DATA LABEL: OFFICIAL - PUBLIC

West Lothian Council

COUNCIL EXECUTIVE

BUS PARTNERSHIP FUND UPDATE

REPORT BY HEAD OF OPERATIONAL SERVICES

A. PURPOSE OF REPORT

The purpose of this report is to inform Council Executive of the outcome of the regional application to the Bus Partnership Fund (BPF) and to agree the local application compiled by the West Lothian Bus Alliance for submission to Transport Scotland.

B. RECOMMENDATION

It is recommended that Council Executive;

1. Note the award of £3.03 million allocated to South East Scotland City Region Deal partnership by Transport Scotland following the April 2021 submission;
2. Note that the purpose of the October submission by West Lothian Council, as lead authority, on behalf of the West Lothian Bus Alliance is an application for funding from Transport Scotland to complete an options appraisal and Business Case Outlines for projects within West Lothian;
3. Note the analysis of problems and opportunities within the West Lothian road and bus network undertaken by the West Lothian Bus Alliance;
4. Note that, subject to a successful application, submission of future proposals based on the Outline Business Case analysis would be agreed by Council Executive;
5. Agree to the ratification of the application form contained within Appendix 1 to Transport Scotland for the Bus Partnership Fund.

C. SUMMARY OF IMPLICATIONS

I	**Council Values**	Focusing on our customers' needs; being honest, open and accountable; providing equality of opportunities; developing employees; making best use of our resources; working in partnership
II	**Policy and Legal (including Strategic Environmental Assessment, Equality**	The Bus Partnership Fund will complement the powers in the Transport (Scotland) Act 2019.

	Issues, Health or Risk Assessment)	
III	**Implications for Scheme of Delegations to Officers**	None
IV	**Impact on performance and performance Indicators**	The council has a target PI for Public Transport of having 90% of residents with access to an hourly or better daytime service Monday to Saturday. It is possible that changes in the commercial and subsidised network could impact this PI.
V	**Relevance to Single Outcome Agreement**	The local bus network contributes to a number of outcomes by connecting communities with services and employment.
VI	**Resources - (Financial, Staffing and Property)**	The West Lothian Bus Alliance is seeking £761,250 from Transport Scotland's Bus Partnership Fund to complete a strategic business case and outline business case appraisal. No additional capital or revenue funding is being sought from the council.
VII	**Consideration at PDSP**	The report has been circulated to Development & Transport PDSP members for consideration and a verbal update will be provided on all comments received.
VIII	**Other consultations**	
		Systra Ltd

D. TERMS OF REPORT

D.1 Background

As part of its response to the climate emergency, the Scottish Government has announced a £500M fund for large-scale capital bus priority infrastructure projects, which aims to reduce the negative impacts of congestion on bus services and address the decline in bus patronage. This fund was originally due to be launched by Scottish Government in March 2020, but was delayed until November 2020 as a consequence of Covid-19.

The Bus Partnership Fund (BPF) will complement the powers in the Transport (Scotland) Act 2019, enabling local authorities to work in partnership with bus operators, to develop and deliver ambitious schemes that incorporate bus priority measures. The Fund will focus on the evidence of how bus services will be improved by addressing congestion, but the partnership approach is also expected to leverage other bus service improvements to help tackle the climate emergency, reduce private car use and increase bus patronage by making bus more attractive and improving services for passengers.

The fund encourages ambitious proposals, including park and ride where it can be demonstrated to have a clear benefit in effecting modal shift, but all proposals will be considered in light of the evidence provided and how successful the interventions are expected to be in achieving the targeted outcomes of the fund.

The first round of bidding for the BPF will facilitate feasibility studies to further develop business cases and proposals.

It was reported to Council Executive in June 2021 that the council is represented on a regional South East Scotland Partnership which comprises of the six City Region Deal Councils, Clackmannanshire and Falkirk councils together with officer representatives from the Regional Transport Partnership, SEStran, looking at strategic corridors into Edinburgh and packages of interventions for bus improvements that cross local authority boundaries. It was confirmed that a bid was submitted to Transport Scotland in April 2021.

It was also reported that a local West Lothian Bus Alliance (WLBA) had been established with representation from council officers, SEStran, Lothian Country, First Bus, Stage Coach, Scottish Citylink, E&M Horsburgh, SD Travel, Prentice Westwood and is independently chaired by Bus Users Scotland with a view to submitting a bid for the later October deadline. This report provides an update on both applications.

D.2 South East Scotland City Region Deal Partnership Bid

The Edinburgh and South East Scotland Joint Committee approved a report on 5 March 2021 which authorised the Transport Appraisal Board to prepare a collective South East of Scotland regional bid for submission to Transport Scotland's Bus Partnership Fund (BPF). The bid preparation was led by City of Edinburgh Council officers, supported by the consultants Jacobs, in collaboration with the constituent authorities of the City Region, Clackmannanshire and Falkirk, with input from SEStran and key bus operators. The £204m BPF bid was submitted on 16 April. On 22 June, ESESCR Deal were informed that it had been awarded £3.03m:

- £1.45 million for the delivery of quick win measures (over financial years 21/22 & 22/23);
- £1.4 million for the development of a South East Region Strategic Appraisal and outline business cases for the North, West and Orbital corridors / routes;
- £180,000 to support a full time Project Manager (for the first three years of the programme).

It is anticipated that further funding will be offered following submission, to Transport Scotland, of a Strategic Appraisal and outline business cases for the North, West and Orbital corridors/routes. It should also be noted that the scope of the Strategic Appraisal will be finalised in further discussion with Transport Scotland.

A sub group of the City Regional Deal Transport Appraisal Board is being established to focus on BPF work and will be led by those with experience of public transport on a day-to-day basis within the local authorities and SEStran and importantly public transport operators would be invited to be members of the sub-group.

In addition, work is ongoing through the West Edinburgh Transport Improvement Plan (WTETIP) which includes consideration of a Park and Ride, bus lanes and active travel routes through the Broxburn to West Edinburgh corridor. Project teams for both strategic projects will work in liaison to ensure that duplication is avoided and the cohesive offer in terms of both regional and local transport needs is maximised.

D.3 Local West Lothian Partnership Bid

Since June, the West Lothian Bus Alliance has continued to meet on a 2 weekly basis to develop proposals for bus priority interventions within the West Lothian area with a view to submitting a bid by the October deadline.

Transport Consultants, Systra Ltd, were contracted to assist in the analysis and identification of problem areas within the network and specifically where road congestion is particularly problematic for bus. The alliance, supported by Systra, then assessed the suitability of various bus priority measures against identified problem areas in order to compile an application for funding. The proposed application is contained within Appendix 1.

The submission sets out the following:

- approach and governance of project and the basis of developing Bus Service Improvement Partnerships;
- high level proposals including estimated costs;
- funds required to secure consultancy resources to deliver the required Outline Business Cases for developed proposals.

It is intended that the improvements proposed in the local bid will complement those major strategic projects from the regional SES bid, by enhancing additional sections of the A89 corridor and the A71 corridor. This creates an opportunity to provide more attractive services not only within West Lothian, but from many parts of West Lothian towards Edinburgh, with the benefits of these West Lothian improvements compounding with the improvements proposed for the City Deal region.

D.3.1 Analysis of Problems

The initial study analysed the problems and opportunities across West Lothian through a review of relevant bus performance data from the bus operators, INRIX road speed data and bus network maps and timetables as well as reviewing and considering policy, strategy and planning documents from National to Local Level.

Section 3 of the application outlines an analysis of the problems identified; these can be summarised at a high level as follows:

- Evidence of delays on the road network across West Lothian;
- Changes in travel behaviours related to COVID 19 have a negative impact on public transport patronage including bus travel;
- Evidence of delays to bus journeys within West Lothian;
- Transport in West Lothian is contributing to global greenhouse gas emissions and poor air quality;
- Limited North-South connectivity within the West Lothian area; and
- New developments could increase congestion and increase car mode use if there is not modal shift to sustainable models.

While each of the above problems can impact on the bus network, delays on the bus network and the subsequent delays to bus journeys are most relevant to the Bus Partnership Fund bid. Addressing these problems directly will in turn help to address problems of low patronage, air quality and car dependency and connectivity.

Table 2 in Appendix 1 provides a summary of the specific areas and corridors within West Lothian experiencing delays on bus routes.

D.3.2 Options and Opportunities

A number of options have emerged which have the potential to address the problems identified and meet the objectives outlined in section 4 of the application.

The options which are directly relevant to the Bus Partnership Fund can be grouped in to 5 categories:

- Physical bus priority;
- Bus priority signaling;
- Bus stop modifications;
- Junction modification; and
- Parking and other traffic control measures.

Further detail on each of these measures can be found in section 5 of the application.

An initial assessment of the twenty corridors identified as experiencing bus journey delays has taken place to identify the category of intervention which could be beneficial within the specific location. Table 3 provides an indicative potential journey time savings at each location and the number of routes and services which would be likely to be impacted.

The application to the Bus Partnership Fund outlines these conceptual measures with a request for funding to progress to a Strategic Transport Appraisal Guidance (STAG) appraisal process and Outline Business Case (OBC) and Final Business Case (FBC) stages.

D.4 Further Consultation

It is acknowledged that public consultation and wider stakeholder engagement would be required should the WLBA submission result in the successful award of funding. This would be necessary at case for change, preliminary and detailed appraisal stages. Further tailored consultation would then be completed for schemes that move forward to the OBC and FBC stages.

This consultation will allow any further problems, opportunities or specific location improvements to be identified and included in the later appraisal process.

D.5 Future Funding Bids and Reporting

If successful in the first round of bidding, funding will be provided by Transport Scotland to facilitate feasibility studies to further develop business cases and proposals. The outcome of appraisal and business case stages will be reported through the council's committee process with recommendations on specific proposals based on the feasibility studies and consultation with key stakeholders.

Further funding would then be released by Transport Scotland following the delivery of the initial appraisal work and the successful progression of an associated gateway review process.

D.6 Resources

Section 6 of the application outlines the resources requested from Transport Scotland to develop the proposals and the estimate of the total cost of the proposed infrastructure improvements. The total figure being sought by the WLBA for strategic and outline business case works is £761,250.

The implementation of bus priority measures has been estimated at £35,712,000 as a high-level consideration. If the application for initial resources is successful, a more detailed costing exercise will be undertaken as part of the outline business case process.

Section 6 also provides a summary of the 'match in kind' investment considered by the members of the bus alliance. This resource is complimentary to the bid.

D.7 Approval and Submission of Application

It is a stipulation of the Fund that applications must be from official partnerships working towards Bus Service Improvement Partnership (BSIP) status. As such, the Alliance has worked in partnership to develop proposals for submission to Transport Scotland.

The application also requires that the Chief Executive and Council Leader of the Lead Authority sign the application form with members of the alliance providing a letter of support confirming agreement and support of the bid and the wider objectives. These will be appended to the application form before submission.

The West Lothian Bus Alliance finalised the draft application for submission at its meeting on 12 October 2021 and requires to submit the application by 15 October 2021. In order to allow the submission to be considered at Council Executive, Transport Scotland has permitted either the ratification or removal of the application to be confirmed after the Council Executive meeting on 26 October 2021.

D.8 Consideration at PDSP

The report has been circulated to Development & Transport PDSP members for consideration and a verbal update will be provided on all comments received.

E. CONCLUSION

Scottish Government has announced a £500M fund for large-scale capital bus priority infrastructure projects, for which formalised partnerships are required to be in place prior to submitting bids. The South East Scotland City Region Deal was awarded £3.03 million for the initial bid submitted in April to develop proposals and progress to Business Case Outline stage. The West Lothian Bus Alliance has worked in liaison with transport consultants to develop an application for local interventions for submission to the 15 October 2021 deadline.

