

## **RURAL ECONOMY AND CONNECTIVITY COMMITTEE**

### **PRE-BUDGET/FINANCIAL SCRUTINY ON ROADS MAINTENANCE IN SCOTLAND**

#### **SUBMISSION FROM CHARTERED INSTITUTION OF HIGHWAYS AND TRANSPORTATION**

The Chartered Institution of Highways and Transportation (“CIHT”) is a membership organisation representing over 14,000 people who work in the highways and transportation sector. CIHT members plan, design, build, operate and maintain best-in-class transport systems and infrastructure, whilst respecting the imperatives improving safety, ensuring economic competitiveness and minimising environmental impact.

With over 1,200 members, CIHT Scotland embraces both public and private sectors across the whole geography of the nation and welcomes the opportunity to comment on the consultation on the budget scrutiny of roads maintenance in Scotland. In so doing we have drawn on the collective knowledge of our Scottish members and from the rest of UK where we have recently conducted a review of highway maintenance in England. We respectfully offer our views on the four Key Questions below:

#### **Impact of Recent Spending Decisions**

Transport Scotland spent 4% less on roads maintenance in 2014/15 than in 2011/12, while local roads authorities spent 14% less. Although, the spend on roads maintenance varies significantly, there continues to be a backlog and deteriorating condition faced by all Scottish roads authorities. This increases personal travel costs, has the potential to reduce safety, environmental amenity and social cohesion. Furthermore, it adds to business costs, contributes to a reduced level of public service and negatively impacts sustainable economic growth on both a community and national level.

The percentage of trunk roads in an acceptable condition declined by 3% between 2011/12 and 2014/15. Most of this decline is associated with the condition of motorways. Transport Scotland attributes this to more resurfacing work, instead of more expensive reconstruction which would also improve the condition of the lower road layers. In 2014/15 Transport Scotland spent 38% less on structural maintenance than it believes is necessary to maintain a steady state of condition<sup>1</sup>. Furthermore, it has been reported that 89% of structures carrying the trunk road require intervention<sup>2</sup> and an estimated backlog in bridge maintenance of £957million (2017/18 figures)<sup>3</sup>.

The known<sup>4</sup> condition of local roads in an acceptable state has generally remained stable between 2011/12 and 2014/15<sup>1</sup>.

However, this steady state fluctuates across local roads authorities<sup>5</sup> and the Road Condition Indicator (RCI) did increase slightly in 2017-18<sup>6</sup>. In 2014/15 SCOTS reported that local roads authorities spent 13% less on planned and routine maintenance than what would have been necessary to maintain a steady state of condition<sup>1</sup>. Moreover, in 2017/18 the RAC estimated a £551million bridge maintenance backlog across Scottish local roads authorities<sup>3</sup>.

In some roads authorities, reductions in spend have resulted in a greater amount of surface treatments being purchased. Such treatments can be effective for less trafficked minor roads but when used extensively it can be a short-term measure that will improve RCI. This means that this approach can be to the detriment of the quality of roads and structures and their expected lifespan; as more expensive interventions are not being invested in to the

level that is required to maintain a steady state of condition in the foreseeable future, let alone address the backlog. The majority of local authorities aim to use the most appropriate treatment type for the road classification and condition. While local authority RAMPs can evidence improved decision-making processes, it is believed that some are more comprehensive and have greater levels of life cycle planning than others. However, recent budgets and available resources are contributory factors, it takes a lot of effort, time and commitment to fully develop and embed a RAMP.

An AA survey in January 2013 found that 45 per cent of local road users in Scotland considered road conditions to be poor or worse. This was the worst rate in the UK<sup>1</sup>. Although the trend is not known, it is expected that road users in Scotland continue to be increasingly dissatisfied with local roads maintenance. Transport Scotland carries out annual surveys to gauge trunk road users' levels of satisfaction. Following a period of decline, levels of satisfaction have risen in the most recent survey<sup>1</sup>.

While casualties of all severities across all modes continue to fall and are at an all-time low, it has been estimated that, poor and defective road condition have been a contributory factor in 0.7% fatal, 0.8% serious and 0.6% of slight road traffic accidents on Scottish roads between 2010-2014<sup>1</sup>. Moreover, a recent Napier University study<sup>7</sup> has concluded that Scottish cyclists are at risk of permanent nerve damage because of poor road surfaces.

