

Dorset Council Highways Asset Management Policy and Strategy

1 Introduction

1.1 Dorset Council has developed a Highways asset management policy and strategy aligned to priorities set out in the Dorset Council Plan. The authority has committed to a Climate and Ecological Emergency Strategy, as well as other key priorities that include keeping people safe on our highway network, and promoting economic growth. Other priorities include promoting strong and healthy communities, housing and protecting our unique environment.

1.2 One of our objectives as a Highways Service is to reduce our carbon emissions linked to highway maintenance activities and transport. This will be achieved through promoting active travel options.

1.3 Investment is required if we are to deliver on supporting these key priorities. Through the development of our Highways Asset Management Plan we have completed detailed asset appraisals to include what assets we have, what condition they are in, and identified investment needs across different investment scenarios.

1.4 We have established that current levels of Department for Transport funding are lower than that required to hold current condition, across all asset groups. Details are summarised in this document, with detailed appraisals documented in the Highways Asset Management Plan.



2 Asset Management Policy Statement

2.1 Dorset Council is committed to an asset management approach and embedding this into the delivery of its Highways services in the design, construction, adoption, maintenance, management, administration and disposal of highway assets.

2.2 Our asset management approach will support Dorset Council priorities set out in the Plan, which incorporates 'staying safe and well', 'economic growth', protecting our 'unique environment', 'sustainable housing', and promoting 'strong healthy communities'. Whilst also addressing the authority's declared climate and ecological emergency.

2.3 Senior member buy in to our asset management approach from the Portfolio Cabinet Member for Highways, Transport and Environment, and Lead Member for Highways, is secured through the Highways and Transport Board, and further briefings and decisions made through the quarterly Highways Asset Risk and Programme (HARP) Board meetings.

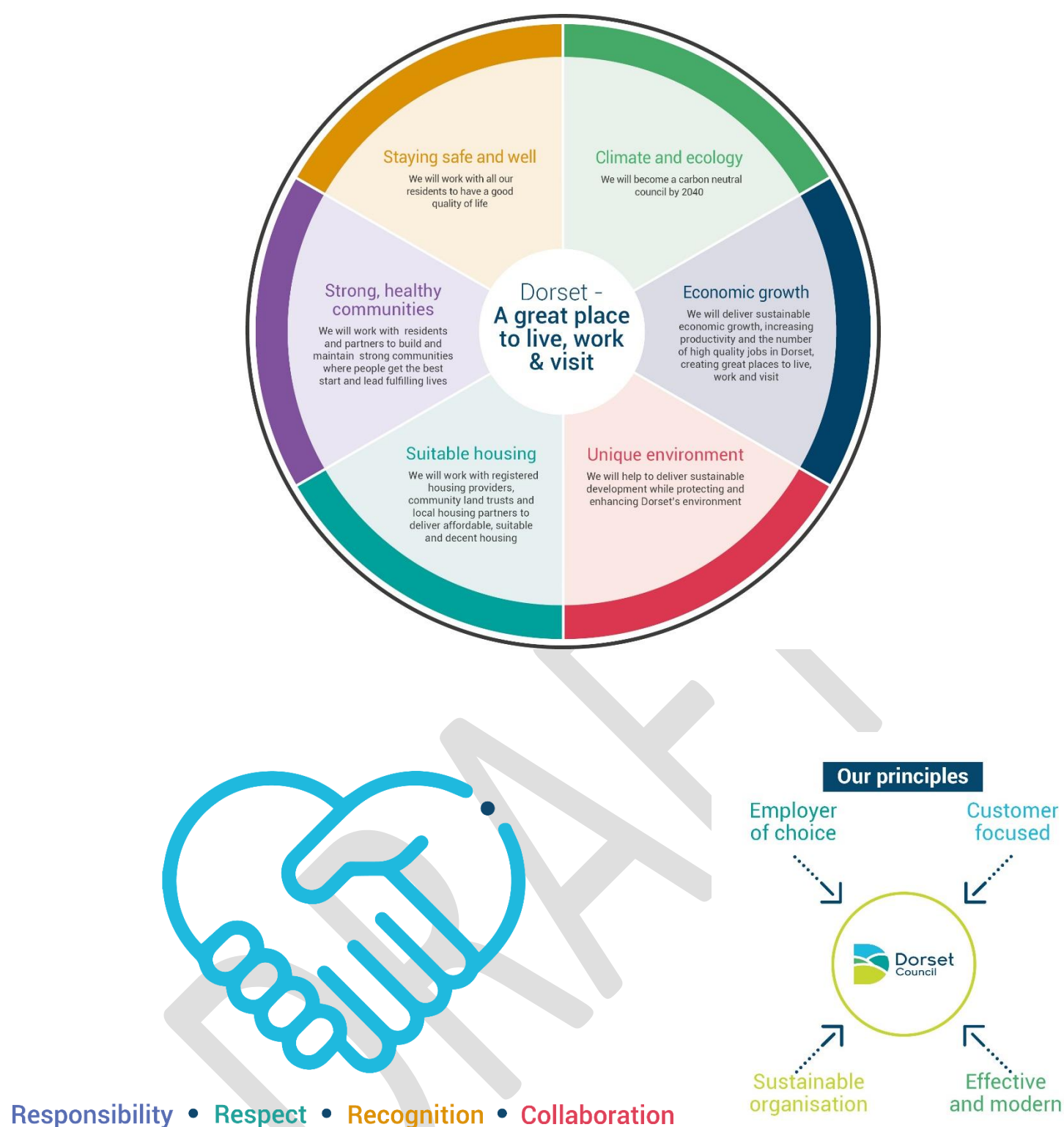
2.4 Maximum return on investment will be sought by providing and procuring services which enhance network resilience, minimise risk to highway users, and extend the serviceable life of highway assets. This mirrors the National Audit Office principles of value for money, economy, efficiency and effectiveness.

