

Subsidy Control Assessment Form

Privileged and Confidential

Name of funding body	Surrey County Council
Date of decision	22/02/2022 - Cabinet Report

Transparency Information

Name of recipient of funding	Brighton & Hove Bus and Coach Company (trading as Metrobus in Surrey)
Date of grant of subsidy	This is expected to be mid-January 2023
Value of subsidy (or budget allocated for the subsidy)	Total Subsidy £ 14.58m from the Capital Pipeline budget
Policy objective of subsidy	The public policy objective is to support measures that tackle poor air quality and the need to advance the decarbonisation of passenger road transport in Surrey to reduce environmental impacts.
	The County Council will purchase 34 Hydrogen Fuel Cell (HFC) buses which would be leased to local bus operator Brighton & Hove Bus & Coach Co. Ltd. (trading as Metrobus). The buses would remain in the ownership of SCC.
	In providing the subsidy we are providing a significant opportunity to work towards Surrey's 2030 and 2050 net zero carbon ambition. Supporting Surrey's carbon neutral pathway requires immediate action in reducing greenhouse gas emissions to achieve a 46% reduction against 2019 levels by 2025.
	The average carbon emissions from the Metrobus fleet amounts to 1.61kg per mile. Once in service, the scheduled route mileage for the 34 hydrogen fuel cell buses is 1,867,008 miles per annum. Applying the average of 1.61kg per mile, the Council's investment will deliver a carbon saving of 3,005,883kg per annum.
	Achieving substantial emissions reductions on public transport will not succeed without introducing zero emission buses and this subsidy is an enabler to allow this project to succeed.
	Emissions associated with Surrey's transport sector currently

	amount to 46% of the County's total amount (2019), equivalent to 2.3 tonnes per person annually. It is predicted that under a business-as-usual scenario there would be no reduction in emissions but an approximate 1% growth by 2050.
Legal basis for award	The subsidy pursues a specific public policy objective to remedy an identified market failure.
Duration of subsidy and any time limits attached to the award	The operational life of the Hydrogen Buses is expected to be 15 years.

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UK-EU Trade and Cooperation Agreement ("TCA") Principles Subsidy Control Explanation of how principle is satisfied Principle The public policy objective is to support measures that tackle poor air The subsidy quality and the need to advance the decarbonisation of passenger road pursues a transport to reduce environmental impacts. specific public policy objective The County Council will purchase 34 Hydrogen Fuel Cell (HFC) buses to remedy an which would be leased to local bus operator Brighton & Hove Bus & identified market Coach Co. Ltd. (trading as Metrobus). The buses would remain in the failure or to ownership of SCC. address an equity rationale In providing the subsidy we are providing a significant opportunity to work such as social towards Surrey's 2030 and 2050 net zero carbon ambition. Supporting difficulties or Surrey's carbon neutral pathway requires immediate action in reducing distributional greenhouse gas emissions to achieve a 46% reduction against 2019 concerns ("the levels by 2025. objective"). Achieving substantial emissions reductions on public transport will not succeed without introducing zero emission buses and this subsidy is an enabler to allow this project to succeed. Emissions associated with Surrey's transport sector currently amount to 46% of the County's total amount (2019), equivalent to 2.3 tonnes per person annually. It is predicted that under a business-as-usual scenario there would be no reduction in emissions but an approximate 1% growth by 2050.

Euro rating of Metrobus fleet operating in east Surrey:

Service		Current fleet Euro ratings					Future fleet Euro ratings			
	3	4	5	6	Hydrogen	3	4	5	6	Hydrogen
20			6							6
21/22	2	2							4	
93			4						4	
100		9		3						12
281		3					3			
318	1					1				
400		4							4	
420/				4						4
820										
430/				5						5

435										
460/		7								7
480										
E9/E10			2					2		
Total no.	3	2	1	1	0	1	3	2	1	34
of buses		5	2	2					2	
%	6	4	2	2	0%	2	6	4	2	65%
	%	8	3	3		%	%	%	3	
		%	%	%					%	

As shown above the introduction of an additional 34 HFC buses would provide clear benefits to the air quality and environment for residents in those areas where these vehicles would operate, such as Gatwick, Horley, Redhill, Reigate and Epsom, on services 100, 420, 430, 435, 460, 480 & 820. This subsidy allows decarbonization on routes which otherwise would have no business case for such vehicles to be operated with zero emission buses.

