

# BRIDGEND COUNTY BOROUGH COUNCIL

## REPORT TO SUBJECT OVERVIEW AND SCRUTINY COMMITTEE 3

24 NOVEMBER 2021

### REPORT OF THE CORPORATE DIRECTOR – COMMUNITIES

#### INFRASTRUCTURE DELIVERY

#### 1. Purpose of report

- 1.1 The purpose of this report is to inform the Subject Overview and Scrutiny Committee 3 of Infrastructure Delivery, including roads and street lighting.

#### 2. Connection to corporate well-being objectives / other corporate priorities

- 2.1 This report assists in the achievement of the following corporate well-being objectives under the **Well-being of Future Generations (Wales) Act 2015**: -

- **Supporting a successful sustainable economy** – taking steps to make the county borough a great place to do business, for people to live, work, study and visit.
- **Helping people and communities to be healthier and more resilient** – taking steps to reduce or prevent people from becoming vulnerable or dependent on the Council and its services. Supporting individuals and communities to build resilience, and enable them to develop solutions to have active, healthy, and independent lives.
- **Smarter use of resources** – ensuring that all resources (financial, physical, ecological, human, and technological) are used as effectively and efficiently as possible and support the Council's economic and well-being objectives.

#### 3. Background

- 3.1 The adopted highway network for the County Borough of Bridgend consists of

- 880 km of carriageways,
- 888 km of footway
- 483 highway structures, including 101 road bridges,
- 19,271 streetlights
- 74 traffic signals (signalised junction and pedestrian crossings)

- 3.2 In 2016 the total value (gross replacement cost) of the highway asset was estimated at circa £ 2 Billion. The total annual depreciation of the asset has been estimated at £11m of which the carriageway is calculated as £2.23m.

- 3.3 Similar to other Local Authorities across Wales, the impact of ongoing austerity since 2010 has seen the level of investment required to maintain our road networks decreasing. This is because the Council has had to prioritise other areas of growing need for local services, including education and social care. Therefore, the amount of funding required to maintain our networks has decreased in real terms.

3.4 Recent intervention funding has benefitted the stability of the classified network condition. However, the consideration is that the unclassified network has deteriorated. This accounts for approximately 67% of the BCBC overall highway network.

#### 4. Current situation/proposal

4.1 The impact of years of austerity, and the competing Council priorities, has influenced the level of highway maintenance that can be achieved. The unintended consequence of budget prioritisation has resulted in a focus on maintaining the core road network of the borough that carry large volumes of vehicles, including heavy goods vehicles, buses, and commuter traffic. However, such volumes and weight of traffic also cause the greater rate of deterioration. This picture is no different to other Local Authorities in Wales who are also facing some very difficult budget situations. Although circa £11m of revenue/capital funding has been invested in the highway network in BCBC over the past three years. The result is effectively a steady state on the main roads. However, the situation on the unclassified network would be one of increased deterioration and a reliance on pothole repairs which maintain the safety of the road but do not fully address the underlying issue that may exist on the street.

4.2 At a basic level, interventions on the highway can commence with attendance in relation to potholes which is funded through the council's revenue funding. However, this is the costliest type of repair in terms of overall asset protection. It is more cost effective to invest in planned resurfacing of roads to prevent potholes forming in the first instance, rather than to repair potholes on a reactive basis. Repairing roads by the pothole is equivalent to £100-150 per square metre. Resurfacing a road costs around £24 per square metre.

4.3 Generally the Highways department receives just under 8,000 referrals per annum from both the public and members requesting repairs/actions to the asset, covering carriageways, streetlighting, footways, drainage etc. Over the last 5 years the Authority has undertaken on average 2,500 pothole repairs per annum, at a cost of approximately £300k.

4.4 The monitoring of the condition of our classified road network is a Key Performance Indicator (KPI) for the Council. This KPI is recorded by Welsh Government and is part of the Communities Directorate Business Plan objectives for Highways. It provides an indication on the performance of Bridgend County Borough Council against all other Welsh Highway Authorities. The latest KPI shows that Bridgend County Borough Council is currently better than the all-Wales average, in all road classification areas. This is shown in table A below.

Table A – Road Classification KPI with poor condition percentages

Road Classification	Percentage of BCBC roads that are in overall poor condition	All Wales Average of Percentage of roads that are in overall poor condition
A	3.7	3.9
B	3.3	4.5
C	7.3	14.0

- 4.5 Consequently the current council highways management processes are aimed at addressing the majority of the roads within the red range, in addition to addressing those in the amber range to prevent them from falling into the red classification. However, without sufficient funding to maintain the status quo, the number of roads transitioning from amber to red will increase and the decline unfortunately will occur at a greater rate than red roads can be repaired. This report will now detail the two main areas of our highway responsibility and intervention, that is firstly road repairs and secondly street lighting.

