



Department
for Transport

Zero Emission Bus Regional Areas (ZEBRA) 2 Application Form

Applications to the Fund will be assessed against the criteria set out here and in the guidance document.

**Proposals must be received no later than
4pm on 15 December 2023.**

You will receive confirmation that we have received your proposal within 5 working days.

An electronic copy only of the bid including any supporting material should be submitted to BUSES@dft.gov.uk

Enquiries about the Fund may be directed to BUSES@dft.gov.uk
Please include “**ZEBRA 2**” in the subject line for the email.

**You must
also complete
and return a
Greener Bus Tool
(separate document)**

Section 1

Applicant information

This section is not scored.

Bidding authority

Lancashire County Council

Bid Manager

Name and position of the official with overall responsibility for delivering the proposed bid.

First name

Phil

Last name

Durnell

Position

Director of Highways and Transport

Contact telephone number

Email address

Postal address

Lancashire County Council

County Hall

Fishergate

Preston

Postcode PR1 8XJ

Website address for published application

<https://www.lancashire.gov.uk/council/strategies-policies-plans/roads-parking-and-travel/bus-se>

Section 2 – Key requirements

LTAAs will need to meet a number of key requirements to be able to receive funding. **This section is not scored.**

The Department reserves the right to reject any application which does not meet all these key requirements.

Please select Yes or No.

2.1 Can you confirm you have an Enhanced Partnership in place or are following the statutory process to decide whether to implement a franchising scheme?

Yes No

2.2 Can you confirm that all vehicles will meet the enhanced accessibility standards set out in the scheme guidance?

Yes No

Please name the annex(es) which provide quotes from zero emission bus manufacturer(s).

The Annex file with the quotes from zero emission bus manufacturer's is titled: "LancsCC_2.2&8.2.2.1_BusQuotes.pdf"

2.3 Can you confirm that you have letters of support from the bus operator(s) as per the below?

- LTAs must provide letters of support from the bus operator(s) who will be operating the zero emission buses, with signatures from the national CEO and local area MD, committing to investing in the buses and operating them in the area for a minimum of 5 years. The national CEO or equivalent should be empowered to commit the bus operator to operating the buses and providing any required funding for the proposed scheme. LTAs do not need to provide letters of support for all operators in the area, only the operators who will be operating the zero emission buses.
- If LTAs intend to award a contract to operate the bus service where the zero emission buses will be used, they must provide evidence that bus operators will submit bids to operate the bus service. This should take the form of letters from bus operators expressing their interest in seeking to bid to operate the bus service.

Yes No

2.4 Please name the annex(es) which provide letters of support from the bus operator(s).

The Annex file with the letters of support from the bus operators is titled: "LancsCC_2.3_Letter of Support from Bus Operators.pdf"

2.5 Can you confirm that all ZEB Funding monies administered will take account of subsidy control obligations, this applies to any onward award of ZEBRA monies to third party organisations. Can you confirm that you have received legal advice?

Yes No

Please name the annex containing legal advice that has been obtained.

The Annex file with the legal advice is titled: "LancsCC_2.5_Legal_Advice.pdf"

2.6 In the case of proposals seeking funding for their battery electric proposals, can you confirm the proposal achieves a minimum low value for money using the Department's updated Greener Bus Tool?

If this has not been met the Department reserves the right to not assess the rest of the application.

Yes No

2.7 In the case of proposal for hydrogen fuel cell buses should provide evidence of costs of hydrogen fuel. In line with other funding for hydrogen transport, proposals for hydrogen fuel cell buses will need to demonstrate that by March 2025 the buses will use hydrogen sourced with either Renewable Transport Fuels Obligation (RTFO) support or hydrogen that meets the UK's draft Low Carbon Hydrogen Standard (LCHS).

Yes No

Please name the annex containing a provisional offtake contract, budget estimate, letter or email from a hydrogen fuel supplier.

Section 3 – Rural eligibility

- 3.1** If you are seeking to apply for the funding that has been initially earmarked for ZEBs in rural areas you will need to demonstrate how you meet the rural definition of ZEBRA 2. Introduce ZEBs in a rural area explain in **no more than 300 words** how the area meets the definition of rural area set out in the guidance.

LTA's not seeking to apply for this funding do not need to complete this section.

This section is not scored and will be pass/fail.

The ZEBRA scheme in Lancashire will introduce buses in Local Authority Districts (LAD) that are both urban and rural. The selected bus routes are intensive services that mainly serve urban areas but will also benefit rural communities.

Lancashire is comprised of 14 LADs of which:

- 2 are classified as “mainly rural” and “largely rural”— Ribble Valley and Wyre respectively;
- 3 LADs are classified as “Urban with Significant Rural”—Chorley, Lancaster, and West Lancashire; and
- 9 are classified as “Predominantly Urban”— Blackburn with Darwen, Blackpool, Burnley, Fylde, Hyndburn, Pendle, Preston, Rossendale, and South Ribble.

For this scheme there are a total of 10 bus routes being considered that are operated by 3 operators: routes 35 and 19 operated by Preston Bus; routes 2X, 1, 1A, and 100 operated by Stagecoach Cumbria and North Lancashire; and routes 1, 111, and 3 operated by Stagecoach Merseyside and South Lancashire.