F. BACKGROUND REFERENCES

Bus Partnership Fund – Report by Head of Operational Services to Council Executive on 8 June 2021

ESESCR Deal Transport Appraisal Bid into the Bus Partnership Fund – report to ESESCR Deal Joint Committee on 5 March 2021

Appendices/Attachments:

Appendix 1 – West Lothian Bus Alliance – October Application

Contact Person: Nicola Gill, Interim Public Transport Manager, Tel: 01506 282317

Email: nicola.gill@westlothian.gov.uk

Jim Jack

Head of Operational Services

26 October 2021

Appendix 1 – West Lothian Bus Alliance October Application

Bus Partnership Fund Application Form

Phase 1 – Capacity Funding

1. Applicant Details

Lead local authority	West Lothian Council
Partners to the proposal	West Lothian Bus Alliance, comprising members from: • Bus Users' Forum; • West Lothian Council; • SEStran; • First Bus; • Stagecoach; • Scottish Citylink; • Lothian Buses; • E&M Horsburgh; • SD Travel; and • Prentice Westwood.
Contact name and job title	Nicola Gill, Passenger Transport Manager
Contact email	nicola.gill@westlothian.gov.uk
Contact telephone number	01506 282317

2. Geography and Demographics

Max 1000 words, excluding maps

Describe the geography of the partnership and specifically that which will be impacted by the proposal, using maps to specify the area. Provide basic population information, to indicate the likely travel habits and therefore how people will be affected by the proposed development.
The partnership covers the West Lothian Council area, with a population of around 183,820 (2020 mid-year estimate[1]), spread across 428km^2 of Scotland's central belt. The main population centre[2] is Livingston (~57,000 people), followed by Bathgate (~23,000), Broxburn (~15,500), Armadale (~12,500) and Whitburn (~11,000) with numerous smaller towns and villages across the area. Urban-Rural Context and Population Using the Scottish Government six-fold urban-rural classification, 57.5% of West Lothian's area is classed as *accessible rural*; however, this only accounts for 7.5% of the population of the area (using 2020 mid-year estimates). A significant majority of the population (81.8%) live in urban areas of 10,000 people or more, which accounts for 34.1% of the area. The remainder (8.4% area, 10.7% population) is classified as accessible small towns. West Lothian's existing public transport strategy[3] highlights the importance in ensuring connectivity from the rural areas and small towns to the larger settlements, as well as between and within the various larger settlements. West Lothian Council had intended to update the public transport strategy during the financial year 2019-20, however this was not possible due to the impacts of Covid-19. It is the Council's intention to update this as soon as possible. Projections (2018-based) indicate that the population of West Lothian will grow faster than the Scottish average in coming years, with an increase of around 10% expected from 2018 to 2038. While the number of children is expected to decrease, the population of pension age and above is expected to increase considerably, by 38% from 2018 to 2038, faster than the Scottish average of 22%. The population of West Lothian aged 75 and over is expected to increase by 79% over the same period. The 2020 Scottish Transport Statistics indicate that the current older age groups are less likely to hold a full driving licence (43% of over 80s, compared to 82% of those in their 40s), and less likely to drive at least three times a week (27% of over 80s, compared to 72% of those in their 40s). While this will in part be due to generational factors which may lead to these figures changing over time, it is still

[1] National Records of Scotland, Mid-2020 Population Estimate Scotland, Last Updated 25th June 2021

[2] Estimated populations of localities, from National Records of Scotland, Mid-2016 Population Estimates for Settlements and Localities in Scotland, Last Updated 2018.

[3] West Lothian Council, West Lothian Public Transport Strategy, provided as Appendix 1 of the 28th June 2019 committee report

reasonable to expect the increase in the older population will lead to a larger group who are less willing or able to rely on car travel as their main mode of transport.

House Prices

Latest Scottish Government statistics[4] show that as of 2018 the median house price in West Lothian was £144,000, below the Scottish median of £152,500. As can be seen in Figure 1, the median by data zone varies considerably across the Local Authority. A number of the more urban zones have median values under £100,000, with a minimum of £68,525 in central Whitburn. Higher values of over £200,000 can be seen in areas on the outskirts of the main settlements, with a maximum of nearly £400,000 on the edge of Linlithgow. This gives some indication of socio-economic variance across the authority area, as expanded below with the consideration of deprivation.

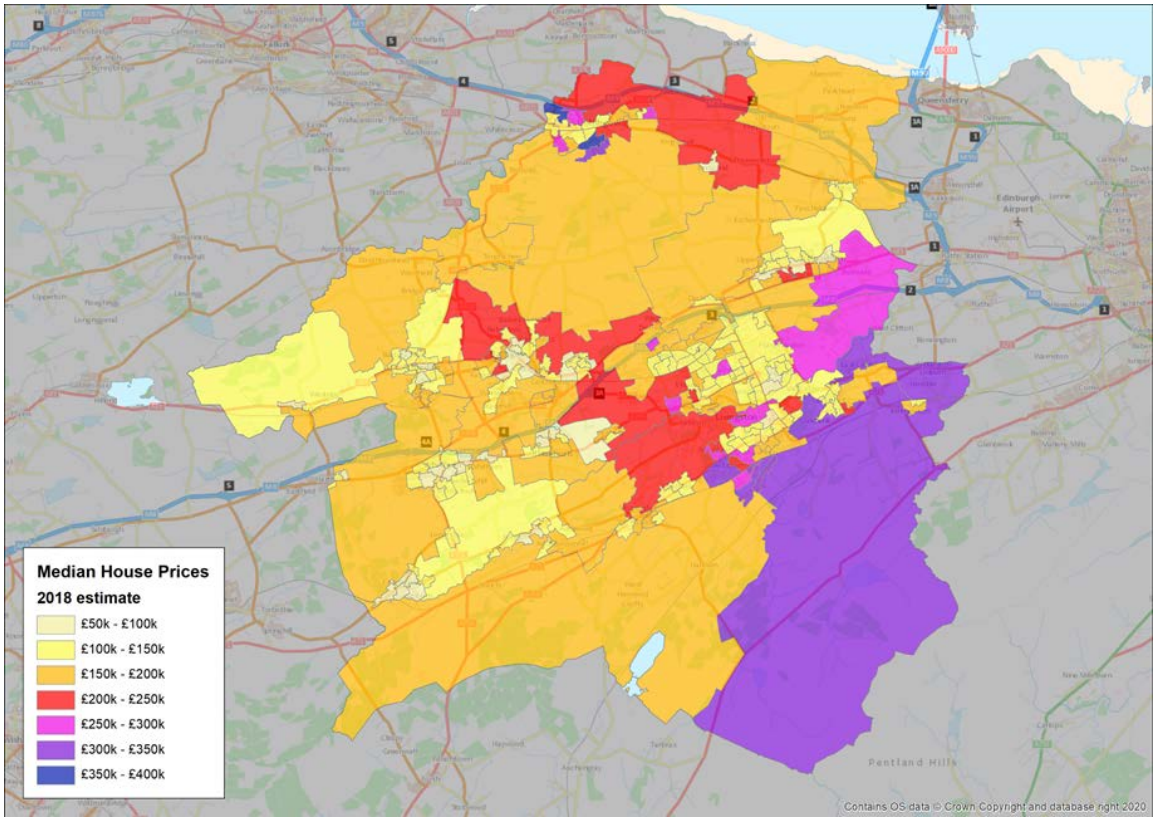

Figure 1: Median house price by data zone, 2018 estimate

Deprivation

Data from the Scottish Index of Multiple Deprivation (SIMD) for 2020 is shown in Figures 2a and 2b. Only 5% of West Lothian's data zones (11 zones) are within the most deprived 10% across the country – these are spread across a number of settlements. Meanwhile, 26 zones (11% of West Lothian) lie within the least

[4] Scottish Government Statistics, House Prices: Value of residential property transactions, 2018

deprived decile of the country, with these zones being located mainly in Linlithgow and more outlying areas of Livingston.

Public transport access is particularly important in areas of high deprivation. The 2020 Scottish Transport Statistics (STS)[5] estimated that only 49% of over-16s living in the most deprived 20% of areas held a full driving licence, compared to 86% of those in the least deprived 20% of areas. For travel to work, the STS show that 37% of employees living in the most deprived 20% of areas use public or active travel modes, compared to 28% of those in the least deprived 20% of areas.

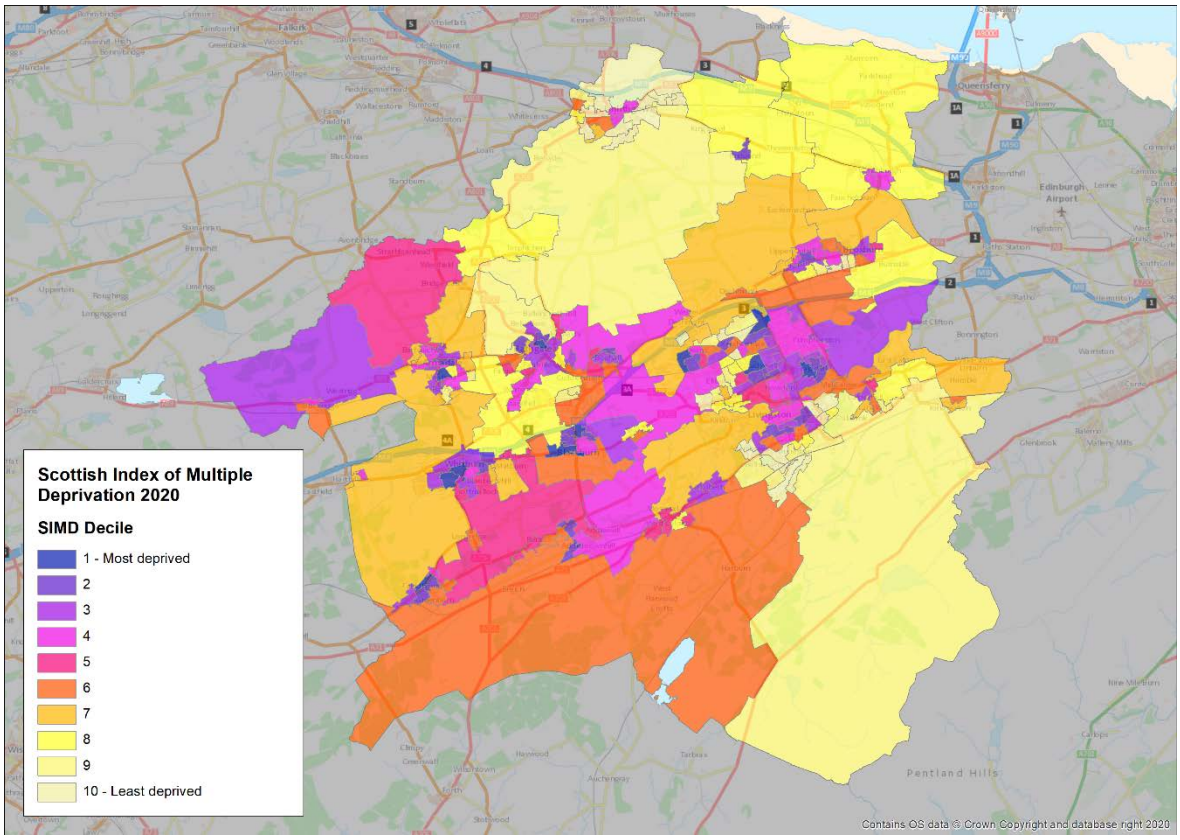

Figure 2a: Scottish Index of Multiple Deprivation 2020 decile by data zone

[5] Transport Scotland, Scottish Transport Statistics No. 39 2020 Edition, 2021

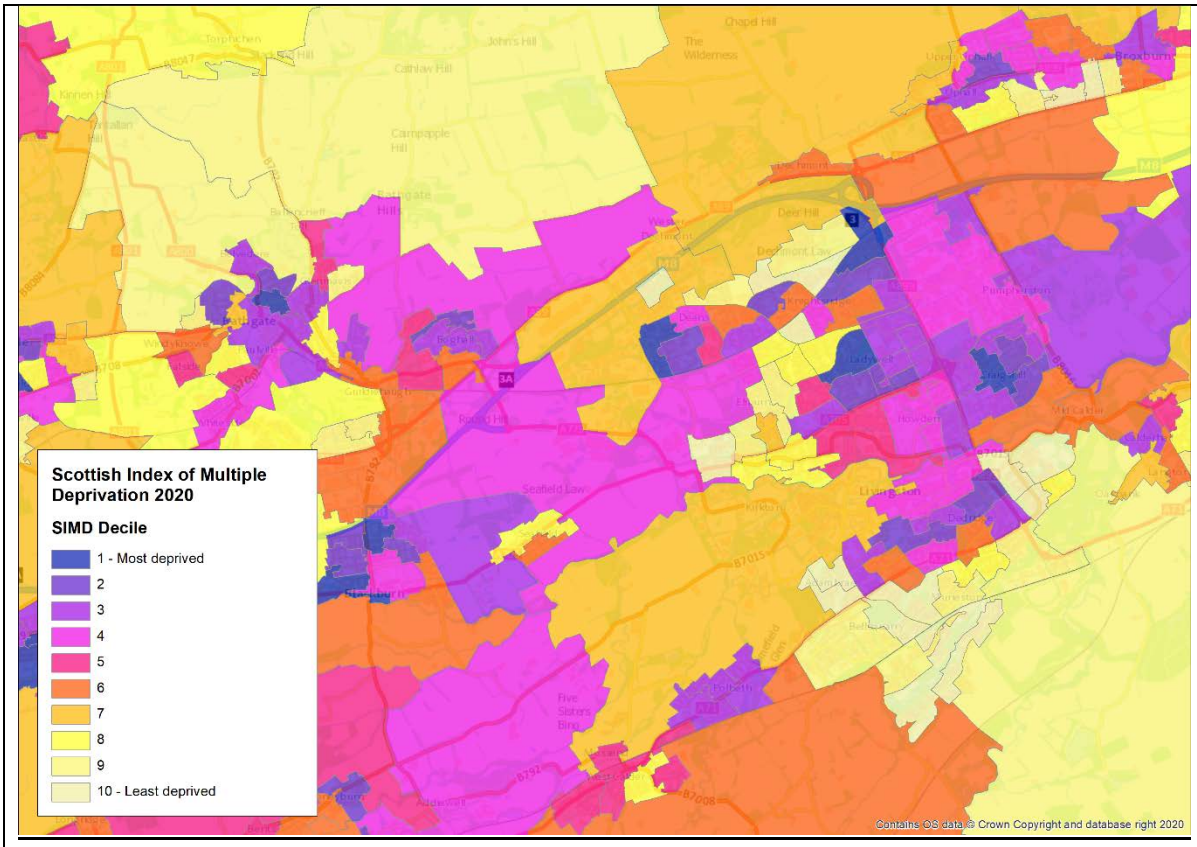

Figure 2b: SIMD 2020 decile by data zone, Livingston and Bathgate area

Mode shares

Scottish Government statistics[6] indicate that West Lothian is currently a relatively car dependent area. 2019 estimates are that 74% of those who travel to work do so by car (compared to 68% nationally), while only 6% travel to work by bus (10% nationally) and 10% on foot (12% nationally). Given the indications of future high levels of population growth in West Lothian, these figures demonstrate the importance of taking modal shift away from the private car and on to sustainable travel, in order to avert further significant increases in road traffic which would exacerbate current levels of congestion.