### **Prioritisation of Highway Repairs and Treatments**

- 4.6 In assessing the appropriate prioritisation for any intervention various factors are taken into consideration. This includes the lifecycle of the road itself, information from automated surveys on Surface Condition Assessment (SCANNER) and/or skid resistance Sideways-force Coefficient Routine Investigation Machine (SCRIM). This is combined with information collected by highway inspectors from safety inspections and stakeholder contact to provide a circumspect highway programme.
- 4.7 Subject to assessment and available funding interventions range from patching, surface dressing and thin surfacing, through to resurfacing and ultimately reconstruction if the road is at the end of its lifecycle. Each of these interventions has to be considered in relation to the individual circumstances, to gain best value for the limited funding available.
- 4.8 The majority of planned intervention seeks to extend the life of the road by sealing it from damage caused by water and UV radiation. This seeks to maintain a road within at least the amber band of categorisation. This could be in the form of a Micro Asphalt on residential and less trafficked roads. This restores surface texture, improves ride quality and prevents ingress of water into the lower road structures. Alternatively, the road surface can be treated by applying liquid bitumen onto the road surface to seal it and provide a binder for the stone chippings spread on top. This provides an enhanced skid resistance and also prevents ingress of water into the lower road structures. This is a low-cost, effective preventative treatment, termed surface dressing that is widely used across the UK and, by timely intervention, prolongs the life of a road and underlying structure. The operations are not as popular with residents as there is the need initially for loose material to be swept from the road, however the surface quickly settles down through the curing process and compaction due to moving traffic.
- 4.9 Where there is more damage to the surface of the road in some limited circumstances it may be prudent to apply an overlay on top of the existing surface with minimal or no patching and thereby can strengthen the road. This methodology can generally only be applied in rural areas where the level increase does not affect adjoining properties/land (i.e. where no existing kerbing is present). Where the road surface has deteriorated beyond the point where an overlay application could be applied but the underlying structure of the road is sound, a treatment involving the removal of the upper surface layers (Planed), and the reapplication of hot bituminous material to create a new more durable road surface can be applied.
- 4.10 Ultimately, where a road has reached the end of its lifecycle whereby the road surface and underlying layers have deteriorated to an advanced stage intervention would require deep excavation, and replacement down to the sub-base stone layer in

addition to the upper layers of structural foundation and running surface.

- 4.11 It is clear, that the highway asset requires ongoing investment to maintain connectivity for the communities of Bridgend to access employment, education and services for its citizens, visitors, workers and businesses. The highway network, subject to ongoing investment, will continue to provide a safe and effective transport system for all its users whether as pedestrian, cyclist, public transport user freight or private motor vehicle.
- 4.12 Historic low levels of funding have unfortunately had a detrimental effect on the condition of the highway network. It is recognised that this is not unique to Bridgend however and other Local Authorities in Wales have faced the same situation during the years of financial austerity. This is where competing demands, and the growth in population in some areas, have affected the levels of finance available to Local Authorities during their MTFS budget setting process. It is clear going forward that sustained funding is required if the network is to address the maintenance backlog especially on those streets away from the primary network.

### **Street Lighting and Maintenance**

- 4.13 The street lighting network within the Borough consists of 19,271 lighting units mounted either on steel or aluminium street lighting columns, with some mounted on buildings and wooden poles. These are supplied either from council managed power supply cabling (circa 300 miles) or third-party networks.
- 4.14 The provision of street lighting is not a statutory requirement but does provide benefits in terms of road safety and residential perceptions. Over the past four years the authority has invested in the conversion of its luminaries to LED technology that has provided a benefit in both energy consumption (carbon savings) and reliability. This has been funded through a repayable 8-year interest free loan which is repaid through energy savings accrued by the conversion to LED units. The installation phase will end this year with the overall replacement of 11,000 units which has provided an energy saving of around 3,000,000 KWh and a Carbon saving of around 699 tonnes, with the circa 8,000 units being previously replaced, and the remainder being addressed as and when they fail.
- 4.15 In terms of asset management, a programme of lighting column replacements is being progressed, with all 2,560 concrete columns having now been removed from the highway. This is complemented with ongoing replacement based on the existing budget of around 200 steel columns annually, that are in excess of their lifespan.
- 4.16 There are a number of mandatory street lighting assessments that need to be carried out on a 6-year cyclic basis, such as electrical testing. This would include testing of feeder pillars, columns and the cabling network. This is highlighting that existing cables that were installed more than 50 years ago (aluminium cored cable) are reaching the end of their life cycle with predominately more cable faults arising. This not only causes issues for residents in the loss of street lighting, but also the nature of the fault requires identification of the underground failure, excavation and in most instances a repair with a jointing procedure.
- 4.17 The future consideration would be for a planned replacement of sections of cabling that are subject to ongoing faults or identified as age expired. This is because the

cost and time to resolve ongoing individual repairs is not cost effective for the authority, as well as public perception of ongoing issues with their local street lighting network.