Six of these 10 routes serve to connect rural and urban communities and provide rural residents with access to services and economic opportunities located in urban centres: Of these routes:

- Route 1 operated by Stagecoach Merseyside and South Lancashire has almost 30% of its journey within a “Mainly Rural” LAD (Ribble Valley). This route connects rural communities in Ribble Valley to job opportunities and services in Preston— a medium size urban centre;
- Route 111 connects central Preston with rural areas in the south located in South Ribble, Chorley and West Lancashire— these LADs are classified as “Urban with Significant Rural”:

Section 4 – Bid description

- 4.1** Please complete the following fields with key information about your bid. This information should match the information that is included in the Greener Bus Tool. We suggest that section 6 is completed at the end of completing your application to ensure numbers reflect the final figures.

This section is not scored.

Total grant amount	£11,602,942
Local transport authority funding	
Other public sector funding	
Bus operator funding	
Other private funding	
Vehicle grant amount	
Infrastructure grant amount	
Total number of buses	69
Total capital cost	
Vehicle capital cost	
Infrastructure capital cost	

- 4.2** In **no more than 750 words** applicants should provide information on the project area. This should include a list of the bus routes where the ZEBs will operate and set out the location of the bus depot and/or other locations where supporting infrastructure will be located.

This section is not scored.

This is a package bid focused on two areas in Lancashire (See Map in Annex):

- Preston and the adjacent Local Authority Areas (LADs) of Ribble Valley, Preston, South Ribble, Chorley and West Lancashire; and
- The Lancaster/Morecambe urban area.

Two Stagecoach subsidiaries, Cumbria & North Lancashire, and Merseyside & South Lancashire along with Rotala-owned Preston Bus are participating in the bid.

Three depots will be involved:

- Stagecoach North Lancs Morecambe depot, on the White Lund Industrial Estate in Morecambe, which opened in 2001;
- Stagecoach South Lancs Selbourne Street, Preston, depot originating from the historic Ribble operation and dating from 1928; and
- Preston Bus Deepdale Road depot, which is the former Preston Corporation Transport tram and bus depot and dates from 1904, but is currently subject to a major programme of rebuilding to provide the latest facilities.

Section 5 – Assessment Criterion 1 – Strategic Case

- 5.1** Applicants should set out in **no more than 1,000 words** how they meet the case for change part of the strategic case as set out in the guidance.

Two rounds of engagement were held with all operators in Lancashire, seeking expressions of interest in participating in a bid for ZEBRA2 funding. Five operators responded and preliminary discussions were held to explore their suggestions.

This ZEBRA bid put forward by Lancashire County Council is for 69 buses, split:

- 31 Stagecoach Cumbria & North Lancashire;
- 28 Stagecoach Merseyside & South Lancashire; and
- 10 Preston Bus.

This represents about 10% of the total bus fleet in Lancashire and represents a significant step-change towards the electrification of the bus fleet in Lancashire. This bid for Lancashire will complement the successful Round 1 ZEBRA bid that was made by Blackpool Council for Blackpool Transport, and which is expected in due course to see electric buses operate across the border into Lancashire.

An estimated 4.7 million bus service kilometres are converted from diesel to electric bus operation each year with Lancashire's ZEBRA2 bid, saving an estimated 64,000 tonnes of carbon and 32 tonnes of nitrogen oxide emissions over the projected 17-year lifetime of the buses.

Lancashire County Council has a strong track record of bus service and infrastructure development. It collaborated with Blackburn with Darwen Council in the delivery of the Pennine Reach package of bus priority schemes, and it is delivering on bus priority measures funded through its £34.2m BSIP award (joint with Blackburn with Darwen), with the identified services for ZEB upgrades benefiting from these investments:

- Stanifield Lane / Lydiate Road junction upgrade (Leyland) (service 111);
- Leyland Road parking restrictions (Penwortham) (service 111);
- Longridge town centre bus stop upgrade (service 1, Preston);
- Tulketh Brow / Fylde Road / University junction improvements and bus priority (Preston) (service 35);
- Grimsargh Bridge replacement (Longridge corridor) (service 1, Preston);
- Ribbleton Lane bus priority (Preston) (service 1);
- Scale Hall Lane / Morecambe Road bus priority improvement (Lancaster) (services 1, 1A, 100);
- Lancaster City Centre traffic light smart bus priority upgrade (services 1, 1A, 100, 2X); and
- Bowerham bus priority (Lancaster) (service 100).

Operators were requested to specify the preferred technology. All proposals were for battery-electric buses. Operators were asked regarding hydrogen. Responses were that it was not considered as suitable for the identified services, and there was wider corporate support for battery electric. Operators have not ruled out hydrogen in the future, but with current stages of technology development and availability/range, the current preference is battery electric. Also considering costs for upgrading depots to cater for hydrogen vehicles and wider property considerations, battery-electronic technology is considered to require fewer changes to buildings – reducing disruption to depot operations during the delivery of the charging infrastructure and other works.



- 5.2 Applicants should set out in **no more than 500 words** how the proposal meets the community benefit with regard to employment and training criteria set out in the guidance.

