



# HIGHWAY ASSET MANAGEMENT PLAN -2018

**Carmarthenshire County  
Council**

Environment Directorate,  
Highways and Transport  
Division

## Cabinet member for Highways

As the Cabinet Member for Highways I am pleased to see the planned approach being further developed in managing our highway network.

We are all aware of the significant financial pressures on the public sector and this makes it all the more important that we manage our resources to achieve the important outcomes we need from our road system.

Residents, businesses and visitors to Carmarthenshire all rely on the access our highway network provides and it is difficult to identify many aspects of daily life in fact where good transport links have not played an important supporting role.

Looking to the future the good management of our highway network will be essential to facilitate our ambitions, regeneration aims and to encourage walking, cycling and the use of our passenger transport network.

As budgets tighten it becomes ever more important that we focus the resources we have available to maximum effect. Against this background, the Highway Asset Management Plan will be a key tool in channelling our resources towards the areas where investment is most urgently needed.

It is inevitable that difficult decisions will have to be made regarding how our funds are invested and this plan will form a key framework in guiding those decisions.



Cllr. Hazel Evans – Executive board member for Environment

## Director of Environment

Welcome to Carmarthenshire County Council's Highway Asset Management Plan (HAMP). The highway network within Carmarthenshire is the second largest in Wales with over 3,500 Km of roads to be managed and maintained against a backdrop of ever increasing traffic, varied weather conditions, and a high public expectation.

The transport network, and particularly our roads, play an important role in supporting many of the services provided by the County Council and good management of the highway network is key to how well we function as a county.

The roads system within Carmarthenshire supports not just our aspirations as a county but also the wider region and will be an important component in delivering the Swansea Bay City Region Strategy.

The Highways Asset Management Plan (HAMP) provides the framework and route map towards the effective management of our highway network. National guidance and increasing financial pressures move us towards the risk based approach adopted within this plan which will help ensure that we invest our funding where it is most needed and to best effect.

The HAMP will be subject to annual review and performance reporting through an Annual Statement and Options Report which will allow us to monitor progress and make informed investment decisions.



Ruth Mullen – Director of Environment

## Contents.

Executive Summary .....	4
<b>PART 1</b> .....	<b>5</b>
<b>1.1 An introduction to our Highway Asset Management Plan (HAMP)</b> .....	<b>5</b>
Part 1 – The Policy and Strategy .....	6
Part 2 – The Highway Asset Management Framework (HAMF) .....	6
Part 3 – The HAMP Annual Statement and Options Report (ASOR) .....	6
Part 4 – The Highway Maintenance Manual (HMM).....	6
<b>1.2 Highway Asset Management – A National and Regional Context</b> .....	<b>7</b>
Well-managed Highway Infrastructure (WMHI): A Code of Practice .....	7
<b>1.3 National Policy</b> .....	<b>8</b>
Well-being of Future Generations (Wales) Act 2015.....	8
Active Travel (Wales) Act 2013.....	10
Integrated Network Map (INM).....	10
<b>1.4 Wales Transport Strategy</b> .....	<b>11</b>
<b>1.5 Joint Transport Plan for South West Wales (2015–20)</b> .....	<b>12</b>
<b>1.6 Highways Context in Carmarthenshire</b> .....	<b>13</b>
Moving Forward in Carmarthenshire: The Council’s New Corporate Strategy 2018-2023.....	15
Carmarthenshire Well-being Plan (2018-2023) .....	15
<b>1.7 HAMP Policy</b> .....	<b>16</b>
Policy Statement .....	16
Key objectives:.....	16
<b>1.8 Delivery of the HAMP key objectives</b> .....	<b>17</b>
Key objective relationships .....	19
<b>1.9 Scope of our Policy</b> .....	<b>20</b>

**PART 2** ..... 21

**2.1 Highway Asset Management Framework** ..... 21

    2.2 Introduction to Carmarthenshire’s Framework .....21

    2.3 Information and Data Management Strategy .....23

    2.4 Communications Strategy .....24

    2.5 Performance Management Strategy .....25

    2.6 Risk Management Strategy .....26

    2.7 Network Hierarchy .....29

    2.8 Lifecycle Planning .....31

    2.9 Cycling Strategy .....33

    2.10 Parking Strategy .....33

    2.11 Service standards .....33

    2.12 Road Safety Strategy .....34

    2.13 Competency Framework .....35

**PART 3** ..... 37

**3.1 The HAMP Annual Statement and Options Report (ASOR)** ..... 37

    Template Carriageway Annual Status and Options Report .....38

    Carriageway Investment Options .....40

    Carriageway Asset Recommendation .....42

**Part 4** ..... 43

**4.1 Highway Maintenance Manual (HMM)** ..... 43



## Executive Summary

This Highway Asset Management Plan (HAMP) is designed to comply with guidance and reflect best practice in the management of what is often referred to as a local authority's most valuable asset, its highway network.

Whilst the highway network can be ascribed a monetary value it plays a far more fundamental role in the social, economic and environmental well-being of the county. It connects communities, underpins the economy and enables people to enjoy leisure pursuits, access learning opportunities, commute to and from work and much more. Many of these high level objectives are encompassed within national statute and policy, and guide regional and county aspirations as set out in the Joint Transport Plan for South West Wales.

As a Highway Authority how we manage this key asset is of vital importance. In common with Highway Authorities across the country we face significant financial pressures and against a backdrop of reducing budgets there is an increasing need to ensure that the investments we make in our highway network are targeted to achieve greatest benefit.

This HAMP sets out how, in line with national codes of practice, we are adopting a risk based approach to target our resources to areas where they are most needed and where our investment will derive greatest value. This will mean that difficult decisions will have to be made. This HAMP sets out the overarching policies and methodology to ensure that those decisions are evidence led and based on an equitable and objective analysis aimed at reducing the authority's exposure to risk and achieving best value for the long term integrity of the highway asset.

Part 1 of the HAMP explains the supporting role of the highway network in the wider policy context. At the national level, this includes key legislation such as the Future Generations Act, at regional level it particularly includes the Swansea Bay City Region and at county levels the recent Corporate Strategy 2018- 2023.

Part 2 sets out the highway network policies which are in place or being developed and our objectives adopted in managing the highway network.

Part 3 of the HAMP provides an understanding of the components of the asset, their condition and performance, and how investment options impact on the lifecycle of the asset. This part of the HAMP is structured to provide an annual reporting framework.

Part 4 will sit as a portfolio of specific manuals, some of which are in place and some of which will be redrafted to reflect how we manage elements of the asset in line with the risk based approach. This will include, for example, our Highway Safety Policy, SCRIM (skid risk management) policy and maintenance intervention levels.

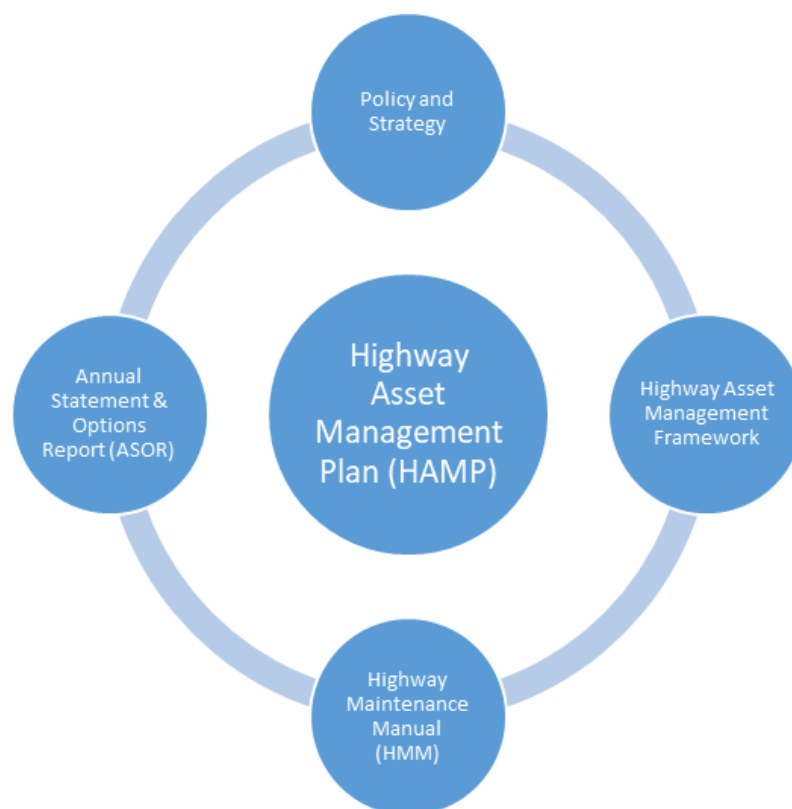
# PART 1

## 1.1 An introduction to our Highway Asset Management Plan (HAMP)

This HAMP has been developed to guide the management of all highway infrastructure assets under the control of Carmarthenshire County Council as defined by the highways register. The key assets included in this plan are carriageways (roads), footways, street lighting, bridges, other structures, drainage and cycle-ways. This plan will update existing policies and plans for highway infrastructure management and set out the authorities' means of compliance and response through a risk based approach in line with *Well-Managed Highway Infrastructure – A Code of Practice* (see 1.3).

The HAMP sets out the Council's strategy for managing its highway infrastructure assets and recognises the importance of its highway infrastructure in contributing to corporate, regional and local objectives.

The HAMP has four key components and aims to provide the flexibility to accommodate changes in resources, demands and priorities. There are four main components to the HAMP:



## Part 1 – The Policy and Strategy

The policy sets out Carmarthenshire’s approach to highway infrastructure asset management. The asset management strategy sets out the key objectives for the highway asset and how they will be met, including statutory obligations, stakeholder needs and the overall performance of highway infrastructure within the context of any constraints such as funding.

## Part 2 – The Highway Asset Management Framework (HAMF)

The framework sets out the strategies and processes necessary to develop, document, implement and continually improve asset management. The strategies within the framework are developed with due regard to the regional, corporate and local strategies.

## Part 3 – The HAMP Annual Statement and Options Report (ASOR)

This is a commitment to provide an annual report setting out our progress over the previous 12 months and our plans for the forthcoming 12 months. It will assist in informing any decisions around future highway maintenance spending and priorities.

## Part 4 – The Highway Maintenance Manual (HMM)

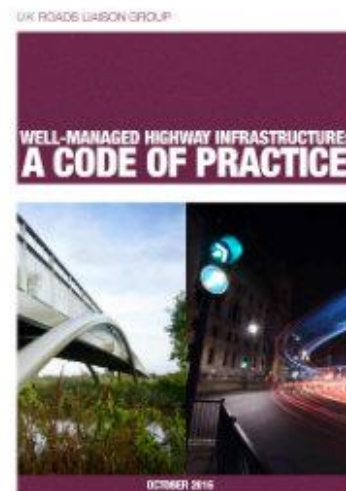
This will be developed to set out the way we will manage and plan the operational maintenance of our highway infrastructure assets. The maintenance manual will be developed over a period of time and will set out technical processes and procedures for day to day delivery of the highway maintenance service. As we adapt to changing demands, resources and technology and continuously implement best asset management practice, aspects of the plan will be updated. We will work closely with neighbours and other local authorities in a collaborative manner and with engagement through the County Surveyors Society Wales (CSSW) asset management project.

