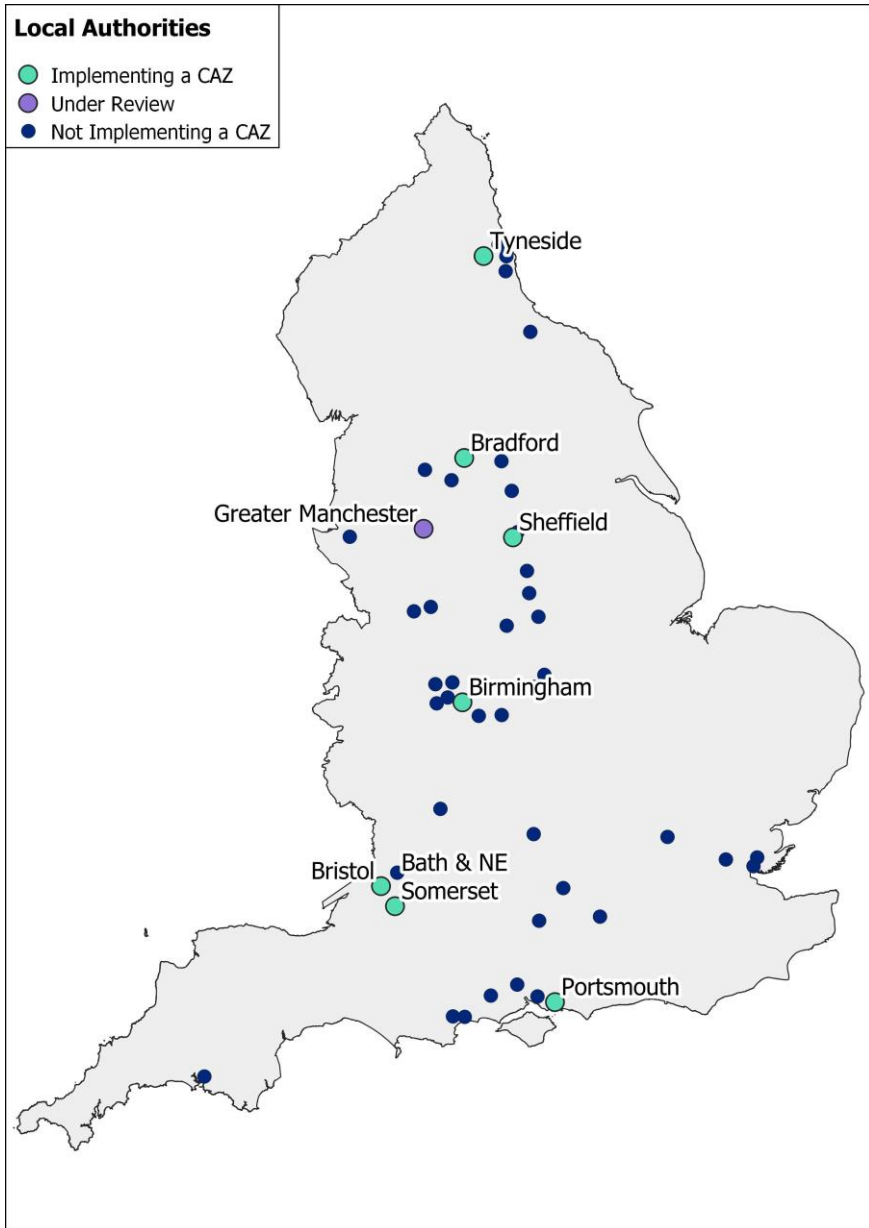
Air pollution is the biggest environmental threat to human health, with transport the biggest contributor



Conditions associated with exposure to NO₂

- Exposure to air pollution in the UK is estimated to have an annual effect equivalent to 28,000 – 43,000 deaths. To compare, there were 32,000 deaths in 2018 from flu
- Around 68% of NO₂ comes from transport near roadsides
- Estimated between 2017-2035 there would be £9.2bn NHS and social costs attributable to NO₂ alone

The NO₂ Programme



- Through the NO₂ plan, we are investing £883 million to clean up transport and cut pollution in the shortest possible time, working with local authorities to urgently tackle these emissions.
- Government is supporting local authorities with funding and expertise to help them develop their plans and accompanying measures to support those affected.
- Clean Air Zones (CAZ) are required to deliver the health and air quality benefits in some places. Non-charging measures are preferred. Where CAZs are required Government assures that the size, charge levels and vehicle types affected by the zone is required to deliver the air quality and health benefits.
- Non-CAZ measures adopted by councils include traffic management schemes, taxi licensing changes and vehicle access restrictions.