2.5 Dorset's asset management approach includes a risk-based methodology, as promoted in Well Managed Highway Infrastructure (WMHI) using data to inform decisions and will embrace innovations in technology and materials to reduce carbon emissions.

2.6 Dorset Highways will regularly monitor and review the effectiveness of the service through outcome based performance indicators, benchmarking, audits and feedback from key stakeholders.

3 Highways Asset Management Strategy

3.1 The Dorset Council Plan – Priorities



3.2 Dorset Highways plays a key role in supporting the Dorset Council Plan. All parts of our highway asset facilitate movement and safe access to communities, businesses, our environment, schools, hospitals, recreational areas.

Economic Growth

3.3 We aim to support a more productive and prosperous economy by improving the reliability, efficiency and connectivity of our transport networks. We provide strategic infrastructure improvements and maintenance focussed on our resilient network, to strengthen connections and support regeneration and growth.

3.4 Emphasis of our highway asset maintenance approach is in improving asset knowledge, using data to support decisions on key parts of the network, and understand investment requirements. We will implement a strategy of effecting early life interventions to keep our assets in good condition (which for carriageways is keeping the greens 'green').

3.5 Using a holistic approach to reduce congestion through efficient management and maintenance of the network, providing alternative sustainable travel options and investing in capacity improvements in key areas.

Unique environment

3.6 Our maintenance activities and materials will be sympathetic to the environment, and impact on ecological systems reduced.

3.7 We will achieve this through engagement with ecological experts and our Greenspace Team, to ensure we minimise the impacts our works have on natural habitats.

3.8 We will engage with heritage colleagues and external bodies to ensure our material choices enhance historic environments within our county.

Climate emergency

3.9 We will design, construct and maintain the transport network to reduce the potential impacts of extreme weather events, flooding and rising sea levels arising from climate change. We will achieve this through focus on our resilient network, and vulnerable assets/areas, using a network resilience toolkit to map resilience risks, which will inform programmes of works for investment.

3.10 We will reallocate road space to encourage alternative modes to the car by building and maintaining high quality walking, cycling and bus infrastructure, to encourage active travel.

3.11 We will reduce our carbon footprint through exploring low carbon options that include early preventative treatment strategies to prolong asset life, recycling of materials, use of low energy materials, and LED technology, whilst considering options for carbon offsetting.

Suitable Housing

3.12 We work across Dorset Council as 'One Team' to ensure that the planning of new housing, employment and other development gives opportunities to reduce travel and promotes opportunities to travel without reliance on the car. We will work with partners and stakeholders to contribute to the Local Plan and influence housing and other development proposals.

Strong healthy Communities

3.13 This starts by reducing the need to travel through sustainable development and providing sustainable travel links through existing urban areas. This will be achieved by encouraging homes, employment, health and education opportunities to be planned and delivered with measures that promote safe, active travel patterns.

3.14 Developing our approach to walking and cycling infrastructure including our hierarchy review, will be critical to supporting this 'priority'; developing links to communities via our footway, cycleway and rights of way networks.

Staying safe and well

3.15 Providing infrastructure to increase the number of people using active travel safely, such as walking and cycling, to support healthy lifestyles.

3.16 We aim to reduce all transport related casualties and improve safety for all users of our network by using engineering, education and enforcement solutions to create safer travelling environments.

3.17 We will manage risk by development of our risk-based approach to maintenance, including that of our Skid Policy, using data to support decisions, which will ensure we focus investment in high risk areas.

3.18 Residual risks will be documented in the Highways and, where appropriate, the corporate risk register, and be reviewed at Quarterly Highways Asset Risk and Programme Board meetings.

4 Capital Investment Strategy - Overview

4.1 The highways capital investment strategy has been established through the Highways and Transport Board, having considered investment scenarios across each of our highway asset groups.

Asset	Base budget without corporate top up	Minimum required budget	Proposed budget 2022/23 onwards (Combined DfT and corporate funding)*
Carriageway	£11.6million	£16.2million	£16.2million
Footway	£0.36million	£1.5million	£0.5million
Cycleway	£0	£n/k	£0.2million
Bridges	£1.359million	£3.7million	£2million
Drainage	£0.5million	£1million	£0.9million
Traffic control	£0	£0.6million	£0.2million
Roadmarkings/studs	£0.125million	£0.4million	£0.2million
Non-illuminated signs	£0.125million	£n/k	£0.125million
Bus stops and shelters	£0	£n/k	£0
Capitalised maintenance activities	£2.4million	-	£2.4million

