

Full Analysis

In developing this recommendation a number of options have been assessed. These are presented below. Further details on the rationale behind the recommendation can be found in the tables on the following page.

| Options | 2020 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|-------------------------------------|--|---|------|------|-------------------------|------|------|-------------------------|
| Option 1 | All Renewals to be EURO 5 standard as minimum | | | | | | | All Renewals to be ULEV |
| Option 2 | All Renewals to be EURO 5 standard as minimum | | | | All Renewals to be ULEV | | | |
| Option 3 (RECOMMENDED) 19 | Newly licensed vehicles to be EURO 4, EURO 6 or ULEV standard as minimum (not EURO 5). All Renewals to be EURO 4 standard as minimum | Newly licensed to be ULEV or at least Euro 4 if replacing an existing Euro 4, Euro 5 or Euro 6 due to the vehicle being written off by an insurance company or is a temporary courtesy car due to repairs | | | All Renewals to be ULEV | | | |

Impact on fleet profile

| Options | 2020 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|-------------------------------|---|------|------|------|----------|------|------|----------|
| Option 1 | 78% fleet upgrade to at least EURO 5 | | | | | | | ALL ULEV |
| Option 2 | 78% fleet upgrade to at least EURO 5 | | | | ALL ULEV | | | |
| Option 3 (RECOMMENDED) | 52% fleet upgrade from EURO 1,2,3 to 4, 6 or ULEV | | | | ALL ULEV | | | |

Rationale for choice of milestone year for 100% ULEV fleet:

| Options | Pros | Cons |
|-------------------------------------|---|---|
| 2028 | <p>9 years for an owner to invest in a EURO 5 now and recoup investment before moving to a ULEV</p> <p>Allows time before enforcing ULEV standard for teething problems with vehicles to be resolved.</p> <p>By 2028 there may be a second hand market for ULEV taxis</p> <p>Less ambitious than the County Council aspirations and the second phase of the Zero Emissions Zone roll out.</p> | <p>Does not provide certainty of ULEV adoption to the commercial operator of the taxi charging points that the city council is installing as part of the Go Ultra Low Oxford: Taxi Scheme. May impact Council's ability to secure the lowest charging tariff for drivers when tendering for this service.</p> <p>Is less ambitious than leading cities' emissions standard requirements. This is a reputational risk given Oxford's ambitious to move towards a zero emissions city. There may also be an impact on credibility with funding bodies.</p> <p>Relies on supporting measures to incentivise early adoption of ULEVs and achieve the desired outcome for emissions levels</p> |
| 2025 (RECOMMENDED) | <p>Emissions levels, and associated health benefits, improve three years earlier than the 2028 option.</p> <p>Offers certainty of ULEV adoption for the commercial operator of the taxi charging points. So the Council will have greater leverage to secure a low tariff for charging when selecting an infrastructure partner, which in turn benefits the taxi trade through lower running costs.</p> <p>A fully ULEV fleet three years earlier than the 2028 option – the co-benefits from showcasing ULEVs to customers are achieved earlier too.</p> <p>Owners who wish to invest in a EURO 4 or EURO 6 before the move to ULEV can do so now and are incentivised to do so asap – in order to maximise the payback. Thus incentivising improvement in emissions of fleet faster than a 2028 target year.</p> <p>Allows time before enforcing ULEV standard for teething problems with vehicles to be resolved.</p> <p>Aligns with the aspirations of Oxfordshire County Council, supported by Oxford City Council, phasing in of the Zero Emissions Zone.</p> | <p>This proposal just matches the timelines for fully ULEV fleet in Nottingham, Cambridge and Slough: it is not more ambitious. Coventry will bring in a full ULEV fleet earlier, in 2024.</p> <p>Relies on supporting measures to incentivise early adoption of ULEVs</p> <p>Impacts on the trade sooner regarding vehicle investments.</p> |

Rationale for introducing an interim emissions standard milestone:

| Options | Pros | Cons |
|--|--|--|
| <p data-bbox="91 395 389 485">No interim milestone – just a year by which all are ULEV</p> <p data-bbox="91 730 136 775">21</p> | <p data-bbox="425 395 1243 456">A simple policy that allows a market-led approach to adopting ULEV technology</p> | <p data-bbox="1265 395 2069 456">Emissions levels will take longer to achieve – the oldest vehicles on the fleet could still be there up to 2025</p> <p data-bbox="1265 475 2069 596">Is less ambitious than leading cities' emissions standard requirements. This would undermine Oxford's claim to lead the way and is a reputational risk. There may also be an impact on credibility with funding bodies in future project bids.</p> <p data-bbox="1265 616 2069 705">By not triggering early upgrades of the worst vehicles we may miss opportunities to encourage and support early adoption in a targeted manner.</p> <p data-bbox="1265 724 1951 785">Feedback from the local trade was broadly in favour of an achievable 2020 milestone.</p> |
| <p data-bbox="91 831 353 940">Include one or more interim milestones (RECOMMENDED)</p> | <p data-bbox="425 831 1196 920">By triggering upgrade of part of the fleet, we can target and work with the willing to support early adoption of ULEV. Prioritising the poorest performing vehicles first.</p> <p data-bbox="425 940 1111 1000">Feedback from the local trade was broadly in favour of an achievable 2020 milestone.</p> <p data-bbox="425 1019 1232 1109">This option recognises that not all owners are early adopters of new technology like ULEVs, but ensures that all must modernise and deliver improved emissions.</p> | <p data-bbox="1265 831 2029 892">A slightly more complex policy to implement and communicate – though the owners do know the licensing policy in detail already.</p> |

