

TRANSPORT (SCOTLAND) BILL

FINANCIAL MEMORANDUM

INTRODUCTION

1. As required under Rule 9.3.2 of the Parliament's Standing Orders, this Financial Memorandum is published to accompany the Transport (Scotland) Bill, introduced in the Scottish Parliament on 8 June 2018.
2. The following other accompanying documents are published separately:
 - Explanatory Notes (SP Bill 33-EN);
 - Policy Memorandum (SP Bill 33-PM);
 - statements on legislative competence by the Presiding Officer and the Scottish Government (SP 33-LC).
3. This Financial Memorandum has been prepared by the Scottish Government to set out the costs associated with the measures introduced by the Transport (Scotland) Bill ('the Bill'). It does not form part of the Bill and has not been endorsed by the Parliament.

BILL CONTENT

4. Given the wide and varied nature of the Bill, the financial implications for each element have specific considerations particular to those measures and the bodies involved with delivery. They are not necessarily cross-cutting. As such, this document is structured to explore the cost implications in line with the Bill's structure – rather than the legislation in its entirety – which is as follows:
 - Part 1 – Low emission zones: makes provision in relation to the creation and enforcement of low emission zones in Scotland;
 - Part 2 – Bus services: ensures that local transport authorities have viable and flexible options to improve bus services in their areas;
 - Part 3 – Ticketing arrangements and schemes ("smart ticketing"): makes provision enabling the Scottish Ministers to specify a national technological standard for the implementation and operation of smart ticketing arrangements and providing local transport authorities with additional powers to develop and deliver effective smart ticketing arrangements and schemes;

- Part 4 – Pavement parking and double parking: introduces prohibitions on parking on pavements and double parking;
- Part 5 – Road works: enhances the role of the Scottish Road Works Commissioner (SRWC) and the wider regulation of road works;
- Part 6 – Miscellaneous and general: includes providing Regional Transport Partnerships (Transport Partnerships) with more financial flexibility and improves the governance of Scotland’s canals.

5. Many of the measures within the Bill allow for options by relevant affected organisations, particularly public authorities such as local authorities, rather than statutorily prescribing the specifics of implementation.

6. Additionally, a number of these will be subject to future decision-making and approval processes applicable to the particular measure, such as secondary legislation, approval/advisory panels, or governance structures and decision-making processes discharged by the relevant delivery bodies. These will be based on the legislative framework set out by the Bill, but taken according to their particular needs. Therefore, whilst it may not be possible to make quantifiable predictions on such future scenarios, illustrative examples are provided in order to explore such costs based on best estimates at the time of the Bill’s introduction.

PART 1 – LOW EMISSION ZONES

STATISTICS AND RESEARCH

7. The Scottish Air Quality website¹ contains a long-standing national dataset on air pollution levels in Scotland, along with the local authority air quality action plans and progress reports. There are 39 air quality management areas but no low emission zones in Scotland. There are no national statistical datasets available on the costs associated with the design, implementation or operation of low emission zones, although various national and city-specific costs have been produced for the likes of the anticipated Clean Air Zones in England and low emission zones in Europe.

8. Low emission zone design, implementation and roll-out is inherently varied, with a wide range of options for the specifics of any particular scheme. This is demonstrated by the significant variance in costs referenced in research and feasibility studies on low emission zones. Given such divergence will exist regarding the implementation of individual low emission zones schemes in Scotland, with elements defined by statutory regulation and others tailored by local authorities according to the nuances of the scheme most appropriate to their needs, it is not possible to give precisely definitive costs for future roll-out in Scotland at the time of the Bill’s introduction. However, the forecasts and costs explored in this document are intended to give an outline example of financial implications and where costs may be incurred on the Scottish Administration, local authorities and other bodies, individuals and businesses.

¹ <http://www.scottishairquality.co.uk/>

9. Transport Scotland has undertaken a range of research and stakeholder engagement activities to help inform our understanding on the likely cost of design, implementing and operating low emission zones:

- A research report by Jacobs consultancy, *Developing Cost Estimates for Low Emission Zones in Scotland*, was produced for Transport Scotland in September 2017. Key findings from this report are outlined below;
- Focus group workshops with bus operators and freight operators were held in 2017. The bus sector workshop report entitled *Low Emission Zones - Bus sector perspectives from Scotland's four major cities Final report*.²;
- The Scottish Government's, *Building Scotland's Low Emission Zones*, public consultation which ran from 6 September 2017 to the 28 November 2017;³
- Information taken from feasibility studies conducted in Scotland and England by the likes of Edinburgh, Glasgow, Aberdeen⁴ and Leeds City Councils in 2007, 2010, 2014⁵ and 2018⁶, some of which are unpublished.

10. Following discussion with key stakeholders, it has become clear that the financial management required to deliver low emission zones will require a joint/partnership effort between the Scottish Government and local authorities. Therefore no single body will be responsible for the entire financial outlay and management necessary to deliver low emission zones.

11. Many respondents to the *Building Scotland's Low Emission Zones* public consultation (85 out of 90 who provided a clear yes/no answer to the question) felt the proposals would increase the costs and burdens placed on all sectors, causing increased costs to public transport, business and the private motorist⁷.

12. However, there are wider societal long-term benefits – not least in terms of citizens' health – associated with cleaner air and more environmentally friendly and attractive cities and communities which can lead to economic benefits. Again, these can be challenging to quantify in relation to specific schemes and can be dependent on the design, roll-out and effectiveness of any particular implementation scenario.

13. The *Health and Socioeconomic Impact of Traffic-Related Air Pollution in Scotland* report in 2017⁸ encompassed a focus on costs regarding low emission zone schemes. The research found that:

- “In a costing exercise for a LEZ [low emission zone] there are many variables to consider and it is difficult to quantify exact costs and benefits in monetary terms... The most difficult costs to identify are the costs of any consultation process, policy development and expenditure to cover fines and vehicle upgrades.”;

² [Low Emission Zones – Bus sector perspectives from Scotland's four major cities'](#)

³ [Building Scotland's Low Emission Zones](#)

⁴ [Air Quality Reports: Aberdeen City Council](#)

⁵ [Leeds City Council Report](#)

⁶ [Leeds City Council Report](#)

⁷ [Analysis Report - Consultation on Building Scotland's Low Emission Zones](#)

⁸ [Dr Jackie Hyland, University of St Andrews \(2017\)](#)

- “The economic and health costs from air pollution are complex. They include the costs of traffic-related initiatives to reduce air pollution such as retrofitting older buses. There are also potential economic costs to businesses that might arise from traffic restrictions imposed under a LEZ. At the same time it is suggested that current air pollution levels are leading to costs to businesses from ill health and costs to the health service for treatment of preventable illness.”.

14. The Building Scotland’s Low Emission Zones public consultation paper noted that “The Urban Access Regulations in Europe website states that the Copenhagen LEZ found only a ‘few reported negative business impacts’”. The most comprehensive published study on low emission zones and business is the London Ultra Low Emission Zone (ULEZ) Economic and Business Impact Assessment, which found that ‘any negative impact on London’s economy as a result of the ULEZ would be minor to moderate in the short to medium term (predominantly in the first year)...and by 2025 the cost to London’s economy would reduce to virtually zero...with minor to moderate positive long term effects on London’s economic competitiveness’ (TfL 2014a, 2014b)^{9 10}.

COSTS ON THE SCOTTISH ADMINISTRATION (INCLUDING COST IMPLICATIONS TO THE SCOTTISH GOVERNMENT) AND COSTS ON LOCAL AUTHORITIES

15. There are various costs associated with the implementation and ongoing management of low emission zones, albeit systems also have the potential to generate some level of revenue through penalty fines.

16. Whilst schemes vary in terms of specific detail, precedents show they are often accompanied by associated vehicle retrofitting schemes (particularly for the bus sector), while the use of Automatic Number Plate Recognition (ANPR) cameras for detection and enforcement is generally commonplace.

17. The level of support for any such initiatives and other associated costs fall between central and local government, with no fixed or established formula or mechanism defined currently in Scotland to precisely apportion this. As the implementation planning around low emission zones is still on-going, there has not yet been a specific cost forecast exercise undertaken by local authorities. COSLA did not provide a response to the Scottish Government’s public consultation. Ultimately, the decision on low emission zone design, size, location and vehicle scope will be for local authorities to decide. As such, costs will be directly derived from this, taking into account the level of additional central government support available.

18. Therefore a partnership approach has taken place between local government and the Scottish Government and such engagement will continue – particularly with the four cities mentioned in the Programme for Government commitment – as matters develop towards

⁹ [TfL \(2014a\) Ultra Low Emission Zone Integrated Impact Assessment.](#)

¹⁰ [TfL \(2014b\) Ultra Low Emission Zone Integrated Impact Assessment. Economic and Business Impact Assessment October 2014.](#)

implementation of measures within the Bill on low emission zones. As such, the costs on central and local government are taken together in this section of the document.

19. The *Developing Cost Estimates for Low Emission Zones in Scotland* report from Jacobs consultants was intended to offer an estimated guide to the cost of low emission zones to the Scottish Government with a particular focus on the bus transport fleet in Scotland.

20. Although the Bill does not mandate any particular vehicle emission standard that needs to be adhered to in a low emission zone and the specific emissions standard will be set by regulation, it may be a reasonable assumption that this is consistent with the general leading emission standards for low emission zones established across Europe – presently Euro VI/6 for diesel vehicles and Euro 4 for petrol vehicles. Therefore the research used this standard as an assumption in calculations.

21. Jacobs gained knowledge of the London ULEZ via their work on the production of the scheme's integrated impact assessment and this experience helped to inform the estimation of costs and quantities for a Scottish low emission zone cost estimate. An area scaling factor of 3% and a population scaling factor of 7% was used by Jacobs as a multiplier to scale down the London ULEZ cost and infrastructure quantity figures (such as ANPR cameras, signage, design, communications, back-office enforcement etc.) to help inform such calculations for a hypothetical 'large' Scottish low emission zone of 3km² in size; this approach was agreed with Transport Scotland. Costs were also calculated for a 'medium' low emission zone at 1.5km² in size and a 'small' low emission zone at 0.5km² in size, although these costs were derived directly from the 'large' low emission zone costs. This approach was based on the assumption that a city like Glasgow may implement a 'large' low emission zone (it should be noted that in mid-2017, Glasgow City Council had not yet published details of its low emission zone but subsequently in late 2017, the council proposed a city-centre zone of approximately 3km² in size).

22. These costs were:

LEZ area + (grant)	Design costs (£)	Implementation Costs (£)	Grant Costs (£)	Operating Costs Year 1	Risk Year 1	Total Costs Year 1	Total Costs 10 years
Small 0.5km ² (Low)	£0.325m	£0.522m	£1.288m	£0.198m	£0.233 m	£2.567m	£4.228m
Small 0.5km ² (Med)	£0.325m	£0.522m	£1.910m	£0.198m	£0.296 m	£3.252m	£4.912m
Small 0.5km ² (High)	£0.325m	£0.522m	£2.575m	£0.198m	£0.362 m	£3.983m	£5.644m
Medium 1.5km ² (Low)	£0.424m	£0.706m	£3.863m	£0.463m	£0.546 m	£6.001m	£9.879m
Medium 1.5km ² (Med)	£0.424m	£0.706m	£5.730m	£0.463m	£0.732 m	£8.055m	£11.993m
Medium 1.5km ² (High)	£0.424m	£0.706m	£7.726m	£0.463m	£0.932 m	£10.250m	£14.129m
Large 3.0km ² (Low)	£0.424m	£0.871m	£7.726m	£0.805m	£0.983 m	£10.809m	£17.549m
Large 3.0km ² (Med)	£0.424m	£0.871m	£11.460 m	£0.805m	£1.356 m	£14.917m	£21.657m
Large 3.0km ² (High)	£0.424m	£0.871m	£15.452 m	£0.805m	£1.755 m	£19.307m	£26.048m

Table 1 – Jacobs optimism bias and discounted costs based on 2017 prices

23. Jacobs calculated undiscounted and discounted costs based on 2010 and 2017 prices. They were able to produce costs for year 1 and again for 10 years after opening of a scheme. Discounted costs for 2017 have been used. In creating their calculations, Jacobs estimated that a financial estimation of risk would be best set at 10% of the year 1 costs, that the optimism bias should be set at 44% and that a discount multiplier factor of 0.7594 be used to calculate the discounted costs.

