

Document Pack



sirgar.llyw.cymru

carmarthenshire.gov.wales

THURSDAY, 18 NOVEMBER 2021

TO: ALL MEMBERS OF THE ENVIRONMENTAL & PUBLIC PROTECTION SCRUTINY COMMITTEE

I HEREBY SUMMON YOU TO ATTEND A VIRTUAL MEETING OF THE **ENVIRONMENTAL & PUBLIC PROTECTION SCRUTINY COMMITTEE** WHICH WILL BE HELD AT **10.00 AM** ON **THURSDAY, 25TH NOVEMBER, 2021** FOR THE TRANSACTION OF THE BUSINESS OUTLINED ON THE ATTACHED AGENDA.

Wendy Walters

CHIEF EXECUTIVE

Democratic Officer:	Janine Owen
Telephone (Direct Line):	01267 224030
E-Mail:	JanineOwen@carmarthenshire.gov.uk

Wendy Walters Prif Weithredwr, *Chief Executive*,
Neuadd y Sir, Caerfyrddin. SA31 1JP
County Hall, Carmarthen. SA31 1JP

ENVIRONMENTAL & PUBLIC PROTECTION SCRUTINY COMMITTEE

14 MEMBERS

PLAID CYMRU GROUP – 7 MEMBERS

- | | | |
|----|------------|--------------------------------|
| 1. | Councillor | Karen Davies |
| 2. | Councillor | Mansel Charles |
| 3. | Councillor | Jeanette Gilasbey |
| 4. | Councillor | Dorian Phillips |
| 5. | Councillor | Susan Phillips |
| 6. | Councillor | Dai Thomas |
| 7. | Councillor | Aled Vaughan Owen (Vice Chair) |

LABOUR GROUP – 3 MEMBERS

- | | | |
|----|------------|--------------------|
| 1. | Councillor | Penny Edwards |
| 2. | Councillor | Tina Higgins |
| 3. | Councillor | John James (Chair) |

INDEPENDENT GROUP – 3 MEMBERS

- | | | |
|----|------------|---------------|
| 1. | Councillor | Arwel Davies |
| 2. | Councillor | Joseph Davies |
| 3. | Councillor | Alan Speake |

NEW INDEPENDENT GROUP – 1 MEMBER

- | | | |
|----|------------|-------------|
| 1. | Councillor | Eryl Morgan |
|----|------------|-------------|

AGENDA

1. APOLOGIES FOR ABSENCE
2. DECLARATIONS OF PERSONAL INTEREST INCLUDING ANY PARTY WHIPS ISSUED IN RELATION TO ANY AGENDA ITEM.
3. PUBLIC QUESTIONS (NONE RECEIVED)
4. ENVIRONMENTAL & PUBLIC PROTECTION TASK & FINISH GROUP 2021/22 - UPDATE 5 - 16
5. CARMARTHENSHIRE COUNTY COUNCIL (CCC) ELECTRIC VEHICLE CHARGING INFRASTRUCTURE STRATEGY - DECARBONISING TRANSPORT 17 - 86
6. HIGHWAYS ASSET MANAGEMENT PLAN (HAMP) MAINTENANCE MANUAL 87 - 128
7. HIGHWAY ASSET MANAGEMENT PLAN - ANNUAL STATEMENT REPORT 2021 129 - 170
8. FORTHCOMING ITEMS 171 - 184
9. TO SIGN AS A CORRECT RECORD THE MINUTES OF THE MEETING OF THE COMMITTEE HELD ON THE 4TH OCTOBER 2021 185 - 196

This page is intentionally left blank

ENVIRONMENTAL & PUBLIC PROTECTION SCRUTINY COMMITTEE

25TH NOVEMBER 2021

ENVIRONMENTAL & PUBLIC PROTECTION TASK & FINISH GROUP 2021/22 UPDATE

Review the Management of Fly Tipping within Carmarthenshire

To consider and comment on the following issues:

To consider, receive and accept the update of the Task and Finish Group and the Group's decision to defer the review until after the 2022 elections.

Reasons:

- The Task & Finish Group is required to report the progress of its work to its main scrutiny committee.
- To inform the Committee and seek that the Task and Finish group's decision to defer the review on the management of fly-tipping within Carmarthenshire until the 2022 municipal year be accepted.

To be referred to the Cabinet for decision: NO

Cabinet Member Portfolio Holder:

Councillor P. M. Hughes (Public Protection)
Councillor H.A.L. Evans (Environment)

Directorate:

Chief Executive's

Name of Head of Service:

Linda Rees-Jones

Report Author:

Councillor John James

Janine Owen

Designations:

Head of Administration & Law

Chair of Environmental and
Public Protection Scrutiny
Committee
Task and Finish Group Chair

Democratic Services Officer

Tel Nos. / E-Mail Addresses:

01267 224010

lrjones@carmarthenshire.gov.uk

01267 224030

johnjames@carmarthenshire.gov.uk

01267 224030

JanineOwen@carmarthenshire.gov.uk

EXECUTIVE SUMMARY

ENVIRONMENTAL & PUBLIC PROTECTION SCRUTINY COMMITTEE

25TH NOVEMBER 2021

ENVIRONMENTAL & PUBLIC PROTECTION TASK & FINISH GROUP 2021/22 UPDATE

Review the Management of Fly-Tipping within Carmarthenshire

At its meeting on 2nd July 2021, the Environmental and Public Protection Scrutiny Committee endorsed the Planning and Scoping Document - To Review the Management of Fly Tipping within Carmarthenshire, agreeing its membership and that the review be commenced in September 2022.

The Task and Finish Group held its first meeting on 8th September 2021 and as part of its desktop review received a presentation from Officers on Fly-tipping. The presentation provided information which included, definition of fly-tipping, types, processes, statistics, legislation drivers and subsequent discussions regarding the challenges that the teams are being faced with.

In addition to the above, with the consent of the Chair, Group Members received a verbal update from the Director of Environment regarding internal matters that had arisen since the Scrutiny Committee agreement on its Task and Finish arrangements and the endorsement of the review planning and scoping document in July.

The Group, having considered all the information received, recognised that communities all over Carmarthenshire were having to endure an increase in fly-tipping which required specific attention. However, in light of the information received from the Director, the Group Members were sympathetic to the internal matters raised and felt that;

- by continuing the review at this time would place additional pressure on the limited staff resources available to assist the review due to staff having to prioritise their work in order to effectively resolve matters in relation to Planning.
- The impending staff re-alignment could essentially impact upon the current process of the internal management of fly-tipping. Therefore, allowing the completion of a staff realignment to take place before the commencement of the research would better inform the review.

Group Members were mindful that a delay in the commencement of the review to allow for the completion of the above, coupled with the timing of the upcoming Elections in May 2022, would further complicate and impede the submission of the final report to Cabinet prior to the pre-election period.

Therefore, the Group would like to report to the Members of the Environmental and Public Protection Scrutiny that after considering all the information provided, members of the Task and Finish Group:-

UNANIMOUSLY AGREED THAT THE TASK AND FINISH REVIEW ON THE MANAGEMENT OF FLYTIPPING WITHIN CARMARTHEN BE DEFERRED UNTIL AFTER THE ELECTIONS 2022.

The Group would like to emphasise to Scrutiny Committee Members that whilst this agreement was not taken lightly, the agreement to defer the review to 2022 would provide the best opportunity for Group Members to undertake the review and base its research on up-to-date information which would formulate valid conclusions and recommendations to Cabinet.

Next Steps

Based on the Groups decision to defer the review, the Environmental and Public Protection Scrutiny Committee, will have an opportunity to include the Task and Finish Planning and Scoping Document on the review of the management of fly-tipping within Carmarthenshire and reaffirm the Membership of the Task and Finish Group by including it on the Committee's Forward Work Programme 2022/23.

REPORT ATTACHED?

**NO:
Notes of the Task and Finish Group [8th September 2021]**

IMPLICATIONS

I confirm that other than those implications which have been agreed with the appropriate Directors / Heads of Service and are referred to in detail below, there are no other implications associated with this report.

Signed: **Linda Rees-Jones** **Head of Administration & Law**

Policy, Crime & Disorder and Equalities	Legal	Finance	ICT	Risk Management Issues	Staffing Implications	Physical Assets
NONE	NONE	NONE	NONE	NONE	YES	NONE

CONSULTATIONS

I confirm that the appropriate consultations have taken in place and the outcomes are as detailed below:

Signed: **Linda Rees-Jones** **Head of Administration & Law**

1. **Local Member(s)** – N/A
2. **Community / Town Council** – N/A
3. **Relevant Partners** – N/A
4. **Staff Side Representatives and other Organisations** – Officers from the Public Protection and Environment teams have been made aware of the Groups decision.

Section 100D Local Government Act, 1972 – Access to Information
List of Background Papers used in the preparation of this report:

THESE ARE DETAILED BELOW:

Title of Document	File Ref No. / Locations that the papers are available for public inspection
Environmental and Public Protection Scrutiny Committee Minutes- 2 nd July 2021	https://democracy.carmarthenshire.gov.wales/ieListDocuments.aspx?Cid=134&Mid=4370&Ver=4

Environmental & Public Protection Scrutiny Committee Task and Finish Group

A Review on the Management of Fly Tipping within Carmarthenshire

Wednesday, 8th September 2021
10:00am

ACTION NOTES

Present:

Name		Party
Cllr. Arwel Davies	AD	Independent
Cllr. Tina Higgins	TH	Labour
Cllr. John James (Chair)	JJ	Labour
Cllr. Jeanette Gilasbey	JG	Plaid Cymru
Cllr. Dorian Phillips	DP	Plaid Cymru
Officers		
Sue Watts	SW	Environmental Protection Manager
Steve Raymond	SR	Environmental Enforcement Officer
Michael Roberts	MR	Local Environment Quality Policy Officer
Robert David Williams	RDW	Public Health Lead
Ruth Mullen	RM	Director of Environment (Agenda 6)
Janine Owen	JO	Democratic Services Officer

Virtual Meeting: 10:00am – 12:00pm

[Note: At the start of Agenda Item 6, the meeting was adjourned at 11:20am to allow the Director of Environment to join the meeting at the agreed time of 11:45am. The meeting recommenced at 11:45am.]

Item No.	Discussion Topic / Agreed Action	By Who
1.	NOMINATION OF CHAIR	
	The Group appointed Cllr. John James as Chair of the Task & Finish Group.	
2.	APOLOGIES	
	Apologies were received from Councillor D. Thomas.	

3.	DECLARATIONS OF PERSONAL INTEREST	
	There were no declarations of interest.	
4.	TASK AND FINISH PROTOCOL	
	<p>Members received the Scrutiny Committee Investigations/Task and Finish Protocol. The Chair explained that the protocol included details of how Task and Finish reviews operate and the process.</p> <p>Members were encouraged to familiarise themselves with the Protocol.</p>	
5.	DESKTOP RESEARCH	
	5.1 PRESENTATION BY OFFICERS	
	<p>The Group received a presentation by the Environmental Protection Manager which covered the following topics:-</p> <ul style="list-style-type: none"> • What is fly tipping? • Current Legislation/Policy • Current process <ul style="list-style-type: none"> ▪ Public Land ▪ Private Land • Minerals and Waste – Planning Section • Possible enforcement actions • Statistics <ul style="list-style-type: none"> ▪ Reported service requests over last 5 years (Private Land and Public Land) ▪ Number of actions related to Waste SR over last 5 years (Private Land and Public Land) ▪ Fly tipping Incidents (recording on Flymapper) • Drivers • Partners • Financial data <ul style="list-style-type: none"> ▪ Public Protection ▪ Waste and Environmental Services • Impact on Communities <p>[Note: The presentation provided is attached]</p> <p>Throughout the presentation, the Environmental Protection Manager provided Group Members with further details, provided context and explained the difficulties associated with flytipping.</p> <p>Members of the Group noted that:-</p> <p>Flytipping is a significant issue, affecting both rural and urban communities County wide.</p>	

The diverse nature of different types of fly tipping, both in scale, location and make of material means that a 'one size fits all' approach may not be viable, and each case has be considered individually.

The issue of flytipping costs an estimated £86m-£186 million every year to investigate and clear up. The costs falls on taxpayers and private landowners.

Fly-tipping poses a threat to humans and wildlife, damages our environment, and spoils our enjoyment of our towns and countryside.

Fly-tipping undermines legitimate waste businesses where illegal operators undercut those business who operate within the law. At the same time, the reputation of legal operators is undermined by rogue traders.

There are several legislative requirements appertaining to flytipping:-

- Environmental Protection Act 1990
- Well-being of Future Generations Act 2015
- Fly tipping Protocol (Wales)
- Welsh Government Litter and Fly Tipping Plan
- Public Services Board Wellbeing Plan 2016-2021 (currently under review)
- Code of Practice Litter and Refuse which identifies a timescale of 4 working days to clear public land.

In addition, the matter of flytipping coincides with the Council's vision - 'Life is for living, let's start, live and age well in a healthy, safe and prosperous environment'

And is relevant to the Councils Corporate Strategy 2021-2023 and well -being objectives namely 8,9 and 12

<http://intranet/media/654960/corporate-strategy-18-23.pdf>

The Environment Protection Manager explained the current management process to Group Members. A synopsis is provided below:-

- **APP** – Initial call will be received by Customer Services who will record the matter on the APP system to either Public Protection or the Environment and Waste team.
- **Entered onto Fly Mapper** – Welsh Government initiative – only 4 Authorities are currently utilising (Rhondda Cynon Taff, Gwynedd, Conwy and Carmarthenshire)
 - This system enables the team to run reports, analyse and interpret details.
- **TASK** – used to identify 'jobs' for cleansing team for clearance; some may be incidents on the APP and Fly Mapper

- **ARCUS** – is a system used by the Planning Department; calls received through customer service and the Planning HWB currently manage as Housing Associations report fly tipping on their land to Local Authority to remove.

It was explained how a call was managed depended on where the flytipping had occurred – private land or public land. Unfortunately, often there was confusion and a flytipping incident could be reported to different teams resulting in a different teams deploying resources which would not be required.

The Environmental Protection Manager explained the details in terms of the statistical trends relating reporting service requests over last 5 years on both Private land and public land and highlighted potential reasons.

- Impact of Covid 19
- Welsh Government directive
 - Closure of Household Waste Recycling Centres (HWRC's) 7 weeks first lockdown to 18th May but restricted service as reopened
 - 2 weeks Firebreak 23rd October to 9th November
- Bulky waste collections also suspended initially
- People working from home/ furloughed - Households clear outs/ DIY/ gardening – what do you do with the waste? Increase in bonfires/ fly tipping etc
- Increase in illegal waste carriers – households not aware of their duty of care/ potential fines
- April to June 2020, Municipal waste collected was 18.5% down compared to same period last year this was likely to be attributed largely to the closure of HWRCs.
- Introduction of appointments system of benefit to the service (aim safe operation) (controllable/ proof of residency required/ online booking/ permits required some vehicles/ blue badges exemptions) but is it putting people off?
- Reopening HMRCs required additional staff resource and infrastructure works
- The Councils website page could be improved and utilised to provide a method of booking offline?

The Environmental Protection Manager explained the declining trend in relation to the number of actions on private land related to waste SR over last 5 years:-

- COVID from March 2020
- Restrictions in movement and ability to visit sites
- Cases difficult to remedy/resolve

In respect of the Fly tipping Incidents recorded on Fly Mapper, when the application was first piloted in 2017, the main users were the Environmental Enforcement Officers, in 2018 a further 9 Fly Mapper units were acquired which were issued to key Cleansing Operatives who dealt with Fly tipping on a regular basis. This enabled Fly tipping incidents to be recorded as and when the operatives come across them. Currently there are 58 registered users of Fly Mapper within the authority with 23 active users that have used the application since the 1st April 2021 to current date.

It was emphasised that each report is logged as a separate issue which may not be linked to the same incident which would give a false understanding of the number of incidents in County.

With regard to the figures on the number of actions related to waste SR over last 5 years, it was reported that unfortunately, there was no clarity on the information being reported in that there was a different reporting across the board and some authorities included other matters such as private land reporting, dog fouling, curtilage of private properties.

Carmarthenshire just reported fly tipping on public land on the Fly mapper application.

It was highlighted that the figures within the table indicated that Carmarthenshire was one of the worst Authorities for fly tipping problems and that Wales Audit had recently picked this up as part of their audit on waste services.

Group members were informed of the possible drivers that were causing issues:-

- No sifting allowed under Covid regulations – unable to trace source of the flytipping
- Court closures – backlog of prosecutions.
- Education and awareness face to face engagements suspended.
- Financial gain (illegal/ criminal activity) or financial savings on disposal costs
- Lack of disposal facilities/ access to them
- Laziness/ someone else will clear the work
- Use of social media to offer services is closed to Authorities. Difficult for Local Authorities to gain access to Facebook pages for investigation purposes.

The current partners that the authority worked with was explained to Group Members

Natural Resource Wales (NRW) – There are 7 in Waste Regulation Team in South West Wales area covering Bridgend, Swansea, Neath Port Talbot, Carmarthenshire and Pembrokeshire

It was recognised that multiple partners were dealing with same sites/individuals with little or not enough resources to resolve the matter. This was resulting in multiple uncoordinated visits to individual sites - waste of resource.

Partners currently meet on 6 weekly basis to discuss strategies and individual cases/individuals; share information for coordinated approach; lead sections/officers for cases with others supporting evidence/resources. It was reported that these meeting were working well.

In addition there were alternative agencies such as the *Department of Works and Pensions, VOSA, DVLA, HRMC and Landfill tax regime* were used for specific actions and afforded other ways of achieving positive results in relation to well- known criminals.

The Environmental Protection Manager explained to Group Members the financial impact of flytipping. The figures provided within the presentation were an estimate for 2020/21.

The following points were raised:-

- In relation to a query raised in relation to the table displaying the number of actions related to waste SR against other Authorities in Wales, the Local Environment Quality Policy Officer explained that in addition to a discrepancy in the reporting methods between Local Authorities, Flytipping is not a statutory function and therefore not all Authorities reported flytipping which would inevitably provide a distorted record of the number of incidents.
- With the difficulties in engaging with NRW, it was asked how officers were managing? The Environment Protection Manager stated that whilst it had been challenging to engage with NRW it was appreciated the recent resource difficulties in terms of staff that NRW had faced particularly during the pandemic. However, it was reported that communications had improved and that NRW were assisting with the high complex matters.
- In response to a query regarding the locations of flytipping, the Local Environment Quality Policy Officer stated that there wasn't any consistency with regards to the locations. Measures would be put in place to prevent repeat offences but the public were becoming more savvy with their choice of location
- It was asked if there was any stipulation within planning application regarding contractors / householders to properly and

	<p>legally dispose of waste? The Local Environment Quality Policy Officer stated that he doesn't believe that there is any stipulation or requirement within any stage of the planning process however within the consultation stage it is highlighted that there is a duty of care on householders to ensure waste is disposed of correctly.</p> <ul style="list-style-type: none"> It was raised that lockdown saw an increase in advertising on the 'Market Place' on Facebook to remove unwanted litter. Many of which claiming that they have the correct licence to dispose, it was reported that often this isn't the case and that the rubbish is dumped elsewhere either on public or private land (flytipping). Unfortunately, many of the pages/groups are 'closed groups' and Local Authorities application to join are declined. This prevents any advice being placed on the pages and or utilising the pages for investigative purposes. 	
6.	<p>REVIEW AND AGREE THE AIMS SET OUT WITHIN THE PLANNING AND SCOPING DOCUMENT</p>	
	<p>[Note: at this point the meeting was adjourned at 11:20am to allow the Director of Environment to join the meeting at the agreed time of 11:45am. The meeting recommenced at 11:45am.]</p> <p>With the consent of the Chair, Group Members received an update from the Director of Environment.</p> <p>The Director of Environment explained that since the Scrutiny Committee's agreement on its Task and Finish arrangements and the endorsement of the review planning and scoping document in July a number of internal matters had arisen which may impact on the review. This included:</p> <ul style="list-style-type: none"> Limited staff resources available to assist the review at this time due to staff prioritising work in order to effectively resolve matters in relation to Planning. A staff re-alignment, due to take place later this year could essentially impact and improve upon the current process on the internal management of flytipping. Allowing the completion of a staff realignment to take place before any research would better inform the review. <p>The Democratic Services Officer advised Group Members that should they wish to postpone the continuation of the review until the completion of the staff re-alignment, the timing of the review may collide with the upcoming Elections in May 2022 impeding on timing of the review and submitting a final report to Cabinet prior to the pre-election period.</p>	

	<p>After having undertaken the first part of the desktop research by way of a presentation by Officers and in light of the subsequent information received by the Director of Environment, and advice in relation to the lead in time of the final report from Democratic Services Officer, the Group discussed the options on the best way to proceed.</p> <p>The Group strongly expressed that flytipping was an area of community interest and acknowledged it was an increasing problem which required attention. However, the group, sympathetic to the internal matters, acknowledged that by continuing the review at this time would place additional pressure on the limited staff available and the staff realignment could potentially modify the current process.</p> <p>Therefore, in order to provide the best opportunity for the Group to consider and utilise up-to-date information, it was proposed that the review be deferred until after the Elections 2022. This was duly seconded and following a unanimous vote of agreement, the proposal was carried.</p> <p>The Democratic Services Officer explained to Group Members that the Group should provide an update report on the Groups decision, outlining the reasons to inform the Environmental and Public Protection Scrutiny Committee.</p> <p>The Group explicitly expressed to be kept informed of the plans on the staff re-alignment.</p> <p>UNANIMOUSLY AGREED THAT THE TASK AND FINISH REVIEW ON THE MANAGEMENT OF FLYTIPPING WITHIN CARMARTHEN BE DEFERRED UNTIL AFTER THE ELECTIONS 2022.</p> <p><u>Actions</u></p> <p>Democratic Services to note that the Task and Finish Group unanimously agreed to defer the Review on the Management of fly tipping within Carmarthenshire <u>until the new scrutiny municipal year in 2022.</u></p> <p>An update Report to Environmental and Public Protection Scrutiny Committee – November 2021.</p> <p>Group Members to be kept informed of the plans on the staff re-alignment.</p>	<p>JO</p> <p>Chair/ JO</p> <p>RM</p>
	<p>Due to the Groups decision in Note 6 above it was agreed that the remainder of business would not be considered.</p>	

ENVIRONMENTAL AND PUBLIC PROTECTION SCRUTINY COMMITTEE

25TH NOVEMBER 2021

CARMARTHENSHIRE COUNTY COUNCIL (CCC) ELECTRIC VEHICLE CHARGING INFRASTRUCTURE STRATEGY – DECARBONISING TRANSPORT

Purpose:

To consider and comment on the proposed adoption of an Electric Vehicle Charging Infrastructure Strategy for the Council. The strategy will support the future development of electric vehicle charging infrastructure across the county to support the delivery of carbon reduction targets.

Reasons:

Carmarthenshire County Council is committed to de-carbonisation and has set a net zero target by 2030, having declared a climate emergency in 2019. Transport is one of the larger contributors to greenhouse gas emissions. Decarbonising the transport sector is fundamental to achieving the net zero targets. There is an increasing growth in the Electric Vehicles sector (EVs) to help reduce emissions and improve air quality. Electric vehicles will be part of the mix, hydrogen is also emerging as one of the options for the future. There is also a UK Government commitment to ban the sale of new petrol and diesel vehicles by 2030. An EV Infrastructure Strategy for Carmarthenshire is required to support the development of infrastructure to meet future demand.

Relevant scrutiny committee to be consulted YES

Cabinet Decision Required YES

Council Decision Required NO

CABINET MEMBER PORTFOLIO HOLDER:- Cllr. Hazel Evans, Environment.

Directorate:	Designations:	Tel: 01267 228150
Name of Head of Service: Stephen Pilliner	Head of Transportation and Highways	Email addresses: SGPilliner@Carmarthenshire.gov.uk
Report Author: Thomas Evans	Transport Planner – Strategy & Infrastructure	Tel: 01267 228258 Email addresses: tjevans@ Carmarthenshire.gov.uk

EXECUTIVE SUMMARY

ENVIRONMENTAL AND PUBLIC PROTECTION SCRUTINY COMMITTEE

25TH NOVEMBER 2021

CARMARTHENSHERE COUNTY COUNCIL (CCC) ELECTRIC VEHICLE CHARGING INFRASTRUCTURE STRATEGY- DECARBONISING TRANSPORT

The report sets out the proposal to adopt an Electric Vehicle Charging Infrastructure Strategy for Carmarthenshire to help deliver net zero carbon. Electric vehicles will be part of the mix in future, hydrogen powered vehicles are also emerging as one of the options for the future.

The strategy is the first step to establishing the requirements for Carmarthenshire's EV infrastructure network and provides an evidence base & recommendations to deliver a convenient, reliable, and accessible charging network that instils confidence amongst users. The County Council cannot deliver the strategy on its own. There is an important role for National Governments, the private sector, other public sector bodies and the County Council.

The strategy and development of the infrastructure aims to encourage the uptake of EVs for businesses, residents, and visitors.

Adoption of the strategy will allow for a structured evidence-based network to be created that will demonstrate a commitment to meeting net zero targets by 2030 and 2050. It will help demonstrate that Carmarthenshire is at the forefront of EV commitment within Wales.

Should the authority decide not to adopt the strategy it would leave the county vulnerable to losing out on future funding from Welsh Government and inhibit the delivery against the net zero carbon objective. With no strategy in place for this fast-moving area and with the ban of petrol and diesel cars in 2030 there is a real danger of not being able to facilitate and encourage a charging network that will support all residents, businesses and visitors.

It would also be a step back in terms of the considerable groundwork that has already been done to push Carmarthenshire forward in this field. The strategy contains 13 key policies specific to Carmarthenshire:

- **EV1** Facilitate the Provision and Delivery of Public EV Charge Points;
- **EV2** Maintain Parking Management Policies Supportive of EVs;
- **EV3** Encourage EV Charge Points at Key Employment Centres, and transport interchanges.;
- **EV4** Encourage the Use of EVs in the Fleet;
- **EV5** Trial New Technologies and Encourage Innovation;
- **EV6** Investigate ways to Encourage Charge Point Provision through the Planning Process;
- **EV7** Investigate incentives for Private Developers and Landowners to Provide Charge Points on Existing Developments and explore the potential for the use of S106 contributions.
- **EV8** Encourage Taxis and Public Transport Providers to Upgrade to EVs;
- **EV9** Provide Publicly Available Information About EV Charging Options;
- **EV10** Inform Businesses and Residents about opportunities to upgrade to EVs and develop a comms plan to support the EV Infrastructure Strategy.
- **EV11** Encourage Electric Car Clubs;
- **EV12** Work in Partnership with Other Organisations;
- **EV13** Continually Review and Refresh this Strategy .

DETAILED REPORT ATTACHED?	YES
---------------------------	-----

IMPLICATIONS

I confirm that other than those implications which have been agreed with the appropriate Directors / Heads of Service and are referred to in detail below, there are no other implications associated with this report:

Signed: **S.G.Pilliner**

Head of Transportation and Highways

Policy, Crime & Disorder and Equalities	Legal	Finance	ICT	Risk Management Issues	Staffing Implications	Physical Assets
YES	NONE	YES	NONE	NONE	YES	None

Policy, Crime & Disorder and Equalities

The strategy will enable and encourage the development of EV charging infrastructure and associated resources across the county to help achieve carbon reduction targets. This will help to reduce inequalities in terms of infrastructure provision and help to enable transition to EVs for those, for example, without off street parking.

Finance

No internal funding implications, however, the strategy can be used to support external funding applications to Welsh Government, Office for Zero Emissions vehicles etc.

Staffing Implications

The strategy is a live strategy and will be continually reviewed given the fast-moving changes to both policy and direction from Welsh Government.

Staff will be expected to update the strategy or secure funding to achieve this.

CONSULTATIONS

I confirm that the appropriate consultations have taken in place and the outcomes are as detailed below

Signed: S.G.Pilliner

Head of Transportation & Highways

1. Scrutiny Committee

The report is scheduled for Scrutiny Committee scheduled on 25th November 2021.

2. Local Member(s)

Not applicable.

3. Community / Town Council

Not applicable

4. Relevant Partners

Not applicable

5. Staff Side Representatives and other Organisations

Not applicable.

**CABINET MEMBER PORTFOLIO
HOLDERS AWARE/CONSULTED**

YES

Cllr. Hazel Evans and Cllr. Ann Davies support the report.

Section 100D Local Government Act, 1972 – Access to Information List of Background Papers used in the preparation of this report:

There are none.

This page is intentionally left blank

Electric Vehicle Charging Infrastructure Strategy

2021



Contents

Executive Summary.....	3
Vision Statement.....	5
1. Background.....	7
2. Electric Vehicles in Context.....	10
3. Policy Context.....	16
Welsh Government Policy.....	16
Southwest Wales Policy.....	20
Carmarthenshire County Council Policy.....	21
UK Policy.....	24
4. Baseline Context.....	29
5. Forecasting.....	41
6. Recommendations.....	50
7. Measuring Success.....	60
Annex A – Air Quality Management Areas.....	63

DRAFT

Executive Summary

Between 31 October - 12 November 2021, Glasgow is hosting the 26th United Nations (UN) Climate Change Conference of the Parties (COP26) to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change¹. Carmarthenshire County Council and the Welsh Government are committed to delivering net zero targets by 2030 and 2050 respectively, having both declared climate emergencies in 2019. As one of the larger contributors to greenhouse gas emissions and as set out in Llywbr Newydd decarbonising the transport sector is fundamental to achieving environmental ambitions. With increasing emphasis placed upon more sustainable forms of travel, the role of Electric Vehicles (EVs) to reduce emissions and improve air quality, alongside commitments to ban the sale of new petrol and diesel vehicles by 2030², a regional EV Infrastructure Strategy for Carmarthenshire is required to ensure the EV charging infrastructure fulfils future demand. Hydrogen is also emerging as an energy source for the vehicle sector as are other interventions such as car sharing and electric bikes.

As the first step to establishing the unique requirements for Carmarthenshire's EV infrastructure network, this strategy provides an evidence base and recommendations for a convenient, reliable, and accessible charging network that instils confidence amongst users. It also aims to encourage uptake of EVs for businesses, residents, and visitors by demonstrating the availability of a strategic infrastructure network when and where needed Carmarthenshire's Vision is as follows:

“to develop and promote a network of electric charging points, that provides for and encourages future growth in EV use, and in doing so future proofs our transport network and contributes to local and global pollution reductions”

The strategy is structured into three sections:

- baseline,
- forecasting, and
- recommendations.

It complements recent publications, such as Welsh Government's 'EV Charging Strategy for Wales'³ (March 2020), drawing upon regional forecasts and taking into account projected infrastructure requirements.

The baseline section reviews relevant national and local policies to highlight key commitments and references broader UK policies for context. It also presents an EV Charge Point (EVCP) assessment of the current number, type and location of

¹ <https://ukcop26.org/>

² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf

³ <https://gov.wales/sites/default/files/publications/2021-03/electric-vehicle-charging-strategy-wales.pdf>

EVCPs already installed using publicly available data, analyses EV uptake to date and presents a grid capacity assessment from available data/engagement with the distribution network operator (DNO), Western Power Distribution (WPD).

The forecasting section is based on Welsh government forecasts for projected EVCP requirements as well as integrated market research. 'Fast charger dominant' and 'rapid charger dominant' scenarios are extracted from the Welsh Government EV Charging Strategy to ascertain specific forecasts for Carmarthenshire.

The final section entails recommendations for the strategy, including developing solutions based on three 'use-cases': (1) Residential, (2) Destination and (3) Strategic Road Networks (SRN). Residential charging focuses on domestic (on, and off-street) charging, where EV owners will typically use a slow charger to charge their vehicles over a long period of time. Destination charging refers to charging facilities for customers which may act as a means of improving customer experience, commonly using fast charging points that at locations such as gyms, supermarkets, public parks, tourist locations and even workplaces. SRN charging refers to chargepoints used to top up vehicles during long journeys along Carmarthenshire's SRN. A typical charging location along the SRN would be motorway service stations. Options for procurement and operating models are detailed, as well as 'complimentary measures' (i.e. non-EVCP interventions such as EV car clubs or partnerships with organisations). A key recommendation is to review and refresh this strategy continually in order to keep it relevant. The following recommendations are made to facilitate realisation of Carmarthenshire's vision for accelerated uptake of EVs throughout the region:

- EV1 - Facilitate the Provision and Delivery of Public EV Charge Points
- EV2 - Maintain Parking Management Policies Supportive of EVs
- EV3 - Encourage EV Charge Points at Key Employment Centres, and transport interchanges.
- EV4 - Encourage the Use of EVs in Their Fleet.
- EV5 - Trial New Technologies and Encourage Innovation
- EV6 - Investigate ways to Encourage Charge Point Provision through the Planning Process
- EV7 - Investigate incentives for Private Developers and Landowners to Provide Charge Points on Existing Developments and explore the potential for the use of S106 contributions.
- EV8 - Encourage Taxis and Public Transport Providers to Upgrade to EVs
- EV9 - Provide Publicly Available Information About EV Charging Options
- EV10 - Inform Businesses and Residents about opportunities to upgrade to EVs and develop a comms plan to support the EV Infrastructure Strategy.
- EV11 - Encourage Electric Car Clubs
- EV12 - Work in Partnership with Other Organisations
- EV13 – Continually Review and Refresh This Strategy

Vision Statement

This Strategy sets out a vision, supported by relevant policies, to encourage and promote the development of infrastructure necessary to enable employees, residents, communities, visitors, businesses and other organisations to use EVs as part of their everyday routine/use. It will also outline ways in which Carmarthenshire County Council (CCC) will encourage and enable EV use across all sectors.

EV users in Carmarthenshire should be confident that they will be able to recharge their vehicles easily and quickly at convenient locations. The uptake of EVs will lead to improvements in air quality in Carmarthenshire, as well having wider benefits such as helping mitigate climate change through decarbonisation of transport.

Vision: “To develop and promote a network of electric charging points, that provides for and encourages future growth in EV use, and in doing so future proofs our transport network and contributes to local and global pollution reduction targets”

With the increasing number of EVs being sold and national policies set to increase uptake further, it is important we work towards and support the introduction of more charging points across the County. This strategy is the first step in encouraging this and illustrates our commitment as a Council to raising the profile of EVs and their many benefits.

Supporting the deployment of EV infrastructure is an important part of future proofing Carmarthenshire’s transport network and sustaining resilient communities. The Council introduced a number of pool cars to its fleet when EVs were far less commonplace and will continue to work to advance the EV transition in the area.

In doing so, the Council’s actions fit in with the Well-being of Future Generations Act which requires public bodies in Wales “to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change.”

This EV strategy in particular aligns with:

- A Globally Responsible Wales,
- A Healthier Wales,
- A Resilient Wales, and
- A More Equal Wales.



Figure 1 Seven Well-Being Goals of Welsh Government's 'Well-being of Future Generations Act' (Source: <https://gov.wales/well-being-of-future-generations-wales>)

DRAFT

1. Background

Overview

Carmarthenshire is in Southwest Wales and as well as having an established agricultural economy, it has administrative and economic hubs in its three major towns, Llanelli, Carmarthen and Ammanford. Llanelli is the largest town in the county; however, Carmarthen has been an important centre since Roman times and remains the administrative centre. In 2017, the county was estimated to have a population of 188,771⁴, with a significant proportion of the population being in rural regions.

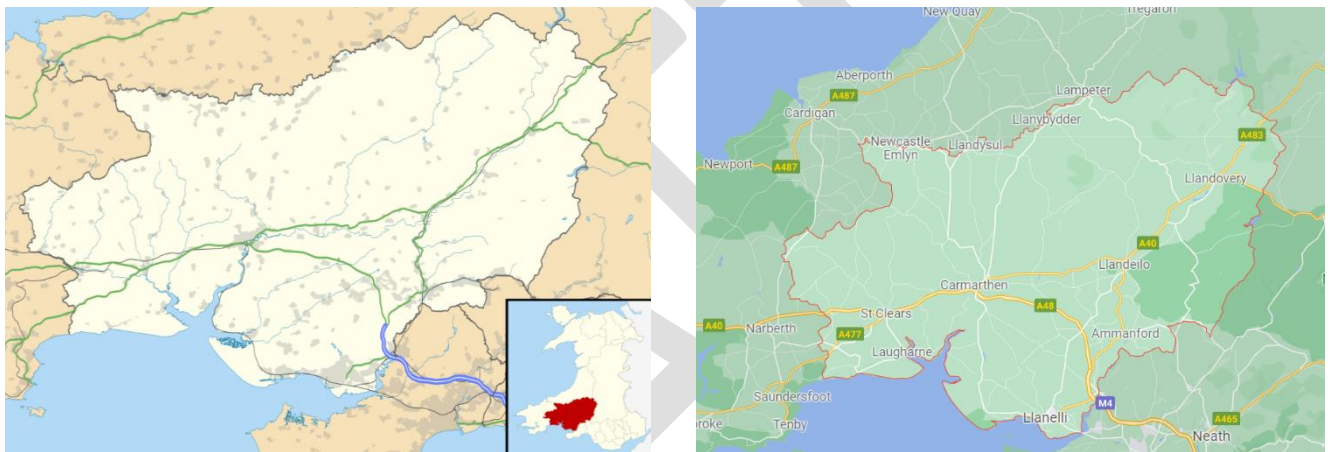


Figure 2 - Situation of Carmarthenshire

Carmarthenshire is bordered by Pembrokeshire, Ceredigion, Swansea, Neath Port Talbot, with three of these combining with Carmarthenshire to comprise the Swansea Bay City Region. Swansea is a regional centre for Southwest Wales with most employment now in the service sector, developing from its industrial heritage.

Carmarthenshire is undertaking strategic action to support the economic recovery and growth of rural towns across the County through the 'Ten Towns⁵' Initiative. Developing economic growth plans to drive forward an agenda for change for each of the respective towns and their wider hinterland. The 'Ten Towns' Initiative focuses upon the following areas: Cross Hands, Cwmaman, Kidwelly, Laugharne, Llandeilo, Llandovery, Llanybydder, Newcastle. Emlyn, St.Clears and Whitland.

Carmarthenshire County Council are also delivering the Pentre Awel⁶ development at a site along the Llanelli coastline. Bringing together business, research, education, community healthcare and modern leisure facilities, Pentre Awel aims to create 1,853 jobs and training/apprenticeship opportunities. It is expected to boost the local economy by a £467million over the next 15 years.

⁴ <https://www.carmarthenshire.gov.wales/home/council-democracy/research-statistics/census-information#.YTIkG45KiUI>

⁵ <https://www.carmarthenshire.gov.wales/home/business/development-and-investment/ten-towns/#:~:text=Our%20Ten%20Towns%20initiative%20is%20to%20support%20the,recommendation%20to%20support%20the%20regeneration%20of%20rural%20Carmarthenshire.>

⁶ <https://www.carmarthenshire.gov.wales/home/business/development-and-investment/pentre-awel/>

The aim of this EV Charging Infrastructure Strategy is to aid in the transition to EV's for the population of Carmarthenshire as well as visitors and those travelling through the county via the strategic road network. This Strategy will ensure there is a focus on these strategic routes, the three major towns, as well as considering more rural and remote communities. This document is important as it provides a delivery roadmap to ensure that an EV charging network will be available when and where it is required.

Carmarthenshire also has a large tourism industry, enticing visitors with its outdoor activities, beaches, and rich heritage.

Purpose of this EV Strategy

This EV Strategy has been created to provide a plan and technical evidence base that supports the transition to zero emission vehicles for Carmarthenshire's residents, organisations, businesses, and visitors. The aims of the strategy include:

1. To support the County Council with existing EV infrastructure planning and delivery work. The strategy will also provide an evidence base for future investment decision-making by Government, The Council and the private sector
2. To develop and promote a network of electric charging points, that provides for and encourages future growth in EV use, and in doing so future proofs the transport network and contributes to local and global pollution reductions.

In achieving these aims, the EV strategy will contribute to broader Welsh Government goals of carbon neutrality in the public sector by 2030. As stated in The Welsh Public Sector Net Zero Carbon Reporting Guide (2021)⁷:

'The aim of this guide is to develop a universal guide set of instructions for use by Welsh public bodies, to estimate baseline emissions, identify priority sources and to monitor progress towards meeting the target collective ambition of a carbon neutral public sector by 2030'.

In February 2019, Carmarthenshire County Council declared a Climate Emergency and made a commitment to becoming a net zero carbon local authority by 2030. Carmarthenshire County Council was also the first local authority in Wales to publish a net zero carbon action plan.

Analysing the current network, high-level demand forecasts and a review of the Welsh Government EV Strategy projections, as well as base and future grid capacity, this strategy delivers a comprehensive update to the existing roadmap, identifying milestone objectives for 5- and 10-year periods. The strategy provides recommendations for the implementation of an infrastructure programme based on best practice review, including technological, procurement, delivery and maintenance options. The report further outlines a series of recommendations for policy

⁷ https://gov.wales/sites/default/files/publications/2021-05/welsh-public-sector-net-zero-reporting-guide_1.pdf

development, strategic investment priorities and complementary measures for public sector investment.

DRAFT

2. Electric Vehicles in Context

Uptake

EVs sales are set to increase in the UK due to the national targets set by the government. Whilst car ownership is typically lower in dense urban areas than it is in rural areas due to higher public transport or active travel use, the conversion from petrol/diesel to EV is still likely to be quicker in urban areas due to easier access to chargepoints. We are already seeing this happening with the city of London having an electric car ratio of one for every 20 cars, which is 10 times the national average⁸. Also, as they have higher population densities the amount of people purchasing new cars will be higher.

In addition, due to the uptake of EVs there will be a subsequent increase in charging infrastructure at locations of high footfall. Strategic road networks and highways which may be more rural are also set to see an uptake in charging infrastructure due to their role in ensuring that vehicles can recharge for long distance journeys or for people who live far from local communities. Carmarthenshire is predominately rural, with around 60% of its residents living in rural areas⁹, therefore encouraging the strategic deployment of charge points is particularly important to ensure that residents of more deprived and/or rural areas have access to charging infrastructure.

EV

Environmental Benefits

As an EV is run on electrical power it has no exhaust emissions like that of a conventional combustion vehicle. This presents a key benefit to EVs as they operate in harmony with the wider environment and can improve the quality of air in which people across our cities, towns and villages breath. Following the Paris Agreement that necessitates 'Net Zero' greenhouse gas emissions, the UK have set an ambitious target to become Net Zero by 2050, such a target will see significant change to the transport industry where the sale of new petrol and diesel vehicles is to be banned in the Wales by 2035.

EVs are not only a cleaner mode of transport than combustion vehicles but they are more efficient at converting energy into motion also¹⁰, and as such have a lower carbon footprint than conventional vehicles, even when charging from mains electricity¹¹. Due to new advanced energy generation, EVs can now be charged from renewable energy sources within the power grid, or directly from renewable sources on your home or on local charging hubs such as solar PV. Due to this greenhouse gas emissions can be reduced even further, presenting the opportunity for a clean mode of transport to use a clean form of power.