LCC is committed to delivering additional economic, social and environmental benefits for the people of Lancashire. Our Social Value Policy Framework sets out 5 core objectives which we have selected based on careful assessment of Lancashire's priorities. Our first priority is to 'promote training and employment opportunities for the people of Lancashire – tackle unemployment and facilitate the development of skills'.

The roll out of ZEBs in our region will be managed by 3 operators: Preston Bus Ltd, Stagecoach Cumbria and North Lancashire and Stagecoach Merseyside and South Lancashire. The operators will be responsible for the day-to-day maintenance of the new vehicles, as well as staffing the routes. Stagecoach Merseyside and South Lancashire alone employs 50 engineering staff, of whom 22 are skilled engineers. This provides a valuable opportunity to retain and develop the skills of a number of engineering staff across the operators.

In addition to retaining existing employees, Stagecoach commit to take on one new higher level engineering apprentice once the new ZEBs come into service. This opportunity will be open to all applicants. LCC are committed to supporting young people into work and, as such, will identify target areas which are classed as deprived against one or multiple factors and ensure that the apprenticeship opportunity is appropriately advertised through our existing employability support network. This will help to ensure that those who face barriers to employment are fully aware of opportunities and can access support if they wish to apply. Preston Bus Ltd and Stagecoach have committed to upskilling their workforce and providing training opportunities for staff who will be working on/with the new ZEBs. This reflects our

- 5.3 Applicants should set out in **no more than 500 words** how the proposal meets the community benefit with regard to the supply chain criteria set out in the guidance.

Our Social Value Policy Framework establishes that our first priority is to promote training and employment opportunities for the people of Lancashire. This commitment incorporates support for businesses in Lancashire and supporting the local economy by spending within the local supply chain. Given that the bus operators LCC are working with have experience of multiple previous EV introduction projects, there is an existing framework of supply partners in place which does not currently include local businesses or SMEs.

However, there is opportunity for both of our identified operators (Stagecoach and Preston Bus Ltd) to use local supply chain and contracts to deliver necessary upgrades within their depots to accommodate the new ZEBs. Stagecoach are committed to creating lasting partnerships with local businesses and contractors not to simply install infrastructure but to collaborate with them on longer term strategic goals for wider community benefit, in line with their sustainability strategy. Preston Bus Ltd have expressed their willingness to explore use of local contractors. At LCC, it is our expectation that incorporation of social value into our contracts will significantly help to deliver our strategic priorities. It has the potential to provide significant additional impact on multiple LCC objectives and in communities with the highest needs. Delivery of additional community benefits is therefore considered an objective for all LCC contracts and will be explored at every possible avenue within the procurement and roll out of zero-emission buses.

- 5.4 Applicants should set out in **no more than 500 words** how the proposal meets the wider decarbonisation benefits criteria set out in the guidance.

Transport is the largest single source of CO₂ in Lancashire, comprising 33% of total emissions. LCC's Environment and Climate Strategy sets out actions the authority is taking towards decarbonisation by 2030 and maps out further improvements over the next three years.

Following the Lancashire Climate Summit in March 2022, action being taken by LCC Under the 'Travel and transport' heading includes:

- Investing in zero emission and low emission bus fleets as part of the Bus Service Improvement Plan, which also helps to reduce CO₂ by encouraging more people to use bus travel; and
- Installing 150 electric vehicle charging points across Lancashire;
- Reducing emissions from their vehicle fleet. Following trials, the first service to go electric will be the county council's parking enforcement team, which will be kitted out with 12 new electric cars.

Buses contribute 2% of transport's total emissions. Transport decarbonisation projects are already being delivered, including the £40m Pennine Reach bus rapid transit scheme in East Lancashire and bus station investments in Rawtenstall and Preston along with the £34m BSIP funding award. The County's £165m ambitious plan for bus services, and proposals for a network of Mobility Hubs to facilitate modal shift, are further steps towards decarbonising bus services in Lancashire, while the improvements to bus services and fares initiatives being delivered with BSIP funding help to promote mode shift from car by improving the quality of the bus offer. These go alongside other sources of funding to deliver de-carbonisation projects including £9.4m Active Travel Fund, Local Electric Vehicle Infrastructure Fund (£10.8m provisional funding for 2024/5), Transforming Cities Fund and Levelling Up.

The Lancashire Enhanced Partnership between Lancashire County Council and the bus operators notes that there are currently no zero-emission buses in Lancashire and includes a requirement on bus operators to convert their fleets to ultra-low emission and zero-emission standards where feasible and subject to funding. This is consistent with the National Bus Strategy ambition for zero-emission bus fleets and the commitment in Lancashire County Council's joint Bus Service Improvement Plan with Blackburn with Darwen Council to pursue opportunities for bus de-carbonisation, including through the ZEBRA process.

Of the district authorities subject to this bid, Preston City Council has a commitment to aim for net zero by 2030. Lancaster City Council is progressing a programme of initiatives, recently being assessed by Climate Emergency UK as being the top-performing district council in an assessment of the actions being taken to achieve net zero. It is already progressing the electrification of its 160-vehicle fleet, introducing electric refuse collection vehicles, vans and

5.5 LTAs must comply with the public sector equality duty (PSED – Section 149 Equality Act 2010). PSED consideration helps to ensure that people who share characteristics defined as “protected” by the Act will benefit from the scheme. The PSED also requires authorities to identify any likely negative impacts and to actively seek to remove or reduce these as far as possible.