24. These figures are based on a mix of the various ‘grant’ retrofitting/scrappage data shown in combination with a selection of costs that might reasonably be expected at either the design, implementation and operational phase of a low emission zone (e.g. ANPR cameras, signage, design, communications, back-office enforcement etc). These are explored below (Table 2 and Table 3). Jacobs also assumed in their cost calculations that a large 3km² low emission zone would require 25 ANPR cameras and that 24 local road signs would be needed.

Automatic Number Plate Recognition (ANPR) Cameras

25. The Bill does not mandate the use of any particular detection technology, but ANPR cameras are regularly used in other established schemes. Whilst the Jacobs research assumes their use as part of its assessment, estimates for their implementation and associated back office can vary:

- The Edinburgh low emission zone feasibility study in 2007 predicted 43 fixed cameras and one mobile ANPR unit totalling £1.6 million at 2007 prices; meaning that the cost of each ANPR camera could be close to £37,000, with 15 staff to manage the penalty charge notice enforcement regime costing £566,000 at 2007 prices. Total cost would be £2.2 million;
- For Aberdeen, a report commissioned from AECOM considered that 10 fixed cameras would cost £350,000 with this including a 33% allowance for structures and a 20% allowance for civil engineering and associated equipment;
- In comparison, the Jacobs report shows that ANPR camera costs – using the proxy metrics noted above to downscale scale costs from the London low emission zone for a hypothetical large 3km² low emission zone in Scotland – may be substantially lower than the costs noted by these two studies and others, even taking into account that fact that the studies are in some cases over ten years old. Jacobs estimated that a large low emission zone would require 25 ANPR cameras at a cost of £250,000 at 2017 prices with an additional £250,000 for installation meaning that each ANPR camera could cost £20,000 (albeit there would be an additional £127,500 for IT equipment and £212,500 for annual running costs).

Source	ANPR Camera Cost
Edinburgh Feasibility Study	£37,000
Aberdeen Feasibility Study	£35,000
Jacobs Research	£20,000

Table 2 – Cost Variation for ANPR Cameras

Retrofitting/Scrapping of Buses

26. The Jacobs report also estimated the costs of retrofitting/scrapping buses. The cost of exhaust retrofitting was expected to be significant, so three cost estimates were calculated for bus exhaust retrofitting and scrappage (described as a ‘grant’) across hypothetical ‘low, medium and high’ funding scenarios, based on industry feedback data (2016) from Strathclyde Partnership for Transport (SPT) and Stagecoach (bus company). A low grant scenario was set at £7,500 per bus for retrofitting and £15,000 per bus for scrappage, a medium grant scenario was set at £12,500 per bus for retrofitting and £20,000 per bus for scrappage, and a high grant scenario was set at £15,000 per bus for retrofitting and £30,000 per bus for scrappage. In all scenarios, the costs would be dependent on the emissions of the existing buses in accordance with current EU classification (Euro), where Euro II and III classification buses would be the source of scrappage costs, and Euro IV and V buses would be the source of exhaust retrofitting costs.

	No of buses	Grant per bus	Total cost per large LEZ (3km)	Grant per bus	Total cost per large LEZ (3km)	Grant per bus	Total cost per large LEZ (3km)
	Low grant scenario		Medium grant scenario		High grant scenario		
Euro II	6	£15,000	£90,000	£20,000	£120,000	£30,000	£180,000
Euro III	253	£15,000	£3,795,000	£20,000	£5,060,000	£30,000	£7,590,000
Euro IV	60	£7,500	£450,000	£12,500	£750,000	£15,000	£900,000
Euro V	364	£7,500	£2,730,000	£12,500	£4,550,000	£15,000	£5,460,000
Euro VI	125	£7,500	£0	£12,500	£0	£15,000	£0
			£7,065,000		£10,480,000		£14,130,000

Table 3 - Jacobs 2017 costs estimates for a hypothetical ‘Large’ Glasgow low emission zone

27. However, a respondent to the *Building Scotland’s Low Emission Zones* public consultation stated that the costs set out in the Jacobs report potentially overestimated these costs for a number of reasons. These included the fact that the report took the unjustified assumption that all Euro III buses would need to be scrapped, not retrofitted. Retrofitting is substantially cheaper.

28. Secondly, the report took Glasgow as a benchmark city from which costs could be drawn up for the other Scottish cities, but assumed the costs of upgrading the bus fleet in Edinburgh would be much lower because Lothian Buses has a much higher proportion of Euro VI and better buses (yet feedback from stakeholders such as the Confederation of Passenger Transport and Transport for Edinburgh questions this viewpoint).

29. Using the rationale for funding calculations shown above for the Jacobs 2017 report, an estimation of indicative design, implementation, operational and resource budget provision to support the introduction of Scottish low emission zones (as outlined in the Programme for Government) in 2018/19 only was prepared, as shown in Table 4. Subsequent costs for financial years 2019/20 and 2020/21 will be considered and determined as part of future budget processes. It should be noted that the estimated costs for the resource is dependent on the type of enforcement regime that would be applied in Scotland (e.g. each local authority

undertaking their own enforcement with their own resource versus a shared enforcement regime with shared staff).

Source	Scope	2018/19
Glasgow, Edinburgh, Aberdeen, Dundee	Design, monitoring, modelling and/or communications	£680,000
	Implementation costs covering ANPR cameras, signage, back-office setup etc	£1,128,000
	Bus Emission Abatement Retrofit Programme (based on £25,000 per bus with up to £15,000 per retrofit exhaust retrofit Selection Catalytic Reduction Technology (SCRT) kit for Euro IV and V (as noted below based on BEAR costs) and up to £10,000 ancillary costs) and £15,000 per bus for targeted scrappage of Euro III)	£7,890,000
	Operating costs including back-office monitoring and annual maintenance	£52,000
	Resource	£400,000
Transport Scotland	Communication and consultant resource support	£400,000
	Low emission zones Scotland website and vehicle emission database development with DVLA	£250,000
	Total	£10,800,000

Table 4 – Budget estimates for four low emission zones in Glasgow, Edinburgh, Aberdeen and Dundee

Bus Emission Abatement Retrofit (BEAR) Programme

30. The Bus Emission Abatement Retrofit (BEAR) programme was launched by Transport Scotland in early 2018 with grant award being allocated in March 2018. £1.6 million was allocated to BEAR Phase 1 in 2017/18, with approximately £7.8 million being allocated to BEAR Phase 2 in 2018/19. With respect to specific costs, the following costs were identified by BEAR bidders during Phase 1 in relation to exhaust retrofitting of buses:

- Exhaust retrofit SCRT kit was priced at between £11,800 to £15,800 (with one kit costing £25,000);
- Ancillary costs varying quite widely for a variety of items, such as £200 to £4,700 for fuel penalty costs over five years, telematics data for five years at about £600 to £900, SCR inspection and maintenance at £300 to £3,700 and five year warranty at £245 to £1,970.

Revenue from Penalty Charge Notices

31. The ambition of the policy is to change behaviours and to ensure that only vehicles compliant with the emission standard are driven into the low emission zone. Therefore the ultimate goal of any zone, which is based on an access restriction, is for no penalty charge notices to be issued and thus no revenue to be generated. In practice, however, any scheme issuing penalty charge notices leading to a monetary fine has the potential to raise revenue via robust enforcement.

32. It is particularly challenging to predict at the time of the Bill's introduction the amount of revenue which might be generated from low emission zone schemes in Scotland,

as the legislation sets out the broad framework for introduction rather than defining the specifics of implementation. There are a number of variables subject to future decision-making processes and so there is no means to determine precisely which vehicles, and the corresponding number of them, would fail to comply with the scheme and how much revenue this would generate. Additionally, the introduction and lead-in times (grace periods), the geographical spread of a low emission zone, its hours of operation, the level at which a penalty charge notice for different vehicle categories might be set at, and any exemptions which may apply would all have a material influence and these are not set out in the primary legislation.

33. For the London low emission zone, during 2016/17, a gross income of £3.5 million was generated from 25,406 penalty charge notices. After deductions for low emission zone expenditure, the net income in 2016/17 was £600,000.

COSTS ON OTHER BODIES, INDIVIDUALS AND BUSINESSES

Cost impact on individuals – private car and motor vehicle owners

34. Those who own private vehicles which do not meet a zone's emission standard (to be set by regulations following the passage of any final Act) and wish to enter the zone will face decisions with cost implications, such as opting for another mode of travel, replacing or modifying their vehicle or paying a penalty charge notice.

35. However, there are a large number of variables dependent upon future influences – such as how many vehicles of certain emission standards come off Scotland's road network due to age, how many new cars meet certain emission standards, how many of any such vehicles regularly drive in areas scheduled for a low emission zone (particularly the four cities mentioned in the Programme for Government) and decision-making procedures on scheme roll-out, such as lead-in times and geographical reach. As such, it is not possible to make a comprehensive and precise assessment of this or the cost implications at the point of the Bill introduction.

Cost impact on industry – general

36. Any regulation of road vehicles in particular areas or on specific roads has the potential to generate cost implications for private companies which need to alter their assets or business model in order to adapt. Some 18 organisations (including 8 businesses) who responded to the *Building Scotland's Low Emission Zones* public consultation believed there would be an increase in public transport costs due to bus, freight and taxi operators having to upgrade their vehicles and costs being passed on to customers.

37. A lead-in period allows commercial fleet operators and private vehicles owners time to prepare prior to the low emission zone enforcement phase starting. This may occur through altering their vehicle or fleet, through retrofitting for example, or in planning the purchase of a new vehicle as part of a natural replacement cycle. The Bill provides for a lead-in time period (known as a grace period) of up to four years.

Cost impact on industry – buses

38. Any low emission zone which includes buses will have an impact on bus companies which do not have vehicles of the required standard. Given the wide variation in vehicle type and standard used in the provision of bus services across Scotland, in addition to the flexibility on how any given low emission zone may be designed and implemented, it is not feasible to give precise cost forecasts for the industry as a whole.

39. Bus operators have offered some views on potential cost impacts from the perspective of their business model. In response to the Building Scotland's Low Emission Zones public consultation, Stagecoach noted that "Whilst there may be financial assistance provided, Euro VI vehicles are more expensive to operate and maintain. Similarly, vehicles which have exhaust abatement equipment fitted, incur a fuel consumption penalty that can reduce mpg by up to 5% (based on vehicles retrofitted in London, other vehicle types may incur a greater fuel consumption penalty), leading to increased costs for operators."

40. Also from the same consultation, First Group noted that "...at a typical cost of £20k per vehicle, upgrading our Glasgow fleet of Euro 4 and Euro 5 buses would cost some £5.8m. There is a downside to retrofitting – it imposes additional operating costs." First also noted that "...besides retrofitting, other options should be considered including accelerated scrappage funding and/or engine conversion from Euro III to Euro VI or possibly hybrid, to address substantial numbers of Euro III vehicles in Scottish fleets – but some of these upgrade costs can be very expensive (up to £75k per bus) and may be better addressed through an extended sunset period [extended lead-in times or "grace periods"] whereby these vehicles could be removed from the fleet first and newer, cleaner Euro IV and Euro V vehicles used for a longer period."

41. Wider government support can also reduce such costs to bus operators. The Scottish Green Bus Fund has so far allocated £16 million, leading to 361 low carbon vehicles being introduced to the national fleet, with a further £1.7 million recently announced for financial year 2018/19.

Cost impact on industry - taxis

42. Taxi firms or drivers may also see cost implications if the vehicles are included in any particular low emission zone. The Scottish Taxi Federation raised this issue in the *Building Scotland's Low Emission Zones* public consultation, but did not forecast any specific cost figure.

Cost impacts on industry – freight

43. A low emission zone which captures HGVs or freight traffic can have cost implications for the sector. The Freight Transport Association and the Road Haulage Association raised this in the *Building Scotland's Low Emission Zones* public consultation but did not forecast any specific cost figure.

Benefits associated with increased good health from reduced air pollution

44. It is well established that cleaner air and pollution reduction can have a positive effect on people's health. As such, financial benefits to wider society can stem from low emission zones.

45. The Royal College of Physicians (2016) report¹¹ noted that "According to 2010 estimates, the economic impact of exposure to air pollution across the European Union was more than €240 billion each year".