- 4.18 The current street lighting assets in the Borough, including street lights, bollards and sign lights amounting to 22,184 units are valued at circa £44 million. These are shown in table B below: -

Table B – Street Lighting Valuation Summary

<b>Street Lighting Valuation</b>		
<b>Valuation Cost</b>	<b>Valuation Cost Description</b>	<b>Cost</b>
Gross Replacement Cost (GRC)	Estimate of the current cost of replacing an asset using a standardised procedure	<b>£44 million</b>
Depreciated Replacement Cost (DRC)	Estimate of the current book value of the asset reflecting the fact that a proportion of the asset has been consumed / used up as result of use and ageing.	<b>£18 million</b>
Annualised Depreciation Cost (ADC)	The cost of an asset to a single year of the asset's expected lifetime	<b>£1.26 million</b>

- 4.19 From table B above, the estimated annualised depreciation of street lighting is £1.26 million. This represents the average amount by which the asset will depreciate in one year if there is no investment in renewal of the asset. In 2020/21, the total council revenue/capital investment in planned maintenance / renewal of the street lighting asset was £342,000. This equates to 27% of the estimated annual depreciation. The asset has benefited from the replacement LED programme over the past 5 years averaging circa £500,000 per year (repayable). The combined figures indicated that circa £842,000 has been invested in street lighting. Whilst it is acknowledged that there is still a funding gap with the estimated replacement cycle, highways officers are currently looking to further address this with a future planned bid to the capital programme for capital funding to be considered for Highways & Street Lighting in the forthcoming MTFS.
- 4.20 From this report various opportunities, investments and challenges have been highlighted, with a theme of the ongoing demands for asset maintenance. In response to this challenge, it is the intention of officers to develop a 5-year rolling capital programme bid that reflects the considerable investment that is now required to improve our highway infrastructure. This is not only because it is the largest asset the Council has in its ownership but also because of its importance to economic growth and wellbeing of our communities. A well-maintained road network is critical to linking people to employment, education and services as well as linking our businesses to the wider economic region and beyond along the M4 corridor.

## 5. Effect upon policy framework and procedure rules

5.1 There is no effect upon the policy framework and procedure rules.

## 6. Equality Act 2010 implications

6.1 An initial Equality Impact Assessment (EIA) screening has identified that there would be no negative impact on those with one or more of the protected characteristics, on socio-economic disadvantage or the use of the Welsh Language as a specific result of this report. It is therefore not necessary to carry out a full EIA.

## 7. Well-being of Future Generations (Wales) Act 2015 implications

7.1 The Well-being of Future Generations (Wales) Act 2015 Assessment Template has been completed and a summary of the implications from the assessment relating to the five ways of working is below:

**Long-term:** Effective Highways management ensures the long term maintenance of the asset as well as monitoring the day to day operation and safety of the network for planning for long term replacement, with interventions being appropriate for the stage in the lifecycle of the asset.

**Prevention:** Effective planning of highway asset management addresses risk on the highway network as effective maintenance ensures safety for the travelling public and availability of highways which may otherwise see an adverse impact on communities

**Integration:** The effective management of the highway network benefits all modes of highway use including safety of pedestrians as well as the effective management of traffic such as cyclists, bus and motor vehicles that provides benefit to the wellbeing and economy of the community.

**Collaboration:** Management of the highway can include improvement and working with others within active travel and regeneration has meant that the highway has evolved to include active travel and road safety measures that require inclusion in future inspection and maintenance regimes

**Involvement:** Apart from information on the lifecycle of the road itself, consideration is made of information collected by highway inspectors from safety inspections and stakeholder contact through the council's customer care system as well as elected members referrals.

## 8. Financial implications

8.1 The current **annual** capital allocations for the highways network currently included within the capital programme are as follows:

£340k highways structural works

£250k carriageway works

£400k street lighting / bridge infrastructure replacement

8.2 Any future additional highways capital allocations, to align a rolling programme of investment with identified capital need will be subject to Council approval for inclusion in the Capital Programme.

## **9. Recommendation**

9.1 It is recommended that the Subject Overview and Scrutiny Committee 3 notes the report.

**Janine Nightingale**  
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**24<sup>th</sup> November 2021**

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### **Background documents:**

None