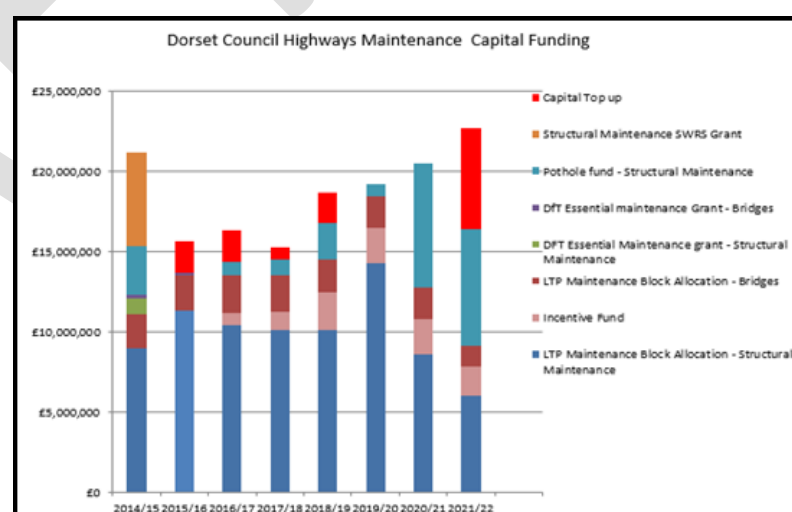
*It is proposed that the highways capital budget will be supported through £6.8million per year of corporate capital funding, awarded from 2022/23 – 2026/27, to support highway asset investment strategies, subject to Cabinet approval.

5 Funding

Highways maintenance funding is predominantly sourced from the Department for Transport in the form of Maintenance Block, Incentive Fund, and the Pothole Fund.

The 2021/22 DfT capital maintenance funding for highways was based on the Government's single year spending plans, which equated to a 20% reduction in funding. Budgets from 2022/23 are expected to be similar.

Dorset Council's Cabinet awarded £6.3million of corporate capital funding in support of highway maintenance activities in 2021/22.



6 Carriageways

6.1 Dorset Council has 3,795 kms of carriageway which are used every day by residents, businesses and visitors to the county, supporting the economic, social and environmental priorities within the county of Dorset.

6.2 The Council also has a legal duty under Section 41 of the Highways Act 1980 to maintain its public highway.

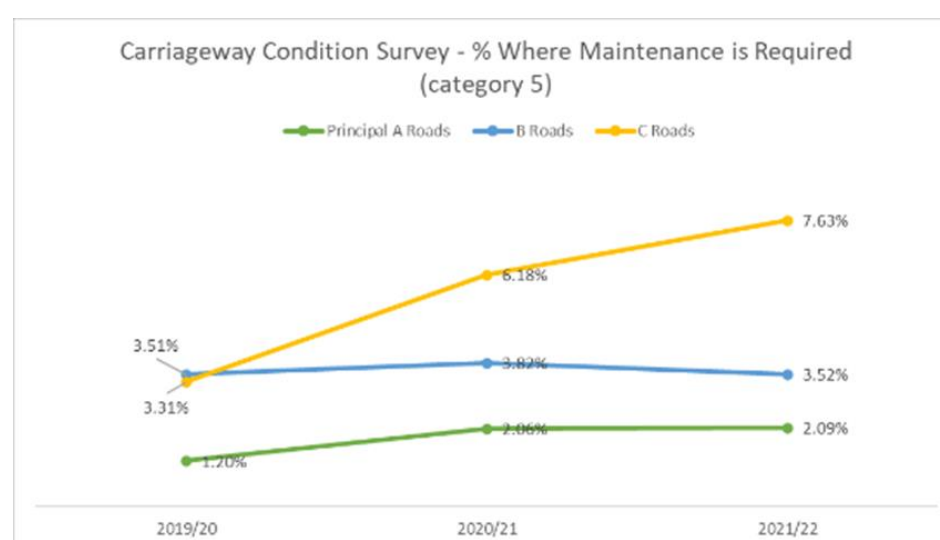
	Kms	Good condition	Fair condition	Poor condition
Principal	368.10	80.71%	17.21%	2.09%
Non-principal	1493.35	64.63%	28.79%	6.58%
Unclassified	1933.30	55.68%	31.51%	12.81%

6.3 Annual carriageway investment has been less than that required to hold current condition which can be evidenced in the trend in highway condition.

6.4 This shows carriageway condition deteriorating across all road classes (we have no trend data for unclassified roads at this time).

6.5 This is reflected in the increasing number of road defects (including potholes) which are recorded each year.

6.6 This has seen reactive road repairs increase from £1.5million in 2016, to £2.47million in 2021.



6.7 Investment scenarios

Scenario 1 £11.6million – Current funding with no capital top up – Managed decline.

This scenario would mean roads are deteriorating faster than we can repair them, and will see reactive defects and costs increasing year on year, meaning an approach of being predominantly reactive. This would pose a risk to the authority in performing its duty to maintain the highway.

This shows that the indicator 130-01 (A roads where maintenance should be planned – red banding) could increase from 2% in 2020, to 4% over a five year period. The indicator 130-02 for B and C roads could increase to 15.9% requiring maintenance (red category).

Scenario 2 £16.2million – Maintain steady state

Dorset Council can avoid further decline of its carriageway asset by investing an additional £4.8million of capital funding into carriageway maintenance.

Scenario 3 £21million – Clear backlog

Dorset Council could return all carriageways in good 'green' condition by investing £21million per year, over the next ten years.