The HAMP underpins and improves the management, prioritisation and service levels for highway maintenance and infrastructure investment. When implementing the HAMP, we will work to the Council’s set of core values when delivering our policy objectives.

## 1.2 Highway Asset Management – A National and Regional Context

### Well-managed Highway Infrastructure (WMHI): A Code of Practice

This document is the first edition and it replaces Well-maintained Highways, Management of Highway Structures and Well-lit Highways. The code is intended to apply throughout the United Kingdom and its production has been overseen by the UK Roads Liaison Group (UKRLG<sup>1</sup>) and its Road, Bridges and Lighting Boards. The code is designed to promote the adoption of an integrated asset management approach to highway infrastructure based on the establishment of local levels of service through risk-based assessment. A further consideration in the development of this HAMP is the Well-being of Future Generations (Wales) Act 2015.



We are currently reviewing our existing management plans, policies and practice in line with the recommendations in the Code of Practice (CoP) and are fully engaged with the collaborative CSS (Wales) asset management project.

All 36 recommendations in the CoP have been considered and evidence of our implementation, response or development plans can be found in Part 4 – Highway Maintenance Manual. There is an expectation that local authorities across England and Wales will update practices and adopt the recommendations of the new code by October 2018. This plan is critical in setting out our plans for compliance by this deadline and proposals going forward.

By implementing this HAMP to manage our highway infrastructure assets efficiently and effectively we will also be contributing to delivering Carmarthenshire’s ambition to be the cycling hub of Wales.



<sup>1</sup> The UK Roads Liaison Group includes representation from Welsh Government, Scottish Government, Department for Transport and local authorities.



### 1.3 National Policy

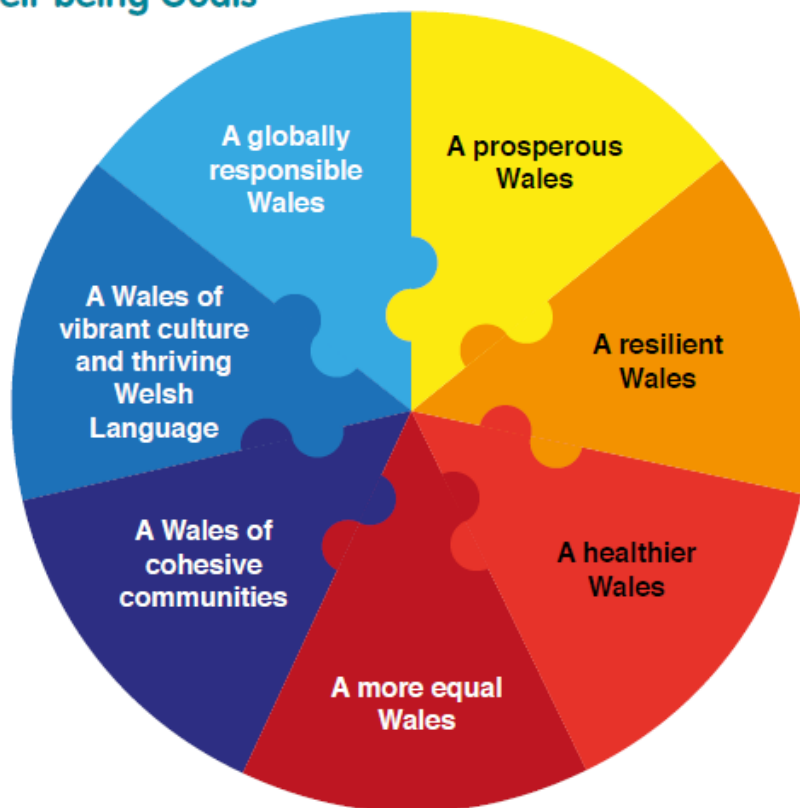
#### Well-being of Future Generations (Wales) Act 2015

Aimed at improving the social, economic, environmental and cultural well-being of Wales, this Act will influence most aspects of our work. The general purpose of the Act is to ensure that the governance arrangements of public bodies for improving the well-being of Wales take the needs of future generations into account. The Act places a duty on public bodies to carry out sustainable development and in doing so public bodies must set and publish objectives (“well-being objectives” that are designed to maximise its contribution to achieving the well-being goals and take all reasonable steps (in exercising its functions) to meet those goals.

The Well-being of Future Generations (Wales) Act encourages public bodies to think more about the long-term, work better with people and communities and each other, look to prevent problems and take a more joined-up approach. This will help us to create a Wales that we all want to live in, now and in the future.

The Act provides a shared vision for all public bodies to work towards, and puts in place seven well-being goals, which are noted below:

#### Well-being Goals



The Act puts in place a 'sustainable development principle' which sets out a requirement to act in a manner which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs. Public bodies need to make sure that when making decisions they take into account the impact they could have on people lives and specifically consider the following five ways of working:



### Long term

The importance of balancing short-term needs with the need to safeguard the ability to also meet long-term needs.



### Prevention

How acting to prevent problems occurring or getting worse may help public bodies meet their objectives.



### Integration

Considering how the public body's well-being objectives may impact upon each of the well-being goals, on their other objectives, or on the objectives of other public bodies.



### Collaboration

Acting in collaboration with any other person (or different parts of the body itself) that could help the body to meet its well-being objectives.



### Involvement

The importance of involving people with an interest in achieving the well-being goals, and ensuring that those people reflect the diversity of the area which the body serves.

This HAMP directly supports the aims of the Act and will, within Part 3 of the HAMP include measurements and indicators which will help monitor our performance and progress. The HAMP will align with the Highways and Transport Department Business Plan. Both will be reported on an annual basis.

## Active Travel (Wales) Act 2013

The Active Travel (Wales) Act 2013, places a number of legal obligations on Local Authorities to create and map fully integrated transport networks as well as wider cross cutting obligations relating to continued Active Travel improvements as part of policy development, decision making and new scheme delivery. These include:

- Identifying and mapping the network of routes within their areas that are safe and appropriate for walking and cycling to access services/facilities
- Identifying and mapping the enhancements that would be required to create a fully integrated network for walking and cycling to access services/facilities
- Deliver an enhanced network by securing new and improved active travel routes and facilities each year

The Act places a statutory requirement on us to identify and continuously improve routes for walkers and cyclists and to prepare maps that identify current and potential future routes.



The Act aims to make active travel the most attractive option for shorter journeys and to connect key sites such as workplaces, hospitals, schools and shopping areas with traffic free routes and cycle lanes.

Following public consultation and our own research in 2015 the Existing Route Maps (ERM) were created. They do not show all possible walking and cycling routes, however the routes have undergone an audit which shows that they meet the standards set out in Welsh Government Guidance.

## Integrated Network Map (INM)

The second stage was to create an INM that sets out Carmarthenshire Council's 15-year vision to improve cycling and walking routes across the county, in order to meet the requirements of the Active Travel (Wales) Act 2013. The plan encompasses the provision and improvement of routes for active travel within built up areas (BUA's) as designated by Welsh Government (this requires a minimum population of 2000 in a prescribed density). This also ties into our long term ambition to become the cycling hub of Wales.



Following public consultation events undertaken in Summer/Autumn 2017, the INM has been revised, taking on board suggestions and comments. The revised maps have been approved by Welsh Government and can be seen on our website using the link below:

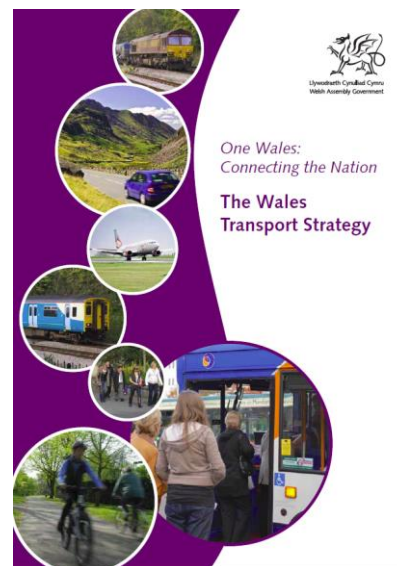
<http://www.carmarthenshire.gov.wales/home/council-services/travel-roads-parking/active-travel/#.Wru078Koubh>

## 1.4 Wales Transport Strategy

The Wales Transport Strategy sets out the vision for efficient, reliable and sustainable links between the north, south, east and west of Wales. The strategy recognises the challenges facing Wales and identifies five key priority areas for action

- reducing greenhouse gas emissions and other environmental impacts;
- integrating local transport;
- improving access between key settlements and sites;
- enhancing international connectivity; and
- increasing safety and security.

The Strategy identifies a number of social, economic and environmental ambitions which the transport system contributes towards.



One Wales: Connecting the nation long-term outcomes		
Social	Economic	Environmental
<ul style="list-style-type: none"> <li>④ improve access to healthcare</li> <li>④ improve access to education, training and lifelong learning</li> <li>④ improve access to shopping and leisure facilities</li> <li>④ encourage healthy lifestyles</li> <li>④ improve the actual and perceived safety of travel</li> </ul>	<ul style="list-style-type: none"> <li>④ improve access to employment opportunities</li> <li>④ improve connectivity within Wales and internationally</li> <li>④ improve the efficient, reliable and sustainable movement of people</li> <li>④ improve the efficient, reliable and sustainable movement of freight</li> <li>④ improve access to visitor attractions</li> </ul>	<ul style="list-style-type: none"> <li>④ increase the use of more sustainable materials</li> <li>④ reduce the contribution of transport to greenhouse gas emissions</li> <li>④ adapt to the impacts of climate change</li> <li>④ reduce the contribution of transport to air pollution and other harmful emissions</li> <li>④ improve the impact of transport on the local environment</li> <li>④ improve the impact of transport on our heritage</li> <li>④ improve the impact of transport on biodiversity</li> </ul>

## 1.5 Joint Transport Plan for South West Wales (2015–20)

Carmarthenshire County Council sits within the Swansea Bay City Region; a region comprising of Carmarthenshire County Council, City and County of Swansea, Neath Port Talbot County Borough Council, and Pembrokeshire County Council. Transport has for many years been considered at this regional level (previously through the formally constituted body The South West Wales Integrated Transport Consortium SWITCH and more recently through the development of the Joint Local Transport Plan for South West Wales (2015-20).