Central Evaluation of Local NO₂ Plans

- **28 local authorities (LAs) were required to develop Local Plans, after the Government published the Air Quality Plan for NO₂, in July 2017.**

Local Plans with Clean Air Zones (CAZs):

- Bath & North East Somerset (B&NES)
- Birmingham
- Bradford
- Bristol
- Portsmouth
- Sheffield and Rotherham*
- Newcastle (Tyne-side)

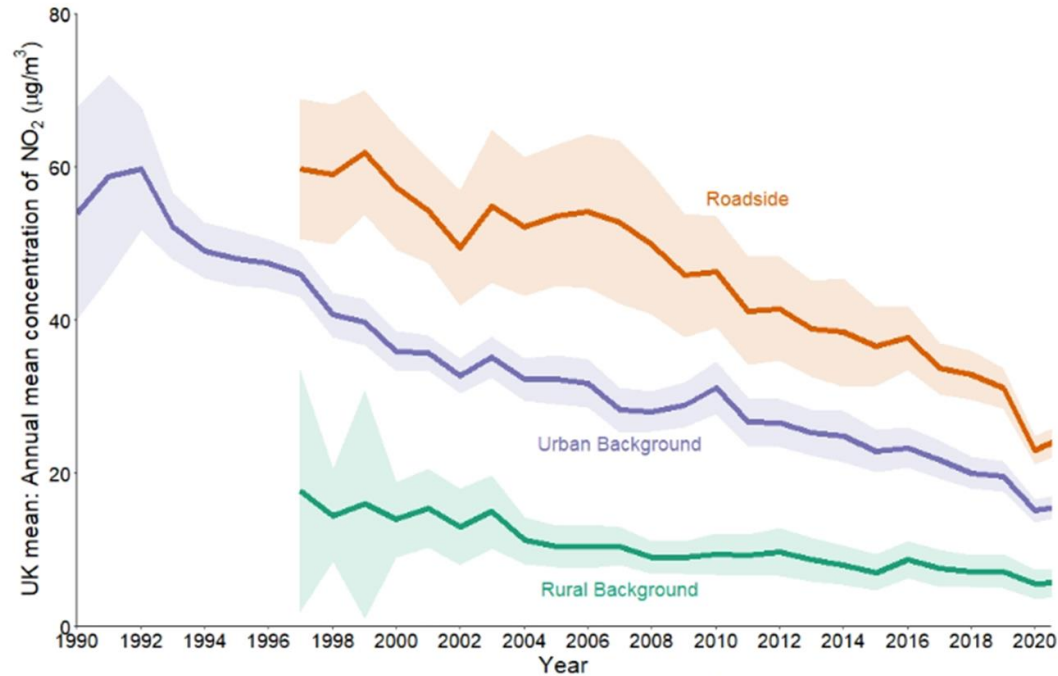
Local Plans with non-charging measures

- Leeds
- Basildon & Essex
- Coventry
- Derby
- Southampton
- Nottingham
- Blackwater Valley
- Fareham

* Sheffield and Rotherham Local Plan also has some additional non-charging measures

The Joint Air Quality Unit

Formed in 2016, the Joint Air Quality Unit brings together expertise from both the Department for Environment, Food and Rural Affairs and the Department for Transport.



- Defra is responsible for Air Quality but DfT holds responsibility for transport.
- A collaborative approach between Defra and DfT is key to effectively tackling air pollution at the roadside.
- The Joint Air Quality Unit (JAQU) is delivering compliance with roadside nitrogen dioxide concentration limit values via the UK NO₂ Plan.