46. On a UK scale, forecasts of economic impact vary quite widely across sources. The Department for Environment, Food & Rural Affairs (Defra) (2010)¹² stated that "...in the UK, the health impacts of poor air quality have been estimated to cost around £15 billion per year" with Defra revising this figure in 2013 stating that that air pollution costs the UK economy as a whole £16 billion per year, based on 29,000 UK-wide deaths from air pollution. Defra (2016) again revised this figure, stating that "Across the UK it's estimated air pollution equates to an annual cost of £27.5 billion to the Treasury" whilst the Air Quality Plan for nitrogen dioxide from 2017 stated that "Poor air quality is estimated to have had a total cost of up to £2.7 billion [to the UK economy] through its impact on productivity in 2012" based on Defra (2015)¹³ evidence.

47. The London Ultra-Low Emission Zone (ULEZ) integrated impact stated in relation to costs and benefits: "There is a health 'burden' associated with absolute levels of pollutant concentrations including for chronic mortality, respiratory and cardiovascular hospital admissions. The central value of these 'burdens' are £35,000 for chronic mortality, £2,60 to-£10,700 for respiratory hospital admission and £3,000-£9,900 for cardiovascular admissions. The health benefits from ULEZ will result in an economic benefit associated with reductions in air pollution. The valuation of health improvement captures a number of economic impacts, including direct impact on the utility of the affected individual, reduction in medical costs and increase in productivity. The improved health outcomes... under the ULEZ for the Greater London Area are estimated to have a total monetised benefit of £101m in 2020 and £32m in 2025." The cost of air pollution to London's economy was also estimated at £3.7bn per year by the London Environment Strategy from August 2017¹⁴.

48. In Scotland in 2010 fine particulate matter was associated with around 2,000 premature deaths and a total of around 22,500 life years lost across the population' (PHE, 2014)¹⁵. In their response to the Scottish Government consultation SPOKES and Friends of the Earth (FOE) stated that air pollution costs the Scottish economy £1.1 billion per year in lost work days and the cost to the NHS (with FOE stating this calculation is "extrapolated from a Defra assessment, 'Impact pathway guidance for valuing changes in air quality'¹⁶.

¹¹ [Royal College of Physicians: Every breath we take: the lifelong impact of air pollution](#)

¹² [Defra \(2010\)](#)

¹³ [Defra \(2015\) Report: Valuing the impacts of air quality on productivity](#)

¹⁴ [London's Environment Strategy \(August 2017, Draft for Public Consultation\).](#)

¹⁵ [PHE \(2014\)](#)

¹⁶ [Defra 2013](#)

49. *The Health and Socioeconomic Impact of Traffic-Related Air Pollution in Scotland* report¹⁷ referenced health practitioners addressing the issue of the financial cost of low emission zones in comparison to health benefits, where Dr Ian Mudway of King's College London stated to the UK Environmental Audit Committee in 2014 that: "Investment has to be seen against health benefit costs otherwise you can never make the justification. £20m sounds like a lot of money, but when you compare it against Defra's estimated annual mortality cost of £16 billion (Defra, 2013) the figure is not so bad."

50. In response to the Scottish Government public consultation, the British Lung Foundation (BLF)¹⁸ stated that: "...report published by the BLF this year found that lung disease costs the UK as a whole £11 billion each year. Lung disease is the Scotland's third biggest killer, costing the NHS across the UK £9.9 billion a year and business £1.2 billion through work days lost. In this context, the immediate costs of implementing effective air quality measures should surely be seen as an investment in Scotland's long-term health and economic prosperity."

PART 2 - BUS SERVICES

INTRODUCTION

51. The Bill's provisions on bus services cover a range of areas and options, as set out in the associated Policy Memorandum. Any associated costs are considered below in relation to the five respective elements, separated into two broad areas:

Bus Service Delivery

- Bus Service Improvement Partnerships;
- Local franchising;
- Services run by local authorities;

Improved Information

- Information for the public;
- Information on deregistration.

52. The first area covers bus service delivery and constitutes a set of options for local transport authorities to consider adopting according to local circumstances. The second area involves new requirements for bus operators to provide information across Scotland.

53. The bus service delivery options build on, and in some cases replace, existing statutory options, most directly stemming from the Transport (Scotland) Act 2001 and the Transport Act 1985. These enabled the adoption of Quality Partnerships (QP) or Quality Contracts (QC), the latter a form of franchising, and for local transport authorities to ensure provision of local services which would not otherwise be available. The Bill enhances these options for local authorities to adopt according to specific local need. There is no statutory requirement to implement them and therefore the Bill does not directly mandate any

¹⁷ [Dr Jackie Hyland, University of St Andrews \(2017\)](#)

¹⁸ [British Lung Foundation \(2017\) Estimating the economic burden of respiratory illness in the UK.](#)

additional costs. However, information has been gathered to provide an illustrative example of the broad costs associated with pursuing the options, as set out below.

54. The proposals on improved information are compared against the status-quo where some information is already required as part of the bus registration system, but other information, on fares for example, is not. This is detailed in the relevant section below.

55. Given the varied nature of the five elements – and differing considerations in terms of implementation and cost considerations – these are taken in turn below.

Bus service delivery

OVERVIEW, STATISTICS AND RESEARCH

56. A range of sources have been drawn on. Those applicable to various areas of the bus provisions are:

- Department for Transport (DfT) Bus Services Bill Impact Assessments (2015);¹⁹
- DfT Final Impact Assessment for the Buses Services Bill (2016);²⁰
- Competition Commission (2011) Local bus services market investigation: a report on the supply of local bus services in the UK;²¹
- The Scottish Government Improving Bus Services public consultation;²²
- Stakeholder feedback via the Bus Stakeholder Group and other engagement forums including direct engagement with operators and the Confederation of Passenger Transport;
- Telephone surveys with Association of Transport Coordinating Officers representatives from all of Scotland’s local transport authorities, from urban or semi-urban settings to rural and island authorities.

57. Additionally, for specific areas the following sources have been drawn on:

Bus Service Improvement Partnerships (BSIPs)

- Strathclyde Passenger for Transport (SPT) *The Statutory Quality Partnership Scheme For Fastlink* (2015)²³;

Local franchising

- *Preliminary Review for Quality Contracts/Bus Franchising in Strathclyde Partnership for Transport (SPT) Area*, AECOM (2012)²⁴;
- *Bus Quality Contract Scheme Proposal Preliminary Study*. Report by ARUP for Bristol City Council²⁵;

¹⁹ [Department for Transport \(2015\) Bus Services Bill Impact Assessments](#)

²⁰ [Department for Transport \(2016\) Final Impact Assessment for the Buses Bill](#)

²¹ [Local bus services market investigation: a report on the supply of local bus services in the UK](#)

²² <https://consult.gov.scot/transport-scotland/improving-bus-services/>

²³ [Strathclyde Passenger Transport \(2015\) The Statutory Quality Partnership Scheme For Fastlink](#)

²⁴ [AECOM \(2012\)](#)

²⁵ Report by ARUP for Bristol City Council

This document relates to the Transport (Scotland) Bill (SP Bill 33) as introduced in the Scottish Parliament on 8 June 2018

- *Transport for Quality of Life: Building a World-Class Bus System for Britain* (2016)²⁶;
- The Quality Contracts Scheme Board Report on the Proposed Tyne and Wear Scheme (2015)²⁷;
- *Reregulating the Deregulated – a Case Study of the Scottish Bus Market*. Conference paper presented to *Universities’ Transport Study Group* conference in Newcastle in January 2014²⁸;
- Children and Young People Bill 2014, supplementary financial memorandum²⁹;

Services run by local authorities

- Nottingham City Transport (2018) *The Cost of Municipal Bus Operation*, a report by Mark J Fowles, Managing Director, conference paper provided to Transport Scotland.

COSTS ON THE SCOTTISH ADMINISTRATION (INCLUDING COST IMPLICATIONS TO THE SCOTTISH GOVERNMENT)

58. The only direct costs to central government from the bus service delivery provisions are the set-up and running costs associated with an independent panel to make decisions in respect of local service franchising proposals. It has been estimated that the cost of carrying out the panel review, under previous similar legislation applicable in England and Wales, of proposals for a quality contract scheme in Tyne and Wear was around £200,000. However, it is not foreseen that a scheme of such size and scope (more detail below) would be routinely implemented in Scotland.

59. The precise composition of the Scottish panel will be determined following consultation. A comparable example other than the Tyne and Wear case may be the School Closure Review Panel established under the Children and Young People Act 2014. Based on employment costs at the time, the annual costs of the Convener of the School Closure Review Panels and the administrative support services were seen at between £83,000 and £90,000 (dependent on the number of cases, assumed to be five-to-six cases per annum).

60. On funding more generally, the Scottish Government provides a range of financial support for bus services which, whilst not directly linked to the new measures in the Bill, may go to support the mode more broadly. The Bus Service Operators Grant (BSOG) is significant in this regard. BSOG aims to benefit passengers, by helping operators to keep their fares down and enabling them to run services that might not otherwise be commercially viable, thus contributing to the maintenance of the overall bus network as well as incentivising the use of greener buses. Bus operators can claim BSOG at 14.4 pence per km. Services operated by low carbon buses are eligible for an additional 10.1 pence per km. There is also an incentive rate for buses that run on sustainable biodiesel. The 2018-19 budget for BSOG is £53.5 million.

²⁶ [Transport for Quality of Life \(2016\) Building a World-Class Bus System for Britain, final report](#)

²⁷ [The Quality Contracts Scheme Board \(2015\) Report on the Proposed Tyne and Wear Scheme](#)

²⁸ Cowie, J. (2014)

²⁹ [Children and Young People Bill 2014, supplementary financial memorandum](#)

61. Local authorities also receive funding from the Scottish Government via the block grant to enable them to support socially necessary services, which are otherwise not commercially viable. This is continually reviewed in line with spending reviews and budget settlements, which will in future be set in the context of new powers on bus services which any future Act creates.

COST IMPLICATIONS FOR LOCAL AUTHORITIES OR REGIONAL TRANSPORT PARTNERSHIPS

62. Local authorities spent £52 million to support socially necessary bus services on 2016/17. Therefore, such monies should be considered to potentially contribute to any illustrative costs below rather than these being assumed to be wholly new costs for the options the Bill sets out.

Bus Service Improvement Partnerships (BSIPs)

63. BSIPs would replace statutory Quality Partnerships (QPs), as set out in the Transport (Scotland) Act 2001 and would differ in three key ways:

- they would not require the local transport authority to invest in infrastructure (investment could be included, but instead or as well the local transport authority could implement policies, on parking for example);
- the range of standards would be extended beyond those allowed in QPs;
- the legislation requires a genuine partnership approach in which the authority and operators work together.

64. Partnership working between local transport authorities and bus companies is already widespread across Scotland. Partnerships take a variety of forms, with voluntary, informal partnerships at one end of the spectrum and statutory Quality Partnerships at the other.

65. The capital and resource costs associated with any measures that are agreed to within partnerships are highly context-specific and therefore vary considerably both for voluntary and statutory partnerships. Feedback from stakeholder engagement suggests that successful partnerships can result in significant benefits that more than offset costs.

66. Such variables will continue under BSIPs, which will be defined by partners (local transport authorities and bus companies) with any facilities, measures, standards and the geographical scope highly context-specific.

67. Although it is challenging to generate accurate estimates of the potential future costs of any specific partnership scheme, SPT's Quality Partnership Scheme for Fastlink gives some indicative costs. Under the partnership, a six-year scheme finalised in 2015, Glasgow City Council and SPT agreed to a bundle of measures, including:

- improvements to facilities at bus stops on the corridor;
- bus priority measures (e.g. provision of segregated bus-only lanes).

68. Traffic Regulation Orders (TRO) to provide bus friendly waiting and loading restrictions on the corridor and markings and protections at bus stopping places. The standards on the bus operators consisted of:

- Bus Operator Standards on, for example, timetables and frequencies, smart ticketing, vehicle condition, driving standards, customer care and service reliability;
- working towards lower emission buses and more accessible low-floor buses;
- provision of data on vehicles operating on the route, timetables, fares and routes, both to the public and to the other partners for the purposes of monitoring.

69. Not including capital spend on infrastructure (a requirement which BSIPs will remove), SPT estimates provided to Transport Scotland show the costs associated with developing the scheme, consulting on it and setting it up were approximately £113,000 over three years (or £37,667 per annum), with the bulk of this accounted for by staff and consultancy costs. It should be noted that ongoing monitoring, governance and review costs are met out of existing budgets and were not separately assigned.