In addition to those areas benefitting from HFC technology other Surrey areas in Mole Valley, Reigate & Banstead and Tandridge would also benefit from reduced transport emissions as Metrobus has committed to cascading the existing low emission Euro 6 diesel vehicles operating on the routes mentioned above onto Surrey routes 21/22, 93 and 400. These routes are currently operated with older buses which are Euro 3, 4 & 5 emission standards. The cascaded Euro 6 vehicles are significantly cleaner than the Euro 3, 4 & 5 vehicles they would replace and could be cascaded as soon as the HFC vehicles are operational. This also enables the previous Metrobus investment in Euro 6 standard vehicles in Surrey to be rolled out to routes which otherwise would have no business case for such vehicles, as an intermediate benefit until they can be replaced in turn by more zero emission buses.

Surrey Climate Change Strategy

The shared ambition of Surrey's 12 local authorities is that our residents live in clean, safe, and green communities, where people and organisations embrace their environmental responsibilities. In support of this ambition – and the UK's commitment to achieving net zero carbon emissions by 2050 this subsidy will enable SCC to pursue this objective and accelerate the introduction of zero emission buses in a number of AQMA's in Surrey.

Strategic Priority 3 (SP3) in our Climate Change Strategy undertakes to invest in and support the development of the infrastructure required to support the move to zero emission vehicles. Our priorities for the transport sector, aimed at reducing emissions whilst providing a better and more comprehensive transport system, is centered on a three-pronged approach of:

- reducing journeys
- shifting to an increase use of public and active transport modes,
- developing zero emission vehicle options.

Combined, these priorities will bring about significant improvements in our air quality and the health of our residents. The actions to deliver this approach will include undertaking significant improvement and investment

to our public transport infrastructure.

National Bus Strategy

This subsidy also fulfills objectives in the National Bus Strategy to accelerate the implementation of zero emission buses across the UK and build back better following COVID19.

Bus operators across the Country share Governments ambitions to achieve zero emission bus fleets. This however is only possible currently if there is public subsidy to mitigate for the substantial cost premium.

The subsidy is proportionate and limited to what is necessary to achieve the objective.

The subsidy required will be limited to that necessary for achieving the specific objective as defined above. As stated above the subsidy requirement will be limited to what is required to accelerate the introduction of 34 zero emission buses and not more. Metrobus will be no better or no worse off in operating HFC buses compared to the current diesel buses operating on these services.

Although there will be no diesel costs associated with operating hydrogen buses Metrobus will have the cost of purchasing hydrogen, therefore there is no financial saving to Metrobus from operating Hydrogen over diesel buses.

Passenger revenues will not increase as a result of operating zero emission buses so have not been taken into account.

As Metrobus do not lease any vehicles it was not felt appropriate to consider the difference between the commercial and non-commercial leasing costs for buses as this is not a like for like comparison of how the operator currently works.

The leasing costs will be calculated on the method which is most consistent with the Metrobus normal procurement

; the total operating costs of diesel buses compared to the higher maintenance and operational costs experienced with operating Hydrogen Fuel Cell buses, taking into account annual depreciation on Euro 6 diesel buses (based over 15 years). This is in line with the costs associated if Metrobus were to purchase their own new Euro 6 diesel buses. However, it must be acknowledged there is currently not a business case for Metrobus to procure new Euro 6 Diesel or Hydrogen Fuel Cell buses for these Surrey routes, as the commerciality of these routes, particularly in the current COVID climate, would not support such an investment.