Scottish Census data shows a more detailed breakdown of mode shares for travel to work and study for those living in West Lothian (note that this includes school children as well as adults in education, and so is not directly comparable with the 2019 statistics). Figures 3 to 6 show the breakdown of these by data zone.

At the time of the Census, car travel accounted for 64% of work and study travel in West Lothian (56% across Scotland). Figure 3 shows that this ranged from under 50% in parts of Livingston and Linlithgow, to over 70% mainly in rural areas, but also in Blackridge, outer parts of Bathgate, and Livingston Village.

[6] Scottish Government Statistics, Travel to Work and Other Purposes, 2019

Bus travel to work and study was reported in the Census as 12% across West Lothian (15% across Scotland). Figure 4 shows that this ranged from under 10% in rural areas as well as much of Armadale, Livingston and Linlithgow, to over 20% in Fauldhouse, East Calder and Winchburgh.

Walking accounted for 17% of travel to work or study across West Lothian (21% across Scotland) at the time of the census. Figure 5 shows that this varied considerably, from under 10% in rural areas, to over 40% in part of Linlithgow and in central Livingston.

'Other' modes of travel, as shown in Figure 6, were highest in Linlithgow, at over 12%. This was most likely due to a high number of rail commuters in this area.

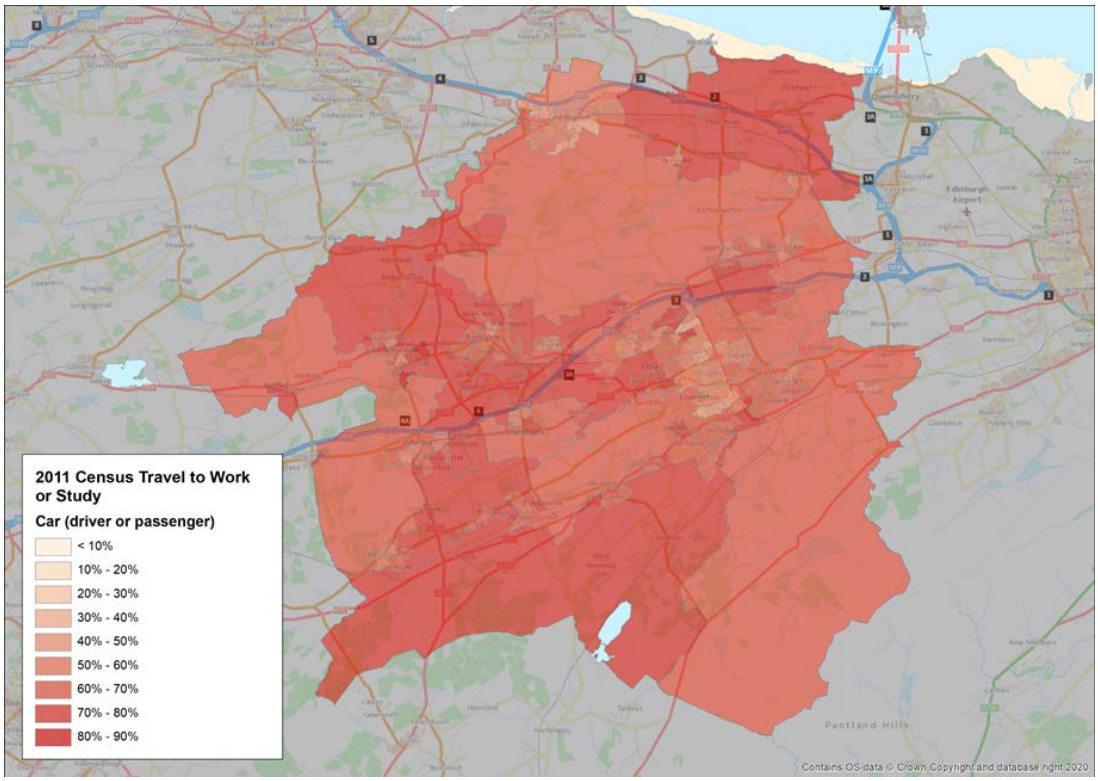

Figure 3: 2011 Census car mode share of Travel to Work or Study

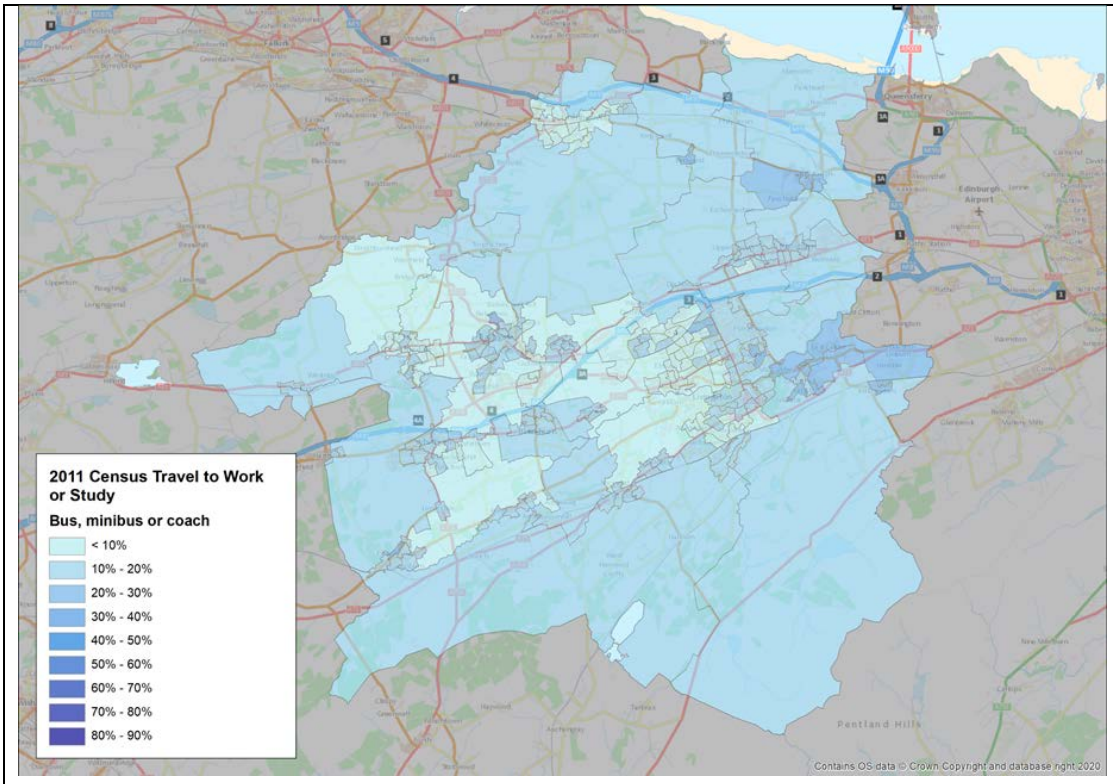

Figure 4: 2011 Census bus mode share of Travel to Work or Study

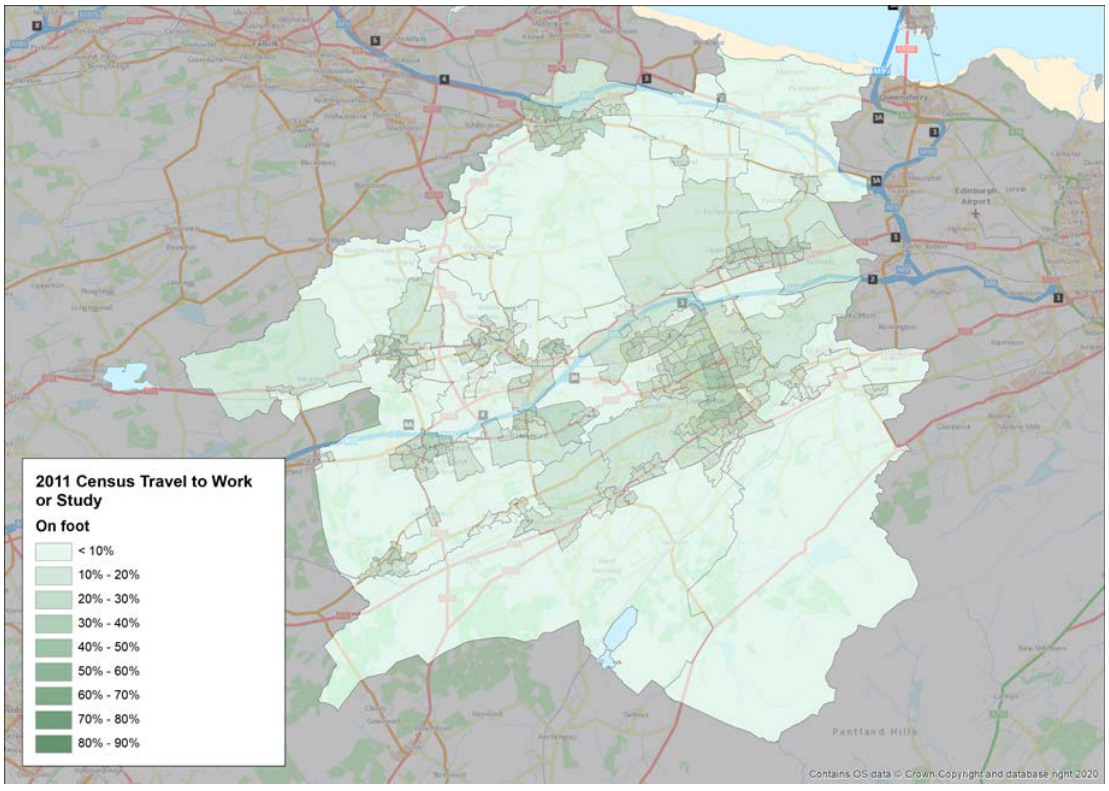

Figure 5: 2011 Census walk mode share of Travel to Work or Study

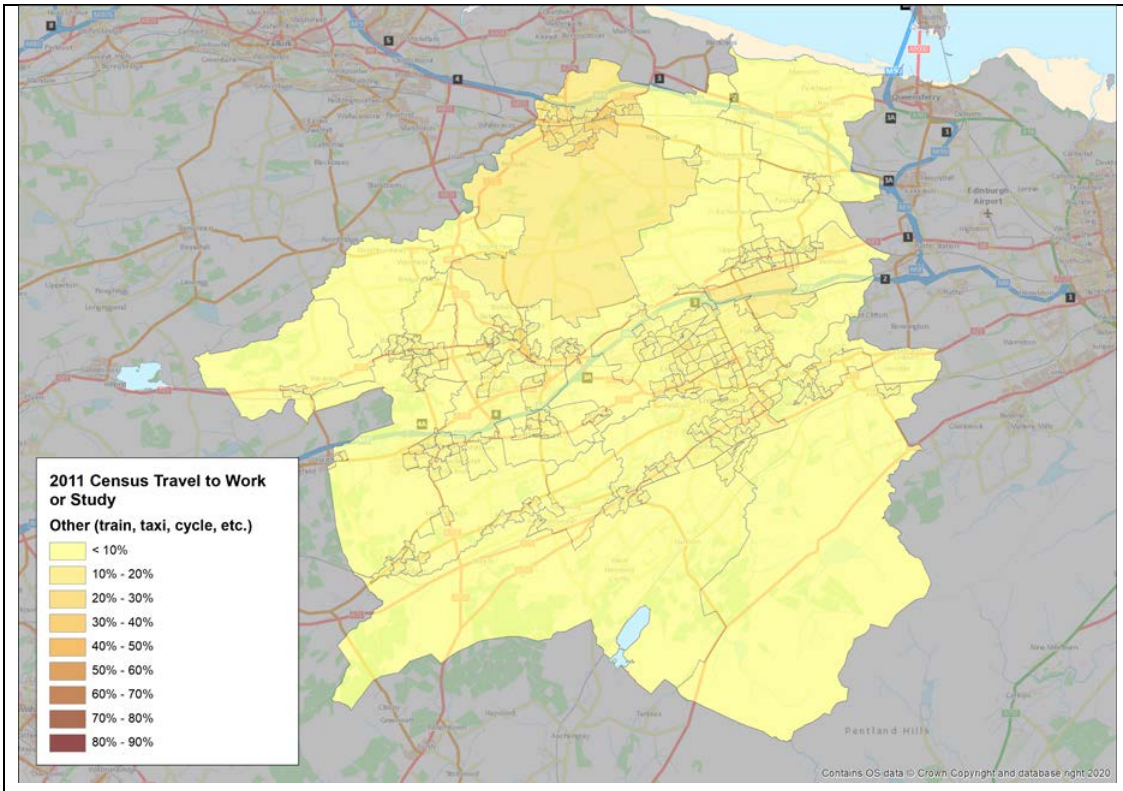

Figure 6: 2011 Census other mode share for Travel to Work or Study

3. Analysis of Problems and Opportunities

Max 3000 words, excluding diagrams and charts[i]

Outline the problems (to the extent you are able at this stage), evidencing areas where road congestion is particularly problematic for bus. The opportunities should relate to bus priority developments, which are the focus of the Bus Partnership Fund[ii], as part of a multi-modal approach to sustainable future mobility provision.