We expect LTAs to consult with relevant stakeholders who represent people from the protected characteristic groups. Guidance on the PSED is available from the Local Government Association.

LTAs should set out in **no more than 1,000 words** how their proposal will meet the expectations of the Equality Act.

The public sector equality duty (Equality Act 2010) states that a public authority must, in the exercise of its functions, have due regard to the need to:

- Eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act;
- Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it; and
- Foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

The Equality Impact Assessment considers the likely impact of a scheme or proposal on Protected Characteristic Groups (PCGs): age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion, sex, and sexual orientation.

The local PCG prevalence and stakeholder feedback has been examined to build an evidence base highlighting the most prevalent PCG groups across Lancashire.

Using this evidence base, the ZEBRA2 proposals have been examined to assess the likely impact on the PCGs. An EqIA is an evolving document that can be developed further as the programme progresses. The current assessment seeks to identify likely impact on PCGs, along with recommendations for further work at subsequent stages.

Background evidence

Census 2021 data was used to examine the prevalence of PCGs across Lancashire, which was compared to the England and Wales averages. The proportion of the Lancashire population by sex, children, young people, race, religion, sexual orientation and gender identity, is in line with England and Wales.

There is however, a slightly larger proportion of older people in Lancashire than England and Wales. Older people are more likely to be dependent on buses than most other age groups. Both total, and general, fertility rates for Lancashire are higher than those for England and Wales. This suggests on average, more pregnant people and those with small children may be using buses in Lancashire, than in England and Wales.

The proportion of people reporting that their daily activities were limited due to a disability was also higher in Lancashire than for England and Wales. People with disabilities make a greater proportion of their trips by bus than adults without disabilities. There is a higher proportion of people with hearing or vision related disabilities claiming personal independence payments in Lancashire than England and Wales.

Stakeholder feedback

The Sensory Impairment Team (Lancashire County Council) has provided feedback:

1. Safety: The risk for blind and partially sighted people not being able to hear electric buses, and therefore being unaware when the bus is moving and potentially stepping out into the path of a moving bus, both in the vicinity of bus stops and when crossing roads the electric buses.

5.6 LTAs seeking funding for a hydrogen fuel cell bus proposal that is poor VfM will need to demonstrate their proposal is innovative to receive funding. LTAs should set out in **no more than 1,000 words** how their proposals for hydrogen fuel cell buses will provide learning to the Department and wider government that will not be obtained from existing hydrogen fuel cell bus projects.

Proposals for hydrogen fuel cell buses that are a minimum of low VfM do not need to complete this section.

Section 6 –

Assessment Criterion 2 – Value for Money

Section 6 of the application form and Greener Bus Tool will be used to assess Value for Money. This represents the ‘Economic case’ of the Five Case Model.

6.1 Please state the proposed VfM category of the proposal e.g ‘low’ and the central BCR informing this e.g. ‘1.25’. The proposed value for money category for the investment proposal should reflect the central BCR, non-monetised impacts and risks and uncertainties. If the proposed VfM category has been uplifted from that implied by the central BCR, provide robust justification for this in **no more than 150 words. This should be a summary of the information provided in 6.3 and 6.4.**

The completed version of the Greener Bus Tool with the central BCR output should be provided alongside the submission along with evidence of key assumptions e.g. annual vehicle distance, estimated risk contingency amount.

The overall VfM category for the Lancashire investment proposal is Low with a central BCR of 1.46. This is an aggregation of the proposals from both Stagecoach operating companies and Rotala Preston Bus. Whilst there are non-monetised benefits outlined in this proposal, there has been no uplifting of this category to reflect them.

6.2 Please outline in **no more than 500 words** evidence informing assumptions related to:

- the estimated annual vehicle distance,
- the fuel/electricity consumption scenario chosen,
- annual infrastructure maintenance costs (if an annual maintenance cost is stated in the tool),
- electricity/hydrogen costs if local evidence is used
- battery replacement costs (if the suggested values in the GBT guidance are not used) and
- a quantified risk assessment (if conducted).

If the evidence is not in a suitable format, please summarise it here and signpost where supplementary evidence has been provided i.e. in a spreadsheet or e-mail as an annex. Further detail is available in the GBT guidance on the level of detail required for input assumptions.

The estimated annual vehicle distance is the weighted average of the bus kilometres data provided the bus operators participating in this bid.

The routes proposed are a mixture of inner and outer urban routes and the High energy consumption scenario has been used.

Annual infrastructure maintenance costs have been obtained from the respective bus operators.

Local evidence has not been used for electricity costs.

Operator estimates of the cost of battery replacement at 10 years have been used with an adjustment for the residual value of the batteries at end of vehicle life of 15 years.

A Quantified Risk Assessment has been carried out with no contingency sought in the bid.

The Annex file with the Quantified Risk Assessment is titled:

“LancsCC_6.2_Quantified_Risk_Assesment.pdf”

- 6.3** Discussion of any significant impacts of the scheme which have not been estimated by the tool (non-monetised impacts) should be outlined in **no more than 500 words**. If any significant non-monetised benefits have been identified, the scale of the change needed to reach a higher VfM category should be determined, by calculating the required % increase and absolute increase in present value benefits (PVB).

