

## *Bus Back Better*

*Making the new English Bus Strategy contribute to Levelling Up!*

The new English Bus Strategy – *Bus Back Better* – has been universally welcomed by operators, local authorities, and customers alike as it finally begins to recognise the contribution buses make to the community and the economy.



However, properly executing the strategy will cost much more than the £3bn committed so far by Government.

It needs to be **implemented boldly nationwide to create cleaner, healthier, liveable towns and cities** no longer choked by congestion and poisonous air from excessive car use.

**Single occupant commuting by car** is every bit **as anti-social** as **drink driving** and **smoking in public places** so serious political determination to address this evil problem is well overdue.

That will need a **ten-year plan** backed up with around **£13bn of new public investment** to **transform England's local bus networks into** environmentally friendly, commercially viable, **growth businesses riding a wave of patronage growth based on modal shift.**

If the UK Government is **serious about its Levelling Up agenda**, properly funding the 'once off' infrastructure costs of *Bus Back Better* will be a sound investment **if it creates first class, commercially sustainable bus networks across England** - a far better investment than continuing to pour billions into ongoing revenue support for London's buses.

### *What is the true cost and who pays?*

A 'best estimate' of the required level of **national government funding** would be an **Exceptional Fund of £13bn** spent over the next **ten years** topped up by significant private sector operator investment.

Operators can ride a 'once off' wave of public funding, to **develop England's bus networks commercially and sustainably** through a **virtuous cycle of patronage growth** and a **significant step change in modal shift.**

The Strategy, if driven through Enhanced Bus Partnerships, will generate a wide range of financial and economic effects which need to be well understood to ensure that the costs and benefits of those Partnerships are properly aligned.

For example, a major key to unlocking patronage growth is a serious level of bus priority. **Funding bus priority measures** on street is a **local authority cost** whilst the **payback** in patronage growth **flows to the bus operators**.

Similarly, a **parking policy** designed to discourage single occupancy car commuting at peak hours **could lead to a drop in revenue for local authority** managed car parks **and an increase in revenue for bus operators**.

The governance and economic arrangements of Enhanced Partnerships need to be robust enough to ensure that **the beneficiary pays**.

### *Estimating the true cost*

### *Conversion to Zero Emission Fleet – THE Big-Ticket Item*

A core element of the strategy is to **improve air quality in urban areas** through converting the entire local bus service fleet in England to **zero emission technology** which could be achieved over a ten year period.



That will be a **major national infrastructure project** requiring substantial investment to replace the current diesel fuel installations at around 300 bus depots across England with alternative infrastructure based on battery electric (charged at depot or opportunity charged in service) or green hydrogen.

Both technologies are much more complex than the existing diesel tanks and pumps and are likely to add up to a **'once off' infrastructure bill of around £200m to £300m**.

The **beneficiary** is the **UK Government** as it delivers a major element of its Decarbonisation Plan.

To qualify for access to that funding, all new installations of electric and / or hydrogen fuelling facilities should be designed to be compatible with all major vehicle types to ensure fleets can be cost effectively procured.

This would also underpin a legal requirement that all local bus service registrations in England **must** be operated by **zero emission vehicles from 2032**.

In addition to the investment in fuelling infrastructure, there is a requirement to phase out around **23,000 diesel buses** costing between £200,000 and £300,000 each and **replace them with zero emission vehicles** currently costing up to 100% more to buy.

In that timescale, **business as usual capital expenditure on fleet replacement would be around £4bn** whereas the **zero-emission cost will be up to £12bn**. Some of the additional £8bn could be funded by the payback from the lower full life fuel and maintenance cost of operating the zero-emission fleet.



However, delivering on the ten-year timescale, will require 8,000 diesel buses to be retired with between one and five years of useful life left leading to a 'write off' of assets worth approximately £3.3bn.

Additionally, it will be difficult for private sector operators to justify the major upfront capital spend plus the 'write off' sitting alongside the other financial challenges

they will face in delivering their Enhanced Partnership responsibilities.

Government grant funding of, say, 80% of the gap between the net cost of 'business as usual' capital expenditure on fleet and the accelerated purchase of zero emission fleet would go a long way to ensuring the universal success of *Bus Back Better* in an accelerated timescale and underpin a legal requirement for **all registered local bus services** in England to be **operated by zero emission vehicles from 2032**.