Introduction

The problems and opportunities highlighted in the preparation of this bid have been summarised at a high level below, followed by a detailed description and consideration of those which directly relate to road congestion and traffic, and the impact this has on the bus travel. One of the primary aims of this fund is to improve bus priority and related infrastructure in order to have a positive impact on journey times and reliability for bus passengers. There would also be a positive impact on the environment, through modal shift away from private car usage, and an increase in bus patronage.

The problems and opportunities across West Lothian have been analysed through:

- A review of policy, strategy and planning documents from National to Local level;
- A review of relevant bus performance data from bus operators, INRIX road speed data, and bus network maps and timetables; and
- Regular engagement with the West Lothian Bus Alliance, West Lothian Council, and Bus Users UK.

Summary of the Problems

Problem 1: Evidence of delays on the road network across West Lothian.

Areas of West Lothian are subject to high levels of traffic during the daytime, and at peak times in particular. Certain areas where this causes notable disruption to journey speeds are well known locally and have been described in detail by members of the West Lothian Bus Alliance. In addition, available data across the Authority area has been analysed in order to evidence and quantify the level of disruption at these known locations, and to identify any other locations where road speeds are impacted throughout the day.

Analysis of INRIX speed data has been carried out, highlighting the differences in peak-time and off-peak speeds. Figures 4 and 5 show the areas where traffic slows discernibly in the AM and PM peaks compared to the off-peak period, for data taken in September 2021.

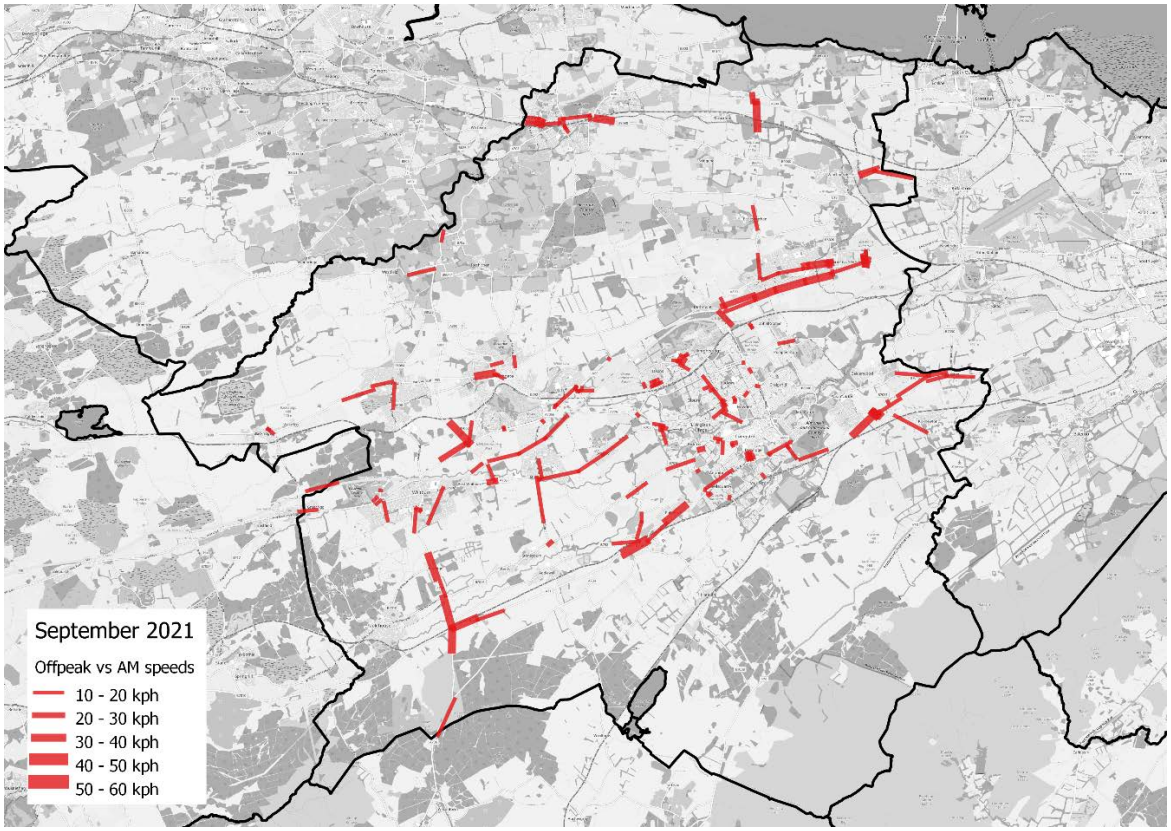

Figure 4: INRIX speed data - off-peak compared to AM peak, September 2021

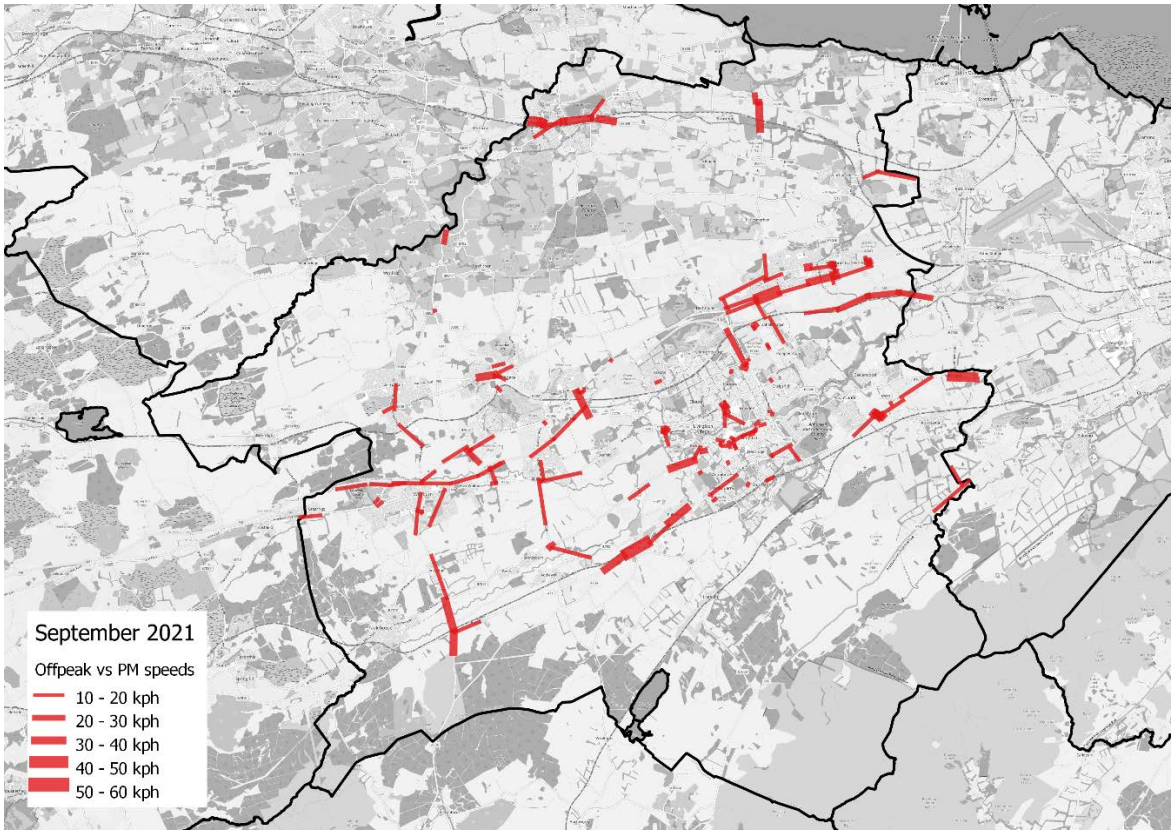

Figure 5: INRIX speed data - off-peak compared to PM peak, September 2021

The maps highlight a number of areas and corridors which experience significant speed reductions at peak times. The key areas which support the observations of the Bus Alliance are the delays shown on parts of the A89 corridor (particularly through Bathgate and the Boghall Roundabout, and in the Broxburn area) and the A71 corridor (particularly at Breich, and through West Calder and Livingston and towards Edinburgh). Delays can also be seen in urban areas, particularly in parts of Livingston and through Linlithgow, but also for example Uphall and Broxburn, Blackburn, Whitburn and Armadale.

It should be noted that these delays are being seen even while there is still a proportion of people working from home. If return to office work increases in coming months, and assuming the modal shift towards car use during the pandemic (see Problem 2 below) does not change, then this congestion is likely to increase severely.

Problem 2: Changes in travel behaviours related to COVID-19 have a negative impact on public transport patronage including bus travel

Passenger data from First Bus, Lothian Buses and Stagecoach highlight a decline in bus patronage between 2019 and 2021. Aggregated patronage data across these operators indicates that for the period of November 2020 to March 2021, patronage on the network was at 46% compared to the previous year (i.e. the period immediately before the pandemic lockdown was declared). Year-to-date figures for 2021 (January to August) show that patronage has only increased by 9% on the first eight months of 2020, indicating that passenger numbers have been relatively slow to recover so far.

Looking at the figures for Scotland as a whole[7], a similar story can be seen for private versus public transport use. Compared to the pre-COVID-19 pandemic, for the period 30th August to the 5th September 2021 the following mode share changes were observed:

- Walking journeys down by 40%;
- Cycling journeys up by 10%;
- Concessionary bus journeys down by 35%;
- Rail journeys down by 50%;
- Ferry journeys up by 10%;
- Air journeys down by 45%; and
- Car journeys are consistent with pre-pandemic level.

Noting the decline of sustainable transport modes (other than cycling), but the recovery of car journeys – this highlights the importance of re-growing bus patronage as part of a package of sustainable transport options as people begin to travel more frequently. Failure to do so may exacerbate issues around car dominance in West Lothian and lead to a spiral of decline for bus. This spiral of decline can begin when patronage and revenue reduce (or in this instance remain low) leading to services become commercially unviable and facing the risk of removal without support. This, in turn, can make bus services less attractive,

[7] Transport Scotland, COVID-19 Transport Trend Data - 30 August - 5 September 2021, 2021

potentially further reducing patronage and increasing the number of car journeys, thereby making services less commercially viable and less attractive due to delays, and so on.

Problem 3: Evidence of delays to bus journeys within West Lothian

Bus journey time data for the first week in August 2021 was analysed. This data was broken down for weekdays into two-hour blocks, and the maximum journey time for each two-hour period calculated. The lowest of the maximum journey time values across the 8am-8pm period was then determined, to serve as a benchmark for a realistic best-case daytime journey time. This benchmark was then compared against the maximum journey time in each of the time periods to determine the areas which saw the greatest increase at peak times, with peak time periods being defined as 8am-10am for the AM peak and 4pm-6pm for the PM peak. The maps in Figures 7 and 8 below show these increases, as factors of the daytime benchmark journey time, for the AM and PM peaks respectively.

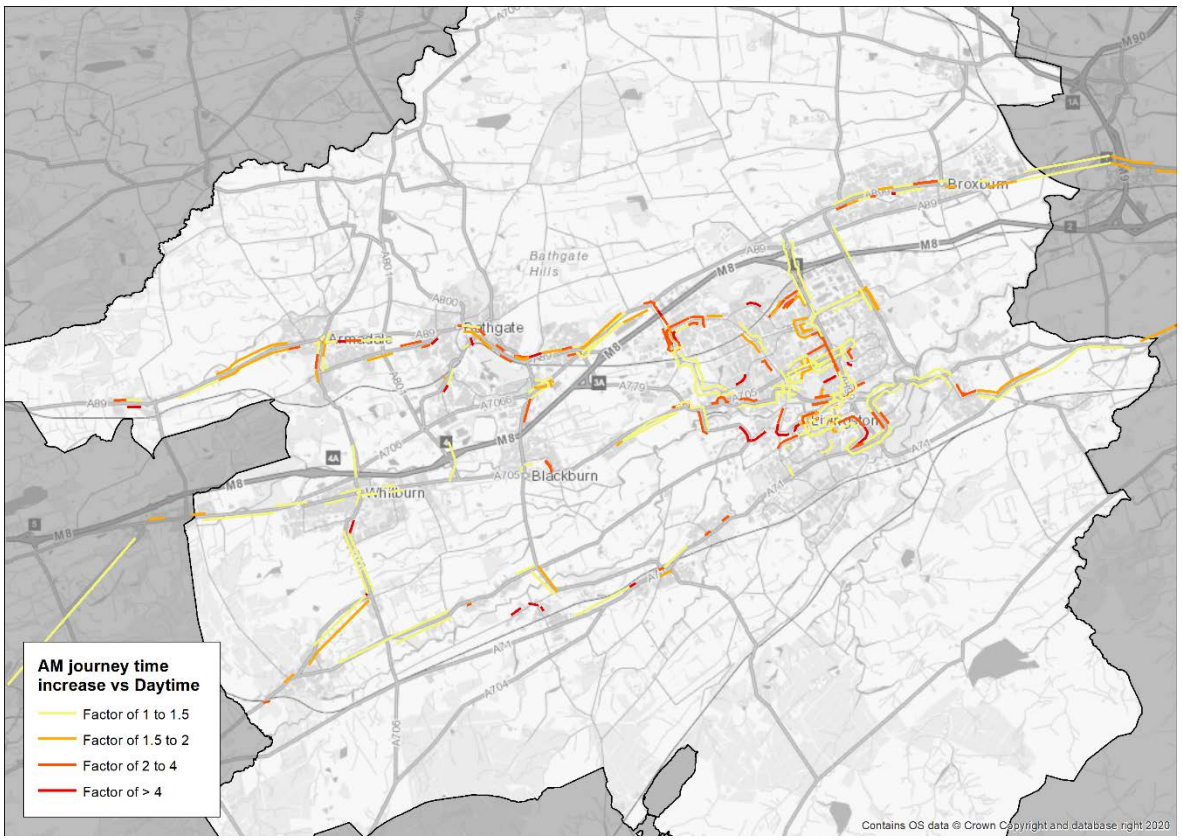

Figure 6: Bus journey time in AM peak compared to daytime benchmark

Figure 7: Bus journey time in PM peak compared to daytime benchmark

These plots highlight a number of areas of delay, particularly around multiple areas of Livingston, but also through other settlements such as Bathgate, Armadale, Broxburn and Whitburn. While some delays seem to be concentrated along corridors, others are concentrated around junctions such as the Boghall Roundabout east of Bathgate, and the Greendykes Junction in Broxburn.