Pedestrians and cyclists have likely been the greatest affected by a decline in the road condition. Prioritisation of available budgets has resulted in a reduction in ancillary asset maintenance. A recent UK wide study found that half of c.5,000 cyclists had suffered a pothole-related accident, with 1,516 injured as a result, 207 of those seriously. More than 10% of respondents said they missed work because of a pothole crash and 31% were put off cycling<sup>8</sup>. Furthermore, cycling pothole crash compensation claims to councils in England and Wales are 10 times higher than motoring claims because of the higher risk of personal injury.

Road users are also impacted by delays at roadworks, particularly difficult to manage when works are emergency as the public cannot be easily informed in these circumstances. On the trunk road network, the Performance Audit Group (PAG) issue hazard notices for a variety of reasons, including dangerous carriageway defects. Over the past ten years there has been an increase in the number of hazard notices issued<sup>9</sup>, indicating there may be a relationship between the deterioration of the trunk road condition and reactive maintenance needs.

*"Surveys of business attraction to Scotland include the quality of transport availability such as airport connections, but do not address the more detailed issues of maintenance of road surfaces or the value of amenity and cultural provision"*<sup>10</sup>. However, it is known, from a HITRANS survey, that 75% of Highlands and Islands businesses consider a robust transportation network is vital to ensuring supply of goods/services<sup>11</sup>. Additionally, businesses are directly impacted through reduced accessibility to them (when footways are unattractive to use directly outside their premises for example), as well as time and operating costs resulting from delays and vehicle damage. Furthermore, there are growing concerns that road condition may detract cycling tourists from Scottish areas<sup>12</sup>.

Recent spending decisions in roads maintenance have resulted in unprecedented pressures on the roads authorities. All roads authorities in Scotland have moved towards improved road maintenance efficiencies through better prioritisation in recent years. However, this has not directly correlated in an improved condition, as these changes are still embedding and realised benefits to date are only mitigating the reductions in spend.

Expenditure on pothole repairs, either permanent or temporary, is effectively 'lost,' as there is no improvement to the structure of the road and the road will eventually require replacement of the running surface. Furthermore, there remains a need for greater asset information and data management systems across all asset types (from roads, footways and ancillary features like fencing). Without a complete and up to date understanding of each asset, the recent positive impact of prioritisation and asset management techniques will diminish.

It is also worth noting that other public services like the NHS and emergency services have been affected by accidents and delays arising from reduced spending in roads (and associated assets) maintenance.

Roads are one of the highest value public assets. The value of local roads is now calculated on a similar basis to trunk roads, based on depreciated replacement cost, that is, the cost of replacing all roads to their current condition. In 2018, the Gross Replacement Value of the Scottish trunk road network is £23.5bn<sup>13</sup>. It is not known how this has trended over time or the exact figure for the Gross Replacement Value of the Scottish local road network. However, it is expected that the recent spending decisions on roads maintenance have contributed to a reduction in asset value on both trunk and local roads. Finally, for every £1 reduction in road maintenance, there is a £1.50 cost to the wider Scottish economy<sup>10</sup>.

### **Potential Impact of Continued Current Levels of Spend**

If spending on roads maintenance were to continue at current levels, without accounting for inflationary pressures, as well as more severe and frequent weather incidents, it is the view of CIHT that Scottish roads authorities will purchase less maintenance than what they have in recent years. The anticipated likely effects are as follows:

#### Road Users

- In addition to the effects on carriageways and the attendant accidents and disruption from roadworks, funds will continue to be diverted away from ancillary asset maintenance. Thus, safety risks will increase for cyclists, pedestrians and all road users arising from a deterioration in the quality of footways, cycleways, barriers and signage. This is likely to impact on the vision for transport in Scotland<sup>14</sup> and contribute further to the challenges Scotland faces as a society (social isolation and poverty, for example). The recent boost to Active Travel is welcomed by CIHT, however, the growing extent of cycleways needs to be properly maintained if they are to optimise their contribution to essential modal shift from car users. The same applies to footway maintenance if the crucial "last mile" of a walk connection to public transport is to be safe, reliable and attractive; and this includes lighting.
- The Scottish Government's commitment in the draft National Transport Strategy to Electric and Connected and Autonomous Vehicles will only be feasible if our road networks are properly surfaced and have well maintained carriageway markings.