This subsidy is calculated as follows:

The cost of buying 34 Euro 6 Diesel buses compared to the cost of buying 34 Hydrogen Fuel Cell buses minus the higher maintenance and operational costs for Hydrogen buses.

Euro 6 Diesel bus costs:

£171,000 single deck (x23) £230,000 double deck (x11)

Hydrogen Fuel Cell bus costs: ACTUAL COSTS

£459,760 single deck (x23) £537,253 double deck (x11) £ 16,484,263 34 x Hydrogen Buses

£ - 6,463,000 34 x Diesel Euro 6 Buses

£ 10,021,263 Difference in cost of buses

 $\underline{\pounds}$ +5,513,950 Higher operational/maintenance costs funded by the operator

£ 15,535,213 Viability Gap

£ - 949,050 15-year lease costs (£63,270 p a)

£ 14,586,163 Total Subsidy

See part 2 for bench marking undertaken by Metrobus

The lease agreement with Metrobus will also include a process for the vehicle sale or disposal/recycle of these 34 hydrogen buses, inclusive of the return of any and all capital receipts to Surrey County Council.

Metrobus Euro 6 vehicles will be cascaded onto other routes in Surrey, and we have explored the opportunity for the proceeds from the net worth of these older vehicles to be used as a contribution towards the cost of the hydrogen buses. The analysis shows:

10 x Scania Omnicity single deckers, 14 years old. Nil book value but likely value of £1,000 each = Total profit of £5,000

- 3 x Enviro 200 single deckers. 15 years old. Book value around £3,500 each but likely value of £2,500 each = Total loss of £3,000
- 6 x Enviro 200 single deckers. 10 years old. Book value around £11,700 each but likely value of £6,000 each = Total loss of £34,200
- 1 x Scania Omnidekka. 16 years old. Nil book value but likely value of £1,000 = Total profit of £2,500
- 14 x Scania Omnicity double decker. 14 years old. Book value around £14,000 each likely value of £7,000 each
- = Total loss of £98,000

This highlights there will not be proceeds to be available to contribute towards hydrogen buses. Metrobus may mitigate some of the losses through transfer to other Go-Ahead companies but they still expect a loss overall.

By agreeing this subsidy in respect of 34 HFC buses, the result will be a total of 54 HFC buses in operation on Metrobus routes by Autumn 2022. This will demonstrate our level of commitment to reaching net zero carbon on SCC's organisational emissions by 2030 or sooner and plays a critical role in positively influencing behaviors to bring about significant improvements in our air quality and the health of our residents.

COVID19 Challenges

The high upfront capital costs of vehicles, energy infrastructure and higher maintenance costs act as a barrier to the rapid adoption of new zero emission buses. In the current unprecedented time, the bus industry is still working to recover from the devastating effects of COVID19. Currently an average of 68% of pre COVID passenger journeys are being made on the Metrobus route network in Surrey. The operator does not have sufficient funding available to purchase these vehicles with the current COVID challenges, depressed passenger numbers and commercial viability of some of the routes. The County Council needs

action now to meet our Climate change objectives and waiting is not an option and would result in the County Council failing to meet its obligation.

3. The subsidy is designed to bring about a change of economic behaviour of the beneficiary that is conducive to achieving the objective and that would not be achieved in the absence of the subsidy being provided.

The forecast above shows that a market operator in Metrobus' position would not be able to implement the project without subsidy as it would not receive a sufficient return on investment. Indeed, the subsidy simply fills in for the incremental cost of fuel cell technology and does not allow for any return additional to what the operator would achieve with diesel only buses from passenger fares.

Without the leasing cost subsidy, the objective could not be delivered in the post-Covid 19 financial climate. The subsidy is designed to bring about a change of economic behaviour by enabling Metrobus to consider operating an additional 34 zero emission buses.