Running Cost Benefits

⁸ Electric Vehicle Adoption in the UK | comparethemarket.com

⁹ <https://www.carmarthenshire.gov.wales/media/1214849/corporate-strategy-18-23.pdf>

¹⁰ <https://fueleconomy.gov/feg/evtech.shtml>

¹¹ https://www.carbonfootprint.com/electric_vehicles.html

Although EVs are currently more expensive to purchase than a petrol or diesel vehicle, EVs are cheaper to run from a day-to-day perspective. Typical running costs are 3-4p per mile compared to 12-15p per mile for combustion vehicles¹². They are cheaper to maintain than combustion vehicles and the cost to service, maintain and repair is cut by more than half¹³. This is because EVs have fewer components that require regular maintenance which is inherently down to the reduced number of moving parts in the vehicle itself as well as improved vehicle technology.

Range Anxiety

The driving range is typically lower than fossil fuel vehicles and charging time that is longer. New EVs are also more expensive to buy than fossil fuel vehicles. However, the driving range is increasing and the range of an electric car in the UK now is typically between 100 to 300 miles¹⁴.

Increases in the average distance travelled per person per year occurred in the three decades 1970 to 2000, for personal travel. This was largely due to increases in average trip lengths since the 1970s, which rose over 50% to 7 miles in 2014. However, since the early 2000s average distance and trip length have levelled off.

Charging times are reducing as charging technology improves, and as more charge points are installed, using EVs becomes more practical.

As the number of EV users increases, having enough chargepoints in an area will not only help aid the issues associated with range anxiety but will also ensure different charging areas stays economically competitive, socially equitable in terms of access to services and furthermore encourage more visitors to the area. As well as these benefits they can also provide an additional income to the chargepoint host and demonstrates the areas commitment to the environment, innovation and future trends, which supports the Swansea Bay City Deal vision “To place the region at the forefront of energy innovation and establish the region as a globally significant player in the production and storage of energy”¹⁵.

Range anxiety has a major impact on large scale public uptake of EV's. To ease this anxiety, investment is needed to construct a comprehensive high quality EV charging network. The public need to be confident in the fact that on their journey they will be able to find an appropriate EV charger in close proximity. EV uptake depends heavily on a step change in current mobility practices and to support this the public need to be confident the infrastructure is in place to allow this.

Cost Comparison

To provide an overview regarding the shape of the current EV market a cost comparison has been conducted, this analysis also includes an overview of EV battery capacities and ranges which have evolved over the last few years. Data has

¹² <https://www.zap-map.com/electric-vehicles/ev-benefits/>

¹³ <https://www.consumerreports.org/car-repair-maintenance/pay-less-for-vehicle-maintenance-with-an-ev/>

¹⁴ <http://www.carbuyer.co.uk/reviews/recommended/best-electric-cars>

¹⁵ <http://www.swanseabaycitydeal.wales/>

been collected from the EV Database (<https://ev-database.uk/>) as this takes several sources into account to provide an industry-wide view of vehicle costs, battery size and typical range. The analysis on vehicle range can vary depending on driving style and climate, therefore a combined average of both city and highway travel has been selected under mild conditions to reflect that of the Carmarthenshire County.

All non-2021 EV prices presented are based on second-hand vehicles available to purchase in the current UK market. Prices are based on market availability from websites such as Autotrader during October 2021.

The cost provided was the 10th lowest price vehicle. This is to exclude any potential outliers (cars that are in poor condition) so to give a fair representation on the average price of the second-hand car from that specified year.

Second-hand vehicles have been presented as they represent a likely purchase option for a large proportion of general public ownership. If there is to be a large uptake in EVs based on government targets, it is unlikely that these will be made up of a significant number of second-hand models due to their affordability in the current market. Note inflation is not accounted for in price comparison.

The analysis conducted presents an overview of the following three EVs: Renault Zoe, Tesla Model 3 & the Nissan Leaf. Table 1 – 3 present this analysis.

Renault Zoe (Supermini)

Table 1 - Renault Zoe Model Development

Model Year	Range (miles)	Battery Size (kWh)	Retail Price (GBP)
2018	180	44.1 kWh	£14,490 ¹⁶
2021	220	52 kWh	£27,595 ¹⁷

Tesla Model 3 (Standard)

Table 2 - Tesla Model 3 Model Development

Model Year	Range (miles)	Battery Size	Retail Price (GBP)
2019	190	50 kWh	£39,500 ¹⁸
2021	250	55 kWh	£40,990 ¹⁹

¹⁶ <https://www.autotrader.co.uk/> as of 04/10/2021

¹⁷ <https://www.renault.co.uk/electric-vehicles/zoe.html> as of 04/10/2021

¹⁸ <https://www.autotrader.co.uk/> as of 04/10/2021

¹⁹ https://www.tesla.com/en_gb/model3 as of 04/10/2021

Nissan Leaf (Standard)

Table 3 – Nissan Leaf Model Development

Model Year	Range (miles)	Battery Size	Retail Price (GBP)
2015	120	30 kWh	£9,500 ²⁰
2018	160	40 kWh	£25,995 ²¹

As is evident from the tables above, vehicle range and battery are consistently increasing over time²². This is including improvements in vehicle where the newer model has a more advanced user interface and all-round aesthetic build.

Despite some EVs still being relatively expensive to date, research does show that brand new EVs are set to become cheaper to make than petrol or diesel vehicles by 2027²³. Research also suggests that some segments of EV production and sales may achieve price parity by 2026. Due to economies of scale, as well as battery technology improvements, costs are envisaged to come down further in real terms. Given BloombergNEF projections about costings, the forecasts made assumed that vehicles will become more affordable which will trigger an increase in EV uptake.

Accessibility of Chargepoints

The predicted uptake of EVs across Wales provides an indication of the scale that Carmarthenshire will have to match in terms of the availability of charging infrastructure. Rural local authority areas such as Carmarthenshire will require comparatively high numbers of charging units to be deployed (compared to urban areas such as Cardiff and Swansea) as Carmarthenshire is set to see the 3rd largest uptake of EVCPs in Wales according to figures presented in the official EV Charging Strategy for Wales (2021). As such, substantial planning, resources and investment will be required across the public and private sector to deliver the charging needs of the county.

Carmarthenshire will roll out its own charging strategy that will be broken down into three groups: Residential, Destination and Strategic. Further information on these categories has been presented in Table 3.

Residential charging presents the most likely form of EV charging, as EV owners will have the opportunity to plug into a dedicated domestic EV charging unit whenever required. Commonly EV charging could commence after work where a daily EV recharge could be conducted overnight. The Welsh Government will introduce requirements for new homes to implement charging infrastructure through changes to building regulations. Encouraging or incentivising the uptake of EVCPs on a residential basis will play an integral part in ensuring the availability of

²⁰ <https://www.autotrader.co.uk/> as of 04/10/2021

²¹ <https://www.nissan.co.uk/vehicles/new-vehicles/leaf.html> as of 04/10/2021

²² <https://ev-database.uk/#sort:path~type~order=,rank~number~desc|range-slider-range:prev~next=0~600|range-slider-bijtelling:prev~next=0~600|range-slider-acceleration:prev~next=2~23|range-slider-fastcharge:prev~next=0~1100|range-slider-lease:prev~next=150~2500|range-slider-topspeed:prev~next=60~260|paging:currentPage=0|paging:number=9>

²³ Price parity for electric cars and vans within 'five years' | Electric fleet news

infrastructure within Carmarthenshire, whilst reducing the demand public charging points. Residential charging is less feasible for residents without off-street parking, but there are various options for on-street parking that will be considered, such as public parking charging bays, rising changepoints and lamppost chargepoints.

Destination charging is installed at many different types of locations (workplaces, supermarkets, gyms etc.). This form of charging infrastructure will become increasingly important for all EV owners in the future, particularly those unable to or choosing not to charge at home. These chargers are publicly available, and therefore sufficient infrastructure needs to be provided to keep pace with rising levels of demand.

Strategic charging is a very important part of Carmarthenshire's EV infrastructure plans as there is a key Strategic Route Network which covers the county. These routes can be viewed in Figure 10. Ensuring that there is charging infrastructure available in strategic routes will facilitate the commuting and business needs in the region, including work-purpose EV cars and small vans or for tourists, travelling longer distances with confidence of overcoming range anxiety. The chargepoints within this purpose will most likely be Rapid or Ultra-Rapid to ensure that users spend less time recharging and can continue their journey after a short break.

The EV Charging Strategy for Wales highlighted that much of the charging infrastructure installed to date has not been designed with the needs of disabled users in mind. Specific issues include heavy cables and difficult connectors presenting problems for those with mobility and dexterity impairments. One in five people in the UK have a disability and there are indications that EV uptake amongst disabled customers has been limited to date²⁴. Therefore, ensuring an equal opportunity for disabled users to have ease of accessibility to EV charge points must be considered in accordance with the Disability Discrimination Act 1995 (DDA), and all chargepoints should be DDA compliant.

Table 3 Table 3 describes the different types of charging locations discussed, including their likely target users, challenges and the advantages associated with each one.

²⁴ ²⁴ <https://www.motability.org.uk/about/news/electric-vehicle-charge-points-lack-accessibility>

Table 3 - Description of different types of charging infrastructure and their likely target users and challenges.

Types of Chargers	Description	Likely Target Users	Challenges	Advantages
Residential (Off-Street Charging)	Personal charge point located within the user's residential property.	Users with off-street parking availability.	Onus is on the user to arrange installations.	Flexibility to charge when suits. Confidence in the quality of the charge point. Prevents congestion.
Residential (On-street Charging)	Stand-alone pillars, typically 'fast' chargers. Kerbside charging points developed to avoid trailing cables.	Users with no off-street parking e.g., terraced housing. Visitors to destinations where on-street parking is available.	Managing parking to ensure access and others don't block spaces when not charging. Funding and arranging installation can be time consuming. Any obstructions (cables or pillars) in the footway will have an adverse impact on disabled access and will reduce usability as active travel routes. Standalone pillars also raise liability issues should damage or electrocution occur. Any on street charging scheme needs to be CCC promoted and controlled scheme.	Incentivises the purchase of EV's for those who do not have access to off-street parking.
Destination Charging	Fast charging is provided at destinations such as gyms and shopping centres. Hotels may take advantage of overnight charging.	Destination visitors.	Not strategically planned or managed – based on individual investment decisions at destination.	Customers are motivated to stay for longer. Demonstrates environmental commitment and supports brands values. Increases convenience of charging for EV users.
Strategic Charging (including SRN)	Used to top up midway through a journey e.g., motorway services. Predominantly along the SRN.	Business travel users, private leisure users, freight and logistics.	Market segmentation, resulting in incompatibility across charging equipment and supporting payment and data infrastructure. Sufficient grid capacity must be available to accommodate high powered charging.	Demonstrates environmental commitment and supports brands values. Increases convenience of charging for EV users.

Car Clubs

With their relatively low running costs, EVs lend themselves well to car clubs. These can allow residents who do not own their own vehicle or have limited access to public transport, to travel to other areas more frequently. The shared ownership

aspect of car clubs can encourage communities in living more cooperatively, working together towards a low carbon, low-cost future. Rural communities can become isolated if there is limited public transport and access to amenities, and young people leaving to study often may struggle to return as residents. Providing shared cars may help with this.

3. Policy Context

Most transport responsibilities are devolved within Wales and as such the Welsh Government has a responsibility for transport policy, planning, and delivery. A summary of relevant policies and strategies are listed below:

Welsh Government Policy

Welsh Government has the ambition for the public sector in Wales to be carbon neutral by 2030²⁵, and expects ultra-low emission vehicles to have a key role in achieving this.

The latest plan from Welsh Government²⁶ states:

- Where practicably possible, all new heavy goods vehicles in the public fleet are ultra-low emission by 2030.
- All new cars and light goods vehicles in the public sector fleet are ultra-low emission by 2025.

Wales Transport Strategy

A new Wales Transport Strategy has been published in 2021 with commitments to EV infrastructure and Taxis/Private Hire Vehicles. The strategy states that over the next 5 years, the Welsh Government will:



Upgrade, improve and future-proof the road network, addressing congestion pinch points and investing in schemes that support road safety, journey reliability resilience, modal shift and electric bike, motorbike and vehicle charging.



Deliver the Welsh EV Charging Strategy and encourage the use of motorbikes and powered light vehicles instead of cars where there are no other transport choices.



Work with the sector to move all taxis and PHVs to zero-emission and make certain that the required infrastructure is in place to support the transition to zero-emission taxis.

The strategy notes that the proposed Climate Change Committee carbon reduction pathway for Wales means emissions from surface transport must be roughly halved between 2020 and 2030 from 6 to 3 million tonnes CO². Welsh Government note that

²⁵ https://gov.wales/sites/default/files/publications/2021-05/welsh-public-sector-net-zero-reporting-guide_1.pdf

²⁶ <https://gov.wales/welsh-public-sector-be-carbon-neutral-2030>

whilst EVs may provide the biggest emissions savings, this is unlikely to be the main source of savings until the late 2020s and possibly later and thus other measures need to be considered.

EV Charging Strategy for Wales: Facilitating the Transition to Net Zero

As alluded to in the Wales Transport Strategy (2021), the Welsh Government published a specific EV Charging Strategy for Wales²⁷ in 2021 with key action points. The strategy covers the period until 2030 yet recognises the urgency of taking action now to ‘put us (Wales) on the right path by setting the vision for 2025’.

The Strategy outlines the current situation regarding EV ownership and associated infrastructure in Wales, with 105 EVs licensed per 100,000 of population (2020) and 21 chargepoints per 100,000 of population (2020). There are approximately 320 workplace chargers installed in Wales, at least 145 on-street chargers, approximately 300 destination chargers at around 150 locations and approximately 130 rapid chargers at 70 ‘on-route’ locations. The vision is that by 2025, all users of electric cars and vans are confident that they can access EV charging infrastructure when and where they need it.

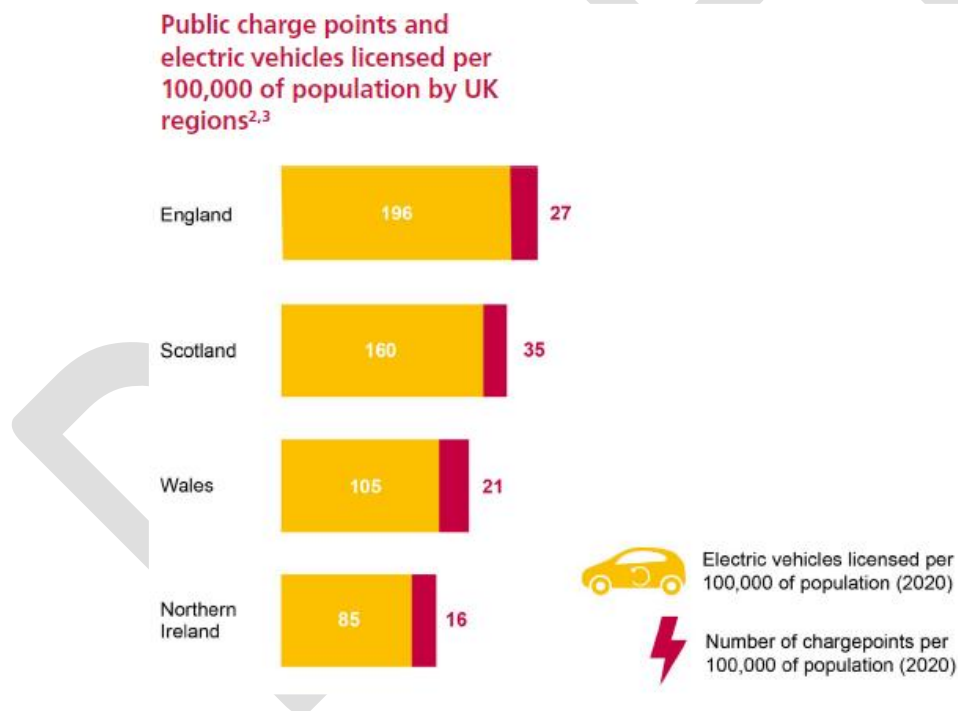


Figure 3 - Public Chargepoints and EVs licensed per 100,000 of population by UK regions (source: Welsh Government)

Based on the scenarios modelled for EV uptake, the following conclusions are made to be taken forward in action planning:

1. The need for a substantial increase in the number of slow, fast and rapid/ultra-rapid chargers available in Wales. Meeting the need for up to 55,000 fast chargers in Wales, alongside home charging, will be a key area of focus to promote equality of access to charging.

²⁷ <https://gov.wales/sites/default/files/publications/2021-03/electric-vehicle-charging-strategy-wales.pdf>

2. The need for better quality charging, to improve the user experience for electric cars and vans Desirable quality outcomes include contactless debit/credit card payment and associated app-based system, information about charging on main roads to help drivers choose where/when to charge, reliable infrastructure with high availability and clear pricing information).
3. To work within the current regulatory framework with these stakeholders to plan for the decarbonised grid network (including heat, renewable electricity generation and transport) so that the needs of charging will be met in a way that is efficient for network management incorporating smart technology.

An action plan from the aforementioned strategy conclusions was scheduled to be published in June 2021, with the Welsh Government recognising its enabling role in delivering this charging infrastructure through the use of regulatory and planning levers, land use planning guidance, use of public land and resources, funding, and targeted support programmes. The strategy further states that targeted action planning will be undertaken to meet the rapidly growing need for charging to ensure that a lack of EV charging infrastructure does not become a barrier to transitioning to electric cars and vans.

The Welsh Government has set out its legal commitment to achieve net zero emissions by 2050 and are passing regulations in 2021 to set interim targets for 2030, 2040 and 2050, against carbon budgets (2021-25 and 2025-2030). To be transposed into Welsh Building Codes, the Energy Performance Buildings Directive signal the requirement for all new homes with associated parking be ready for EV charging. The same obligation is placed on any refurbishment scheme covered by the Code. The following outcomes to develop into the forthcoming EV action plan have been identified regarding infrastructure:

Table 4 - Charging Infrastructure in Relation to Welsh Government Policy Commitments

Slow Charging (3.6kW AC)	(a) All new homes with an associated car parking space will be ready to have EV charging installed.
	(b) Homeowners and occupiers with off-street parking in Wales will be supported to charge at home.
	(c) Home charging will be 'smart enabled' for value and efficiency.
Fast Charging (7kW - 22kW AC)	(a) need to have between 30,000 and 55,000 fast chargers available for use by 2030 (currently have less than 1% of this installed).
	(b) New non-residential buildings with more than 10 parking spaces will have a charge point provided by 2025.
	(c) Business provides charging facilities at places of work for the use of staff and visitors.
	(d) Destinations provide charging facilities for the use of customers which may act as a means of improving customer experience.
	(e) On-street charging and in car parks will be encouraged in villages, towns and cities throughout Wales; with a view to installing on average one charge point for one in every three EVs that cannot charge at home.
	(f) Charging hubs, including out of town park and ride, and supporting active travel will feature in enabling decarbonised multi-modal journeys across Wales.
Rapid Charging (43kW AC)	(a) predicted that up to 4,000 rapid/ultra-rapid chargers will be needed in Wales over the next ten years (currently have less than 3% of this installed).

& (50kW - 120kW DC)	(b) By 2025, a rapid charging network will be provided across the strategic trunk road network of Wales, providing charging at a distance of approximately 20 miles.
	(c) In urban centres taxis and private hire vehicles will have extensive access to charging facilities by 2025.

The strategy also comments on quality outcomes for EV users such as charging facilities to be available to everyone, including those with accessibility needs and payment platforms to be simple, accessible and easy to use with clear pricing information available.

Sustainable outcomes, notably, where possible, EV charging should be installed at locations that complement other modes of sustainable transport, including the use of public transport, walking, and cycling. Consideration will be given to allowing sufficient additional spare capacity and cableways to meet anticipated need for EV charging.

Welsh Government Policy Commitment Summary:

1. Upgrade, improve and future-proof the road network, addressing congestion pinch points and investing in schemes that support road safety, journey reliability resilience, modal shift and electric bike, motorbike and vehicle charging.
2. Deliver the Welsh EV Charging Strategy and encourage the use of motorbikes and powered light vehicles instead of cars where there are no other transport choices.
3. Work with the sector to move all taxis and PHVs to zero-emission and make certain that the required infrastructure is in place to support the transition to zero-emission taxis.
4. Need for a substantial increase in the number of slow, fast and rapid/ultra-rapid chargers available need for a substantial increase in the number of slow, fast and rapid/ultra-rapid chargers available in Wales.
5. Need for better quality charging, to improve the user experience for electric cars and vans and to work within the current regulatory framework with these stakeholders to plan for the decarbonised grid network

Net zero carbon status by 2030: A route map for decarbonisation across the Welsh public sector

Accelerating the rollout of EV charging infrastructure constitutes a specific component in the routemap to achieve Welsh Public Sector net zero greenhouse gas emissions by 2030. As part of the 'Mobility and transport' priority area for action identified in the routemap, EV policy commitments are present in action points across the three distinct phases plans. The three phases of action the routemap identifies for achieving net zero ambitions by 2030 are as follows:

- 'Moving Up A Gear' (2021-22) - understanding the context and what needs to be done and where action needs to accelerate.
- 'Well on our way' (2022-26) - where there is an expectation that low

carbon is becoming the norm and the Welsh Public Sector are definitely on the way to net zero status.

- 'Achieving our goal' (2026-30) - where choosing zero carbon has become routine, culturally embedded and self-regulating.

As part of the 'Moving Up a Gear' phase of action, the policy document highlights the Welsh Government will: (1) understand the nature and use of our fleet, future patterns of usage, and a feasible technological pathway for an ultra-low emission transformation, (2) accelerate the roll-out of EV charging infrastructure and our staff will be offered the opportunity to test ultra-low emission vehicles, and (3) commit to fleet transformation plans (considerable upscaling of ULEV uptake). As part of the 'Well On Our Way' phase of action points, all new cars and light goods vehicles in the public sector fleet are set to be ultra low emission by 2025. Where possible, all new Heavy goods vehicles in the public fleet are ultra low emission by 2030, as part of the final 'Achieving Our Goal' phase of this plan.

Welsh Government Policy Commitment Summary:

1. We will understand the nature and use of our fleet, future patterns of usage, and a feasible technological pathway for an ultra-low emission transformation.
2. We will accelerate the roll-out of EV charging infrastructure and our staff will be offered the opportunity to test ultra-low emission vehicles.
3. We commit to fleet transformation plans and there is a considerable upscaling of ULEV uptake.
4. All new cars and light goods vehicles in the public sector fleet are ultra low emission by 2025.
5. Where practicably possible, all new Heavy goods vehicles in the public fleet are ultra low emission by 2030.

Southwest Wales Policy

The Joint Local Transport Plan for Southwest Wales (2015 - 2020)²⁸ provides a consistent policy which is applied across the four councils in Southwest Wales: Carmarthenshire County Council, City and County of Swansea, Neath Port Talbot County Borough Council and Pembrokeshire County Council. It lists EVs as an emerging trend and outlines an EV Charging Network scheme "to investigate and implement a network of EV charging points across Southwest Wales. This will seek to draw together fragmented existing provision and install new sites at strategic locations using standardised technology." It also mentions the Sustainable Travel Centres scheme in Carmarthenshire, which helped fund the Rapid charger at Nant y Ci.

Work is due to commence on the next version of the Regional Transport Plan. This EV Charging Infrastructure Strategy will inform the process. Feeding into regional

²⁸ <https://www.swansea.gov.uk/localtransportplan>

plans that will translate into an integrated Metro system for Southwest Wales, this Charging Infrastructure strategy will also inform development of the South West Wales Metro²⁹.

The Economic Regeneration Strategy for the Swansea Bay City³⁰ region whilst not specifically covering EVs, includes in its strategic aims to “keep a strong eye on the emerging market and technology trends” and “Nurture and support our emerging growth sectors”.

South West Wales Policy Commitment Summary:

1. An EV Charging Network scheme “to investigate and implement a network of EV charging points across South West Wales. This will seek to draw together fragmented existing provision and install new sites at strategic locations using standardised technology”.

Carmarthenshire County Council Policy

Route towards becoming a Net Zero Carbon Local Authority by 2030

Carmarthenshire County Council’s ‘Route towards becoming a net zero Carbon Local Authority by 2030’ is an important local policy driver for this EV strategy. On the 20th February 2019, Carmarthenshire specifically declared a ‘notice of Motion’ entailing the following:

1. Declare a climate emergency.
2. Commit to making Carmarthenshire County Council a net zero carbon local authority by 2030.
3. Develop a clear plan for a route towards being net zero carbon within 12 months
4. Call on Welsh and UK Governments to provide the necessary support and resources to enable effective carbon reductions.
5. Work with Public Services Board and Swansea Bay City Deal partners to develop exciting opportunities to deliver carbon savings.
6. Collaborate with experts from the private sector and Third sectors to develop innovative solutions to becoming net zero carbon.”

The Council was the first local authority in Wales to have EVs in 2010, and currently has 10 EV cars, 1 EV van, and hybrid vehicles too and is aiming to increase its electric fleet as an alternative to existing diesel-powered vehicles. Grant funding from the Office for Low Emission Vehicles (OLEV) was secured to install 26 electric charging points for public use throughout the County. The Council has reduced carbon emissions from its fleet mileage by 19% between 2012-2019. The Council has reduced carbon emissions from its business mileage by over 36% between 2012-2019.

The Council will adopt a pragmatic approach for the route towards the Council becoming a net zero carbon local authority by 2030 in recognition that this approach

²⁹ <https://gov.wales/swansea-bay-and-west-wales-metro>

³⁰ <https://www.swansea.gov.uk/swanseabaycityregioneconomicregenerationstrategy>

needs to be sufficiently flexible to accommodate changing circumstances, including the reporting requirements yet to be introduced by Welsh Government as part of its ambition for a carbon neutral public sector by 2030. The Council will review the most appropriate fuel powered vehicles for each of the Council's Services and develop appropriate carbon reduction target for the Council's fleet mileage as part of an annual review. This Council will also undertake a review of the Council's pool cars to identify opportunities for carbon reduction, finalise this EV strategy for the County and develop appropriate carbon reduction targets for the Council's business mileage as part of an annual review.

Carmarthenshire County Council Existing Policy Commitment Summary:

1. Review the most appropriate fuel powered vehicles for each of the Council's Services and develop appropriate carbon reduction target for the Council's fleet mileage.
2. Undertake a review of the Council's pool cars to identify opportunities for carbon reduction, finalise this EV strategy for the County and develop appropriate carbon reduction targets for the Council's business mileage.

Other Carmarthenshire Policies / Strategies

EVs and related issues are already covered in several Carmarthenshire Council policies; the document Carmarthenshire County Council Moving Forward in Carmarthenshire: the next 5-years³¹ states that the Council plans to "improve the infrastructure for the use of EVs especially in rural areas"

Carmarthenshire County Councils Corporate Strategy³² outlines the need to invest in infrastructure to support more sustainable journeys.

As part of Carmarthenshire County Council's commitment to increase the supply of affordable housing, EV points are included in all council new build developments.

Carmarthenshire County Council has three Air Quality Management Areas, in Carmarthen, Llanelli and Llandeilo, as shown in the maps in Annex A. Whilst not providing the full solution to improving air quality issues it is recognised that wider EV use in these areas could make a positive impact on air quality.

The Taxi Licencing team have Licence Conditions for Hackney Carriages and Private Hire Vehicles in Carmarthenshire, which includes a minimum size of 1200cc, but they have an exemption for electric cars which are fully compliant with all Conditions of Licence to have an Engine Capacity of below 1200cc.

The Carmarthenshire Parking Strategy 2018 includes several proposals relating to EVs, including:

³¹ <https://www.carmarthenshire.gov.wales/media/1212982/moving-forward.pdf>

³² <https://www.carmarthenshire.gov.wales/media/1214849/corporate-strategy-18-23.pdf>

- Increase the use of iconography on the County Council website to promote car park facilities such as; electric charging points, public transport connectivity, cycle parking, opening times and tariffs.
- To facilitate increased use of EVs appropriate charging facilities and parking spaces will be provided for EVs.
- Consideration should be given to parking spaces at new developments for EVs with associated infrastructure.
- Where appropriate, provide electric charging facilities and spaces to short term parking for EVs.

The current Local Development Plan³³, adopted December 2014, does not specifically cover EVs but states that it “looks to tackle the causes and effects of climate change within our communities”, and describes how Transport takes up a sizable proportion (28%) of the overall figure for the County’s carbon footprint.

The emerging Local Development Plan includes a Sustainability Appraisal³⁴, which has amongst its objectives:

1. To maintain/reduce the levels of the UK National Air Quality pollutants (objective 3.1).
2. To reduce the emission of greenhouse gases (objective 4.1).
3. Improve the integration of different modes of transport (objective 6.5).
4. Promote the use of more sustainable modes of transport (objective 6.6).

Carmarthenshire County Council Existing Policy Commitment Summary:

1. Plans to improve the infrastructure for the use of EVs especially in rural areas. Review the most appropriate fuel powered vehicles for each of the Council’s Services and develop appropriate carbon reduction target for the Council’s fleet mileage by March 2021.
2. Carmarthenshire undertake a review of the Council’s pool cars to identify opportunities for carbon reduction, finalise this EV strategy for the County and develop appropriate carbon reduction targets for the Council’s business mileage
Taxi licensing team exemption for electric cars which are fully compliant with all Conditions of Licence to have an Engine Capacity of below 1200cc.
3. Parking Strategy proposals - parking spaces will be provided for EVs during periods of charging.
4. Consider the appropriateness of promoting powered light vehicles.

This will allow us to reference EV provision as part of the ongoing development process.

³³ <https://www.carmarthenshire.gov.wales/home/council-services/planning/planning-policy/local-development-plan-2006-2021/#.W32HsfIKgdU>

³⁴ <https://www.carmarthenshire.gov.wales/media/1215165/sa-scoping-non-technical-summary-final.pdf>

UK Policy

Building upon previous UK strategy documents for low emission vehicles and related infrastructure³⁵, the 2021 publication of 'Decarbonising transport - A Better, Greener Britain'³⁶ and 'HM Transitioning to zero emission cars and vans: 2035 delivery plan'³⁷ provide important action points to decarbonise transport by 2050. The main commitments of each policy are summarised below, to which Carmarthenshire County Council's EV strategy will compliment.

Decarbonising Transport - A Better, Greener Britain

Although transport policy is devolved and responsibility rests with the Welsh Government (the proposals in this plan apply to England only), it is useful to understand the direction UK Government is moving towards in terms of EV policy and strategy.



By law, the UK's Emissions must now be net zero by 2050. The Government have committed to remove all emissions from road transport:

2030 - end sale of new petrol and diesel cars and vans

2035 - all new cars and vans must be 100% zero emission at the tailpipe

2035- all new L-category vehicles to be fully zero emissions at the tailpipe.

2040- End the sale of all non-zero emission HGVs.

Given the crucial role that local authorities must play in supporting the roll-out of charging, and to navigate the complexities involved, the Government will publish an EV infrastructure guide for local authorities later this year. For those households unable to charge at their home, the On-Street Residential Scheme supports local authorities in installing EV infrastructure on-street and in public car parks and the workplace Charging Scheme/EV Homecharge scheme are committed to continue.

The Government will further regulate to ensure that all new home and workplace chargepoints have smart capability by the end of this year and through regulation by Ofgem, network operators must ensure that they provide connecting customers with the cheapest option that meets their requirements.

³⁵ E.g. Department for Transport's 'Road to Zero' (2018)

<https://www.gov.uk/government/publications/reducing-emissions-from-road-transport-road-to-zero-strategy>, 'Government Vision for England's Rapid Chargepoint Network' (Department for Transport, 2020) <https://www.gov.uk/government/publications/government-vision-for-the-rapid-chargepoint-network-in-england/government-vision-for-the-rapid-chargepoint-network-in-england> and 'Decarbonising Transport – Setting the Challenge' (Department for Transport, 2020) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/932122/decarbonising-transport-setting-the-challenge.pdf

³⁶https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf

³⁷https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005301/transitioning-to-zero-emission-cars-vans-2035-delivery-plan.pdf

UK Policy Commitment Summary:

1. 2030 - end sale of new petrol and diesel cars and vans
2. 2035 - all new cars and vans must be 100% zero emission at the tailpipe
3. £2.8 billion to support the switch to clean vehicles across the UK, through a range of funding packages.
4. UK's Emissions must be net zero by 2050.

HM Transitioning to zero emission cars and vans: 2035 delivery plan

 HM Government

Transitioning to zero emission cars and vans: 2035 delivery plan



Whereas the 'Decarbonising Transport' strategy is holistic, encompassing multi-modal action points, the 'HM 2035 Delivery Plan' expands upon specific commitments made regarding zero emission cars/vans.

The 2035 delivery plan states: 'our commitment to transitioning to zero emission vehicles is for the whole of the UK. The grants for plug-in cars and vans, as well as the grants for home, workplace and on-street chargepoints are all available UK-wide. Where funding is provided for England-only programmes, the devolved administrations will receive additional funding through the Barnett formula'.

Figure 4 is taken from the 2035 delivery plan and visualises the forthcoming government guidance as well as funding to realise ambitions around net zero cars and vans³⁸.

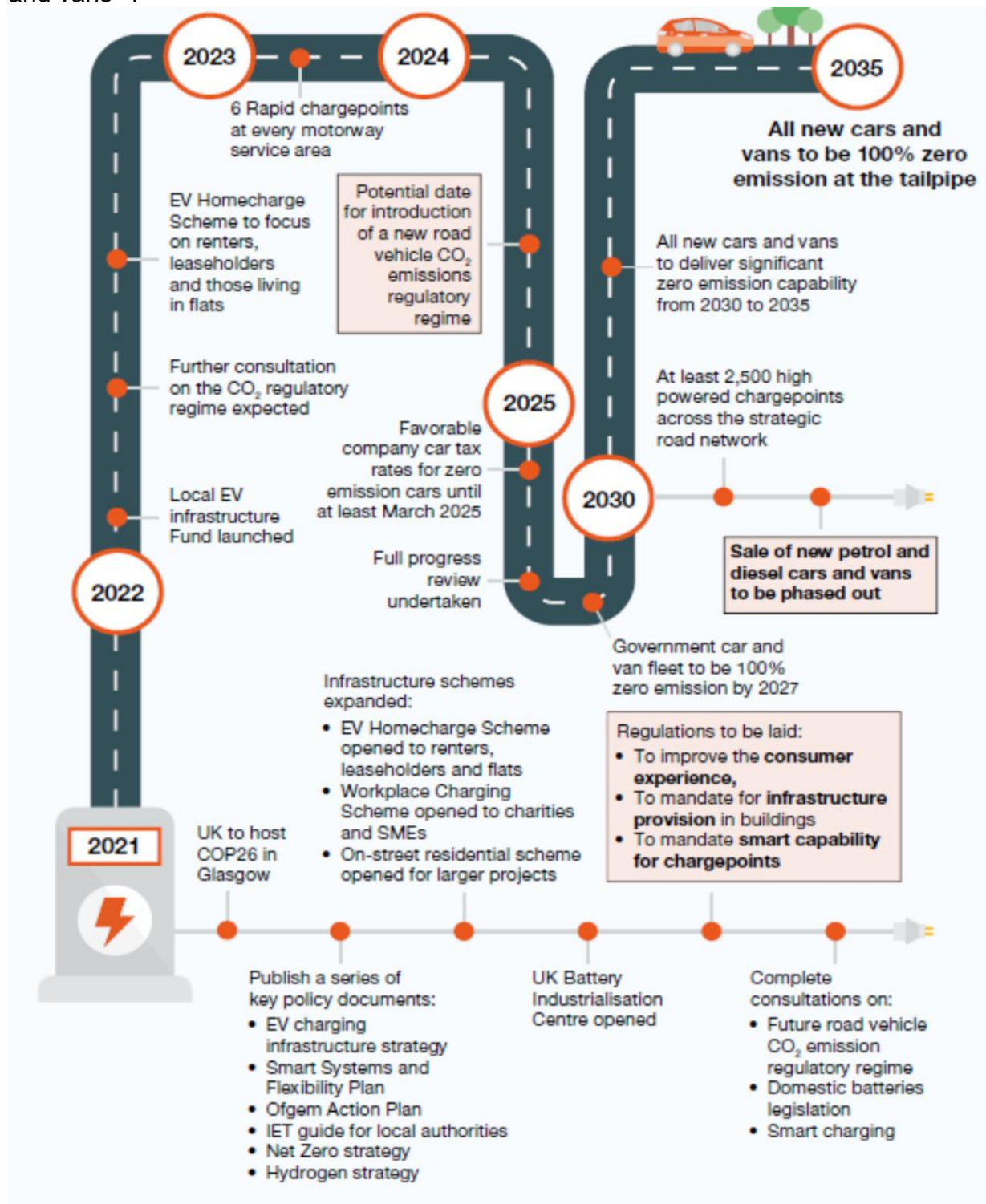


Figure 4 - Timeline of Key deliverables (source: HM Government)

³⁸ Note, not all initiatives on the roadmap apply to Wales/are available funding sources (e.g. Local EV Infrastructure fund).

Table 5 below summarises the main commitments across three broad areas of the delivery plan.

Table 5 - Commitments Summary - Transitioning to zero emission cars and vans: 2035 delivery plan

Increasing uptake of zero emission vehicles	Accelerating infrastructure roll-out	A Sustainable Transition
Aim to introduce a new road vehicle CO ² emissions regulatory regime in 2024.	Publish an EV Infrastructure Strategy in 2021.	Published our smart charging consultation response and later this year will legislate to mandate that all private chargepoints must be smart.
Continue to fund the plug-in van grant until at least 2022/23.	Support provision of on-street chargepoints until at least 2024/25.	Publish with Ofgem a second phase of the Smart Systems and Flexibility Plan (SSFP) in 2021 to set out reforms needed to secure flexibility across the energy system, including EVs.
Review the Category B derogation in 2021.	Ofgem is considering changing the way charges for connecting to the electricity network are allocated. It has recently published a consultation proposing that all network reinforcement costs should be socialised across energy bill payers in future. This should often reduce the costs of connecting EV chargepoints to the network. Any changes are expected to come into force in 2023.	In conjunction with Ofgem, publish a plan to maximise the contribution of EV flexibility in 2022.
Accelerate Government fleet commitment - 100% of our car and van fleet will be fully zero emission at the tailpipe by 2027.	Shift the support of the EV Homecharge Scheme (EVHS) to focus on leaseholders, renters and those living in flats from April 2022.	Publish a call for evidence for Vehicle-to-everything (V2X) technologies in a net zero energy system.
We will work closer than ever with local authorities, to encourage uptake of central government funding and ensure more widespread action in the transition to ZEVs.	Continue to fund EVHS until at least 2024/25	Publish a consultation on domestic batteries legislation in 2021 to ensure we have an appropriate legal framework governing the increasing numbers of EV batteries
	Continue to fund the Workplace Charge Scheme until at least 2024/25	Publish a Net Zero Strategy including the recommended actions of the Green Jobs Taskforce in 2021.

Carmarthenshire County Council are looking to provide and encourage the installation of relevant infrastructure to help meet these targets.

UK Policy Commitment Summary:

1. Continue to fund the plug-in van grant until at least 2022/23.
2. Support provision of on-street chargepoints until at least 2024/25.
3. Continue to fund EV Home Scheme until at least 2024/25.
4. Continue to fund the Workplace Charge Scheme until at least 2024/25.
5. Accelerate Government fleet commitment - 100% of our car and van fleet will be fully zero emission at the tailpipe by 2027.

DRAFT

4. Baseline Context

Introduction

A baseline assessment has been conducted to understand Carmarthenshire's existing position in relation to EV uptake, the EV network, and the existing grid capacity. Additionally, the baseline includes a review of the existing EV and EVCP technologies currently in the market.

The baseline of this EV strategy provides a key role in determining the starting off point and in turn influences forecasting, EVCP recommendations/ complimentary measures and the ambitions and targets set and upheld via policy.

Types of EV

Battery EVs (BEV) or simply EVs (EV)

These are fully EVs with no Internal Combustion Engine. Electricity is stored within battery packs usually under the car and the power is used to run the electric motor. EVs are charged via electricity from an external source usually at home, work or via a public charge point.

Hybrid EVs (HEV)

Hybrid vehicles are powered by both petrol/diesel and electricity. The electricity is usually powered by 'regenerative braking' or in newer 'self-charging' the petrol engine generates electricity whilst in use.

Plug in Hybrid EV (PHEV)

Plug in vehicles can recharge battery via 'regenerative braking' or can be plugged in to an external source. PHEV models usually have around 10-40 miles on one charge.

Baseline EV Registrations

Vehicle registrations for Ultra Low Emission Vehicles (ULEVs), (broken down into Battery EVs (BEVs) and Plug-in Hybrid EVs (PHEVs)) in Carmarthenshire County Council study area have been analysed to establish a baseline position from which EV uptake scenarios can be developed.

The data used can be found in the Department for Transport (DfT) dataset (VEH01) (subset dataset VEH0132)³⁹.

ULEVs are vehicles that reported to emit less than 75g of carbon dioxide (CO₂) from the tailpipe for every kilometre travelled. In practice, the term typically refers to BEVs, PHEVs and fuel cell EVs. For clarity and to assist further analysis of EV uptake in the future (Section 4), the data presented in this section exhibits separate totals for ULEV, PHEV and BEV registrations.

³⁹ <https://www.gov.uk/government/statistical-data-sets/all-vehicles-veh01>

Details of ULEV registrations for Carmarthenshire were taken from the DfT dataset VEH0132. This dataset provided the total number of ULEV registrations, BEV registrations and PHEV registrations at the end of each quarter (Q) from 2011 Q4 to 2020 Q4 for the UK, Wales and Carmarthenshire.

Vehicles are allocated to a local authority according to the postcode of the registered keeper. This is the keeper's address for privately owned vehicles or the company's registered address for company owned vehicles. The address does not necessarily reflect where the vehicle is located. This is especially true for large fleets kept by companies involved with vehicle management, leasing or rentals. Significant changes in the number of vehicles from year to year can often occur when these companies change their registered address.

Registrations can be assumed to be a minimum as due to some major dealerships being based outside of the Carmarthenshire boundary, some vehicles will be registered outside the boundary and used within Carmarthenshire. Therefore, the registered vehicles can be assumed to be conservative.

An initial analysis has been undertaken to gauge the level of ULEV uptake as a proportion of total vehicles registered. This has been conducted for the UK, Wales and Carmarthenshire. The figure below illustrates the level of ULEV uptake in relation to the total vehicles registered within the respective defined geography. It can be seen that the UK has a higher proportion of ULEVs, reaching 13% at the end of 2020.

Carmarthenshire's ULEV uptake is in line with the level of ULEV uptake in Wales, whereby the proportion of ULEVs out of the total vehicles registered follow a similar trajectory.

This highlights that Carmarthenshire's rate of adoption is in line with Wales with regards to the number of ULEV in proportion to the total vehicles registered.