6.8 Capital Investment strategy – Carriageways

£11.6million (71% of Department for Transport (DfT) capital funding)

Further recommendation of £5million of corporate capital funding (subject to Dorset Council Cabinet approval) to hold carriageway condition. This will include Community Response Teams that will carry out proactive maintenance on the network.

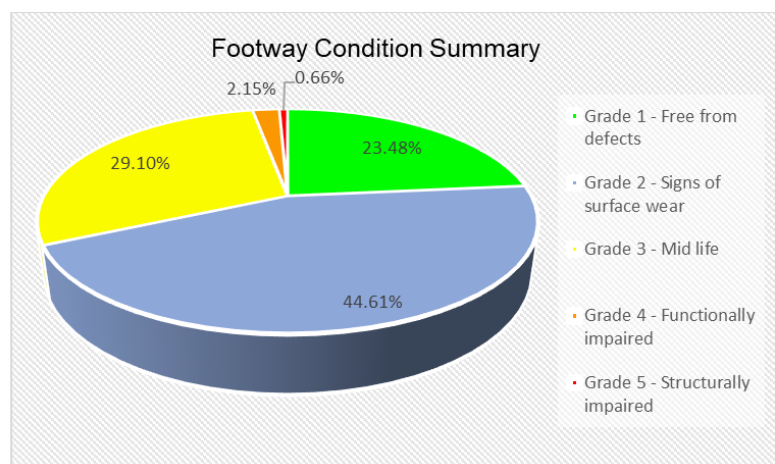
6.9 Carriageway Maintenance strategy

Early life intervention (surface treatment), combined with end of life replacement (reconstruction/resurfacing)

7 Footways

7.1 The footway asset facilitates the safe passage of pedestrians, and promotes healthier active life choices and travel options, which reduces both congestion on the road network, and pollution, whilst encouraging healthier travel choices to improve physical and mental wellbeing. Our footway network equates to 2,640 kms.

7.2 Footway condition summary



7.3 Whilst footway condition appears to be predominantly in good to fair condition, confidence in this survey data is low.

7.4 This is a representative sample of the footway network.

7.4 An alternative survey method for collecting footway condition data is planned for the spring / summer.

7.5 Investment scenarios

Scenario 1 Current investment with no capital top up £360,000 per year – This is significantly below the required investment to hold condition, and will most likely only fund a small programme of footway works.

This will see footway condition deteriorate and the number of reactive repairs increasing.

Scenario 2 Hold condition £1.5million investment per year

Lifecycle planning studies suggest we need to be investing £1.5million into footway maintenance to hold condition.

7.6 Footway Investment Strategy

£360,000 of 2.2% of Department for Transport (DfT) capital funding

Further recommendation of £140,000 of corporate capital funding (subject to Dorset Council Cabinet approval) to restore footway investment to levels experienced in 2019/20.

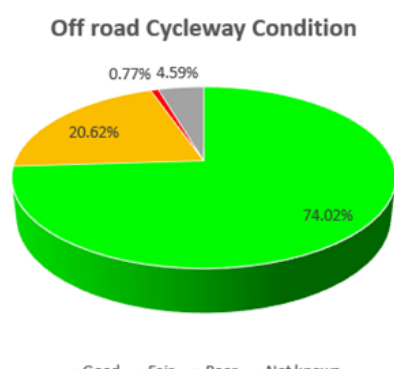
7.7 Footway Maintenance Strategy

Early life intervention (slurry seal treatment), combined with end of life replacement (reconstruction/resurfacing)

8 Cycleways

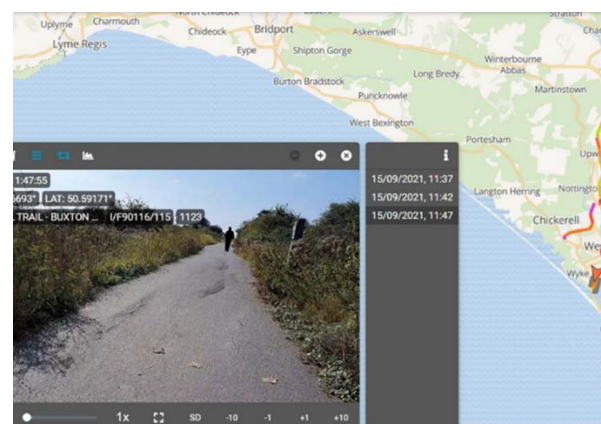
8.1 Cycleways form an important role in promoting more active travel choices, with the Government setting out their vision for walking and cycling, recognising the important role cycling has in improving health and reducing pollution and congestion.

8.2 We are currently undertaking a hierarchy review of our cycleway network to quantify our network inventory and establish key attributes, as well as cycleway condition.



8.3 An assessment carried out by Sustrans of our off-road cycleway network established this condition assessment, but we have low confidence in this assessment and the validity of the data.

8.4 We will be carrying out an alternative inventory/condition assessment in the spring / summer.



8.5 Cycleway Maintenance strategy

£0 0.0% of Department for Transport (DfT) capital funding

Recommendation of £200,000 of corporate capital funding (subject to Dorset Council Cabinet approval) to invest into cycleway maintenance.