70. Additionally, DfT's impact assessments for the Bus Services Bill in 2015 and 2016 estimated the costs for Enhanced Partnerships. Whilst this form of partnership differs from the Scottish proposals, the broad approach is similar. DfT assumed that six metropolitan and two non-metropolitan Passenger Transport Executives would adopt the new form of partnership and that these would be on a route, rather than a whole network, basis.

71. DfT noted that partnerships are a relatively low cost measure, designed to bridge the gap between voluntary partnerships and franchising. They estimated that the total costs over ten years to local government of undertaking enhanced partnerships would be £600,000 (equivalent to £7,500 per authority, per year).

72. Taking the average of the administrative cost estimates for Fastlink and the English Enhanced Partnerships and rounding, the estimated illustrative annual costs for a single local transport authority to develop and set up a BSIP is £23,000.

73. There are also cost benefits associated with BSIPs which local transport authorities highlighted during engagement. These include a greater ability to define the standards needed in their locality, making schemes more effective in delivering on outcomes and therefore value for money.

Local franchising

74. Local franchising is already possible in Scotland through 'Quality Contract schemes' (QCs), as set out in the Transport Act (Scotland) 2001 but QCs have never been pursued in Scotland. The Bill aims to make franchising a more viable option in Scotland by lowering the threshold for considering franchising and creating a more certain and structured process, while maintaining appropriate checks and balances.

75. The main differences from the franchising measures created by the Bill and QCs are:

- removing the requirement for QCs to be necessary to implement relevant general policies;
- introducing a new requirement for an assessment of the proposed franchise framework with a further requirement for an audit of the financial aspects of that assessment (akin to the business case), in order to ensure costs and benefits are correctly assessed and to preclude nugatory effort and expense based on flawed information and analyses;
- replacing the Ministerial approval required for QCs with the decision of an independent panel.

76. It is important to note that the bulk of the costs outlined below would be incurred under a QC pursued under the existing statutory framework, though the changes in the Bill would be expected to result in greater uptake and some reduction in the costs of embarking on a franchise.

77. As no local transport authority in Scotland is actively pursuing or has ever made a QC scheme, there is no fixed evidence in a Scottish context yet the experience in England provides an indication of the types and magnitude of costs involved. These cover issues such as:

- preparatory work, including developing a business case and consulting on proposals;
- set-up costs associated with establishing a scheme, including developing and planning the network under a gross cost contracting scheme;
- running costs, including any staffing requirement;
- costs related to legal issues and challenges;
- transition costs for employees;
- provision for risk and contingency.

78. For the first two points on preparatory and set up costs, following the introduction of new powers under the Transport Act 2017 the Greater Manchester Combined Authority (GMCA) has allocated a budget of £11.5 million for the financial year 2018/19 to undertake a franchising assessment. Costs are highly dependent on the scale, which in Greater Manchester's case is the entire Combined Authority area. This is an illustrative figure. It is not envisaged that schemes of this scale or coverage will be implemented with any regularity in Scotland.

79. The GMCA is the first authority to use the new 2017 legislation to prepare an assessment of a proposed franchising scheme. It may be reasonable to expect future costs be less as the process becomes better known and understood. GMCA's figure assumes a mayoral decision on franchising within the period and encompasses a range of costs including development of the commercial and economic case, modelling and model development, information gathering and assimilation, risk and contingency, including legal costs.

80. The operating costs of franchising vary greatly. A key factor in determining costs is the choice of franchise model. In ‘gross cost’ franchising, the model used in London, the authority retains revenues and is responsible for areas such as network planning and development. Financial risks, therefore, transfer to the authority and it must make provision for scenarios in which revenues undershoot forecasts.

81. In ‘net cost’ contracting operators retain the fare revenue and with it the financial risks. Size and scale are other factors in determining costs. Most of the analysis looking at the costs of franchising has focused on large-scale, network, region wide or even country-wide franchising.

82. The Nexus proposal for a quality contract scheme in Tyne and Wear estimated the total risk-adjusted ten-year scheme would cost £1.6 billion. However, with the possible exception of a scheme covering the SPT area, it is not envisaged that anything on a comparable scale would be implemented in Scotland.

83. DfT estimated the potential costs and benefits of franchising in relation to the Bus Services Bill (which became the Bus Services Act 2017), basing them on an illustrative scenario in which the six English Passenger Transport Executives undertook franchising over a ten-year period using gross-cost contracting. Although Passenger Transport Executives are not directly comparable to local transport authorities, this provides a useful example. The cost over ten years was estimated at £0.5 billion, yet DfT did state that it was not able to quantify certain costs and that these could turn out to be significant.

84. The Transport for Quality of Life (TfQL): *Building a World-Class Bus System for Britain* report estimated that the ten-year transport authority costs in England would be £110 million.

85. Such cost variations highlight the range according to the different composition of a scheme. TfQL points out that in many transport authority areas large proportions of the network are commercial and generate a profit, implying that the revenue risk may be overstated, and that the non-commercial portions are already funded by the transport authority, implying little additional cost.

86. TfQL also points to evidence given to the House of Commons Transport Committee in 2008 which argued that there is little or no legal basis for challenges by operators under the European Convention on Human Rights, so legal cost estimates incorporated may also be overstated.

87. Engagement with local transport authorities has shown there is a widespread understanding that franchising is a relatively costly approach. Nevertheless, authorities still see merit in franchising where a partnership approach proves unachievable or fails. Ultimately, however, feedback from authorities emphasised that franchising would only be undertaken if it had a strong business case in which the full costs and benefits had been appraised.

88. There can be benefits from franchising for local transport authorities, including opportunities to better align bus services with local/ regional strategic socioeconomic objectives and efficiencies from integrating non-commercial services that are currently tendered within a franchising framework.

89. The requirement for an external audit of franchising proposals is specifically intended to ensure that the financial aspects of the assessment are assured before the franchise progresses to a later stage. This is informed by the lessons learnt from the Nexus case where it was only late in the process, after significant administrative costs, that the QCS Board determined that the basis of the financial information was flawed. The independent panel is also intended to be a safeguard to ensure that public money is invested in franchising only where the case has been made.

Services provided by local authorities

90. The Scottish Government's intention is to allow local authorities to provide bus services where there is an unmet public transport requirement. This would be as a direct alternative to offering support to services via subsidy where those services would not otherwise be provided on a commercial basis. A small number of authorities run some bus services of various types under a variety of very specific provisions in the existing legislation.

91. Discussions with local authorities have identified the following costs:

- substantial set-up costs, particularly if having to establish or acquire depots, vehicles, supporting buildings, equipment and services;
- ongoing running costs related to, for example, fleet maintenance and replacement, staff costs, fuel, insurance, tax and MOTs, risk and contingency.

92. A report by the managing director of Nottingham City Transport Ltd explored the estimated cost of setting up a hypothetical municipal bus operation. The Cost of Municipal Bus Operation study assumes the bus company is situated in a town with a population of 140,000-150,000 (similar in size to Dundee) and that the company is required to purchase and build all infrastructure (incl. depots) and all vehicles. It assumes a fleet size of 112 vehicles, mainly double-deckers, running a typical urban 24 hour, seven days a week all-year service with a 10-minute peak time service frequency. The hypothetical costs are broken down as shown in the table below. These costs are based on a relatively sizeable operation, likely to go well beyond that required to meet an unmet transport requirement. Nevertheless, they do give indicative unit costs which could be scaled down depending on the extent of the operation.

Costs - Capital Set-Up (one-off)	Amount (£million)
Land	£1.2
Buildings (e.g. depot)	£4
Related infrastructure & equipment	£1
Vehicles	£28.5
System support	£3
Total	£37.7
Costs - Operational (annually recurring)	£17.5

Table 5 – Nottingham City Transport Ltd cost estimate of hypothetical municipal bus operation.

93. Direct engagement with two local authorities with some in-house bus operations, Comhairle nan Eilean Siar and Dumfries and Galloway Council, was also undertaken to offer insight. Dumfries and Galloway Council runs an in-house bus operation with a fleet of approximately 62 buses, used primarily for statutory duties around school transport with some ancillary provision of socially-necessary services. As an island council, Comhairle nan Eilean Siar was not subject to the restriction on local authorities holding PSV licences in the Transport Act 1985. Bus Na Comhairle dates back to 1999, originally set up to deliver statutory services. However, in 2014 the local authority-run company successfully bid for a number of substantial competitively-tendered bus service contracts.

94. Dumfries and Galloway Council’s operating costs of the internal fleet are subsumed within the overall school transport budget, for which the annual costs (staff, maintenance, fuel, administration) is £1.1 million.

95. The annual costs of Bus Na Comhairle are subsumed within wider transport budgets. To give an indication of scale, the Council spends around £5.6 million annually on supported bus services (of which £2.6 million is on public transport and £3 million on school transport). Neither set of figures from local authorities, however, includes the capital costs associated with depots and vehicles. Ultimately, any particular scheme to pursue local authority-run buses would need to be carefully examined in terms of its business case to consider and value the potential benefits relative to costs.

COSTS ON OTHER BODIES, INDIVIDUALS AND BUSINESSES

Bus Operators

Bus Service Improvement Partnerships

96. Engagement with the bus industry has been generally welcoming of proposals for a more flexible partnership model. In particular operators saw a relaxation of the measures that local transport authorities can fund within a partnership as creating the potential to save costs. For example, BSIPs will allow for non-infrastructure measures to tackle congestion which could reduce bus operating costs. This is because congestion drives up costs by forcing operators to increase capacity in order to maintain service standards without any commensurate revenue increase.

97. Bus operators noted, however, that incurring any costs associated with meeting service standards agreed within a partnership can affect a business model. This is because costs are typically front-loaded whereas benefits – such as from increased patronage/revenues or operating cost improvements – are less certain and may take longer to materialise.

98. DfT's impact assessments for the Bus Services Bill considered the potential costs to operators from its enhanced partnerships and noted that there were competing factors on the cost side. It acknowledged that partnerships would lead to additional operator costs associated with staffing and capital investment, whilst concluding that these would be offset by benefits to operators in terms of reduced operating costs from network efficiencies, and revenue benefits from increased bus journeys as passengers are attracted by service improvements.

99. BSIP enforcement (as with the existing QP regime) would be carried out by the Traffic Commissioner for Scotland. The Commissioner will have powers to apply penalties, attach conditions to operator licences and refuse or cancel a bus service registration that was not deemed to be able to meet the requisite standards. The Traffic Commissioner has confirmed that this does not represent a radical alteration of her functions and, as such, it is not expected to have any significant financial implications.

Local franchising

100. Bus operators would incur potential costs in relation to franchising arrangements such as:

- The costs of preparing a tender bid for a franchised contract, with this cost disproportionately affecting those companies with little or no experience of bidding for contracts;
- Reduced profit margins from the costs associated with meeting franchising standards. The risk of business disadvantage or potential collapse for operators failing to win a franchise contract, resulting in associated job losses if staff could not be reabsorbed by the winning bidder or disruptions to non-franchised services provided by those operators (e.g. school transport contracts), with knock-on implications for local economies and local government costs. Industry representatives argued that smaller operators are less able to absorb losses and would therefore be more vulnerable to this risk.

101. Operators did highlight that some of these costs depend on the specific model of franchising and noted that where gross-cost contracting was used there would be a benefit for those operating the franchise as the revenue risk and the associated costs would transfer to the franchising authority.

102. Given that franchising has not taken place in Scotland or the UK outside of London there was little available quantification of these potential costs in a Scottish context. DfT's impact assessments for the Bus Services Bill estimated the potential costs to bus operators from franchising. This was based on a scenario in which the six English Passenger Transport Executives undertake franchising over a ten year period. It emphasised that the figures were purely illustrative to identify the main potential costs to operators as tendering and

implementation costs, revenue losses (under the assumed gross-cost contracting model and reduced profit margins (resulting from increased competition for franchised services).

103. DfT estimated a net bus operator loss of between £243 and £544 million over the ten-year period. There are no means of drawing a direct comparison with the bus industry in Scotland. DfT estimated that any industry and local authority costs are more than offset by the potential benefits of franchising with an average ratio of benefits to costs in its impact assessment of 2.1:1. The benefits flow mainly to bus users and wider society in the form of network/service improvements and resulting decongestion benefits.

Services provided by local authorities

104. There could be some loss of business to bus and coach operators where local authorities choose to provide services themselves in response to unmet requirements instead of securing their provision by subsidised contracts. This would be most likely where commercial competition was limited and local authority provision was expected to be more cost effective than the tenders operators would submit. It is not possible to make precise forecasts on such cost implications at the time of the Bill's introduction. This is due to the number of variables associated with any given scenario, such as the size or scope of the bus service and the business model of any commercial bus operator potentially affected. It is also worth noting that there is currently no obligation on local authorities to offer, or continue to offer, subsidies to secure provision of services so there is no guarantee to operators of this business.