Delays at these locations can have knock-on effects on the punctuality of a service for the rest of the route. Sections further along the route may have no particular delay issues and may have a reasonably predictable journey time, but may on the other hand offer little opportunity for the bus to make up time from previous delays. Even if the potential delays are factored into the service schedule, this will create longer journey times and make for less efficient operation by increasing the resource requirements. According to research by Greener Journeys[8], a 10% decrease in operating speed leads to an 8% increase in operating costs and a 10% decline in patronage. This highlights the importance of faster and more reliable services to both operators and passengers.

<u>Problem 4: Transport in West Lothian is contributing to global greenhouse gas emissions and poor air quality</u>

West Lothian is currently a relatively car dependent area, with car ownership higher than the Scottish average. Table 1 shows the results of the 2011 Census

[8] Greener Journeys, The Impact of Congestion on Bus Passengers, 2017

for the five most populous settlements in West Lothian, and the area as a whole. It can be seen that of the five towns, only Whitburn has a lower rate of car availability (67.2%) than the Scottish average (69.5%), while Livingston shows a particularly high rate (76.7%), greater than the average for West Lothian overall (75.6%).

Table 1: Car or van availability by household (2011 Census)

Town or Area	Number of Households	% with at least one car/van available
Livingston	26,024	76.7%
Bathgate	11,419	71.9%
Broxburn	6,500	74.2%
Whitburn	5,273	67.2%
Armadale	5,030	74.5%
West Lothian	**73,398**	**75.6%**
Scotland	**2,372,777**	**69.5%**

The high car ownership and car dependency can be linked to an increase in vehicle kilometres travelled in West Lothian, as shown in Table 2. There was an increase of almost 10.7% between 2014 and 2019, which is higher than the increases across the SEStran area (7.4%) and Scotland (8.7%). This increase is against national to local policy, in particular the need to reduce car kilometres travelled by 20% by 2030.

Table 2: Traffic in Vehicle Kilometres (Millions of km, all roads)[9]

Area	2014	2019	Change
West Lothian	1,763	1,952	+10.7%
SEStran Area	11,342	12,184	+7.4%
Scotland	44,789	48,714	+8.7%

While zero emission vehicles are becoming more common, the large majority of vehicles on the road are still using petrol and diesel as a fuel source. This means that as traffic levels have risen, consumption of fuel has also increased, as shown

[9] Transport Scotland & the DfT, Scottish *Transport Statistics No. 34 2015 Edition and 39*, 2020 Edition

in Table 3. It can be seen that consumption has increased by 6.3% in West Lothian, which is higher than the increases in the SEStran Area (4.7%) and Scotland (5.1%).

Table 3: Petrol and Diesel Consumption of Road Vehicles (Thousands of tonnes, all vehicles)[10]

Area	2013	2018	Change
West Lothian	120.3	127.9	+6.3%
SEStran Area	771.9	808.3	+4.7%
Scotland	3,124.2	3,284.0	+5.1%

Related to this, we can see that West Lothian has a higher than average CO_2 emissions per capita from transport, compared to both the SEStran region and Scotland as a whole. It produced approximately 14.5% of the region's CO_2 from transport in 2019, despite having around 11.4% of the region's population. This is shown in Table 4 below.

Table 4: CO_2 Emissions from Transport in 2019 by Local Authority in the SEStran Region

	Mid-Year Population 2019	Territorial CO_2 Emissions (kt)	Per capita CO_2 Emissions (t)	Proportion of SEStran Population	Proportion of SEStran CO_2 Emissions
Falkirk	160,890	357	2.2	10.0%	13.3%
West Lothian	**183,100**	**388**	**2.1**	**11.4%**	**14.5%**
Scottish Borders	115,510	243	2.1	7.2%	9.1%
East Lothian	107,090	204	1.9	6.7%	7.6%
Fife	373,550	586	1.6	23.2%	21.9%
Midlothian	92,460	137	1.5	5.7%	5.1%
Clackmannanshire	51,540	73	1.4	3.2%	2.7%
City of Edinburgh	524,930	690	1.3	32.6%	25.8%
SEStran Region	**1,609,070**	**2,679**	**1.7**	**-**	**-**
Scotland	**5,463,300**	**10,161**	**1.9**	**-**	**-**

In addition to carbon emissions, local air quality is also a problem in the area, with three areas in West Lothian currently declared as Air Quality Management Areas

[10] Transport Scotland & the DfT, Scottish *Transport Statistics No. 34 2015 Edition and 39*, 2020 Edition

(AQMA)[11] due to high levels of pollutants, namely Particulate Matter < 10 µm (PM_{10}) and Nitrogen Dioxide (NO_2). These include areas in:

- Broxburn for PM_{10} and NO_2;
- Linlithgow for PM_{10} and NO_2; and
- Newton for PM_{10}.

The Newton AQMA has been declared in relation to background and domestic fuel consumption; however the Broxburn and Linlithgow AQMAs relate to pollutants which are typically associated with transport emissions. To address these issues, decarbonisation of the transport system, in particular a shift towards non car-based travel behaviours is a priority.

Problem 5: Limited North-South connectivity within the West Lothian area

According to the West Lothian LDP Main Issues Report (MIR), east-west connectivity is generally good by rail, road and bus. This is true both within and to places outwith West Lothian, with three major rail lines and several major roads including the M8 and M9 providing connectivity. However, the MIR notes that "connectivity for all modes of transport is poor between the areas north of the Bathgate Hills and the main centres of population and employment around Bathgate, Livingston and Uphall/Broxburn". Better direct public transport connections between the north of West Lothian and the south and southwest is needed to ensure the effective connection of new and adjoining neighbourhoods and to promote access to local facilities and employment.

Problem 6: New developments could increase congestion and increase car mode use if there is not modal shift to sustainable modes.

The Edinburgh and Lothians Structure Plan 2015 identified three Core Development Areas (CDAs) which were to be the focus of major new developments across the West Lothian in coming years including Armadale, Livingston and the Almond Valley and Winchburgh / East Broxburn / Uphall. Travel demands resulting from new developments should be met by sustainable forms of transport including public transport providing efficient bus services and creating active links such as footpaths and cycle routes to adjacent facilities and between communities. Traffic and congestion are likely to increase further if new development – which will produce a greater demand for travel in West Lothian – continues to deliver similar, highly car focused modal split patterns in the future.

Problems identified by Location

While each of the above problems can impact on the bus network, those most directly relevant to this Bus Partnership Fund bid are:

- Problem 1: Evidence of delays on the road network; and
- Problem 3: Evidence of delays to bus journeys.

[11] Scottish Government, *Air Quality Management Areas*, 2021, Air Quality Management Areas - Air Quality in Scotland

Addressing these problems directly will in turn help to address problems of low patronage (by making bus travel more attractive), air quality and car dependency (by encouraging modal shift), and connectivity (by freeing operator resources which can be invested back into network development).

From the journey time data available, a number of areas, corridors and junctions have been identified as contributing to the problem of delays to bus journeys. These are identified in Table 5 and the maps in Figures 8 to 10 below.

Table 5: Areas and Corridors experiencing delays on bus routes

No.	Area / Corridor	Description
1	Alderstone Road	Delays are experienced between Peel Roundabout and Almondvale, including junctions with Eilburn Road and with Kirkton North Road.
2	Almondvale Boulevard / Almondvale Avenue	Delays experienced in areas around the Bus Terminus are due to slow moving traffic towards College Roundabout. Additional disruption is caused by vehicles queuing back from McDonald's drive-through, which can impact the southern exit of Bubbles Roundabout.
3	Deans	Deans N Road and Knightsridge West Road, including the junctions of these. Movement is slower through the residential areas of these at peak times.
4	Knightsridge	Knightsridge West Road, Knightsridge East Road, and Ladywell East Road. Movement is slower through the residential areas of these at peak times.
5	Ladywell	Movement is slower through residential areas here at peak times, and there are delays crossing Cousland Road and at St John's Hospital.
6	Craigshill	Movement is slower through residential area here at peak times, and there are delays through the interchange at Livingston Road (A899).
7	Dedridge	Dedridge East Road – movement is slower through the residential areas are at peak times.
8	Civic Centre junction	Delays occur at the roundabout at the intersection of Howden East Road and Howden South Road at peak times.
9	Kirkton Campus	Movement is slower westbound at peak times along Simpson Parkway.
10	A705	Delays are particularly problematic eastbound during the AM peak, including at Mill Roundabout and Toll Roundabout.
11	Bathgate Town Centre	This is part of the A89 corridor through Bathgate, including North Bridge Street junctions, Guildiehaugh Roundabout,

	and Boghall Roundabout	and Boghall Roundabout. Delays experienced due to high traffic levels and multiple conflicting vehicle movements.
12	A89 west of Bathgate	Delays are experienced at peak times between Blackridge and Bathgate via Armadale, including at Armadale Cross.
13	Harthill / Whitburn corridor	There are delays on the B7066/B7069 between Harthill and East Whitburn, including Whitburn Crossroads, especially in the PM peak.
14	Blackburn	Delays are especially problematic in the PM peak in Blackburn town centre, including West Main Street, and the bus routing around Ash Grove.
15	A7066/B792 interchange	There are notable delays at Easter Inch and Leyland Roundabouts on the B792.
16	Uphall and Broxburn Main Streets	There are delays on each major road in the area, including the junction with Station Road (Uphall) and Greendykes Junction. Causes for this include high volume of traffic, parked cars and right-turning vehicles.
17	East Calder	There are delays in the proximity of the mini-roundabout on Langton Road at the junction with Redcraig Road.
18	West Calder and Polbeth	There are delays along the A71 corridor, including West Calder Main Street around the Kirkgate and A792 junctions, and through Polbeth.
19	Addiewell	There are delays around Church Street / Addiebrownhill junction especially in AM peak, possibly related to nearby schools.
20	Fauldhouse / Longridge	There are delays around Fauldhouse Main Street / Sheephousehill junction, and along B7010 towards Longridge.

These locations are shown across three maps:

- Figure 8: Areas 1 to 10 are within the Livingston area;
- Figure 9: Areas 11 to 15 are within the western part of West Lothian, around Armadale, Whitburn, Blackburn and Bathgate; and
- Figure 10: Areas 16-20 are in the wider West Lothian area.

Note that the data points to an area of delay on Deans Road, indicated by a grey shaded area on the Livingston area map (Figure 8). Following discussion with bus operators, who reported no known issues with delays here, it was determined that the data was being skewed by the presence of a driver change location. Therefore, this area has not been progressed as a “problem”.