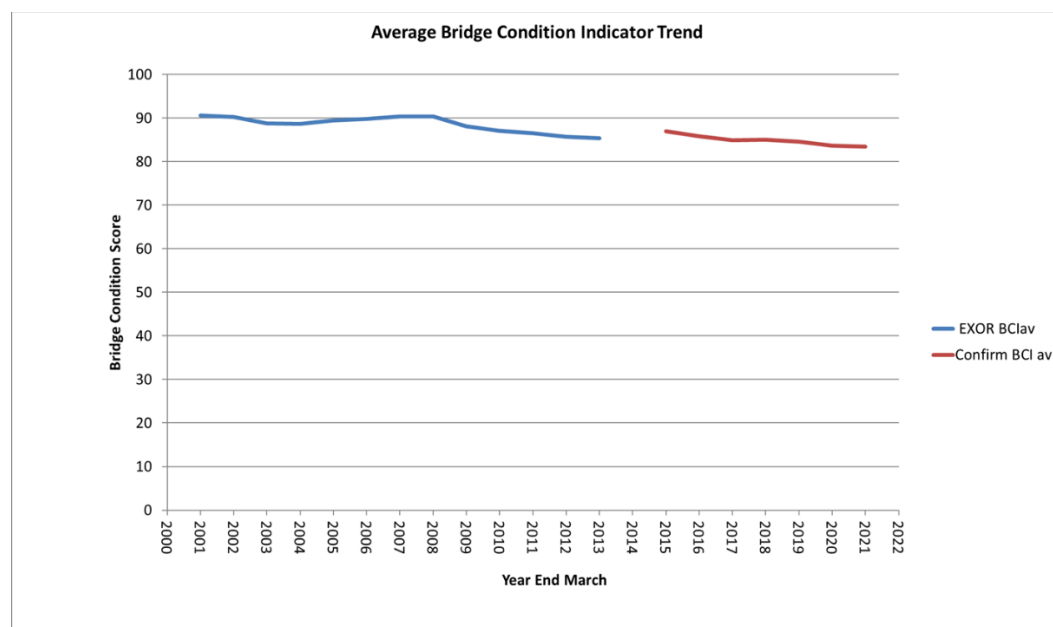
8.6 Cycleway Maintenance strategy

Focus on end of life replacement and structural patching

9 Bridges/Structures

9.1 Bridges and structures are essential to support the carriageway network. Without them, a continuous highway network would not exist. Around 10% of this stock is covered by a form of heritage protection, either listed building, or scheduled monument classification. The other major class of highway structures include culverts, underpasses retaining walls, cattle grids and fords.

9.2 We maintain 846 bridges, 93 footbridges, 288 culverts, 11 underpasses, 152 retaining walls and 11 cattle grids.



9.3 The bridge condition indicator shows a declining trend in bridge condition year on year, based on the current level of annual investment, which suggests that it is deteriorating more quickly than we are able to maintain our bridge stock, based on both historic and current capital investment.

9.4 Investment scenarios

Scenario 1 £1.359million– Current funding with no capital top up – Managed decline.

This level of investment will see our bridge stock condition continue to deteriorate, and impact the resilience of some of our bridges.

Scenario 2 £3.76million – Double annual investment to £3.8million

Doubling the investment to £3.8m per year would slow the deterioration and the fall from BCIav = 78.9 to 74.6 over twenty years.

Scenario 3 £10million per year – Increased investment

This increased investment would see improvement in bridge condition with scores increasing from 78.1 in 2021, to 81.5 in 2031.

The total maintenance backlog for our bridges is estimated to be £317million

9.5 Bridge Investment Strategy

£1.359million (8.32% of Department for Transport (DfT) capital funding)

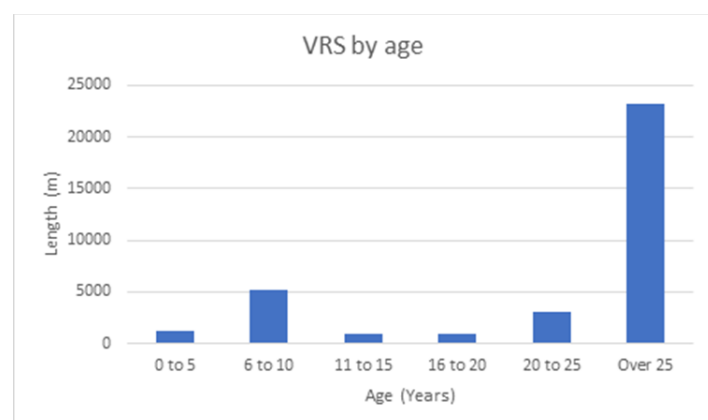
Further recommendation of £641,000 of corporate capital funding (subject to Dorset Council Cabinet approval) to restore bridge investment to levels experienced in 2019/20.

9.6 Bridge Maintenance Strategy

Schemes derived from analysis of bridge inspection data

10 Safety Fences or Vehicle Restraint Systems (VRS)

10.1 The purpose of safety fences is to redirect errant vehicles back on to the highway. They are located on the central reserves of dual carriageways to reduce the risk of collision with traffic travelling in the opposite direction and at the side of the road to protect drivers from hazards. We manage 45,533 metres of safety fencing in Dorset.



10.2 The figures indicate that 67% of the safety fencing is already over 15 years old. Therefore if no renewals take place in the next 10 years 78.5% of the Dorset's safety fence will have exceeded its expected service life by 2031. This risk is mitigated through safety inspections.