Metrobus are currently unable to fund commercial leasing costs, maintenance, and higher operational costs for 34 HFC buses in Surrey without subsidy support, impacting on deliverability of decarbonisation.

Due to the significant investment made by Metrobus in securing the first 20 HFC vehicles in November 2021, they have exhausted their funding capacity for further HFC buses until 2025/6.

The operator is also pledging to ensure that the upgraded refueling infrastructure needed for the 34 buses will be available by appointment to other fleet users, thereby ensuring that this public investment helps bring about more widespread decarbonisation opportunities for road transport than would be achieved with just the initial 20 buses. Investment in Hydrogen refueling infrastructure is significant and acts as a key barrier to operators looking to use this zero-emission option. The opportunity for other users to also refuel at this facility will act as a positive enabler.

The subsidy is designed to bring about a change of economic behaviour in Surrey working towards achieving our Climate change objectives which will not be achieved in the absence of the subsidy being provided.

Options	Outline description
Option	Do nothing -
Α	PROS
	-Staff resource could be deployed on other programmes.
	-The identified pipeline funding could be deployed elsewhere or the capital borrowing not taken up.
	CONS
	-Funding has already been earmarked and there is strong political support for these initiatives.
	-SCC has declared a climate emergency and committed to a series of actions that are needed to achieve net zero carbon emissions, as set out in the Climate Strategy.

- -It is predicted that under a business-as-usual scenario there would be no reduction in emissions but an approximate 1% growth by 2050.
- -We will be unable to contribute effectively towards Our strategic priorities, providing sustainable transport options to residents in Surrey.
- -SCC will not satisfy part of our duty as a local authority to improve air quality, especially in AQMAs, for transport provision and will not be able to contribute effectively towards our strategic priorities of providing more sustainable and cleaner transport options for residents.

Option B

Deliver only part of the project or extend the programme timeframe –

PROS

- -Some of the HFC buses and other supporting measures could be delivered in a reduced number of locations (with appropriate Cabinet / Cabinet Member prioritisation).
- -This would reduce emissions and improve user experience in those areas alone.
- -The unallocated pipeline funding could be deployed elsewhere or the capital borrowing not taken up and / or the programme could be elongated and delivered over a much longer timeframe.

CONS

- -Funding has already been earmarked and there is strong political support for these initiatives.
- -SCC will not satisfy part of our duty as a local authority to improve air quality, especially in AQMAs, for transport provision and will not be able to contribute effectively towards our strategic priorities of providing more sustainable and cleaner transport options for residents.
- -Some pipeline funding would not be spent and would have to reallocated, against the council decision already made.
- -Extending the programme timeframe would delay the reduction in emissions and miss the 2030 target.

Option

Deliver the full planned project -

PROS

- -Delivery of all the positive outcomes and benefits as already described fulfilling the council's objectives to be a carbon neutral council by 2030 and county by 2050.
- -Fulfilling the objectives of investing in ultra low emission vehicles.
- -Leveraging in third party investment in HFC fleet which otherwise would not be delivered.
- -Improving attractiveness and reliability of bus services for Surrey residents.
- -Low Emission Euro 6 buses to be cascaded down to replace higher polluting Euro 3, 4 & 5 buses.

CONS

- -We will increase the number of assets we own, however, the maintenance obligations and costs rest with the operators and will be formalised by a legal agreement and lease for use.
- -The capital cost to the council.

Preferred option and key reason(s) why this option is recommended

The preferred option is option C - deliver the full project.

Delivering the project in full will enable the council to make substantial progress on the pathway to an ultra-low / zero emission bus fleet by 2030, at a time when unprecedented circumstances limit bus operators making such investments for several years. It demonstrates clear leadership and will encourage operators to invest themselves in further buses when economic circumstances permit them to do so. The initial project will facilitate the introduction of 34 HFC buses across a wide geographic area, enabling a greater overall reduction in harmful emissions as produced by older diesel buses, some of which are now up to 10-12 years old. These 34 buses are on top of the 20 being ordered by Metrobus. The cascade of Euro 6 buses to other Surrey routes, replacing far higher polluting Euro 3, 4 and 5 will also improve air quality.