The central Benefit Cost Ratio value is estimated to be 1.46. This is a 'low' value and is built up of a present value of costs of £11,200,000 and a present value of benefits of £16,200,000. The BCR of 1.46 is just below the 'medium' value for money threshold of 1.5. To achieve this with the same costs would require a present value of benefits of £16,700,000. The benefits not valued in the Greener Bus Tool would need to sum to £500,000, a 3% increase over the present value of benefits.

The non-monetised impacts include:

- Replacement of diesel buses with electric buses will lead to a reduction in emissions of harmful pollutants at the roadside, particularly nitrogen oxides and particulates, much of this in densely-populated urban environments. The bus routes proposed for conversion to battery-electric bus operation pass 5 Air Quality Management Areas – 1 in Preston, 2 in South Ribble, 1 in Lancaster city centre and 1 in Greater Manchester. The transition to electric buses on these routes will reduce their current contributions to emissions at these AQMAs and have a small but positive impact on the air quality measured at these sites, particularly in the case of Lancaster city centre where the services proposed for conversion are a high proportion of the total;
- The proposals will also benefit rural areas, with an estimated 16% of route kms in LSOAs classified as rural - according to 2011 Census rural urban classification for LSOAs;

- 6.4** Discussion of any significant risks and uncertainties that might influence a scheme's VfM, with appropriate sensitivity tests to show the impact risks/uncertainties would have on the scheme BCR should be outlined in **no more than 500 words**. Completed GBTs with sensitivity tests should also be provided, with the file name clearly indicating which sensitivity test has been conducted. Refer to the GBT guidance for a suggested list of sensitivities.

The following significant risks of variation have been considered in the sensitivity analysis:

- Non Traded Cost of Carbon Scenario set to low – adjusts the BCR from 1.46 to 0.73
- Non Traded Cost of Carbon Scenario set to high – adjusts the BCR from 1.46 to 2.18
- Fuel/energy consumption scenarios set to high - adjusts the BCR from 1.46 to 2.29
- Fuel/energy consumption scenarios set to low - adjusts the BCR from 1.46 to 1.21
- Diesel operating cost set to low – adjusts the BCR from 1.46 to 1.02
- Diesel operating cost set to high – adjusts the BCR from 1.46 to 1.99
- Bus purchase costs increased by 10% - adjusts the BCR from 1.46 to 1.21
- Bus purchase costs decreased by 10% - adjusts the BCR from 1.46 to 1.75
- Estimated ZEB vehicle mileage reduced by 10% - adjusts the BCR from 1.46 to 1.26
- Estimated ZEB vehicle mileage increased by 10% - adjusts the BCR from 1.46 to 1.65
- Electric operating cost set to high – adjusts the BCR from 1.46 to 1.36
- Electric operating cost set to low – adjusts the BCR from 1.46 to 1.55
- Charging equipment costs increased by 10% - adjusts the BCR from 1.46 to 1.39
- Charging equipment costs decreased by 10% - adjusts the BCR from 1.46 to 1.52
- Battery replacement costs increased by 10% - no adjustment to the BCR of 1.46.
- Battery replacement costs decreased by 10% - no adjustment to the BCR of 1.46.

Section 7 –

Assessment Criterion 3 – Grant funding per bus

The grant funding per bus criterion will form part of the financial case of the Five Case Model. LTAs must complete the grant funding per bus calculator spreadsheet which will be used to calculate a grant funding per bus score.

[Download Grant Funding Per Bus Calculator Spreadsheet](#)

Section 8 – Assessment Criterion 4 – Deliverability

The Deliverability criterion draws together relevant aspects of the Finance, Commercial and Management Cases in the Five Case Model.

8.1 Finance Case

Together with grant funding per bus section 8.1 of deliverability will form the finance case of the Five Case Model.

8.1.1 LTAs should set out clearly in **no more than 1,000 words** all the sources of funding for their proposal, which should match the information included in the Greener Bus Tool. For all funding sources, except grant funding from the Government, LTAs should set out a short summary detailing the source of the funding and what approvals (e.g. investment or credit committees) are required to access the funding.

The financial elements of the bid have been derived from information and data provided by the respective bus operator partners. Lancashire County Council will enter into funding agreements with each bus operator based upon the grant conditions prescribed by the Department for Transport.

8.1.2 LTAs seeking to use finance other than from a bus operator(s) (e.g. private, UKIB, other) should set out in **no more than 1,000 words** the finance, what further steps would be needed to secure that finance on confirmation of any grant award from the scheme, and what other alternative sources would it seek to utilise if the external finance was subsequently not available.

Lancashire County Council is not seeking funding for this bus de-carbonisation project from any source other than this ZEBRA bid or operators' own resources.

8.1.3 Subsidy control

LTAs should set out in **no more than 1,000 words** a summary of the legal advice that they have received on how they will comply with subsidy control rules. LTAs must attach the full legal advice as a labelled annex.

This section is contributed by Freeths LLP and is based upon our view that the financial assistance proposed constitutes a subsidy (Subsidy). Compliance with the requirements of the Subsidy Control Act (SCAN2022) is accordingly essential.