A Clean Air Zone is coming

We're introducing a Clean Air Zone to make our town a healthier place to be. Charges apply. Use our quick and easy vehicle checker to find out more.

gov.uk/cleanairzone
#CleanAirZone



Implementation Fund and Clean Air Fund

- **£883m has been made available to support local authorities** with an Implementation Fund to develop and implement measures and a Clean Air Fund.
- The **Implementation Fund** is provided to support local authorities implementing measures which will achieve compliance with NO₂ limits in the shortest possible time. Examples of these measures include the setting up of Clean Air Zones and traffic management improvements.
- The **Clean Air Fund** was launched by the Government in 2018 to support individuals and business affected by the measures. A range of options local authorities can consider to utilise this money such as new park and ride services, freight consolidation centres, concessionary travel schemes and improvements to bus fleets have been set out.

What is a Clean Air Zone (CAZ)?

- A **Clean Air Zone (CAZ)** is an area where targeted action is taken to improve air quality. The CAZ Framework sets out the principles Local Authorities should follow when setting up CAZ in England. The Framework is designed to provide a consistent approach to the introduction of CAZs by Local Authorities to help businesses and individuals.
- **The CAZ Framework establishes the minimum standards for compliant vehicles and four charging classes** covering different types of vehicle, A-D.
- There are **exemptions** for disabled, military, historic and specialist vehicles. Specialist vehicle exemption will need to be apply for with local authorities.
- Limited local exemptions to suit specific local situation, for example school and community buses, low income commuters.
- When driving into or within a charging CAZ, a vehicle will be subject to a monetary charge if it does not meet certain European Union emissions standards.



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CAZ vehicle types



CAZ	Vehicles types included
A	Buses, coaches, taxis, PHVs
B	Buses, coaches, taxis, PHVs, HGVs
C	Buses, coaches, taxis, PHVs, HGVs, vans, minibuses
D	Buses, coaches, taxis, PHVs, HGVs, vans, minibuses, cars (motorcycles optional)



Evaluation purpose

Purpose:

- Provide insights into the impacts of the implementation of Local Plans
- Provide evidence to support adaptive and future policymaking

Evaluation questions:

1. What impact have Local Plans had on air quality, specifically in relation to ambient NO₂ concentrations?
2. What impact have Local Plans had on health outcomes?
3. How have Local Plans affected behaviours?
4. How has the impact of Local Plans varied for different local groups?
5. How have external factors influenced effectiveness?
6. How does the approach to implementing Local Plans affect the scale and pace of impacts?

Resident behaviour

- Residents reported high levels of awareness of CAZs and, in Class D CAZ areas in particular, reported some behaviour changes.

The majority (at least 3 in 4) of residents in each area reported knowing at least a little bit about the **CAZs**. Highest awareness was reported in Class D CAZs (86% knew at least a little in Birmingham, and 91% in Bristol).

Class D CAZs, overall, can be said to have encouraged **some residents to use more sustainable or active** forms of travel.

Most residents still use a car to travel into the **Class D CAZs**, but those who are most likely to do so, were also **most likely to have changed their behaviours**, including by upgrading or replacing vehicles.

Business behaviour

Of businesses with at least one non-compliant vehicle, most reported having changed their behaviours in at least one way

The most common behaviour change was for businesses to **replace their vehicle** or to **re-route trips around the zone**.

Re-routing: 38% of businesses in B&NES and Birmingham, 36% in Bradford, and 76% in Sheffield reported doing this at endline.

Replacing vehicles: 30% in B&NES, 38% in Birmingham and Bradford, and 27% in Sheffield.

Businesses were **less likely** to change the **frequency or mode of travel into CAZs**.

Frequency: In most areas surveyed, there was little difference between baseline and endline surveys, reporting slight but not significant changes.