The average carbon emissions from the Metrobus fleet amounts to 1.61kg per mile. Once in service, the scheduled route mileage for the 34 hydrogen fuel cell buses is 1,867,008 miles per annum. Applying the average of 1.61kg per mile, the Council's investment will deliver a carbon saving of 3,005,883kg per annum. In addition, once in service, the scheduled route mileage for the additional 20 hydrogen fuel cell buses being purchased by Metrobus as part of this partnership is 1,276,763 miles per annum. Applying the average of 1.61kg per mile, this partnership investment will deliver an additional carbon saving of 2,005,588kg per annum across Surrey and West Sussex.

De-carbonisation of public transport is fundamental to the council Climate Change Strategy and the Greener Futures programme. It also supports a key strand of the council's actions and obligations in regard to the declared climate emergency.

The subsidy should not normally compensate for the costs the beneficiary would have funded in the absence of any subsidy.

Metrobus are amongst the first privately owned commercial bus operator in Europe to attempt to operate HFC buses at volume and in these early years of hydrogen technology that is stated by Metrobus as not financially possible without subsidy support from the public sector. This is evidenced by the viability gap assessment discussed in 2 above.

Surrey's enablement of 34 additional buses will complement the £10M investment made by Metrobus (comprising company funding, funding by the UK government and EU Jive 2) in November 2021 to purchase 20 HFC buses + fueling infrastructure for use on their Fastway network of services in Surrey & Sussex. These buses will be in service in spring 2022 and operational on route 20 in the Air Quality Management Area in Horley. This funding initiative from Metrobus demonstrates their clear commitment to invest to achieve our mutual air quality objectives.

Due to the significant investment made by Metrobus in securing the first 20 HFC vehicles in November 2021, they have exhausted their funding capacity for further HFC buses until 2025/6.

It is also clear from the above that Metrobus would not be able to commence the project by entering into legally binding agreements to acquire the new buses and equipment/dispose of the existing busses, until the Council's subsidy is granted to Metrobus. As required in the parallel State aid regime operated in the EU, the subsidy provides the necessary incentive for the project to occur, without which it would fail.

5. The subsidy is an appropriate policy instrument to achieve a public policy objective and that objective cannot be achieved through other less distortive means.

Metrobus clearly states that in order to achieve the council's objective, a subsidy intervention will be required. It is therefore clear that subsidy is an appropriate public policy instrument in this case to satisfy the objective.

A leasing arrangement is proposed as being less distortive to the market than a grant and the council will retain ownership of product delivery.

Surrey's enablement of 34 additional buses will complement the £10M investment made by Metrobus (comprising company funding, funding by the UK government and EU Jive 2) in November 2021 to purchase 20 HFC buses + fueling infrastructure for use on their Fastway network of services in Surrey & Sussex. These buses will be in service in spring 2022 and operational on route 20 in the Air Quality Management Area in Horley. This funding initiative from Metrobus demonstrates their clear commitment to invest to achieve our mutual air quality objectives.

Due to the significant investment made by Metrobus in securing the first 20 HFC vehicles in November 2021, they have exhausted their funding capacity for further HFC buses until 2025/6.

The high upfront capital costs of vehicles, energy infrastructure and higher maintenance costs act as a significant barrier to the rapid adoption of new zero emission buses for all bus operators. Following COVID, bus operators are unable to commit funding to such projects on such a large scale and unlikely to be able to do so for a number of years while the industry recovers from the significant reductions between 2020-2022 in patronage and revenue.

Introduction of more zero emission buses at volume and pace will encourage a reduction in purchasing and operating costs across the whole bus industry, to a level where public subsidy could no longer be needed. This deployment of buses is a crucial step to ensuring that this happens.