8.2 Commercial Case

Section 8.2 of the deliverability criterion will form the Commercial Case of the Five Case Model.

8.2.1 LTAs should set out in **no more than 1,000 words** how they will comply with the requirements on procurement set out in the guidance.

Procurement Scope

Goods and services to be procured as part of LCC's proposed ZEBRA scheme are set out below:

Note that the ZEBRA funding received will be used for capital costs only (i.e. purchase of buses, charging infrastructure and power upgrades). All operating expenses will be paid by the operator partner(s).

ZEBs:

The operator partners will be responsible for procuring the 69 battery-electric buses, of which 21 will be single-decker and 48 will be double-decker.

The operator partners are responsible for contacting the manufacturers to get quotes on the vehicles and make sure these vehicles' technical specifications comply with the requirements of DfT specification. LCC will require each operator to demonstrate that they have undertaken a competitive, fair, transparent and non-discriminatory procurement process in selecting the vehicle manufacturer.

Depot Infrastructure Upgrades:

Each of the operator partners involved in this bid has their own depot requirements. In total, 32 charger points will be installed to accommodate the 69 buses. Grid connection and power supply upgrades will also be required. As with the buses, LCC will require each operator to demonstrate that they have undertaken a competitive, fair, transparent and non-discriminatory procurement process in selecting the vehicle manufacturer.


[see text version for table summarising procurement requirement]

Procurement Strategy: Battery-electric buses

The buses will be owned and operated by the operator partners. LCC will not own any of the assets involved in this ZEBRA bid. As the organisation responsible for operating, staffing, and maintaining the vehicles, and the organisation best placed to protect and secure residual value for the vehicles, the operator partners are best placed to own the vehicles. LCC will require that all vehicles have to be procured by the operator partners in a transparent and competitive process before orders are placed – whether this is a pre-existing framework or a new competition to be held on award of funding.

LCC will require that buses ordered have the necessary type approvals, including the accessibility certificate (Public Service Vehicle Accessibility Regulations) and the Zero-Emission Bus Certificate.

Procurement Strategy: Charging Infrastructure:

As with buses, LCC will not own any of the charging infrastructure being included in this bid; hence, the ownership of the charging infrastructure remains with the operator partners. The operator partners will procure, own and maintain in-depot charging infrastructure. 

8.2.2 Evidence of costs

LTA's should provide evidence that they, or one of their partners, has engaged with the supply chain to demonstrate reliability of costs. The Department reserves the right to reject any application which has not provided all the required quotes.

8.2.2.1 LTA's **must provide quotes from two manufacturers** for the cost of zero emission buses. LTA must also provide quotes from the manufacturers for the cost of an equivalent diesel bus. Please attach quotes in the form of a letter or email from suppliers as a separate annex(es). The annex(es) should be clearly labelled. LTA's must input the key information on these vehicles into the below table.

	Quote from preferred manufacturer	Quote from second manufacturer
Manufacturers name		
Make and Model of bus		
Number of buses in bid		
Vehicle technology (eg. Battery electric or hydrogen fuel cell)		
Cost per bus (£)		
Cost of diesel equivalent (£)		
Has evidence for the cost of this bus model been provided alongside the application form?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Link to ZEMO ZEB certificate*		
Battery manufacturer		
Battery Installed Capacity (kWh)		
Battery Usable Capacity (kWh)		
Maximum zero emission range for type of route		
Battery chemistry		
Plug type		
Rated charging power (kW)		
Charger compatibility (eg. AC, DC or both)		
Fuel cell manufacturer		
(For hydrogen proposals) Hybridised battery size		

continued overleaf

	Quote from preferred manufacturer	Quote from second manufacturer
(For hydrogen proposals) Fuel cell power rating (kW)		
Total system power rating		
Hydrogen Storage Capacity (kg)		
On board hydrogen Storage Pressure (bar)		
Vehicle length		
Passenger capacity (seated)		
Number of PSVAR compliant wheelchair spaces		
Number of additional flexible spaces		
Total passenger capacity		

* The Zemo Partnership (formerly Low Carbon Vehicle Partnership) have developed the Zero Emission Bus definition and test process, and a certification of compliance is provided as each bus type is tested. Bidders can find these certificates on Zemo Partnership’s website: www.zemo.org.uk/work-with-us/buses-coaches/low-emission-buses/certificates-hub

8.2.2.2 For proposals to introduce battery electric buses LTAs **must provide quotes from two suppliers** of charging infrastructure. Please attach quotes in the form of a letter or email from suppliers as a separate annex(es). The annex(es) should be clearly labelled. LTAs must input key information on charging infrastructure in the below table.

Electric	Quote from preferred manufacturer	Quote from second manufacturer
Manufacturers name		
Make and model name		
Number of charging units (charging unit with dual plug counts as one unit)		
Cost per charging unit		
Has evidence for the cost of this model been provided alongside the application form?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Max Charging rate (kW)		
AC or DC charger		
Chargepoint protocol utilised		

8.2.2.3 For proposals to introduce hydrogen fuel cell buses LTAs **must provide quotes from two suppliers** of refuelling infrastructure Please attach quotes in the form of a letter or email from suppliers as a separate annex(es). The annex(es) should be clearly labelled. LTAs must input key information on charging infrastructure in the below table.