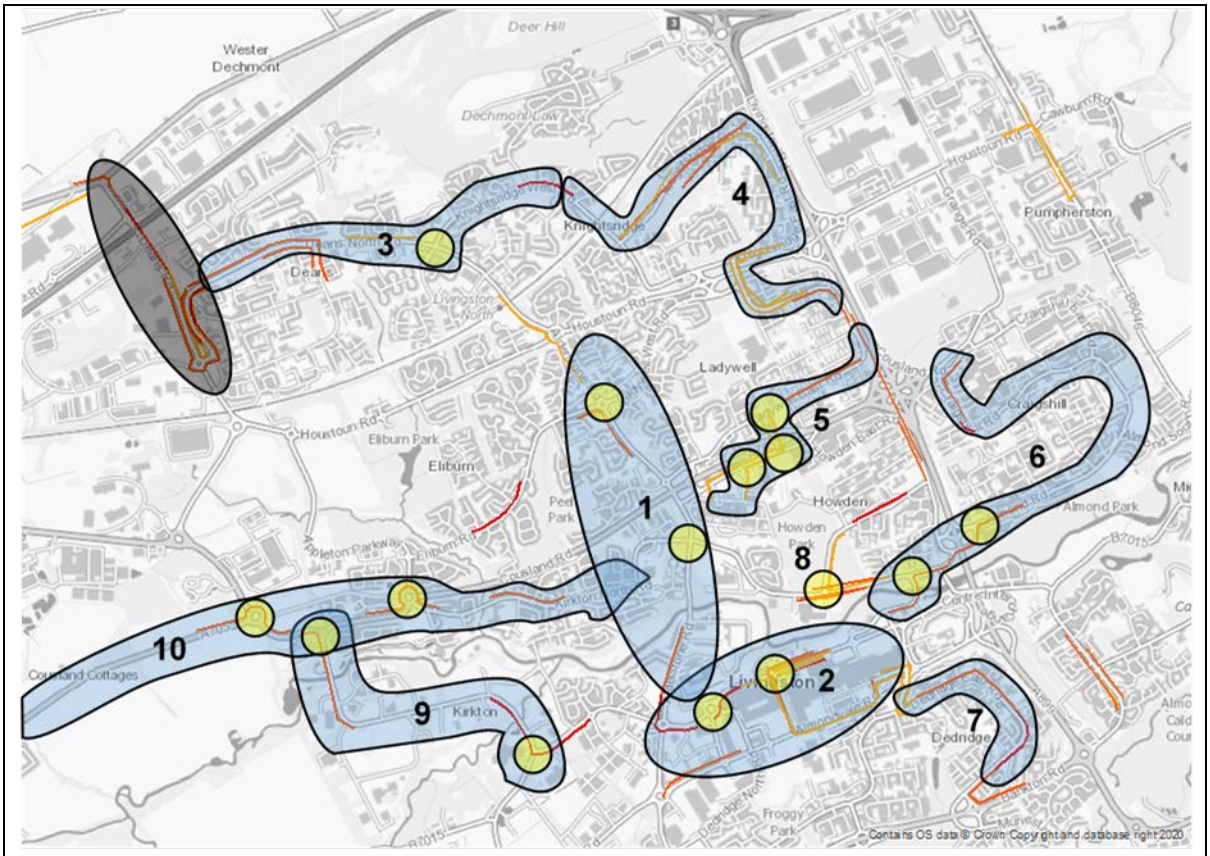

Figure 8: Bus delay locations and corridors – Livingston area

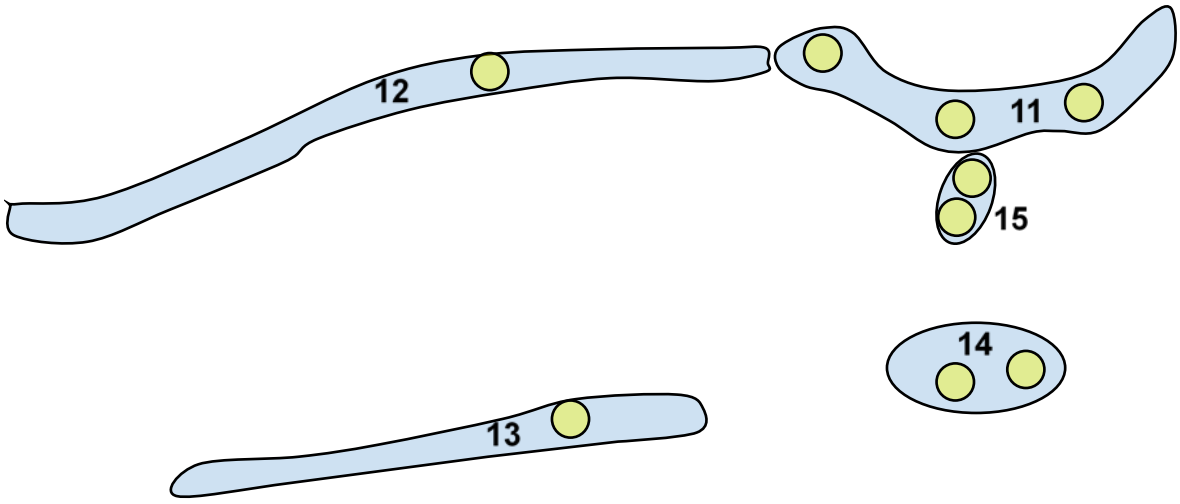

Figure 9: Bus delay locations and corridors – western West Lothian area

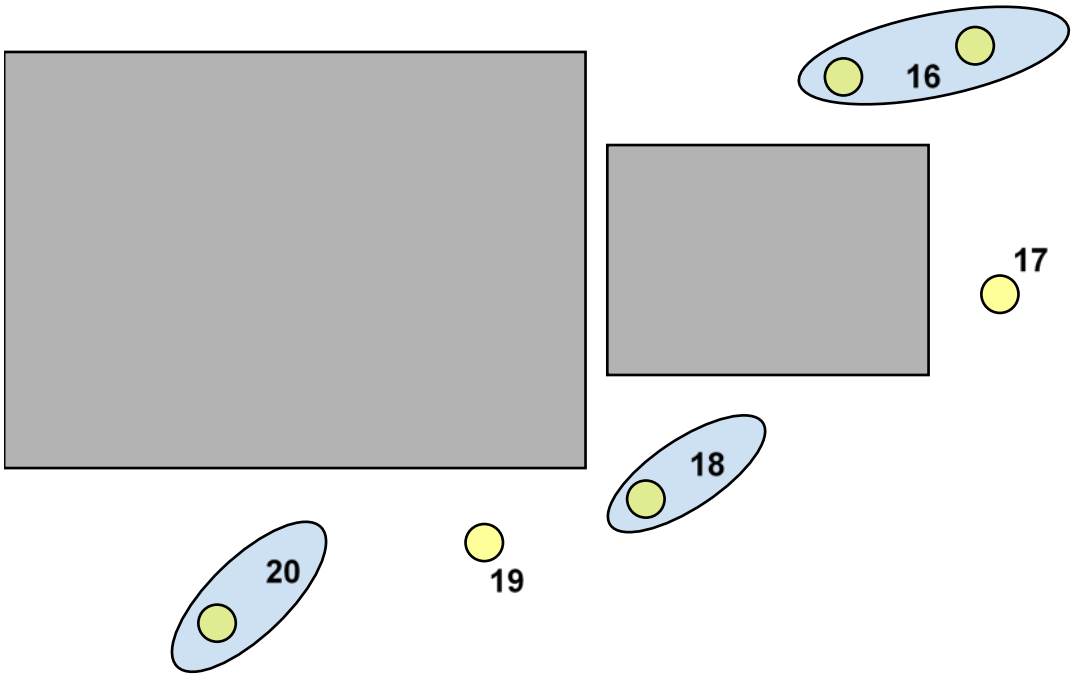

Figure 10: Bus delay locations and corridors – wider West Lothian area

Summary of the Opportunities

The consideration of the transport network has also raised a number of opportunities that are relevant to the Bus Partnership Fund as well as to a wider public transport strategy. These include the opportunity to explore new bus priority measures in the area, including:

- Bus lanes;
- Bus gates;
- Bus advance areas;
- Bus priority signalling;
- A review of the layout or positioning of stops;
- A review of the location of stops.

More broadly, there is an opportunity to ensure the provision of high-quality bus services, which will be fast, frequent, direct, integrated and affordable. Such a network would encourage users to move from private car transport to bus travel, helping to address congestion and emissions concerns.

Combining these opportunities with a wider strategy of promoting the bus network creates the potential to arrest the cycle of decline which has been brought about by the COVID-19 pandemic, and instead create a virtuous cycle of recovery and growth of the bus network.

4. Desired Outcomes

Max 1000 words

Describe the desired outcomes from the proposed bus priority developments. How do you plan to evaluate the achievement of these outcomes?
Objectives have been developed based on the analysis of problems and opportunities discussed above, and incorporating policy and strategy at local, regional and national levels. Draft objectives were reviewed with the West Lothian Bus Alliance to ensure that these are consistent with the stated aims of the Alliance. These objectives have been developed with the intention that they can be refined and made SMART as the appraisal process progresses, i.e.: • Specific; • Measurable; • Attainable; • Relevant; and • Timed. It is noted at this early stage the objectives may not fully satisfy all of these criteria. The objectives developed were as follows: 1. Improve bus journey times, punctuality, and reliability; 2. Improve public transport connectivity to key locations, including employment, education, healthcare, and retail; 3. Grow patronage on the network, as part of a post-COVID recovery and beyond; 4. Improve the quality of bus services, information, and infrastructure to increase their attractiveness; 5. Reduce congestion and emissions by increasing the share for sustainable modes; 6. Ensure provision for sustainable transport options at new developments; 7. Deliver parking strategies which promote modal shift from single occupancy private vehicles to sustainable modes; 8. Deliver a safer, more attractive environment for active travel including integration with public transport. 9. For the Alliance to provide a platform for the future development of a Bus Service Improvement Partnership (BSIP). Objective 1 is the most directly related to the problems described above, although reducing congestion (Objective 5) and promoting modal shift (Objective 7) will also feed improvements in journey times and journey time reliability for buses. More generally, each of these objectives tie in with broader strategic goals of reducing inequalities, taking climate actions, helping deliver inclusive economic growth, and improving health and wellbeing. The success in achieving these objectives can be measured by monitoring a number of Key Performance Indicators (KPIs). As with the objectives themselves,

these KPIs should be reviewed as appraisal is carried out in more detail and refined where necessary. Initial proposed KPIs, which can be refined in later stages of study, are as follows:

1. Increased bus speeds on the corridors / junctions selected for improvement, and on the network in general;
2. Improved punctuality (compliance to timetable) and reliability (reduced lost mileage) of bus services operating on the corridors / through junctions selected for improvement;
3. Reduced time lost to delay by buses on the corridors / through junctions selected for improvement, and on the wider network;
4. Improved journey time / reduced time lost to delay for all vehicles on the network in general;
5. Increased accessibility to key facilities, in terms of proportion of the population with access by sustainable modes and in terms of journey times;
6. Increased passenger numbers using bus services;
7. Increased passenger satisfaction of bus services;
8. Increased mode share for sustainable transport modes;
9. Reduction in monitored emissions from transport-related pollutants (PM_{10} and NO_2);
10. Reduction in recorded accidents involving active travel users.

In order to monitor these KPIs, data can be collected from various sources including bus operators and Transport Scotland, and by undertaking accessibility analysis e.g. using TRACC software. This can be done both before delivery and over a period after to evaluate the anticipated improvements in the metrics. Note that data sources will be identified through the Business Case development and may complement the following data provided by the operators:

- Timing data, using the Automatic Vehicle Locations (AVL) transponder systems, to measure speeds, punctuality and delays;
- Ticketing data, to monitor passenger numbers and travel patterns;
- Customer surveys and feedback, to measure satisfaction and opinion.

In further stages of appraisal, the following steps are proposed to evaluate the potential options:

- Completion of a Case for Change report, building on the work undertaken for this bid document and to act as a foundation of the business case. This will incorporate engagement on how people use the transport system;
- A STAG Preliminary Appraisal to evaluate and sift options at a high-level, utilising largely qualitative analysis other than where readily quantitative analysis is possible. It should be noted that emerging updated guidance for STAG suggests that it may be possible to progress directly to Detailed Appraisal, should a small number of options be taken forward following early option sifting;
- A STAG Detailed Appraisal to further develop the sifted options and evaluate these to a level consistent with a Strategic Business Case (SBC), and including STAG Option Summary Tables for each;
- Outline Business Cases(s) (OBC) related to the progressed options; and
- Final Business Case(s) (FBCs) related to the progressed options.

Note that at the OBC and FBC stages it may appropriate to group certain measures to be considered as part of a corridor and to leave other measures to be considered as separate scheme, depending on the options progressed through the STAG process. Whether some options can be delivered as ‘quick wins’ should also be considered at an early stage.

5. Potential Options

Max 3000 words

Outline the ideas the partnership has for developing bus priority measures and an outline timescale for their delivery. Describe any quick wins i.e. developments which could be implemented by the end of the financial year 2022/23[iii]. Outline how you plan to work in partnership. Describe what consultation has taken place (if any) to arrive at these high-level options[iv].

Options Under Consideration

A number of options have emerged which have the potential to address the problems identified and meet the objectives discussed in the preceding sections. Those options which are directly relevant to the Bus Partnership Fund, can be grouped into five categories, although it is likely that a mixture of these will be most effective in meeting the requirements in the area. The categories are as follows:

- Physical bus priority;
- Bus priority signalling;
- Bus stop modifications;
- Junction modifications; and
- Parking and other traffic control measures.

These measures are described below, and the potential for their implementation in West Lothian outlined later in this section.

Physical Bus Priority

Physical measures can allow buses to bypass traffic queues, reducing the effects of congestion on journey times. By reducing the effects of congestion, the journey times become more reliable, helping to achieve one of the key desired outcomes from this process. By prioritising buses ahead of general traffic, these measures also increase the attractiveness of bus travel relative to other modes, which will help achieve the objective of growing patronage.

There are two main forms of physical bus priority which have been identified as potential options here:

- Bus lanes, which may be appropriate on wider roads or where the road can be widened. Even in cases where a bus lane cannot be accommodated at a junction, a measure to allow buses to bypass heavy traffic until close to the junction can still be of considerable benefit. However, a number of the corridors identified as problem areas are single lane with the potential to widen the carriageway restricted by bridges, level changes, or buildings.
- Bus advance areas, which allow buses to bypass general traffic, which is held at a set of traffic lights. Often these are at the end of a bus lane to allow effective merging of buses into mixed traffic lanes. This would be appropriate at locations where traffic is likely to queue, particularly at or near a junction. Depending on the likely length of the traffic queue, this

measure may not need a wider carriageway for as long a section as a full bus lane.