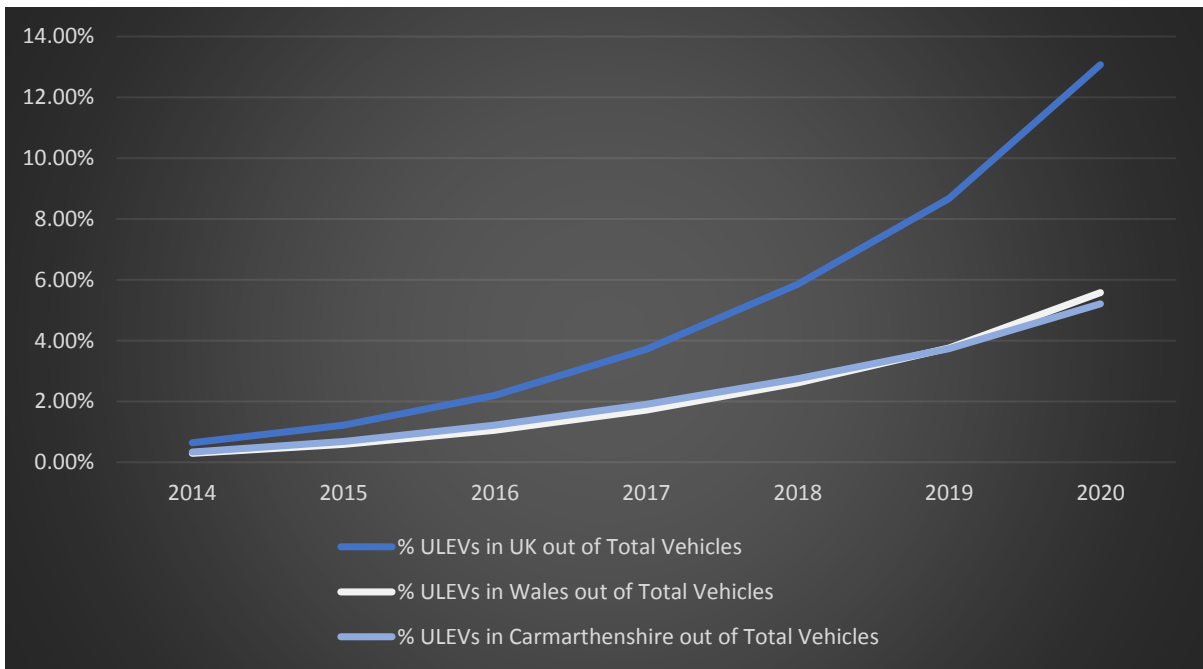


Figure 5 - % of ULEV Uptake out of Total Vehicles Registered for the UK, Wales and Carmarthenshire (2014 – 2020)

Figure 5 illustrates ULEV uptake in Carmarthenshire and in Wales from 2011 Q4 to 2020 Q4 to convey both the rate of increase and the number of ULEVs that have been registered in Carmarthenshire which contributes to the national uptake. This dataset has been presented on a cumulative basis, highlighting the total number of ULEVs by the end of each quarter whilst considering the average life span of a vehicle. For the basis of this analysis, it has been assumed that all registered ULEVs will remain within Carmarthenshire and in Wales.

By the end of 2020 Q4, the level of ULEV uptake in Carmarthenshire, cumulatively, accounted for 6% (5,852 ULEVs) of the registered ULEVs across Wales, illustrated in Figure 6 below. For context, the DfT dataset for ULEV registrations for Cardiff reveals that the capital city accounts for approximately 10% (10,211 ULEVs) of the registered ULEVs in Wales.

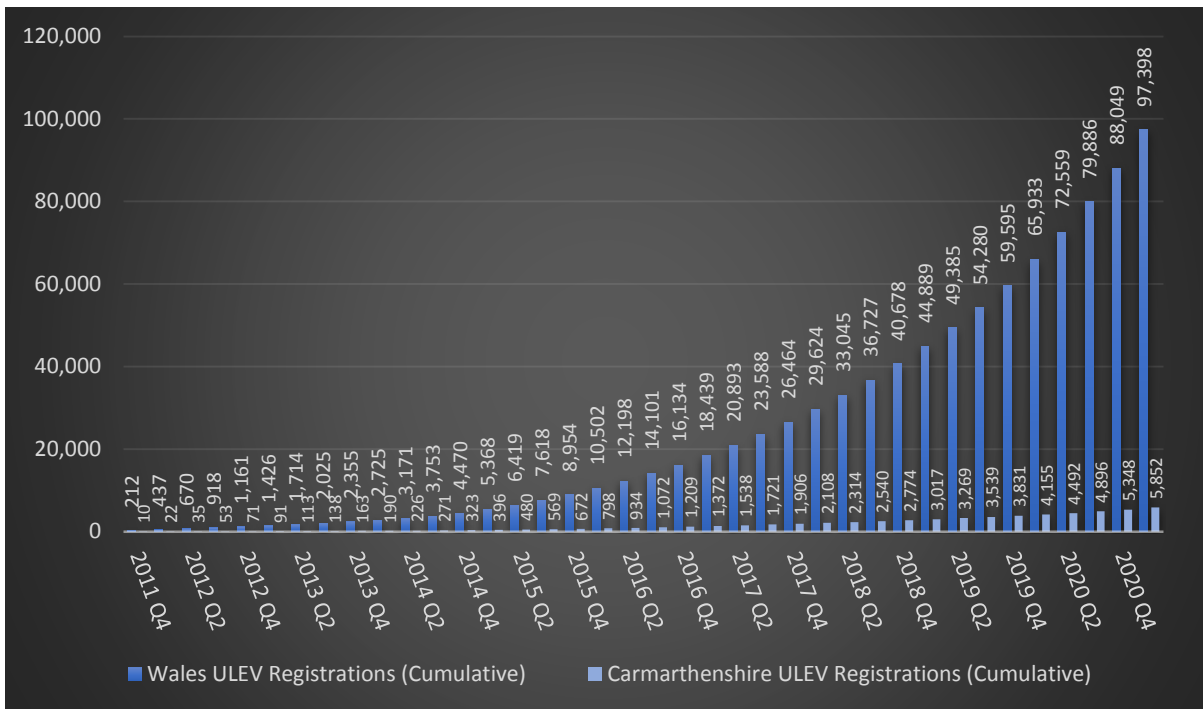


Figure 6 - ULEV Registrations for Wales and Carmarthenshire (Cumulative) (2011 Q4 – 2021 Q1)

A breakdown of ULEV registrations by BEV and PHEV has been illustrated for Carmarthenshire between 2011 Q4 and 2021 Q1, shown in Figure . Between 2011 Q4 and the end of 2014 Q1, it is shown that there were early adopters for BEVs, whilst zero presence of PHEV uptake. From 2014 Q2 to 2019 Q2, a rise in PHEV emerged, from 5 registered PHEVs to 128, respectively, for said quarter. However, following 2019 Q3, a sharper uptake of BEVs can be evidenced (129 BEVs registered in 2019 Q3 in contrast to 291 BEVs registered in 2021 Q1, an increase of 126%), a result of clear policy, market forces, funding and increase in charging infrastructure.

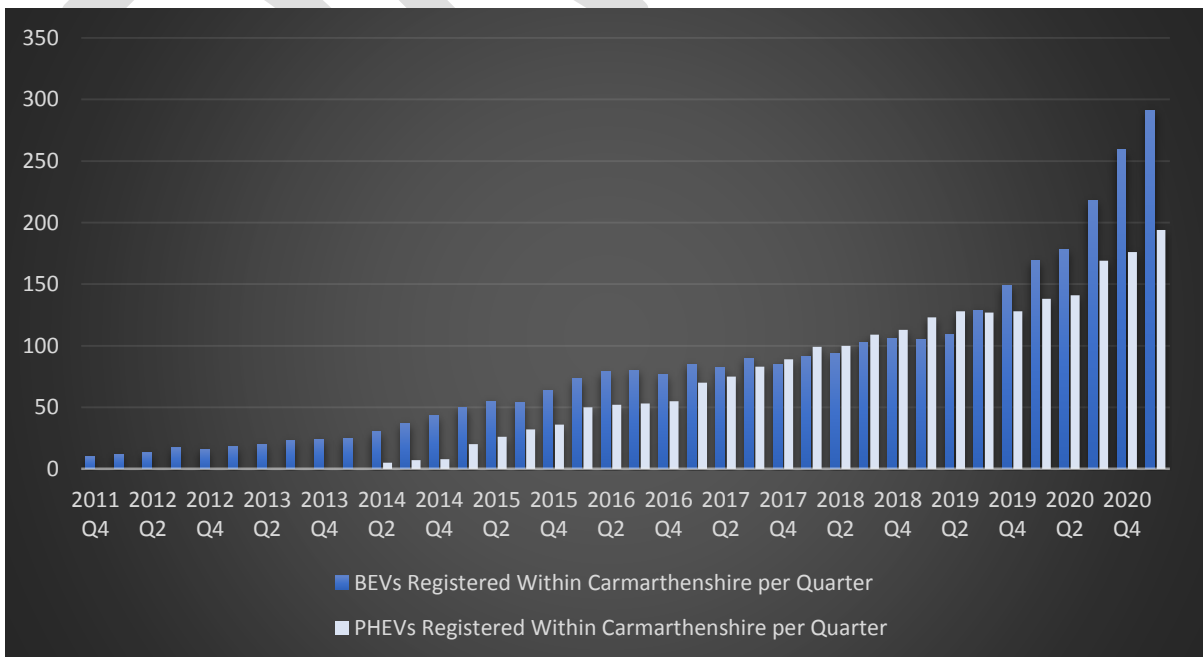


Figure 7 - BEV vs PHEV Registrations Within Carmarthenshire (2011 Q4 – 2021 Q1)

Figure highlights ULEV uptake by type within Carmarthenshire from 2011 Q4 to 2021 Q1. With regards to the data series for “% ULEV of Total Vehicle Registration”, this has been illustrated from 2012 Q3 to capture a cumulative total amount ULEV registrations which cover 4 quarters, which can then be used to take as proportion for total number of vehicles registered for 2012. Due to the granularity of total vehicle registrations (on a yearly basis) it has been assumed that each quarter the number of total vehicle registrations stay the same for that year.

The data displays progressive increase in the number of EV’s registered in the County over this time from 10 ULEV registrations by 2011 Q4, to 504 ULEV registrations by 2021, Q1.

As a percentage of total vehicle registrations, there is an increase from 0.06% in 2012 to 5% in 2020, highlighting an increase of 4.94% in terms of the proportion of total vehicles registered to be ULEV. Although total ULEVs in Carmarthenshire is shown to be a minimal 5% of total vehicle registration, it is very likely that the projections for ULEV % will increase at a rapid rate, due to charging infrastructure investment (reducing range anxiety), innovation within BEV technology, defined policy targets and increased awareness on the environmental benefits of EV adoption.

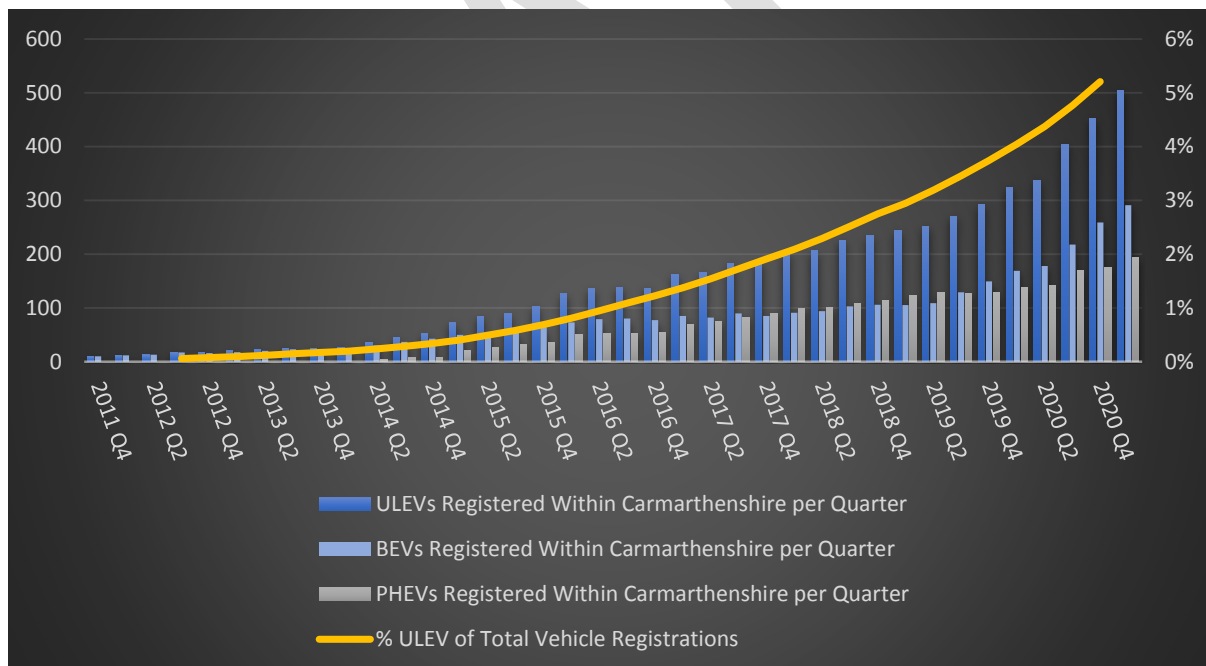


Figure 8 - ULEV Registrations by Type Within Carmarthenshire and Proportion of ULEVs in Relation to Total Vehicles Registered (2011 Q4 – 2021 Q1)

EV Charging

Whilst EVs can be charged via a normal household plug socket, charging with this method takes a long time. EVs are usually charged via dedicated charge points. There are three main EV charger types described in Table 6 below; the times given are estimates.

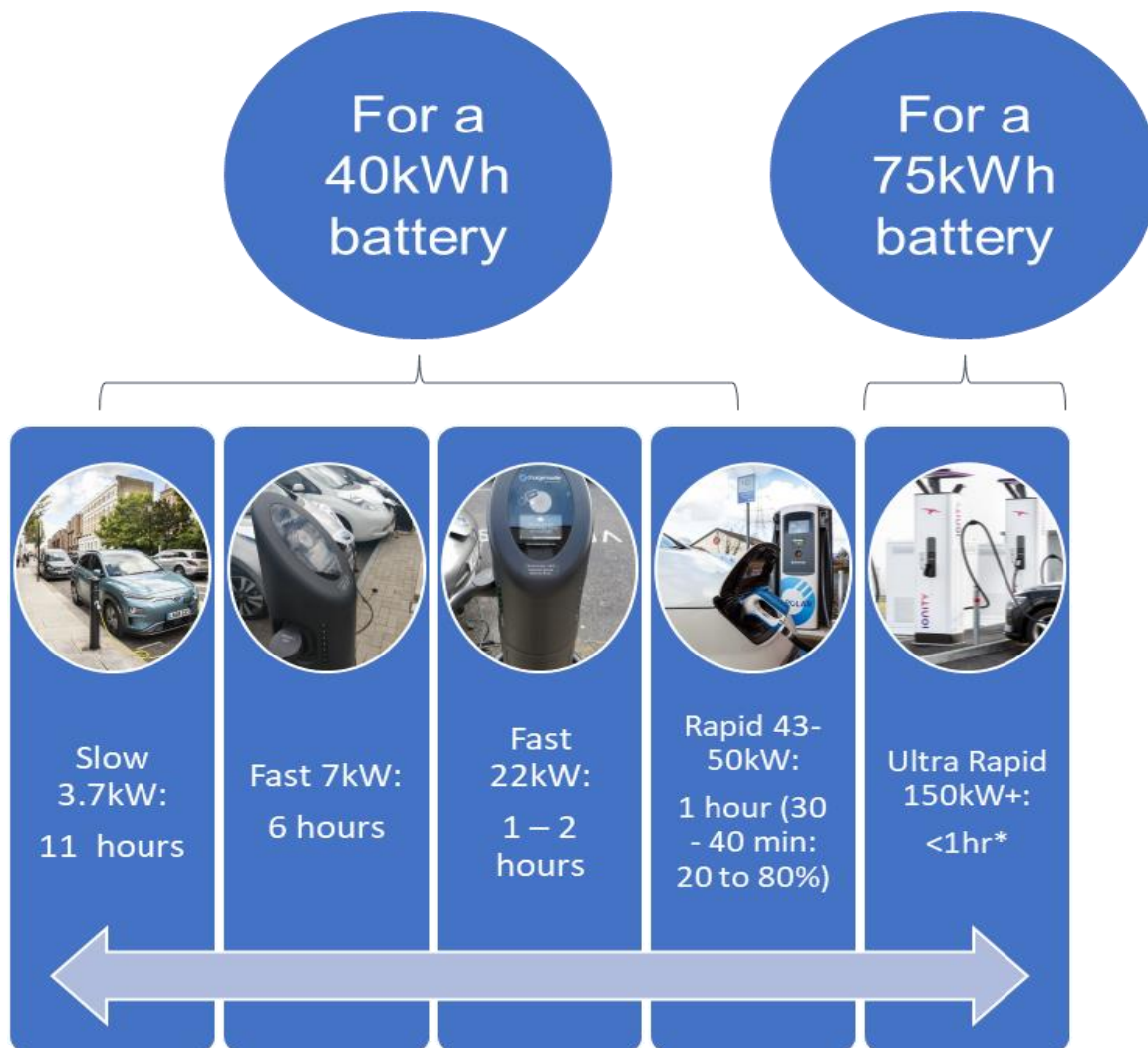
Table 6 - Charger Types and Times

Charger Type	Typical use case	Power	Typical Charging Time	Comment
Slow	Residential	3.6kW	6-12 hours	Time given is to fully charge. Slow charging is equivalent to charging via a mains socket.
Fast	Destination	7kW – 22kW	3-6 hours	Time taken to achieve a full charge.
Rapid	Destination & SRN	43kW, 50kW, 120kW	20 minutes – 1 hour	Time given is to 80% charge where the unit's power output will reduce to preserve battery life and maximise charging levels.
Ultra-Rapid	SRN	150kW	10 – 20 Minutes	Due to high current via this charging method incurs, many older vehicles cannot handle the charge due to thermal impacts on the battery, therefore this form of charging is more common in modern vehicles with larger battery capacities.

Using the power outputs stated in Table 6 this has been applied to a 40kWh battery and a 75kWh battery, shown in Figure 9 to highlight an approximate charge time based on battery size^{40 41}. The 75kWh battery has been included to showcase the charge time for an Ultra Rapid chargepoint.

⁴⁰ <https://pod-point.com/guides/driver/how-long-to-charge-an-electric-car>

⁴¹ <https://www.projectev.co.uk/ev-fast-charging-all-you-need-to-know>



*Charging time based on the Tesla Model S (2019)

Figure 9 - Charging Technology – Defined Power Output and Charging Duration (Based on a 40kWh and a 75kWh Battery)

EV Charging and the Highway Network

Data provided by Zap-map⁴² gives the total number of publicly available connectors in the UK as over 21,000 (Jan '19) across almost 7,500 different locations. This has increased from just over 13,000 connectors in November 2017. However, in Wales there are only 655 connectors.

Carmarthenshire has over 60 active chargepoints, the majority being Fast chargepoints, with a small number of Rapid chargepoints, with plans to facilitate the delivery of more. Some of these are available to any member of the public at any time, however others are only available some of the time or are for eligible customers of the charge point owner only.

CCC Corporate Strategy⁴³ describes how Carmarthenshire has the second largest highway network in Wales, covering 3,536 Kilometres, more than double the Welsh

⁴² <https://www.zap-map.com/statistics/#region>

⁴³ <https://www.carmarthenshire.gov.wales/media/1214849/corporate-strategy-18-23.pdf>

average of 1,566 Kilometres. EV charge points should be available to destination and through traffic, at specific destinations as well as for residents.

Figure below shows the location of existing publicly available EVCP infrastructure across Carmarthenshire in August 2021. Clusters are shown around the three largest towns, Carmarthen, Llanelli and Ammanford. Fast chargers are the most common, with them accounting for 51 out of 62 chargers in Carmarthenshire. Rapid chargers currently account for 5 of the EVCP's,

DRAFT

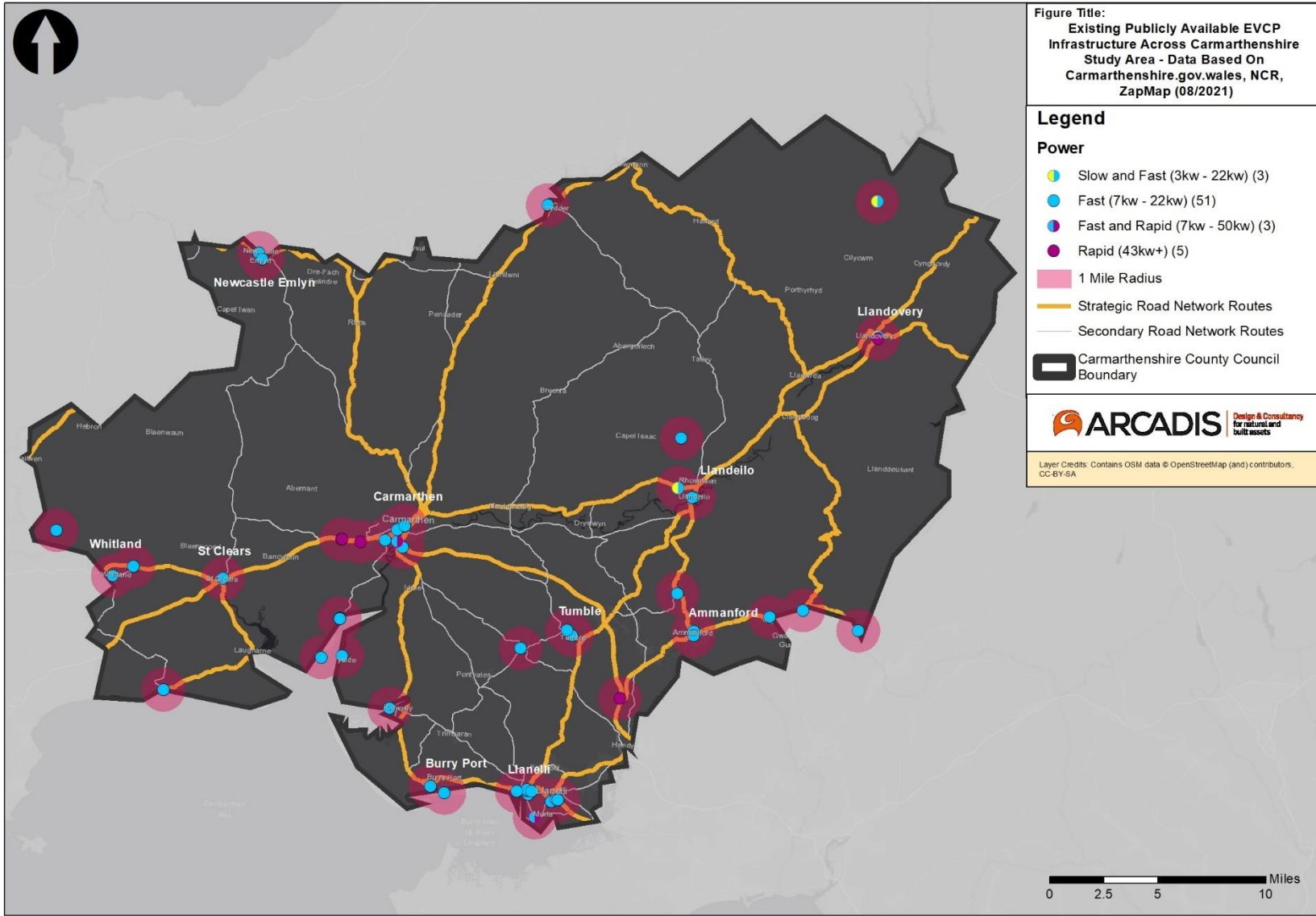


Figure 10 - Existing EVCP Infrastructure Across Carmarthenshire Study Area (08/2021)

Grid Capacity

For EVs to be charged, the delivery of power from the grid network must be in line with network capacities. This is particularly important during peak demand times which can be subjective depending on the area of EVCP operation. To assess available network capacity a nominal use case scenario was applied to each substation in the Carmarthenshire area.

Use case scenario

The selected use case scenario for Carmarthenshire simulates the implementation of Rapid EV chargers. This scenario was simulated to develop a baseline energy analysis of primary substations (33kV/11kV) and the demand headroom across the Carmarthenshire area.

The Swarco C63 ONE 43kW AC EV charger, with a power factor of 0.98 for accurate capacity analysis was used. This charger was selected as it provides a power output adequate to provide a full recharge (0% to 100%) for most EVs in little over an hour. Furthermore, this style of charging station is more cost effective than that of DC charging stations and can be integrated directly with the AC network.

The demand headroom for all primary substations was calculated based on 'Firm Capacity' and 'Measured Peak Demand' gathered via the Western Power Distribution online energy database. It should be noted that due to the usage of Firm Capacity opposed to Max Capacity/Ratings of the substations, a more general/universal analysis was conducted. However, for a more subjective analysis of individual substations in the future, the usage of Max Capacity/Ratings is advised.

Based on this baseline analysis all substations with available headroom in the Carmarthenshire area, and within 2km of the border, were evaluated and broke down into a Red, Amber, Green (RAG) categories. The RAG categories were based on the number of chargers that could be implemented within each substations connected network for this particular use case. The RAG Key can be viewed in Table 7 below.

Table 7 - RAG Key for Primary Substations

RAG Status	Number of Chargers	Infrastructure
Green	>100	No upgrades required to install over 100 rapid chargers
Amber	10-100	Upgrades required to install over 100 rapid chargers
Red	<10	Upgrades required to install over 10 rapid chargers

Analysis concluded that the Carmarthenshire grid network is currently in a healthy condition to facilitate a large uptake of EVCPs. The network at this point will require

no upgrades to primary substation capacities but may require upgrades regarding the connection of new charging sites as per the standard process. Further analysis may be conducted at distribution level (11kV/400V) to assess headroom, as and where required, for the development of EVCPs in the future at lower voltage levels for more specific site plans.

Figure presents a mapped analysis of the RAG rating and locations of all primary substations in the Carmarthenshire area with available headroom. It should be noted that when referring to the north/northeast of Carmarthenshire within the map, there may be considerably large areas that appear to be without a primary substation in close proximity. This is as these areas are particularly rural and will not rely on a large primary substation for power but will instead use secondary substations which will provide sufficient power to the area. This would however require further investigation upon delivery.

DRAFT

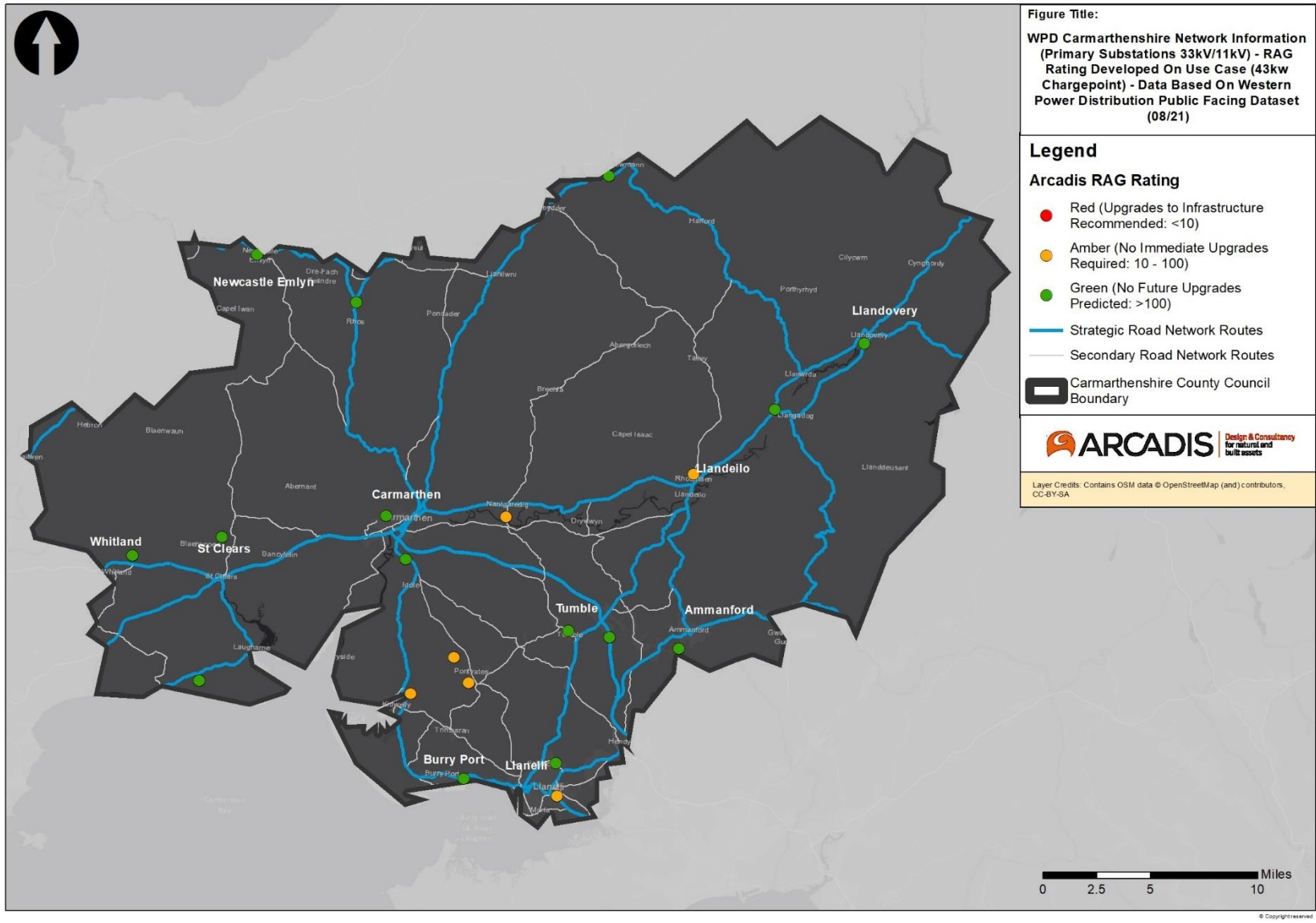


Figure 11 - RAG Assessment for Primary Substations

5. Forecasting

EV Expansion

According to the IEA report, Global EV Outlook 2018⁴⁴, sales of new electric cars worldwide surpassed 1 million units in 2017, a record volume which represents a growth in new electric car sales of 54% compared with 2016. The same report also lists how in the UK the total electric car stock (including hybrids) went from 86,440 in 2016 to 133,670 in 2017, with a UK target of 396,000 to 431,000 electric cars by 2020.

The growth in EVs is set to continue, and The Future Energy Scenarios⁴⁵ document produced by the National Grid in July 2018, predicts that in the UK there could be as many as 11 million EVs by 2030 and 36 million by 2040.

The report Roll-out of Public EV Charging Infrastructure in the EU by Transport and Environment⁴⁶ finds that “Despite the considerable emphasis on the importance placed on public recharging to drive EV acceptance, the data shows that public chargers are only used for about 5% of charging events. Furthermore, as the market matures this share is expected to decline with a preference for more fast charging over slow kerbside sites. The visibility of public recharging may however be important in encouraging existing drivers of conventional cars to switch to electric options although public chargers are rarely used.”

This reiterates evidence from trials and pilots that exposure to EVs and EV infrastructure results in an increase in uptake in EVs and EV infrastructure usage. Examples of this include EV taxis / private hire, EV rental or hire vehicles, and EV public service vehicles.

Leadership from both national and local governments is therefore vital in the strategic deployment of public chargepoints needed to facilitate and encourage the uptake of EVs.

There are a number of potential funding sources for chargepoint installation, some of which are listed in Annex G.

EVCP Forecast Modelling (EV Charging Strategy for Wales, 2021)

To develop an EVCP forecasting model that presents the trends regarding the uptake of EVCPs in Carmarthenshire, the official ‘EV Charging Strategy for Wales’ has been used to represent Carmarthenshire, which is projected to have the second largest uptake of EVCPs in all of Wales, second to that of Cardiff. A breakdown of EVCP uptake on a local authority basis for 2025 and 2030 is presented in

⁴⁴ <https://webstore.iea.org/global-ev-outlook-2018>

⁴⁵ <http://fes.nationalgrid.com/fes-document/>

⁴⁶ <https://www.transportenvironment.org/publications/roll-out-public-ev-charging-infrastructure-eu>

Figure respectively, as presented in the associated strategy. The strategy itself can be reviewed in further detail via the footer link⁴⁷.

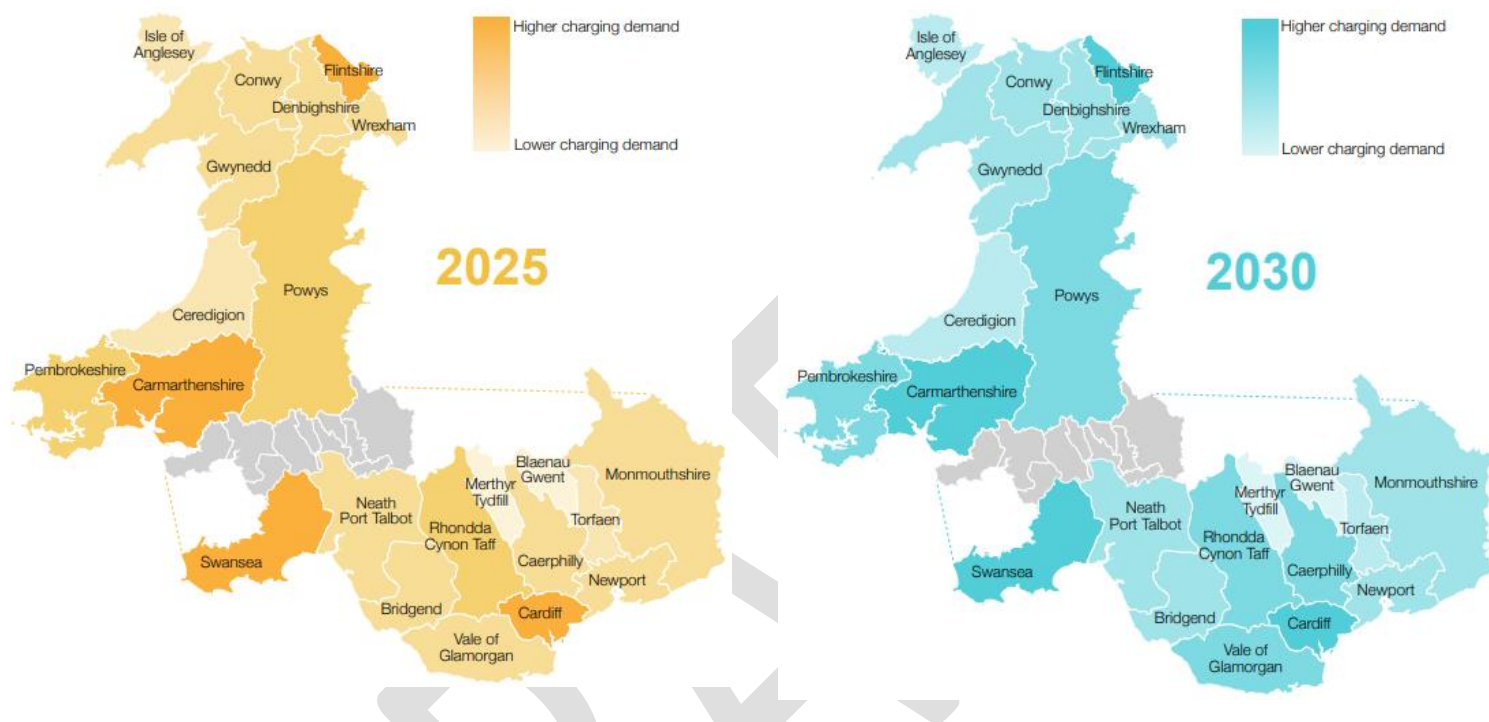


Figure 12 - Charging Demand Forecasts

The strategy itself takes 2 different approaches to modelling the increase of EVCPs. The first being 'Fast charging dominant' and the second being 'Rapid charging dominant'. As charging infrastructure requirements can be heavily dependent on user behaviours and locations of deployment, these two scenarios were developed to provide a projection considerate of one method becoming more favourable than the other, whether that be financially or logistically.

It should be noted that this modelling will be reviewing publicly available EVCP and therefore domestic EVCPs will not be included.

Fast charging dominant - Based on the widespread use of fast charging measures this scenario assumes EV charging will be utilised at locations where several hours of slower charging would be appropriate such on-street hubs, workplaces or Train stations. Fast charging is less demanding on the electrical grid network and is often more cost effective.

The EVCP modelling data has been extrapolated from the Wales EV Strategy as well as current EVCP registration databases to provide a projection from now until 2030 for the uptake of a 'Fast charging dominant' EVCP approach. This data

⁴⁷ <https://gov.wales/sites/default/files/publications/2021-03/electric-vehicle-charging-strategy-wales.pdf>.

modelling will use key milestones of 2021, 2025 and 2030 to provide a linear output for all years in between and is presented in Figure 13 below.

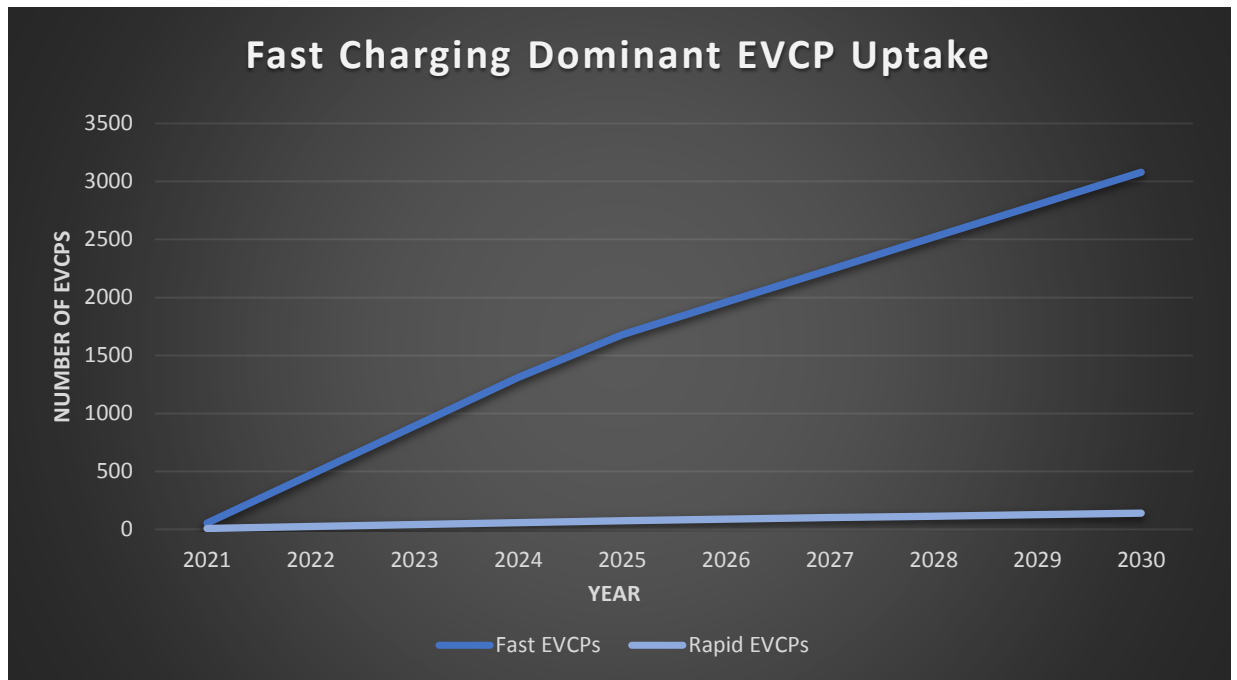


Figure 13 - Fast Charging Dominant EVCP Uptake

Rapid charging dominant – Based on the widespread use of rapid chargers. This scenario assumes that car battery capacities will continue to grow, permitting a much greater electrical range than current EVs. Along with improved battery performance and a reliable grid network this method will allow EV owners to achieve a much more convenient charge time to relieve the stresses of range anxiety and long journey breaks.

Again, the EVCP modelling data has been extrapolated from the Wales EV Strategy for the uptake of a 'Fast charging dominant' EVCP approach. This data modelling will use key milestones of 2021, 2025 and 2030 to provide a linear output for all years in between and is presented in Figure 14.

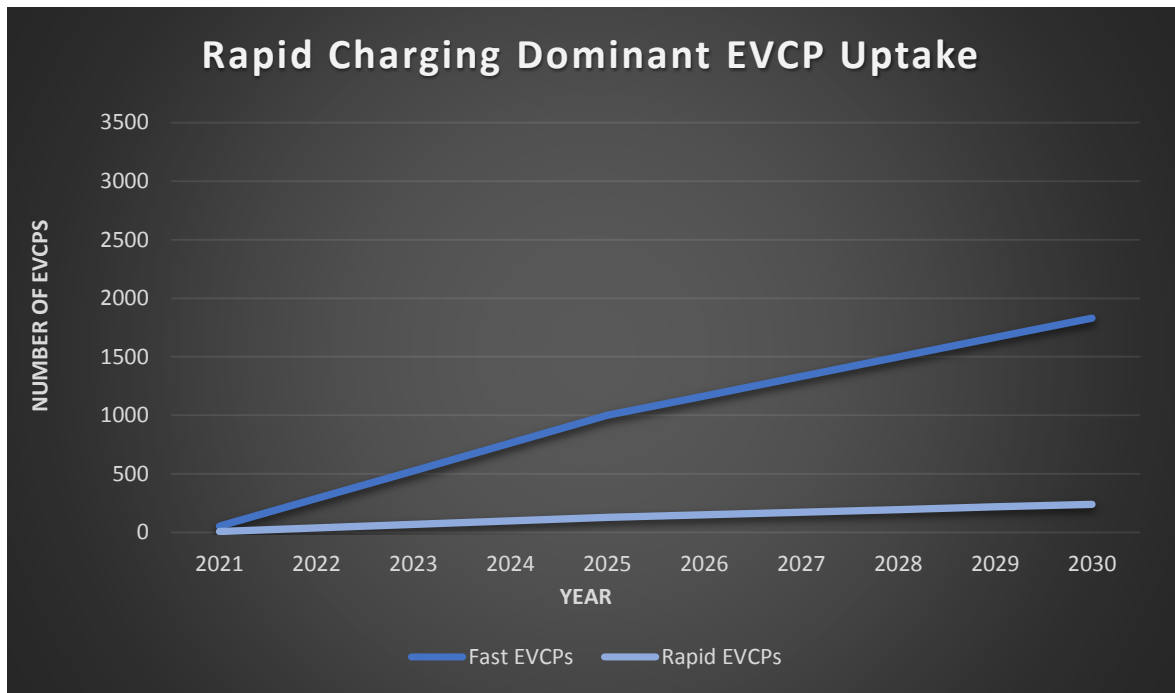


Figure 14 - Rapid Charging Dominant EVCP Uptake

To compliment the modelled EVCP uptake data for both EV charging scenarios, a side-by-side presentation of key milestone table arrays for both Fast charging dominant & Rapid charging dominant in Carmarthenshire has been presented across Table 8 & **Error! Reference source not found.** This helps clearly distinguish between both approached where 2030 targets present significant differences in projections.