Hydrogen	Quote from preferred manufacturer	Quote from second manufacturer
Hydrogen refuelling station (HRS) operator		
Technology provider		
Number of HRS		
Cost per HRS		
Hydrogen storage (kg)		
Dispensing pressure (bar)		
Fuelling capacity (kg/day)		
Production on-site or off-site?	<input type="checkbox"/> On-site <input type="checkbox"/> Off-site	<input type="checkbox"/> On-site <input type="checkbox"/> Off-site
(If on-site) Size of electrolyser stack		
(If off-site) Source of hydrogen: supplier and location of hydrogen supply		
Hydrogen supplier		

8.2.2.4 In **no more than 750 words** LTAs should explain how the quotes they have obtained for vehicles and infrastructure have been informed by the vehicle and infrastructure specifications they intend to introduce.

The Operator Partners based their vehicle and infrastructure preferences on the operating indicators of the routes where the Zero Emission Buses will be deployed. Calculations on the number of kilometres covered by a bus were carried out for each of the routes to determine which vehicles in the market were suitable to continue with the operation of such services. Based on these results and the vehicles available in the market, the Operator Partners started engaging with manufacturers to start establishing the standards required for the vehicles. The parameters used to determine the minimum/maximum range these buses should cover were the average number of annual kilometres covered by the bus in the routes where they will operate, provided by the Operator Partners, and the journey length. [see text version for table showing kms by route for each operator] Based on these calculations, the minimum range of kilometres per day required by the Zero Emission Buses intended to be procured varies depending on the route characteristics, ranging between 134 and 243 km. This is believed to be within an acceptable range. The technical specifications of the vehicles received from the manufacturers presented in the section above

8.2.2.5 Please provide evidence of the cost of the grid connection. This should take the form of a connection offer, budget estimate, letter or email from the Distribution Network Operator or Independent Connection Provider. If a grid connection is not needed, please explain in **no more than 750 words** why.

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8.2.2.6 Proposals for battery electric buses that are not using the GBT costs for electricity should explain why and provide evidence of the cost of the electricity. Evidence should take the form of a letter or email from suppliers as a separate annex(es). This annex(es) should be clearly labelled.

8.2.2.7 Proposals for hydrogen fuel cell buses should provide evidence of costs of hydrogen fuel. Proposals for hydrogen fuel cell buses must either be sourced with Renewable Transport Fuels Obligation (RTFO) support or hydrogen that meets the UK's draft low carbon hydrogen standard. Proposals for hydrogen fuel cell buses, must provide evidence of costs of hydrogen fuel. This evidence should take the form of a provisional offtake contract, budget estimate, letter, or email from a hydrogen fuel supplier. Please attach this as a separate annex(es). This annex(es) should be clearly labelled.

8.2.2.8 LTAs that are proposing to use private finance to support their proposal they will need to provide a letter of support from the private financier. Please attach quotes in the form of a letter or email from suppliers as a separate annex(es). This annex(es) should be clearly labelled. LTAs will also need to set out in **no more than 1,000 words** what further steps would be needed to secure that finance on confirmation of any grant award scheme, and what other alternative sources would it seek to utilise if the external finance was subsequently not available.

8.3 Management Case

8.3.1 Governance

In **no more than 1,000 words** please provide reassurance that they and their partners have the capacity to deliver the project as set out in the guidance.

The project will be primarily delivered by the partner operators Stagecoach and Preston Bus. They will be responsible for procuring and operating the zero-emission bus (ZEB) fleet and its associated infrastructure. As a result, many of the roles and responsibilities of the project will sit with them. Lancashire County Council will retain oversight of the project, particularly in relation to monitoring and evaluation, administering the drawdown of funding and scrutinising the operators' adherence to funding conditions. The Enhanced Partnership Executive Board will provide overall scrutiny and oversight.

[see text version for figure showing proposed governance structure]

Lancashire County Council

Project Sponsor

Strategic direction to Project Manager and project team members

Owns the programme and budget

Accountable for project delivery

Project Manager

Co-ordinate project teams and resource as required from inside LCC and across the team

Responsible for project delivery



8.3.2 Allocating grant funding

LTAs should set out in **no more than 500 words** how they will allocate grant funding to their bus operator(s) partners. LTAs can attach draft funding agreements with bus operators as an annex.

Lancashire County Council has engaged Freeths LLP to prepare a draft Grant Funding Agreement, which draws on Freeths' experience with other ZEBRA bids. This draft agreement is appended to this bid. Should this bid be successful, LCC will engage with bus operators to negotiate a mutually-acceptable agreement.

This includes reference to the operators' and authority's warranties and obligations, monitoring and auditing, and deals with events such as the funding becoming re-payable.

The Annex file with the grant funding agreement is titled: `LancsCC_8.3.2_Grant Funding Agreement.pdf`

8.3.3 Project plan

LTAs should provide a project plan. This should be set out in **no more than 1,500 words**. A project plan in formats like gantt charts and tables, can also be provided as a separate annex(es). These must be provided in an excel format.

Lancashire County Council's ZEBRA 2 project is planned to align with the set deadlines outlined by the Department for Transport (DfT).