#### Businesses

- There will be an increased risk of emergency incidents on all roads, responding to these would likely divert further resources from maintenance budgets/teams and increase pressure on the already under-resourced NHS. Incidents like the 9-day A83 closure at the Rest and Be Thankful in 2018, which resulted in a 60-mile diversion, could easily become common place.

- The quality of transport and accessibility plays a part in inward investment decisions and the importance of “place” and reliable transport links is critical to the achieving the national outcomes of an inclusive, sustainable economy. Linked to this is the adequacy and proper maintenance and visibility (free from vegetation) of brown tourist signage which facilitates visitors to this crucial sector of Scotland’s economy.

### Public Services

- Recent successes resulting from asset management approaches and collaboration could be diluted, as it is likely that investment in asset management and information systems will not be sustained due to more urgent needs.
- History shows that skilled labour will be lost to the authorities which is often imbued with “added value” due to accumulated local knowledge of a network and its recurring problems. This skills deficit was apparent after the downsizing and local authorities and is exacerbated by restricted funding constraints.

### The Economy

- The quality of Scotland’s roads will see an accelerated decline in condition. This deterioration will likely result in a further increase in temporary repairs and ultimately increase the longer-term asset management and maintenance costs. Meaning the opportunities for cost effective interventions, which are time dependant, are likely to be lost.
- There will be an increase in bridge closures and weight restrictions, with significant impacts to road users (resulting from likely lengthy diversions), businesses, society and the economy.
- Recent spending cuts have resulted in reduction of staff and loss of expertise in local roads authorities. Workloads for officers at all levels will continue to rise, meaning less time for any specialist work. Lost expertise will be difficult to regain in the future.
- The amenity value of many local communities and neighbourhoods will decline, with a variety of cumulative effects expected. A community free from litter and potholes gives a greater sense of security and belonging than a badly lit area with rutted pavements covered in debris.

### **Potential Mitigation of Reduced Road Spending**

Should spending on roads maintenance reduce further it is the view of CIHT that there is the need for roads authorities and government to manage the expectations of society. Funding and budgetary decisions should consider the priorities of the Road Asset Management Plan<sup>15</sup> (RAMP).

CIHT welcomed the funding certainty that is being put into the Strategic Road Network in England through the establishment of Highways England and the implementation of the Roads Investment Strategy. The same certainty should be considered for the other Strategic Road Networks across the United Kingdom (Scotland, Wales, and Northern Ireland) and would help further their ability to deliver efficiency savings<sup>16</sup>.

In 2014, CIHT responded to the Transport Resilience Review<sup>17</sup> with a view that transport resilience assessments should be made a statutory requirement and that the UK Government should establish a central (capital) fund that authorities could bid for, based on the outcomes of their resilience assessments.

CIHT is currently undertaking a review of the English local highway network and is considering issues associated with the funding, governance, and operation of the network.

The review to date has included a survey responded to by over 150 representatives of the highways and transportation sector<sup>18</sup>. Although the review only considers the English Local Network, it is likely that the following initial results (which are also supported in a recent Parliamentary Select Committee Report<sup>19</sup>) would be mirrored in the Scottish context:

- 9 out of 10 said funding for the local highway network should be ring fenced
- 7 out of 10 support total expenditure (totex)<sup>20</sup> funding
- 5 out of 10 said there should be some form of pay as you go funding
- 96% said that we should change the way Utilities pay for the impact of their works
- >8 out 10 said allow Roads Fund to be used for Local Highway Network (LHN)
- 95% - provide certainty of funding for 5 years or a longer period

Parking on footways is illegal and compromises the structural integrity of their sub-structures. Civil enforcement could be considered with revenues directly contributed to footway and cycleway maintenance. The RECC may already be aware of CIHT's response to the Transport Bill regarding footway parking – they have different design standards and this is why so many footways are damaged.

Further data gathering on the condition and quality (surface smoothness) of active travel facilities is recommended. A high quality surface is key to attracting the widest range of people to choose to walk and cycle for a purpose (rather than leisure).