Bus Priority Signalling

Linking to the onboard Automatic Vehicle Location (AVL) systems / transponders, and integrated with overall Urban Traffic Management and Control (UTMC) systems, priority signalling allows buses to be detected on approach to a junction and to prevent them being delayed by a red signal. A number of junctions in the area have been identified as having significant wait times at lights for bus movements, which adds additional time to the duration of the journey. If these delays can be reduced, this will help meet the objectives of improving overall journey time, punctuality and reliability, and improving the attractiveness of the bus services.

Bus Stop Modifications

It is possible that circumstances at the bus stops themselves may be impeding the performance of the bus services. For example, at locations where the bus stop is located in a layby, there may be delays re-entering the traffic stream. Making changes at the stops to reduce delays will decrease journey times and increase journey time reliability, as well as improving the perception of the services. The types of options which may be relevant in this area are:

- Reviewing the location of stops, which may not be ideally situated due to the proximity of a junction or other facilities, or in cases where a number of stops are located very near to each other on the same route.
- Modify the positioning of stops at their current location. In particular, this may involve the removal of the layby, which can cause delays for buses both in terms of having to manoeuvre into the layby to access the stop and then to filter back into the lane of traffic. Note however this may not always be the most appropriate option and in, for example, the case of a layby shortly before a junction, an alternative of extending the layby into an additional approach lane (or bus lane) to the junction may prove preferable in an appraisal. Laybys may also be appropriate for timing points on routes.
- Review of stop layout with a view to making improvements which would assist boarding and alighting. This may be appropriate on corridors where bus speeds are influenced less by the traffic volumes and more by the passengers boarding and alighting at certain stops at peak times. An example of this might be to provide level boarding, which can benefit mobility impaired and wheelchair users, families with children and pushchairs, and older users. Any small modifications may accrue a small benefit, but if this is done at multiple stops along the corridor then these benefits would accumulate along the route.

Junction Modifications

As well as options to specifically target bus journey times and give public transport more priority over general traffic, there are a number of potential options which may improve the general flow of traffic while also inferring benefit to bus. More general modifications at junctions where congestion occurs may be able to reduce

this congestion and allow vehicles, including buses, to move more freely. These options are as follows:

- Increasing the stacking capacity of approach lanes to junctions, either by lengthening the lanes back, or by increasing the road width to incorporate an additional lane for a specific movement. The benefit of this will depend on understanding the dominant movements at the junction, and redesigning the road layout appropriately;
- Signalisation of a junction. This can be done in cases where a dominant movement from one approach is preventing traffic from other approaches accessing the junction. Note that this can be combined with signal bus priority and, where space permits, this could be done in conjunction with implementation of a bus advance area to further reduce bus delays.
- More wholesale junction changes, such as removal of a roundabout and replacing with a signalised junction. This would likely prove a more expensive option but can be considered and appraised to determine whether the likely benefit would justify this; and
- Resequencing of traffic signals at a junction or in a linked manner along a corridor, or introducing a more dynamic element to the signal operation. This could allow improved throughput at the junction for all traffic, and reduce delays experienced by the bus. This can also be done in conjunction with bus priority signalling.

Other junction modifications to benefit bus include those such as banning certain turns, providing turning lanes, and yellow boxes to keep key turning movements free of obstruction.

Parking and Car Park Control Measures

Parking provision and other measures to control the movement and behaviour of traffic can be modified in order to reduce the disruption caused to buses. This may particularly be the case in main streets through town centres, where there is a high volume of traffic making multiple competing movements. In addition these areas may see disruptions from vehicles making deliveries to local businesses, which may obstruct the movement of buses even more so than they do general traffic. Simplifying the traffic behaviour through these areas could improve bus journey times and journey time reliability. Some of these options may also fit with the objective of encouraging modal shift through delivery of alternative parking strategies. The options in this category comprise:

- Review of parking layout and restrictions in order to reduce congestion caused by vehicles accessing parking bays; and
- Review of car park circulation in car park areas in order to prevent overspill onto the main carriageway. This would be particularly applicable at Almondvale Avenue, where traffic is known to tail back and block access from the nearby Bubbles Roundabout.

Key to the success of any of these measures will be enforcement of new parking restrictions. This may be particularly important early after implementation, as some road users may otherwise be slow to change their behaviour to adapt to the new

rules. Failure to adequately enforce any measures may see the same bad habits continuing, and so negate any benefits the measures may have generated.

Options by Location

Twenty corridors and junctions have been identified for further investigation in a detailed appraisal. Table 6 below identifies these locations and indicates the category of intervention which it has been determined could be beneficial there. The table also shows indicative potential journey time savings at each location, and the number of routes and services which would be likely to be impacted.

Table 6: Potential options for areas and corridors with delays on bus routes

No.	Area / Corridor	Description including junctions	Issues	Potential Options					Potential Bus Journey Time Impacts (per journey)	Number of Services / Journeys affected
				Physical Priority (Bus Lanes, Advance areas)	Bus Priority Signals	Revised Bus Stop layouts / Stop improvements	Junction modifications	Parking controls		
1	Alderstone Road	Between Peel Rdbt and Almondvale, including Eilburn Rd and Kirkton N Road junctions	Delays at junctions along route	✓	✓	✓	✓		up to 7mins 15s	Number of routes: 14 Number of journeys in: AM peak: 76 PM peak: 80 Total weekday daytime (8am-8pm): 402 Total across week: 4110
2	Almondvale	Area around Bus Terminus, including Almondvalue Boulevard and Almondvale Avenue, and College Roundabout	Slow-moving traffic to College Roundabout; queuing traffic from McDonald's can impact Bubbles Roundabout.	✓			✓	✓	up to 7mins 15s	Number of routes: 22 Number of journeys in: AM peak: 126 PM peak: 124 Total weekday daytime (8am-8pm): 611 Total across week: 6103
3	Deans	Deans N Road and Knightsridge W Road, including junction of these	Slower through residential area at peak times	✓		✓	✓	✓	up to 5mins	Number of routes: 7 Number of journeys in: AM peak: 57 PM peak: 53 Total weekday daytime (8am-8pm): 262 Total across week: 2604
4	Knightsridge	Knightsridge W Road, Knightsridge E Road, and Ladywell E Road	Slower through residential area at peak times			✓			up to 7mins	Number of routes: 5 Number of journeys in: AM peak: 31 PM peak: 31 Total weekday daytime (8am-8pm): 143 Total across week: 1466
5	Ladywell	Ladywell E Road, junctions at crossing of Couland Rd (A705) between Ladywell E Road and Howden E Road, and entrance/exit of St John's Hospital	Slower through residential area at peak times, and delays crossing Cousland Road and at Hospital			✓	✓		up to 3mins 15s	Number of routes: 12 Number of journeys in: AM peak: 65 PM peak: 68 Total weekday daytime (8am-8pm): 326 Total across week: 3339

No.	Area / Corridor	Description including junctions	Issues	Potential Options					Potential Bus Journey Time Impacts (per journey)	Number of Services / Journeys affected
				Physical Priority (Bus Lanes, Advance areas)	Bus Priority Signals	Revised Bus Stop layouts / Stop improvements	Junction modifications	Parking controls		
6	Craigshill	Junctions of Howden S Road and Almond Link Road, and Almond Link Road and Almond Road, and along Almond Road and Craigshill E Road	Slower through residential area at peak times, and delays through interchange at Livingston Road (A899)			✓			up to 8mins 30s	Number of routes: 5 Number of journeys in: AM peak: 26 PM peak: 25 Total weekday daytime (8am-8pm): 123 Total across week: 1401
7	Dedridge	Dedridge E Road	Slower through residential area at peak times			✓			up to 3mins 30s	Number of routes: 9 Number of journeys in: AM peak: 40 PM peak: 40 Total weekday daytime (8am-8pm): 200 Total across week: 2141
8	Civic Centre	Roundabout at junction of Howden E Road and Howden S Road, at Civic Centre entrance	Delays at junction at peak times				✓		up to 2mins 30s	Number of routes: 8 Number of journeys in: AM peak: 48 PM peak: 43 Total weekday daytime (8am-8pm): 209 Total across week: 2216
9	Kirkton Campus	Simpson Parkway, from Kirkton S Road junction to A705 junction	Slower westbound at peak times		✓	✓	✓		up to 5mins 15s	Number of routes: 2 Number of journeys in: AM peak: 9 PM peak: 8 Total weekday daytime (8am-8pm): 41 Total across week: 413
10	A705	Kirkton N Road past Livingston Village to A705, and A705 toward Seafield, including Mill Rdbt and Toll Rdbt	Delays particularly Eastbound at the AM peak	✓	✓	✓	✓		up to 6mins 30s	Number of routes: 3 Number of journeys in: AM peak: 28 PM peak: 24 Total weekday daytime (8am-8pm): 123 Total across week: 1274
11	Bathgate / Boghall	Part of A89 corridor through Bathgate, including North Bridge Street junctions,	Delays experienced due to high traffic levels and multiple	✓	✓	✓	✓	✓	up to 10mins 45s	Number of routes: 16 Number of journeys in: AM peak: 88

No.	Area / Corridor	Description including junctions	Issues	Potential Options					Potential Bus Journey Time Impacts (per journey)	Number of Services / Journeys affected
				Physical Priority (Bus Lanes, Advance areas)	Bus Priority Signals	Revised Bus Stop layouts / Stop improvements	Junction modifications	Parking controls		
		Guildiehaugh Roundabout, and Boghall Roundabout	conflicting vehicle movements.							PM peak: 87 Total weekday daytime (8am-8pm): 439 Total across week: 4355
12	A89 west of Bathgate	From Blackridge through Armadale to Bathgate, including Armadale Cross	Delays both directions especially in morning peak. Ties in with eastern A89 corridor in SES bid.		✓			✓	up to 12mins 15s	Number of routes: 6 Number of journeys in: AM peak: 42 PM peak: 40 Total weekday daytime (8am-8pm): 207 Total across week: 2166
13	Harthill / Whitburn	B7066/B7069 between Harthill and East Whitburn, including Whitburn Crossroads	Delays in PM peak		✓	✓		✓	up to 4mins 45s	Number of routes: 5 Number of journeys in: AM peak: 36 PM peak: 34 Total weekday daytime (8am-8pm): 170 Total across week: 1770
14	Blackburn	Blackburn town centre - W Main Street and route round Ash Grove, including E Main Street juncitons with Blackburn Road and Elm Grove	Delays both directions especially in PM peak		✓		✓		up to 3mins 30s	Number of routes: 4 Number of journeys in: AM peak: 36 PM peak: 32 Total weekday daytime (8am-8pm): 163 Total across week: 1665
15	A7066/B792 interchange	Easter Inch and Leyland Roundabouts	Delays at roundabouts on B792 at peak times				✓		up to 4mins	Number of routes: 3 Number of journeys in: AM peak: 24 PM peak: 24 Total weekday daytime (8am-8pm): 120 Total across week: 1157
16	Uphall / Broxburn	Main streets through Uphall and Broxburn, including junction with Station Road (Uphall) and Greendykes Junction	Delays due to high volume of traffic, parked cars and right-turning vehicles		✓	✓	✓	✓	up to 7mins 15s	Number of routes: 9 Number of journeys in: AM peak: 54 PM peak: 53 Total weekday daytime (8am-8pm): 267 Total across week: 2701

No.	Area / Corridor	Description including junctions	Issues	Potential Options					Potential Bus Journey Time Impacts (per journey)	Number of Services / Journeys affected
				Physical Priority (Bus Lanes, Advance areas)	Bus Priority Signals	Revised Bus Stop layouts / Stop improvements	Junction modifications	Parking controls		
17	East Calder	Langton Road around junction with Redcraig Road	Delays around mini roundabout peak times				✓		up to 2mins 30s	Number of routes: 4 Number of journeys in: AM peak: 21 PM peak: 17 Total weekday daytime (8am-8pm): 89 Total across week: 1004
18	West Calder and Polbeth	A71, including West Calder Main Street around Kirkgate and A792 junctions, and through Polbeth	Delays, particulalry in PM peak		✓			✓	up to 4mins 30s	Number of routes: 3 Number of journeys in: AM peak: 24 PM peak: 25 Total weekday daytime (8am-8pm): 122 Total across week: 1170
19	Addiewell	Around Church Street / Addiebrownhill junction	Delays especially in AM peak (possibly related to nearby schools)					✓	up to 4mins	Number of routes: 3 Number of journeys in: AM peak: 24 PM peak: 25 Total weekday daytime (8am-8pm): 122 Total across week: 1170
20	Fauldhouse / Longridge	Around Fauldhouse Main Street / Sheephousehill junction, and along B7010 towards Longridge	Delays at peak times					✓	up to 4mins 15s	Number of routes: 2 Number of journeys in: AM peak: 16 PM peak: 16 Total weekday daytime (8am-8pm): 81 Total across week: 804

Taking into consideration the numbers of journeys operating through each of these areas at different times of the week, it is possible to estimate the potential total benefit of these options to the bus network. Assuming an appropriate proportion of the maximum benefit to be experienced at the different times of the week, this can be approximated[12] at around 55,800 minutes (around 930 hours) per week.