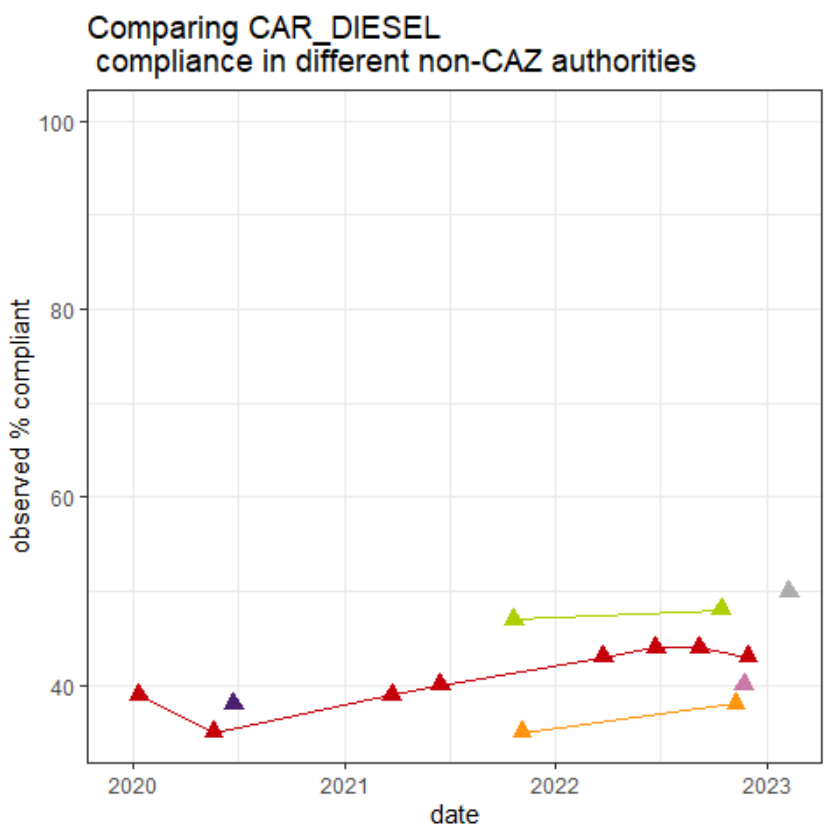
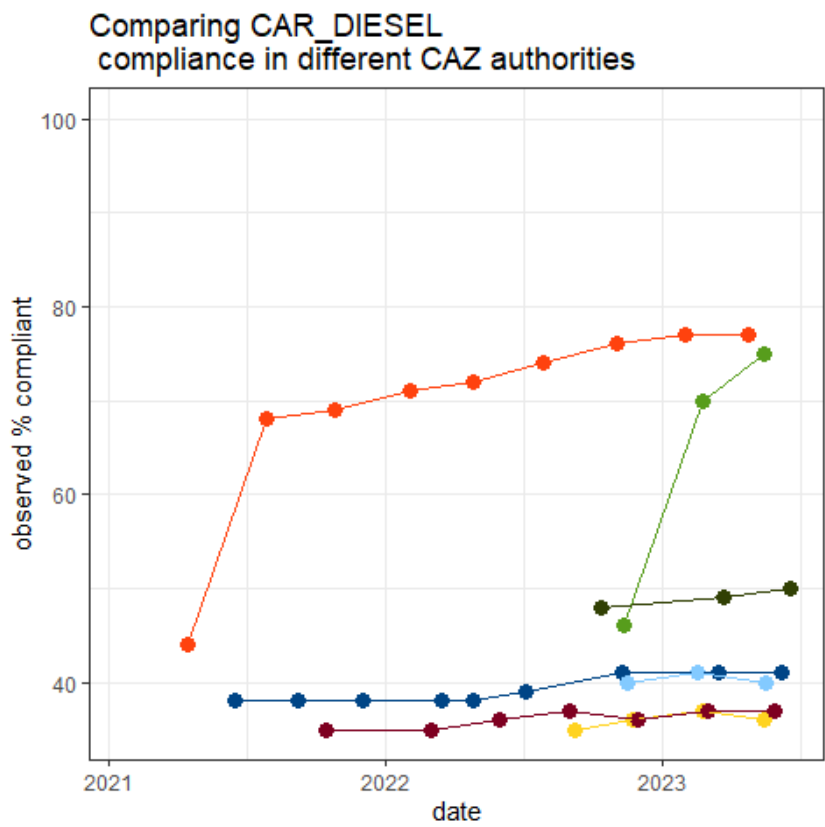
Mode: Across modes, there were also limited changes to how businesses travelled into and around the zones.