Rationale for choice of interim milestones:

| Options | Pros | Cons |
|---|---|--|
| <p>All vehicles at least Euro 5 from January 1 2020</p> | <p>Based upon feedback from the local trade.</p> <p>78% or 83 vehicles of the fleet will upgrade by 2020 – those currently EURO 1,2,3,4 standard</p> | <p>The most common Oxford Euro 5 Hackney carriage, the Euro 5 LTI TX4, has been found to produce 50% more NOx emissions than the LTI Euro 4 taxi, and 25 %more carbon. This means that a policy encouraging Euro 5 would have a negative impact on fleet emissions.</p> <p>Such a large number of upgrades may mean that the council isn't able to identify and support potential ULEV early-adopters as effectively due to lack of resource.</p> <p>EURO 5 is not a high standard for emissions. This standard in particular is evidenced to be very poor performing for real-life emissions compared to vehicle testing emissions. There is a reputational risk that it is associated with the emissions scandals of recent years.</p> |
| <p>Phased start (RECOMMENDED)</p> <p>From Jan 1st 2020. renewals must be vehicles at least Euro 4 New applications must be EURO 4, Euro 6 or ULEV standard</p> <p>All newly licensed vehicles must be ULEV standard from Jan 1st 2022, unless an exemption applies.</p> | <p>This is less stringent than the suggestion from the local trade.</p> <p>It allows owners of EURO 4 vehicles to continue to operate these models until 2025 and make the transition directly to the ULEV standard. This, in combination with ensuring all newly licensing vehicles are either EURO 4, EURO 6 or ULEV, we avoid increasing the number of poorer performing EURO 5 vehicles on the fleet.</p> <p>52%, or 56, vehicles of the fleet will upgraded by 2020 – those currently EURO 1, 2, 3 standard.</p> | <p>A slightly more complex policy to implement and communicate.</p> <p>EURO 4 may not appear to be a high minimum standard for emissions. However implementing a EURO 5 standard would incentivise owners to move from EURO 4 to EURO 5 and a recent study has shown that EURO 5 taxis are significantly worse in terms of emissions performance than EURO 4 models. A EURO 6 minimum standard for renewals is not consistent with a phased approach that allows the trade to thrive while making the journey to zero.</p> |

Environmental and health benefits

The proposed measures will lead to a phased improvement of the hackney fleet, beginning with the worst performing vehicles.

In the “fast take up” scenario it is assumed that all vehicles triggered for replacement are replaced by ultra-low emissions vehicles (even if a lower standard is allowed). In the “slow take up scenario” it is assumed that vehicles triggered for replacement are replaced with a vehicle meeting only the minimum permissible emissions standard.

In addition, as taxis are used by visitors and local residents we may expect an additional benefit due to the normalisation of electric vehicles accelerating uptake by other stakeholders.

Fleet nitrogen oxides emissions

| Take up | From 1 st Jan 2020 | From 1 st Jan 2025 |
|---------|-------------------------------|-------------------------------|
| Fast | 45% reduction NO _x | 93% reduction NO _x |
| Slow | 7 % reduction NO _x | 93% reduction NO _x |

| Take up | Number taxis From 1 st Jan 2020 | | | | From 1 st Jan 2025 |
|---------|--|--------|--------|------|-------------------------------|
| | EURO 4 | EURO 5 | EURO 6 | ULEV | ULEV |
| Fast | 27 | 20 | 4 | 56 | 107 |
| Slow | 27 | 48 | 32 | 0 | 107 |

Background: Measures in leading cities in the UK

Coventry

- From 1st January 2019 only EURO 3 or better will be renewed and new applicants must meet the EURO 6 standard
- From 1st January 2020 only EURO 4 or better will be renewed and new applicants must meet the ULEV standard
- From 1st January 2022 only EURO 5 or better will be renewed and new applicants must meet the ULEV standard
- From 1st January 2024 only ULEV or better will be renewed and new applicants must meet the ULEV standard

London

- From 1 January 2018, new applicants will need to be Zero Emissions Capable (ZEC).
- A 1st-time vehicle licence will no longer be granted to a diesel taxi. ZEC taxis with petrol engines must meet the most recent emissions standard
- The existing 15 year age limit on renewals means that without further change, the fleet will be fully ULEV by 2032

Nottingham

- From 2020: Vehicles over 10 years old must be Euro 6 or a ULEV. Vehicles over 14 years old will be refused a licence.
- From 2025: Newly licensed vehicles must meet the ULEV standard
- From 2030: No vehicle will be licensed unless it meets the ULEV standard

Birmingham

- From December 31, 2019, vehicles must be either Euro 4 (petrol) or Euro 6 (diesel) standards, as a minimum.
- Ultra Low Emission Vehicles (eg hybrids), Zero Emissions Vehicles or Zero Emission Capable Vehicles will also be licensed.
- Licences for vehicles that don't comply with these standards can be renewed in the 12 months before this deadline, but will expire December 31, 2019.
- Drivers who have acquired a compliant vehicle before the deadline will not have to do anything as their vehicles will be licenced for 12 months.

Manchester

- When a vehicle is first licensed (including a replacement vehicle) it is expected to meet (and maintain) the current (*currently Euro 6) or immediate previous Euro emission standard (*currently Euro 5). This standard must be maintained throughout the period that the specified vehicle is licensed.
*These will change as Euro emissions change.