It is believed that the pursuit for consistent benchmarking across all 33 roads authorities within Scotland should continue and requires further acceleration. There is consistent benchmarking across all 32 local authorities, through the APSE Performance Network and local roads authorities regularly meet to discuss and share best practice. However, comparison of financial data is difficult, most notably for unit cost benchmarking. This arises from different accounting practices across authorities and can render any comparison meaningless.

All roads authorities to take part in the NHT survey every 3 years to allow for consistent comparison and trend oversight, across Scotland and with the rest of the UK. Only nine Scottish local roads authorities took part in 2018<sup>21</sup>.

The continuation of SCOTS RAMP programme is also supported. Also, more investment in data management system to inform RAMP.

All authorities to publish RAMP and prepare annual options report for decision maker buy in and agreement, to protect funding allocations and necessary projects in certain areas. Also to enable change towards proactive maintenance approaches that address the structural integrity of roads and associated structures, rather than surface improvements. *Currently, only a third of councils are presenting options to elected members on what kind of road condition can be expected from different levels of spending<sup>1</sup>.*

Embracing innovation at a contractual level to drive change. For example, the use of drones for inspections would likely drive forward efficiencies and reduce safety risks associated with structural inspections (confined spaces/ working at height). Such innovations may support and allow for easier adoption of a risk-based approach to roads maintenance, as is required by the latest Code of Practice<sup>22</sup>.

### **Current Funding and Delivery Model in Scotland**

The geographic and demographic diversity of Scotland means that transport provision will always be a major challenge. We have the benefit of an extensive road network that reaches many parts, but this means that the unit ratios of population/areas served per mile

of road fluctuate hugely. Despite the challenges of improving and maintaining that total road network, the current model of funding and delivering roads maintenance does work but is clearly under strain. The split of responsibility between Transport Scotland and local authorities has prevailed for many years and has a fundamental logic of hierarchy that reflects the legislation and governance of devolved responsibility.

However, the CIHT welcomes the REC committee Call for Views which we believe truly reflects concerns within the profession and the general public. The increasing costs of road maintenance and growing knowledge within the profession should be called upon to find a more economic and efficient option.

The current system appears to serve the nation well, especially on trunk roads and motorways where the innovative operating contracts, under the watch of the Performance Audit Group (PAG) have built a positive reputation that has been acknowledged in reports by Audit Scotland. However, local authority roads have not had the same intensity of investment or focus leading to our view that the current funding and delivery of overall roads maintenance in Scotland achieves a sporadic pattern of economic and efficiency benefits. This is not surprising as Scotland needs to cater for differing geographical/topographical and client group needs with issues of scale and funding having most variety within councils.

CIHT believes that changes are likely to bring greater economic value and optimise efficiencies for the pan-Scotland situation but believe the issues begs some difficult questions, for example are all local roads authorities appropriately sized? We believe there have been some benefits accrued from the Roads Collaboration Programme, but these vary between authorities and may be too early to arrive at definitive view. We can see a need for local accountability to be firmly embedded in any collaborative arrangements and, while local authorities continue to “fire-fight” with interim minor repairs, there should be a realistic prospect of assuring the public of a more sustainable repairs regime in due course. Furthermore, Local authorities should be more transparent about how they allocate and protect road maintenance budget allocations.

Long – term fixed budgets at an appropriate level will allow roads authorities to have a managed decline on some roads knowing that a permanent repair can be firmly programmed for future years. In such a scenario, the public may be better willing to accept a deterioration knowing that a ‘proper’ repair is programmed. Furthermore, this approach to funding could lead to further efficiency in getting increased value from budgets. CIHT’s recent review of Highway Maintenance in England found good evidence of such benefits through prudential borrowing in Blackpool<sup>23</sup>, PFIs in Portsmouth<sup>24</sup> and Project Horizon in Surrey<sup>25</sup>.

Finally, an acceptance of the importance of Active Travel and a strategic cycle network could be aided by funding commitments from SG towards national and strategic connected cycle network.

Our final and crucial view is that the overall Scottish skills base for roads asset management is talented but reducing. The total asset value of Scottish roads deserves appropriate long-term funding to meet the functional and economic needs expected of it. This Call for Views is timely, welcomed and we recommend that the outcome takes detailed recognition of the depth of knowledge from SCOTS.