Vehicle types and compliance rates – CAZs and non-charging

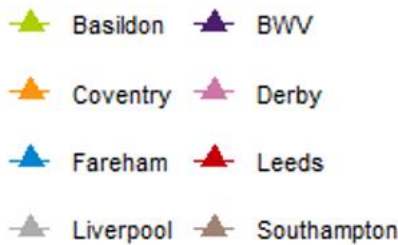
- Increase in compliance across all vehicle types

Passenger car (diesel)

CAZs



Non-charging

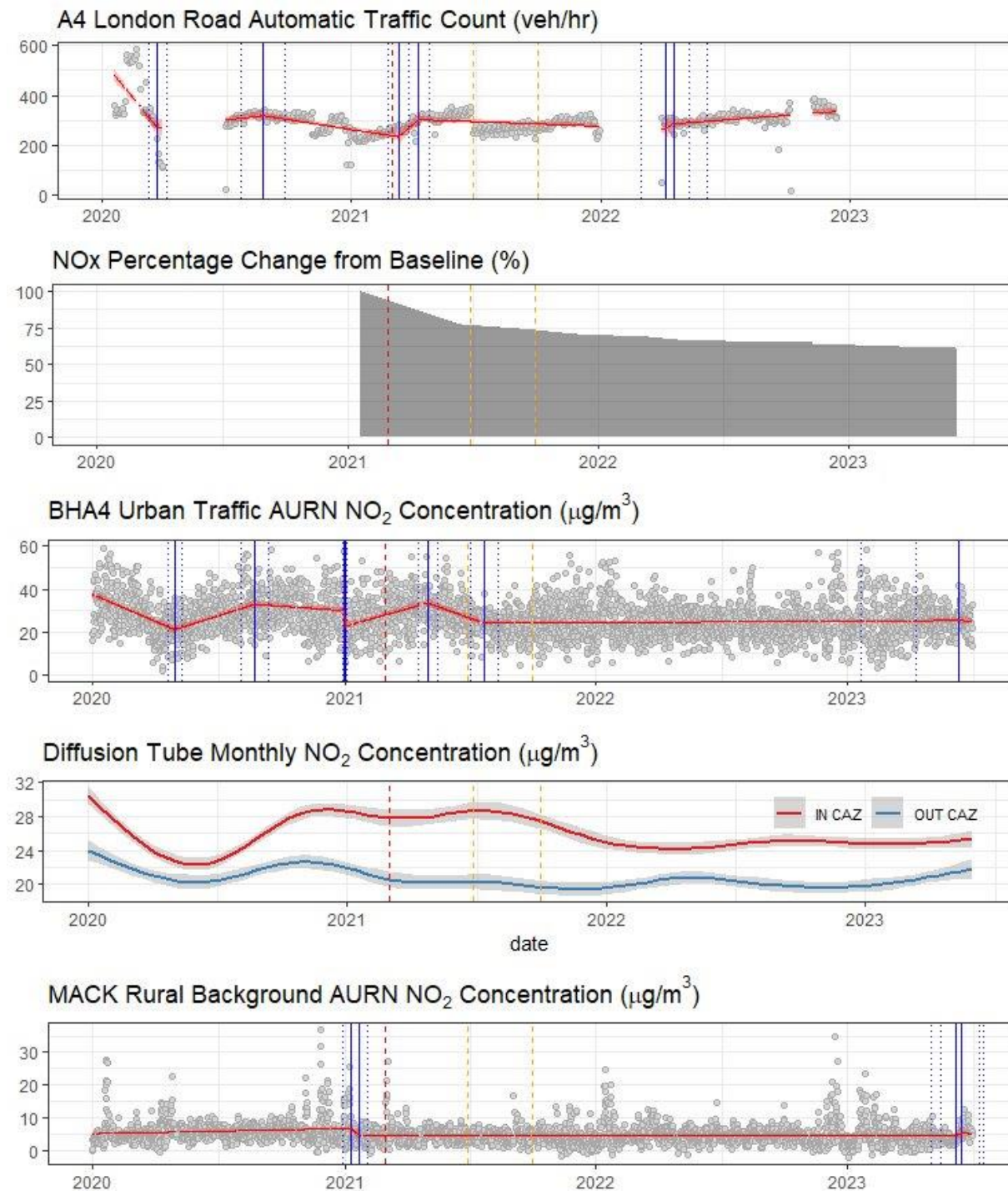
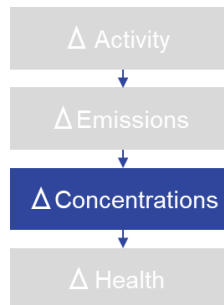