Initial tasks on confirmation of award of funding include confirmation of any outstanding quotations (DNOs), a potential need for LCC to refer the award to the Subsidy Advice Unit of the Competition and Markets Authority (depending on the overall funding to operators as a result of ZEBRA2) and for LCC to obtain political approval to proceed. We expect these activities to take a minimum of 4 months, with the aim of being in a position to obtain political approval by the end of July 2024. The first batch of vehicles will be ordered upon this approval in July of 2024.

Taking account of lead times and the possible need to design and obtain planning permission for depot works, vehicle and charger manufacturing and the making of the DNO connections, are due to take place during 2025, with vehicle deliveries taking place between July 2025 and March 2026, and associated engineer and driver training taking place in line with the vehicle delivery dates.

[See text version showing gantt chart setting out timeline]

The Annex file with the grant funding agreement is titled: `"LancsCC_8.3.3_ProjectPlan.xlsx"`

8.3.4 Risk Management

LTAs should set out in **no more than 1,000 words** your top five risks and the actions they will take to mitigate these risks.

Quantifiable Risks- these are included in the accompanying Quantified Risk Assessment and contingency values are included in the sums set out in 4.1.

Risk 1

Risk: Vehicle quotations expire before orders are placed, leading to cost rises.

Reason: Cost inflation is a significant risk, and delays in placing orders before expiry of quotation periods could see that risk realised.

Mitigation:

Risk 2

Risk: DNO/ infrastructure cost escalation and unforeseen works leading to cost rises and delays.

Reason: Cost inflation is a significant risk together with quotations being caveated against unforeseen costs and delays.

Mitigation:

Risk 3

Risk: Advice from the Subsidy Advice Unit results in difficulty for LCC to proceed with the bid.

Reason: It is not known at this stage whether it will be necessary to refer this to the SAU, but it is a novel process and whilst the output is an opinion, nonetheless it could cause difficulty in proceeding if it opened up avenue of challenge by the supply chain.

Mitigation: LCC has engaged Freeths LLP to provide subsidy control advice (appended to the bid). If successful, LCC will engage further with Freeths in developing its submission to the SAU, should this be required, taking account of the statutory guidance and previous case studies.

Risk 4

Risk: Unable to reach agreement on, or obtain compliance with, Grant Funding Agreement terms

Reason: Agreement on GFA is required to enable LCC to release funds; failure to agree could delay vehicle and infrastructure ordering to beyond the expiry of quotations and the Zebra deadline date of January 2025.

**8.3.5 Programme level Monitoring & Evaluation**

LTAs should confirm that they will conduct the following as part of the programme-level M&E:

Participate in programme-level M&E activities as required, for example taking part in interviews or group discussion sessions: Yes No

Share relevant monitoring data in an electronic format (e.g. Microsoft Excel): Yes No

Share relevant monitoring data on a quarterly basis Yes No

Ensure relevant monitoring data is collected automatically via telematics Yes No

8.3.6 Scheme level Monitoring & Evaluation

LTAs should set out in **no more than 1,000 words** their plans for scheme-level M&E, including a logic map which sets out expected causal links between scheme inputs, outputs, outcomes and impacts:

A monitoring and evaluation plan is required to support an assessment of the extent to which the intended outputs (the scheme) and outcomes (intended benefits) have been delivered, and hence to provide lessons learned for Lancashire County Council, the bus operators and the Department for Transport.

The scheme level evaluation of Lancashire County Council's ZEBRA bid will support DfT's wider programme-level evaluation (across all successful ZEBRA bids). What is set out below is an outline of what LCC believes will be required and LCC will liaise with DfT to ensure that its data collection and analysis support the programme-level evaluation. The monitoring and evaluation plan will be delivered by Lancashire County Council officers with oversight provided by the LCC Enhanced Partnership Executive Board.

The scheme level evaluation will cover:

Process evaluation: this examines the activities involved in implementation, and covers key questions such as:

- How was the scheme delivered?
- Was the scheme delivered as planned?
- What worked well and what worked less well, and why?
- What could be improved?

Particular foci are likely to be the sponsorship, procurement and specification of vehicles and depot works, the execution of these works, vehicle and equipment commissioning, staff readiness and training and how any teething difficulties were addressed.

Impact Evaluation: this focuses on measurable changes which either directly relate to an objective, or indirectly contribute to measurement of performance against an objective (through establishing the causal mechanisms and linkages) of the intervention. The key questions include:

- What difference did the scheme make?
- What measurable outcomes, both intended and unintended, occurred?
- How much of these outcomes can be attributed to the intervention?
- How has the context influenced outcomes?

[See text version for an outline logic map for the impact evaluation].

Value for Money or Economic Evaluation - this considers:


- Did the benefits justify the costs?
- How do the measurable scheme costs and benefits compare with the appraisal set out at the submission, notably the results from the Green Bus Tool analysis?

The monitoring and evaluation will cover a range of output, cost and carbon-related metrics that are intended to inform the DfT's programme-level evaluation. Key questions are:

What is the difference between a BEB and an equivalent ICE bus?

How do the metrics change over time?

These are described below:

REBs and charging infrastructure outputs: 

An electronic copy only of the bid including any supporting material should be submitted to BUSES@dft.gov.uk