It should be noted that the displayed installation targets are not a representation of CCC individual responsibility but are in fact a representation of the collective responsibility set for Carmarthenshire inclusive of private investment by Welsh Government.

Table 8 - Welsh Government Fast Dominant Scenario

Fast charging dominant EVCP uptake (Carmarthenshire Milestones)		
Year	Fast EVCPs	Rapid EVCPs
2021	54	8
2025	1680	75
2030	3080	140
Rapid charging dominant EVCP uptake (Carmarthenshire Milestones)		
Year	Fast EVCPs	Rapid EVCPs
2021	54	8
2025	1000	130
2030	1830	240

Table 9
- Welsh

Government Rapid Dominant Scenario

Future Vehicle Technology

As EV ownership continues to rise and national targets regarding the decarbonisation of transport become more accelerated, the concerns of range anxiety and recharge times become increasingly relevant. Therefore, industry professionals are constantly looking to innovate new concepts that improve the user experience with regards to EVs.

The power drawn from the grid to charge an EV will be AC. However, an EV battery itself can only store power as DC meaning somewhere along the line there must be a power conversion.

The difference between AC and DC charging is that AC charging requires power to be converted within the vehicle itself via an onboard charger, whereas DC charging has a converter built into the charger itself which can feed power directly to the EV battery. A visual example of both AC and DC charging has been provided in the infographic below.

Despite DC chargers being larger and more expensive, they can achieve much higher power levels than that of AC charging, therefore achieving a much faster charge time for users. DC charging can utilise power electronic devices such as voltage boosters to reduce the requirements from the grid whilst achieving high power levels to charge EVs quicker. Such a charging topology can be referred to as Ultra-Rapid or Hyper charging where the EVCP itself can be rated anywhere from 150kW-350kW. Developments such as Hyper charging present an exciting opportunity to mitigate any issues associated with EV charging times.

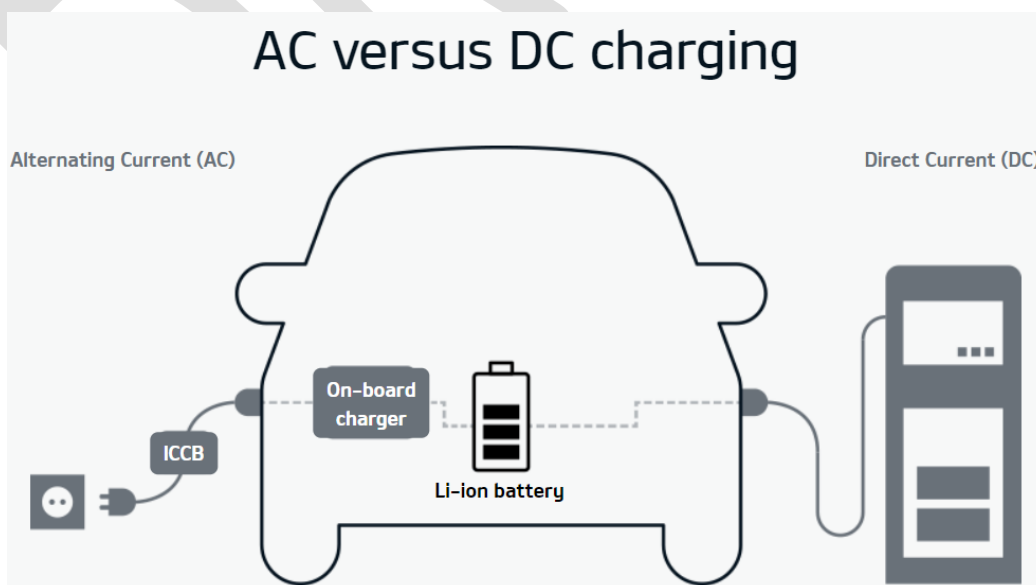


Figure 15 - AC vs DC Charging

Future Grid Demand

Carmarthenshire has 25 substations that are feasible for extra demand that will be encountered from an increase in EVCPs. This has been plotted back in the baseline chapter displaying grid capacity and a use case scenario RAG assessment.

By utilising the Welsh EV strategy forecast data for EVCP uptake for a 'Rapid charging dominant scenario' a model can be simulated to analyse the future demand headroom for each substation in line with their firm capacities. This model has been simulated for years 2021, 2025 and 2030. It should be noted that rapid charging dominant has been selected due to it being a more likely scenario to deliver charge points for Strategic Road Networks (SRN) within Carmarthenshire.

For this modelling if a substation is running over its capacity, it will gain a Red rating, if the substation is running below an available headroom of 1MVA it will gain an Amber rating and if it has over 1MVA it will gain a Green rating.

This model will incorporate domestic (5kW) charging, local fast (22kw) charging and rapid (43kW) charging to represent the most considerate and accurate forecast. It should be noted that this analysis has been evenly split across all substations and to develop a more specific and accurate analysis of each substation, more precise EV forecasting measures will be required for each community in Carmarthenshire opposed to Carmarthenshire as a whole. Furthermore only 25% of domestic EVs will be incorporated into this analysis as not all 100% will be charged at one time but some overlapping may occur due to slow charging rates.

Key Milestone results:

- **2021:** All substations can operate safely within substations firm capacity ratings. With 1 substation operating below 1MVA headroom.
- **2025:** 23 of the substations can operate safely with 2 substations forecast to be operating over substation capacity.
- **2030:** only 14 substations can operate safely with 11 substations forecast to be operating over substation capacity.

Table 10 provides a representation of the number and RAG rating of substations based on future grid demand based on the Welsh EV strategy.

Table 10 - Future Grid Capacity RAG Analysis

Future Grid Capacity RAG Analysis			
Year	Red (operating over substation capacity)	Amber (operating with below 1MVA headroom)	Green (operating with more than 1MVA headroom)
2021	0	1	24
2025	2	2	21
2030	11	5	9

Demand Mitigation Opportunities

When reviewing EVCP options CCC will consider opportunities to use innovative technologies that can sustainably aid the charging process and protect the grid. CCC

will encourage charge point suppliers to use innovative solutions to aid the EV uptake in Carmarthenshire, for example the integration of renewable energy generators such as solar PV could be used to reduce the demand that a charging location/hub would have on the grid.

Battery energy storage systems (BESS) represent another option that can be utilised at charge points where the grid may require some demand alleviation, or at points of high throughput where EV charging demand may be particularly large. This technology will allow power to be stored from onsite renewable sources or the grid network when demand is low allowing a discharge to EVs when grid demand is high, alleviating pressure on the grid network.

In addition, smart EV charging systems that control charger output in line with active infrastructure loadings will be considered, to maximise EV charging penetration levels whilst maintaining network stability.

All the above will be considered on an SRN, Destination and Residential basis when applicable.

Currently CCC is delivering a sustainable EV Charging Hub located at Cross Hands in Carmarthenshire, working with Arcadis and Swarco. This project represents not only the initiative that CCC are taking, but also the incorporation of solar panels on the roof that feed into battery back-up storage on site is one example of the measures that can be used to protect the grid network and sustainably charge EVs. This charging site is presented in



Figure 16.



Figure 16 - Cross Hands EV Charging Hub (in construction)

Vehicle to Grid (V2G)

Another innovative and exciting prospect of EVs would be their potential to aid in grid balancing.

UK distribution systems achieve frequency response by using a primary and secondary response system. This refers to low frequency events around 50Hz. During a period when the system frequency falls below 50 Hz there must be quick action taken to avoid a blackout. During a period where the frequency is over 50Hz, there must be adequate action taken to avoid the possibility of damaging supplied devices.

A principal problem with renewable power sources is their intermittency, and as we continue to move towards Net Zero, the decentralization of power systems such as solar and wind farms will continue to grow and dominate the market, thus making the issue of grid balancing vital.

Therefore, digital control within decentralised power systems is becoming more important. Integrating digital systems with technologies such as BESS provides an opportunity to harness energy and ensure that the grid remains stable during the ever-changing daily supply and demand cycle.

BESS currently requires a high capital investment for installation, due to the high manufacturing and installation costs. EVs present an alternative solution due to their ability store and release electricity during periods of low or high demand, furthermore due to the vast amount of EVs that is expected to be on the market in the future there will be enough collective battery capacity to provide this service without major influence on EV users. Therefore, grid balancing with EVs may prove to be a useful tool in the future.

Generally, the more charge and discharge cycles the EV battery goes through, the more it degrades. However, this is based on high levels of battery discharge, often more than 50%. In the case of vehicle to grid (V2G) operation, each vehicle would be subject to a discharge of a very low percentage as there would be a collective input from multiple vehicles connected to the network. This removing the concerns of battery degradation.

Alternative Fuels and Technology - Hydrogen

Hydrogen vehicles are similar in many ways to EVs and run on a motor powered by electricity. The difference between a hydrogen vehicle and a BEV is that a hydrogen vehicle uses a hydrogen fuel cell instead of a battery.

While EV charging via the electrical grid network represents some inefficiencies with the conversion from AC to DC power, the process of generating hydrogen to be used in fuel cell vehicles represents a much more complex procedure than that of connecting directly to the grid network for a BEV. The process from the generation right the way through to usage of hydrogen is relatively inefficient, and despite its ability to provide a greater range than that of BEVs these inefficiencies drive up the costs of hydrogen charging compared to electrical charging, and even when range is considered, the BEV is still considerably more favourable based on charging cost.

Despite this many manufacturers are experimenting with hydrogen vehicles as they could prove to be a great option for larger transportation vehicles such as planes, trains, and lorries. The Government has recently published a UK Hydrogen Strategy (August 2021)⁴⁸. The strategy (p53) highlights: 'hydrogen is likely to be fundamental to achieving the full decarbonisation of transport, with particular potential in areas of heavy transport 'that batteries cannot reach''. The first multi-modal hydrogen transport hub had £3 million investment committed in 2021 in Tees Valley, which it is stated could provide a blueprint for the creation of hubs in other areas across the UK⁴⁹.

However, EVs continue to see much faster growth and are currently the more widely adopted low emission vehicle of the two. As such, this strategy focuses on EVs, however the national policy position will be kept under review and the inclusion of hydrogen vehicles in more detail will be considered for future versions of Carmarthenshire County Councils EV Strategy.

⁴⁸https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1011283/UK-Hydrogen-Strategy_web.pdf

⁴⁹ P175 Decarbonising transport - A Better, Greener Britain
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf

6. Recommendations

Introduction

Recommendations have been brought forward in this section of this EV Strategy, with the objective to outline options for funding sources, the approach to procurement and operating models.

Policy objectives have been recommended based on the development and findings of this EV Strategy thus far, in the efforts to accommodate and/or accelerate EV uptake in the region and achieves Carmarthenshire's overarching vision.

Applicable Funding Sources

The recent government publications analysed in section two of this strategy⁵⁰ provide an update of funding scheme commitments, grants and incentives available regarding EVs and the associated infrastructure:

Infrastructure

On-street Charging

- The On-Street Residential Chargepoint Scheme provides local authorities access to up to 75% of funding to install EV infrastructure on-street and in public car parks.
 - From April 2021 the scheme has changed to address prohibitively high electrical connection costs by increasing the maximum funding available per chargepoint installation from £7,500 to £13,000. The funding will also help to encourage larger rollouts of charging infrastructure projects by removing the £100,000 maximum project cap.

Off-street Charging

- For properties with dedicated off-street parking, the EV Homecharge Scheme will provide funding towards the cost of a chargepoint and its installation. From April 2022, focus will shift to supporting leaseholders, renters and those living in flats.
- The Government will continue to fund EVHS until at least 2024/25.

Workplace Charging

- Workplace Charging Scheme (WCS) The Workplace Charging Scheme will provide funding towards the cost of the purchase and installation of EV chargepoints at workplaces. Since April 2021, the scheme has been opened up to small and medium enterprises (SMEs), as well as the charity sector, providing a boost as staff return to work. B&Bs will be eligible for the grant to provide visitors with certainty that they will be able to charge when they visit.

⁵⁰ 'Decarbonising transport - A Better, Greener Britain' and 'HM Transitioning to zero emission cars and vans: 2035 delivery plan'

- The Government will continue to fund the WCS until at least 2024/25

Vehicle Grants/Tax incentives

- £582 million for plug-in car, van, taxi, and motorcycle grants until 2022-23, reducing Zero Emission Vehicle (ZEV) purchase prices for consumers.
 - Plug-in car grant provides up to £2,500 towards the purchase of a car priced under £35,000.
 - Plug-in van grant provides funding of 35% of the purchase price for eligible vans up to £3,000 for vans less than 2.5 tonnes, and up to £6,000 for vans between 2.5 and 3.5 tonnes.
- Favourable company car tax rates for zero emission cars up to at least March 2025, zero emission cars and electric vans pay no vehicle excise duty, and a nil rate of tax is applied to zero emission vans within the van benefit charge.

Supply Chain

- £1bn to build EV supply chain at pace and scale in the UK. (First £500m delivered through Automotive Transformation Fund over next 4 years (battery cell manufacturing and gigafactories).

Research and Development

- Faraday Battery Challenge (FBC) is a £330 million programme designed to create the innovation ecosystem needed for the UK to become a battery science superpower.
- Driving the Electric Revolution Challenge, delivered by UK Research & Innovation (UKRI), provides £80 million to scale-up and unite UK supply chains to deliver fundamental components of EVs and net zero – power electronics, electric motors, generators and drives (PEMD). Funding is committed to support this initiative until at least 2025.

Procurement and Operating Models

There are a wide range of potential operating models due to the complex roles in procurement, installation, operation and maintenance of EV chargepoints. Due to commercial agreements, contractual terms and available incentives, there is a great number of bespoke operating models in existence, but some typical and common operating models and their advantages and disadvantages are explained below.

When procuring EV charging infrastructure up to £25,000, 3 quotes must be sought from companies. Any charging units with a total life cost of over £25,000 are procured via a tendering process through Sell2Wales. This includes all rapid chargers and fast charger packages covering a number of sites.

Table 11 - Typical Models of EVCP Operation

	LA Operated	Private Agreement	Private Licensed	Private Operated
--	----------------	----------------------	---------------------	---------------------

Land costs	LA	LA	LA	Private
EVCP Infra	LA	LA	Private	Private
Installation	LA	LA	Private	Private
Maintenance	LA	Private	Private	Private
Operation/	LA	Private	Private	Private
Revenue	LA	Mixed	Mixed	Private

There are currently 2 operating models implemented by Carmarthenshire County Council:

LA Operated

Purchase, installation and operation of the charging units by the local authority. This can be via grant funding or internal CCC funds. Currently in use on the St Peters and Mart Car Park chargers.

Advantages:

- All income generated will come straight back to the council;
- Charging units remain an asset of the council;
- Free to move chargers around to other sites if necessary;
- Flexibility in charging;

Disadvantages:

- After initial period maintenance and monitoring costs must be absorbed by the Council.
- As technology develops the units may require upgrading – full cost for this to be absorbed by the council.

Private Licensed

Agreement with a company to provide and maintain units as a service to the public. Currently in use on the Nant y Ci and Llandovery Rapid Chargers.

Advantages:

- No initial cost or need to find/secure funding;
- No ongoing cost or risk to the Council;
- All maintenance, upgrade and monitoring covered by the external company.

Disadvantages:

- Any profits must be split between third party and the Council;

Other Operating Models

There are a range of alternative operating models not currently utilised by Carmarthenshire County Council which include, but are not limited to:

- Private Agreement - If new charging points were to be installed by local authorities on local authority land, private operators could be used to maintain and / or operate the EVCPs, with a fee paid to the operator, or a shared revenue risk model to offset any future costs to the local authority. Grant funding could be sourced to offset the initial cost, but it is likely there would still be DNO costs and installation costs;
- Private Operated - If the charging points were purchased, installed, and operated by a private operator, there would be no initial capital cost for a local authority in terms of procurement and installation of the infrastructure, or operating costs in terms of maintenance. Grant funding could be sourced to help encourage private operators to install further EVCPs, possibly through a match funding agreement;
- Using development control or planning permission requirements to encourage private operator funded EV chargepoint installation.

Proposed Policies

Following the review of current National, Regional and Local policies on EV's, a series of policy objectives have been developed which will assist us in achieving our overarching Vision:

“To develop and promote a network of electric charging points, that provides for and encourages future growth in EV use, and in doing so future proofs our transport network and contributes to local and global pollution reductions”

The policy options have been considered for implementation in Carmarthenshire to accommodate or accelerate EV uptake in the region. These options have been generated and considered based on achievability, benefit, and risk.

EV1 Facilitate the Provision and Delivery of Public EV Charge Points

Carmarthenshire County Council will facilitate the provision of a charging network that provides mixed speed public charging infrastructure which is available, affordable, consistent, convenient and user friendly.

Carmarthenshire Council will investigate strategic locations throughout the county for fast and rapid charge points and identify zones where charge point installation should be particularly encouraged. The Council will consider the speed of charging for each location considered, providing a range of Fast and Rapid chargers as appropriate.

The EV chargers should primarily be placed in locations that are accessible to the majority to ensure good uptake. At the same time, the council will work with rural communities to ensure that less-populated rural areas are not excluded from EV use by lack of infrastructure and will seek to identify funding sources for charge points in more remote areas where the private sector may be less likely to install. The Council

will monitor usage statistics of charge points and use this in informing future decisions and strategy.

Funding contributions will be required from a range of contributors, including private sector investment for new development, property owners for planning applications, UK Government and Welsh Government and Carmarthenshire County Council. The quantum from each is yet to be understood, and will be dependant on locations, delivery options (including chargepoint type) and demand timescales.

Different areas of the County will have different needs with regards to EV charge points, but consideration needs to be given to public charge points in the following environments:

1. Locations near the strategic road network, with at least a pair of rapid and a fast charger at least every 20 miles.
2. Destination chargers for tourist, leisure, and shopping venues.
3. Shared carparks and other locations to encourage people without off-road parking to use EVs.
4. Employment centres.
5. Air Quality Management Areas.

Carmarthenshire County Council will also investigate the possibility of lamppost chargers and other solutions such as rising chargers within the footway to encourage use of EVs amongst residents without off-street parking.

EV2 Maintain Parking Management Policies Supportive of EVs

Carmarthenshire County Council will, where appropriate, provide electric charging facilities and spaces in parking bays at council owned car parks. Installations have already been completed at several council owned car parks as of September 2021 fast charge points are installed at 28 locations across the county. In addition, there are rapid charge points at the Park & Ride car park at Nant-y-Ci and Castle Car Park in Llandovery. The Cross Hands charging hub is due to be opened imminently and will provide a further 4 rapid chargers (50kW) and 1 super rapid (150kW) on the strategic road network.

The council has had positive feedback on the installation of the current charge points, with one EV owner saying that they would not have visited Carmarthen had there not been EV charging facilities available.

EV3 Encourage EV Charge Points at Key Employment Centres, and Public Transport Interchanges.

Carmarthenshire County Council will seek to put out a tender to EV charge point providers for facilities at their main staff car parks. Some of these car parks act as council employee parking during the week and public parking at weekends, giving an additional benefit. They will also investigate available grant funding to install EV charge points at destinations used for leisure purposes.

Carmarthenshire County Council will also seek to encourage and facilitate EV parking at other employment centres, by providing information to employers about EVs, and pass any enquires about EVs onto the relevant organisations.

EV4 Encourage the Use of EVs in the Fleet

Carmarthenshire County Council will investigate opportunities to upgrade its fleet to EVs and other similar technologies such as hydrogen. The Council are developing a fleet strategy in 2022. A successful trial has already been undertaken involving the introduction of EVs in the council's fleet, with six vehicles based at Parc Myrddin Parc Dewi Sant and Spilman Street– two Mitsubishi iMIEVs and four Peugeot IONs. This initiative took place when Public Body use of EV's was in its infancy and saw Carmarthenshire become the first Local Authority in Wales to do so.

Carmarthenshire County Council are currently reviewing their fleet strategy in terms of introducing EVs into the fleet, changing the mix of technologies and will pilot the use of further EVs in the fleet, and will also seek to install EV chargepoints in their depots. The Council will also investigate training for staff so that more work on the EVs in the fleet can be done in house.

EV5 Trial New Technologies and Encourage Innovation

When looking at EV options for their fleet Carmarthenshire County Council will consider opportunities to use innovative technologies. The Council will also encourage charge point suppliers to use innovative solutions, for example integration with renewable energy generators or batteries at charge points where the grid is lacking capacity

EV6 Investigate ways to Encourage Charge Point Provision through the Planning Process

Carmarthenshire County Council will seek to support the inclusion of EV charging points within developments they permit. Planning Policy Wales 10 states that the planning system should encourage and support the provision of ULEV charging points as part of new development and suggests that planning authorities should seek a minimum of 10% of car parking spaces to have ULEV charging points. Carmarthenshire County Council will review ways in which to proactively encourage and facilitate the provision of EV charge point as part of the emerging Local Development Plan and other planning policy, and the draft Highways Design Guide for developers.

EV7 Investigate incentives for Private Developers and Landowners to Provide Charge Points on Existing Developments and explore the potential for the use of S106 contributions.

Carmarthenshire County Council will research possible incentives to encourage the installation of publicly available charge points on private land. They will investigate the precedent from other Local Authorities and discuss with relevant departments the applicability to Carmarthen. This is likely to be via the South West Wales Regional EV Network meetings and can also be used to review available grant and other

funding opportunities that can aid in identifying and providing information to landowners about funding options.

EV8 Encourage Taxis and Public Transport Providers to Upgrade to EVs

Taxi firms are well placed to benefit from the use of EVs. Taxis based at urban centres are likely to be undertaking mostly shorter journeys and would be more suitable to switch to vehicles that run solely on electricity, with hybrids being better suited to firms or vehicles undertaking longer trips to rural areas.

Carmarthenshire County Councils licensing team have already exempted EVs from the 1200cc minimum size vehicle for private hire, and the Council will investigate other mechanisms to encourage EV use amongst Carmarthenshire's taxi companies. The Council will send out appropriate information about EVs to all taxi companies on their register and seek to facilitate the installation of EV charge points at taxi ranks. This information could include estimates of cost savings on fuel and maintenance, and where possible cite examples from other taxi firms that have converted to EVs, see case study below.

Case Study: 'AJ's Taxis' EV Fleet Transition, Llanelli

The achievability and benefits for taxi firms to transition to full EVs within Carmarthenshire has been long standing. This is evidenced by an exemplar case study located within Llanelli, whereby a taxi firm had been declared the first taxi firm in Wales to go fully electric and successfully operates as being eco-friendly. This highlights the case for change to EV is achievable and can incur numerous commercial and environmental benefits.

EV9 Provide Publicly Available Information About EV Charging Options

Carmarthenshire County Council will provide easily accessible information with regards the charging infrastructure available within the county so that both locals and visitors with EVs are confident in finding a place to charge. There is a map showing charge points on the Council's website⁵¹ and this map will be developed further with further information such as charger type and pricing structure labelled.

Signage will be placed near charge points to assist vehicle owners in finding them. Public facing communication will be provided where suitable to direct residents and visitors to the Council's website where further information can be accessed for those looking to upgrade to EVs.

EV10 Inform Businesses and Residents about opportunities to upgrade to EVs and develop a comms plan to support the EV Infrastructure Strategy.

Carmarthenshire County Council will investigate other ways to encourage EV use, for example organising clear air day events and EV supplier days. The council will

⁵¹ <https://www.carmarthenshire.gov.wales/home/council-services/travel-roads-parking/electric-car-charging-points/#.W03wVE2ouUk>

seek to utilise existing community links and knowledge within the third sector, such as Carmarthenshire Energy Ltd and the Community Transport Association.

EV11 Encourage Electric Car Clubs

Carmarthenshire County Councils Corporate Strategy⁵² outlines how 60% of the County's people live in rural areas, and that many residents, particularly elderly ones, do not have access to a car or van. The strategy states "community-based services are important to enable people to continue to live within their communities; it can mean the difference between a person staying independent at home or entering residential care."

Additionally, the document 'A Strategic Regeneration Plan for Carmarthenshire 2015'⁵³ highlights the limited penetration and frequency of service of public transport provision in parts of rural Carmarthenshire seeks to "invest further in the application of new technologies to ensure that our local businesses are able to compete in wider market" as well as highlighting the importance of "access to rural transport".

Electric car clubs could be used to help to meet these goals when integrated with the public transport sector, to strengthen rural communities and allow elderly and vulnerable residents to remain independent.

Carmarthenshire County Council will support communities who wish to consider setting up electric car clubs and will refer any enquiries they get onto relevant bodies. The council will also lend support to organisations promoting electric car clubs. They will also include details of existing EV car clubs and similar schemes such as the Eco Travel Network⁵⁴ in the information they provide to business and residents in the area. This type of initiative could encourage more low carbon tourism to the area, for example visitors arriving by public transport and having access to EVs whilst staying.

EV12 Work in Partnership with Other Organisations

Many of the publicly available chargepoints in the UK are not owned by the landowner of the site they are located on, but are owned by another organisation, typically a private sector company, who pay the supply and installation costs of the charge points and either take a percentage of the income or pay a lease to the landowner. This allows landowners who lack the capital or who do not want to take the financial investment of a charge point installation.

Carmarthenshire County Council will work with these organisations in identifying sites suitable for charge points on council owned land and tendering for installation. The Council will also seek to provide information on charge points and reputable installers to local business. The Council will work with community groups and other

⁵² <https://www.carmarthenshire.gov.wales/media/1214849/corporate-strategy-18-23.pdf>

⁵³ <https://www.carmarthenshire.gov.wales/media/1212060/strategic-regeneration-plan-for-carmarthenshire-2015-2030-pdf.pdf>

⁵⁴ <http://www.ecotravelnetwork.co.uk/>

not for profit organisations in supporting the development of community owned charging hubs in the county.

The cost of installing EV charge points can vary considerably depending on the capacity of the electrical distribution network in the area. When considering charge point locations Carmarthenshire County Council will liaise with Western Power Distribution (DNO) to ensure costs and grid availability are taken into consideration.

Carmarthenshire County Council will also seek to work with neighbouring local authorities on promoting EV use and the strategic deployment of charge points, to develop a coherent consistent approach across the Swansea Bay City Region and in doing so realise potential economies of scale in terms of procurement and contract arrangements.

Setting up a “Carmarthenshire EV Centre of Excellence” will be considered with the inclusion of academics, local authority representatives, private EVCP operators, vehicle manufacturers and EV strategy consultants. This would enable open discussion, knowledge share, lessons learnt and exchange of best practice between key stakeholders, with the objective to improve the rollout of EVCP infrastructure and its operational use. This proposed policy will be further explored and investigated.

EV13 Continually Review and Refresh This Strategy.

The market for low emission vehicles is changing rapidly, and many of the policies outlined here may need revision as the technologies develop. As such, Carmarthenshire County Council will need to keep this strategy under regular review with a periodic strategy refresh undertaken depending on any major changes in policy or availability of funding.

The table below summarises the policies and actions:

Table 12 - Summary of Proposed Policies

Policy	Action
EV1	Facilitate the Provision and Delivery of Public EV Charge Points
EV2	Maintain Parking Management Policies Supportive of EVs
EV3	Encourage EV Charge Points at Key Employment Centres, and transport interchanges.
EV4	Encourage the Use of EVs in the Fleet
EV5	Trial New Technologies and Encourage Innovation
EV6	Investigate ways to Encourage Charge Point Provision through the Planning Process
EV7	EV7 - Investigate incentives for Private Developers and Landowners to Provide Charge Points on Existing Developments and explore the potential for the use of S106 contributions.
EV8	Encourage Taxis and Public Transport Providers to Upgrade to EVs
EV9	Provide Publicly Available Information About EV Charging Options

EV10	EV10 - Inform Businesses and Residents about opportunities to upgrade to EVs and develop a comms plan to support the EV Infrastructure Strategy.
EV11	Encourage Electric Car Clubs EV
EV12	Work in Partnership with Other Organisations
EV13	Continually Review and Refresh This Strategy

DRAFT

7. Measuring Success

Carmarthenshire County Council are committed to their vision of developing and promoting a network of electric charging points that provides for and encourages future growth in EV use, and in doing so future proofs the transport network and contributes to local and global pollution reductions. Recognising the importance of self-accountability and delivering to timescales stated, the following milestone objective programme has been created based on 5 and 10-year time-periods. Typically, a 15-year time-period would also be included, but there is now unlikely to be targets or ambitions after a 10-year period due to Welsh and UK Government bringing targets dates forward to 2030.

DRAFT

5-year Milestone Objectives

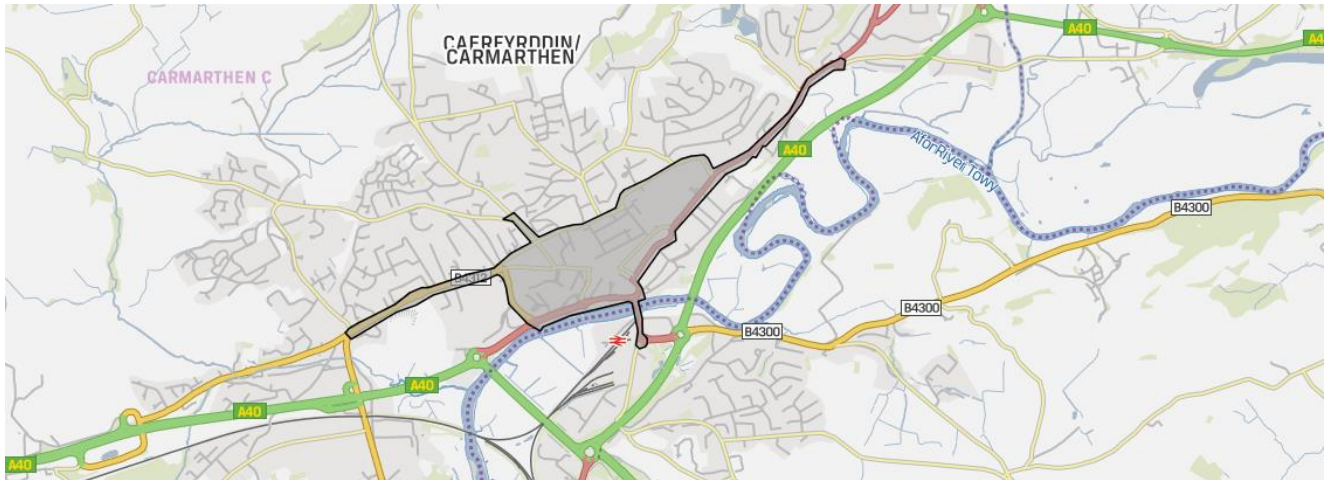
Milestone (KPI)	Measure	Timescale	Driver	Source/Reference
Facilitate EVCP provision in line with WG forecasts (not just CCC installations)	Fast EVCPs – between 1000 and 1680 available Rapid EVCPs – between 75 and 130 available	By 2025	EV Charging Strategy for Wales – Requirement for Carmarthenshire	EV Charging Strategy for Wales
Review and refresh this strategy every 3 years	Document and associated documents updated within 3 years	Before the end of 2024	Requirement to keep strategy and policy relevant and appropriate.	Carmarthenshire County Council EV Charging Infrastructure Strategy
Investigate and encourage development of car club within Carmarthenshire with a significant EV fleet	Car club with EV vehicles in operation		Facilitate EV uptake through public procurement	Carmarthenshire County Council EV Charging Infrastructure Strategy

10-year Milestone Objectives

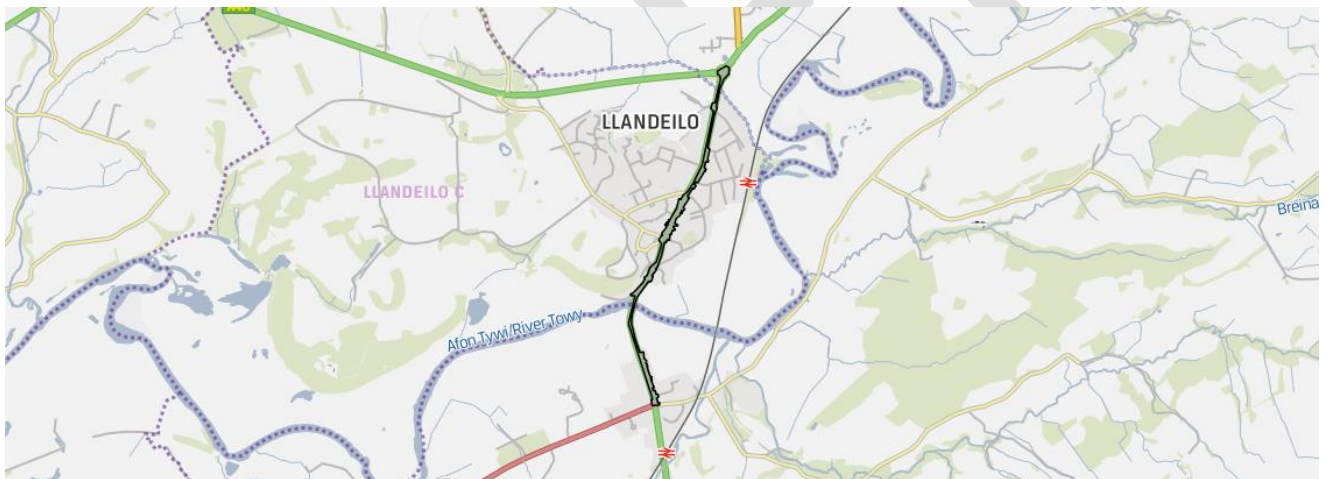
Milestone (KPI)	Measure	Timescale	Driver	Source/Reference
Facilitate EVCP provision in line with WG forecasts (not just CCC installations)	Fast EVCPs – between 1830 and 3080 available Rapid EVCPs – between 140 and 240 available	By 2030	Welsh Government EVCP requirements for Carmarthenshire	EV Charging Strategy for Wales
Carmarthenshire County Council to be net zero carbon local authority.	Greenhouse gas emissions net zero across fleet.	2030	Welsh Public Sector net zero greenhouse gas emissions by 2030	Net zero carbon status by 2030: A route map for decarbonisation across the Welsh public sector
Established car club within Carmarthenshire with whole EV fleet	Car club with all EV vehicles in operation		Facilitate EV uptake through public procurement	Carmarthenshire County Council EV Charging Infrastructure Strategy

Annex A – Air Quality Management Areas

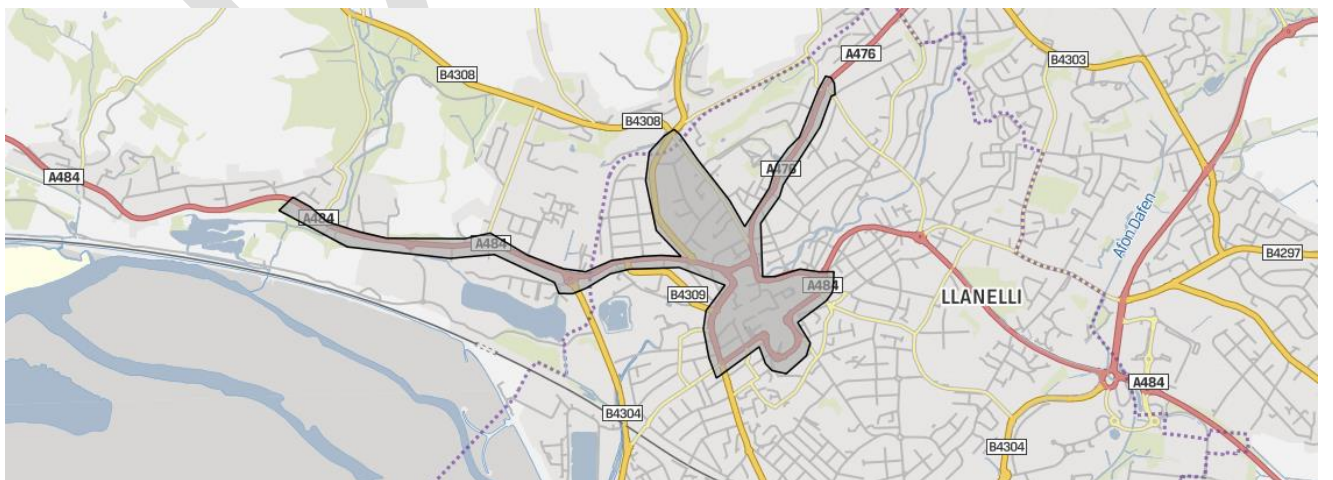
Carmarthen



Llandeilo



Llanelli



This page is intentionally left blank

ENVIRONMENTAL AND PUBLIC PROTECTION SCRUTINY COMMITTEE

25TH NOVEMBER 2021

HIGHWAYS ASSET MANAGEMENT PLAN (HAMP) MAINTENANCE MANUAL

Purpose:

To adopt the Maintenance Manual in support of the Highway Asset Management Plan which was approved by Executive Board and adopted in October 2018. The Maintenance Manual forms Part 4 of the HAMP and is being developed as a portfolio of specific manuals covering the management of a range of highway asset categories. The first four sections brought forward at this time cover:

- Part 4.1 Highway Maintenance Management
- Part 4.2 Highway Network Hierarchy
- Part 4.3 Highway Inspection and Repair Regime
- Part 4.4 Road Condition Assessment and Investment Prioritisation

Further sections will be brought forward in future years.

To consider and comment on the following issues:

The adoption of the Maintenance Manual parts 4.1 to 4.4 as detailed.

Reasons: To ensure the highway network is maintained in accordance with statutory duties, supports corporate objectives and complies with the revised national code of practice 'Well Managed Highway Infrastructure'. The revised manual introduces changes to the inspection and maintenance of highways recommended by the County Surveyor's Society Wales to provide consistency across Wales.

Relevant scrutiny committee to be consulted Yes – E&PP Committee 25th November 2021

Cabinet Decision Required YES – 6th December 2021

Council Decision Required NO

CABINET MEMBER PORTFOLIO HOLDER:-
Councillor Hazel Evans, Cabinet Member for Environment

Directorate:	Designations:	Email addresses:
Steve Pilliner Report Author:	Head of Service: Highways & Transportation	SGPilliner@carmarthenshire.gov.uk
Richard Waters	Highways & Transportation Services Manager	rwaters@carmarthenshire.gov.uk
Darren King	Highway Services Manager	dking@carmarthenshire.gov.uk
Chris Nelson	Highways Asset Manager	CNelson@carmarthenshire.gov.uk

EXECUTIVE SUMMARY

ENVIRONMENTAL AND PUBLIC PROTECTION SCRUTINY COMMITTEE

25TH NOVEMBER 2021

HIGHWAYS ASSET MANAGEMENT PLAN (HAMP) MAINTENANCE MANUAL

BRIEF SUMMARY OF PURPOSE OF REPORT.

In 2018 Council resolved to adopt the Highway Asset Management Plan which ensures that the County Council manages and maintains the highway network in accordance with its statutory duties and to comply with best practice.

The HAMP is in line with national codes of practice and adopts a risk-based approach which targets limited resources to areas where they are most needed and where our investment will derive greatest value. This does mean that difficult decisions have to be made and the 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. There are four parts to the HAMP:

- Part 1 of the HAMP explains the supporting role of the highway network in the wider policy context.
- 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 informs on the condition of the asset and is reported as an Annual Statement.
- Part 4 is a Maintenance Manual consisting of a portfolio of topic specific manuals setting out how we manage particular elements of the highway asset in line with the risk-based approach.

This report concerns Part 4 of the HAMP which is being drafted in accordance with an all-Wales approach being coordinated by the County Surveyors Society Wales (CSSW). Although there is the opportunity for each authority to depart from CSSW guidance to recognise local conditions, the overarching intention is to bring a consistent approach across Wales.

Part 4 will consist of a portfolio of individual manuals which will be brought forward over time to provide a comprehensive document setting out how the maintenance of the highway asset will be managed. There are four particular sections brought forward within this report and a provisional timetable is included setting out subsequent manuals to be drafted in the next two

years. Each section of the Manual has been drafted with reference to CSSW guidance and include:

- Part 4.1. Highway Maintenance Management.
- Part 4.2. Highway Network Hierarchy.
- Part 4.3. Highway Inspection and Repair Regime.
- Part 4.4. Road Condition Assessment and Investment Prioritisation.

An overview of these sections of the Manual is provided below with a full copy of the relevant section attached.

Part 4.1 Highway Maintenance Management

This section introduces the document, provides an overview of the structure of the Manual and a proposed timetable for bringing forward other sections of the Manual in future years. Part 4.1 also outlines a number of aspects to managing the maintenance of the highway including:

- Key legislation
- Risk Management
- Customer engagement
- Asset registration
- Roles & responsibilities
- Finance & budgeting
- Streetworks
- Performance management
- competencies
- Procurement
- Traffic management

Part 4.2 Highway Network Hierarchy

This Part builds on the Highway Network Hierarchy classification system developed by CSSW and adopted by the County Council within the HAMP document in 2018. Each road within our highway network has since been evaluated and classified in accordance with the following table:

CHSR	Trunk roads and some principal 'A' class roads between primary destinations
CH1	Major urban network and Inter-Primary Links.
CH2	B and C class roads and some unclassified urban routes carrying bus HGV and local traffic with frontage access and frequent junctions.
CH3	Roads linking between the main and secondary distributor network with frontage access frequent junction's
CH4	Roads serving limited numbers of properties carrying only access traffic
CH5a	Little used roads serving very limited numbers of properties
CH5b	Minor routes and low used tracks that provide access to isolated properties
CH5c	Lanes and tracks that are generally unsuitable for vehicle traffic
CH5d	Unmetalled tracks that are unrecognisable as a road

The specific classification of individual roads within Carmarthenshire are presented on the County Council Geodiscoverer mapping system: <http://geodiscoverer/>

Part 4.2 also summarises the lengths and percentages of the highway network within each class of hierarchy, discusses cross-boundary issues and how roads will be reviewed and their classification updated.

Part 4.3 Highway Inspection and Repair Regime

Inspections

A revised approach to highway inspections has been developed by the CSSW to guide Welsh authorities. Although each authority will determine and adopt its own specific inspection regime, there are benefits to a consistent approach across Wales which provides a uniform standard within the highway maintenance sector, consistent levels of asset management for road users and a uniform policy for assessing and defending third party claims against the authority.

This section of the Manual discusses the types of inspection, the highway assets included within the inspection and of particular importance, the frequency of scheduled routine inspections.

The frequencies of scheduled routine highway inspections are determined by road hierarchy as are defect definitions and repair regimes. This replaces the current *Code of Practice for Highway Safety Inspections in Carmarthenshire* adopted by the County Council in 2008. An overview of the HAMP routine highway inspection frequencies for highways is presented in the table below along with the current policy which they will replace.