Impact on Air Quality

- Theory of Change (ToC)
- Example Bath & North-East Somerset
- Triangulating evidence:
 - Traffic flow
 - NOx Emissions
 - Trends hourly NO₂ (CAs)
 - Area Grouped DTs (in/out CAZ)

Note: *deseasonalised* and *deweathered* air quality measurements (CAs and DTs) using **AQEval** and development **DTtools** R packages

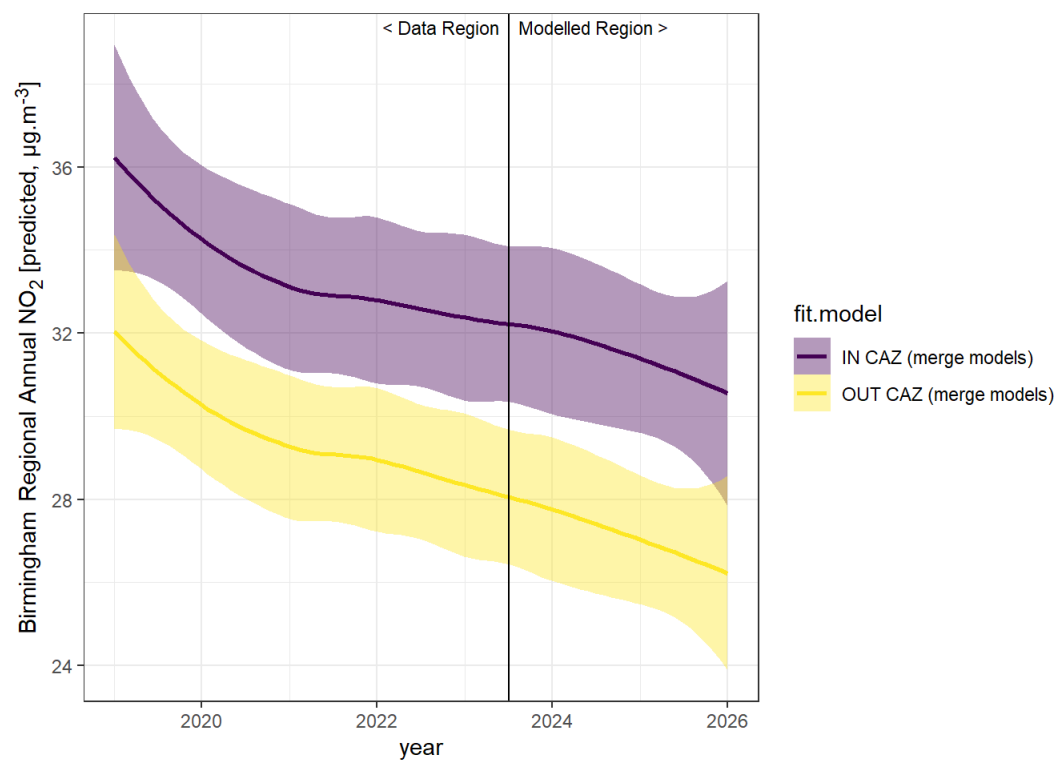
- *Provisional analysis, under review – subject to change*