Individuals and Communities

105. There may be cost savings to individuals in relation to improved bus services associated with the options. DfT (2015) suggested potential benefits to bus users in the form of improvements to network efficiency and integration, improvements in service, vehicle quality and maintenance, and fare changes, leading to increased bus patronage and some modal shift towards buses. These in turn would generate benefits to society in terms of reduced congestion and pollution.

Improved Information

OVERVIEW, STATISTICS AND RESEARCH

106. Placing a requirement on operators of local services to provide information on routes, timetables, actual running times (real time and in the past) and fares publicly and in a specified format will have cost implications.

107. Some operators are already taking steps to make information available to passengers, both through their own websites and apps and journey planners such as Traveline Scotland. However as this is being undertaken on a voluntary basis the information being provided to passengers is not currently fully comprehensive and so undermines the benefits to passengers.

108. The requirements for providing and publishing the information will be defined in secondary legislation and the details of the design will be developed in conjunction with

operators, local transport authorities and other interested parties prior to implementation. It is intended that these regulations will be introduced with sufficient lead in time to enable operators to adopt (or adapt where systems are already in use) systems to meet the requirements. Data in franchised areas will also need to be captured and published and in these cases the responsibility will fall to the franchising authority.

109. The provisions on deregistration place a requirement on bus operators to share on request information on the revenue and patronage of a service with affected authorities where notification has been given that the service is to be de-registered or, in certain circumstances, varied. It also empowers the authority to disclose the information (subject to appropriate safeguards) to potential bidders for the contract to provide a replacement/supplementary service. These new powers to obtain and share information are designed to facilitate more effective competition in the market for supported bus services and to assist affected authorities to ensure the best use of public funds. Much of this information is already being provided to local authorities on a voluntary basis. Putting this on a statutory basis will fully implement the recommendations of the Competition Commission.

110. A range of sources have been drawn on. Those applicable to various areas of the bus provisions are:

- DfT Bus Services Bill Impact Assessments (2015)³⁰;
- Scottish Transport Statistics (2017)³¹;
- Competition Commission (2011) *Local bus services market investigation: a report on the supply of local bus services in the UK*³²;
- *Assessing the Value of Transport for London's Open Data and Digital Partnerships* report (2017)³³;
- The Scottish Government *Improving Bus Services* public consultation³⁴;
- Stakeholder feedback via engagement through the Bus Stakeholder Group and other engagement forums, including direct engagement with operators and the Confederation of Passenger Transport;
- Telephone surveys with Association of Transport Coordinating Officers representatives from all of Scotland's local transport authorities, from urban or semi-urban settings to rural and island authorities.

COSTS ON THE SCOTTISH ADMINISTRATION (INCLUDING COST IMPLICATIONS TO THE SCOTTISH GOVERNMENT)

111. There may be costs to the Scottish Administration associated with the development and operation of a central repository to hold and disseminate the data published by operators. The need for such a system has not yet been established and will be dependent on the final

³⁰ [Department for Transport \(2015\) Bus Services Bill Impact Assessments](#)

³¹ [Scottish Transport Statistics 2017](#)

³² [Local bus services market investigation: a report on the supply of local bus services in the UK](#)

³³ [Assessing the Value of Transport for London's Open Data and Digital Partnerships report \(2017\)](#)

³⁴ <https://consult.gov.scot/transport-scotland/improving-bus-services/>

approach taken in the regulations and as such the costs of establishing such a system are difficult to quantify.

112. Traveline Scotland is Scotland's national public transport information service and operates as a partnership with public transport operators, Transport Scotland, and local authorities. Transport Scotland funds the data management contract and the development of existing and new platforms for the service. Grant funding in 2018/19 includes £311,169 for provision of data management in relation to a National Public Transport Information System which includes data maintenance and licence fees. A similar figure could be envisaged for development and operation of a system to hold and disseminate the data published by operators in relation to the Bill's provisions.

COSTS ON LOCAL AUTHORITIES

113. In terms of information for the public, no additional costs have been identified for local authorities as a result of these provisions. Under the current system, local transport authorities already hold some of this information (routes and timetables) as it is provided to them as part of the registration process. In most areas they already extract this information and provide it to Traveline to inform their data set, so it may be more logical for authorities to provide this information on behalf of operators in certain circumstances but this is not expected to lead to significant additional costs.

114. In terms of information on de-registration, there may be administrative costs to authorities in seeking and processing (depending on its format) information from operators, along with determining issues of commercial confidentiality where this is raised by an operator. However this is likely to apply only where the affected authority has requested information from an operator, which in practice is likely to be limited to services which authorities are considering supporting, and so costs are expected to be minimal.

COSTS ON OTHER BODIES, INDIVIDUALS AND BUSINESSES

115. Most of the costs associated with the provisions on public information will fall on operators and will vary by data type:

- Routes and timetables. This information is already provided as part of the registration system and used by local transport authorities to feed into Traveline system. As there are existing costs associated with the provision of this information, it is considered that any additional costs will be small;
- Actual running times. In order for buses to record this data they require to be equipped with AVL systems. Many operators have already installed these systems and use the information obtained for their own internal purposes. Increasingly they are also using this to make tracking information available to the public through websites and apps as well as feeds to on-street signs. Scottish Transport Statistics show that in 2016/17 94% of buses in Scotland were fitted with AVL, a 23% change over five years. The cost of installing a basic ticketing machine with tracking capability, including maintenance and operations, is calculated as £5,270 over five years. There will also be back office costs in terms of holding and managing data following the installation of new AVL systems, although this is unlikely to be relevant where companies are already gathering this information for other purposes;

- Fares. The costs of providing fares information will vary by operator dependant on the complexity of the existing fare structure and any rationalisation which has been undertaken to inform existing systems for smart ticketing systems etc. Operators will face a one-off cost in converting fares to the correct format, followed by ongoing maintenance and updating costs.

116. Some operators are already capturing data such as vehicle locations for their own internal purposes, particularly larger companies. In many cases they are also using this data to make information available to the public on a voluntary basis. However this is not universal and the costs of complying with this legislation will be more significant for those operators who are not currently making information for the public. Feedback from operators has highlighted that this is most likely to affect smaller operators who may not be able to absorb the costs associated with the set up and maintenance of equipment and are less likely to have the expertise to interrogate back office systems. Many smaller operators also operate supported services and costs arising from the requirements of this legislation may be passed on to local transport authorities as a through an increase in tender prices. To ensure that SMEs are not disproportionately affected by these proposals, consideration will be given to their treatment and support during the development of the secondary legislation.

117. On de-registration information, there may be administrative costs on commercial operators due to the requirement to retain and provide this information on request. It is anticipated that companies would already hold this information as part of their normal operations and much of this information is already being provided to local authorities on a voluntary basis. It is therefore not considered that the legislation would lead to any significant new costs to bus operators.

PART 3 – SMART TICKETING

OVERVIEW, STATISTICS AND RESEARCH

118. The Bill will contain legislation on smart ticketing which covers the following areas:
- Updating sections 28-32 of the Transport (Scotland) Act 2001 to ‘enhance’ the existing ability of local transport authorities to implement ticketing arrangements and schemes;
 - A provision requiring local transport authorities to report annually to Ministers on the exercise of their functions under section 28 and 29;
 - A power for Ministers to direct the local transport authority to exercise their powers to make or vary an existing ticketing scheme;
 - A power to set national technological standard for the implementation and operation of smart ticketing;
 - Establishes a national advisory body which will provide advice to the Scottish Ministers in relation to the national technological standard and their other functions in relation to smart ticketing.

119. The enhanced powers for local transport authorities, the power of Ministerial direction and the reporting requirement on local transport authorities will be in place from the Bill

commencement date in 2019. The Bill will establish the National Smart Ticketing Advisory Body (NSTAB) yet detailed provision in relation to the membership, remuneration and decision-making processes will be made, by regulation after Bill commencement. The national technological standard will be published following consultation with NSTAB.

120. The implementation of new technology into a sector can have cost implications in terms of systems acquisition and the associated back-office functions. Smart ticketing requires software and hardware, such as ticket machines.

121. However, as the setting of a national standard will be subject to influence from the advisory body established through regulations, the inability to pre-empt such future influences make definitive cost forecasts of specific implementation scenarios difficult at the stage of the Bill's introduction, especially with technology advances. With that in mind, this analysis is based on a number of assumptions, in particular as to what the first national technological standard will be. On the basis of those assumptions, the Bill is considered to have no significant cost implications upon commencement of relevant provisions on smart ticketing.

Statistics

122. The Bill's requirement for local transport authorities to ensure that ticketing arrangements provided under a mandatory ticketing scheme comply with a new national technological standard will solely apply to bus operators, therefore the analysis below focuses on that industry.

123. There is no national repository regarding the implementation and use of commercial smart ticketing products by the bus industry in Scotland and so no established statistical dataset on the issue currently exists.

124. However, the payment of the Bus Service Operator Grant (BSOG) to operators of locally registered bus services and the use of ITSO smart ticketing technology to deliver the Scotland-wide Free Bus Travel scheme for Older and Disabled People scheme provides a useful overview of the current availability and deployment of smart ticketing equipment for those schemes, and the general size and shape of the bus network across Scotland.

125. Such schemes use equipment meeting a standard known as ITSO 2.1.4. While the national technological standard for smart ticketing arrangements under the Bill will be subject to Ministerial decision following consultation with NSTAB, the cost estimates in this memorandum are predicated on an assumption that ITSO 2.1.4 is adopted as the first national technological standard, the infrastructure for which is already in use by local bus service operators.

126. In the financial year 2017/18, 185 bus operators have claimed BSOG for the running of commercial services and 173 bus operators (all of whom also claimed BSOG) made concessionary travel claims.

127. At present there are only three bus operators who are claiming concessionary reimbursement using ticketing equipment which does not meet the ITSO 2.1.4 standard.

128. Additionally, there are approximately 20 very small operators which do not use electronic ticketing equipment at all, instead submitting manual claims, as their turnover is so small it in no way warrants the purchase and upkeep of smart ticketing equipment. At present these very small operators are not required to invest in ticketing equipment for concessionary travel. It will be possible for such operators to be excluded from the scope of any ticketing scheme (and therefore from providing the ticketing arrangements required by that scheme).

129. All of Scotland’s major operators are delivering commercial smart ticketing and, while much of this has been delivered using infrastructure connected with the concessionary initiatives above, some operators have chosen to adopt other solutions which would not meet the national standard, such as m-tickets (ticketing through a mobile device app) adopted by First Group.

130. Transport Scotland has supported a number of smaller operators across Scotland to deliver smart ticketing. All of these initiatives have been delivered using existing concessionary fares infrastructure so costs have been nominal to both operators and Transport Scotland.

131. To support multi-operator ticketing, legislation covering ‘ticketing arrangements’ was first introduced in Scotland through section 28 of the Transport (Scotland) Act 2001. This legislation obliges local transport authorities to consider if there is sufficient provision of ticketing arrangement in place within their area and, if not, to look to work in partnership with operators to develop them.

132. There are a number of such voluntary arrangements in place across Scotland . These arrangements include:

Arrangement	Offering
GrassHOPPER – Aberdeen/shire	Smart using ITSO 2.1.4 and paper
ABC – Dundee	Smart using ITSO 2.1.4 only
Glasgow Tripper	Smart using ITSO 2.1.4 only
SPT Zonecard	Paper only
Ridacard	Smart using proprietary system
One Ticket	Currently paper only – Zone 1 (Edinburgh to be smart using ITSO 2.1.4 from mid-2018)

Table 6 – Local Transport Authority Ticketing Arrangements

Research

133. The following research has been undertaken to consider the financial impacts of this Part of the Bill:

- Public consultation;
- SYSTRA research on schemes in place elsewhere in UK;
- Discussion and one-to-one engagement with key stakeholders;
- Set-up and operating costs of existing ticketing arrangements;

- Existing infrastructure costs from suppliers.

COSTS ON THE SCOTTISH ADMINISTRATION (INCLUDING COST IMPLICATIONS TO THE SCOTTISH GOVERNMENT)

134. To deliver the national standard a range of software and hardware will need to be maintained/operated by the Scottish Government, local government or public transport operators.