HAMP Maintenance Manual			Highway Inspection Frequencies	
Carriageway Hierarchy	HAMP Inspection (to be adopted)	CSSW Recommendation	Carmarthenshire Policy since 2008 (to be replaced)	
			Environment	Frequency
CHSR	Monthly	Monthly	Town Centres (Llanelli, Carmarthen and Ammanford)	1 month
CH1	Monthly	Monthly	All Class 'A' Roads	1 month
CH2	Every 3 months	Every 3 months	All Class 'B' and 'C' Roads	3 months
CH3	Every 6 months	Every 6 months	Residential estates and other Urban Unclassified Roads	6 months
CH4	Annual	Annual or 2 yearly dependent on condition	Rural Unclassified Roads & Adopted Back Lanes	1 year
CH5a	Annual	Reactive		
CH5b	Annual	Reactive		
CH5c	Reactive	Reactive		
CH5d	Reactive	Reactive		

Footway Inspections are currently undertaken at the same frequency as carriageway inspections apart from the town centres and busier sections. The council will develop in 2022/23 a hierarchy for footways to follow a similar risk-based approach adopted for carriageway management with walked inspections of high use routes.

The inspection of highway structures is also summarised within this section with a detailed section programmed for development in 2022/23.

Repairs

Potential highway defects are recorded either through routine inspection or third party notification and prioritised for repair based on the Inspector's judgement of the risk they pose.

The HAMP response criteria and current policy are summarised below with full details available in the attached reports.

Timescales for Repairs				
Hamp Maintenance Manual (to be adopted)		Carmarthenshire Policy since 2008 (to be replaced)		
Critical defect	2 hours	Category 1 – risk requiring prompt repair	Priority 1 – requires 2-hour response.	Priority 2 – requires a 24-hour response.
Safety defect	By end of Next Working Day (CHSR,CH1,CH2)			
	Within 5 working days (CH3,CH4,CH5)			
Maintenance defect	30 Days (CHSR,CH1,CH2) 90 days (CH3,CH4,CH5)	Category 2 – defects which do not present an immediate or imminent hazard		
Programmed repairs	To be programmed.	To be programmed.		

Critical defects are those judged by the inspecting officer to present a risk high enough to require immediate action. Typically, this will include incidents such as highway collapse with a high risk to road users, unstable overhead wires or trees and missing manhole covers.

The inspecting officer will record Safety and Maintenance defects based on an assessment of risk associated with each individual defect and will use criteria detailed in Part 4.3 as a guide. This guidance accords with CSSW recommendations for an all-Wales approach with the key points summarised in the table below.

HAMP Policy - Safety Defect (to be adopted)				
Carriageway	Pothole	CHSR, CH1 and CH2	>50mm	Maximum horizontal dimension greater than 150mm
	Pothole	CH3, CH4 and CH5	>75mm	Maximum horizontal dimension greater than 150mm
Footway	Pothole / crack / gap	All footways	> 40mm	Maximum horizontal dimension greater than 75mm
	Trip	All footways	> 40mm	Maximum horizontal dimension greater than 75mm
	Rocking slab	All footways	> 40mm	N/A
HAMP Policy – Maintenance Defect (to be adopted)				
Carriageway	Pothole	CHSR, CH1 and CH2	> 40mm	Maximum horizontal dimension greater than 150mm
	Pothole	CH3, CH4 and CH5	> 50 mm	Maximum horizontal dimension greater than 150mm

	Crowning / depression	All roads	> 100mm	< 2M Length
Footway	Pothole	All footways	25mm - 40mm	Maximum horizontal dimension greater than 75mm
	Crack or Gap	All footways	25mm - 40mm	Maximum horizontal dimension greater than 75mm
	Trip	All footways	25mm - 40mm	Maximum horizontal dimension greater than 75mm

These defect guidelines replace the current guidelines adopted in 2008 by the *Code of Practice for Highway Safety Inspections in Carmarthenshire* and the key points of the Code being replaced are summarised below.

Carmarthenshire Policy since 2008 (to be replaced)			
Carriageway	All roads	Potholes	>40mm
		Depressions or ridges	>40mm over a 1m length
		Vertical faces	>40mm
Footways	All footways	Potholes	>20mm
		Depressions or ridges	>40mm over a 1m length
		Vertical faces	>25mm over a 0.6m length

These changes in the frequency of inspections, timescales for response and intervention levels follow the national code of practice risk-based approach and the recommendations from the County Surveyor's Society Wales for an all-Wales approach and are necessary to manage the highway asset with the resources available.

Part 4.4 Road Condition Assessment and Investment Prioritisation

This section of the Manual details how our main roads are subject to condition assessments through SCANNER, Scrim and visual assessments and the criteria used to prioritise funding for remedial works to our roads and structures to target areas of greatest need.

DETAILED REPORT ATTACHED?	YES
---------------------------	-----

IMPLICATIONS

I confirm that other than those implications which have been agreed with the appropriate Directors / Heads of Service and are referred to in detail below, there are no other implications associated with this report:

Signed: Steve Pilliner Head of Service Highways & Transportation

Policy, Crime & Disorder and Equalities	Legal	Finance	ICT	Risk Management Issues	Staffing Implications	Physical Assets
NONE	YES	YES	NONE	YES	YES	YES

1. Legal

The County Council has a statutory duty under the Highways Act 1980 Section 41 to maintain the highway and to keep them safe for public use. Through the adoption of the HAMP and its associated Maintenance Manual the County Council will be ensuring that it discharges this statutory duty and maintains the highway asset in a safe and reasonable manner.

The adoption of standards which are consistent with other local authorities across Wales will also help to ensure that road users enjoy a consistent standard of maintenance irrespective of authority boundaries.

2. Finance

The budgets available to local authorities for highway maintenance have been under pressure for many years and the impact of this is detailed in our HAMP Annual Statement.

The HAMP adopted a risk-based approach to ensure the resources available to maintain our highways are targeted towards the areas of greatest need to ensure the safety of the travelling public.

The Maintenance Manual continues to build on this approach by targeting resources proportionally towards areas of greatest risk.

3. Risk Management Issues

The HAMP and Maintenance Manual adopt risk management as a core theme. This approach is in accordance with national codes of practice and adopts standards recommended by the County Surveyors Society Wales for a consistent approach across Wales.

4. Staffing Implications

The adoption of the elements of the Maintenance Manual included within this report will not have a direct impact on staff numbers but will change aspects of how services are currently delivered and improve efficiency. The Maintenance Manual accommodates a more planned approach to highway maintenance which will improve efficiency.

CONSULTATIONS

I confirm that the appropriate consultations have taken in place and the outcomes are as detailed below

Signed: Steve Pilliner Head of Highways & Transportation

1. Scrutiny Committee – not applicable
2. Local Member(s) - Not applicable
3. Community / Town Council – Not applicable
4. Relevant Partners - County Council's insurers.
5. Staff Side Representatives and other Organisations - not applicable.

CABINET MEMBER PORTFOLIO
HOLDER(S) AWARE/CONSULTED

Yes

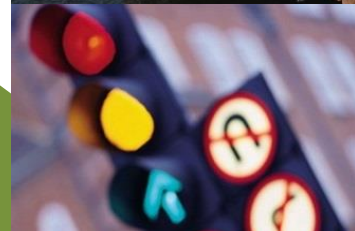
Section 100D Local Government Act, 1972 – Access to Information List of Background Papers used in the preparation of this report:

Title of Document	File Ref No.	Locations that the papers are available for public inspection
<i>Code of Practice for Highway Safety Inspections in Carmarthenshire</i> adopted by the County Council in 2008.		Electronic copy available from report authors

Highway Asset Management Plan

Part 4:

Highway Maintenance Manual (V1.1)



Contents

4.1 HIGHWAY MAINTENANCE MANAGEMENT	1
4.1.1 INTRODUCTION	1
4.1.2 TIMETABLE FOR MAINTENANCE MANUAL	2
4.1.3 SCOPE	2
4.1.4 LEGAL REQUIREMENTS	3
4.1.5 NATIONAL GUIDANCE	3
4.1.6 RELEVANT COUNCIL PLANS AND DOCUMENTS	3
4.1.7 ROLES, RESPONSIBILITIES AND COMPETENCIES	4
4.1.8 ASSET REGISTER AND INVENTORY	5
4.1.9 DATA AND SYSTEM IMPROVEMENT	5
4.1.10 RISK MANAGEMENT	6
4.1.11 FINANCE AND BUDGET ALLOCATION	7
4.1.12 PROCUREMENT	8
4.1.13 PERFORMANCE MONITORING REGIME	9
4.1.14 DECARBONISATION	10
4.1.15 CUSTOMER ENGAGEMENT	10
4.1.16 STREETWORKS	11
4.1.17 TRAFFIC MANAGEMENT	12
4.2 HIGHWAY NETWORK HIERARCHY	13
4.2.1 ESTABLISHING THE NETWORK HIERARCHY	14
4.2.2 NETWORK HIERARCHY CATEGORIES	14
4.2.3 REGIONAL CONSISTENCY	14
4.2.4 UPDATE AND REVIEW	14
4.3 HIGHWAY INSPECTION AND REPAIR REGIME	15
4.3.1 TYPES OF INSPECTION/ASSESSMENT	15
4.3.2 HIGHWAY INSPECTIONS	15
4.3.3 INSPECTED ASSETS	16

4.3.4 INSPECTION FREQUENCIES	16
4.3.5 INSPECTION TOLERANCE	17
4.3.6 INSPECTION SCHEDULE	17
4.3.7 RECORDING OF INSPECTION RECORDS	17
4.3.8 REPAIR REGIME	18
4.3.9 DEFECT CATEGORIES	18
4.3.10 DEFECT TYPES AND INTERVENTION LEVELS	19
4.3.11 FOOTWAYS AND CYCLEWAYS	22
4.3.12 STRUCTURES	22
4.3.13 WORKS ORDERING	23
4.3.14 RECORDING OF REPAIR RECORDS	23
PART 4.4 ROAD CONDITION ASSESSMENT AND INVESTMENT PRIORITISATION	24
4.4.1 CONDITION ASSESSMENTS	24
4.4.2 CARRIAGEWAYS ROLLING PROGRAMME	25
4.4.3 SCHEME PRIORITISATION	26

This manual is based upon a template produced by CSSW Wales under the CSSW Highway Asset Management Planning (HAMP) project. CSSW has developed a risk-based approach for highway management under the HAMP project that is intended to enable a nationally consistent response to the Code of Practice. The template has been used to create a manual specific to Carmarthenshire Council with amendments where the CSSW proposed minimum standards have been exceeded by the Council.

Document Control

Version Number	Amendments Made	Date
V1.0	Nil – Original	25 th August 2021
V1.1	Updates following CMT 2 nd September 2021	6 th September 2021
Next Review Due		October 2023

Council Approval

Version Number	Council Committee	Date
v1	Cabinet	25 th October 2021

Responsibility for the Manual

The responsibility for the delivery of and updating of this plan are shown below

Council Officer	Responsible for
Richard Waters – Highways and Transportation Manager	Setting direction and strategy for the Division to support the HAMP objectives
Darren King – Highways Services Manager	Ensuring compliance with the Manual, developing policy
Chris Nelson – Highways Asset Manager	Preparing the Manual and developing policy

4.1 Highway Maintenance Management

4.1.1 Introduction

The purpose of the Maintenance Manual is to set the policy and the standards of maintenance of the highway asset and ensure the Council meets its statutory obligations. The Maintenance Manual documents the methods used to manage the highway asset and ensure that the risks to users are appropriately monitored and managed.

The HAMP underpins and defines the management, prioritisation and service levels for highway maintenance and infrastructure investment. The HAMP supports the Council's Well-being objectives and the principals of the Well-being of Future Generations (Wales) Act 2015.

The Maintenance Manual will address many areas of service delivery and will be developed over a 3-5 year period, setting out key policies and technical processes for a risk based delivery of the highway maintenance service. The authority will need to adapt to changing demands, resources and technology and continuously implement best asset management practices. The authority will continually update and review the Maintenance Manual over time. Major updates or policies will be submitted for corporate approval. 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 CSSW have engaged with insurers and risk managers in the development of this recommended practice and additional consultation has taken place with the County Council's own insurers and legal counsel in the development of this Manual..

The Maintenance Manual manual will comprise a portfolio of individual sections which focus on specific elements of the highway asset brought forward to comply with CSSW recommendations and National Codes of Practice in accordance with the provisional timetable below. It will bring together specific maintenance strategies and policy into a linked suite of documents, with a focus in 2021 to update our Highway Safety Policy in response to the updated National Codes of Practice.

Highway Maintenance Manual (HAMP)

Part 1 – Policy and Strategy – Adopted October 2018

Part 2 – Highway Asset Management Framework – Adopted October 2018

Part 3 – Annual Statement and Options Report – Annual report to Exec board

Part 4 – Highway Maintenance Manual – Executive board review 25th October 2021

4.1.2 Timetable for Maintenance Manual

The proposed timetable for the development of the manual is:

Year	
2021-22	<ul style="list-style-type: none"> • 4.1 Highway Maintenance Management • 4.2 Highway Network Hierarchy • 4.3 Highway Inspection and Repair Regime • 4.4 Road Condition Assessment and Investment Prioritisation
2022-23	<ul style="list-style-type: none"> • Routine Highway Maintenance including: <ul style="list-style-type: none"> ▪ Cyclic (scheduled) maintenance ▪ Surface repairs ▪ Signs ▪ Road Markings and Cats Eyes ▪ Gully cleansing ▪ Sweeping and cleansing • Footway and Cycleways Hierarchy and Maintenance regime • Emergency response • Highway Structures • Highway Drainage • Geotechnical management • Public Lighting • Traffic Signals/Crossings • Winter Service/Adverse Weather plan
2023-24	<ul style="list-style-type: none"> • Road restraint systems • Boundary interfaces • Soft estate (Trees and Verges) • Inventory and data management plan • Technical approval procedures • Asset adoption • Streetworks and licencing • Lifecycle planning • Roadside memorials

4.1.3 Scope

The Maintenance Manual describes how the council maintains the road network under its control as the Highway Authority. It details the procedures used to plan and execute all works and functions associated with the management, operation and maintenance of the highway asset including how the activities are monitored to ensure compliance with council policies and to meet out statutory obligations.

4.1.4 Legal Requirements

As the Highway Authority the council has a duty to meet the requirement of the following legislation:

- **The Highways Act 1980:** This places a duty upon Highway Authorities to maintain highways, adopted as maintainable at public expense, and to keep them safe for public use. Key duties are set out in Appendix A.
- **New Roads and Street Works Act 1991:** This places a duty upon Highway Authorities to co-ordinate all works in the highway for the purposes of ensuring safety, minimising inconvenience to highway users, and protecting the highway and apparatus in it.
- **The Traffic Management Act 2004:** This places a duty on Highway Authorities to ensure the expeditious movement of traffic on their road network and networks of surrounding authorities.
- **Well-being and Future Generations (Wales) Act 2015** equires public bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change.
- **Environment (Wales) Act 2016:** this requires local authorities to secure healthy, resilient, and productive ecosystems for the future whilst still meeting the challenges of creating jobs, housing and infrastructure.



4.1.5 National Guidance

To assist authorities in meeting their duties the methods adopted in the Maintenance Manual are based upon the following National Guidance.

- [“Well-Managed Highway Infrastructure: A Code of Practice, UK Roads Liaison Group, 2016”](#)
- [“Risk Based Approach: Method”, 2019, CSSW, 2019](#)
- [“Highway Inspection Defect Recording Manual”, CSSW, 2019](#)

4.1.6 Relevant Council Plans and Documents

The Highway Asset Management Plan consists of a suite of documents and provides a comprehensive guide setting out the Council’s approach to managing the highway asset. The key documents are;

- [Highway Asset Management Plan – Parts 1 and 2](#)
- [Annual Status Reports - Part 3](#)
- [Highway Maintenance Manual - Part 4 \(includes Highway Data Improvement Plan \(2023-24\)\)](#)

4.1.7 Roles, Responsibilities and Competencies

The roles, responsibilities and competencies required of those involved in managing the council's highway asset are defined below.

Role	Responsibility
Councillors	Approve the use of this document as council policy.
Director of Environment	Ensure the Directorate's policies and strategies follow and support the attainment of Council objectives
Head of Service	Ensure the Highways & Transportation Service's policies and strategies support Directorate and Council objectives.
Highways and Transportation Manager	Develop Highways & Transportation policies and strategies to support Directorate and Council objectives, ensure their effective implementation, monitor the results, and undertake an annual risk assessment update.
Highway Services Manager	Develop Highway policies and standards to be used, ensure their effective implementation, monitor the results and ensure the 2 yearly risk review is carried out.
Highways Asset Manager	Develop Highway policies and standards, ensure their effective implementation, monitor the results, review, and update the HAMP suite of documents in line with recommended practice. Participate in CSSW HAMP workgroups/projects and disseminate best practice/guidance. To review software and asset management systems to support delivery in line with agreed policy.
Public Lighting Manager	Support in developing policy and standards for public lighting and electrical assets.
Asst Area Managers	To implement the operational and inspection service within Highways in line with the maintenance manual.
Highway Inspectors / Structures Inspectors	Carry out inspections as per the highway inspection regime, recording the appropriate data for input into the AM system including recording works completed.
Works Gangs	Carrying out highway repairs as per the repair regime and record the required data for input into the AM system.
Contractors	Carry out repairs as highway instructed as instructed and record the required data for input into the AM system.

Competencies and Training

CSS Wales manages a competency confirmation scheme covering a range of highway management functions. The scheme has been used to enable the competency of authority staff in key areas to be confirmed. The scheme covers the following areas:

- Visual Condition Assessment (Carriageways)
- Visual Condition Assessment (Footways)
- Bridge /Structures Inspection
- Highway Inspections

Those who are accredited by these schemes are listed in the [Competency Register](#).

4.1.8 Asset Register and Inventory

The asset register defines the roads that are maintainable at public expense by the council as the highway authority. The inventory of the highway assets is based on the asset register and contains the detailed information required to manage the asset. The information includes amount, size, construction material, current condition etc. where data is available.

Asset Register

The definitive record of the roads that are the councils responsibility including the full list of adopted streets is located on the Highway Searches map register. Details are also held for operational management in the Highway Asset Management System. The local street gazetteer is held on the Streetworks database. The authority has an on-going exercise to ensure the data in each repository is aligned and updated, however the 'Searches' register remains the definitive record.

Inventory

A data assessment model is programmed to be developed in 2023/24 as a live record of inventory and data and to ensure management and control of accurate data. The spreadsheet records the specific inventory held for each highway asset. The quality of the inventory details held is recorded on the data assessment spreadsheet. The data is held for each asset in the following software systems:

- Carriageways and Footways – Highway Management system, Pavement Management System
- Structures - Structures Management System
- Drainage – Highway Management System, QGIS Mapping system
- Street Lighting and Traffic Signals – Lighting Management System

4.1.9 Data and System Improvement

On completion of the [data assessment spreadsheet](#) the quality of the inventory details held shall be reviewed every two years. A plan for improvements to data shall be recorded in the [Highway Data Improvement Plan](#). The division is currently reviewing the software management systems in place across the division and plans to modernise and rationalise its systems to support effective asset management and operational service delivery whilst ensuring the ability to adapt to improvements in technology and support better ways of working.

4.1.10 Risk Management

The risks associated with maintaining the highway are managed using the methods described below. This includes how the methods comply with the risk based approach required by the Code of Practice.

Code of Practice

A revised Code of Practice (the code) for Highways “Well Managed Highway Infrastructure” was published in October 2016 providing guidance that authorities are expected to follow and may rely upon when defending themselves against third party claims. Specific duties with regards to highway maintenance are contained within section 41 of the Highways Act 1980 with a specific defence available to highway authorities under section 58 (see extracts in Appendix A).

The most significant change to the previous guidance, proposed by the new CoP, is the introduction of a risk based approach to all decision making to be undertaken by each authority individually.

CSSW have developed a method in response to the code that it recommends authorities adopt. The method includes development of Network Hierarchy, Inspection Regime and Repair Regime for the highway assets, along with recommended minimum standards for inspection and defect repair. In Carmarthenshire this replaces our Code of Practice for Highway Safety Inspections in Carmarthenshire which was adopted in 2008.

Use of the CSSW Risk-Based Approach

The Highways and Transportation Service have carried out risk assessments as detailed in the “CSSW Highways Asset Management Framework Recommended Practices - Recommended Practice 1 Risk Review with the results being recorded in the [“RP1 Risk Assessment – Spreadsheet”](#)

The details of the asset hierarchy, inspection and repair regimes adopted by the council and where they differ from (exceed) the CSSW recommended standards is detailed later in this document.

Carmarthenshire County Council Corporate Risk Management

The council manages risk via the Risk Management & Contingency Planning Strategy 2018-2022. An electronic copy of this document can be found at: [risk management and contingency planning strategy \(llyw.cymru\)](#)

The authority maintains a Corporate and Directorate Risk Registers to manage any significant risks that have been identified. Where appropriate these will be included within the Annual Statement Report.

Third Party Claims

Third party claims are made against the council when members of the public believe that negligence on the part of the council, has resulted in injury or property damage. The risk based approach adopted within the HAMP aims to minimise the authority’s exposure to risk from claims of negligence.

4.1.11 Finance and Budget Allocation

The budget for highway maintenance is set annually by the council. Status reports are provided to assist the council in establishing the overall budget. The highway maintenance budget is allocated between asset groups and work types in accordance with the method set out below.

Annual Status Reporting

Annual Status Reports (ASRs) are provided annually detailing the current condition of the asset.

Options Reports (ORs) detail the options available for its future maintenance/management based on differing budget scenarios and are provided prior to the updating of the HAMP.

Annual Budget Setting

The budget for highway maintenance is set by Council following the review of annual status and options reports (ASRs and ORs) in coordination with the Head of Service, Highways and Transportation manager and the Highways Services manager.

The Capital budgets are established in a 5 year programme across the authority and are reviewed annually. Once determined by Council, the budgets allocated for Highway and Structures maintenance are prioritised using a risk and needs based approach each year.

The revenue maintenance budget for Highway maintenance is determined as part of the authorities annual Corporate budget setting and funds allocated to the Department. The Highway Services manager sets out nominal budgets proportionately against the various asset types and work functions. Budgets are based on best available data for Asset extent and service demands. Draft allocations are reviewed by the Highways and Transportation Manager and Head of Service.

The impact on service standards, works programme summaries and any budget pressures are detailed in the Annual Status Report on an annual basis as required.



Cost Recording

The cost of the activities required to maintain the highway are recorded to enable them to be monitored and managed. Both planned and actual expenditure is categorised to support cost analysis and inform the investment strategy. The coding used to record costs is shown below.

Cost Coding

Highway maintenance costs can be allocated to one of the following categories.

Cost Category	Activity
Planned Maintenance - Preventative	Planned maintenance activities that are designed to ensure that more expensive future repairs may not be needed.
Planned Maintenance - Corrective	Planned maintenance activities that correct the condition of the asset, and which would not cost significantly more if delayed.
Routine Cyclic Maintenance	Scheduled works consisting of activities that are based on a prescribed time interval.
Routine – Reactive Maintenance (Emergency)	Reactive repair of potentially dangerous defects identified from inspection or customer complaint / notification.
Routine - Reactive Maintenance (Non-Emergency)	Other less urgent minor repairs
Routine – Inspection and Survey	Cost of specialist inspection and surveys
Operating Costs	Costs of operating elements of the asset
Overhead	Internal costs associated with the management of the asset. NB it is accepted that these costs may not be available at an asset group level
Loss	Money expended that is effectively “lost” to the council from which no benefit to the asset or user is gained.
Improvements	Works that add new infrastructure to the asset.

Reviewing and Reporting of Costs

Outturn cost information is used for status reporting (HAMP Part 3 - Annual Status Report) including reporting if sustainable levels of investment are being made in each asset and for the reporting of future funding needs.

4.1.12 Procurement

Detail of how maintenance works for each asset are procured are shown below. Works are procured using a combination of internal and external resources.

Principle

Day to day highway maintenance is mainly undertaken by in house council resources. Where specialist skills are required external contractors are employed. How the service is delivered for each asset is shown below.

Asset	Work Type	In-House or Contractor	Contract Details
Carriageway	Routine and Reactive	In-house work teams	
	Planned	Resurfacing – Contractor	Surfacing framework
		Surface Dressing – Contractor	Surface dressing Tender
Footways	Routine and Reactive	In-house work teams	
	Planned	Reconstruction – In-house work teams	
		Resurfacing – In-house work teams	
		Slurry Seal – Contractor	Separate tender exercise
Highway Structures	Routine and Reactive	In-house work teams	
	Planned	In-house work teams / contractor	Construction framework contractors

Contract Reviews

Contracts are reviewed and monitored by the Commissioning and Contracts Officer and the procurement section.

4.1.13 Performance Monitoring Regime

To ensure that the standards set out in this manual are adhered to the council operate a performance monitoring regime as set out below.

Operational Performance Measures

A series of operational performance measures are used to monitor ongoing activities such as inspections and routine and reactive repairs.

The operational measures are designed to enable the service manager to take corrective action if performance has fallen below the required standards. As such the reporting of these measures is undertaken at frequencies within the year i.e., monthly, quarterly etc.

- Inspection performance – reported quarterly with monthly operational reports
- Safety Defects – monthly reports detailing completion performance for recorded safety defects

Performance Indicators

CSSW has developed a suite of performance measures designed to enable authorities to monitor the performance of their highway assets. The Performance measures are detailed in Carmarthenshires Performance & Improvement Monitoring System (PIMS) The council has adopted the recording and reporting of these PIs in order to enable review of progress in meeting condition targets set in the asset management plan and to facilitate appropriate comparison with peer authorities.

- 3-year Capital Investment programme monitoring
- 3-year programme of bridge strengthening and replacement schemes

Benchmarking

The council participates in appropriate benchmarking activities using the data recorded for appropriate OPMS and PIs. This benchmarking is facilitated via the CSSW HAMP project. It is recognised that some of the measures are a direct result of council choice in terms of standards and targets adopted and as such comparison with other authorities may not be appropriate. There are elements of performance however where understanding equivalent performance in similar authorities will enable the authority to share and learn from good practice and to implement improvements. The council actively pursues this via collaboration facilitated by CSSW and the various committees and groups that CSSW support.

4.1.14 Decarbonisation

Carmarthenshire County Council is committed to tackling climate change and to become a net zero carbon authority by 2030. The County Council was the first in Wales to publish a Net Zero Carbon Action Plan which was approved by full Council in February 2020:

<https://www.carmarthenshire.gov.wales/home/council-democracy/net-zero-carbon/>

The County Council has adopted a pragmatic approach towards becoming a net zero carbon local authority by 2030 with an initial focus on the measurable carbon footprint. The Council has also recognised that it has legal duties and responsibilities to fulfil and this will include a duty to maintain the public highway. However, in developing the HAMP Maintenance Manual we will review our operations with the aim of reducing our carbon emissions through improving our operational efficiency, ensuring effective outcomes, and using low carbon materials and techniques wherever practical and feasible.

There is a significant backlog of maintenance works required to bring our highways up to standard and the adopted risk-based approach recognises this and ensures resources are directed to areas where they are most urgently needed. This Maintenance Manual also adopts, where affordable, a planned and preventative approach to highway maintenance to improve operational efficiency and a 'fix first time' methodology to reduce repeat visits for repair works. This directly supports the reduction of whole life carbon impacts.

4.1.15 Customer Engagement

The authority operates a central contact centre with out of hours provision throughout the year. When service requests have been received these are automatically allocated to the highway inspector based on the geographical location. This allows the request and appropriate response to be prioritised and the customer advised of the action taken.

Scheme Notification and Roadworks reports

For all major works undertaken on the highway the highway service provide a pre-works notification to residential properties and businesses affected by the works.

Public frustration can stem from delays caused by roadworks. To provide the public and others with information on where disruption to road traffic can be expected, the authority notifies all major works in advance via the streetworks noticing system (ETON) and one.network. This information is also available via the council's web site <https://www.carmarthenshire.gov.wales/home/council-services/travel-roads-parking>

The web system gives details of works being undertaken on all classified routes, including the nature and anticipated duration of the works, and the method of traffic management being employed. Additional publicity is

10

provided where exceptionally severe traffic delays are anticipated with advance warning signs on major routes.

4.1.16 Streetworks

The condition and management of the highway is affected by third party works. The management of these third-party activities is governed by legislation (Highways Act 1980 - see Appendix B), New Roads and Street Works Act (NRSWA) 1991, and Traffic Management Act 2004). The manner in which the council complies with its duties under this act is set out below.

All notified utility activity undertaken on the council's highway network is co-ordinated by the Street Works Team and recorded within the Streetworks Register. The Street Works Team ensure that all statutory undertakers comply with the New Roads and Street Works Act (NRSWA) 1991 and all amendments as notified in the Traffic Management Act 2004, to ensure that all works undertaken on the highway are completed to the required standards and are programmed to achieve the least disruption to members of the public.

Procedures

The detailed procedures are used for undertaking this work including procedures for;

- **street works notices;** all statutory undertakers and works promoters have a legal duty to provide advance notification of their intention to work on any highway maintainable at public expense. Emergency works must be notified by 10am on the next working day. Please note that statutory undertakers have a right to lay apparatus in the highway and do not require permission to do so.
- **street works register;** the register kept by the council that records where and when utilities / works promoters are working or have worked on the highway and records the size of reinstatements.
- **S58 restrictions on works;** preventing works being carried out on roads that have been recently resurfaced for a period after completion of those works
- **co-ordination of works;** coordinating works in an appropriate sequence and at appropriate intervals where more than one organisation needs to work on the same street, or promote collaborative working
- **designation of protected streets,** where the council can assign a protection on specific streets being used by utilities
- **re-instatement categories;** nationally agreed specification for what the standards of reinstatement should be for each category based on proven usage of road including materials and depths etc.
- **apparatus affected by highway works:** where the council notifies utilities where road works are planned to ensure that provision is made for the protection or diversion of the existing utility apparatus

Copies of the procedures used can be found in the Standard Codes of Practice Manuals located on [Documents \(whauc.com\)](http://www.whauc.com)

Statutory undertakers works have a significant effect upon the condition of the highway and the users perception of it. In the future ASR (Annual Status Reports) reporting will reference the number of openings made and the standards of reinstatement being achieved such that a true picture of condition and its causes are known.

4.1.17 Traffic Management

The council as local traffic authority has a duty to manage the road network to secure the expeditious movement of traffic on the network and facilitate the same on road networks for which another authority is the traffic authority. The duties are set out in the Traffic Management Act 2004 and the arrangements that the council has in place to meet these duties is detailed below.

Full details of the arrangements put in place for managing traffic on the counties roads can be found in the Traffic Management Act 2004 and Code of Practice for Co-ordination of Street Works & Works for Road Purposes & Related Matters both of which can be found on the following Welsh HAUC (Highway and Utilities Committee) website page [Documents \(whauc.com\)](http://www.whauc.com)

Traffic Sensitive Streets

The county contains several streets that due to the amount or make up of traffic that use them have been designated as traffic sensitive and have working time restrictions placed upon them. The list of traffic sensitive streets is contained in the National Street Gazetteer.



4.2 Highway Network Hierarchy

The highway assets have been divided into network hierarchy categories that reflect the use and function of the component parts of the network. This enables the inspection and repair regimes to be related to their associated risk. Carmarthenshire developed its hierarchy which was discussed at the Council's Environment and Public Protection Committee and subsequently adopted by the Council's Executive Board in 2018. Following adoption the hierarchy has been further developed to follow guidance from CSSW and to ensure a consistent approach across Wales. The hierarchy details are tabulated below and set out in ["RP1 Risk Assessment – Spreadsheet"](#). The categorisation of individual highway links in the network in accordance with the Network Hierarchy are displayed on [GeoDiscoverer \(add the Network Hierarchy layer\)](#).

CSSW Category	Description	Type of road General Description	Description
M	1. Motorway	Limited access -motorway regulations apply	Routes for fast-moving long-distance traffic. Fully grade separated and restrictions on use
CHSR	2. Strategic Route	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.
CH1	3a. Main Distributor	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
CH2	3b. Secondary Distributor	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 traffic generators to the Strategic and Main Distributor Network.
CH3	4a. Link Road	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.
CH4	4b. Local Access Road	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.
CH5a	5a. Minor Road	Little used roads serving very limited numbers of properties.	Locally defined roads
CH5b	5b. Lane	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
CH5c	5c. Green Lane or track	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
CH5d	5d. Disused track	Unmetalled tracks that are unrecognisable as a road	Roads that have become unusable having fallen into disuse through regression or agricultural use

4.2.1 Establishing the Network Hierarchy

The network hierarchies have been derived in accordance with the the Code of Practice “Well-Managed Highway Infrastructure: A Code of Practice, UK Roads Liaison Group, 2016” and the CSSW “Risk Based Approach: Method”. Details of how the hierarchies were derived is held in the “RP1 Annual Highway Asset Risk Review 2018”. The methodology is set out in [CSSW Risk based approach – Method 2019 v1](#).

4.2.2 Network Hierarchy Categories

Details of the CSSW recommended hierarchies for the seperate highway asset groups can be found in Appendix B. The details of the hierarchy allocated to each individual asset are held in the council’s Highway Management System, Structures management system and Lighting managemnt system. Carmarthenshire is developing individual hierarcies for other asset groups following adoption of the main road network hierarchy.

Carmarthenshire’s road network hierarchy is broken down as follows (subject to update):

Network Road Class	Length by Hierarchy (km)									Total
	CHSR	CH1	CH2	CH3	CH4	CH5a	CH5b	CH5c	CH5d	
A & B	168	118	294		1					581
C		2	140	458	656	27	0			1284
U (Rural u-c)			3	82	49	1014	9	76	25	1258
W (Urban u-c)			17	63	136	137	33	0		387
Total (km)	168	121	454	603	842	1179	42	77	25	3510
%	5	3	13	17	24	34	1	2	1	

4.2.3 Regional Consistency

CSSW recommends that to achieve regional consistency consultation is undertaken with neighbouring authorities to enable consistent hierarchies to be allocated to assets which cross boundaries. At this time the consultation process is yet to be completed, however on completion, the results will be recorded in the [“RP1 Risk Assessment – Spreadsheet”](#).

4.2.4 Update and Review

The hierarchies are reviewed on an ongoing basis where changes to the asset occur and or significant changes in use happen (e.g. significant changes in traffic volume). As a minimum the hierarchy will be reviewed and confirmed every 2 years. Records of the review will beheld in the “Carmarthenshire County Council RP1 Annual Highway Asset Risk Review”. Any resultant recommended changes to the hierarchy will be undertaken in line with the approved methodolgy.

4.3 Highway Inspection and Repair Regime

To monitor the condition and repair needs of the asset the council deploys a regime of inspection and repair of varying types and frequencies which adopts a risk-based approach.

4.3.1 Types of Inspection/Assessment

The council undertakes the following types of inspection:

1. **Reactive Inspections/Response:** inspections undertaken in response to the notification to the authority of potential defects by other sources (council employees, members of the public, emergency services etc.).
2. **Planned/Routine Inspections:** A regime of planned inspections the purpose of which is to identify defects that have the potential to cause harm to users and to identify defects that require repair in order to prevent escalation of deterioration and increased (avoidable) maintenance needs.
3. **Condition Surveys:** A regime of condition surveys that record the condition of components of the asset such that a programme of renewal/replacements can be derived. Condition surveys can be visual or machine based and may include testing where such is appropriate for the asset type.

4.3.2 Highway Inspections

Planned routine inspections are a combination of:

- **Driven Inspections:** inspections of the highway undertaken by a Highway Inspector with a driver (high speed roads only – typically CHSR, CH1 and CH2). Inspections of road classes CH3, CH4 and CH5 are carried out by Highway inspector only from a slow-moving vehicle with high visibility markings to Chapter 8 and at a speed appropriate to the road conditions.
- **Walked Inspections:** inspections undertaken by a Highway Inspector on foot where the footway and carriageway are assessed.



4.3.3 Inspected Assets

The assets inspected during the routine inspections by the highway inspector include (but are not limited to) the following:

<ul style="list-style-type: none"> • Carriageways 	<ul style="list-style-type: none"> • Kerbs, Edgings and Channels
<ul style="list-style-type: none"> • Footways 	<ul style="list-style-type: none"> • Highway Structures (safety only)
<ul style="list-style-type: none"> • Covers, Gratings & Frames (inc. Statutory Undertakers apparatus) 	<ul style="list-style-type: none"> • Highway Drainage systems (above ground)
<ul style="list-style-type: none"> • Highway Culverts (below 900mm – reactive inspections only) 	<ul style="list-style-type: none"> • Traffic Systems, Controlled Crossings, Illuminated Bollards and Cabinets (safety only)
<ul style="list-style-type: none"> • Guardrails, Fencing and Restraint Systems 	<ul style="list-style-type: none"> • Signage / bollards
<ul style="list-style-type: none"> • Verge, Trees and Hedges 	<ul style="list-style-type: none"> • Road Studs and markings
<ul style="list-style-type: none"> • Street furniture (safety only) 	<ul style="list-style-type: none"> • Street Lighting (safety only)
<ul style="list-style-type: none"> • Embankments and Cuttings (safety only) 	<ul style="list-style-type: none"> • Cattle Grids (Safety only)
<ul style="list-style-type: none"> • Cleanliness and Weed Growth (Invasive and injurious weeds) 	<ul style="list-style-type: none"> • Cycleways (on road/highway only - see note below)

Note: Off road cycleways / cycle trails are inspected by the Public Rights of Way Team.

4.3.4 Inspection Frequencies

Reactive Inspections

Where a “safety” defect is notified to the council by a third party an inspection of the reported defect will take place by the end of the next working day and action will be taken as per the Council's repair regime.

Where a “maintenance” defect is notified to the council by a third party an inspection of the defect will take place within 30 days and action will be taken as per the Council's repair regime

Routine Inspection Frequencies

Routine Inspection frequency is based on the Network Hierarchy. It has been determined using the CSSW Highway Asset Risk Review Method and is reviewed every 2 years. The frequency of routine inspections is set out below along with the CSSW minimum recommended standards. Carmarthenshire either meets or exceeds the minimum recommended standards.

Carriageway: Routine Inspection Frequencies				
Carriageway Hierarchy	Inspection Interval	Inspection Method	Inspection Frequency Tolerance	CSSW Recommended Minimum
CHSR	Monthly	Driven - 2 person	10 working days	Monthly
CH1	Monthly	Driven - 2 person	10 working days	Monthly
CH2	Every 3 months	Driven - 2 person	10 working days	Every 3 Months
CH3	Every 6 months	Driven – 1 person	3 months	Every 6 Months
CH4	Annual	Driven – 1 person	3 months	Annually or 2 yearly Dependant on condition
CH5a	Annual	Driven – 1 person	3 months	Reactive Only
CH5b	Annual	Driven – 1 person	3 months	Reactive Only
CH5c	Reactive	Driven/Walked – 1 person	NA	Reactive Only
CH5d	Reactive	Walked	NA	Reactive Only

4.3.5 Inspection Tolerance

Due to the effect of adverse weather, unplanned incidents etc. and to allow for sickness or leave, a tolerance in frequency of inspections is permitted as set out in the table above. The respective Assistant Area Manager is responsible for ensuring inspections are undertaken within permitted tolerances.

4.3.6 Inspection Schedule

Inspection routes in compliance with the regime above are held in the council's highway asset management system. The asset management system contains details of the inspection regimes, the inspections undertaken and the date of the next scheduled inspection. Inspections are scheduled on a monthly basis and downloaded from the asset management system. The use and character of a road will be considered when scheduling inspections. Best endeavours will be made to ensure that the timing of the inspection enables defects to be identified effectively. Weather conditions and traffic volumes will also be considered to support safe and effective inspections.

4.3.7 Recording of Inspection Records

Records of the inspection and the resulting observations are recorded using tablet computers and the results transferred by the inspectors into the highway management system as soon as possible on completion of the inspection.

4.3.8 Repair Regime

Repairs identified via inspection or by 3rd party notification, are prioritised for repair based upon the risk that they pose to users. The methods used to categorise a response are set out below.

4.3.9 Defect Categories

The defect categories are established during routine or ad-hoc highway inspections. Defect categories prioritise making safe or undertaking repairs using the defect response times shown below.

Defect Categories	Description	Response Time
Critical Defect	A situation where the inspecting officer considers the risk to safety high enough to require immediate action, e.g. Collapsed cellar, missing manhole/gully cover, fallen tree, unprotected opening	2 Hours*
Safety Defect	Service requests or defects requiring a response as soon as possible to remove a potential risk of injury to users	By end of Next Working Day (CHSR, CH1, CH2) Within 5 working days (CH3, CH4, CH5**)
Maintenance Defect	Defects that warrant treatment to prevent them deteriorating into a safety defect prior to the next scheduled inspection	30 Days (CHSR, CH1, CH2) 90 days (CH3, CH4, CH5**)
Programmed repairs	Defects that warrant treatment, in order to prevent them deteriorating to such an extent that additional works or costs are incurred	As per the local works programme. Subject to resources.

*Response time for critical defects refers to the time to attend site from the time the defect is inspected/categorised, make safe or repair will then be asap thereafter. Making safe may constitute displaying warning notices, coning off or fencing off to protect the public from the defect.

** Defect triggers on CH5 roads are to be considered an investigatory level. An investigatory level does not automatically trigger a response. It will be incumbent upon the inspector to assign an appropriate response to each defect based upon its type, size, location, and the level of use of the road. CH5 roads are low use roads and defects will frequently present low risk to users and can be responded to accordingly.

4.3.10 Defect Types and Intervention Levels

Details of the defect types and the intervention levels that have been prescribed for each defect type i.e. Critical Defects, Safety Defects and Maintenance Defects, are set out below.

Critical Defects

Asset Type	Defect	Magnitude	Hierarchy	Road Character	Response Time
All	A situation where the inspecting officer considers the risk to safety high enough to require immediate action, typically include items such as; Carriageway / footway / cycleway collapse with high risk of accidents / loss of control; Critically unstable overhead wires, trees, or structures; Exposed live wiring; Isolated standing water with high risk of loss of control; Missing or seriously defective ironwork with high probability of injury to highway users.	Not Applicable. Critical defects are defined by their potential to cause immediate injury not by defect size	All	Not Applicable. Critical defects are defined by their potential to cause immediate injury not by defect size	2 hours

The response time for a critical defect is the time until the site is made safe, this may be achieved by closing all or part of the road or coning off the hazard. In some instance a repair may be immediately possible but in many instances the defect will be made safe, and a permanent repair will occur later.