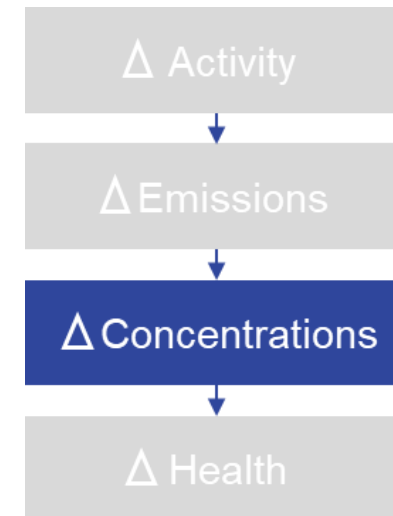
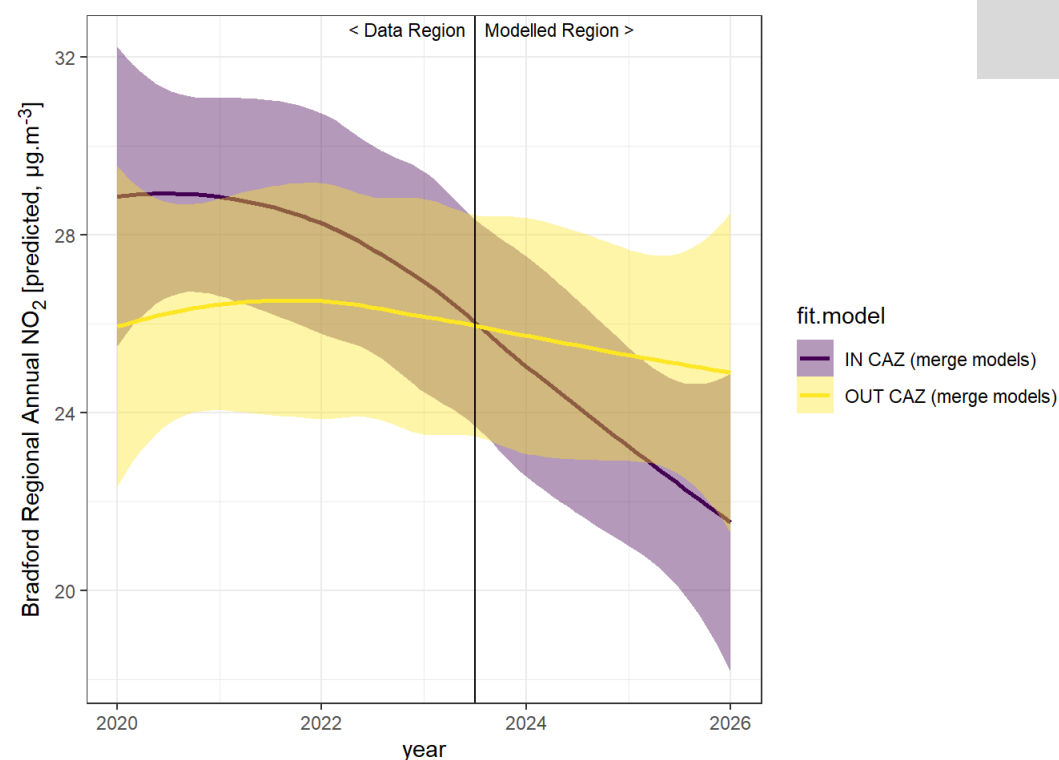
Impact on Air Quality

- Diffusion Tube NO_2 trends inside and outside CAZ areas from January 2020 to end of June 2023 e.g.