135. At present Transport Scotland supports commercial smart ticketing using elements of the infrastructure already in place for the concession schemes. These costs include:

- Membership of ITSO (the technical standard used for ticketing equipment);
- Costs for use of ITSO components (which allow secure data transfer);
- Back office systems;
- Operator web portal and card management system (CMS);
- On-vehicle ticketing equipment;
- Technical advice and support.

136. With the exception of the CMS and web portal, all of these services are provided to public transport operators who wish to use them, free of charge.

137. In total this infrastructure, while fulfilling the primary function of supporting concessionary travel, costs the Scottish Government around £750,000 per annum.

138. The recently updated Smart Ticketing Delivery Strategy confirms the Scottish Government's intention to continue to support the industry in this way after new legislation comes into effect.

139. Transport Scotland also fulfils a key advisory role, supporting operators and local government in assessing their smart needs and working in partnership to deliver these. Both the advice and assistance with implementation is generally provided free of charge.

140. This support and infrastructure is supplied in line with concessionary travel initiatives, and meets the well-established ITSO 2.1.4 standard. If it is decided, following consultation with NSTAB, that ITSO 2.1.4 should be the basis for the national technological standard, no additional costs are forecast for central government.

Setting of a National Standard

141. Although the existing infrastructure is in place to deliver on the well-established ITSO 2.1.4 standard, obviating any cost implications for a foreseeable period if this were to be set as the national standard, it is possible that another standard may be set as the first standard or subsequently. However, it is not possible to pre-empt the costs of setting a different standard until that standard is identified.

National Standard and Advisory Group

142. It is envisaged there will be little or no costs associated with the set up and running of NSTAB, which will have the role of advising Scottish Ministers on the setting and updating of the national standard for smart ticketing technology.

143. The Operator Smart Steering Group, similar to the proposed group, is already in place. Members – many of whom are commercial operators – do not draw any financial remuneration, giving time and contributions on goodwill to help shape measures affecting their industry and therefore results in no cost implications. If it is decided, following consultation with stakeholders, to follow this approach for the Advisory Board, this would not give rise to any cost implications

144. Any Scottish Government employee time and resource contributions to the group will be met from the existing Transport Scotland staff budget.

Local Transport Authority reporting

145. The Bill will create a requirement for local transport authorities to submit yearly returns on delivery. The administrative costs associated with these are considered to be negligible and met within existing resource and staffing budgets.

Non-Compliance and Enforcement

146. While a national standard is being set, this will only be enforced where bus operators take part in ticketing schemes. Section 32 of the Transport (Scotland) Act 2001 already has provision for ensuring that operators do so, by treating participation in the ticketing scheme as a ‘prescribed particular’ of the operator’s PSV licence. This allows for the Traffic Commissioner to impose sanctions under section 6 of the Transport Act 1985. Therefore no cost implications are foreseen.

COST IMPLICATIONS TO LOCAL AUTHORITIES OR REGIONAL TRANSPORT PARTNERSHIPS

Reporting on Arrangements and Schemes in place

147. Local transport authorities will be required to report annually to Ministers on the exercise of their functions in relations to smart ticketing arrangements and schemes. Local transport authorities will be provided with an annual template to complete. Such bodies are subject to various reporting and monitoring obligations in line with their current statutory and other responsibilities, so are well used to carrying out associated administrative functions. Therefore any cost associated with the reporting requirement created by the Bill will be cost neutral.

Introduction of a Scheme

148. While the general trend in recent years has increasingly seen bus operators adopting smart ticketing voluntarily and there is no reason to assume this would not continue without the measures in the Bill, the changes to legislation mean that, where a new ticketing scheme is being introduced the local transport authority would need to ensure that it was a “smart” ticketing scheme. Local transport authorities will also be obliged to ensure that ticketing

arrangements provided under a ticketing scheme comply with the national technological standard. The following are situations where this may incur a cost:

- The costs of an existing paper arrangement becoming a scheme, or a new scheme which requires to be smart to the national standard – as ITSO ticketing technology is largely in place, if this was to be the national standard these costs would be mostly in developing new products which could be delivered on a smart basis and in offering smartcards or other forms of storing tickets such as mobile apps. From review of the existing arrangements, and based on national standard being ITSO 2.1.4 at inception, the start-up costs would be around £20,000 if using Transport Scotland funded technology. If a commercial decision was taken to use other technology, the costs may be slightly higher, yet this would not emanate from the requirement to meet the national standard;
- The costs of an existing smart arrangement becoming a scheme which would require to meet the national standard (such as the current Lothian Buses Ridacard). Currently, all operators have equipment meeting ITSO 2.1.4 standards, so if this were to be set as the first standard, initial costs could be expected to be very limited.

COSTS ON OTHER BODIES, INDIVIDUALS AND BUSINESSES

Bus Operators

149. From information held by Transport Scotland as part of its role managing the Scotland-wide free bus travel scheme, over 99% of commercial bus operators in Scotland have ITSO standard ticketing equipment, mainly due to involvement in concessionary travel schemes.

150. If the well-established ITSO system was the basis for the national standard initially, there would be no new financial impact when the new legal measures commence.

151. It is possible for local transport authorities to exclude operators with a very small turnover from a ticketing scheme (and any requirement to provide the ticketing arrangements required by the scheme).

Operators of other public transport modes

152. Other modes are not directly affected by the legislative changes in the Bill, as powers to require that arrangements meet the national standard only apply to bus operators. The Bill will expand the definition of ticketing arrangements to cover connecting rail and ferry services such as rail or ferry, yet such operators cannot be compelled to provide the ticketing arrangements required by a ticketing scheme and would have to do so voluntarily. There will be the option for this to be set out in guidance, taking account of the benefits of interoperability. The Scottish Government will also consider the imposition of requirements to participate in local transport authority ticketing schemes within future contract specification, as it is at present with ScotRail and CalMac. Any bearing on contract costs associated with this do not directly stem from the requirements on the face of the Bill. Also, as the advisory body is multi-modal, any decisions on the national standard would take account of the views of operators across modes.

PART 4 – PAVEMENT PARKING AND DOUBLE PARKING

OVERVIEW, STATISTICS AND RESEARCH

153. The measures within the Bill to tackle pavement and double parking will have financial implications. Statutory provision for decriminalised enforcement of such schemes has not been implemented in Scotland or the UK previously, whilst there are no national data-sets on instances of tackling pavement and double parking on Scotland's streets. Whilst pavement parking is banned in the London Boroughs, there is no financial data available on this specific element as the measures are encompassed within the areas' decriminalised parking enforcement regimes.

154. Although costs will be incurred during implementation, the associated enforcement and penalty system has the potential to generate revenue. The policy aim of these provisions within the Bill is not as a revenue-raiser for local authorities – and compliance from motorists is the ultimate aim – yet a penalty system which levies fines will inherently have the propensity to generate funds.

155. Due to the lack of quantifiable data relating to the extent and costs of footway parking, as well as the range of options for implementation and enforcement for local authorities, it is not possible to precisely identify cost implications for local government. Therefore Transport Scotland officials have engaged with the City of Edinburgh and Aberdeenshire Council to gather feedback on any expected costs, in order to provide an illustrative example.

COSTS ON THE SCOTTISH ADMINISTRATION (INCLUDING COST IMPLICATIONS TO THE SCOTTISH GOVERNMENT)

156. The Scottish Government has an established process with local government, whereby any policy initiatives or legislative changes which places a 'new burden' (duty) on local authorities are funded accordingly in addition to the wider local block grant package.

157. As such, there has been significant discussion between local authorities and COSLA through Parking Manager Stakeholder Working Group and the Parking Standards Working Group, which were established to steer policy direction in preparation for the legislation. Therefore the cost forecasts below in relation to local authorities have been developed via a partnership approach and this dialogue is continuing in advance of commencement of any new legal duty created by the Bill.

158. The parking prohibitions will be a significant alteration from the current situation for the driving public. As such, it is envisaged that significant awareness-raising will be needed to foster the necessary behaviour change. It is the Scottish Government's intention to undertake a nationwide publicity campaign involving local authorities, Police Scotland and other stakeholder groups in this regard. The campaign will take place prior to commencement of the provisions to ensure there is widespread awareness of the new prohibitions. Using comparative costs from recent campaigns by Road Safety Scotland on issues of a similar magnitude it is thought it would cost in the region of £500,000 if it was to cover TV, radio, digital and printed formats.

159. The Scottish Government currently collates information on penalty charge notices and revenue generated from local authorities operating decriminalised parking enforcement regimes. It is intended that this annual report produced for the Scottish Parliament will be extended to contain information on the enforcement of the provisions within this Bill and any additional cost incurred is expected to be minimal.

COSTS ON LOCAL AUTHORITIES

160. The costs on local government can be grouped into three main areas:

- assessment and implementation;
- signage and road marking;
- enforcement.

Assessment and Implementation

161. The Bill will create prohibitions on parking on footways and footpaths, and double parking across Scotland's road network. Local authorities, under order making powers, will be able to exempt certain footways where the ban on pavement parking is not appropriate. Therefore local authorities will require to have an overview or audit of their road network and its associated roadside footways in order to make such an assessment. Given the differing nature and practices of Scotland's local authorities – and their associated road networks – there will be variation on the degree to which this information is already held in order to discharge their existing duties on the roads they oversee. Additionally, readily-available technology – such as google maps and streetview – allow a level of insight into specific road size and specification with relative ease.

162. The Bill itself does not mandate on the technical specification for exempting footways and this will be set out in Ministerial directions which will be collated together with guidance produced to aid implementation. The City of Edinburgh Council has indicated that to carry out a full assessment of its street network through site visits would cost in the region of £40,000. It may also be possible to carry out a desktop survey using inventory databases and applications such as google street view to review streets and identify streets that require an actual site visit. The local authority estimates that this type of survey would cost in the region of £4,000 in terms of administrative and staff functions.

163. Aberdeenshire Council currently don't operate a decriminalised parking enforcement regime and, their parking restrictions within their towns and villages are not as well developed as the City of Edinburgh Council. However Aberdeenshire Council has indicated that to carry out a full assessment of their street network through site visits where pavement parking exists would cost in the region of £10,000.

164. Therefore an average cost of implementing this element of the Bill's provisions is taken as £25,000 per local authority, however this could be significantly reduced if desktop online or database surveys were used.

Signage and Marking

165. Those roads with footways which are identified for exemption will require associated signage to be erected notifying motorists that the national prohibition on footway parking does not apply.

166. The City of Edinburgh Council has already carried out surveys at 60 sites which are known to have issues with footway parking across their road network to gain a snap-shot sample. Aberdeenshire Council have also reviewed six regional areas that contain a number of streets within each of the areas. The criteria used has been based on dialogue with Transport Scotland officials regarding the likely parameters of what will appear in future standards on the matter.

167. From the sites surveyed, Edinburgh has identified nine that would be considered for exemptions. Edinburgh estimated unit costs for exemption measures are £300 per sign and carriageway markings at £1 to £1.30 per metre. Whilst detailed costs across City of Edinburgh Council's entire network are not currently available, the local authority does not envisage full implementation costs for these measures to exceed £150,000.

168. Aberdeenshire Council has stated that it is likely that the number of exemptions that would be required would be low in number. The council anticipated less than 10 exemptions with varying numbers of bays would be required, with a cost in the region of £5,000.

169. As part of the back office functions including management system, administration costs would be in the region of £33,000.

Community or Public Objections

170. The Bill provides powers to Ministers to prescribe a procedure for the making, amendment or revocation of exemption orders. While the procedure to be followed by local authorities in each case has not yet been fully developed it is expected to build upon the existing local authority established decision making processes. Such local government processes ensure community feeling is taken into account in a transparent manner. This process includes public consultation, overcoming of potential objections, discussion and approval at council committee. If objections cannot be overcome then local authorities may be required to hold a public local inquiry. Such functions can have cost implications for local government in terms of administration resource and staff time. However, these processes relate to the discharge of many of the functions of local authorities and are not new to such bodies. As such, councils are well-used to carrying out such practices already and structured to do so, therefore no significant new cost implications are envisaged for these processed.

171. Additionally, local traffic authorities can presently use Traffic Regulation Orders (TROs), under the Road Traffic Regulation Act 1984 ("the 1984 Act"), to apply local restrictions and management measures (such as single and double yellow lines). However, the work involved and the cost of producing TROs and providing the additional signage means that this approach has not been used as often by local traffic authorities to implement pavement parking restrictions. Therefore the Bill removes this financial disincentive for action for councils where pavement parking is an issue.