Safety Defects

Asset Type	Defect Type	Hierarchy	Dimensional Criteria		CSSW National Minimum Standard	
			Depth/Height	Extent	Depth/Height	Extent
Carriageways	Pothole	CHSR, CH1 and CH2	>50mm	As CSSW	> 50mm	Maximum horizontal dimension greater than 150mm
	Pothole	CH3, CH4 and CH5**	>75mm	As CSSW	>75mm	Maximum horizontal dimension greater than 150mm
Footways	Pothole	All	As CSSW	As CSSW	> 40mm	Maximum horizontal dimension greater than 75mm
	Crack or Gap	All	As CSSW	As CSSW	> 40mm	Maximum horizontal dimension greater than 75mm
	Trip	All	As CSSW	As CSSW	> 40mm	Maximum horizontal dimension greater than 75mm
	Rocking Slabs	All	As CSSW	As CSSW	> 40mm	N/A
Kerbing	Dislodged, Loose, Missing, Damaged - Causing a trip hazard	All	As CSSW	As CSSW	> 40mm	N/A

Maintenance Defects

Asset Type	Defect Type	Hierarchy	Dimensional Criteria		CSSW National Minimum Standard	
			Depth/Height	Extent	Depth/Height	Extent
Carriageways	Pothole	CHSR, CH1 and CH2	As CSSW	As CSSW	> 40mm	Maximum horizontal dimension greater than 150mm
	Pothole	CH3, CH4 and CH5	As CSSW	As CSSW	> 50 mm	Maximum horizontal dimension greater than 150mm
	Crowning / Depression	All	As CSSW	As CSSW	> 100mm	< 2M Length
Footways	Pothole	All	As CSSW	As CSSW	25mm - 40mm	Maximum horizontal dimension greater than 75mm
	Crack or Gap	All	As CSSW	As CSSW	25mm - 40mm	Maximum horizontal dimension greater than 75mm
	Trip	All	As CSSW	As CSSW	25mm - 40mm	Maximum horizontal dimension greater than 75mm
	Rocking Slabs	All	As CSSW		25mm - 40mm	N/A
Kerbing	Dislodged, Loose, Missing, Damaged - Causing a trip hazard	All	As CSSW		25mm - 40mm	N/A

**Defect triggers on CH5 roads are to be considered an investigatory level.

Note: The standards in the preceding tables are a guide only. [Reference should be made to the CSSW Highway Inspection Defect Recording Manual](#) . It is an essential part of the authorities' inspection regimes that inspectors are appropriately trained. In doing so inspectors can complement application of the standard with their own risk assessment of individual defects, which may result in a different response time.

4.3.11 Footways and Cycleways

The council will develop a footway hierarchy in 2022/23 utilising a risk-based approach in accordance with CSSW recommendations. Higher usage footways will be identified and a schedule of footways requiring walked inspections will be documented. The footway inspection regime as set out in the 2008 Code will continue until superseded, but the revised defect categorisation detailed in Part 4.3.2 below will apply in association with the revised carriageway defects.

Where adjacent carriageways and footways are inspected during the same inspection the higher frequency level is applied. The sections subject to monthly walked are listed at [Schedule of Monthly Walked inspections](#)

The general condition of footways are observed during the highway inspection and the information recorded by the highway inspector is used to address individual defects and determine priorities for remedial work programmes. Separate Visual condition assessments are not currently undertaken on footways.

On road cycleways are currently inspected as part of the highway inspection regime by the highway inspection team. The road hierarchy recognises national and higher usage on-road cycling routes. Off-road cycling trails are inspected and maintained by the public rights of way (PROW) maintenance team.

4.3.12 Structures

An individual Maintenance Manual section on Highway Structures will be developed in 2022/23 but an overview of current inspection regimes is set out below:

Highway Structures consist of:

- Bridges
- Retaining Walls
- Cattle Grids
- Footbridges
- (1500mm and
- Culverts (900mm or above)
- above)

Structures are inspected as follows:

- i. General Inspections (GIs); GIs are visual inspections, with some hands-on and basic assessment e.g., hammer tapping and measurements where necessary. Carmarthenshire Structures Inspectors undertake general inspections on a 2-yearly frequency. The extent and severity of observed defects are recorded on the Council's Structures Management System.
- ii. Principal Inspections (PIs); PIs are a more detailed visual inspection, with hands-on assessment of most/all elements plus detailed assessment e.g., hammer tapping, half-cell, chloride measurements etc. Principal inspections are only undertaken on a limited number of key structures on a frequency ranging from 6 to 10 years following a risk-based assessment process. Detailed reports are recorded within the Council's Structures Management System.
- iii. Special Inspections: Reactive inspections as a result of adverse weather, or due to damage or in

advance of abnormal loads.

- iv. Reactive inspections following complaints or third-party reports.

Inspections are undertaken using the Inspection Manual for Highway Structures for guidance and following Design Manual for Roads and Bridges standard CS 450. Details are recorded on hand-held devices and immediately loaded into the Structures Management System and the data used to record a bridge condition score (bci).

The results of inspections are used to generate condition scores for individual structures, or the entire structures stock. Condition scores can be reported at structural element level and are used to prioritise works programmes. Bridge condition score data is also used for performance management and benchmarking purposes.

4.3.13 Works Ordering

Works orders are generated using the council's asset management system following the input of the inspection records.

4.3.14 Recording of Repair Records

On completion of recorded defects, the repair details are recorded in the asset management system including the date/time of repair. These details are available to monitor performance and respond to third party claims.

Part 4.4 Road Condition Assessment and Investment Prioritisation

The road or 'carriageway' is the most significant highway asset in terms of value and the cost of essential preventative and corrective maintenance. Maintaining all road surfaces in 'as new' condition is not feasible across the entire 3500km network and the timely intervention of maintenance is key to delivering maximum value from our investments. Monitoring the condition of each part of the network is critical when prioritising investments, increasingly so as budgets are under pressure and demands on the network increase. Prioritising investment using the Network Hierarchy and best available condition information supports our risk-based approach.

4.4.1 Condition Assessments

In addition to routine inspections, the authority undertakes the following condition assessments on its highway assets. The frequency of condition assessment for carriageways is set out below.

Carriageway Annual Inspection Coverage		
Road Class	SCANNER	SCRIM
A Roads	100% (one direction)	100% (both directions)
B Roads	100% (one direction)	100% (both directions)
C Roads	50% (one direction)	

Carriageways

SCANNER (Surface Condition Assessment of the National Network of Roads)

SCANNER is a machine condition survey undertaken from a vehicle moving at traffic speeds. The results of the survey are held in the highways asset management system PMS module (Pavement Management System)..

The SCANNER survey collects a range of data using high speed vehicle mounted lasers. The data includes measurements of:

- Wheel track rutting
- Cracking
- Edge deterioration
- Longitudinal profile (3m,10m and 30m)
- Texture depth

Each of these datasets is aggregated and summarised in accordance with nationally agreed standards to

assess condition levels in a consistent manner. This data is used to produce the Road Condition indicator figures and provides network wide condition ratings to assist with Asset Valuation and deterioration modelling. SCANNER surveys are not currently undertaken on the unclassified road network.

The scanner results inform overall condition of the highway network and assist in prioritising investment. The results are also required to provide PAM 20 (Public Accountability Measures) on Class A, B and C roads.

SCRIM (Sideway-force Coefficient Routine Investigation Machine)

The SCRIM survey measures wet road skidding resistance and is stored in the highways asset management system.

The approach outlined within HD28 has been adopted to help manage the risk of skidding accidents in wet conditions so that this risk is broadly equalised across the county road network. This is achieved by providing a level of skid resistance that is appropriate to the nature of the road environment at each location on the network. The appropriate level of skid resistance is determined from a network accident analysis plus local judgment of site-specific factors.

The initial output from the survey is used to identify parts of the road network requiring further investigation. These investigations consider accident history and network characteristics to arrive at a recommendation for any further action. Carmarthenshire routinely allocates a fixed sum to fund remedial treatments to prioritised locations each year, subject to funding.

SCANNER and SCRIM surveys are procured via a central contract managed by the Welsh Government.

Visual Condition Assessment

A visual condition survey of all roads has been undertaken in 2020 using video survey technology. The carriageway condition has been assessed by AI (artificial intelligence) to produce coarse visual inspection data in accordance with national standards. The carriageway visual condition information is stored in the Vaisala database for review and CVI (Coarse Visual Inspection) data exported into the highway asset management system.

Assets that are identified as in need of substantial repair or replacement are included on a works programme of potential schemes and prioritised using a risk-based approach. The prioritisation will vary according to the asset and available data with a focus on use of the hierarchy and areas of highest use.

4.4.2 Carriageways Rolling Programme

A list of schemes is maintained on a rolling programme as surveys and inspections identify the need for surface treatment either from resurfacing or other measures including surface dressing. A 3 year programme is developed and subject to review each year. The annual programme is produced to meet the standards, strategies & budgets for each asset and treatment type as detailed in the Highway Asset Management Plan (HAMP). This rolling programme contains significantly more schemes than it is possible to fund and the risk-based prioritisation process is critical in ensuring investment is targetted in the appropriate areas.

4.4.3 Scheme Prioritisation

The carriageway prioritisation uses the following categories:

- Hierarchy (traffic/usage)
- Scanner data (rutting, Texture, 3m profile, 10m profile) RCI
- Visual condition (video survey analysis)
- Area and local network priorities
- Defect levels
- Age of construction

The structures prioritisation uses the following categories:

- Hierarchy
- Condition
- Means of access/Alternative routes
- Network impact
- Safety status

Using the above criteria scheme bids are objectively scored and prioritised to ensure the funding available is targeted towards the areas of greatest need and benefit.



Appendix A: Extract from highways Act 1980

As the highway authority the council is subject to legal requirements that include:

The 1980 Highways Act,

- Section 41; to maintain those roads, footways and cycle tracks that are '*Highways maintainable at public expense*'.
- Section 58 ; states that a statutory defence against third party claims is provided where the Highway Authority can establish that reasonable care has been taken to 'secure that the part of the highway to which the action relates' to a level commensurate with the volume of ordinary traffic such that it 'was not dangerous to traffic'.

Section 41 - Duty to maintain highways maintainable at public expense

(1)The authority who are for the time being the highway authority for a highway maintainable at the public expense are under a duty, subject to subsections (2) and (4) below, to maintain the highway.

(2)An order made by the Minister under section 10 above directing that a highway proposed to be constructed by him shall become a trunk road may, as regards—

(a)a highway to which this subsection applies which becomes a trunk road by virtue of the order, or

(b)a part of a highway to which this subsection applies, being a part which crosses the route of the highway to be so constructed,

contain such a direction as is specified in subsection (4) below.

(3)Subsection (2) above applies to—

(a)any highway maintainable at the public expense by a local highway authority, and

(b)any highway other than a highway falling within paragraph (a) above or a highway maintainable under a special enactment or by reason of tenure, enclosure, or prescription.

(4)The direction referred to in subsection (2) above is—

(a)in a case where the highway or part of a highway falls within subsection (3)(a) above, a direction that, notwithstanding subsection (1) above, it shall be maintained by the highway authority for that highway until such date, not being later than the date on which the new route is opened for the purposes of through traffic, as may be specified in a notice given by the Minister to that authority ; and

(b)in a case where the highway or part of a highway falls within subsection (3)(b) above, a direction that, notwithstanding subsection (1) above, the Minister is to be under no duty to maintain it until such date as aforesaid.

(5)Where an order under section 10 above contains a direction made in pursuance of subsections (2) to (4) above, then, until the date specified in the notice given by the Minister pursuant to the

direction, in accordance with subsection (4) above, the powers of a highway authority under sections 97, 98, 270 and 301 below as respects the highway to which the direction relates are exercisable by the highway authority to whom the notice is required to be given, as well as by the Minister.

Section 58 : Special defence in action against a highway authority for damages for non-repair of highway.

(1) In an action against a highway authority in respect of damage resulting from their failure to maintain a highway maintainable at the public expense it is a defence (without prejudice to any other defence or the application of the law relating to contributory negligence) to prove that the authority had taken such care as in all the circumstances was reasonably required to secure that the part of the highway to which the action relates was not dangerous for traffic.

(2) For the purposes of a defence under subsection (1) above, the court shall in particular have regard to the following matters:—

- a) the character of the highway, and the traffic which was reasonably to be expected to use it;
- b) the standard of maintenance appropriate for a highway of that character and used by such traffic;
- c) the state of repair in which a reasonable person would have expected to find the highway;
- d) whether the highway authority knew, or could reasonably have been expected to know, that the condition of the part of the highway to which the action relates was likely to cause danger to users of the highway;
- e) where the highway authority could not reasonably have been expected to repair that part of the highway before the cause of action arose, what warning notices of its condition had been displayed;

but for the purposes of such a defence it is not relevant to prove that the highway authority had arranged for a competent person to carry out or supervise the maintenance of the part of the highway to which the action relates unless it is also proved that the authority had given him proper instructions with regard to the maintenance of the highway and that he had carried out the instructions.

The New Roads & Street Works Act 1991 imparts a duty on Statutory Undertakers to maintain their apparatus in the Highway, but it has been established in Case Law that they can rely on the Highway Authority's Safety Inspection regime to some extent when defending Claims.

The Council can avoid being held jointly liable for defective apparatus by issuing a Section 81 Notice - New Roads & Street Works Act 1991 to the Utility Company whenever a defect is identified by the Authority within the Highway.

Appendix B: County Surveyor Society Wales Recommended Asset Hierarchy Categories

Carriageways	
Category	Description (approximate daily traffic volume)
CHSR	Route enabling travel between locations of regional significance (NA, Strategic routes are identified based on their importance regionally rather than their traffic volume)
CH1	Travel between locations (traffic volume 10,000 - 20,000)
CH2	Travel between locations (5,000 - 10,000)
CH3	Travel between locations (1,000 - 5,000)
CH4	Access to housing (200 – 1,000)
CH5a	Access to properties (housing and farms) (< 200)
CH5b	Access to isolated properties <20
CH5c	Unsuitable for vehicles
CH5d	Disused/impassable

Footways	
Category	Description (approximate daily footfall)
FHVHU	> 10,000 (15,000 used for calculations)
FH1	High use pedestrianised zones and footways in town centres (5,000 – 10,000)
FH2	Footways outside busy public building such as train/bus stations, hospitals, schools and colleges or small parade of shops etc. that generate significantly higher levels of use than the adjacent footways (1,000 – 5,000)
FH3	Footways that link housing estates and industrial estates to other centres /routes (500 – 1,000)
FH4	Footways in housing areas (<500)
FH5	Rural footways used very infrequently (<100)

Structures	
Category	Description
Vital Structure	A structure that is vital to the network i.e., if restricted or out of service it would cause a significant adverse effect such as major traffic delays and a lengthy diversion route with the potential to affect other important services or community severance
Important Structure	A structure that is important to the functioning of the network, i.e., if restricted out of service would have an adverse effect on the operation of the network
Standard Structure	All other structures

Street Lighting Hierarchy

The hierarchy for street lighting assets managed by Carmarthenshire County Council is at a single level. All assets are inspected at the same frequency and repaired within the same response time. The nature and extent/impact of the fault determines the priority rather than the location.

Traffic Signals Hierarchy

Traffic Signals Hierarchy	
Category	Description
Vital Junction	A junction the operation of which is vital to the operation of the network i.e. its failure would cause major traffic disruption
Important Junction	A junction that is important to the operation of the network, the failure of which would cause traffic disruption
Standard Junction	A signalised junction on the network
Pedestrian Crossing	Pedestrian crossing

Details of the hierarchy allocated to each individual asset are held in the asset management systems.

ENVIRONMENTAL & PUBLIC PROTECTION SCRUTINY COMMITTEE

25TH NOVEMBER 2021

HIGHWAY ASSET MANAGEMENT PLAN – ANNUAL STATEMENT REPORT 2021

Purpose:

To present the Highway Asset Management Plan (HAMP) Annual Statement Report 2021 for information and consideration

To consider and comment on the following issues:

To consider and note the contents of the report which provides an update on the condition and performance of the highway network and related financial information

Reasons:

The report provides an annual update as set out within the Highway Asset Management Plan adopted by Council in July 2018.

Relevant scrutiny committee to be consulted

To be presented for information at Environment and Public Protection Scrutiny Committee 25th November 2021

To be referred to the Cabinet / Council for decision: NO

CABINET MEMBER PORTFOLIO HOLDER:- Councillor Hazel Evans

Environment Directorate Name of Head of Service: Stephen Pilliner	Designations: Head of Highways & Transport	E Mail Addresses: SGPilliner@cararthenshire.gov.uk
Report Authors: Richard Waters Chris Nelson	H&T Services Manager Highway Asset Manager	rwaters@cararthenshire.gov.uk CNelson@cararthenshire.gov.uk

EXECUTIVE SUMMARY

ENVIRONMENTAL & PUBLIC PROTECTION SCRUTINY COMMITTEE 25TH NOVEMBER 2021

HIGHWAY ASSET MANAGEMENT PLAN: ANNUAL STATEMENT REPORT 2021

BRIEF SUMMARY OF PURPOSE OF REPORT.

In July 2018 Council adopted the Highway Asset Management Plan which included an undertaking to present each year an Annual Statement Report on the condition and performance of the highway network. The Report was to include investment options and their implications on the asset condition. Annual Statement Reports were subsequently presented in 2019 and 2020.

The Annual Statement Report 2021 includes an overview of the highway network and provides detailed commentary on the following three key highway asset areas:

- Highways (carriageways, footways and cycleways)
- Bridges and Structures
- Highway Lighting and Traffic Signals

Highways

The Highway network in Carmarthenshire is the second largest in Wales and extends to over 3500Km. Although much of the County is predominantly rural in nature it nevertheless still has the third highest level of traffic in Wales.

Carmarthenshire has a backlog of highway maintenance work, which is growing, and in common with other local authorities a risk-based approach has been adopted in line with a national code of practice *Well-Managed Highway Infrastructure* to focus on the higher priorities for resource allocation.

The highway network carries a range of road users from cyclists and pedestrians through to 44 tonne heavy goods vehicles and operates through weather conditions ranging from hot sunny summers to sub-zero winters with snow and ice. The highway network is also being increasingly impacted by storm events which can lead to highway flooding and undermine the support for our highways. All of these are detrimental to the fabric of the highway asset and continuous investment is required to ensure it is fit for purpose.

In recent years additional funding has been available and Welsh Government grant funding (£1.5M) combined with County Council funding (£1.55M) has helped to maintain the asset with approximately 25km of roads resurfaced in 2020/21. This has helped to keep our higher-class roads in a relatively stable condition. However, an overall annual investment of £6M per year is required to keep all Carmarthenshire's roads in a stable condition.

A capital bid has been submitted to increase this level of annual investment but without it the minor road network will continue to deteriorate. Overall, it is calculated that there is currently a highway maintenance backlog of over £38M.

The authority's footway and cycle network exceed 1000km in length, investment in maintenance has been very modest and is mainly focused on local priorities. The division has submitted a Capital bid of £500k pa to develop a modest footway and cycleway refurbishment programme.

Bridges and Structures

Our highways are supported by almost 1,900 structures (800 bridges, 560 retaining walls 459 large culverts and 49 footbridges). Welsh Government grant funding has helped address storm damaged areas particularly along the A484 where new retaining walls have been required in many locations.

The number of sub-standard structures has decreased from 54 to 50 and these are being carefully monitored to ensure they remain safe for public use.

The overall bridge stock condition has remained relatively stable.

Highway Lighting and Traffic Signals

Our street lighting system includes over 20,000 lighting units. We also manage 5000 units for our Town and Community Councils. LED lighting units have been introduced for County and Community lights to replace less efficient street lighting units on an invest to save basis. This has reduced carbon emissions, lowered energy costs and improved light quality. The project was completed in the summer of 2020 and is estimated to have saved 1,200 tonnes of CO₂ emissions.

There are two significant challenges for the Public Lighting Team:

- Ageing lighting columns, including more than 7,000 steel columns need to be replaced to avoid the risk of collapse. A programme is underway for this.
- 304Km of deteriorating underground electrical cabling needs replacing to prevent cable faults, power outages and to ensure public safety. A funding application has been made for this.

The County Council also has 54 signalised pedestrian crossings and 20 signalised junctions.

Recommendation.

That the report be noted.

DETAILED REPORT ATTACHED?

YES –

Highway Asset Management Plan: Annual Statement Report 2021

IMPLICATIONS

I confirm that other than those implications which have been agreed with the appropriate Directors / Heads of Service and are referred to in detail below, there are no other implications associated with this report:

Signed: **S Pilliner** Head of Highways & Transportation

Policy, Crime & Disorder and Equalities NONE	Legal NONE	Finance YES	ICT NONE	Risk Management Issues YES	Staffing Implications NONE	Physical Assets YES
--	----------------------	-----------------------	--------------------	--------------------------------------	--------------------------------------	-------------------------------

Finance

The Annual Statement Report 2021 details the implications of various funding scenarios which will be subject to future budget setting and grant availability. The report also details that funding bids have been submitted to address key maintenance issues.

Risk Management Issues

The Highways Asset Management Plan adopts a risk-based approach to managing the highway network and details of this are set out within the Highway Asset Management Plan.

Physical Assets

The Highway Asset Management Plan sets out the Council's approach in managing the highway asset and relates this to national, regional and county objectives. The Annual Statement Report 2021 provides information on the current condition of the asset and sets out how the asset condition has changed and will change in the future depending on funding scenarios.

CONSULTATIONS

I confirm that the appropriate consultations have taken in place and the outcomes are as detailed below

Signed: **S G Pilliner** Head of Highways & Transportation

1. Scrutiny Committee - N/A
2. Local Member(s) - N/A
3. Community / Town Council - N/A
4. Relevant Partners - N/A
5. Staff Side Representatives and other Organisations - N/A

Section 100D Local Government Act, 1972 – Access to Information
List of Background Papers used in the preparation of this report:
THERE ARE NONE

HIGHWAYS ASSET MANAGEMENT PLAN

ANNUAL STATEMENT REPORT 2021

Environment Directorate,
Highways and Transport
Division

carmarthenshire.gov.wales

Cyngor **Sir Gâr**
Carmarthenshire
County Council



Page 133

Contents

Section 1 – Introduction	3
1.1 Introduction	3
1.2 HAMP Management Approach	3
1.3 Challenges	4
1.4 Achievements	5
Section 2 – Highways	7
2.1 Introduction	7
2.2 Highways Status Report	8
2.2 Ash Die-back	10
2.3 Drainage surveys	11
2.4 New Technology – Condition and inventory surveys	12
2.5 Highways Condition	13
2.6 Highways Investment Options	15
2.7 Highways Summary	19
2.8 Footways and Cycleways Introduction	19
2.9 Footways and Cycleways Summary	22
Section 3 – Bridges and Structures	23
3.1 Bridges and Structures Introduction	23
3.2 Bridges and Structures Status	26
3.3 Bridges and Structures Summary	30
Section 4 – Lighting	32
4.1 Public Lighting Introduction	32
4.2 Street Lighting Asset	33
4.3 Illuminated Signs and Traffic Signals Asset	35
4.4 Lighting Summary	35

Executive Summary

In July 2018 Council adopted the Highway Asset Management Plan which included an undertaking to present an Annual Statement Report (this report) on the condition and performance of the highway network, one of the most valuable assets managed by the County Council.

The Report discusses how the asset has been managed over the past twelve months (2020-2021) and includes a discussion of the key issues and changes which have impacted its condition.

The Report provides detailed commentary on the following three key highway asset areas:

- Highways (carriageways, footways, and cycleways)
- Bridges and Structures
- Highway Lighting and Traffic Signals

For each asset category the report details its condition, how its condition has changed since the last report and how it will change into the future depending on funding scenarios which are set out within the report.

Highways

The Highway network in Carmarthenshire is the second largest in Wales and extends to over 3500Km. Although much of the County is predominantly rural in nature it nevertheless has the third highest level of traffic in Wales.

In common with highway authorities around the country Carmarthenshire has a backlog of highway maintenance and that backlog is unfortunately growing. This has necessitated a risk-based approach to its management to focus on the higher priorities for resource allocation. This approach has focused resources towards the higher class roads and as a result their condition has been relatively stable over the period. Deterioration will be more noticeable in the more lightly trafficked lower class roads.

The highway network carries a range of road users from cyclists and pedestrians through to 44 tonne heavy goods vehicles and operates through weather conditions ranging from hot sunny summers to sub-zero winters with snow and ice. The highway network is also being increasingly impacted by storm events which can lead to highway flooding and undermine the support for our highways. All of these are detrimental to the fabric of the highway asset and continuous investment is required to ensure it is fit for purpose.

In recent years additional funding has been available and Welsh Government grant funding (£1.5M) combined with County Council funding (£1.55M) has helped to maintain the asset with approximately 25km of roads resurfaced in 2020/21. This has helped to keep our higher-class roads in a relatively stable condition. However, an overall annual investment of £6M per year is required to keep all Carmarthenshire's roads in a stable condition. Consequently, the minor road network will have suffered

the greatest deterioration and overall it is calculated that there is a highway maintenance backlog of over £38M.

The authority's footway and cycle network exceed 1000km in length, investment in maintenance has been modest and is mainly focused on local priorities. The division has submitted a Capital bid of £500k pa to develop a modest footway and cycleway refurbishment programme.

Bridges and Structures

Our highways are supported by almost 1,900 structures which includes around 800 bridges, 560 retaining walls 459 large culverts and 49 footbridges. Welsh Government's Resilient Roads Grant funding has helped address storm damaged areas particularly along the A484 where new retaining walls have been required in a number of locations.

With recent capital investment, the number of sub-standard structures has decreased from 54 to 50 and these are being carefully monitored to ensure they remain safe for public use.

The overall bridge stock condition has remained relatively stable.

Highway Lighting and Traffic Signals

Our street lighting system includes over 20,000 lighting units. We also manage 5000 units for our Town and Community Councils. LED lighting units have been introduced for County and Community lights to replace less efficient street lighting units on an invest to save basis. This has reduced carbon emissions, lowered energy costs and improved light quality. The project was completed in the summer of 2020 and is estimated to have saved 1,200 tonnes of CO₂ emissions.

There are two significant challenges for the Public Lighting Team:

- Ageing lighting columns, including more than 7,000 steel columns need to be replaced to avoid the risk of collapse. A programme is underway for this.
- 304Km of deteriorating underground electrical cabling needs replacing to prevent cable faults, power outages and to ensure public safety. A funding application has been made for this.

The County Council also has 54 signalised pedestrian crossings and 20 signalised junctions.

Section 1 – Introduction

1.1 Introduction

The highway network plays a vital role in facilitating the safe and efficient movement of goods and people. It underpins not just our economy but also the fabric and wellbeing of our communities. Carmarthenshire has the second largest highway network in Wales with over 3,500km of highway, 1,000km of footways & cycleways, 1,900 structures and 20,000 lighting units. All of these important assets require continual investment and management to ensure that they continue to support and connect our communities.

In common with highway authorities around the country the highway network in Carmarthenshire has a maintenance backlog which is increasing. This is recognised through the HAMP where a risk-based approach is adopted in line with the recommended Code of Practice.

1.2 HAMP Management Approach

Maintaining the highway network in a serviceable condition remains a continuing challenge against a weight of public expectation. External influences such as traffic loading, winter service and severe weather events and natural deterioration undermine the fabric of our roads and its management through events such as covid are a strain on resources.

The HAMP recognised this difficulty with the adoption of a risk-based approach to focus limited where they are most urgently needed. This year we have built on Parts 1, 2 and 3 of the HAMP in developing the first sections of the HAMP Maintenance Manual. The Maintenance Manual is being brought forward as a separate report and extends the risk-based approach in the following areas:

- Highway Maintenance Management
- Highway Network Hierarchy
- Highway Inspection and Repair Regime
- Road Condition Assessment and Investment Prioritisation

1.3 Challenges



Through 2020/21 the authority has faced many challenges and these have had an impact on the highway network and how it is managed. The key challenges are highlighted below.

Key Challenge – Carbon Reduction
<ol style="list-style-type: none">1. Initiatives such as the introduction of LED lighting units have made a significant contribution towards reducing carbon emissions.2. A review is also underway of our vehicle fleet to introduce ultra-low emission vehicles where feasible.3. A new highway repair methodology is also being trialled to improve the durability of pothole repairs and improve efficiency.4. The potential use of low carbon materials is continually reviewed to assess their feasibility as they become commercially available.5. The adoption of the Vaisala video survey system has reduced the need for many site visits and improved our efficiency by supporting maintenance and design teams in reducing the number of vehicle journeys.
Key Challenge – Climate Change
<ol style="list-style-type: none">1. Adverse weather events are occurring more frequently, and the Service operates an emergency management plan to respond to such events.2. Out of Hours management systems are in place in partnership with other key responders.3. Duty Officers, Operatives and plant such as pumps and a snow blower are on standby to assist in critical locations.4. Highway drainage and geotechnical surveys of key routes are being undertaken to improve target areas of concern and improve network resilience.5. Additional weather stations are being introduced to improve the accuracy and detail of forecasting.
Key Challenge – Covid Pandemic
<ol style="list-style-type: none">1. Continuing the provision of services through the pandemic has been a challenge requiring a flexible and adaptive approach.2. Covid Risk Assessments and Safe Working Practices were introduced to cover all site and office-based operations.3. Office based employees adapted to working remotely to continue to provide services and support front-line operations.4. Additional vehicles were introduced and working 'bubbles' implemented to safeguard operatives undertaking certain activities.5. Staff absence due to covid was managed and support given to other front-line services so that they could continue to be delivered.

1.4 Achievements

Despite a very challenging backdrop, not least the continuing provision of a service through the covid pandemic, a number of notable achievements have been made.

Hot Material Pothole Repair Trial	
<p>A trial is underway to repair potholes using hot materials to improve the durability of the repairs and to improve repair efficiency by only making one visit with a 'fix first time' approach.</p> <p>The Roadmender machine (pictured) has a 'hotbox' to continually heat materials and can also carry excavated materials</p>	
Replacement Lighting Columns	
<p>A programme has been introduced to replace aging lighting columns which are in danger of collapse.</p> <p>The initial focus is on over 7,000 steel columns, and a large proportion of these have exceeded their design life.</p>	

Drainage Surveys	
<p>Proactive drainage surveys are being undertaken on a selection of key main roads including the A484 from Newcastle Emlyn to Llanelli and the A485 north of Carmarthen. The surveys are identifying issues which are causing surface water flooding and enabling appropriate remedial or cleaning works to be brought forward as funding permits to ensure that road flooding does not occur. It should be noted that 32% of the drainage systems so far surveyed are blocked or collapsed.</p>	
Geotechnical Surveys	
<p>A programme of geotechnical surveys and assessments are being undertaken along key main routes which are prone to river flooding in particular such as the A484 and A485. The purpose of the work is to assess the stability of potentially vulnerable sections and to identify early remedial works which may prevent bigger problems developing and potentially compromising the highway.</p>	

The following three sections provide detail of the three key highway asset areas:

- Highways (carriageways, footways, and cycleways)
- Bridges and Structures
- Highway Lighting and Traffic Signals

Section 2 – Highways

2.1 Introduction



The road, or carriageway asset, is by far the largest asset in terms of operational importance and investment value. Over recent years traffic volumes have continued to increase along with customer expectation. Increased levels of usage combined with the effects of more frequent adverse weather events can accelerate the deterioration of road surfaces. Heavy goods vehicle journeys, which cause the most significant stress on the fabric of the highway are less likely to have reduced during this period as essential supply chains were maintained.

Carmarthenshire’s highway network provides the vital infrastructure which supports and facilitates connectivity within our County and with the rest of Wales. Our road system ensures businesses continue to operate, people get to work, food reaches shelves, children get to school, and patients get to hospitals. Ensuring this network remains fit for purpose and provides for the safe and efficient movement of goods and people is an essential component in maintaining a healthy, vibrant, and prosperous Carmarthenshire.

It is estimated that the cost to keep pace with on-going deterioration of our road surfaces across the 3500km network requires long term funding of £6m per year to carry out corrective and preventative maintenance. The current lack of planned maintenance is leading to increased abortive cost of reactive maintenance for potholes and surface failures, placing increased pressure on diminishing revenue budgets and increased replacement costs for future generations. Current budget levels (600k Capital), even with additional WG funding (£1500k PA in recent years but not confirmed for future years) is not keeping pace with deterioration and we face increased future costs and risk of claims against the authority. Current funding does not support the authorities’ commitments and promotion of cycling on the highway network. Currently 9.4% of the County’s classified road network are in a RED condition (plan maintenance soon) and in need of refurbishment to provide a safe and sustainable transport network. The project consists of a county wide prioritised programme of road refurbishment and preventative treatments aiming to extend the life of existing road surfaces and reducing future costs from reactive repairs and complete reconstruction when roads fail.

2.2 Highways Status Report

The Transportation and Highways Division has been able to maintain key services this year despite the lockdown restrictions. A large programme of road refurbishment has been delivered and by the end of November we will have resurfaced 17km of priority sections of road. In addition we surface dressed 43km of road providing essential surface restoration and preventative maintenance treatment. A significant



portion (50%) of this has been funded by Welsh Government Road refurbishment grant. There is no indication of grant funding for 2022 and our future road refurbishment programmes will be significantly reduced as a result and in addition to potential for further reductions in revenue funding from PBB's. We continue to have an overall lower than average level of investment in our Highways and transport, ranking **18th out of 22** authorities and remain in the lower quartile across Wales.

Key Facts

Carmarthenshire has the **second largest** highway network in Wales (3485 Km of highway) and is more than double the Welsh average of 1514km *

We have the **third highest traffic volume** in Wales - in 2020 the Wales average was 1.12 billion vehicle km/per year and Carmarthenshire was third at 1.68 billion (Cardiff 2.65 and RCT at 1.77 were highest) *

In 2020/21 our **spend on highways and transport was ranked 18th out of 22** authorities on money spent per km on highways and roads. £3090/km compared to a Welsh average of £6610/km. *

Based on current funding levels, the length of road estimated to be in a poor condition is predicted to increase from 9% to 28% over the next 20 years.

(* data from StatsWales.gov.wales)

There have been a number of particular points of note over the last year (2020-21) regarding our highway network. Work has continued in delivering projects funded by the road refurbishment grant from Welsh Government and the £3.1M grant in March 2019 for remedial works following Storm Callum. A further £936k has been secured from Welsh Government to address storm damage highway infrastructure and work is progressing on a number of schemes.

Carmarthenshire successfully hosted Stage 3 of the Tour of Britain in September 2021 and sections of the Wales Road race at Newcastle Emlyn the same month.

Our 3500km highway network is subject to many external influences which cause the asset to deteriorate such as weather impacts and traffic loading. Based on current road condition figures, there is a backlog of carriageway maintenance works in

Carmarthenshire equating to £38M. Our current investment consists of £600k of County Council funding which has been bolstered through grants of £1.5m per year from Welsh Government. The impact of current investment levels and investment options are set out within this report.

The latest available condition survey data for 2018-19 show that Carmarthenshire remains in the lower quartile for road condition.

Road Conditions: Percentage of A,B and C Roads in poor condition (18-19 data)		
A Roads	5.2%	Ranked 20th (out of 22 authorities in Wales)
B Roads	4.2%	Ranked 10th (out of 22 authorities in Wales)
C Roads	12.5%	Ranked 17th (out of 22 authorities in Wales)

These performance figures are directly related to investment levels in Carmarthenshire. The graph below shows an investment comparison with other local authorities in Wales.

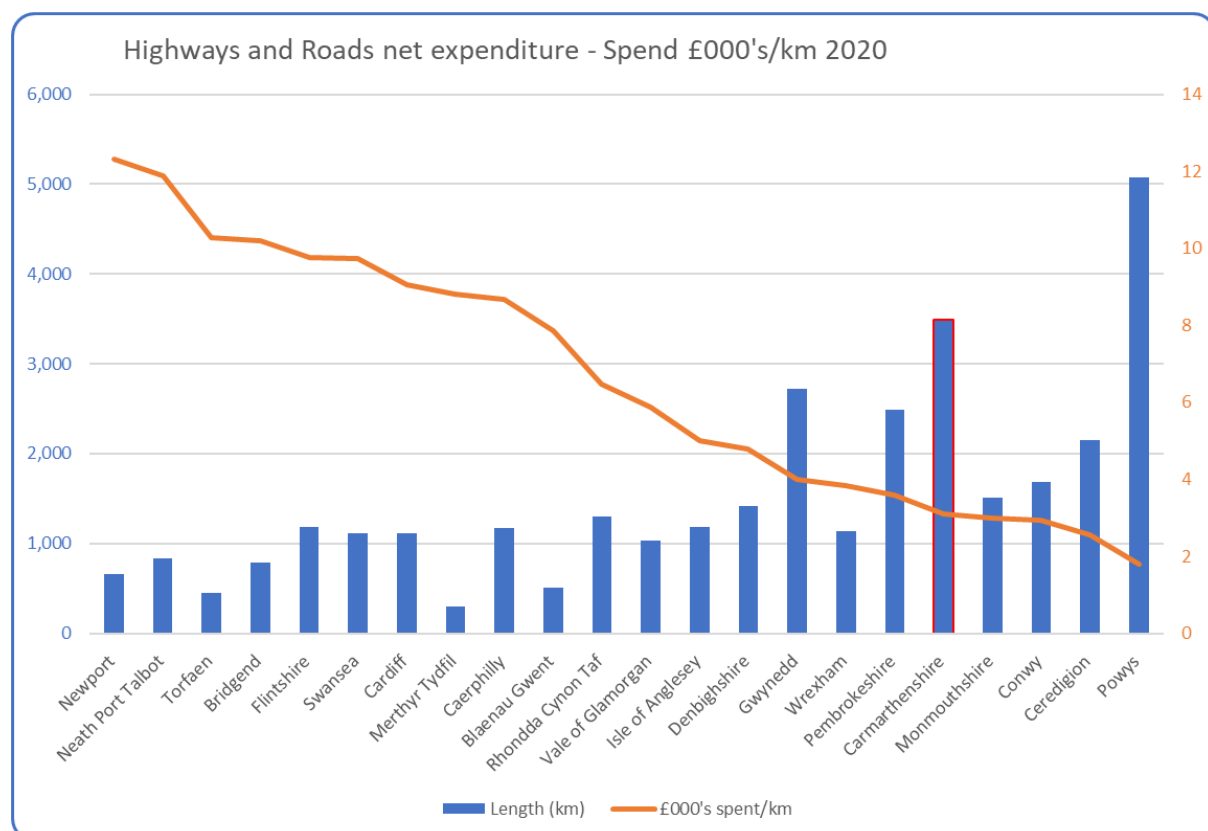


Table 1. Estimated carriageway maintenance need based on measured road condition

Road Class	A	B	C	U	Total	
Network Length (km)	249.6	331.5	1283.8	1617.1	3482	
Av. Width (m)	7.3	6	5	3		
Surfacing rate (£)	12	10	10	10		
Surface dressing Rate (£)	5	4	2.5	2.5		
% Red (>100) Resurfacing	4	3.4	12	10		Condition
% Amber 1 (80-100) Resurfacing	5.2	4.5	9.2	9.2		
% Amber 2 (40-80) Surface treatment	23.2	21.2	28.4	28.4		
Total	32.4	29.1	49.6	47.6		
Area Red	72883.2	67626	770280	485130		One off costs
£ (resurfacing cost)	£874,598	£676,260	£7,702,800	£4,851,300	£14,104,958	
Area Amber 1	94748.16	89505	590548	446319.6		
£ (Resurfacing cost)	£1,136,978	£895,050	£5,905,480	£4,463,196	£12,400,704	
Area Amber 2	422722.56	421668	1822996	1377769.2		
£ (Surface treatment cost)	£2,113,613	£1,686,672	£4,557,490	£3,444,423	£11,802,198	
Sum Total	£4,125,189	£3,257,982	£18,165,770	£12,758,919	£38,307,860	

The above table indicates that to rectify all areas of highway requiring remedial surfacing works would cost £38,307,860.

2.2 Ash Die-back

Ash trees across Europe are under attack by a pathogen that significantly affects the structural strength of ash trees. The authority has established a management plan to respond to this and the Transportation and Highways Division has taken on a key role in managing trees on and alongside the highway. In 2019 highway inspection teams undertook surveys of all A and B roads across the county (581km) and identified 2512 Highway trees and 10326 private trees requiring immediate attention due to the level of the disease. Works packages have been developed using specialist contractors to remove hazardous trees on the public highway. Trees on private land are subject to notice and appropriate action by the landowner.

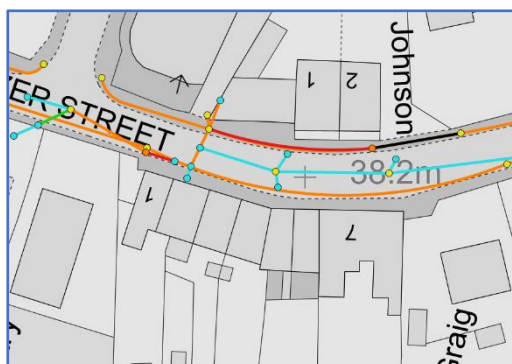
In 2020 we carried out surveys on 1155km of our C Class network, identifying 218 highway trees and 14,386 private trees.

This summer we have carried out repeat surveys on our A&B roads to monitor progress on the busier parts of the network. The surveys recorded 353 highway trees and 3892 private trees, down from 2512 and 10326 respectively in 2019. This represents a significant improvement in the numbers of high-risk trees on this class of roads. A continuance of surveys and funding remedial work on highway trees is anticipated. Whilst the majority of the trees are on private land, as the highway authority we have a duty to identify potential risks affecting the safe use of the highway, and we work with landowners to reduce these risks.

2.3 Drainage surveys

Our existing highway drainage infrastructure is ageing, and limited maintenance is carried out due to reducing revenue budgets over recent decades. Surveys have been carried out on sections of our A road network by a specialist survey team using Quickcam survey techniques in order to record detailed location information of our drainage assets above and below ground and also provide a condition rating. The surveys record the service level (ability to carry water) and structural condition.

The surveys so far have shown that **32%** of our drainage pipes are either **Severely reduced** or **Blocked and unsafe**. Of that **9%** are graded as having **Major Defects** or **Not fit for Purpose**. The results of the survey show action must be taken and an on-going programme of further investigation and drainage repairs is essential. Further surveys are planned in 2021 and a prioritised programme should be developed to reduce the risks to the road user. A Capital bid of £500k pa has been submitted to fund further survey and remedial schemes along the key strategic routes. It is well documented that poor management of water and drainage systems can lead to failures of highway construction and edge support leading to more costly repairs in the future. A pro-active approach improves the management of risk from highway flooding but will require additional funding.



Examples of blocked pipes

Investment will be required to maintain serviceability and efficient functioning of our drainage assets.

Further surveys will provide more accurate estimates of the condition across the entire network, however it is clear that funding needs to be identified to carry out programmed cleansing and repair of drainage systems in addition to traditional gully emptying.