The constraints on fuel range and the complexity of refuelling arrangements also pose operational challenges as **one for one replacement** of diesel buses by zero emission vehicles **will not be possible in all cases**. It would be prudent to assume a 5% increase in fleet requirement to overcome the constraints that even the cleverest scheduling techniques cannot resolve.

In parallel during that 10-year period, if *Bus Back Better* truly drives patronage growth and modal shift as planned, the size of the **English local bus fleet will need to grow to create the capacity for that additional business**. That growth will create a business case for private sector commercial investment in more vehicles but most likely only at a level which would cover the cost of diesel buses and not zero emission vehicles.

If we assume that the **patronage growth rate increases by an increment of 2% each year for those 10 years, the cumulative growth will be 22%**. To maintain capacity for ongoing growth would require 22% more buses. Taken

together with the 5% associated with scheduling, **English local bus networks will require a further 6,200 zero emission vehicles by 2032.**

That requirement may be **mitigated by bus priority measures** as part of *Bus Back Better* increasing bus operating speeds. If a **10% improvement in operating speed** is achieved, the **additional bus fleet requirement would reduce by 2,900.**

| Item   | Cost           |
|--|----------------|
| Net Additional Cost of Zero Emission Fleet replacement of 23,000 buses | £8bn           |
| Full cost of additional 5% fleet for scheduling purposes               | £2.9bn         |
| Full Cost of additional 22% fleet for volume growth                    | £5.8bn         |
| Fleet reductions through operating speed improvement                   | (£2.6bn)       |
| Sub Total  | £14.1bn        |
| 20% Operator Contribution  | (£2.8bn)       |
| <b>Net Cost</b>  | <b>£11.3bn</b> |

In conclusion, combining the net fleet investment with the infrastructure spend requires the creation of a 'once off' **Zero Emission Bus Fund** of around **£11.6bn** spent **over 10 years** to deliver the **transition of bus services in England to electric and hydrogen power** as a major contribution to the Government's Decarbonisation Plan, the health benefits of improved urban air quality and a significant reduction in traffic congestion.

By 2032, the market environment for replacing zero emission vehicles with zero emission vehicles will be a more commercial proposition as technology matures, manufacturing cost falls and zero-emission fuel ranges increase.

If *Bus Back Better* delivers on its objectives, the long-term business case for investing in high specification zero emission buses will be much stronger once modal shift to the bus is well established and the bus industry is characterised by growth.

These measures **need not be restricted to buses.**

There are **many more commercial diesel vehicles contributing to poor urban air quality** across England and there may, therefore, be **scope for sharing expensive electric or hydrogen fuelling installations more widely** as part of a national infrastructure project.

### Other essential components of *Bus Back Better*

The **zero-emission transition is THE big-ticket item** which can ignite the **transformation of local bus services** across England.

That **substantial capital investment** must be accompanied by the **full use of the Enhanced Partnership powers in the Bus Services Act 2017** to transform

the governance, design, delivery and marketing of bus networks across England in **robust, powerful public / private sector partnerships.**

## Governance

Excellent Governance is **the key to partnership success** with all parties coming together to **agree objectives** which meet the needs of both the private and public sector stakeholders and **establishing a decision-making body to execute the transformation of local bus networks.**

There will be a need for **the Partnership, itself, to control elements of funding** contributed directly by local government stakeholders, private sector bus operators and topped up by any other public or private funding streams available.



However, over the last ten years of austerity, both **bus support and the management resources at local transport authorities** across England **have been cut to the degree where they no longer have the depth of professional expertise to play a full role in Enhanced Partnership Development.**

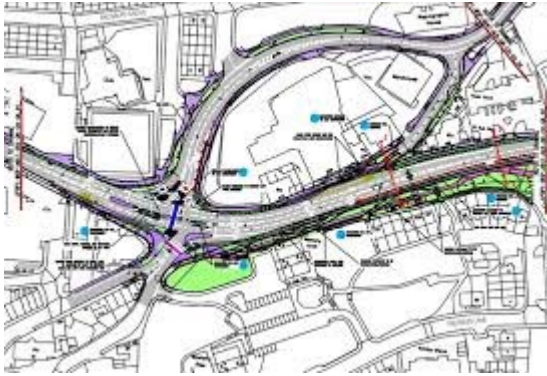
*Bus Back Better* assumes 'once off' funding of £25m in 2021 – 2022 to allow the 79 local transport authorities in England to support bus development.