Enforcement

172. The intention of the provisions of the Bill are that the enforcement of the new prohibitions should be undertaken by local authorities, as is the case in relation to other parking restrictions within a local authority area. Decriminalised parking enforcement is a regime which enables a local authority to enforce its own parking policies using parking attendants employed by the council or outsourced to a third party. Such powers are granted to a local authority after an application to the Scottish Ministers, as set out in the Road Traffic Act 1991.

173. The powers enable parking attendants to issue penalty charge notices to motorists breaching parking controls in specific areas. Since Police Scotland's decision to remove its traffic warden service as a result of a review on resources in 2013, the number of local authorities who have decriminalised parking enforcement powers has increased from 14 to 20, expected to increase to 21 at the end of 2018.

174. Local authorities who are operating a decriminalised parking enforcement regime should not incur any extra costs by enforcing the provisions in this Bill, as they are already operating the regime that includes costs for enforcement wardens, back office staff, data analysis and collating of penalty charge notice figures. Portable handheld devices may require a software update for the issuing of penalty charge notices in the provisions of the Bill and Transport Scotland is liaising with local authorities to determine the cost, yet this is expected to be minimal.

175. The Bill also includes a provision that enables local authorities to engage third parties to enforce the restrictions on their behalf. For such councils, there are options for collaborative working and the use of a service level agreement where enforcement officers from a neighbouring authority can be shared.

176. The costs of enforcement will vary with local authorities either operating a decriminalised parking enforcement regime or not. Financial data from previous local authority decriminalised parking enforcement applications as well as their annual reporting regarding their regimes has been used to determine the cost of ongoing enforcement.

177. Local authorities which are not operating a decriminalised parking enforcement regime have various options available to carry out enforcement, these include:

- **Option A:** Set up their own decriminalised parking enforcement regime and operate using permanently employed enforcement officers, their own back office and equipment;
- **Option B:** Set up a service level agreement with a neighbouring local authority with decriminalised parking enforcement powers already using a private contractor with full time employed enforcement officers, contractor back office and equipment;
- **Option C:** Set up a service level agreement with a neighbouring local authority or private contractor using part time or hourly rate employed enforcement officers from a neighbouring local authority or private contractor, contractor back office and equipment.

178. **Option A:** The back-office set-up for such a function will cost in the region of £30,000. Costs for staff training and legal expenses is estimated be in the region of £10,000. Cost of equipment is estimated to be from £10,000 to £20,000. Employee costs will be determined on how many enforcement officers they have however each enforcement officer is expected to cost in the region of £9.00 per hour. Aberdeenshire Council has stated that it would require an additional three members of staff to undertake enforcement in towns and villages where footway parking issues exist but no enforcement staff are currently patrolling. Efficiency of current staff would improve in other areas as more work would be available within the areas they are covering. If the number of penalties increases, income should increase making any necessary increase in staffing levels self-sustainable on a long term basis. This also incorporates vehicle hire, fuel, uniforms costs. This could cost in the region of £100,000.

179. **Option B:** The costs for this option would be in the region of those outlined above, yet there would be the potential to reduce these for constituent authorities as such costs would be spread across a number of councils, such as the removal of the £30,000 back-office set up costs outlined in Option A.

180. **Option C:** As with Option B. Although each enforcement officer will cost in the region of £9 per hour, employee costs will be determined on how many enforcement officers are deployed.

Potential Revenue

181. In relation to decriminalised parking enforcement regimes, which it is the intention for the enforcement of the new restrictions to be modelled on, guidance to local authorities seeking to acquire decriminalised parking enforcement powers is that the system should, insofar as possible, be self-financing. It is anticipated that authorities with existing decriminalised parking enforcement powers will use those existing systems to also administer the enforcement of these prohibitions and therefore costs will be absorbed into those existing systems.

182. While some local authorities operating decriminalised parking enforcement schemes at present draw significant revenue from this, the average revenue is around £1.8 million per council. Although revenue is generated through schemes – principally parking charges – distinctly different than those set out in the Bill, this provides an illustration of the wider context around decriminalised parking enforcement scheme funding and re-investment.

183. In relation to off-setting any implementation and enforcement costs, City of Edinburgh Council has indicated that any signage and marking costs will be met by the revenue generated by its decriminalised parking enforcement regime.

184. It is the intention to use the enabling power in section 55 of the Bill to place a duty on local authorities to keep accounts as well as prepare and publish statements relating to their income and expenditure in connection with the enforcement of the new prohibitions. This duty will be similar to the duty on local authorities operating decriminalised parking enforcement regimes by virtue of section 55 of the 1984 Act, therefore there will be ongoing transparency and monitoring in relation to local authority income and expenditure as schemes

bed-in across the country. It will also form the basis of an annual report prepared for Scottish Ministers. Local authorities which currently keep accounts on decriminalised parking enforcement have already established processes and any cost or resource implications are considered to be minor.

COSTS ON OTHER BODIES, INDIVIDUALS AND BUSINESSES

Other Bodies

185. There are not expected to be any such costs. During passage of the previous Member's Bill on Footway Parking and Double Parking, Police Scotland indicated during committee evidence³⁵ that such legislative measures would give more clarity on parking laws and enforcement and therefore Police Scotland would incur no cost.

Individuals

186. There should be no cost implications for individuals and private motorists. Where parking restrictions currently apply, such as road markings (single and double yellow lines), permit schemes or pay-and-display schemes these would still apply to motorists who currently park on pavements. Where there are no such restrictions, motorists parking on pavements will still be able to park on the road.

Businesses

187. No cost implications are forecast regarding the freight and logistics industry. The Bill's provisions offer all delivery, postal services, and utility company drivers limited exceptions to the prohibitions whilst undertaking their duties. Discussions held with the Road Haulage Association and Freight Transport Association confirmed these organisations' do not forecast cost implications.

³⁵ [Local Government and Regeneration Committee Evidence Session](#)

PART 5 – ROAD WORKS

OVERVIEW, STATISTICS AND RESEARCH

188. The road works provisions within the Bill are intended to improve the maintenance and upkeep of major national assets which make a considerable contribution to Scotland's economic prosperity and costs should be considered against this background.

189. Scotland's road network consists of almost 35,000 miles (56,000 kilometres) of road³⁶. Local authorities as roads authorities are responsible for around 32,500 miles (52,400 kilometres) of this. The Scottish Ministers are the roads authority for the remaining trunk road network. A 2017 report for Transport Scotland by consultants Transport Research Laboratory (TRL) valued the contribution made by the trunk road network to the Scottish economy as £1.38 billion³⁷, and that it directly supports 31,000 jobs.

190. There is no one report covering local roads from a similar basis. Using the same methodology as that used in the 2017 TRL report, it is estimated that local roads contribute £1.46 billion in Gross Value Added terms to the Scottish economy and directly generate employment for just under 31,000 people³⁸.

191. Additionally, roads authorities maintain a replacement value of their road network as part of their Road Asset Management Plans ('RAMP'). Using 2012 collated RAMP values, the Society for Chief Officers of Transportation, attributes a replacement value for all of Scotland's local roads at just under £73 billion, the equivalent figure for the Trunk Road Network of over £20 billion³⁹.

Current Figures

192. In 2016-17 there were a little under 131,000 road works⁴⁰ carried out in Scotland. These include works for roads purposes carried out by roads authorities, and road works carried out utility companies, developers and others. Undertakers – those licensed to undertake road works for a utility such as electricity, gas, water or telecommunications – are responsible for the signing, lighting and guarding of road work sites, and for reinstating the road to the prescribed requirements on completion of their works.

193. In 2016/17 around 97,500 utility road works were recorded on the Scottish Road Works Register (SRWR). Roads authorities recorded a little under 29,000 chargeable inspections for those works⁴¹. Of those inspected after works were complete and the road had been reinstated, around 1,100⁴² were found not to have reinstated the road to the required standards.

³⁶ http://www.audit-scotland.gov.uk/uploads/docs/report/2016/nr_160804_maintaining_roads.pdf

³⁷ <https://www.transport.gov.scot/media/33629/value-of-society-economy-to-trn-final-report-feb-2017.pdf>

³⁸ Freight, public transport, construction and roads maintenance.

³⁹ <https://www.transport.gov.scot/media/32978/j408891.pdf>

⁴⁰ Source: The Scottish Road Works Register

⁴¹ Source: The Scottish Road Works Register

⁴² Source: The Scottish Road Works Register

COSTS ON THE SCOTTISH ADMINISTRATION (INCLUDING COST IMPLICATIONS TO THE SCOTTISH GOVERNMENT)

194. The Scottish Road Works Commissioner (SRWC) currently has 4.8 full time equivalent members of a staff, consisting of four office-based support staff and two technical staff who currently carry out site visits.

195. The Bill will confer an inspection function on the SRWC. The function along with the associated inspection powers will be used to underpin the on-site work begun under the current SRWC using existing technical staff. Should there be a desire to expand the technical capability of the office, the SRWC has estimated that up to five technical staff may be required, and that the cost of employing these staff and equipping them with suitable vehicles so that they are capable of working all over Scotland will be approximately £411,000 in year 1 and then approximately £301,000 per annum thereafter. See the table below.

Description	Salary (max)	Other recurring costs	One-off costs	Total
5 “inspectors” to assist the SRWC with the new inspection function (Band B1 grade equivalent)	5 x £26,448	x 1.8 on cost multiplier ⁴³		£238,032
5 additional lightweight defection meters			£40,000	£40,000
5 vehicles (small vans)			£70,000	£70,000
Annual vehicle running costs		£28,000		£28,000
Travel and subsistence, and associated travel/overtime		£35,000		£35,000
Total year 1 costs				£411,032
Total annual recurring costs			-£110,000	£301,032

Table 7 – Additional resources required to fulfil SRWC inspection function

196. Changes to the notification of actual starts, works closed, and a mandatory requirement to place plant information onto the Scottish Road Works Register – of which the SRWC is the legally nominated keeper – could require changes to be made to the register (the computer database) to accommodate the new obligations. The extent of the changes required, if any, will depend on the level of detail prescribed in secondary legislation. It is therefore difficult to predict what the associated costs might be. If the changes are relatively minor they may fall within the scope of the existing service provision contract. In order to gauge the cost of more significant changes, it is possible to draw on previous examples where a major addition to the system resulted in a one-off cost of approximately £150,000, and increased the ongoing support costs by around £70,000 per year. Any additional support costs would be added to the overall costs of running the register, which are recovered from users through statutory fees they pay in order to access the system.

⁴³ Higher than normal to take account of the need for PPE and professional training.

COST IMPLICATIONS TO LOCAL AUTHORITIES FROM THE PROVISIONS IN THE BILL

197. The Bill will create two new duties for roads authorities regarding site safety and professional qualifications:

- Roads authority work sites will become subject to the existing code of practice on site works which applies to utility road works sites;
- Roads authority operatives and supervisors will be required to hold certain professional qualifications that are currently only mandatory for utility operatives and supervisors.

198. The code of practice on site works is currently advised for road authority sites but not mandatory. Most roads authorities already comply with the code and therefore no additional costs are forecast for this element.

199. As regards professional qualifications, candidates undertaking a road work qualification might typically pay around £800 to £1,200 for a five day course to obtain their initial qualifications. The fee to register that qualification on the SQA run register is currently £25⁴⁴. That registration is typically valid for five years before it has to be renewed (early re-registration is possible). However the qualification can only be re-registered if the candidate has been re-assessed as competent in the qualification subject by passing an exam on the underlying theory. It currently costs around £100 to £400⁴⁵ for the reassessment course.

200. There are a little under 1,600⁴⁶ road workers employed across Scotland's 32 local authorities. Similarly there are also just over 900 employed in supervisory roles (senior road workers, Superintendents, and Inspectors). A large road authority might employ between 140 to 180 road operatives and perhaps between 30 to 40 supervisors. Within a small roads authority the corresponding number of roads operatives might be between 50 to 80 and the number of supervisors perhaps 20 to 30 individuals.

201. On the trunk road network, similar work is carried out by a number of operating companies and their agents. There are approximately 1,000 individuals in operator, and supervisory grades. However there is also an element of additional seasonal/casual staff which could increase the number of operatives within the trunk road operating companies and their agents.

202. This means that if a roads authority does not already have a training regime in place which sees their operatives and supervisors already using the prescribed qualifications for utility operatives and supervisors they may be facing an initial cost of £800 to £1,200 for each operative and supervisor they elect to train, and an on-going cost of £25 to re-register these qualifications each five years, with an associated cost of £100 to £400 to complete any re-assessment of their competence.