The Joint Local Transport Plan (LTP) for South West Wales 2015-20 vision and its objectives for a better connected region will also play an integral part in the development of the key objectives for this HAMP. The LTP includes the following vision for the region:

*To improve transport and access within and beyond the region to facilitate economic regeneration, reduce deprivation and support the development and use of more sustainable and healthier modes of transport*

(Source: Joint Local Transport Plan 2015-20)



## 1.6 Highways Context in Carmarthenshire

### Moving Forward in Carmarthenshire: The Council's New Corporate Strategy 2018-2023

The New Corporate Strategy provides a consolidation and alignment of a number of previous plans and strategies into a single document which incorporates key aspirations for the next 5 years. Informed by the Carmarthenshire Well-being Assessment (2017) the Strategy recognises a number of challenges facing the authority and set out how these would be faced whilst maintaining our core values in everything we do.



The Strategy sets out the Council's vision that:-

*'Life is for living, let's start, live and age well  
in a healthy safe and prosperous environment'*

The HAMP will play a role in supporting the realisation of this vision and many of the following Well-being Objectives which have been incorporated into the Strategy. The key objectives supported by this HAMP are indicated in bold below:-

1. Help to give every child the best start in life and improve their early life experiences
2. **Help children live healthy lifestyles**
3. Continue to improve learner attainment for all
4. Reduce the number of young adults that are Not in Education, Employment or Training
5. Tackle poverty by doing all we can to prevent it, help people into work and improve the lives of those living in poverty
6. **Create more jobs and growth throughout the county**
7. Increase the availability of rented and affordable homes
8. **Help people live healthy lives (tackling risky behaviour and obesity)**
9. **Support good connections with friends, family and safer communities**
10. Support the growing numbers of older people to maintain dignity and independence in their later years
11. A Council-wide approach to support Ageing Well in the County
12. **Look after the environment now and for the future**
13. **Improve the highway and transport infrastructure and connectivity**
14. Promote Welsh Language and Culture
15. **Building a Better Council and Making Better Use of Resources.**



## Carmarthenshire Well-being Plan (2018-2023)

Although in draft form at present the Carmarthenshire Well Being Plan provides a more holistic view of Carmarthenshire's endeavours to improve the economic, social, environmental and cultural well-being and is a requirement of the Well-being of Future Generations (Wales) Act 2015. The Plan, which has been drafted on behalf of Carmarthenshire Public Services Board (PSB), has through public engagement identified four key well-being objectives for attention over the next few years. These objective align well with those of the County Council's New Corporate Strategy.



### Healthy Habits

People have a good quality of life, and make healthy choices about their lives and environment



### Early Intervention

To make sure that people have the right help at the right time; as and when they need it



### Strong Connections

Strongly connected people, places and organisations that are able to adapt to change



### Prosperous People and Places

To maximise opportunities for people and places in both urban and rural parts of our county



## 1.7 HAMP Policy

### Policy Statement

This HAMP defines highway asset management as

*“A systematic approach to meeting the strategic need for the management and maintenance of highway infrastructure assets through long term planning and optimal allocation of resources in order to manage risk and meet the performance requirements of the authority in the most efficient and sustainable manner”.*

Against this backdrop this HAMP has been developed to ensure the council has well-managed highway infrastructure assets in line with the recommendations of the national code of practice and to deliver Carmarthenshire County Council’s key aspirations.

The following policy objectives for this HAMP have been developed to support these aspirations:

### Key objectives:

1. The Highway Authority will manage its resources to support the safe and expeditious movement of goods and people by means of a risk based and prioritised approach.
2. Continue to manage and maintain the network to enable sustainable modes of travel including cycling and walking.
3. National, Corporate and Business planning objectives will underpin this policy.
4. The Council will adopt effective asset management practices leading to more efficient and effective maintenance activities.
5. To put in place appropriate inspection and maintenance regimes, data collection, condition surveys, inventory management and information systems to enable informed decision making, to ensure our statutory duties are met and to minimise the County Councils exposure to claims.

## 1.8 Delivery of the HAMP key objectives

Carmarthenshire's HAMP will enable the delivery of key highways objectives whilst supporting regional and authority wide objectives as follows:

**Our stated highways objectives are:**

**Key objective 1:** The Highway Authority will manage its resources to support the safe and expeditious movement of goods and people by means of a risk based and prioritised approach. We will do this by:

- a) providing a highway network which is fit for purpose
- b) supporting national, regional and local transport and road safety strategies
- c) co-ordinating the works on the network to minimise congestion
- d) using a risk matrix and network hierarchy to target resources

**Key objective 2:** Continue to manage and maintain the network to enable sustainable modes of travel including cycling and walking. We will do this by:

- a) supporting Active Travel initiatives
- b) maintaining and managing the highway cycle network within Carmarthenshire
- c) developing footway and cycleway maintenance hierarchies
- d) supporting the infrastructure for passenger transport networks
- e) recognising cycle usage as part of our highway investment prioritisation model

**Key objective 3:** National, Corporate and Business planning objectives will underpin this policy. We will do this by:

- a) liaising with internal and external partners to ensure that highway maintenance activities are aligned with wider objectives
- b) recognising changes in legislation and policies
- c) acting on feedback received from the Authority's Strategic Asset Steering Group to ensure appropriate oversight of capital investment
- d) producing an Annual Statement and Options Report which will provide a positional statement and investment options

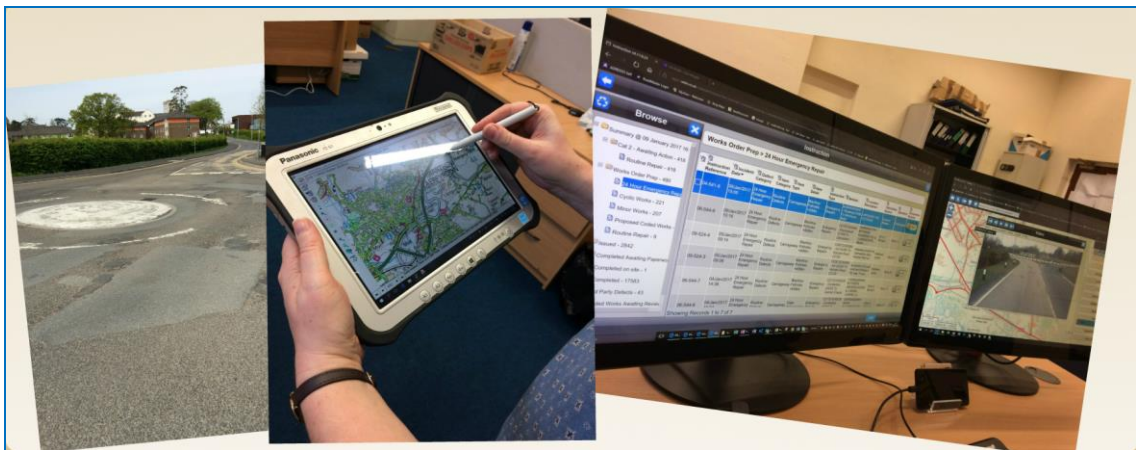
**Key objective 4:** The Council will adopt effective asset management practices leading to more efficient and effective maintenance activities. We will do this by

- a) recognising whole life costs, long-term sustainability, technical advancement and environmental considerations, in relation to the available resources.
- b) developing life cycle plans for the whole life of our infrastructure assets to enable us to carry out preventative maintenance at the right time to avoid costly repairs to our highways
- c) Working collaboratively with other Welsh authorities within the County Surveyors Society Wales asset management project

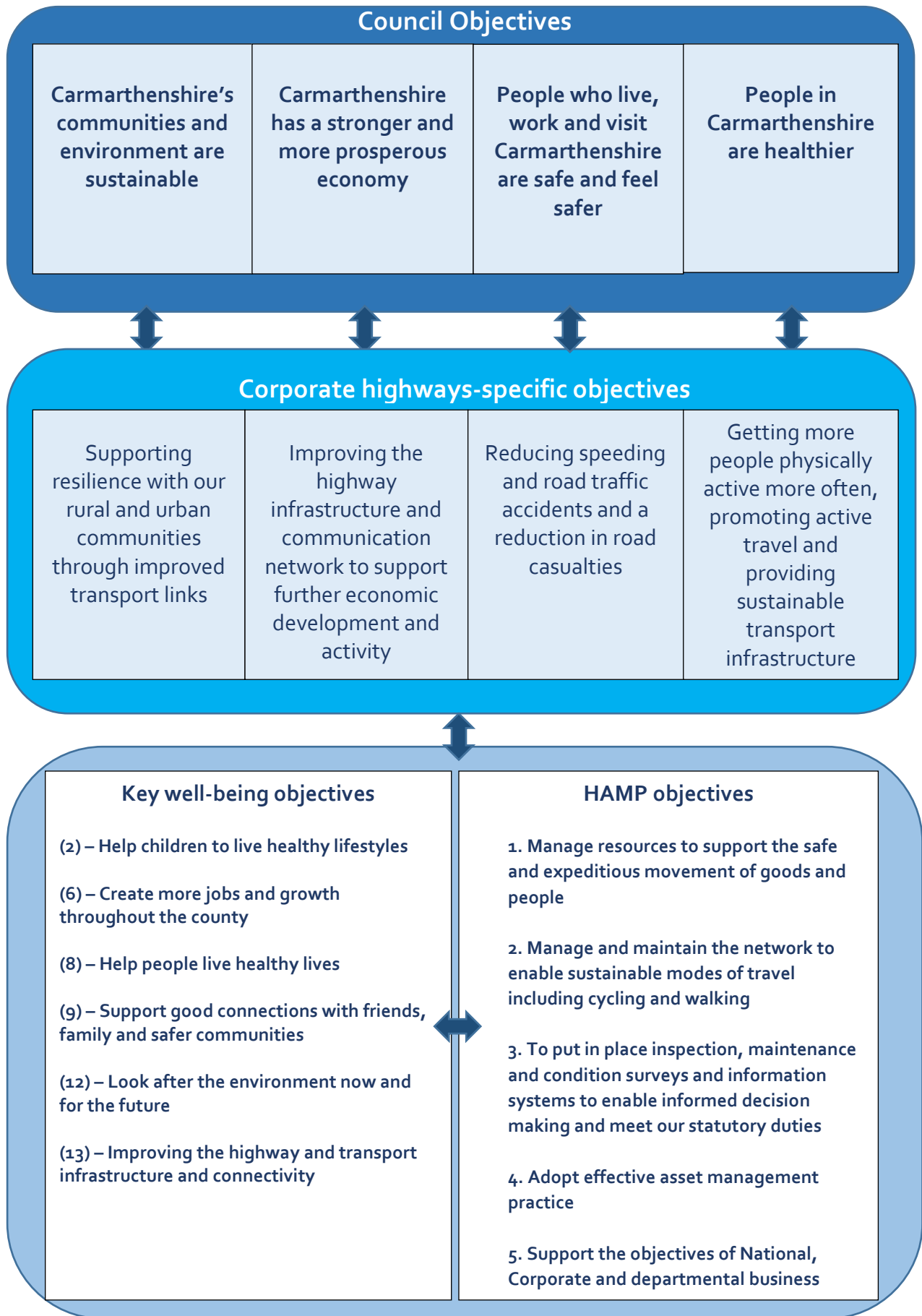
**Key objective 5:** To put in place appropriate inspection and maintenance regimes, data collection, condition surveys, inventory management and information systems to enable informed decision making, to ensure our statutory duties are met and to minimise the County Councils exposure to claims. We will do this by:

- a) maintaining an appropriate highway infrastructure assets inspection procedure. This will take into account national guidance such as the Well-Managed Highway Infrastructure code of practice
- b) ensuring that highway defects, whether identified by inspectors or reported by the public, are investigated and repaired in accordance with the criteria set out in our highway maintenance manual
- c) maintaining our investment in our asset management systems
- d) carry out appropriate inventory and condition surveys of our infrastructure assets
- e) investing in data capture and mobile technology to capture asset information, condition data and keep accurate records of works undertaken on the assets

The detailed procedures used to ensure the Council provides data to inform its decision-making process are set out in the Information and Data Management Strategy. The strategy is set out in Part 2, the HAMP, the supporting framework document, and engagement activities undertaken will be reported each year in the Annual Statement and Options Report.