10.3 VRS Investment strategy

£0 (0% of Department for Transport (DfT) capital funding)

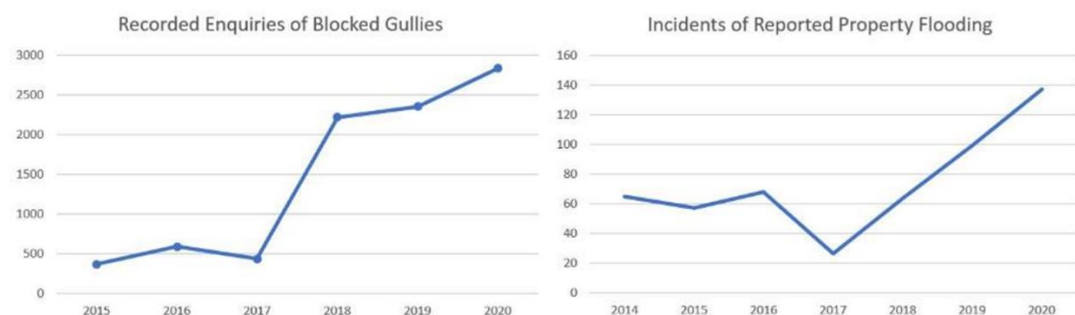
10.4 VRS Maintenance Strategy

This asset is managed entirely through inspection and replacing damaged / failed sections when identified.

11 Drainage

11.1 The role of the drainage asset is to capture water falling onto the road or footway surface, to then remove and convey the water to natural outfalls, including streams, or other watercourses. These assets are designed to 1. Prevent the accumulation of surface water on carriageways, footways and cycleways, which can freeze in the winter months, 2. To avoid the erosion of side slopes/verges and 3. Reduce future maintenance liability by minimising water damage to the highway structure.

11.2 Public satisfaction associated with Dorset Council’s management of the drainage asset is below the national average and reducing each year.



We have seen an increased frequency of significant storm events which can be linked to property flooding and blocked gullies.

11.3 Drainage Investment Strategy Scenarios

Revenue - A significant proportion of the maintenance of the drainage asset relates to revenue funded, cyclic and reactive maintenance activity. This would require the following additional revenue investment:

- Reinstate proactive gully emptying on the highest risk non-resilient network – annual cleansing £200K (revenue) funding per year + purchase of a gully emptier £185K.
- Reinstate cyclical jetting of pipe work, cleansing of manholes/catchpits £548,600 (revenue)
- Cyclic side verging programme on a quarter of the rural network each year £100,000 (revenue)

Capital –Current funding with no capital top up £500,000 (3.12% of Department for Transport (DfT) capital funding)

This investment will address a proportion of the minor local ‘dig down’ schemes and resilient risk sites where highway and / or property flooding have been identified.

11.4 Drainage Investment Strategy

Revenue

Investing in delivering annual proactive gully maintenance on the resilient road network only, with further reactive maintenance on both the resilient and non-resilient networks, at a cost of approximately £560,000 per year.

Capital

£500,000 (3.12% of the DfT highways capital funding)

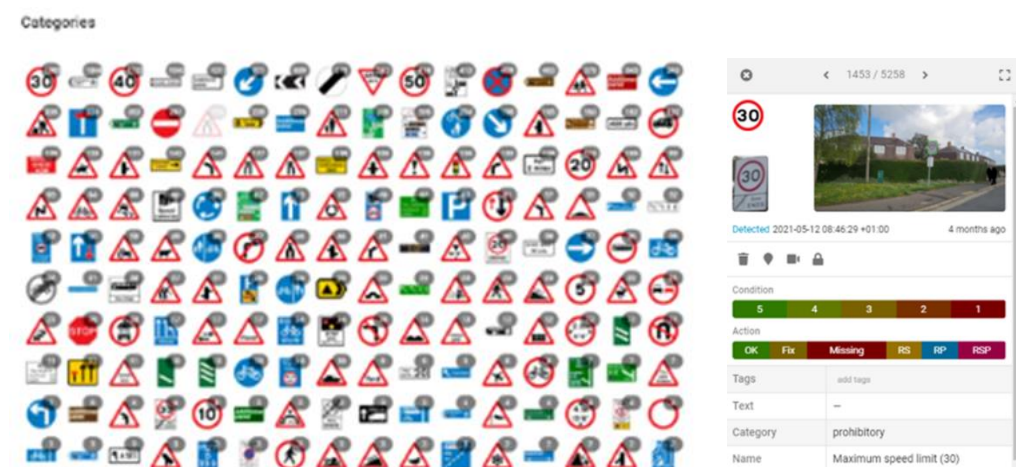
Further recommendation of £400,000 of corporate capital funding (subject to Dorset Council Cabinet approval) to target these highest ranking resilient risk sites.

11.5 Drainage Maintenance Strategy

Schemes are identified through public enquiries, safety inspections or arising from scheduled gully maintenance activity. These are recorded in a resilience risk appraisal system called HIRAM. Sites are prioritised through an overall risk score

12 Non illuminated Highways Signs

12.1 The non-illuminated sign assets deliver on key Service priorities of keeping motorists safe and reducing the risk of collisions through warning and informing, and regulating speeds of motorists, therefore reducing the risk of collisions, and the number of people killed or seriously injured on Dorset’s roads. These signs also provide directional information to motorists, which range from large reflective direction signs on our strategic networks, down to small wooden fingerposts in our rural locations.