⁴⁴ <https://www.sqa.org.uk/mini/26954.html>

⁴⁵ [BRIA - The Road Works \(Qualifications of Operatives and Supervisors\)\(Scotland\) Regulations 2017](#)

⁴⁶ 2015 Workforce survey undertaken by the Improvement Service

203. Roads authorities will not be required to train every operative and every supervisor. As such, for roads authorities which require to meet the cost of prescribed professional qualifications for the first time, this might mean an initial cost for training of £136,000 to £264,000 for a large roads authority, and £56,000 to £132,000 for a small roads authority. As with the new duty on the site works code of practice, some authorities already put their operatives and supervisors through the approved professional qualifications as current best practice.

204. The Bill will also introduce a requirement for roads authorities to produce a quality plan when they are required to do so by the SRWC. The costs involved will very much depend on the detail of what might be required. However, the SRWC is only likely to require a roads authority to produce a quality plan when they are not performing to the required standards. As such, the costs of complying with the requirements of a reinstatement quality plan should only equate to the cost of meeting existing obligations, and therefore not a new cost introduced by the Bill.

COST IMPLICATIONS TO OTHER BODIES, INDIVIDUALS AND BUSINESSES FROM THE PROVISIONS IN THE BILL

Businesses and Utility Companies

205. The Bill's requirements to provide quality plans and more accurate information in relation to plant and apparatus and the timing of road works could result in additional costs for businesses and utility companies. Separately there are the financial consequences of enforcement measures applied as a consequence of non-compliance. The affected businesses are those conducting road works which are either those with rights as undertakers to maintain and repair their apparatus and anyone given permission to execute road works under section 109 of the 1991 Act by a roads authority. This might be a private developer wishing to make a connection onto an existing network.

206. Cost implications from increased enforcement measures provided for the SRWC through the Bill include the increase in maximum civil penalty available to the Commissioner to £100,000, albeit this is the maximum level of penalty and therefore is at the extreme level of any civil penalty received. Businesses can obviously avert such penalties, or any other enforcement sanction including the new Fixed Penalty Notice option which the SRWC will have as alternative to the submission of a report to the Procurator Fiscal, by complying with the regulatory framework.

207. Any new duties or obligations placed on those conducting road works to provide better information about their apparatus and about the timing of road works potentially have resource implications. Currently, however, the road works community generally use the Scottish Community Apparatus Data Vault ('Vault') – an electronic geographic information database – to store the location of their plant and apparatus. This will be suitable for any new requirements and it is only those which have to transfer paper-based records which would see any impact. A sample of utility companies which had already digitised their paper records was canvassed on their experiences. Unfortunately none were able to provide cost estimates.

208. A suitable transition period would help ameliorate any such resource considerations. Feedback from large utilities such as Scottish Gas Networks and Scottish Water is that it took them one to two years to digitise their records. The implementing regulations and guidance will be developed in partnership with the Scottish road works community through Roads Authorities and Utilities Committee (Scotland).

209. Additionally, moving from paper records to the digitised Vault system can lead to longer-term cost savings for utility companies as it significantly reduces the administrative resource needed to gain an overview of a site and begin works.

210. The second area which could have cost implications for businesses are the Bill's measures designed to improve the accuracy of information relating to road works. Yet measures are already being taken in this area to allow the submission of information electronically to the SRWR from the actual road work site, which mitigates administrative implication for businesses, and any associated costs. The SRWC is currently developing an application for mobile smartphones to provide this functionality. The cost of developing the applications is within the scope of the latest contract for the service provision for the SRWR and will continue to be so.

211. The measures in the Bill are also likely to lead to cost benefits for utility companies and other road works undertakers. Regarding the one-year (2016/17) example of 29,000 chargeable inspections, the current fee for such inspections is £36⁴⁷. This represents a cost to the undertakers responsible for those works of around £1 million pounds per annum just in relation to inspection fees alone, so any measures to reduce this could have significant direct cost benefits for utility companies. In the longer term roads authorities would also benefit if there was less need to carry out inspections as a result of road reinstatements being of a higher standard which would also have wider benefits including for road users.

212. Likewise for the 1,100 reinstatement works where inspections found these not to meet the required standards, the typical cost of sending a squad back to road works to rectify defects is in the region of £1,000 to £1,500 per day. In respect of the sample inspections undertaken this represents a potential further cost to the undertakers concerned of between £1.1 million to £3.3 million pounds a year assuming only one to two days on site is required to rectify any defect. In practice remedial works at a substantial road works site might take more than one to two days on site to put it right. The 1,100 inspections on which reinstatement issues were identified come from a 20% sample of all utility road works undertaken.

213. Taking this into account, there are potentially similar reinstatement issues at perhaps 5,500 road works sites across Scotland. The potential remedial costs of remedying these defects could cost the undertakers concerned between £5.5 million to £16.5 million to rectify. Any proposals for regulatory change within the Bill which increase the quality of road works resulting in more reinstatements being right first time, are therefore anticipated to reduce such costs and better protect the fabric of the road network and help secure wider socio-economic benefits.

⁴⁷ [The Road Works \(Inspection Fees\) \(Scotland\) Amendment Regulations 2014](#)

PART 6 – REGIONAL TRANSPORT PARTNERSHIP FINANCE AND THE GOVERNANCE OF SCOTLAND’S CANALS.

214. There are no costs associated with the proposals to create greater financial accounting flexibility for Transport Partnerships, allowing them to carry over any financial reserve accumulated from local authority funding from one financial year to the next. This is a technical amendment to existing legislation to clarify that this provision exists. The current level of ambiguity can lead to Transport Partnerships transferring funds back to local authorities at the end of the financial year, only for this to be re-allocated in the following financial year. Therefore the changes should decrease levels of staff time and back office administrative resource associated with this practice. Transport Partnerships are already required to produce annual accounts and have the resources in place to do so. No additional responsibilities will be placed on constituent councils of Transport Partnerships or the Scottish Government.

215. The measures to alter the structure of the Board of Scottish Canals are not considered to generate any financial consequences. The changes most likely to be considered will enable the executive team, who are salaried public officials and already attend Board meetings, to become members of the Board. As such, this function would become part of their work responsibilities and they would draw no additional remuneration. There may be future changes to the Board structure but Ministers would seek to ensure they would be cost neutral in line with the appointment of the executive team to the Board. Some of the changes being considered may result in minor additional costs for Board member expenses, but these are not expected to be significant and would be met within existing central government budgets in this area.

SUMMARY OF COSTS ARISING FROM THE BILL

	Paragraph reference	Costs								
Costs on the Scottish Administration										
Low Emission Zones	15-30	<p>There are various costs associated with the implementation and on-going management of LEZs, and the potential for amounts of this to be offset through revenue from penalty fines generated by schemes.</p> <p>The level of support for any such initiatives and other associated costs fall between central and local government, with no fixed or established formula or mechanism defined currently in Scotland to precisely apportion this. The implementation planning around LEZs is still on-going and, in the near future, centres on roll-out in the four cities outlined in the 2018/19 Programme for Government. Therefore costs are principally aligned with wider policy aims being taken forward in partnership with local government rather than stemming from matters prescribed in the Bill.</p> <p>On the basis of research by Jacobs consultants, the cost windows for different sizes of local authority LEZ schemes (per council) over a ten year period are below:</p> <table border="1" data-bbox="596 1133 1313 1321"> <thead> <tr> <th>Size</th> <th>Cost (£m)</th> </tr> </thead> <tbody> <tr> <td>Small (0.5km²)</td> <td>4.2 – 5.6</td> </tr> <tr> <td>Medium (1.5 km²)</td> <td>9.9 – 14.1</td> </tr> <tr> <td>Large (3 km²)</td> <td>17.5 – 26.0</td> </tr> </tbody> </table>	Size	Cost (£m)	Small (0.5km ²)	4.2 – 5.6	Medium (1.5 km ²)	9.9 – 14.1	Large (3 km ²)	17.5 – 26.0
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Medium (1.5 km ²)	9.9 – 14.1									
Large (3 km ²)	17.5 – 26.0									
	31-33	<p>Costs of operation may be offset by revenue from charges. Estimating this revenue is challenging at this stage as the parameters for LEZs are not known.</p>								
Bus Services	51	<p>The three options for local transport authorities set out in the Bill are not mandated and therefore do not result in ‘new burden’ funding to local government. The only direct cost is the set up and running of an independent panel to oversee local franchising proposals estimated at £90,000 annually.</p>								
	111-112	<p>On enhanced information requirements, a central repository to hold and disseminate the data published by operators is estimated at £311,000.</p>								
Smart Ticketing	134	<p>This is expected to be cost neutral. Although the Bill does not set the national standard to be used, if this was the well-established ITS0 2.1.4, it would be largely facilitated by investments already made by both Transport Scotland and bus operators in the technological infrastructure used for the Scotland-wide Free Bus Travel scheme for Older and</p>								

	142-144	Disabled People. Establishment of the National Standard and Advisory Group is not envisaged to create any material costs.
	146	No non-compliance and enforcement cost implications.
Pavement parking and double parking	156-157	Discussion is on-going with local authorities on costs arising from the legislative changes in accordance with the 'new burdens' protocol.
	158	£500,000 for a national publicity campaign to raise public awareness.
Road Works	195	Setting up an inspection function will cost £411,000 with annual running costs of £300,000 thereafter.
	196	Costs of change to the Register to accommodate increased information requirements cannot be estimated until the detail of the changes prescribed in secondary legislation is known.
Costs on Local Authorities or Regional Transport Partnerships		
Low Emission Zones	18	Costs on central and local government are taken together in this section of the document (as above).
Bus Services	62-73	The average cost of developing and setting up a Bus Service Improvement Partnership is estimated at £23,000 annually, however this does not include capital spend as it is not possible to predict how local authorities will implement.
	74-89	A form of local franchising is already possible but has never been used. Estimated costs for small Scottish schemes are therefore difficult to infer from the large schemes that have been operated in England.
	90-95	Transport authority-run bus scheme costs would vary dependent on the scheme
Smart Ticketing	149	If ITSO 2.1.4 is adopted as the first national technological standard, anticipated to be cost neutral.
Pavement parking and double parking	164	Assessment and implementation estimated at an average of £25,000 per local authority, although this can be reduced significantly if database surveys used.
	165-169	Estimated cost of signing and administering exemptions ranges from £38,000 to £150,000 per local authority.
	172-180	Costs of setting up an enforcement scheme are estimated at up to £160,000 per local authority, although 21 authorities already have a regime in place and set up costs can be reduced by sharing facilities.
	181-184	Costs of operating a scheme may be mitigated or significantly

		be offset by revenue from charges. Estimating this revenue is challenging as the compliance level of motorists is unknown.
Road Works	197-204	The Bill mandates the existing code of practice on site safety, which most authorities comply with, so no additional costs. The Bill mandates professional qualifications estimated to cost from £56,000 to £264,000 to implement dependent on the size of the roads authority, although some authorities already adopt this practice.
Costs on other bodies, individuals and businesses		
Low Emission Zones	34-43	As the legislation sets out the broad framework for introduction rather than defining the specifics of implementation which will be subject to a large number of variables, it is not possible to definitively quantify the cost on other bodies, individuals and businesses at the time of the Bill's introduction.
Bus Services	96-99	Bus operators – Bus Service Improvement Partnerships can lead to cost outlay to meet service standards, yet these can be mitigated or offset by longer term benefits in a successful partnership and are anticipated to have similar cost implications to the Quality Partnerships they replace.
	100-103	Bus operators – Franchising has not taken place outside London so estimates are not readily available.
	115-117	Bus operators – Improved information costs vary by operator depending on the information they currently make available and the complexity of their fare structure.
Smart Ticketing	149-152	99% of bus operators have ITSO 2.1.4 standard ticketing equipment and it is the intention for certain small scale operators to be exempt, so no cost envisaged.
Pavement parking and double parking	185-187	No cost implications forecast for individuals or businesses.
Road Works	206-213	Where businesses and utility companies comply with the enhanced regulations the resulting benefits and cost savings on reinstatements are estimated to outweigh costs.

This document relates to the Transport (Scotland) Bill (SP Bill 33) as introduced in the Scottish Parliament on 8 June 2018

TRANSPORT (SCOTLAND) BILL

FINANCIAL MEMORANDUM

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