Key objective relationships



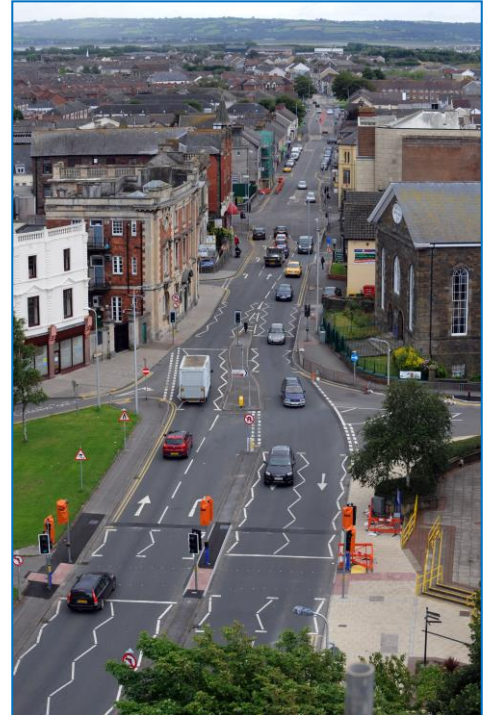
## 1.9 Scope of our Policy

This Policy covers highway infrastructure assets on Carmarthenshire County Council's publically maintainable highway network. The infrastructure assets include:

- Roads
- Footways
- Highway Bridges and related structures
- Highway drainage
- On and off-road Cycle routes
- Geotechnical assets
- Highway Lighting, traffic signals and illuminated signs
- Highway street furniture and traffic calming measures
- Highway trees and verges

This Policy does not cover the following assets:

- Trunk Roads/motorways
- Public Rights of Way
- Car Parks
- Land Drainage
- Non-adopted carriageways / footways
- Non-adopted highway council assets
- Coastal defences
- Speed cameras/CCTV/ANPR
- Community or transferred Assets



## PART 2

### 2.1 Highway Asset Management Framework

#### 2.2 Introduction to Carmarthenshire's Framework

Our framework is developed against the backdrop of national, regional and local guidance as a basis for delivering a consistent approach to implementing asset management principles.

The framework contains highway and transport specific strategies which set out the way key policies and objectives outlined in Part 1 will be supported.

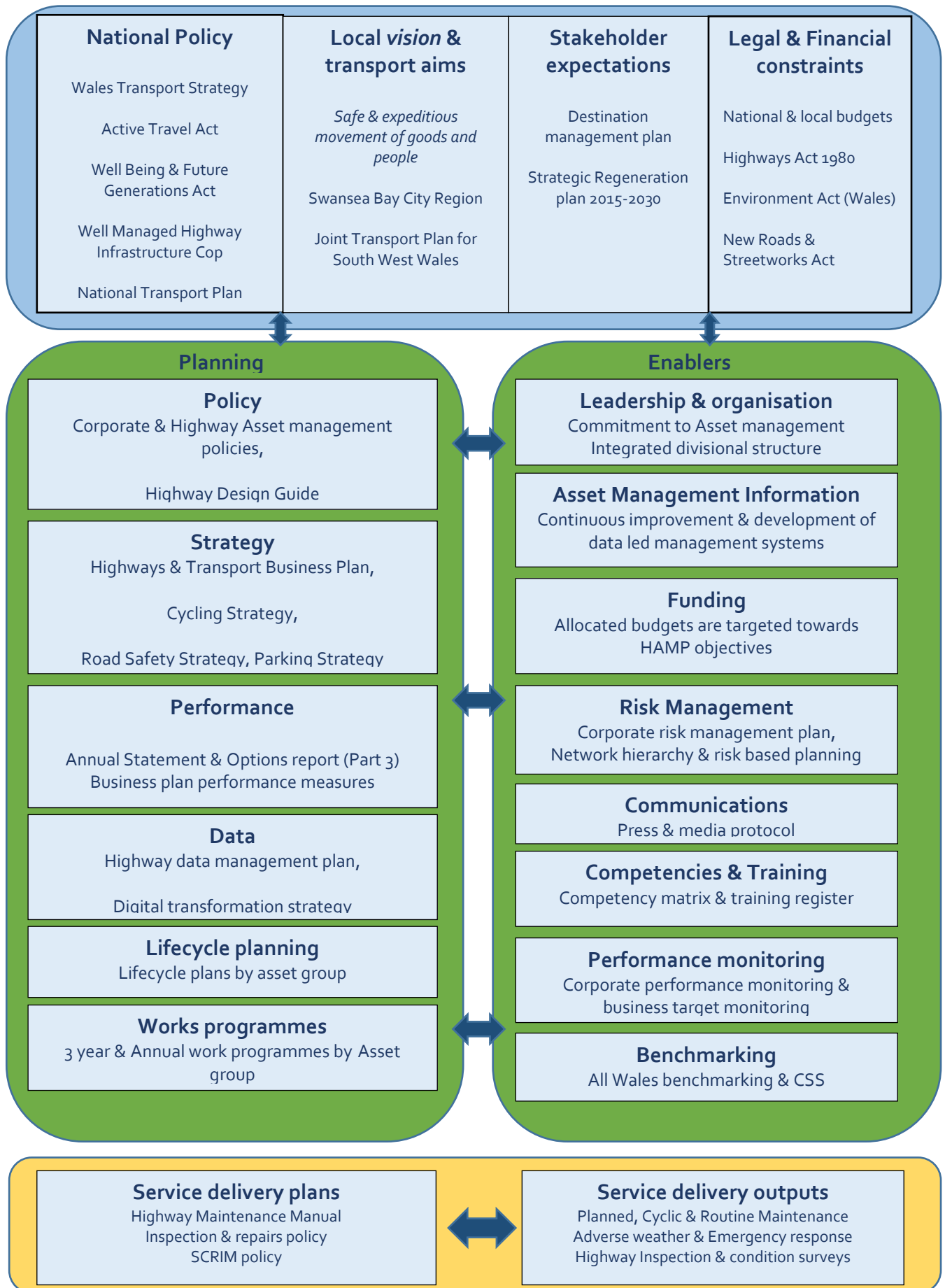
These strategies will also set out how we will manage and plan the long term maintenance of our highway infrastructure assets and guide investment decisions along a risk based approach.

It is recognised that specific highway and transport strategies will develop and change over time to reflect changing needs and demands. The HAMP will therefore act as an overarching framework which provides strategic direction and enables specific strategies to support the management and long-term maintenance of our highway infrastructure assets.

The framework will be supported by a Highway Maintenance Manual (HMM) which will set out how we manage specific assets and technical procedures for day to day delivery of the highway maintenance service.

The HMM will contain specific policy and service delivery details either currently in place or under development. Where policies are under review against the recommendations of WMHI we will work with the CSS (Wales) Asset management project to develop robust and consistent standards appropriate for this authority.

The framework diagram on page 22 sets out the wider inputs and mechanisms for delivering the high level objectives through local policies, plans and service delivery.



### 2.3 Information and Data Management Strategy

Information and data are integral to supporting a risk-based approach to highway maintenance. It shall be recorded and managed using secure and sustainable systems and procedures, whilst being available to all required network users for effective asset management to take place. Key to this is an integrated asset management system. In essence, this inventory of highway assets, maintenance records and condition information will be stored with sufficient detail to be both fit for purpose and meet the business needs of the council.

The system allows for regular reviews to take place, ensuring the currency, quality, relevance and completeness of the records held therein. Being in compliance with recommendations 8, 9, 10, 11 and 17 of the Well-managed Highway Infrastructure: A Code of Practice with the Freedom of Information Act, 2000, Data Protection Act, 1998 and CSSW templates for Data management Plan and Software Data Assessment.

The Information and data strategy will form the basis for the planning, implementation, nature and frequency of asset condition and inventory surveys, allowing for the effective updating of existing records and data. We are developing our strategy in line with the CSS (Wales) Asset management project guidance.

The information and data strategy will specifically support the following Well-Managed Highway Infrastructure Code of Practice recommendations:

RECOMMENDATION	Description
8–INFORMATION MANAGEMENT	Information to support a risk based approach to highway maintenance should be collected, managed and made available in ways that are sustainable, secure, meet any statutory obligations, and, where appropriate, facilitate transparency for network users.
9 – NETWORK INVENTORY	A detailed inventory or register of highway assets, together with information on their scale, nature and use, should be maintained. The nature and extent of inventory collected should be fit for purpose and meet business needs. Where data or information held is considered sensitive, this should be managed in a security-minded way.
10 & 11– ASSET DATA MANAGEMENT & SYSTEMS	The quality, currency, appropriateness and completeness of all data supporting asset management should be regularly reviewed. An asset register should be maintained that stores, manages and reports all relevant asset data.
17 – CONDITION SURVEYS	An asset condition survey regime, based on asset management needs and any statutory reporting requirements, should be developed and implemented.



## Data Owner

The Highway Asset Manager is the 'data owner' and is responsible for annually reviewing the method of data collection, the percentage of the asset to be surveyed, procuring the surveys and managing the collected data.

The data owner is responsible for collating data to provide annual highways returns including:

- Public Accountability Measures (PAM)
- Whole of Government Accounts (WGA) Asset Valuation
- Network length returns – TP1
- Performance measurement including APSE and CSS Wales

In addition, the data owner is responsible for providing the condition data to inform the development of the HAMP Annual Statement and options Report, ad-hoc requests for condition data, such as the ALARM annual survey and data to respond to Freedom of Information requests across all aspects of the highways service.

## 2.4 Communications Strategy

The Highways Authority aims to develop a communications strategy for highways that will ensure that the relevant information is actively communicated to the appropriate parties, through engaging with stakeholders and responding to customer needs.