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<sup>1</sup> [https://www.audit-scotland.gov.uk/uploads/docs/report/2016/nr\\_160804\\_maintaining\\_roads.pdf](https://www.audit-scotland.gov.uk/uploads/docs/report/2016/nr_160804_maintaining_roads.pdf)

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<sup>2</sup> <https://www.scotsman.com/news-2-15012/transport/revealed-nine-in-ten-major-scottish-road-bridges-need-repairs-1-4833591>

<sup>3</sup> [https://www.racfoundation.org/wp-content/uploads/RAC\\_Foundation\\_Bridge\\_Maintenance\\_Scot\\_2017-18.pdf](https://www.racfoundation.org/wp-content/uploads/RAC_Foundation_Bridge_Maintenance_Scot_2017-18.pdf)

<sup>4</sup> WDM carry out the annual Scottish Road Maintenance Condition Survey, which includes 100% of all A class roads, 50% of B and C class roads and 10% of U class roads in one direction of travel. The direction of travel is alternated each year for A/B/C class roads.

<sup>5</sup> [https://www.highland.gov.uk/download/meetings/id/74003/item\\_20\\_-\\_scottish\\_road\\_maintenance\\_condition\\_survey\\_2017](https://www.highland.gov.uk/download/meetings/id/74003/item_20_-_scottish_road_maintenance_condition_survey_2017)

<sup>6</sup> <https://www.transport.gov.scot/media/44207/sct01193326941.pdf> Table 4.6b)

<sup>7</sup> <https://www.napier.ac.uk/research-and-innovation/research-search/outputs/cyclist-exposure-to-hand-arm-vibration-and-pavement-surface-improvement-in-the-city-of>

<sup>8</sup> <https://www.cyclinguk.org/press-release/156-local-authorities-spend-total-ps433-million-pothole-claims>

<sup>9</sup> [http://www.performanceauditgroup.co.uk/pub\\_arch.htm](http://www.performanceauditgroup.co.uk/pub_arch.htm) - annual reports

<sup>10</sup> <https://www.transport.gov.scot/media/29455/j235740.pdf>

<sup>11</sup> <https://www.transport.gov.scot/media/33629/value-of-society-economy-to-trm-final-report-feb-2017.pdf>

<sup>12</sup> <https://www.bbc.co.uk/news/uk-scotland-south-scotland-47089944>

<sup>13</sup> <https://www.gov.scot/publications/foi-19-00768/>

<sup>14</sup> <https://www.transport.gov.scot/media/45149/national-transport-strategy-draft-for-consultation-july-2019.pdf>

<sup>15</sup> Asset Management Planning is a long term approach to scheduling optimal maintenance interventions and eventual renewal of infrastructure.

<sup>16</sup> [https://www.ciht.org.uk/media/4379/autumn\\_statement\\_2016\\_-\\_representation\\_from\\_ciht\\_-\\_final.pdf](https://www.ciht.org.uk/media/4379/autumn_statement_2016_-_representation_from_ciht_-_final.pdf)

<sup>17</sup> <https://www.gov.uk/government/publications/transport-resilience-review-recommendations>

<sup>18</sup> <https://www.ciht.org.uk/news/ciht-improving-local-roads-an-update/>

<sup>19</sup> <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/1486.pdf>

<sup>20</sup> The recent totex concept aims to incentivise delivery at the lowest total cost, without preferring either operating expenditure (opex) or capital expenditure (capex) solutions, further reading can be seen at <https://www.arcadis.com/en/united-kingdom/our-perspectives/2015/successfully-implementing-totex-is-a-mission-possible/>

<sup>21</sup> [http://www.nhtnetwork.org/files/3615/4469/6049/2018\\_NHT\\_Survey\\_Annual\\_Report\\_.pdf](http://www.nhtnetwork.org/files/3615/4469/6049/2018_NHT_Survey_Annual_Report_.pdf)

<sup>22</sup> <http://www.ukroadsliasingroup.org/en/utilities/document-summary.cfm?docid=C7214A5B-66E1-4994-AA7FBAC360DC5CC7>

<sup>23</sup> <https://www.rsta-uk.org/blackpools-project-amber-facilitates-road-innovation-via-collaboration/>

<sup>24</sup> <https://www.colas.co.uk/case-studies/portsmouth-highways-management-pfi-contract/>

<sup>25</sup> <https://www.aggregate.com/news-and-resources/case-studies/project-horizon-surrey-county-council>