Actively implementing *Bus Back Better* at the local level will require those local transport authorities to **employ either additional professional and administrative staff or incur significant consultancy support costs.**

These will vary by the scale of Authority but assuming an average annual cost per authority of, say, £300,000 would be a prudent assumption and amount to almost £25m per annum and **£250m over the ten-year transition.**

## Bus Priority

A **quality bus network needs to have reliable, punctual optimised journey times** and even more so given the substantial capital investment in the transition to zero emissions and the need to drive up modal shift to improve urban air quality and reduce traffic congestion.



These measures need to be **agreed between the Highway Authority and the Operators** with a **robust technical and financial business case** to ensure they deliver the objective and **underpin a financial agreement between both parties.**

Ideally, any **bus priority measure** will have a robust payback through modal shift and patronage growth and be **funded by the relevant operators from the financial benefit to them.**

Bus priority measures will comprise **civil engineering projects, traffic management measures** or deployment of **technology.**

Bus Priority should be funded locally with no specific national government contribution through *Bus Back Better*.

### Road Pricing and Congestion Charging

**Road pricing, congestion charging, car parking policies and workplace parking levies** are all **practical and legitimate ways of** improving the bus operating environment and **encouraging modal shift** from private cars.



They may also **generate funds to support further measures** agreed by the Enhanced Partnership.

No funding would be required through *Bus Back Better* for any of these local initiatives.

### Bus Stops, Mobility Hubs, Interchanges and Park and Ride

Improvements to the **quality of infrastructure** surrounding the bus network will **make it both more attractive and simpler to use.**

They will all **reinforce the local bus brand and image.**



Development of all four items should be agreed between the Transport Authority and the Operators together with the most appropriate way for them to be funded. The Partnership should seek to exploit as many external sources of funding as possible where there are third party organisations who meet the category of being a beneficiary.

No funding would be required through *Bus Back Better* for any of these local initiatives.

### Network Planning and Design

The Partnership should **agree, and regularly review, clear objectives for the design of the network**, recognising and meeting the reasonable objectives of all partners.

Ideally, **the network**, as a whole, **should be self-sustaining at the operating level.**



The network should **contain a Demand Responsive Transport component** which can be the most cost-effective way of meeting the needs of thinly populated areas.

The operators should seek to use DRT to feed their core networks and, as such, **assess the commercial value and returns on the network in the round** and use DRT to maximize modal shift and optimise loadings on their core corridors especially in off peak

hours.

Taking a holistic view of the network in the context of the network objectives, it should be possible to **harmonise the Transport Authority's requirement for the most comprehensive coverage with the Operators' essential commercial requirement to deliver a long-term sustainable return on capital.**

If the **heavy public investment in the zero emission transition and the policies in respect of bus priority, disincentives to car commuting and on street infrastructure are delivered** and generate modal shift and patronage growth, the **optimum network design should not require major funding.**

No additional funding should be required through *Bus Back Better* for network planning and design.

### Multi modal integration, MaaS and City Car Clubs



As further incentives to generate modal shift and patronage growth, the Partnership should take steps to **facilitate multi modal public transport journeys** by the development of **seamless interchange infrastructure** at any point where the bus network crosses other modes and **actively promote**

**commercial Mobility as a Service (MaaS) applications** and the **development of 'hire by the hour' city car clubs.**

Investment in integration infrastructure should be addressed alongside other elements of street infrastructure.

Commercial MaaS applications and City Car Clubs should thrive in an environment where there are strong pro public transport policies being delivered by the Partnership.

None of these measures should require any funding through *Bus Back Better*.

### Pricing, Ticketing and Payment

The Partnership should seek to minimise friction in the fields of ticketing and payment, ensuring they are **simple to understand and use**, whilst minimising the level of 'on bus' transactions.



Sight should not be lost of the objective for **the network as a whole to be commercially and financially self-sustaining at the operating level** when setting pricing policies.

**Market driven, commercial pricing focused on modal shift and patronage growth** should be the core objective.

Where there is a political desire to offer cheaper travel to certain categories of customer, it is

**always wise to avoid the temptation to make travel free.**



Its short-term political attractions are not worth the **long term inevitability that there will come a time when it is no longer affordable or sustainable.**

**Operating costs inevitably rise with inflation whereas free fares never inflate** – only the cost burden of their funding by the public sector inflates to the point where **other elements of pricing have to be increased to compensate or quality of operation has to be diluted.**

Both measures lead to patronage decline and a **perpetual funding crisis** which is completely contrary to the *Bus Back Better* objectives!