This will need to incorporate the elements of decision making, and be able to report on performance, allowing for reviews to take place allowing for continuous improvement needed for this flexible and responsive network.

Currently the Highway Authority has the communication requirements outlined in its previous HAMP under 'Community Requirements', this will need to be further developed in line with the Council's existing communication policy for Emergency Communications (used for highways-related incidents along with extreme weather toolkit) along with Press and Media protocols.

The communications strategy will support the following Well-Managed Highway Infrastructure Code of Practice recommendation:

RECOMMENDATION	Description
4 – ENGAGING AND COMMUNICATING WITH STAKEHOLDERS	Relevant information should be actively communicated through engagement with relevant stakeholders in setting requirements, making decisions and reporting performance.

## 2.5 Performance Management Strategy

The performance of the HAMP will be key to enhancing its functionality and identifying any issues and challenges, as processes transfer from the theory to practice. It will also help maintain the effectiveness and relevance of existing policies and procedures. The performance management framework should be accessible to the relevant stakeholders, with the required information and data presented in a clear and comprehensive format.

The system will allow for regular reviews by senior decision makers within the Authority, this will ensure that any improvements needed to the system are expedited in a timely manner, in compliance with recommendations 26 and 27 of the Well-managed Highway Infrastructure: A Code of Practice.

The Highway Authority will measure, monitor and report its performance in line with the performance indicators within our Departmental and Divisional Business Plans and engage with the APSE and CSSW Report for Annual Performance Indicators.

The performance management strategy will support the following WMHI Code of Practice recommendations:

RECOMMENDATION	Description
26 – PERFORMANCE MANAGEMENT FRAMEWORK	A performance management framework should be developed that is clear and accessible to stakeholders as appropriate and supports the asset management strategy.
27 – PERFORMANCE MONITORING	The performance of the Asset Management Framework should be monitored and reported. It should be reviewed regularly by senior decision makers and when appropriate, improvement actions should be taken.

## 2.6 Risk Management Strategy

Risk Management forms a central pillar of this HAMP, and is a key recommendation of the code of practice. Our strategy is to identify and rank assets with a risk based scoring mechanism. This scoring mechanism then guides our investment in the asset to optimise the benefit to road users and ensure the integrity of the asset.

This management system will incorporate activities from the strategic to operational levels, ensuring a continuity of asset management approach to asset condition and status.

The risk management strategy will support the following WMHI Code of Practice recommendations:

RECOMMENDATION	Description
5 – CONSISTENCY WITH OTHER AUTHORITIES	To ensure that users’ reasonable expectations for consistency are taken into account, the approach of other local and strategic highway and transport authorities, especially those with integrated or adjoining networks, should be considered when developing highway infrastructure maintenance policies.
14 – RISK MANAGEMENT	The management of current and future risks associated with assets should be embedded within the approach to asset management. Strategic, tactical and operational risks should be included as should appropriate mitigation measures.

As the highway authority, we are required to manage a variety of risks at all levels within our organisation. The likelihood and consequences of these risks can be used to inform and support the approach to asset management and inform key decisions on the following:

- Maintenance hierarchies
- All highway assets within the scope of the Highway Maintenance Plan
- Inspection frequency
- Levels of service
- Service standards
- Performance
- Investment decisions
- Development and implementation of works programmes.

A risk can be defined as an uncertain event which, should it occur, will have an effect on the desired performance of an asset or series of assets.

It consists of a combination of the likelihood of a perceived threat or opportunity occurring and the magnitude of its impact on the objectives where:

- **Threat** is used to describe an uncertain event that could have a negative impact on the levels of service; and
- **Opportunity** is used to describe an uncertain event that could have a favourable impact on the levels of service.

DEFINITIONS OF RISK

“Risk is the **threat** that an event or action will adversely affect an organisation’s ability to achieve its objectives”<sup>1</sup>

“Risk can be the failure to take advantage of **opportunities** to enable the organisation to best achieve its objectives.

DEFINITION OF RISK MANAGEMENT

“Risk management is the process by which risks and opportunities are identified, evaluated, prioritised, monitored and managed”



The most commonly understood risks affecting the highway service relate to safety. However, there are a wide range of other risks and their identification and evaluation is a crucial part of the asset management process. Risks may include:

- Safety
- Reputation
- Asset loss or damage
- Service reduction or failure
- Operational
- Environmental
- Financial
- Contractual

We will adopt and develop risk models in conjunction with CSS (Wales) Asset management project. This model will be applied to all aspects of prioritisation and resource allocation. A typical risk matrix is shown overleaf and the adopted model will be in line with the corporate risk model.

LIKELIHOOD OF EVENT OCCURRING	CONSEQUENCE OF EVENT OCCURRING				
	NEGLIGIBLE	LOW	MEDIUM	HIGH	SEVERE
NEGLIGIBLE	1	2	3	4	5
VERY LOW	2	4	6	8	10
LOW	3	6	9	12	15
MEDIUM	4	8	12	16	20
HIGH	5	10	15	20	25
KEY TO RISKS					
LOW		MEDIUM		HIGH	

[Typical risk matrix](#)

## 2.7 Network Hierarchy

The hierarchy will support an overall Highway Asset Management Plan that prioritises highway infrastructure investment through a risk based approach in accordance with the new updated National Codes of Practice – “Well Managed Highway Infrastructure.”

The hierarchy shall underpin and improve the management, prioritisation and service levels for highway maintenance and infrastructure investment and will support the Council’s Key outcomes from the Corporate Strategy 2018 /2023 that include:

- Making better use of resources
- People who live, work and visit Carmarthenshire are safe and feel safer
- Carmarthenshire’s communities and environment are sustainable
- Carmarthenshire has a stronger and more prosperous economy

We have developed a highways network hierarchy based on the latest guidance in the National Code of Practice – Well Managed Highway Infrastructure (WMHI) 2016. We continue to work closely with other Welsh Authorities via the County Surveyors Society (CSS) Wales collaborative Highways Asset Management project both in the development of Asset management best practice and the development of common Hierarchy principles and its subsequent application. The Network Hierarchy will determine the budget priorities through the use of a four stage process.

The four stage processes are:

1. Determine the Network Hierarchy
2. Determine inspection regime
3. Determine repair regime
4. Allocate budget priorities

Following the implementation of the Highways network hierarchy via this HAMP the same approach will be adopted for footways and cycle routes as recommended by the Code of Practice WMHI 2016.

The hierarchy has been applied to all sections of highway network and will be updated following any changes or additions to the network. There will be further refinement of the initial categorisation as we develop this HAMP. The proposed network hierarchy and functional descriptions are set out in Table 1.

Table 1. Carmarthenshire Highways Network Hierarchy

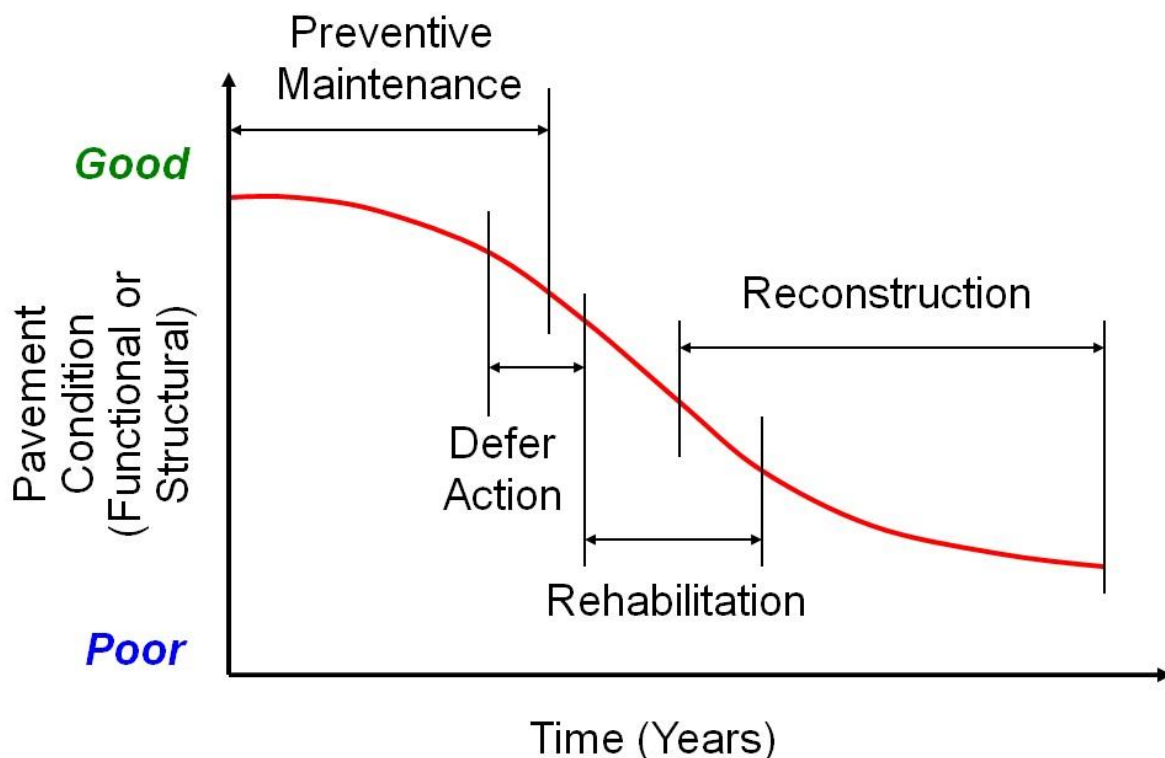
Category	Type of road General Description	Description
<b>1.Motorway</b>	Limited access - motorway regulations apply	Routes for fast moving long distance traffic. Fully grade separated and restrictions on use
<b>2. Strategic Route</b>	Trunk and some Principal 'A' class roads between Primary Destinations	Routes for fast moving long distance traffic with little frontage access or pedestrian traffic. Speed limits are usually in excess of 40 mph and there are few junctions. Pedestrian crossings are either segregated or controlled and parked vehicles are generally prohibited.
<b>3a. Main Distributor</b>	Major Urban Network and Inter-Primary Links. Short - medium distance traffic	Routes between Strategic Routes and linking urban centres to the strategic network with limited frontage access. In urban areas speed limits are usually 40 mph or less, parking is restricted at peak times and there are positive measures for pedestrian safety
<b>3b. Secondary Distributor</b>	B and C class roads and some unclassified urban routes carrying bus, HGV and local traffic with frontage access and frequent junctions	In residential and other built up areas these roads have 20 or 30 mph speed limits and very high levels of pedestrian activity with some crossing facilities including zebra crossings. On-street parking is generally unrestricted except for safety reasons. In rural areas these roads link the larger villages, bus routes and HGV generators to the Strategic and Main Distributor Network.
<b>4a. Link Road</b>	Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions	In urban areas these are often residential or industrial interconnecting roads with 20 or 30 mph speed limits, random pedestrian movements and uncontrolled parking. In rural areas these roads link the smaller villages to the distributor roads. They are of varying width and not always capable of carrying two-way traffic.
<b>4b. Local Access Road</b>	Roads serving limited numbers of properties carrying only access traffic	In rural areas these roads serve small settlements and provide access to individual properties and land. They are often only single lane width and unsuitable for HGVs. In urban areas they are often residential loop roads or cul-de-sacs.
<b>5a. Minor Road</b>	Little used roads serving very limited numbers of properties.	Locally defined roads
<b>5b. Lane</b>	Minor routes and low use tracks that provide access to isolated properties	In rural areas these often narrow roads serving isolated agricultural buildings or properties. In urban areas these are often metalled lanes serving garages or the rear of properties
<b>5c. Green lane or track</b>	Lanes and tracks that are generally unsuitable for vehicular traffic	Lanes and tracks that are unsuitable for vehicular traffic but may be used as a footpath, part of a Cycle Trail or by horse riders, generally for leisure purposes
<b>5d. Disused track</b>	Unmetalled tracks that are unrecognisable as a road	Roads that have become un-useable having fallen into disuse through regression or agricultural use

## 2.8 Lifecycle Planning

The continual decrease in Highway asset funding means that the highway authority will need to target its funds in an ever-more effective manner. Financial constraints necessitate a risk based approach with increasingly targeted and prioritised investment including reactive as well as planned maintenance.