12.2 We are currently engaged in a project to use Road AI technology to verify our sign inventory and identify condition.

12.3 This data will be used to inform future strategy and asset replacement programmes

12.4 Non illuminated Sign Investment Strategy

£125,000 (1% of Department for Transport (DfT) capital funding)

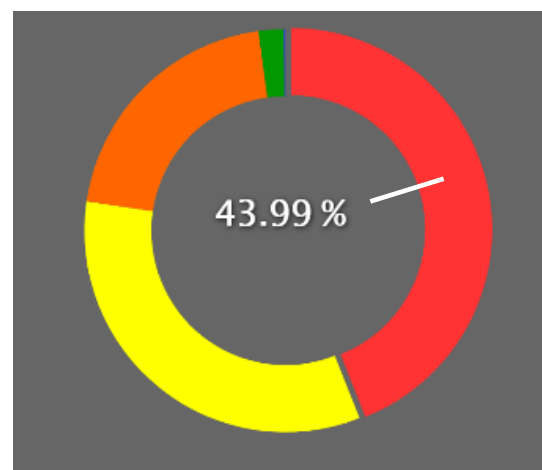
12.5 Non illuminated Sign Maintenance Strategy

Signs are currently managed through safety inspection, with the focus of replacement on warning and regulatory signs.

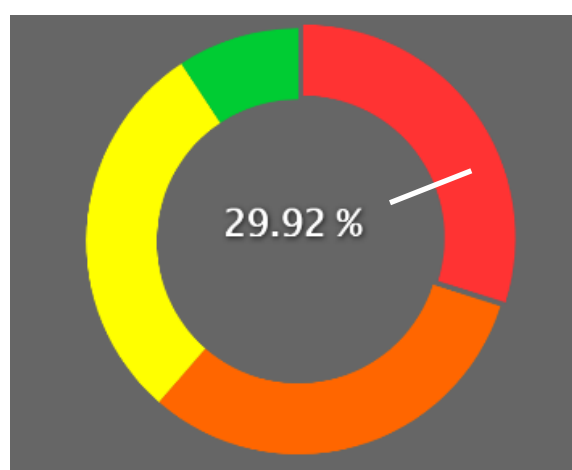
13 Road Markings and Studs

13.1 The road marking and road stud assets are to enforce, inform and direct highway users, to improve road safety and provide information. They are therefore an essential safety feature on the highway which will manage driver behaviour, especially at night and in foggy conditions.

13.2 Road marking condition

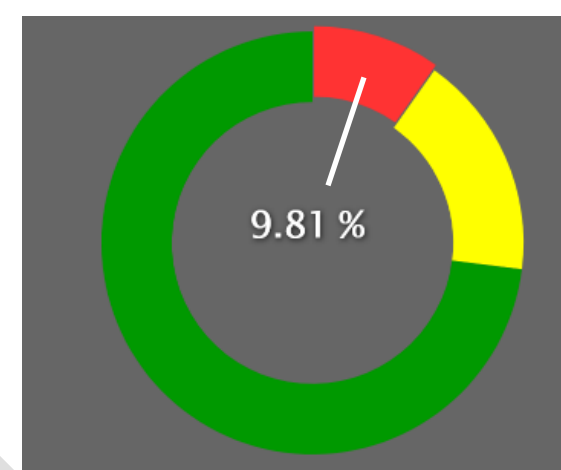


Roadmarkings A Roads reflectivity –
43.99% in the least reflective banding



Roadmarkings A Roads Visibility
29.92% in the least visible banding

Road stud condition



Road stud retroreflectivity A Roads
9.81% of road studs with least reflectivity

The condition data suggests we need to invest more to improve the condition of the roadmarking asset.

13.3 Investment scenarios – Road markings

Scenario 1 £125,000 per year – Current funding with no capital top up – Managed decline. No improvement in the worst condition roadmarkings

Scenario 2 £200,000 per year – This investment will remove the 0 – 10% worst condition (part of the reds)

Scenario 3 £450,000 per year – This would remove all of the 0-25% defective category (all of the reds)

13.4 Road Markings and Studs Capital Investment strategy – Carriageways

£125,000 (1% of Department for Transport (DfT) capital funding)

Further recommendation of £200,000 of corporate capital funding (subject to Dorset Council Cabinet approval) to tackle the worst of the 'red' (worst) category

13.5 Road Markings and Studs Maintenance strategy

We will adopt a 'worst first' approach to repainting road markings based on reflectivity and visibility data.

14 Bus Stops and Shelters

14.1 Bus stops and shelters support an accessible bus service across the county. The vast majority of Dorset's bus stops are physically identifiable with shelters and bus timetables.

14.2 A project is being undertaken to establish reliable inventory and condition data associated with this asset, which will be used to develop future maintenance and investment strategies.



14.3 Bus Stop and Shelters Investment Strategy

£0 (0% of Department for Transport (DfT) capital funding)

14.4 Bus Stops and Shelters Maintenance Strategy

Reactive - Repairs following reports of vandalism, damage to assets

Shelters are routinely cleaned. Defects are reported where they are identified.