2.4 New Technology – Condition and inventory surveys



In March 2020 we commissioned a new technology system which enabled us to undertake surveys of the highway network using an adapted smartphone. This was part of a project to improve our inventory and asset data. This information has provided us with an up-to-date video which is map based. The artificial intelligence in the system carries out a condition analysis of the highway network to produce a coarse visual assessment (CVI). In addition, the system recognises and categories highway signs which can assist us with managing our assets. To date over 22,000 signs have been recorded and categorised. As a result we have been able to review and assess issues and projects on the highway network by having access to current information. This has been very helpful with the travel restrictions and going forward provides opportunities for efficient ways of working.

These video surveys are now carried out by our Highway Inspectors during their driven inspections and assist in information capture as we continue with single manned routine inspections during COVID restrictions. Each A road is inspected once a month, B and C roads every three months, Urban Unclassified roads every 6 months and Rural Unclassified roads annually, thereby building up a library of up-to-date videos of the road network.

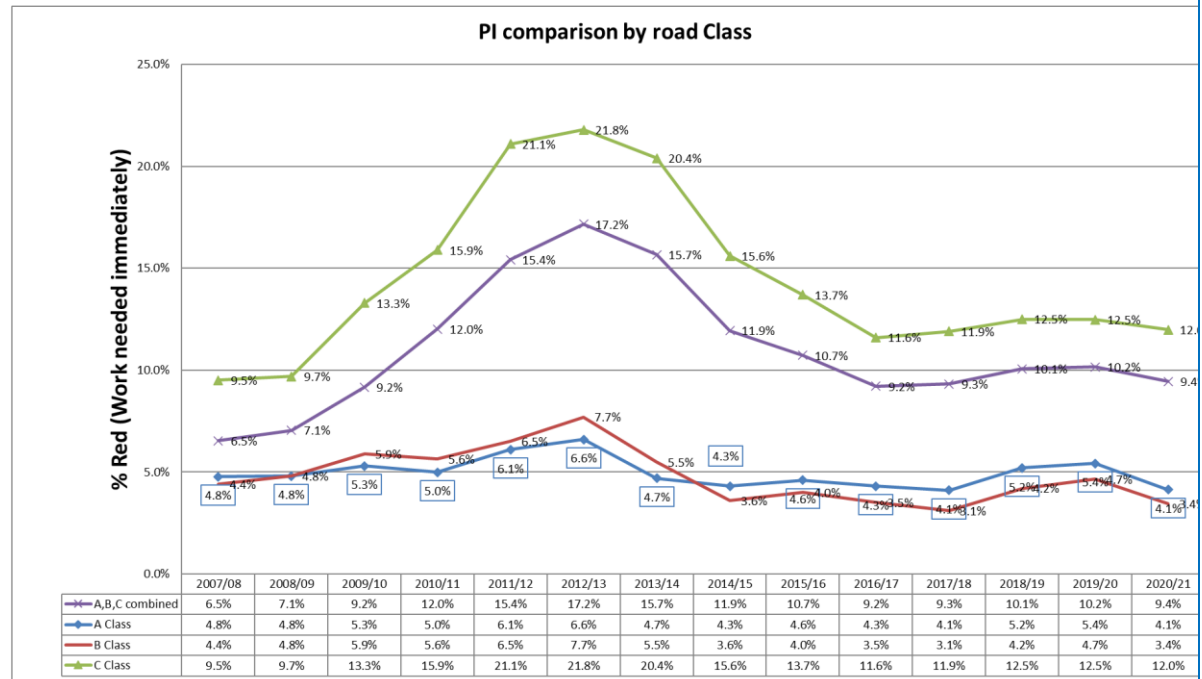
The availability of these videos will provide valuable information to our engineers and colleagues across the department and has potential to reduce vehicle journeys and improve efficiency.

2.5 Highways Condition

This section sets out the condition trend and provides commentary on the asset performance and investment levels.

Asset Group: Carriageways (Roads)

Measured road condition (PI – Performance Indicator)



The sharply changing condition indicators between 2009-2015 illustrate the impact of a period of significant flooding and successive harsh winters followed by increased investment in road maintenance in 2012-15 (Local Government Borrowing Initiative). More recently Welsh Government grant funding through the local highway refurbishment grant of average £1.5m per year has helped to improve condition on our priority roads. The classified network (A,B & C) will recover at this rate of investment as we target resources using the network hierarchy. The unclassified network which makes up 45% of our network will continue to deteriorate.

The Welsh Government local highway refurbishment grants have funded a number of surfacing schemes around the County which were prioritised to target areas of greatest risk. **In 2020 we resurfaced 25km of an estimated 535km which is in a poor condition (Red).** The condition of the County Road network is set out in the table below and shows over the period of analysis one of minor deterioration overall on the classified network. The condition of A and B Class roads has remained relatively stable over the period although C roads remain in worse condition than in 2007 despite recent investment. Our investment is increasingly targeted at the higher priority classified roads at the expense of our unclassified network, where investment is increasingly limited due to the risk-based approach. Compared across Wales our road condition is in the lower quartile.

Commentary	<p>Our carriageways are maintained through a combination of corrective and preventative treatments, and we use the network hierarchy to prioritise investment within budget resources. Early investment in preventative treatments provides a more cost-effective approach and decreases the need for more expensive reactive maintenance. We require additional investment to fund a pro-active approach so that road treatments can be carried out before road surfaces deteriorate beyond an economic threshold.</p>																										
Expenditure Summary by category 2020-21	<table border="1"> <thead> <tr> <th>Cost Category</th> <th>£</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Planned Maintenance - Corrective</td> <td>£1,356,463</td> <td> <ul style="list-style-type: none"> 42 resurfacing schemes totalling 25km </td> </tr> <tr> <td>Planned Maintenance - Preventative</td> <td>£830,367</td> <td> <ul style="list-style-type: none"> 49 surface dressing schemes totalling 55km of new surface treatment. </td> </tr> <tr> <td>Routine Cyclic Maintenance</td> <td>£2,428,533</td> <td> <ul style="list-style-type: none"> Cyclic gangs & routine works, drainage, sign cleaning, grass cutting </td> </tr> <tr> <td>Routine – Reactive Repairs (emergency)</td> <td>£385,231</td> <td> <ul style="list-style-type: none"> Pothole repairs etc. </td> </tr> <tr> <td>Routine – Reactive Repairs (non-emergency)</td> <td>£369,059</td> <td> <ul style="list-style-type: none"> Drainage and surface repairs, sign repairs </td> </tr> <tr> <td>Routine – Inspection & Survey</td> <td>£201,758</td> <td> <ul style="list-style-type: none"> Asset management & condition surveys </td> </tr> <tr> <td>Operating Costs</td> <td>£1,378,798</td> <td> <ul style="list-style-type: none"> Includes Winter Maintenance </td> </tr> </tbody> </table>	Cost Category	£	Output	Planned Maintenance - Corrective	£1,356,463	<ul style="list-style-type: none"> 42 resurfacing schemes totalling 25km 	Planned Maintenance - Preventative	£830,367	<ul style="list-style-type: none"> 49 surface dressing schemes totalling 55km of new surface treatment. 	Routine Cyclic Maintenance	£2,428,533	<ul style="list-style-type: none"> Cyclic gangs & routine works, drainage, sign cleaning, grass cutting 	Routine – Reactive Repairs (emergency)	£385,231	<ul style="list-style-type: none"> Pothole repairs etc. 	Routine – Reactive Repairs (non-emergency)	£369,059	<ul style="list-style-type: none"> Drainage and surface repairs, sign repairs 	Routine – Inspection & Survey	£201,758	<ul style="list-style-type: none"> Asset management & condition surveys 	Operating Costs	£1,378,798	<ul style="list-style-type: none"> Includes Winter Maintenance 	<ul style="list-style-type: none"> The above cost categories are based on groupings developed for national reporting requirements and are used to inform budget planning. The overall length of road treated in 2020-21 was 80 km, which is 2.3% of the highway network. This equates to a treatment period of over 42 years on average per section of road. 	
Cost Category	£	Output																									
Planned Maintenance - Corrective	£1,356,463	<ul style="list-style-type: none"> 42 resurfacing schemes totalling 25km 																									
Planned Maintenance - Preventative	£830,367	<ul style="list-style-type: none"> 49 surface dressing schemes totalling 55km of new surface treatment. 																									
Routine Cyclic Maintenance	£2,428,533	<ul style="list-style-type: none"> Cyclic gangs & routine works, drainage, sign cleaning, grass cutting 																									
Routine – Reactive Repairs (emergency)	£385,231	<ul style="list-style-type: none"> Pothole repairs etc. 																									
Routine – Reactive Repairs (non-emergency)	£369,059	<ul style="list-style-type: none"> Drainage and surface repairs, sign repairs 																									
Routine – Inspection & Survey	£201,758	<ul style="list-style-type: none"> Asset management & condition surveys 																									
Operating Costs	£1,378,798	<ul style="list-style-type: none"> Includes Winter Maintenance 																									

2.6 Highways Investment Options

Road assets deteriorate slowly over time and consequently a long-term view needs to be taken. This report includes 20-year forecasts to enable decisions to be taken with an understanding of their long-term impact. The investments analysis for 2021-41 includes the recent Welsh Government grant which is in its final year (2021) and proposed PBB reductions.

A number of budget scenarios showing the effect of investment on the carriageway condition performance indicator have been carried out.

Condition forecasting methodology

This has been carried out using a forecast model developed by the County Surveyors Society Wales CSSW Road Asset management project. The tool is intended for use by Welsh authorities to assist in Asset Management and budget planning. The results are considered realistic and demonstrate the impact of a continued reduction in real terms investment in the highway network, against a backdrop of increasing traffic volumes and user expectation. Reductions in preventative maintenance are leading to higher levels of reactive repair placing further pressure on the reducing revenue resources. Unplanned works are by nature less economical and increase safety risk for road users and increased risks to the authority and are less environmentally friendly due to wasted resources.

The calculations are based on depreciation of the existing highway network and using known treatment costs and current condition values from SCANNER data. The condition indicator used in the examples is a combined indicator across all road classes and provides an indication of the likely effect of current budget levels on actual carriageway condition across the County.

Road condition indicators

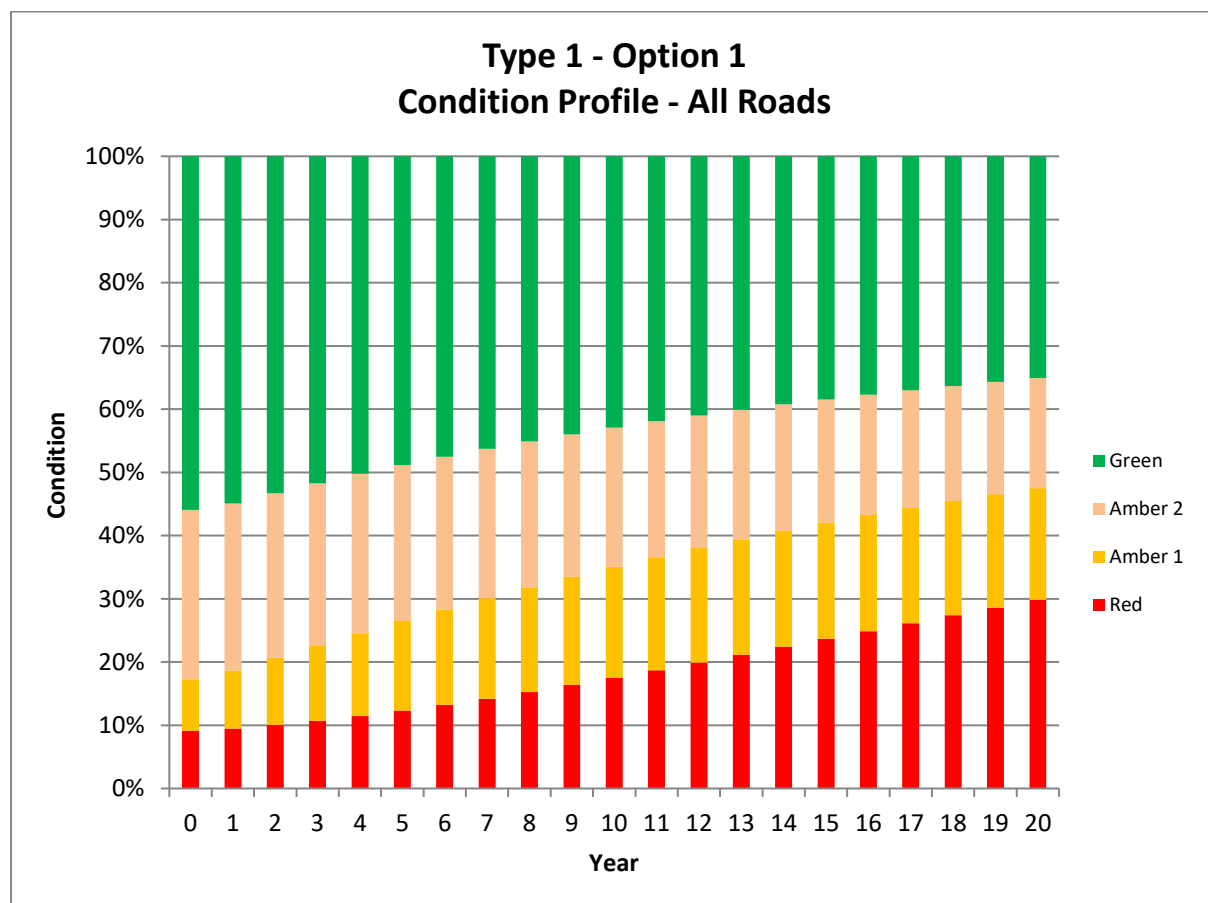
A description of the condition indicators and indicative maintenance treatments are as follows:

- **Green** – Good condition - No planned works are anticipated in the next 3 years
- **Amber 2** – Preventative maintenance, typically surface dressing on the 3–5-year programme
- **Amber 1** – (Imminent Red) Works should be planned by Year 3 – part Preventative/Corrective maintenance i.e. Resurfacing/Surface dressing/patching
- **Red** – Maintenance work needed now – Corrective maintenance i.e. Road Resurfacing

The following options show the predicted levels of road condition related to each funding scenario. There are 3 investment options that have been considered for comparison:

Option 1 - Existing budget – funding including WG Grant of £1.5M in 21/21, From 22/23 onwards County Capital £500k/annum and Revenue £1050k/annum (includes 100k PBB revenue reduction)

Funding/Year	21/22	22/23	23/24 onwards
Welsh Government	1.5	0	0
CCC	1.55	1.55	1.55
Total invested	3.05	1.55	1.55



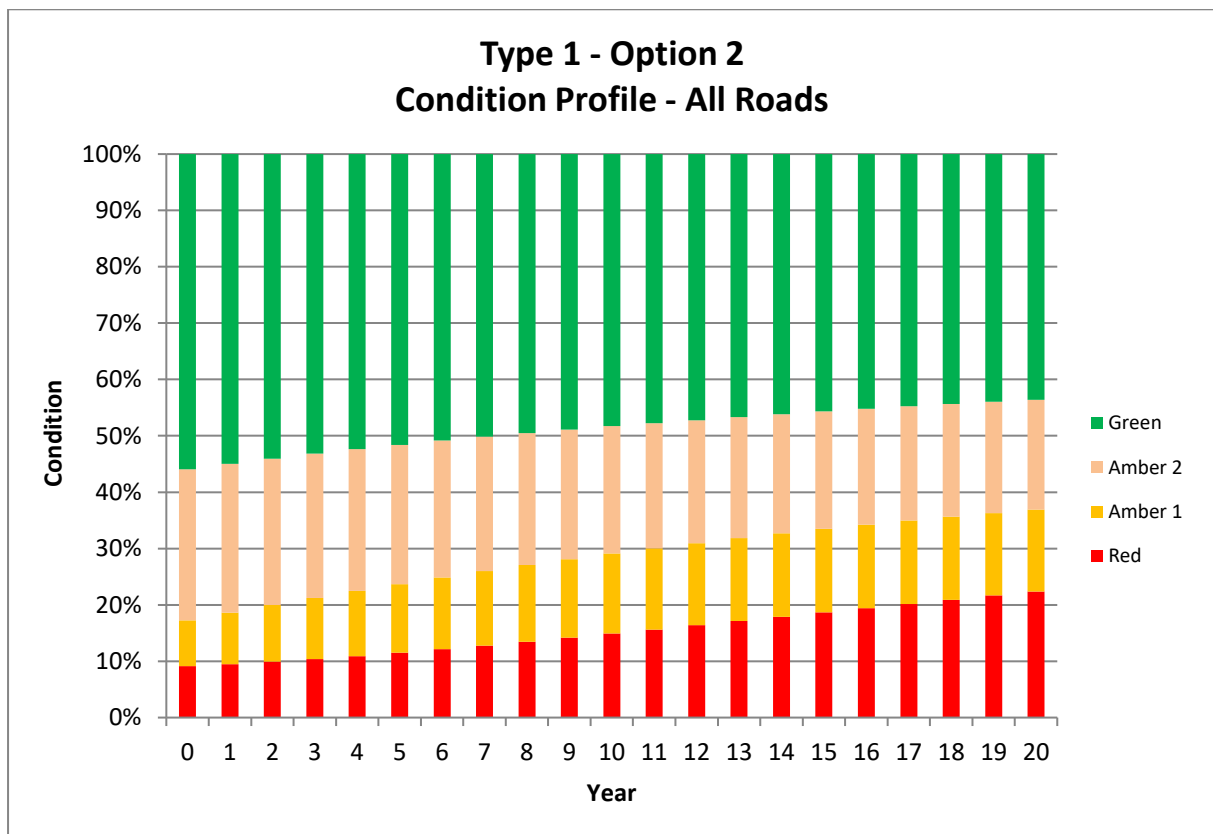
The percentage of road in poor condition (Red) increases from 9% (313km) to 18% (626km) at 10 years and 30% (1043km) at 20 yrs.

The percentage of road in good condition (Green) falls from 56% to 43% at 10 years and to 35% at 20 years.

Option 2 – Modest option - Modelled investment of £3.05M/annum

This maintains funding at current levels including the additional £1.5M grant, £500k County Capital & Revenue £1050k (assumes WG grant continuing).

Funding/Year	21/22	22/23	23/24 onwards
Welsh Government	1.5	1.5	1.5
CCC	1.55	1.55	1.55
Total invested	3.05	3.05	3.05



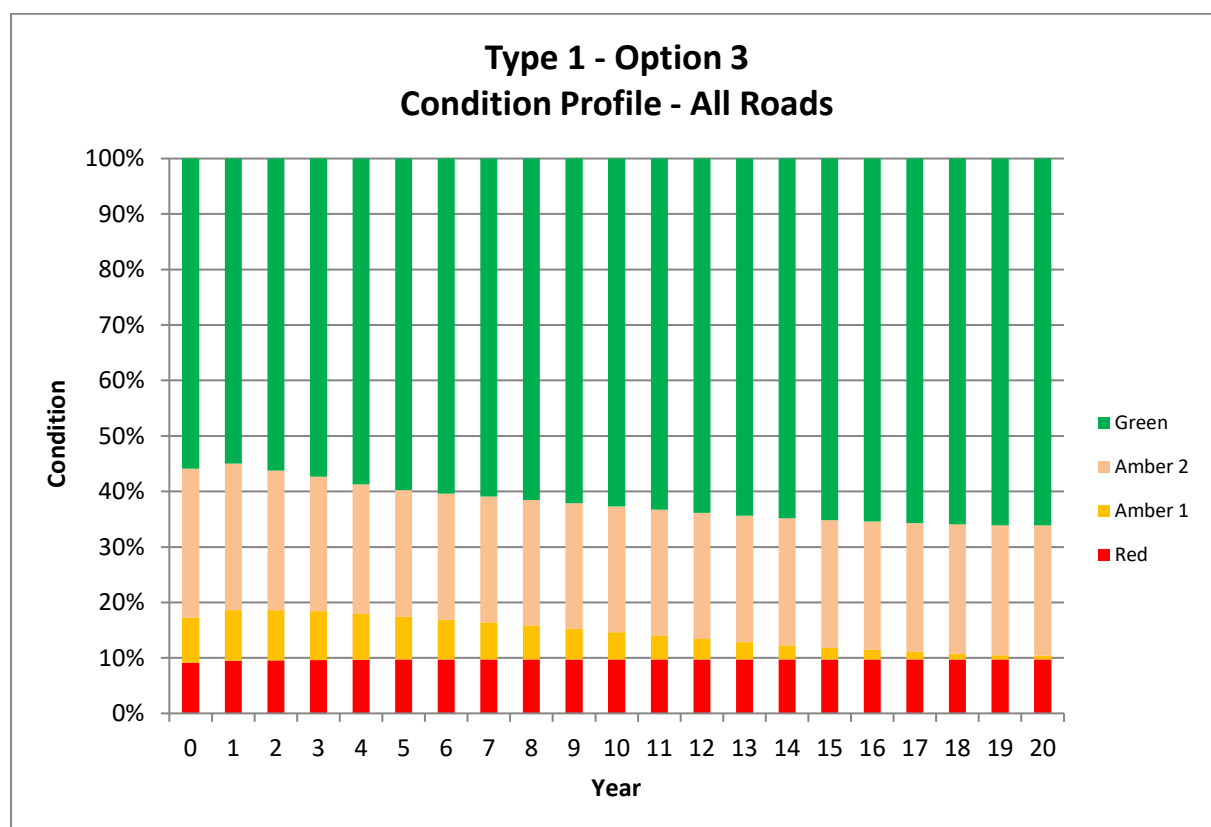
The percentage of Red increases from 9% (313km) to 15% (522km) at 10 years and to 22% (765km) at 20 yrs.

The percentage of Green falls from 56% to 48% at 10 years and to 44% at 20 years.

Option 3 – Steady-state Option -. Modelled investment of £6M/annum.

This option maintains the asset in a steady state condition with a gradual improvement. This requires an increase to the existing budgets in year 2 to **£6M**. This is most likely to be funded by Capital £5m and Revenue £1m.

Funding/Year	21/22	22/23	23/24 onwards
Welsh Government	1.5	0	0
CCC	1.55	6.0	6.0
Total invested (£m)	3.05	6.0	6.0



The percentage of Red remains at 9.1% at this level of investment increases marginally from 9% to 10% at 10 years and in 20 yrs.

The percentage of Green increases from 56% to 63% at 10 years and to 66% at 20 years, with a reduction of roads in the amber category.

This provides for an almost steady state and a modest improvement is predicted in the percentage of highway in good condition with the length of roads in poor condition remaining stable.

2.7 Highways Summary

A key principle of Carmarthenshire's 5 ways of working is :

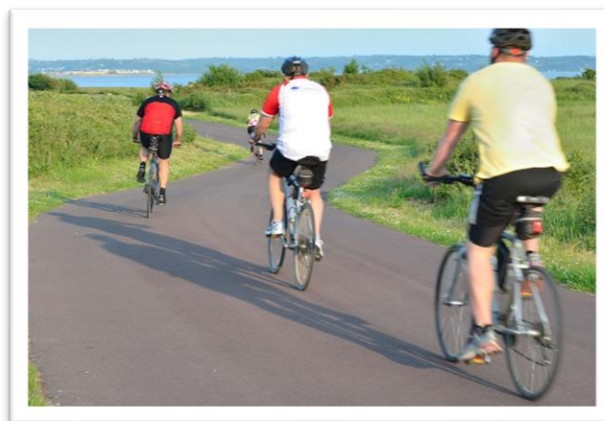
' The importance of balancing short-term needs with the need to safeguard the ability to also meet long-term needs.'

For our highways, this means investing in lower cost preventative treatments which provide a cost-effective way of prolonging the life of the carriageway and reducing the need for more expensive resurfacing treatments at a later stage. However, such an approach requires up-front funding which currently is not in place. Without sufficient funding we will continue to utilise funds on a reactive basis as road surfaces fail. Reactive carriageway repairs such as potholes increase the pressure on revenue budgets and resources. Highway surfaces naturally deteriorate over time and increasing our investment in preventative surface treatments is recommended if we are going to maintain our significant highway assets for future generations.

The County Council currently invests £1.55M in surfacing and surface dressing work and this has been bolstered by Welsh Government Grants of typically £1.5m each year. The carriageway condition data set out in this report highlights a long-standing backlog of highway maintenance and demonstrates the necessity to invest in our highway network to prevent future deterioration. It is expected that the division will need to identify further PBB savings from our revenue budgets. This will have a further impact on road conditions unless additional Capital or grant funding is available to offset reductions in revenue funding. Carmarthenshire is currently in the lower quartile for investment in its highways assets and a more sustainable approach needs to be developed if we are to meet our corporate objectives.

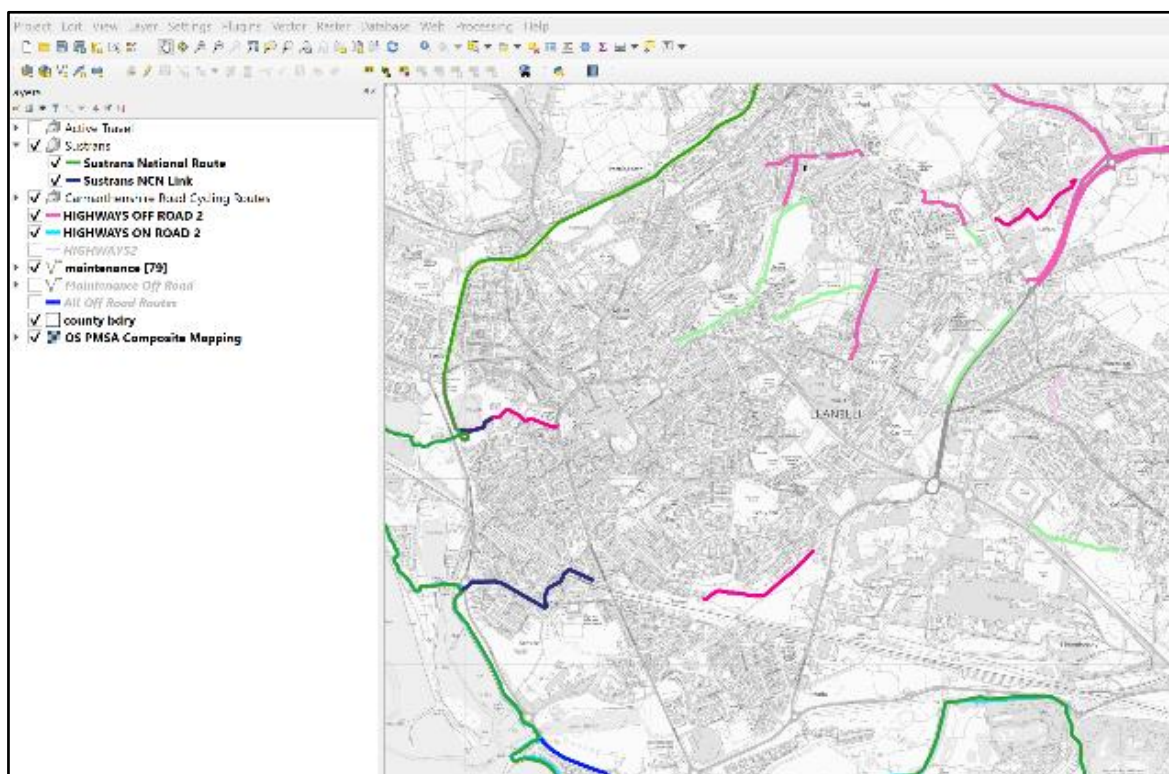
2.8 Footways and Cycleways Introduction

Our footway and cycleway networks play an important role in facilitating sustainable modes of travel and directly support the Active Travel agenda. The County Council has set out its ambition of being the cycling hub of Wales and the HAMP has an important role in supporting our adopted cycling strategy.



Footways are currently inspected on a regular basis alongside carriageway inspections and a methodology is being developed for cycleway inspections. A wide review of known cycle routes is underway, and proposals are being developed to develop a hierarchy led management plan and to improve consistency in the

inspection and maintenance across the cycle network. A footway and cycleways hierarchy and maintenance regime will be developed as part of our maintenance manual in 2022-23.



Cycle route network example

In 2020/21 we invested £85k Capital into footway maintenance and refurbished footways at:

- Garregllwyd Pembrey
- Brynlluam, Gorslas
- Millfield Estate, Whitland

It is important that we to continue and increase our investment in footways and cycleways if we wish to realise our corporate objectives. Current Capital budget allocations do not support this. A pro-active capital investment in preventative treatments can reduce the demand for less economical reactive maintenance which pressurises our revenue budgets.

In 2021/22 we have allocated a budget of £100k to footways and cycleways refurbishment. This funding will typically address 2km of our 1,000km footway network. The division has submitted a Capital bid of £500k pa to develop a modest footway and cycleway refurbishment programme.

Asset Group: Footways and Cycleways

		Statistics					Commentary
Footways	Footway Length by Material (km)						<ul style="list-style-type: none"> • Carmarthenshire's footway/cycleway network is extensive at over 1000km. • CSS Wales is developing a National Code of Practice for a footway hierarchy. • We will develop a programme of headline condition data in line with the CSS Wales HAMP procedure. • Footway inspections are currently carried out at regular frequencies alongside road inspections.
		Bituminous	PCC Slabs	Precast blocks	Concrete	Total	
	Total	869	48	6.5	12.8	936	
	<p>The predominant material for our footways is bituminous macadam.</p> <p>Our footway resurfacing programmes are based on local priorities with budgets allocated in line with the extent of footway.</p> <p>Reactive repairs to footways in 2020-21 cost £89,180 and were funded through revenue budgets.</p> <p>In addition to reactive repairs, we invested £85,000 of Capital funding into a programme of footway refurbishment works. Active Travel funding and Safer Routes in Communities projects are also being utilised to improve routes for pedestrians and cyclists.</p>						
Cycleways	<ul style="list-style-type: none"> • On road cycle-lanes – 2.6km • Dedicated cycle-tracks/shared use paths – 23.3km • On road cycle routes (e.g. National Cycle Network) – 126km 						<ul style="list-style-type: none"> • The cycleway network is currently being formulated and formal inspection regimes on off-road routes will be introduced in April 2022. This will further support the County Council's cycling ambitions • Repair and service level targets will be established in line with National recommendations in conjunction with our revised highway standards.
	<p>These lengths are estimated based on current confirmed responsibilities for the highways service. Increasing cycling numbers and networks will require continued investment.</p>						

Asset Group: Footways and Cycleways		
	Statistics	Commentary
Key Issues	Corporate funding has been provided to support off-road cycleways which will help to maintain these routes. Funding for on-road cycle routes remains a challenge.	
Current Strategies	<p>The council's current strategy is to keep the footway asset in a condition which is safe and does not hinder the customer's journey. We do this by means of regular safety inspections and a prioritised reactive repair system.</p> <p>A more pro-active programme of preventative maintenance and refurbishment will be developed in 2022, subject to approval, as part of our Maintenance Manual (Part 4 of the HAMP).</p>	

2.9 Footways and Cycleways Summary

On-going deterioration of our extensive footway and cycleway network (over 1000km) is increasing our risk of claims from pedestrians and cyclists. A planned programme of refurbishment would ideally prevent an increase in reactive maintenance for surface failures. The lack of programmed maintenance places increased pressure on diminishing revenue budgets and will increase eventual replacement costs for future generations. Some provision has been made in previous years by investing £100k of the £600k allocation for Highway infrastructure Capital on footway surfacing.

The division has submitted a Capital bid of £500k pa to develop a modest footway and cycleway refurbishment programme to prevent deterioration and to support the authorities' commitments to active travel and its promotion of cycling.

Section 3 – Bridges and Structures

3.1 Bridges and Structures Introduction

Carmarthenshire has an extensive highway network, the second largest in Wales, and providing vital support to that network there are some 1872 structures. Whilst our 799 highway bridges and 49 footbridges may be easily appreciated there are also 560 retaining walls with a cumulative length of around 19Km, 459 culverts and 5 subways which all provide a largely unseen but nevertheless key role in supporting the highway network. These structures have been built over a wide timespan and vary considerably in the materials and construction methods. 55 of the structures are listed.

These structures are relied upon to remain in service year after year and accommodate changes in traffic and vehicle loadings and weather impacts. All structures are inspected and assessed on a scheduled basis in accordance with national standards to ensure that the inspection regime provides timely, accurate and appropriately detailed information on asset condition and performance. Safety defects are identified and addressed in a prioritised manner, and the data informs effective maintenance management and planning of our highway structures.

There are currently 50 bridges which have been assessed as sub-standard (reduced from 54 in 2021 following further assessment and strengthening of 4 structures) in terms of carrying capacity, of which 8 are weight restricted for some classes of heavy vehicles. Where required, regular monitoring inspections are being carried out and all bridges are managed in accordance with strict technical standards to keep these structures in service and maintain their safe operation. It is estimated that the cost of strengthening these sub-standard structures is of the order of £6.02 million. It is also estimated that the maintenance backlog on highway structures is circa £5.5 million.

In accordance with Technical Standards, monitoring of sub-standard structures should be for a defined period of time. Should sufficient funding not be forthcoming, then the number of structural weight restrictions on the highway network will increase as the condition of structures deteriorate.

In addition to on-going maintenance of existing structures stock, the number of failed edge of highway supports is on the increase due to severe weather events, reduced highway drainage maintenance and the additional impact from increased traffic volumes and larger agricultural vehicles on the highway network.

Scour Assessments

A large proportion of the bridge stock, especially those located on fast flowing rivers, are susceptible to scour. The risk of scour is significant with an increasing number of flood incidents and the impacts of climate change. Covid-19 restrictions halted the scour assessment programme for 2020/21 however we are now developing a programme of assessment with our framework consultants. It is envisaged Level 1 Scour Assessments for all 799 bridges and 49 footbridges will be completed within financial year 2021/22. A programme of structures identified as requiring Level 2 Scour Assessments will be developed and progressed in 2022/23, subject to available funding.

Inspection Training

As part of our review of practices to comply with recommendations of the 2018 Code of Practice, CSS Wales are developing accreditation for Structures inspections. Our inspection team are in the process of under-going a competency assessment to ensure our inspections are carried out to the required standards. Final accreditation was delayed in 2020 due to COVID restrictions however this is expected to conclude in 2021.

Bridge Improvement Works

Revenue funding in 2020 has remained steady and allows reactive and routine maintenance works to be undertaken. There is however a significant backlog of repair and preventative works which should be considered for funding. Planned PBB reductions of £24k in 2021 will not support improvements to maintenance regimes, which are largely reactive. The structures unit is prioritising funding planned maintenance to improve access to structures and ensure basic maintenance visits to structures on a 2 yearly cycle. This may reduce contingency funds available for unplanned failures.

Capital funding of £741k in 2020 enabled the following structures to be upgraded:

- Doethie Bridge Replacement Scheme, Rhandirmwyn
- Ffaldre Bridge, Rhandirmwyn, Deck Replacement – Strengthening Scheme
- Clynmelyn Culvert replacement
- Loughor bridge rehabilitation (part funded with Swansea City Council)
- Upper Lliedi Bridge, Felinfoel, bridge strengthening



Doethie bridge replacement 2021

We will be carrying out the following Capital structural schemes in 2021-22.

- Berem Bridge Replacement Scheme, Pontyberem
- Nantylfin Bridge, Rhandirmwyn, Deck replacement – Strengthening Scheme
- Pont y Pentre, bridge replacement

A programme of design and construction is underway aiming to reduce the number of sub-standard structures. Notable schemes commencing in 2022 include:

- Railway Inn Llanpumsaint - Bridge strengthening
- Mynyddygarreg Bridge – Bridge replacement
- Sawdde Culvert, Llangadog – Upgrade works

Prioritisation of Overall Funding Needs

Using the structures priority matrix which considers the following:

- Road Hierarchy
- Structural condition
- Access/community impact
- Network issues
- Traffic management impact

The following section provides detail on the status of our structure's assets, their condition and investment options for their continued maintenance.

3.2 Bridges and Structures Status

Asset Group: Highway Structures																																						
	Statistics	Commentary																																				
The Asset	<p style="text-align: center;">CCC Highway Structures Inventory by Road Type</p> <table border="1"> <caption>CCC Highway Structures Inventory by Road Type</caption> <thead> <tr> <th>Road Type</th> <th>Subways</th> <th>Culvert 0.9m < Span < 1.5m</th> <th>Retaining Walls > 1.5m height</th> <th>Foot bridges</th> <th>Highway Bridges: Span > 1.5m</th> </tr> </thead> <tbody> <tr> <td>Listed structures</td> <td>54</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>Road Type unclassified</td> <td>231</td> <td>160</td> <td>169</td> <td>41</td> <td>0</td> </tr> <tr> <td>Road type B & C</td> <td>445</td> <td>254</td> <td>245</td> <td>7</td> <td>0</td> </tr> <tr> <td>Road type A</td> <td>123</td> <td>45</td> <td>146</td> <td>1</td> <td>0</td> </tr> <tr> <td>total number</td> <td>799</td> <td>459</td> <td>560</td> <td>49</td> <td>0</td> </tr> </tbody> </table>	Road Type	Subways	Culvert 0.9m < Span < 1.5m	Retaining Walls > 1.5m height	Foot bridges	Highway Bridges: Span > 1.5m	Listed structures	54	0	1	0	0	Road Type unclassified	231	160	169	41	0	Road type B & C	445	254	245	7	0	Road type A	123	45	146	1	0	total number	799	459	560	49	0	<ul style="list-style-type: none"> Bridge inventory is stored in the WDM Asset Management System (WDM) Data is updated as part of the routine General Inspection regime of structures. Growth in the structures' asset has been minimal in the last five years. The increase in numbers is related to new highway retaining structures to address highway support issues coupled with the construction of new structures
	Road Type	Subways	Culvert 0.9m < Span < 1.5m	Retaining Walls > 1.5m height	Foot bridges	Highway Bridges: Span > 1.5m																																
Listed structures	54	0	1	0	0																																	
Road Type unclassified	231	160	169	41	0																																	
Road type B & C	445	254	245	7	0																																	
Road type A	123	45	146	1	0																																	
total number	799	459	560	49	0																																	
Inspections	<table border="1"> <thead> <tr> <th>Inspection Statistics</th> <th>No.</th> </tr> </thead> <tbody> <tr> <td>Number of bridges requiring principal inspections – 6 years</td> <td>42</td> </tr> <tr> <td>Number of principal inspections scheduled to be undertaken in 20/21</td> <td>7</td> </tr> <tr> <td>Number of principal inspections on time</td> <td>0</td> </tr> <tr> <td>Number of structures requiring general inspections – 2 years</td> <td>1872</td> </tr> <tr> <td>Number of planned general inspections</td> <td>936</td> </tr> <tr> <td>Number of general inspections on time</td> <td>675</td> </tr> </tbody> </table>	Inspection Statistics	No.	Number of bridges requiring principal inspections – 6 years	42	Number of principal inspections scheduled to be undertaken in 20/21	7	Number of principal inspections on time	0	Number of structures requiring general inspections – 2 years	1872	Number of planned general inspections	936	Number of general inspections on time	675	<ul style="list-style-type: none"> 42 structures are subject to Principal Inspection (PI). The remainder are subject to General Inspections (GI). PI's suspended in 2020/21 due to COVID restrictions 																						
	Inspection Statistics	No.																																				
	Number of bridges requiring principal inspections – 6 years	42																																				
	Number of principal inspections scheduled to be undertaken in 20/21	7																																				
	Number of principal inspections on time	0																																				
	Number of structures requiring general inspections – 2 years	1872																																				
	Number of planned general inspections	936																																				
Number of general inspections on time	675																																					

Asset Group: Highway Structures																							
	Statistics	Commentary																					
Structural Condition	Assessment Statistics	No.																					
	Number of council owned / maintained bridges that failed assessment	126																					
	Number of privately owned bridges within council's road network that failed assessment	5																					
	Number of council owned / maintained bridges subject to monitoring / special inspection regimes	50																					
Weight Restrictions	Weight Restrictions	No																					
	Number of council owned / maintained weight restricted bridges (excluding acceptance weight restriction)	8																					
	Number of council owned / maintained height / width restricted bridges	1																					
Bridge Condition Indicators	<h3 style="text-align: center;">BRIDGE STOCK INDICATOR 2015-16 - 2020/21</h3> <p style="text-align: center;">■ BSCIav ■ BSCIcrit</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>15/16</th> <th>16/17</th> <th>17/18</th> <th>18/19</th> <th>19/20</th> <th>20/21</th> </tr> </thead> <tbody> <tr> <td>■ BSCIav</td> <td>90.32</td> <td>90.96</td> <td>90.35</td> <td>90.01</td> <td>91.19</td> <td>90.71</td> </tr> <tr> <td>■ BSCIcrit</td> <td>86.25</td> <td>87.54</td> <td>85.76</td> <td>85.62</td> <td>86.76</td> <td>86.44</td> </tr> </tbody> </table>			15/16	16/17	17/18	18/19	19/20	20/21	■ BSCIav	90.32	90.96	90.35	90.01	91.19	90.71	■ BSCIcrit	86.25	87.54	85.76	85.62	86.76	86.44
		15/16	16/17	17/18	18/19	19/20	20/21																
	■ BSCIav	90.32	90.96	90.35	90.01	91.19	90.71																
	■ BSCIcrit	86.25	87.54	85.76	85.62	86.76	86.44																
	Definition:																						
	BCIAv is the average BCI for a bridge evaluated considering the condition of all structural elements in a bridge.																						
	BCIcrit is the critical BCI for a bridge evaluated considering the condition of those elements deemed to be of very high importance to the bridge.																						

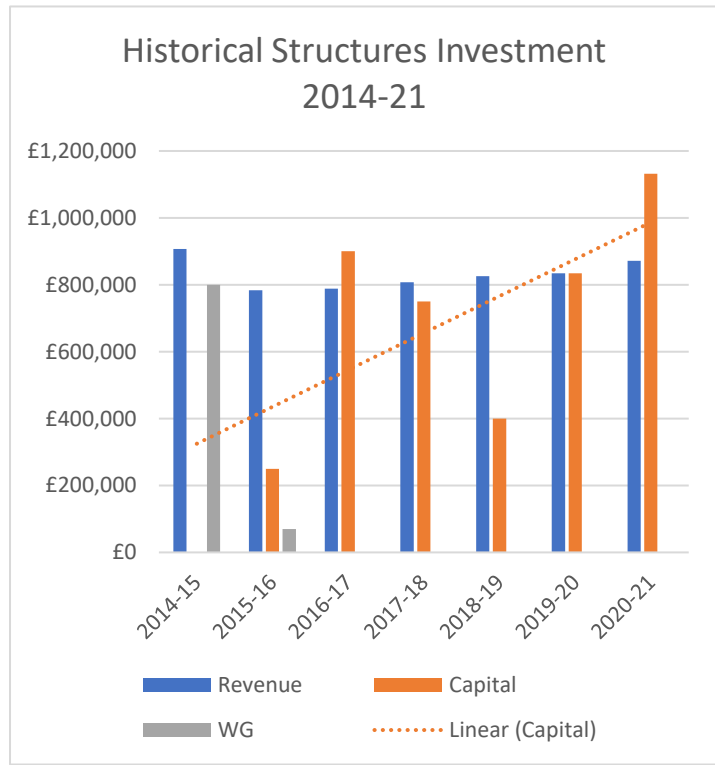
Asset Group: Highway Structures

	Statistics	Commentary
--	------------	------------

BSCIAv and BSCCrit are the average and critical condition index for a bridge stock evaluated using the BCIAv and BCICrit values for all bridges in the stock.