Lifecycle Planning should inform future spending profiles, in compliance with recommendation 29 of the Well-managed Highway Infrastructure: A Code of Practice. Planned preventative maintenance reduces abortive reactive maintenance costs and provides better value in the longer term. Current resources do not support a full lifecycle approach however the principles of targeted investment by providing the right treatment at the right time will be adopted where possible.

The coordination of short, medium and long-term highway maintenance budgets is central to lifecycle planning, with the apparent immediate spend on asset repair and improvement being balanced with the longer-term outcomes to help achieve value for money with diminishing budget levels; this will select the most appropriate form of maintenance for the best long-term outcome.

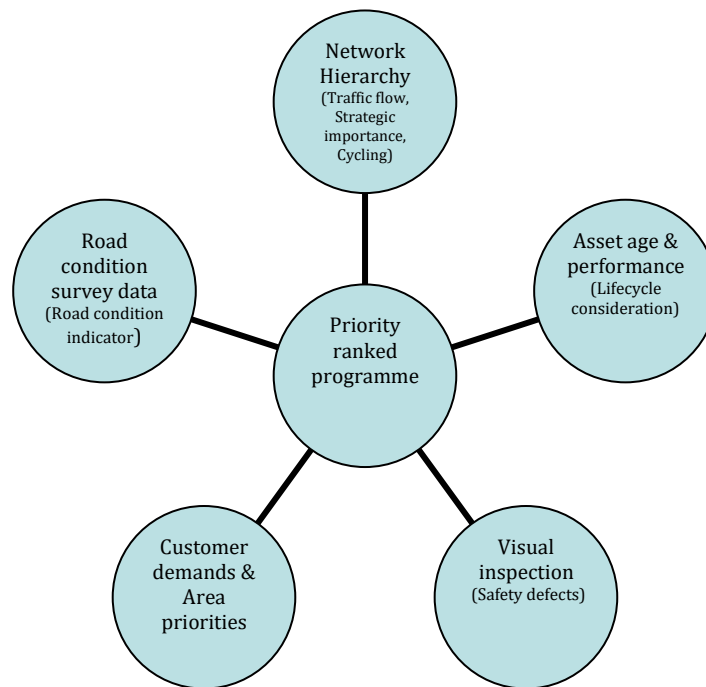


We will set out and manage rolling multi-year programmes of improvement, allowing the culmination of annual budgets into concentrated expenditure peaks to focus limited financial budgets to help maximise their impact on the asset stock.



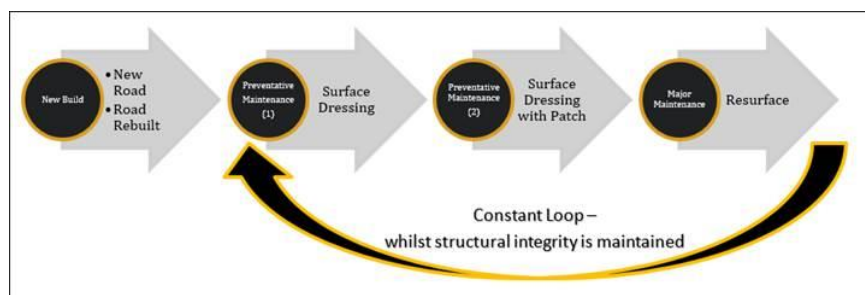
The method of prioritisation will incorporate asset condition within particular asset classes and across the asset register, this should inform appropriate decisions in a timely manner and focus budgets accordingly.

The prioritisation model for carriageway surfacing is shown below. Similar models will be developed for all Assets in line with these principles and in conjunction with best practice developed via the CSS (Wales) asset management project.



The authority recognises the value of lifecycle planning and will aim to adopt a “whole life” approach to managing the highway assets.

The illustration below shows how a typical road might be maintained over 60 years. It demonstrates how preventative maintenance can extend the life of the carriageway and lead to better value for money.



## 2.9 Cycling Strategy



The County has become a magnet for cyclists from all across Wales, the UK and beyond. Following years of investment Carmarthenshire now has an effective and growing cycling infrastructure.

To ensure this continues, the council have produced the Carmarthenshire Cycling Strategy 2017-27, which sets out the programme of change along with an infrastructure action plan that will link in with education, development & training, marketing, tourism and coordinated events to advance the improvement to the cycleway network throughout the county.

The HAMP supports our Cycling Strategy and priority commitments set out in the Joint Transport Plan for South West Wales. Decision making for highway investments will recognise the role of cycling within the County.

## 2.10 Parking Strategy

The management of on and off street parking is a key priority for the authority due to the increasing demand and the impact on the highway network. The Councils parking strategy 2005 is currently under review and we plan to have a new policy in place by April 2019. The parking strategy objectives shall align with our corporate, strategic and operational objectives and also meet statutory obligations and customer needs.

## 2.11 Service standards

Levels of service in simple terms are: "the defined service quality for a particular activity or service against which performance may be measured". Levels of Service (LoS) may relate to safety, availability, accessibility, condition, environmental impact, customer service and financial performance (cost).

Levels of service are an integral component of the asset management process. They are used to determine service delivery levels (or Service Options) for each asset group, which can be

measured and evaluated against each other using common criteria. Typically this would include cost, benefit and risk analysis.

Initially, levels of service will be predominantly based on current practice and predicted future asset performance and will be the subject of regular monitoring and subsequent development. Suitable new (local) performance measures may need to be introduced and annual reviews undertaken to determine actual asset performance against pre-defined targets.

Level of Service Descriptions	
Level of Service	Description
Statutory Minimum	Meeting statutory or legislative requirements only
Existing	Is in effect of a continuance of current funding levels
Steady State	Retention of current levels of condition and performance
Requested Service	Based on customer expectations and or political aspirations
Optimum Service (Desirable)	Assesses constraints as well as desires to identify an economically optimal level of service. This option is determined from the life cycle planning process.
Attainable Service	Re-interprets the optimum option in the light of available resources. (e.g. budget constraints)

Levels of service shall be developed on an asset basis in conjunction with CSS (Wales) Asset management project. The monitoring of levels of service will be dependent on the availability of robust and repeatable data that can reliably measure the required performance.

An example of how Service Options could be developed and which factors should be considered for an asset group is shown below. However in order to develop these further, we also need to look at and develop the risk factors involved relating to the particular levels of service.

### 2.12 Road Safety Strategy

Carmarthenshire has had a Road Safety Strategy since 2006, it has most recently produced an updated version for 2016-20. This strategy focuses on casualty reduction targets set out to reduce death and serious injury on Carmarthenshire’s county roads. There is a collaborative approach across a range of public safety agencies with the County Council and its partners are committed to improving road safety for all users.

The Road Safety Action Group (RSAG) brings together the partner agencies in Carmarthenshire and continues to deliver road safety engineering measures, education initiatives and enforcement action to reduce the risk to road users.

<http://www.carmarthenshire.gov.wales/home/council-services/travel-roads-parking/road-safety/>

### 2.13 Competency Framework

Within this HAMP the competency and training of staff at all levels needs to be assessed and reviewed at regular intervals. This is to ensure that personnel that are observing, recording and processing the asset information and data will be compliant with the processes and procedures set out within the Plan (HMM).

The Highway Authority will develop and maintain training and competency matrices for all staff carrying out functions within the HAMP, ensuring that these requirements are reviewed for their relevance and kept up-to-date.

Currently the Highway Authority has identified the need to develop a Competency Framework Strategy, this will be further developed in line with the Well-managed Highway Infrastructure: A Code of Practice and in conjunction with other Welsh authorities through the CSS (Wales) asset management project.

The competency framework strategy will support the following WMHI Code of Practice recommendations:

RECOMMENDATION	
5- CONSISTENCY WITH OTHER AUTHORITIES	To ensure that users' reasonable expectations for consistency are taken into account, the approach of other local and strategic highway and transport authorities, especially those with integrated or adjoining networks, should be considered when developing highway infrastructure maintenance policies.
15 – COMPETENCIES AND TRAINING	The appropriate competency required for asset management should be identified, and training should be provided where necessary.

#### Scope

All officers responsible for managing the highway infrastructure assets will be required to use the competency framework. For each role a prescribed number of competencies will be necessary to manage the highway assets.

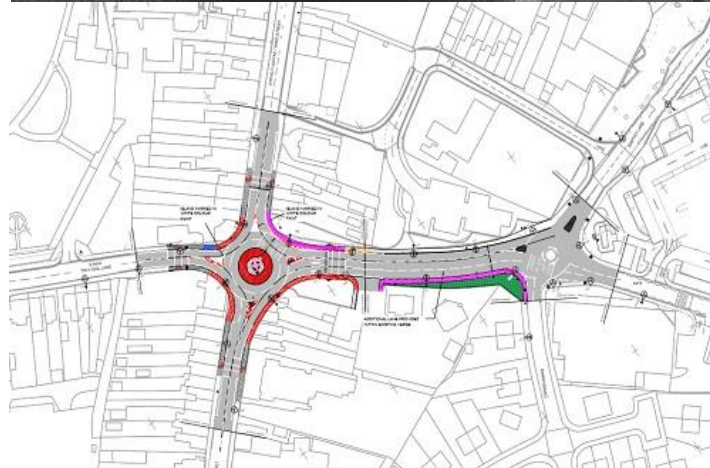
There is a competency requirement for the lead cabinet member to be familiar with the principles of highway asset management.