Replace when no longer serviceable – though no current funded replacement programme

There are sometimes 106 Developer contributions (plus other funding sources) to replace / construct bus stop / shelter assets

15 Traffic Control and Intelligent Transport Systems (ITS)

15.1 Traffic Control and Intelligent Transport Systems (ITS) are the electronically controlled traffic management assets across Dorset's highway network. This group includes items such as traffic signals, pedestrian crossings, weather stations, static and towable electronic message signs.

15.2 This asset group consists of :

93 Signal Junctions, 59 School Crossing flashing lights, 59 Puffin crossings, 56 Pelican crossings, 44 Zebra crossing and 23 Toucan crossings. It also consists of 67 Vehicle Activated Signs, 64 Car Park Signs, 31 ANPR Cameras, 21 Variable Message Signs, 12 Weather Stations and 4 Mobile Variable Message Signs.

15.3 Traffic Control and (ITS) Investment Scenarios

Scenario 1 £0 per year (0% of DfT Capital Funding) in asset replacement – Current funding with no capital top up – Managed decline

This scenario will result in the deterioration of asset condition from a current score of 65.5%, to an estimated 4.29% by 2036.

Scenario 2 £150K per year

This would equate to deterioration of asset condition from a current score of 65.5%, to 11.11% by 2036

Scenario 3 £600K per year

The projected deterioration of asset condition from a current score of 65.5%, to approximately 30% in 2036, depending on the rate of degradation.

Scenario 4 £1.434million per year is required to hold condition over a 15 year period, based on 50% rate of degradation.

15.4 Traffic Control and (ITS) Investment Strategy

£0 (0% of Department for Transport (DfT) capital funding)

Recommendation of £200,000 of corporate capital funding (subject to Dorset Council Cabinet approval) to tackle the worst category units where technology has become obsolete.

15.5 Traffic Control and (ITS) Investment Strategy

Management of this of this asset is through routine inspections by a third-party contractor.

Some crossings are upgraded through LTP funds.

16 Street Lighting

16.1 Carriageways and footways in urban and sub-urban areas of Dorset are usually lit to assist users of the highway after dark. The highway street lighting asset in Dorset is externalised and managed through a Private Finance Initiative (PFI) contract with SSE(C&R).

16.2 The street lighting asset lists some 46,000 individual elements, which includes around 4,600 illuminated traffic signs and bollards.

16.3 Almost all structural elements in the asset have been renewed and guaranteed until 2032 +5 years; the ongoing maintenance, testing and inspection of the service is carried out by the service provider in accordance with all industry best practice, guidance and statutory requirement.



16.4 Street Lighting Maintenance Strategy

Management of the asset wholly rests with the service provider, who is responsible for all risks however they might arise.

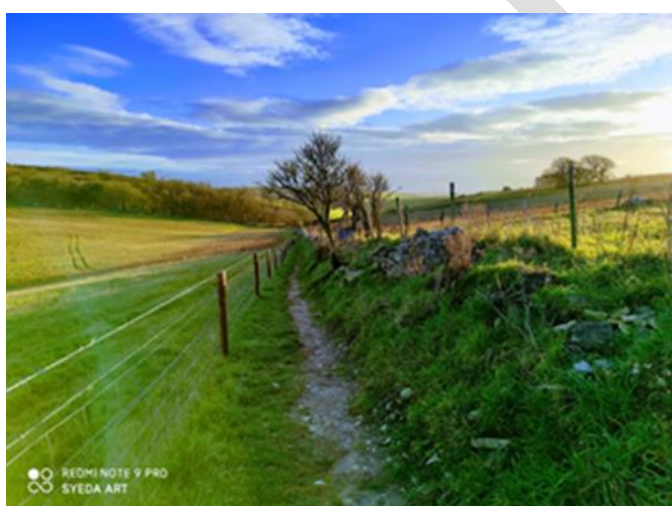
Inspection, Testing and all necessary maintenance is carried out by SSE(C&R) until the PFI concludes in 2032.

17 Public Rights of Way

17.1 The rights of way network is the best way for the public to access Dorset's countryside and is seen as the backbone of our tourism-based rural economy.

17.2 The physical asset i.e. the surface of these public rights of way, does not belong to Dorset Council, unless it is on Council land. It is vested in the authority to maintain access and the public have a right to pass and re-pass. The Council has a statutory duty to protect the right of the public to use the public rights of way network, for instance, by keeping them in a safe and accessible condition.

17.3 Dorset Council has a statutory duty to ensure that access furniture such as gates and stiles are maintained in safe and accessible condition. This includes liaison with landowners and enforcement where required to ensure these assets are in a safe condition allowing the public to pass and re-pass unhindered.



17.4 We are developing our strategic approach to management of rights of way assets, primarily focussing on bridges to improve asset knowledge and develop investment scenarios

Photo credit- Tara Hansford

17.5 Public Rights of Way Investment Strategy

£160K is invested in rights of way bridges which is taken from the Bridge budget.

17.6 Public Rights of Way Maintenance Strategy

Reactive - responding to enquiries / reports received by the public or the Rangers

18 Capitalisation

18.1 We are committed to capitalising some maintenance activities to ensure we fulfil our statutory duty to maintain the highway.

18.2 This includes a 14.7% allocation of DfT capital funds as follows:

£2,200,000 - Reactive carriageway repairs

£ 200,000 - Drainage grip cutting

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