Subsidy in the manner proposed in our assessment is the only way to achieve our objective to support measures that tackle poor air quality and the need to advance the decarbonisation of passenger road transport (buses) to reduce environmental impacts. Immediate action is required now if we are to be successful in fulfilling our ultimate objective of being a carbon neutral County Council by 2030 and County by 2050 and waiting is not an option if the council is to achieve its goals.

The subsidy is directed towards the costs of the buses only. The higher maintenance costs and hydrogen fuel and fueling infrastructure will be funded by Metrobus.

As noted above, due to the viability gap and lack of further resources from Metrobus nothing other than the subsidy suggested in this assessment would have been sufficient to allow the outcome proposed.

6. The subsidies' positive contributions to achieving the objective outweigh any negative effects, in particular the material effect on trade or investment between the Parties.

As a consequence, the subsidy is the only policy instrument available to make this project occur now and no other less distortive financing is available to achieve the objective.

The viability gap shows that this is a market failure and hence subsidy is unlikely to distort the market. Hence it is unlikely to have a material effect on trade or investment.

The positive effects this investment are primarily the environmental benefits to society (see the objective at #1 and pros and cons in #3) will bring include transforming the experience of bus travel in east Surrey, having a very positive effect on transport emissions, improving the air quality for our residents and Surrey County Council taking a positive step towards achieving a 46% reduction in emissions against 2019 levels by 2025.

By agreeing this subsidy in respect of 34 HFC buses, the result will be a total of 54 HFC buses in operation on Metrobus routes by Autumn 2022. This will demonstrate our level of commitment to reaching net zero carbon on SCC's organisational emissions by 2030 or sooner and plays a critical role in positively influencing behaviors to bring about significant improvements in our air quality and the health of our residents.

Not agreeing this subsidy would mean the council would lose the opportunity to introduce 34 zero emission buses in Surrey and a similar number of buses with higher emission levels would remain, ultimately delaying our ability to achieve our decarbonisation goals.

The services that the buses will be operating on are predominantly commercial and where Metrobus are the only operator or the main operator. There is no commercial competition on the routes where these buses will operate.

The routes which will be operated with hydrogen buses are:

100 Crawley-Gatwick-Horley-Redhill – other services along this corridor are operated by the same operator

420 Sutton-Banstead-Tadworth-Redhill-East Surrey Hospital

460 Epsom- Tadworth-Redhill-East Surrey Hospital- Horley-Gatwick-Crawley

480 Epsom-Tadworth

820 Sutton-Banstead-Redhill

Although there are other bus services operating in the towns of Horley, Redhill and Epsom area Metrobus are the predominant operator. Two other services operate less frequently on the short section of route between East Surrey Hospital and Redhill but none operate Epsom-Tadworth-Redhill or Sutton-Banstead-Tadworth-Redhill or Gatwick-Horley-Redhill along the same route as Metrobus 100. The negative impacts of displacement have been considered and disregarded as there is minimal risk. There would be no change in passenger fares meaning there is little risk of relocation of customers to/from other routes.

Perceived potential for distortion of the market is mitigated by reason that an opportunity has been offered to all operators to engage with this initiative. All Surrey operators were invited to participate in the Ultra-Low Emission Bus conference in October 2019 and were invited to make contact

	with the County Council to discuss partnership working.
Article 3.5 (Prohibited subsidies and subsidies subject to conditions) has been considered.	The prohibited awards at Article 3.5 of the TCA have been checked: Yes No

Other Subsidy Control Considerations

Legal Commitment	Appreciable Risk
Article 10 Northern Ireland Protocol and Article 138 of the Withdrawal Agreement	Yes No
Article 138 of the Withdrawal Agreement	Yes No
The WTO Agreements	Yes No
Subsidy provisions Trade Agreements the UK has entered into at the date of the award.	Yes No

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