Competencies and training are covered in the UKRLG Highway Infrastructure Asset Management Guidance, Part C. This document should also be referred to.

Competence is especially important in the case of inspections and surveys where the quality and treatment of data could have significant legal and financial implications. All training, experience and other forms of staff development will be recorded and documented.

We define a 'competent person' as follows;

- someone is competent where they have sufficient training and experience or knowledge and other qualities to enable them to properly undertake the roles referred to in this competency framework.
- someone who has the ability, appropriate training, knowledge and experience to carry out the work being undertaken against defined standards, assessed consistently, over time, in the workplace.



## PART 3

### 3.1 The HAMP Annual Statement and Options Report (ASOR)

The ASOR will provide the council with a regular update on the current state of the highways assets and their performance over the preceding 12 months. The report will highlight key outputs and achievements during the period and also highlight any in year pressures affecting the network and resources. The report will identify significant risks, set out the detailed condition of the key asset groups and the anticipated future performance based on forecast investment levels. The report complements the Highway Asset Management Plan.

The report will provide summary information on the following key asset groups:

Asset Group	Reporting information
Carriageways (roads)	<ul style="list-style-type: none"> <li>• Asset value</li> <li>• Summary of work undertaken during the last 12 months</li> <li>• Planned investment in the asset</li> <li>• Condition and Performance</li> <li>• Customer engagement</li> <li>• Future plans and issues</li> <li>• Investment scenarios</li> <li>• Conclusions</li> </ul>
Footways and Cycle ways	
Highway Bridges and structures	
Highway Lighting, traffic signals and illuminated signs	

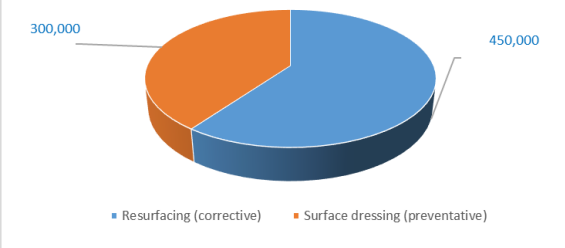
A template of the report format is included in this HAMP to demonstrate the minimum level of reporting proposed and with illustrative information based on recent data. Additional information may be provided either within this report or as Appendices.

The report will generally be submitted in July of each year to inform decision making by the authority.

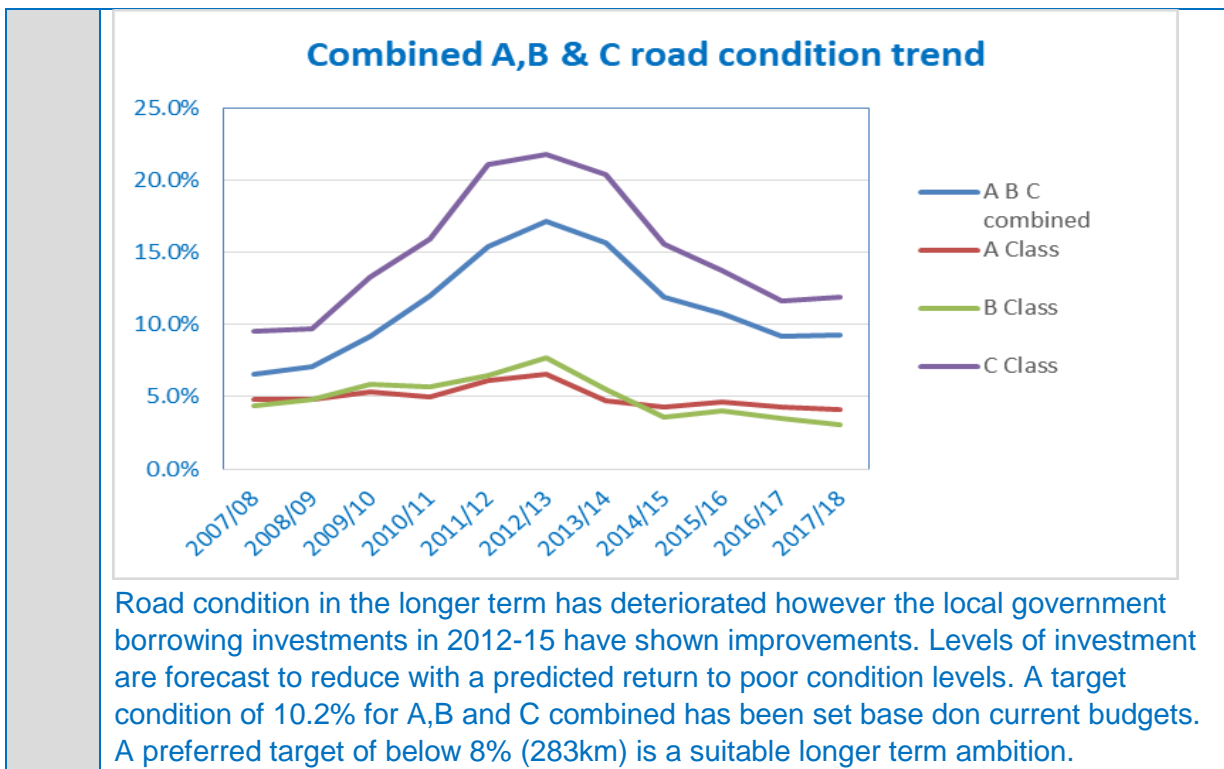
## Template Carriageway Annual Status and Options Report

(NOTE: template is for illustrative purposes only and based on draft data)

Asset Group: Carriageways																																												
The Asset	<ul style="list-style-type: none"> <li>The total length of carriageway is 3,536 km broken down as:</li> </ul>																																											
	<table border="1"> <thead> <tr> <th>Standard Road Classification</th> <th>Length (km)</th> </tr> </thead> <tbody> <tr> <td>A Roads (Urban)</td> <td>92</td> </tr> <tr> <td>A Roads (Rural)</td> <td>159</td> </tr> <tr> <td>B Roads (Urban)</td> <td>105</td> </tr> <tr> <td>B Roads (Rural)</td> <td>226</td> </tr> <tr> <td>C Roads (Urban)</td> <td>89</td> </tr> <tr> <td>C Roads (Rural)</td> <td>1193</td> </tr> <tr> <td>Unclassified Roads (Urban)</td> <td>402</td> </tr> <tr> <td>Unclassified Roads (Rural)</td> <td>1270</td> </tr> <tr> <td><b>Total</b></td> <td><b>3536</b></td> </tr> </tbody> </table>		Standard Road Classification	Length (km)	A Roads (Urban)	92	A Roads (Rural)	159	B Roads (Urban)	105	B Roads (Rural)	226	C Roads (Urban)	89	C Roads (Rural)	1193	Unclassified Roads (Urban)	402	Unclassified Roads (Rural)	1270	<b>Total</b>	<b>3536</b>	<table border="1"> <thead> <tr> <th>Road Hierarchy</th> <th>Length (km)</th> </tr> </thead> <tbody> <tr> <td>Strategic Route</td> <td>108</td> </tr> <tr> <td>Main Distributor</td> <td>148</td> </tr> <tr> <td>Secondary distributor</td> <td>522</td> </tr> <tr> <td>Link road</td> <td>1166</td> </tr> <tr> <td>Local access road</td> <td>323</td> </tr> <tr> <td>Minor roads</td> <td>1108</td> </tr> <tr> <td>Lanes</td> <td>34</td> </tr> <tr> <td>Green lane/track</td> <td>127</td> </tr> <tr> <td><b>Total</b></td> <td><b>3536</b></td> </tr> </tbody> </table>		Road Hierarchy	Length (km)	Strategic Route	108	Main Distributor	148	Secondary distributor	522	Link road	1166	Local access road	323	Minor roads	1108	Lanes	34	Green lane/track	127	<b>Total</b>	<b>3536</b>
	Standard Road Classification	Length (km)																																										
	A Roads (Urban)	92																																										
	A Roads (Rural)	159																																										
	B Roads (Urban)	105																																										
	B Roads (Rural)	226																																										
	C Roads (Urban)	89																																										
	C Roads (Rural)	1193																																										
	Unclassified Roads (Urban)	402																																										
Unclassified Roads (Rural)	1270																																											
<b>Total</b>	<b>3536</b>																																											
Road Hierarchy	Length (km)																																											
Strategic Route	108																																											
Main Distributor	148																																											
Secondary distributor	522																																											
Link road	1166																																											
Local access road	323																																											
Minor roads	1108																																											
Lanes	34																																											
Green lane/track	127																																											
<b>Total</b>	<b>3536</b>																																											
<ul style="list-style-type: none"> <li>Carmarthenshire has the second largest highway network in Wales</li> </ul>																																												
Valuation	<table border="1"> <tbody> <tr> <td>Gross Replacement Cost (£000)</td> <td>£3,200,972</td> </tr> <tr> <td>Depreciated Replacement Cost DRC (£000)</td> <td>£2,458,758</td> </tr> <tr> <td>Annualised Depreciation Charge ADC</td> <td>£32,689,000</td> </tr> </tbody> </table>		Gross Replacement Cost (£000)	£3,200,972	Depreciated Replacement Cost DRC (£000)	£2,458,758	Annualised Depreciation Charge ADC	£32,689,000	<ul style="list-style-type: none"> <li>The annualised depreciation charge £32.6m represents the assessed amount by which the carriageway asset will depreciate in one year if no investment in asset renewal is made.</li> <li>Planned maintenance expenditure of £7m compares with £32.6m of assessed depreciation.</li> <li><b>Note:</b> DRC is the current cost of replacing the asset with its modern equivalent asset, less deductions for physical deterioration and impairment. ADC is the estimated annual depreciation cost.</li> </ul>																																			
	Gross Replacement Cost (£000)	£3,200,972																																										
	Depreciated Replacement Cost DRC (£000)	£2,458,758																																										
	Annualised Depreciation Charge ADC	£32,689,000																																										
<p>The highway assets are valued at £3.2 billion based on the 2016/17 WGA asset valuation with annual depreciation assessed at £32.6 m (equates to 1% of the asset value).</p>																																												