Considering the areas individually, it can be seen from the table that the longer sections of the A89 – both west of Bathgate, and through Bathgate and Boghall – may offer the greatest potential for reducing the maximum journey times. However, it should also be considered that almost every service operating in West Lothian intersects multiple sections of delay (one service as many as 9 of the areas identified), and that therefore addressing a number of these areas will have cumulative benefits along several routes.

Consideration has also been given to Bus Partnership Fund bids for neighbouring areas, and in particular that for the South East Scotland (SES) City Region Deal group. Focussing on improving links into and out of Edinburgh, this bid has proposed improvement on the A89 corridor around the West Lothian border, between Broxburn and Newbridge, and on the A71 corridor around Kirknewton and Wilkieston and at Lizzie Brice's Roundabout in south Livingston where the A71 meets the A899. Improvements proposed in this Bid will complement those from the SES bid, by enhancing additional sections of the A89 corridor (the Uphall / Broxburn, Bathgate and Boghall, and A89 west areas) and the A71 corridor (East and West Calder, Addiewell, and Fauldhouse). This creates an opportunity to provide more attractive services not only within West Lothian, but from many parts of West Lothian towards Edinburgh, with the benefits of these West Lothian improvements compounding with the improvements proposed for the City Deal region.

Wider Supporting Measures

A number of supporting measures have been identified as being of likely benefit in the area. These measures would work in conjunction with any bus priority measures implemented to ensure maximum possible benefit to the bus network and its users. These additional measures include:

- Improvement of bus stop infrastructure and stop information, including Real Time Information (RTI) systems. It is known that in West Lothian a number of shelters are in need of upgrade, and the RTI and other information is not provided at a substantial number of stops. This creates a barrier for bus users, and especially to infrequent or new users. Addressing this would fit the objectives of improving the quality of the network, and by making the network more accessible could help increase patronage.
- Improvement of the bus fleet, including investment in lower carbon vehicles. This would increase the quality of the network as well as reducing vehicle emissions.

[12] Assuming journeys at peak times on weekdays will on average experience half the maximum benefit, and that buses across the weekday inter-peak period and on Saturdays will on average experience 25% of the maximum benefit.

- Marketing and publicity, especially in relation to the corridors and routes which have been improved. This can be arranged both by operators, in the form of on-bus advertising, leafleting, as well as using social media, and by the Council in the form of raising awareness through the various channels.
- Ticketing improvements, such as further investment in smart ticketing, or multi-operator and multi-modal ticketing in the area. Promotions could also be given by the operators to encourage non-regular users to try the bus service. By making ticketing easier and potentially cheaper, this may help achieve the aim of encouraging modal shift towards sustainable transport options. Simplified ticketing can also improve bus boarding times.
- Parking policies and strategies which will support the measures under appraisal. This would include the volume and price of parking, and a review of enforcement of parking restrictions to ensure illegal or obstructive parking is addressed effectively. By doing this in conjunction with bus improvement measures, this allows public transport to become a viable alternative to single-occupancy vehicles, in line with the objectives.
- Improved active travel provision, including integration where possible with the bus network, to ensure as wide as possible access to the improved network. This would help provide a multi-modal alternative to private vehicle usage, and serve both the objectives of increasing bus patronage and increasing active travel usage in a safe manner.
- Other on-road improvements such as line painting or traffic light renewal. By ensuring markings at junctions or parking bays are clear this may reduce driver confusion and allow vehicle manoeuvres to be completed more efficiently. As a result, the number and duration of vehicles obstructing bus travel can be reduced.

Bus Partnership

The West Lothian Bus Alliance comprises representatives of West Lothian Council, the South East of Scotland Transport Partnership (SEStran), the Bus Users' Forum, and bus operators running services within West Lothian. The Alliance has been formed to provide a platform to develop a Bus Service Improvement Partnership (BSIP), and to work together to access funding opportunities to improve bus infrastructure (and hence bus transport more generally) in the West Lothian area.

Assuming a successful Bus Partnership Fund bid, the West Lothian Bus Alliance would continue to oversee the development of proposals through the STAG and subsequent Business Case stages. The Terms of Reference of the West Lothian Bus Alliance, which is included in the Appendix to this bid document, sets out the purpose and aims of the Alliance. The Mission Statement is that:

> *West Lothian Bus Alliance seeks to create a smarter, more successful set of bus services that maximises the potential of the sector in the West Lothian area for the benefit of the area's people.*

The production of this bid document has involved significant engagement from the stakeholders within the West Lothian Bus Alliance. Meetings have been held weekly, with emerging results being presented to the group for discussion and

feedback. Minutes of meetings and the Terms of Reference for the Alliance are provided in the Appendix to this document.

Adjacent Bids and Joint Working

This proposal is adjacent to funded proposals led by the City of Edinburgh Council (CEC). Ongoing, positive collaboration between officers, WLBA's consultants SYSTRA and CEC consultants Jacobs has ensured there is no risk of duplication of effort or funded activity, with proposals in particular for the A89 Broxburn corridor being seen as complementary.

WLBA is also aware of the Forth Valley Bus Alliance successful bid, and the Midlothian Bus Alliance emerging bid. Again, these are seen as complementary.

West Lothian Council (providing oversight for the proposals) and WLBA will continue to work in partnership with all adjoining bids to ensure alignment, through regular reporting to SEStran Board and to the City Region Deal Transport Appraisal Board, with information sharing facilitated by partners, Councils and SEStran.

Further consultation

It is expected that public consultation and wider stakeholder engagement would be required should this bid result in the successful award of funding. This would be necessary in building the Strategic Business Case (SBC), including the case for change, and preliminary and detailed appraisal stages, in line with STAG. Further tailored consultation would then be required for schemes that move forward to the Outline Business Case (OBC) and Final Business Case (FBC) stages.

Timescale for Delivery

Each of the options presented above has the potential to address the problems previously identified, and to build on the opportunities discussed. Should this bid be successful the options will be developed further as part of the STAG appraisal process. Progressed options would then continue to the OBC and FBC stages as appropriate.

The timescales for this are dependent on the following:

- Completion of the SBC (STAG appraisal process);
- Completion of the OBC and FBC stages;
- Securing land where necessary;
- Completion of necessary statutory process, such as Traffic Regulation Orders (TROs), detailed designs, and planning permission;
- Identifying and securing funds; and
- Final delivery of the schemes.

It is expected that the SBC will be completed within 12 months. The timescales for completion of the OBC(s) will be determined on completion of the SBC; however, it is expected that these would be completed within 24 months and delivered thereafter, subject to funding.

6. Resources Required

<table>
<tr>
<td>What resources is the partnership requesting from Transport Scotland to develop the proposals[v]?</td>
<td>The West Lothian Bus Alliance is requesting the following funding to undertake appraisal studies of the areas identified:
<table>
<tr><td>Strategic Business Case</td><td>£231,250</td></tr>
<tr><td>Outline Business Case(s)</td><td>£493,750</td></tr>
<tr><td>Project Management Cost</td><td>£36,250</td></tr>
<tr><td>Total</td><td>£761,250</td></tr>
</table>
A more detailed breakdown of these cost and associated assumptions can be found in the Appendix to this submission.</td>
</tr>
<tr>
<td>What is the estimated total cost of the proposed infrastructure developments?</td>
<td>Implementation of Bus Priority measures:
• £24,800,000 excluding Optimism Bias;
• £35,712,000 including Optimism Bias of 44%.

These are high-level estimates only and are not derived from a detailed costing exercise. These costings have been estimated using an assumed £1m cost per kilometre along with a factoring process to account for the scale and number of interventions considered.

These costs have been provided for use in the application to the Bus Partnership Fund only, in order to indicate the potential scale of costs associated with the measures considered. These should not be used for any other purpose and future stages of study should consider cost estimates independently from these. An allowance for optimism bias of 44% has been quoted.

A summary of the assumptions made is provided in the Appendix.</td>
</tr>
<tr>
<td>What – if any - is the nature and extent of investment to be made by partners[vi]?</td>
<td>Discussions have been undertaken within the West Lothian Bus Alliance to determine what can be contributed by each of the partners in order to increase the success of any measures implemented. In particular, it is clear that some of the Wider Supporting Measures identified above can be progressed by some or all of the Alliance partners.</td>
</tr>
</table>

	The following potential investments have been put forward by the Bus Operators: • To invest in improved ticketing systems, such as introduction of contactless and/or smart cards, and to explore integrated ticketing between operators or modes. • To invest in publicity for the improved corridors and for the partnership area in general. This would take the form of advertising space on vehicles, social media, and leafleting. • To invest in promotional fares or tickets, to encourage infrequent or non-users towards bus travel. • To improve customer information to make bus travel a simpler experience. This would include improved timetable and fare information, and a review of online information and operator apps. • To reinvest savings made as a result of the improvement measures, be these resource savings (for example a reduced Peak Vehicle Requirement) or cost savings, into improving services elsewhere in the West Lothian area. • To invest in fleet improvements, to ensure vehicles continue to provide safety and comfort for passengers, and have low carbon emissions. • To work with other operators, under co-ordination from West Lothian Council, to provide better co-ordinated service frequencies and customer information. The following potential investments have been put forward by West Lothian Council: • To invest in bus stop improvements, including shelters and increasing the provision of Real Time Information (RTI) displays. • To support smaller operators with ticketing developments. • To work with operators in the marketing of corridor improvements. This will include an increase in promotion of public transport options to the public from the various Council departments. • To work with operators to provide better co-ordinated service frequencies and customer information. • To work with operators to minimise disruptions due to road closures. • To carry out a review of Livingston Bus Terminus, and to consider stop location changes across the

	network more generally if these are shown to be necessary. • To review parking restrictions and enforcement within the area, and to ensure suitable enforcement of bus priority corridors. • To review Active Travel provision across West Lothian. • To invest in general road improvements as necessary, such as line painting, traffic light renewals, etc. Subject to funding, SEStran have proposed the following: • To support further upgrades to Real Time Passenger Information (RTPI) systems and provide more facilities at key sites / locations within West Lothian. • To continue work on development of a journey planning app which will specifically improve the accessibility of the bus network for people with a wide range of mobility and sensory impairments. • To progress trials of a tech-enabled rural Demand Responsive Transport (DRT) service in West Lothian, to increase connectivity for areas currently without a scheduled bus service. • To work with West Lothian Council to improve active travel and modal integration by identifying suitable Go e-Bike sites. • To work with West Lothian Council and other WLBA members, as well as Sustrans Scotland, to align the development of active travel routes with that of the bus priority corridors. A number of projects are already in development, such as from Addiewell to Livingston South, and Threemiletown / Ecclesmachan to Livingston North.
What – if any – other sources of investment will be available for the proposed developments[vii]?	To be developed as part of the appraisal process.

7. Commitment of Partners

The proposal should be signed by the Chair and CEO of the local authority leading the proposal. Partners (including RTPs and bus operators, as appropriate) may indicate their support to the proposal through appended letters of intent or additional signatures below.

Organisation	Name	Job title	Signature
[Lead local authority]		Lead Councillor	
[Lead local authority]		CEO	

8. Submission of Proposals

Proposals should be submitted to buspartnershipfund@transport.gov.scot by 12 noon on Friday 15th October 2021.

9. Guidance Notes

[i] Relevant appendices or links to documents may be added, in addition to the word limits. For example, the partnership may wish to include links to community plans, transport strategies, STAG reports etc.

[ii] Partnerships should look to the STAG pre-appraisal phase, as a guide on the level of information required. It is recognised that you may not have all of the data at this stage but you should outline how you are going to produce the more detailed data – including forecast data - through the Outline Business Case (OBC) stage. If you require resources to carry out even a pre-appraisal level of analysis, please state that here and estimate the requirements in section 6.

[iii] Quick wins should be sustainable and fit with the longer-term, transformational developments proposed.

[iv] Full details of the long-listing process are not required at his stage, as successful partnerships will have the opportunity to develop, evaluate and refine the options through the OBC stage. Where

appraisals have already been carried out (for example, through city deals) partnerships should consider how these fit the future and the changes they will need to make to transport.

[v] Support from Transport Scotland will be to fund the specialist resources required to develop an appraisal, as defined by the Scottish Transport Appraisal Guide (STAG), and Outline Business Case (OBC). This will be required to access further infrastructure funding from the Bus Partnership Fund.

We recognise that some partnerships may have already conducted an appraisal and may be at Outline Business Case stage or even further with proposals. We also uphold the STAG principle that the level of appraisal required should be proportionate. Capacity funding will therefore take into account the stage the partnership is at and will be based on a proportionate view of what further appraisals and business cases are required to justify the infrastructure funding.

We also recognise that some options may have been appraised and are ready to implement as quick wins: if so, that should be stated here and relevant evidence attached.

Partnerships are reminded that staff costs may be capitalised in considering the request for funding. All justifiable bids will be considered, including funding for early quick wins, which may already have been appraised.

[vi] This may include investment in other measures, which will contribute to the holistic transformation of the bus service e.g. ultra-low or zero emission buses.

[vii] Include sources and amounts of investment already secured or expected to be secured before the development projects commence. This may include in-kind investment, as well as finance, and should take account of contributions from bus operators and other partners, as well as local authorities.