Birmingham class D CAZ



Bradford class C CAZ



Note: *deseasonalised* and *deweathered* air quality measurements (CAs and DTs) using **AQEval** and development **DTtools** R packages

- Provisional analysis, under review – subject to change*

Health Outcomes

- Research indicated some positive outcomes, but research faced challenges

Qualitative Research

- Small-scale qualitative research with residents with respiratory health conditions found anecdotal evidence of positive health outcomes
 - E.g. Fewer onsets of symptoms with their asthma and/or COPD requiring medical attention and less frequent trips to the hospital

Quantitative Research

- Case studies explored self-reported changes health, asking about prevalence of respiratory conditions.
 - Showed very limited changes in the prevalence of heart and respiratory illnesses between baseline and endline
 - Often the base size was too low to be representative

“I am asthmatic, and [the CAZ] has helped me. I don’t need to use my inhaler as much when I go into the city... Previously I was constantly having to use my pump.” (Qualitative Interview Participant)

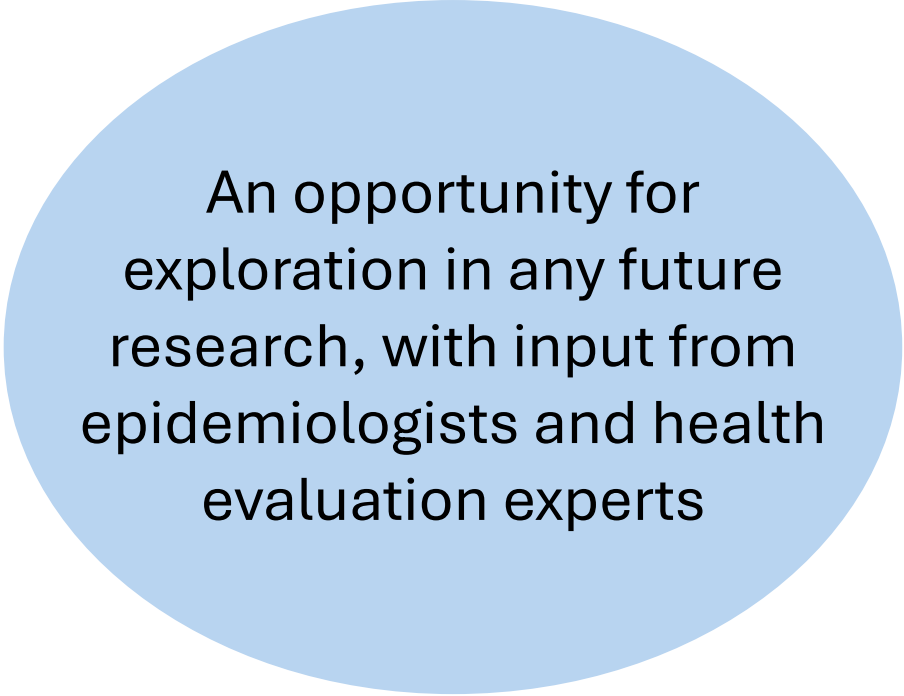
“I think [my health] has improved [with the] CAZ. For me, with cleaner air, I feel that bit healthier, and it means less trips to doctors. I think that would be same for others in my predicament, so it’s less harsh on the public purse.” (Qualitative Interview Participant)

Health Outcomes

- **Research indicated some positive outcomes, but research faced challenges**

Secondary Datasets

- We also explored opportunities for analysing public datasets (e.g. NHS emergency admissions), but this faced challenges:
 - COVID-19 impacted respiratory condition data
 - Data collection changed over the pandemic, meaning data cannot be compared before/after
 - GP waiting lists & other barriers to treatment mean it does not show the full picture
 - Doesn't provide evidence on severity or onset of new illness



An opportunity for exploration in any future research, with input from epidemiologists and health evaluation experts

Learning from the evaluation

Conclusions

Evaluation questions

- **Local Plans work!** Average ambient NO₂ concentrations falling in most areas, faster in CAZ areas in place > 12 months plus comparison with national control
- CAZ more direct measurable fleet changes - under-estimates shift
- **Evidence of behaviour change** with more compliant vehicles, re-routing, take up of non-charging measures
- **Impact of global polycrisis** – Brexit, Ukraine war, COVID-19 and resulting cost of living challenges

Issues

- **Engagement effective but still misunderstanding** about purpose of CAZs (revenue for LAs)
- **Distributional impacts evident** and more focus needed on addressing this
- **Health impacts challenging** to fully assess due to time lags and confounding factors
- **Growing EV market complicates attribution** and needs to be considered in more depth
- **Impact of CAZ investment in wider transport** projects not explored