Summary of work during last 12 months	<p>Capital and revenue investment in carriageway surfacing of £1,728k provided the following outputs:</p> <ul style="list-style-type: none"> <li>• Resurfacing – 3.8km</li> <li>• Surface dressing – 74km</li> </ul> <p>This totals 77.8km or 0.2% of the network length.</p> <p>Reactive maintenance (revenue) resulted in 1633 recorded pothole repairs.</p>	<p>Capital Expenditure 17-18 Highway Surfacing £750,000</p>  <p>Surfacing works (corrective) accounted for 60% of the Capital expenditure whilst thin surfacing or surface dressing (preventative) accounted for 40%.</p>																												
	<p>The current approach is to maintain road condition using a combination of corrective and preventative treatments. We will use the network hierarchy to prioritise investment within the current budget resources. On lower classes of road this will result in a more reactive approach with priority given to safety defects.</p>																													
Expenditure Summary by category	<table border="1"> <thead> <tr> <th></th> <th>Cost Category</th> <th>£</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Capital</td> <td>Planned Maintenance - Corrective</td> <td>£450,000</td> <td>• 3.8km Resurfacing</td> </tr> <tr> <td>Planned Maintenance - Preventative</td> <td>£1,278,000</td> <td>• 74km Surface Dressing</td> </tr> <tr> <td rowspan="5">Revenue</td> <td>Routine Cyclic Maintenance</td> <td>£2,699,000</td> <td>• Cyclic gangs &amp; routine works</td> </tr> <tr> <td>Routine – Reactive Repairs (emergency)</td> <td>£190,000</td> <td>• Pothole repairs etc.</td> </tr> <tr> <td>Routine – Reactive Repairs (non-emergency)</td> <td>£1,650,000</td> <td>• Drainage and surface repairs, sign repairs</td> </tr> <tr> <td>Routine – Inspection &amp; Survey</td> <td>£260,000</td> <td>• Asset management &amp; condition surveys</td> </tr> <tr> <td>Operating Costs</td> <td>£1,574,000</td> <td>• Includes Winter Maintenance</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• The above cost categories are based on groupings developed for national reporting and to inform budget planning. The outputs stated are high level only and for illustrative purposes.</li> <li>• These cost groupings are based on currently available data. As we develop improved tracking and recording the details and breakdown will improve.</li> </ul>				Cost Category	£	Output	Capital	Planned Maintenance - Corrective	£450,000	• 3.8km Resurfacing	Planned Maintenance - Preventative	£1,278,000	• 74km Surface Dressing	Revenue	Routine Cyclic Maintenance	£2,699,000	• Cyclic gangs & routine works	Routine – Reactive Repairs (emergency)	£190,000	• Pothole repairs etc.	Routine – Reactive Repairs (non-emergency)	£1,650,000	• Drainage and surface repairs, sign repairs	Routine – Inspection & Survey	£260,000	• Asset management & condition surveys	Operating Costs	£1,574,000	• Includes Winter Maintenance
	Cost Category	£	Output																											
Capital	Planned Maintenance - Corrective	£450,000	• 3.8km Resurfacing																											
	Planned Maintenance - Preventative	£1,278,000	• 74km Surface Dressing																											
Revenue	Routine Cyclic Maintenance	£2,699,000	• Cyclic gangs & routine works																											
	Routine – Reactive Repairs (emergency)	£190,000	• Pothole repairs etc.																											
	Routine – Reactive Repairs (non-emergency)	£1,650,000	• Drainage and surface repairs, sign repairs																											
	Routine – Inspection & Survey	£260,000	• Asset management & condition surveys																											
	Operating Costs	£1,574,000	• Includes Winter Maintenance																											





## Carriageway Investment Options

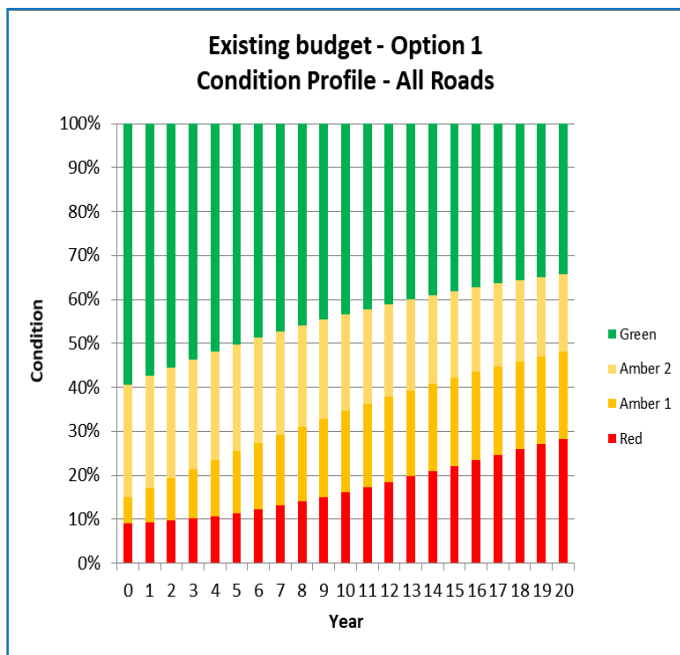
There are 3 investment options that have been considered for comparison:

Budget year/ Option	17/18 - £000	18/19 - £000	19/20 - £000	20/21 - £000	2021/22 £000	2022/23 £000
<b>Option 1 – Existing budgets</b>	750	2800	600	600	600	600
<b>Option 2 – Moderate increase</b>	750	2800	800	800	2100	2100
<b>Option 3 – Steady State</b>	6000	6000	6000	6000	6000	6000

The following options show the predicted levels of road deterioration using a national model using known treatment costs and current condition values from SCANNER data. The condition indicators are as follows:

- Green – As new condition - No planned works anticipated in next 3 years
- Amber 2 – Preventative maintenance on 3-5 year programme
- Amber 1 – (Imminent Red) Works should be planned by Year 3 – part Preventative/Corrective
- Red – Maintenance work needed now – Corrective maintenance

### Option 1 Existing budgets

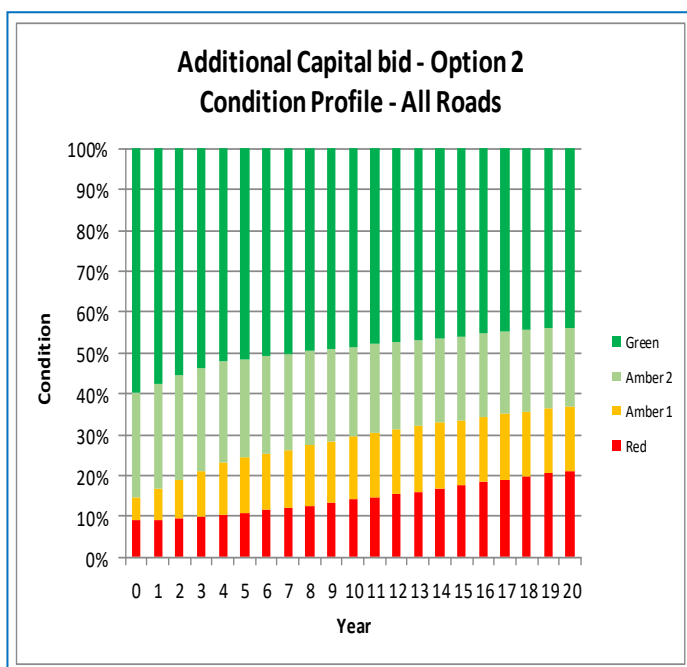


The percentage of Red increases from 9% (311km) to 16% (553km) at ten years and 28% (967km) at 20 yrs.

The percentage of Green falls from 59% to 43% at ten years and 34% at 30 years. **A reduction of 863km of highway in a good condition.**

### Option 2 – Moderate increase

Based on additional funding over and above Option 1 (existing Capital 5 year indicative budgets).



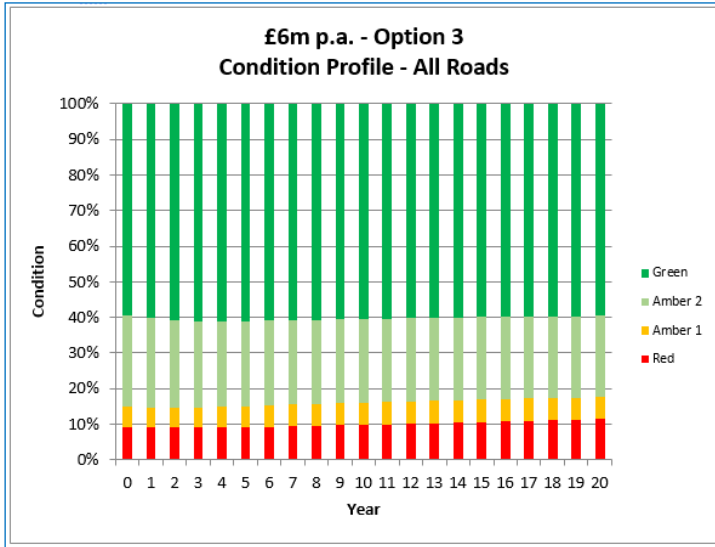
The percentage of Red increases from 9% (311km) to 14% (484km) at ten years and 21% (726km) at 20 yrs.

The percentage of Green falls from 59% to 48% at ten years and 43% at 30 years. **A reduction of 550km of highway in a good condition.**

However this is an improvement of 313km 'Green' over current budget levels (option 1).

### Option 3 - Steady State Investment

A more suitable level of investment of £6,000,000 per annum.



The percentage of Red increases from 9% (311km) to 10.5% (362km) at ten years and 12.5% (432km) at 20 yrs.

The percentage of Green increases from 59.5% to 62% at ten years and 61% at 30 years. An increase of 34km of highway in a good condition.

This provides for an almost Steady state and maintains the highway network to a level consistent to overall current condition levels.

### Carriageway Asset Recommendation

Reductions in preventative maintenance are leading to higher levels of reactive repair placing further pressure on the reducing resources. Unplanned works are by nature less economical and increase safety risk for road users and increased risks to the authority due to potential personal injury or damage claims. In addition unplanned works are less environmentally friendly due to wasted resources and the short term benefits.

The carriageway asset is significant and requires long term investment to protect the investment and provide fit for purpose transport for future generations. The authority should consider the longer term impact of reduced budget levels and develop a strategy to return to a steady state funding level.

## Part 4

### 4.1 Highway Maintenance Manual (HMM)

The HMM will be developed separately to this document and in line with the policies and objectives framework set out in Parts 1 and 2.

The HMM will set out the way we plan, prioritise, manage, maintain and operate our highway infrastructure assets in the day to day delivery of the highway maintenance service. It will define key areas including:

- Statutory responsibilities
- Customer response
- Inspection management
- Condition Assessment
- Service and investigatory levels
- Programming and prioritisation
- Lifecycle planning
- Inventory management
- Data and Information management
- Emergency response
- Routine maintenance management
- Winter Service and adverse weather plan
- Environmental impact
- Boundary interfaces (neighbours including local authorities and Trunk Roads)
- Streetworks and Licencing
- Technical approval procedures
- New asset handover requirements

The HMM will develop as a portfolio of specific manuals, some of which are in place and some of which will be redrafted to reflect how we manage elements of the asset in line with the risk based approach. As we adapt to changing demands, best practice, available resources, emerging technology and improved information, aspects of the plan will be updated. We will work in a collaborative manner with neighbours and other local authorities with engagement through the County Surveyors Society Wales (CSSW) asset management project.

Carmarthenshire County Council  
Environment Directorate  
Highways and Transport Division  
Parc Myrddin  
Carmarthen  
SA31 1HQ