Given the current English National Concessionary Fares Scheme, there will be a funding requirement through *Bus Back Better* to meet the cost of up to a 22% increase in demand for concessionary travel as a direct result of patronage growth and modal shift amongst the elderly population covered by the Scheme.

At current prices, this will amount to an **additional funding requirement of up to £240m per annum.**

### ITS Systems

Operational Intelligent Transport Systems should remain the financial responsibility of operators as part of their core service delivery as should any integration requirements between them.

No funding will be required through *Bus Back Better* for ITS Systems.

### Marketing and Promotion



Marketing and Promotion budgets should exist at both the operator and partnership level.

It makes perfect sense for the Partnership to develop its own campaigns to promote the network as a whole whilst the operators promote their specific products **but in the context of the wider Enhanced Bus Partnership.**

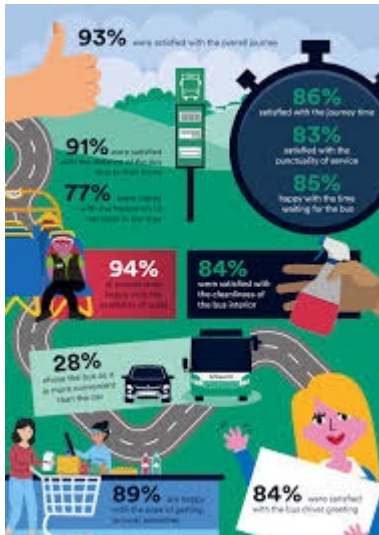
There should be no requirement for funding of local marketing and promotion through *Bus Back Better.*

However, given the major sum being invested by Government in a programme designed to contribute to Decarbonisation, air quality improvements and reducing traffic congestion, there would be **value in national government considering nationwide marketing and public information campaigns to ensure the full**

**social and economic benefits of that investment are realised** through maximising patronage growth and modal shift.

### Consultation and Customer Satisfaction

The Partnership should retain a budget for public consultation and regular customer satisfaction surveys on the network as a whole.



It is important for the Partnership to understand public opinion on its activities and the **perception of the customers of the bus network on the product being delivered in the Partnership environment to inform future decision making.**

Individual operators should also conduct their own customer satisfaction surveys for operational purposes.

No funding through *Bus Back Better* should be required for Consultation and Customer Satisfaction research.

### National Government Support for Bus Services

If *Bus Back Better* is to succeed it is essential that the **value of all current national funding streams for the bus industry is maintained in real terms at 2019 levels.**

Any real term reduction will undermine the benefits of the programme.

### Conclusions

In summary, this analysis sets out to **identify the true cost of delivering the *Bus Back Better* strategy** across England **and who should pick up the bill.**

The **Big-Ticket item relates to the accelerated transition of registered local bus networks across England from diesel power to electric or hydrogen** contributing to the Government's Decarbonisation Plan, improving air quality, cutting traffic congestion and **creating cleaner, healthier and liveable towns and cities** across the country.

This requires **major 'once off' infrastructure investment** in the region of around **£11.6bn over a ten-year period, a progressive annual increase in the cost of the English National Concessionary Scheme from £1.11bn per annum in**

**2019 to £1.35bn before inflation in 2032 and an annual increase in local transport authority management costs of £25m per annum.**

Over a **ten-year period** this amounts to **additional expenditure of around £13bn** excluding inflation and any contingency.

It would be most appropriate for the **UK Government to pick up that bill if it is serious about its Levelling Up agenda.**

In return, **local authorities and local bus operators should commit to developing public/private sector Enhanced Bus Partnerships** in line with the Bus Services Act 2017 **building on that major 'once off' infrastructure investment to drive modal shift and patronage growth to create long term, commercially and environmentally sustainable, attractive, growing bus networks.**

Where the **costs of specific necessary measures fall on one partner and the benefits accrue to others, the Partnership's Governance Procedures should provide for the transfer of funds between the partners to align the situation.**

Overall, most of the other funding, **except the consequent increases in the cost of ENCTS and local authority management**, should not require any exceptional increase in government funding, other than the 10 Year Infrastructure Transition Fund, as **the commercial operating model will benefit from the virtuous cycle of patronage growth if the Partnerships execute the policies assumed above well.**

In terms of **Levelling Up**, this 'once off' major infrastructure investment will **ensure that the public transport networks of Newcastle, Leeds, Sheffield, Manchester, Liverpool, Birmingham, Bristol, Leicester, Hull and many other towns and cities can be put on a par with London.**