- The 2020-21 BSClave of 90.71 and BSClcrit of 86.44 indicate that the highway structures are in a good to very good condition (score of 80-100 in accordance with CSS Wales performance indicators).
- As a consequence of sustaining the current level of revenue funding, the overall condition performance indicator values have remained fairly constant.

Historical Investment



- Planned works comprise of maintenance programmes which target renewing the asset.
- Reactive works are smaller scale defects which require repair to reduce safety issues. Budgets are based on historical costs. Such works are funded from the revenue budget.

Strengthening / Replacement

There are currently 50 structures located on the highway network that whilst in safe operation, are considered sub-standard in terms of their load carrying capacity. There are also a number of structures, due to their overall poor condition, which have been included for replacement. Detailed design is currently being carried out on 15 structures, with a high priority being assigned to structures with a high scoring derived from the priority matrix.

Carmarthenshire has the second highest number of sub-standard structures across all 22 Welsh authorities.

Local Authority	Number of Bridges	Number of substandard bridges	Proportion of substandard bridges
Conwy	293	58	20%
Carmarthenshire	799	54	7%
Powys	1399	47	3%
Denbighshire	282	23	8%
Monmouthshire	400	22	6%
Gwynedd	631	18	3%
Swansea	157	12	8%
Cardiff	113	11	10%
Rhondda	307	10	3%
Bridgend	175	9	5%
Torfaen	189	9	5%
Caerphilly	117	8	7%
Ceredigion	825	7	1%
Merthyr Tydfil	37	5	14%
Wrexham	214	4	2%
Newport	65	3	5%
The Vale of Glamorgan	81	3	4%
Flintshire	148	3	2%
Neath Port Talbot	398	3	1%
Blaenau Gwent	170	1	1%
Isle of Anglesey	150	0	0%
Pembrokeshire	650	0	0%

Note: Figures based on 2020 data. Carmarthenshire now has 50 sub-standard structures.

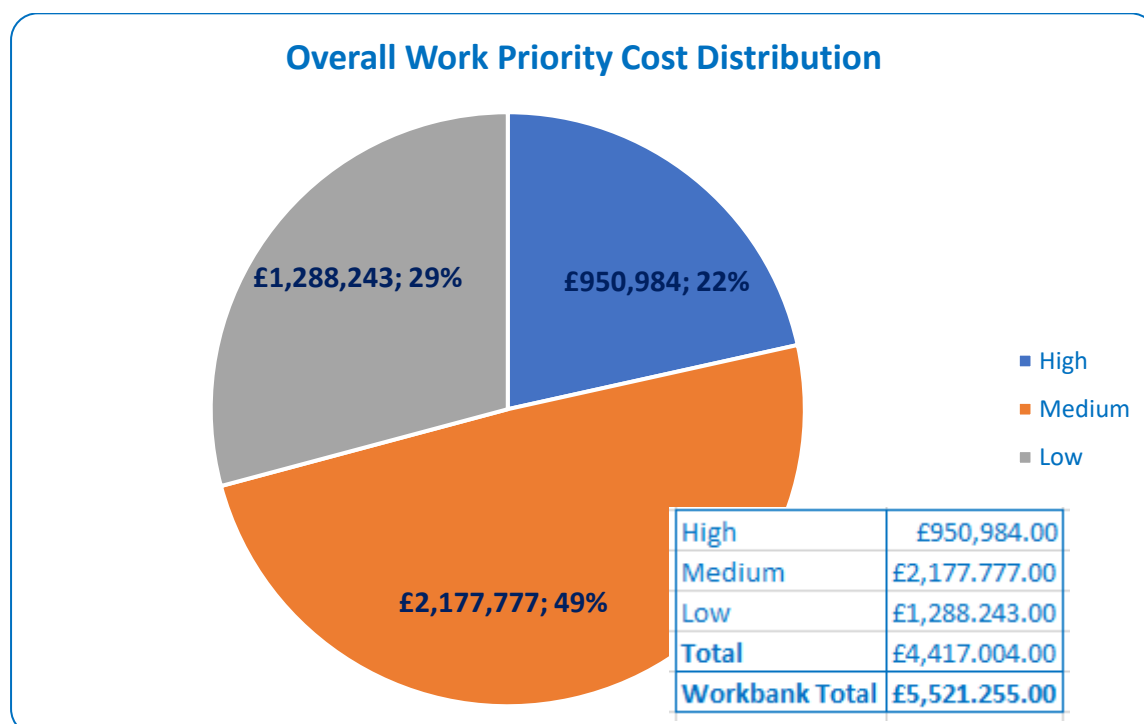
The repair or replacement of sub-standard structures is funded through council capital investment of £400k per year. The overall estimated cost of addressing the 50 sub-standard structures is £6.02 million. With current levels of funding this will take approximately 15 years to complete the programme as a minimum, and assuming no other major structural work is funded by this budget during this period.

Monitoring sub-standard structures for a further 15 years places the authority at risk, as the condition of structures may deteriorate. Addressing the backlog over a shorter period is recommended. An increase of Capital budget to £850k per annum for bridge

strengthening would accelerate the programme for substantial completion over 7 years. Higher risk structures would be addressed in the early part of the programme.

Maintenance Needs

The following figures are derived from the Department's Bridge Management System and relates to the estimated cost of addressing defects identified by the Bridge Inspectors as part of biennial General Inspections. The work is categorised as high, medium, and low priority in a scoring matrix which uses factors including extent, severity, and defect type. The overall cost is termed the work bank total.



3.3 Bridges and Structures Summary

The bridge stock has remained fairly stable in terms of the Condition Performance Indicators since 2015/16. It is considered that the overall condition performance indicators will not improve in the short term however by sustaining the current level of revenue funding, overall condition performance indicators should remain between 80 and 90, which represents 'Good' to 'Very Good' condition in accordance with the County Surveyors Society (Wales) classification of structures condition Performance Indicators (see table below).

Bridge Stock Indicator	15/16	16/17	17/18	18/19	19/20	20/21

BSClav	90.32	90.96	90.35	90.01	91.19	90.71
BSClcrit	86.25	87.54	85.76	85.62	86.76	86.44

Continued investment in our bridges and structures is essential to maintain continuity of our highway network. Current funding levels are maintaining our asset stock in a steady state condition, although if in-roads are to be made into the current maintenance backlog and to upgrade our sub-standard structures, then further investment will be required.

Historically, revenue funding has been focussed on reactive repairs which often require urgent repair. There is a large backlog of repair work identified during inspections that we plan to develop into planned programmes of work and additionally increase the level of scheduled maintenance visits to structures to address basic maintenance and improve access for inspection. A more pro-active approach to carrying out repairs at an early stage of identification is anticipated to reduce more costly repairs in the future. This planned approach may place pressure on revenue budgets for larger repairs or structural failures in the shorter term and additional Capital funding will be required going forward.

Section 4 – Lighting

4.1 Public Lighting Introduction

Our street lighting system includes over 20,000 lighting units. We also manage 5000 units for our Town and Community Councils. The Public Lighting Team have worked in partnership with Town and Community Councils to introduce LED lighting units in Community Lights. This project was developed on an invest to save basis to reduce carbon emissions, lower energy costs and improve light quality. The project was completed in March 2020 and is estimated to have saved 1,200 tonnes of CO₂ emissions.

The Public Lighting Team have also introduced new technology to enable mobile working so that lighting surveys, checks and works can be recorded electronically in place of the previous paper-based system.



There are two significant challenges for the Public Lighting Team:

- Ageing lighting columns need to be replaced to avoid the risk of collapse. Regular inspections help to reduce the risk of failure and where structural issues are identified columns are removed immediately. A column replacement programme is underway focused on replacing the older life-expired steel columns as a priority.
- There are around 304Km of underground electric cables supplying lighting units which are deteriorating, and this is leading to an increasing number of cable faults and power outages. A funding application is in place for this.

In addition, the Public Lighting Team also manage our stock of illuminated traffic signs and our permanent traffic signals.

4.2 Street Lighting Asset.

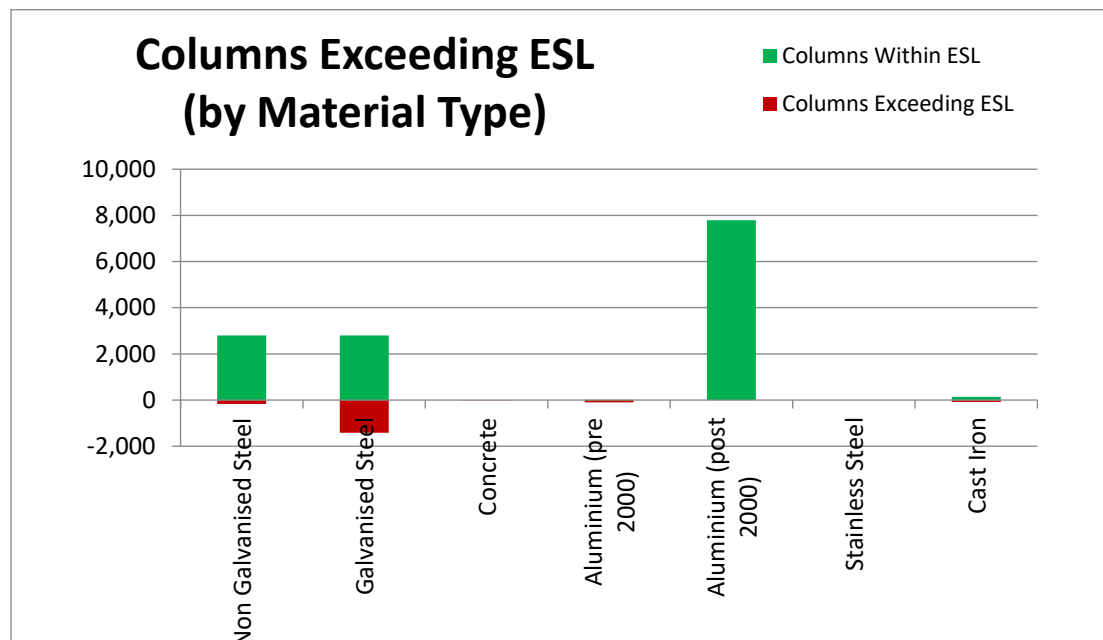
The street lighting asset can be considered in three main areas:

- Lighting columns
- Lighting Lanterns
- Electric supply cabling

Lighting Columns

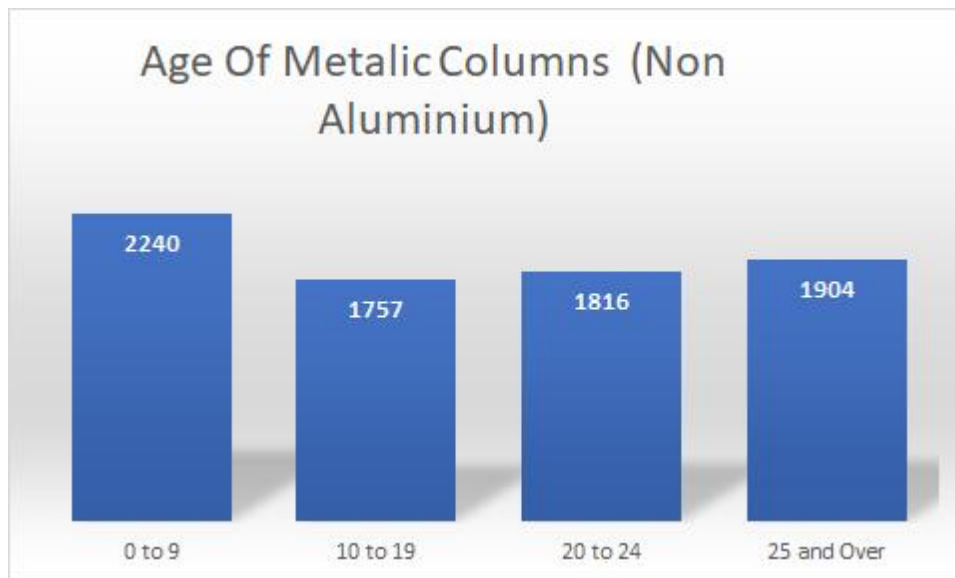
There are currently 20,229 street lighting units which includes bracketed units on third party wooden poles. This figure generally grows by around 150 units every year as new lighting either through highway improvements or new development is adopted.

The age of a street lighting column and its construction material can be used to provide a broad assessment of structural condition and Expected Service Life (ESL). This is represented for the range of lighting columns in use throughout the County in the graph below.



A key concern are the existing steel columns which are considered to have an ESL of up to 25 years before replacement. Based on current data 24.6% (1904 out of 7717) of our metallic lighting columns/brackets exceed their expected service life. Whilst these are subject to a management regime with regular inspections and the removal of columns deemed to be unsafe, a programmed for replacement is required.

The graph below shows the age profile of these metal columns and identifies the number currently beyond their Expected Service Life.



Underground Electrical Supply Cable

The majority of our existing 304km electrical supply network is of a significant age and in many cases accurate records are not available with regards to the exact age and cable type. Often the cable is not ducted and is more prone to perishing in the ground.



A prioritised survey and testing programme are required to establish the future life expectancy of the cable network and develop a programme of renewal.

4.3 Illuminated Signs and Traffic Signals Asset

Carmarthenshire has over 3,400 illuminated signs and bollards on the highway network. All new installations are specified to be LED sign lights and solar bollards.

There are 74 Traffic signal installations on the Highway network. These are made up of 54 pedestrian crossings and 20 Traffic Signal junctions. These assets are regularly inspected and are maintained by externally procured contractors who also provide an Out of Hours service to deal with emergencies.

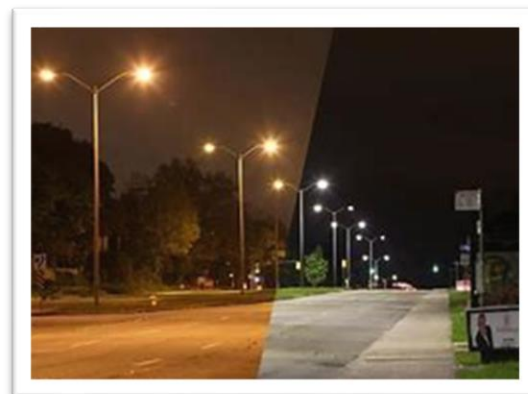


4.4 Lighting Summary

The introduction of funding for the replacement of lighting columns will significantly reduce the risk of column collapse. There are a significant number of columns which require replacement and the programme to address this will take a number of years before a reduced baseline replacement programme can be adopted.

A similar approach is required with respect to the 304km of underground electrical cabling which present operational and safety concerns.

A bid for funding has been submitted.



This page is intentionally left blank

ENVIRONMENTAL AND PUBLIC PROTECTION SCRUTINY COMMITTEE

25TH NOVEMBER 2021

FORTHCOMING ITEMS for next meeting to be held on 22nd December 2021

In order to ensure effective Scrutiny, Members need to be clear as to the purpose of requesting specific information and the outcome they are hoping to achieve as a consequence of examining a report.

Proposed Agenda Item	Background	Reason for report	Cabinet Member
Quarterly Performance Monitoring Report- Quarter 2	This Performance Monitoring Report for Quarter 2 will provide progress updates and information in respect of set targets.	This report enables the Committee to undertake its role in scrutinising performance.	<ul style="list-style-type: none"> • Cllr. Hazel Evans (Environment) • Cllr. Philip Hughes (Public Protection) • Cllr. Ann Davies (Communities and Rural Affairs) • Cllr. Jane Tremlett (Social Care & Health)
Local Toilets Strategy Interim Progress Report	In accordance with the Public Health (Wales) Act 2017: Provision of Toilets, which requires each local authority to publish an interim progress report within six months of the 2-year publication anniversary of the original Local Toilet Strategy. In Carmarthenshire's case this will be in February 2022, as the original strategy was adopted in August 2019.	To afford the Committee with an opportunity to comment on the information contained within the report prior to Cabinet decision to endorse.	Cllr. Hazel Evans (Environment)

Proposed Agenda Item	Background	Reason for report	Cabinet Member
Planning Enforcement Statement	<p>In response to the WAO review of Planning Services and the findings of the report, the Council is reviewing how it carries out its enforcement responsibilities.</p> <p>The current Enforcement Policy was developed in 2015. Subsequently, an overarching Corporate Enforcement Policy was adopted in April 2018, therefore there is a need to review the original Planning Enforcement Policy to take account of changes within both the internal and external environment and to re-establish as the Planning Enforcement Statement and ensure that this is appropriately consulted on and approved.</p>	To afford the Committee with an opportunity to consider and comment on the revision of the Council's Planning Enforcement Policy and the formal consultation exercise on the draft Planning Enforcement Statement prior to Cabinet/Council approval.	<ul style="list-style-type: none"> • Cllr. Philip Hughes (Public Protection)
Environment Act Forward Plan Update This report has been deferred to April 2022	<p>The Environment (Wales) Act 2016 requires that all public bodies in Wales, such as local authorities, publish and deliver an Environment Act Forward Plan. These plans usually run for 3 years. The Council's first plan ran until December 2019, and the second 3year plan runs from Jan 2020.The Council's delivery of this plan will be reported on to Welsh Government in December 2022.</p>	This report will inform the Committee on the progress being made to deliver the actions set out in the Council's second Environment Act Forward Plan.	<ul style="list-style-type: none"> • Cllr. Philip Hughes (Public Protection)

Items to be circulated under a separate cover to Scrutiny Committee members

(as agreed at the Committee's Forward Work Programme development session on 9th April 2021.)

Equestrian Strategy	<p>Deferred to March 2022. <i>The Committee's Forward Work Programme has been updated to reflect this change.</i></p>	Cllr. Hazel Evans
---------------------	--	-------------------

Items circulated to the Committee under separate cover since the last meeting held on 4th October 2021
(in accordance with the Committee's Forward Work Programme)

In line with the Environmental and Public Protection Committee's decision to receive and scrutinise reports outside of the formal committee process, the following reports were forwarded to all members of the Scrutiny Committee by e-mail on 8th October 2021 and 26th October 2021:

- Budget Monitoring Report (1st April 2021 – 30th June 2021)
- Public Rights of Way Network Hierarchy

No comments/queries were received in relation to the abovementioned reports.

An updated Environmental and Public Protection Scrutiny Committee Forward Work Programme for 2021/22 is attached together with the Cabinet Forward Work Programme (September 2021).

This page is intentionally left blank

Environmental & Public Protection Scrutiny Committee – Forward Work Plan 2021/22

18 th May 2021 CANCELLED	2 nd July 2021	4 th October 2021	25 th November 2021	22 nd December 2021	1 st February 2022	7 th March 2022	8 th April 2022
E&PP Forward Work Programme 2021/22 <i>Forwarded to 2nd July</i>	E&PP Scrutiny Annual Report 2020/21	Quarterly Performance Monitoring Report Q1	Electrical Vehicle Strategy	Quarterly Performance Monitoring Report Q2	3-year Revenue Budget Consultation	Report on the provision of Pavements in Rural Areas <i>[Referral from Community & Regeneration Scrutiny Committee]</i>	Quarterly Performance Monitoring Report Q3
Departmental Business Plans x 3 <i>- Forwarded to 2nd July</i>	Carmarthenshire Council Annual Report 2020/21	Flood Response	Update report from the Task and Finish Group	Public Conveniences Report	Revenue and Capital Budget Strategy	Public Space Protection Order (PSPO)	Net Zero Carbon Action Plan
	Task and Finish Planning and Scoping Document on Fly-Tipping	E&PP Scrutiny Committee Actions Update report.	Highways Maintenance Manual	Planning Enforcement Statement			Environment Act Forward Plan Update <i>[Deferred from December 2021]</i>
	Air Quality Management Area (AQMA) - Future Delivery Plan	Future Waste Strategy	Highways Asset Management Plan Annual Statement update				

Items to be circulated under a separate cover to Scrutiny Committee members
(as agreed at the Committee's Forward Work Programme development session on 9th April 2021.)

Budget Monitoring [April 2020 to February 2021]		Graffiti Policy <i>(delayed to 2022/23)</i>	Budget Monitoring [April to August 2021]		Budget Monitoring [April to October 2021]	Budget Monitoring	Budget Monitoring
Page 175		Budget Monitoring April to June 2021			Local Environment Quality	Equestrian Strategy	
		Public Rights of Way Network Hierarchy					

OTHER REPORTS TO BE INCLUDED:

The following reports will be included to the FWP at a later date:-

- Dog Breeders Licence Update (Change of Policy / Legislation – awaiting WG confirmation)
- Update on WG Speed Limit Review (20mph) – *dependant on WG publishing their review report*
- Carmarthenshire Pollinator Strategy and Action Plan – date to be confirmed
- Referral from P&R Scrutiny Committee (27/1/2020), Joint Transport Plan for South West Wales –
Delayed until 2022/23 [Update at the E&PP Scrutiny meeting on 14/12/2020, minute 5 refers].

SCRUTINY FOCUS SESSION (Informal) - ITEMS FOR SC&H and E&PP SCRUTINY COMMITTEE'S – Date to be confirmed

Informal Scrutiny Committee meeting with Social Care and Health– (to be confirmed):

- Area Planning Board's Drug & Alcohol Misuse Strategy Report
- Substance Misuse Service Report

TASK & FINISH REVIEW:

The Committee at its FWP Development Session held on 9th April 2021, considered a topic suggestion received from Llandyfaelog Community Council suggesting that the Committee consider the issues in relation to fly-tipping in Carmarthenshire. Committee Members recognised that fly tipping was an increasing problem in Carmarthenshire and that the consequence of fly-tipping had a detrimental effect on the environment and communities.

The Committee at its meeting on 2nd July 2021 unanimously resolved that its Task and Finish arrangements for 2021-22-23 would be as follows:

- 1) *Review on the Fly tipping within Carmarthenshire
- 2) Review on Dog Breeding in Carmarthenshire.

The Task and Finish Group at its first meeting on 8th September, 2021 received an update from the Director of Environment on internal matters that had arisen since the Scrutiny Committee agreement on its Task and Finish arrangements and the endorsement of the review planning and scoping document in July. Considering the information received, the Group unanimously agreed to defer the review on Flytipping to 2022 following the Election process. A report outlining the reasons will be presented to the Committee at its meeting in November 2021.

**This decision supersedes the Committee's decision made at its meeting held on 15th November 2019 – “unanimously resolved that dog breeding in Carmarthenshire be the subject for Committee's next Task and Finish review in 2021”.*

CABINET FORWARD WORK PROGRAMME 2021/22
–as at 07/09/2021 (For the period September 21 – September 22)

Introduction

This plan is published to encourage and enable greater understanding between the Cabinet, all Councillors, the public and other stakeholders. It assists the Scrutiny Committees in planning their contribution to policy development and holding the Cabinet to account.

The plan gives the public and stakeholders a chance to see the forthcoming major decisions to be made by the Cabinet over the next 12 months. It is reviewed and published quarterly to take account of changes and additional key decisions.

WORKING DRAFT

CABINET FORWARD WORK PROGRAMME 2021/22
–as at 07/09/2021 (For the period September 21 – September 22)

CHIEF CABINETS

Subject area and brief description of nature of report	Responsible Officer	Cabinet Portfolio	Scrutiny Committee to be consulted	Date of expected decision by Cabinet
ECONOMIC RECOVERY PLANS (TOWN CENTRES)	Jason Jones, Head of Regeneration	Resources	12.10.21 Community	25.10.21
CITY DEAL – PROCUREMENT UPDATE	Wendy Walters, Chief Executive	Leader	20.01.22 Community	31.01.22
EQUALITY AND DIVERSITY TASK & FINISH GROUP	Wendy Walters, Executive	Communities & Rural Affairs		8.11.22
WELSH GOVERNMENT CONSULTATION DOCUMENTS	Wendy Walters Executive	Deputy Leader	If applicable	As and when required
REVIEW OF COMMUNITY COUNCIL BOUNDARIES & ELECTORAL ARRANGEMENTS	Wendy Walters, Chief Executive	Resources		As and when required
REVIEW OF THE CONSTITUTION (LEGISLATION CHANGES) - CRWG	Linda Rees Jones Head of Administration & Law	N/A CRWG - FEB	N/A	As And When Required
CITY DEAL UPDATE (INCLUDING PENTRE AWEL)	Wendy Walters Chief Executive	Leader		As & When Required

WORKING DRAFT

CABINET FORWARD WORK PROGRAMME 2021/22
 –as at 07/09/2021 (For the period September 21 – September 22)

COMMUNITY SERVICES

Subject area and brief description of nature of report	Responsible Officer	Executive Portfolio	Scrutiny Committee to be consulted	Date of expected decision by Cabinet
DIRECTOR OF SOCIAL SERVICES ANNUAL REPORT 2021/22	Jake Morgan – Director of Communities/Silvana Sauro	Social Care & Health	07/07/21 & 08/07/21	13/09/2021
DOG BREEDERS LICENCE UPDATE (Change of Policy / Legislation – awaiting WG confirmation)	Jonathan Morgan – Head of Homes and Safer Communities/ Roger Edmunds	Public Protection		TBC
PROVIDING ADDITIONAL PITCHES FOR GYPSIES AND TRAVELLERS IN THE LLANELLI AREA	Jonathan Morgan – Head of Homes and Safer Communities/Rachel Davies	Housing	TBC	04/10/2021
HRA BUDGET SERVICES CHARGES AND RENT SETTING 2022/23	Jonathan Morgan – Head of Homes and Safer Communities/Rachel Davies	Housing		January 22
CHS+ DELIVERING WHAT MATTERS BUSINESS PLAN	Jonathan Morgan – Head of Homes and Safer Communities/ Rachel Davies/ Gareth Williams	Housing	February 2022	February 2022 (Budget)

WORKING DRAFT

CABINET FORWARD WORK PROGRAMME 2021/22
 –as at 07/09/2021 (For the period September 21 – September 22)

CORPORATE SERVICES

Subject area and brief description of nature of report	Responsible Officer	Executive Portfolio	Scrutiny Committee to be consulted	Date of expected decision by Cabinet
BI-MONTHLY REVENUE AND CAPITAL BUDGET MONITORING REPORTS	Chris Moore Director of Corporate Services	Resources	N/A	SEPT NOV JAN MARCH
QUARTERLY TREASURY MANAGEMENT AND PRUDENTIAL INDICATOR REPORT	Chris Moore Director of Corporate Services	Resources	N/A	SEPT/OCT JAN APR
ANNUAL TREASURY MANAGEMENT & PRUDENTIAL INDICATOR REPORT	Chris Moore Director of Corporate Services	Resources	N/A	JULY
BUDGET OUTLOOK	Chris Moore Director of Corporate Services	Resources	N/A	JULY
5 YEAR CAPITAL PROGRAMME	Chris Moore Director of Corporate Services	Resources	ALL JAN/ FEB	JAN
COUNCIL TAX BASE	Chris Moore / Helen Pugh	Resources	N/A	DEC
Council Tax Reduction Scheme	Chris Moore / Helen Pugh	Resources	N/A	FEB
BUDGET STRATEGY (Revenue and Capital)	Chris Moore Director of Corporate Services	Resources	ALL JAN/ FEB	JAN
HIGH STREET RATE RELIEF	Chris Moore Director of Corporate Services /Helen Pugh	Resources	N/A	March
CORPORATE RISK REGISTER	Chris Moore Director of Corporate Services / Helen Pugh	Resources	– Audit Committee March & SEPT	
TREASURY MANAGEMENT POLICY AND STRATEGY	Chris Moore Director of Corporate Services	Resources	N/A	FEBRUARY – BUDGET MEETING
FINAL BUDGET Revenue & Capital	Chris Moore Director of Corporate Services	Resources	N/A	FEBRUARY – BUDGET MEETING
HOUSING REVENUE ACCOUNT BUDGET AND RENT SETTING REPORT	Chris Moore Director of Corporate Services	Resources	HOUSING	FEBRUARY BUDGET MEETING
BUDGET STRATEGY	Chris Moore Director of Corporate Services	Resources	N/A	NOV

CABINET FORWARD WORK PROGRAMME 2021/22
-as at 07/09/2021 (For the period September 21 – September 22)

WORKING DRAFT

CABINET FORWARD WORK PROGRAMME 2021/22
 –as at 07/09/2021 (For the period September 21 – September 22)

EDUCATION & CHILDREN

Subject area and brief description of nature of report	Responsible Officer	Executive Portfolio	Scrutiny Committee to be consulted	Date of expected decision by Cabinet
MODERNISING EDUCATION PROGRAMME – MUTUAL INVESTMENT MODEL -DEED OF ADHERENCE	Simon Davies – Head of Access to Education	Education & Children		27/09/2021
PROPOSAL TO DISCONTINUE YSGOL GYNRADD BLAENAU AND TO INCREASE THE CAPACITY AND CHANGE THE NATURE OF PROVISION AT YSGOL GYNRADD LLANDYBIE (STAGE 1, 2 AND 3)	Simon Davies – Head of Access to Education	Education & Children		November 21
PROPOSAL TO DISCONTINUE YSGOL RHYDYGORS (STAGE 1, 2 AND 3)	Simon Davies – Head of Access to Education	Education & Children		November 21
PROPOSAL TO CHANGE THE AGE RANGE AT YSGOL SWISS VALLEY (TBC) (STAGE 1, 2 AND 3)	Simon Davies – Head of Access to Education	Education & Children		November 21
PROPOSAL TO DISCONTINUE YSGOL GYNRADD MYNYDD Y GARREG (STAGE 1, 2 AND 3)	Simon Davies – Head of Access to Education	Education & Children		November 21
PROPOSAL TO CHANGE THE NATURE OF PROVISION AT YSGOL Y FELIN (STAGE 2 AND 3)	Simon Davies – Head of Access to Education	Education & Children		November 21

WORKING DRAFT

CABINET FORWARD WORK PROGRAMME 2021/22
 –as at 07/09/2021 (For the period September 21 – September 22)

ENVIRONMENT

Subject area and brief description of nature of report	Responsible Officer	Executive Portfolio	Scrutiny Committee to be consulted	Date of expected decision by Cabinet
PUBLIC REALM	Steve Pilliner / Richard waters	Environment		27/9/21
HIGHWAYS MAINTENANCE MANUAL	Steve Pilliner - Head of Transportation & Highways/ Chris Nelson/ Richard Waters	Environment	EPP 4/10/21	25/10/21
LEQ	Ainsley Williams	Environment	EPP 4/10/21	25/10/21
FUTURE WASTE STRATEGY	Ainsley Williams / Dan John	Environment	4/10/21	25/10/21
EQUESTRIAN STRATEGY	Steve Pilliner - Head of Transportation & Highways /Caroline Ferguson	Environment	EPP 12/11/21	22/11/21
ELECTRIC VEHICLE STRATEGY	Steve Pilliner / Simon Charles	Environment	EPP 12/11/21	6/12/21
PUBLIC CONVENIENCES	Ainsley Williams. Head of Waste & Environmental Services Rhys Davies	Environment	EPP 16/12/21	January 22

This page is intentionally left blank

ENVIRONMENTAL & PUBLIC PROTECTION SCRUTINY COMMITTEE

4 OCTOBER 2021

PRESENT: Councillor J.D. James (Chair)

Councillors:

J.M. Charles, T.A.J. Davies, J.A. Davies, K. Davies, S.J.G. Gilasbey, T.M. Higgins,
E. Morgan, B.D.J. Phillips, J.S. Phillips, D. Thomas, A. Vaughan Owen and A.D.T. Speake

Councillor D.M. Cundy - Substitute for Councillor P.M. Edwards.

Also in attendance:

Councillor C.A. Davies, Cabinet Member for Communities and Rural Affairs;
Councillor H.A.L. Evans, Cabinet Member for Environment;
Councillor P.M. Hughes, Cabinet Member for Public Protection;
Councillor J. Tremlett, Cabinet Member for Social Care and Health.

The following Officers were in attendance:

R. Mullen, Director of Environment;
J. Morgan, Head of Homes & Safer Communities;
S. Pilliner, Head of Transportation & Highways;
A. Williams, Head of Waste and Environmental Services;
G. Ayers, Corporate Policy and Partnership Manager;
K. Barlow, Senior Manager-Complex Needs and Transition;
K. Davies, Sustainable Development Manager;
J. Edwards, Business Improvement Manager;
D.W. John, Environmental Services Manager;
Y. Thomas, Waste Transformation Project Manager;
M. Evans Thomas, Principal Democratic Services Officer;
E. Bryer, Democratic Services Officer;
R. Morris, Members Support Officer;
J. Owen, Democratic Services Officer;
A. Eynon, Principal Translator.

Virtual Meeting: 2:00pm - 3:57pm

1. APOLOGIES FOR ABSENCE

An apology for absence was received from Councillor P. M. Edwards.

2. DECLARATIONS OF PERSONAL INTEREST INCLUDING ANY PARTY WHIPS ISSUED IN RELATION TO ANY AGENDA ITEM.

There were no declarations of prohibited party whips.

Councillor	Minute Item(s)	Nature of Interest
J. Gilasbey	6 -2021/22 Quarter 1 Performance Report (1 st April to 30 th June 2021)	An action within the report includes a reference to a school located within her ward in which she has an interest. She has dispensation to speak but not vote.

3. PUBLIC QUESTIONS (NONE RECEIVED)

The Chair advised that no public questions had been received.

4. EXPLANATION FOR NON-SUBMISSION OF SCRUTINY REPORT

The Committee received an explanation for the non-submission of the following scrutiny report:

- Highway Asset Management Plan (HAMP)

Members noted the revised submission date of 25th November 2021.

UNANIMOUSLY RESOLVED that the explanation for the non-submission be noted.

5. EMERGENCY FLOOD RESPONSE - STORM EVENT ARRANGEMENTS

The Committee received a report on the Emergency Flood Response Storm Event Arrangements. The report, presented by the Cabinet Member for Environment provided detailed information on how the Council currently deals with and responds to storm events that cause widespread flooding and included the actions that could be expected of the Council.

Committee members considered the principles that were set out in the report for responding to flood events during the emergency response phase.

Members noted that the pattern of more frequent winter storms that required an emergency response had escalated over recent years.

The report concentrated on the main aspects of the operational emergency response phase and information relating to the immediate physical clean-up operation which was part of the recovery phase and in addition, it made reference to the wider aspects of the post event recovery response phase.

In response of a storm event resulting in significant flooding, the following distinct phases to manage such an event was reported:

- The **pre-storm planning** phase;
- **Reactive immediate response** phase during a flood event;
- A **recovery response** phase immediately following the event.

Members considered the following content within the report:

- Partner agencies
- Carmarthenshire County Council's Emergency Flood Event Teams(overview)
- Statutory Responsibilities and Functions (flood related)
- Carmarthenshire County Council's Planned Flood Response Process.
- Private Property Owners Responsibility
- Post-storm Long Term Actions

The following comments/queries were raised on the report:-

- Thanks was expressed to Officers for compiling a comprehensive report which provided information which had been clearly set out.
- Clarification was sought on the level of responsibility that Welsh Government and Natural Resource Wales (NRW) had on the river which caused the significant flooding in Pensarn, Carmarthen. The Head of Waste and Environmental Services clarified that in general terms, main river flooding resides under the responsibility of the NRW under the umbrella of the Welsh Government's flood and wider environmental functions. In relation to the flooding incidents in Pensarn, it was reported the flooding was caused by a combination of factors including the fact that rainwater was not able to discharge from behind the flood defence due to high river water level of the river Towy. The Head of Waste and Environmental Services informed the Committee that the Council were pursuing Welsh Government funding in order to undertake further work to explore what can be achieved to alleviate the flooding issues within the area of Pensarn, Carmarthen.
- A comment was raised that the information reported in terms of the increase in the number of storms and the subsequent impact on communities was distressing and was likely to be attributed to climate change.

It was raised that whilst householders and businesses had their own responsibilities it was asked what work was being undertaken to encourage communities and in particular vulnerable communities to have an emergency plan and trained emergency wardens? The Head of Waste and Environmental Services agreed that it was important that communities should aim to be in a strong position to organise self-help and explained that following Storm Callum, engagement took place with those communities most affected. It was reported that following a recent discussion with NRW in relation to flooding matters, Members were informed that whilst NRW would not be directly involved in the future, there was scope to assist communities in the setup of their own flood defence committees. Whilst further discussions with NRW would take place to support this, Councillors were encouraged to raise this option within their respective Town and Community Councils.

- In suggesting that there was a direct correlation between climate change and the recent increase of storms, reference was made to the upcoming COP 26 Conference in Glasgow in November 2021. It was proposed that the Environmental and Public Protection Scrutiny Committee write to the First Minister and the Minister for Climate Change as the Welsh Government representatives attending the COP 26 Conference, to request that they pursue to mitigate climate change. This was duly seconded. It was emphasised that decisions by leaders in the upcoming months are vital and would not only support Carmarthenshire County Council's ambition to cut carbon emissions by 2030, but also for the future of Wales and beyond.
- Reference was made to the new flood map published by NRW recently, it was asked in light of the new map if plans were being made to improve on flood defences? The Head of Waste and Environmental Services reassured Members that the new map would be studied and utilised to inform the Council's future strategy as a longer-term plan. The Director of Environment re-iterated that the new NRW maps would be used in the longer-term planning of the strategies in terms of flooding and the impact of flooding. In addition, Members were informed that the Forward Planning Team were also examining the new flooding maps in association with TAN 15 in terms of what alterations would be required and how it would be applied to future planning applications.
- In response to a concern raised in relation to the vulnerable coastal areas, the Head of Waste and Environmental Services stated that a Shoreline Management Plan was in place which defines coastal areas and how they are managed. Furthermore, it was reported that following any storm, all coastal and highway flood defence assets were inspected and programmed for repair subject to available funds.
- Committee members were complimentary of the comprehensive report and hoped that the Welsh Government representatives would contribute in making important decisions at the COP 26 Conference in November 2021, in order to remedy climate change.

UNANIMOUSLY RESOLVED that:

- 5.1 the Emergency Flood Response – Storm Event Arrangements report be received;**
- 5.2 the Environmental and Public Protection Scrutiny Committee write to the First Minister and the Minister for Climate Change requesting that in support of Carmarthenshire County Council's ambition to cut carbon emissions by 2030 they pursue to mitigate climate change at the COP 26 conference in November 2021.**

6. 2021/22 QUARTER 1 PERFORMANCE REPORT (1ST APRIL TO 30TH JUNE 2021)

(Note: Councillor J Gilasbey earlier declared an interest in an action within this item).

The Committee received the 2021/22 Quarter 1 Performance Report for the period 1st April to 30th June 2021 presented by the Cabinet Members for Environment, Public Protection, Communities and Rural Affairs and Social Care and Health in respect of the areas falling within their portfolios and the Committees remit.

The report detailed the progress made against the actions and measures within the Corporate Strategy and on the delivery of the 13 Well-Being Objectives. The Committee noted that 2021/22 was the first year the Council would self-evaluate and report on under the terms of the Local Government and Elections (Wales) Act 2021, especially Part 6 relating to Performance and Governance.

The following comments/queries were raised on in relation to the actions attributed to the Environment portfolio:-

- In response to a query raised in regard to action PAM/043, the Cabinet Member for Environment confirmed that the increasing targets were due them being a cumulative quarterly target.
- Reference was made to the fire at CWM Environmental materials recovery facility, Nantycaws, Carmarthen. It was asked if the insurance would cover any fine incurred subject to any targets not being met? The Cabinet Member for Environment confirmed that the insurance would not cover any fines incurred however, reassured members that strong discussions would take place with the Welsh Government at the end of the year, if necessary.

The Director of Environment informed Members that insuring against matters which were a legal/statutory requirement was not permitted. In addition, she reported that insurers for CWM Environmental Ltd had accepted liability in relation to the fire and that negotiations were currently taking place. Furthermore, the Welsh Government had been advised of the situation and the current position and whilst a target league table would continue to be reported, due to the steps in place to correct matters a fine was unlikely.

- The Head of Highways and Transportation, in response to a query raised in relation to gully cleansing stated that the Council currently operate within the budget allocated and currently there was a compliment of 2 full-time and 2 part-time gully cleansing operatives to cover Carmarthenshire. In response to a further query regarding the allocated budget, the Head of Highways and Transportation stated that in addition to managing the programme of pre-planned inspections there were reactive situations in the main attributed to the weather.

- It was commented that in relation to previous observations regarding setting relevant targets, it was observed that the current targets did not seem to set ambition or strive to improve process or performance by continuing to do what was always done. The validity of the targets quoted was questioned.
- Reference was made to action number 14813 cited on page 38 of the agenda pack '*Deliver Re:fit Cymru (Energy Efficiency) Phase 1 project to achieve energy / carbon savings (NZC-01)*'. Clarity was sought in relation whether this action should read 'off target' as the comment stated 'Phase 1 completed apart from solar PV installation at Parc Dewi Sant'. The Sustainable Development Manager explained that whilst Phase 1 had been completed in order to allow for a bat survey to be completed the Welsh Government had extended the target date and on reflection acknowledged that this explanation should be included and that the target should have been changed for clarity.
- Reference was made to action number 13272 cited on page 42 of the agenda pack '*We will conclude the study into the feasibility of developing an overnight lorry park/s within the County*'. An observation was raised that this action had been on ongoing for a number of years with a moving target, raising a concern regarding the language of the actions. To provide clarity the Cabinet Member reported that the feasibility had been undertaken and that the final report was currently being finalised.
- Reference was made to action number 14962 cited on page 42 of the agenda pack '*We will continue to work with national and regional bodies to develop the public transport network to support carbon reduction and economic development*'. More detail on this action was requested. The Head of Highways and Transportation stated that the Welsh Government had recently published the Wales Transport Strategy included key projects in accordance with the Regional Transport Plan. The development of a METRO for South West Wales as well as studies had been undertaken in regard to rail infrastructure development for the METRO. It was reported that from a wider Welsh Government policy perspective, in terms of the model shift, interventions were required to the transport and rail network. In addition, the investment in relation to the Active Travel development had enabled a significant improvement to the Active Travel infrastructure.
- Reference was made to action number 15106 cited on page 43 of the agenda pack '*We will ensure that the Council works with partners to develop community transport opportunities across the county, which should consider all feasible means of transport to address local needs*'. A query was raised in relation to addressing local needs including if the Council was looking to expand services such as Country Cars? The Head of Highways and Transportation explained that work was ongoing with the Welsh Government and Transport for Wales in relation to the previously known Bwcabus project which operated in the North and West of the County, which had now integrated to Transport for Wales Flexi demand responsive travel. In addition, the shopmobility schemes and a number of community transport operators e.g. Country cars would be continued to be supported.

- Reference was made to action number 14963 cited on page 43 of the agenda pack *'We will continue to develop the infrastructure for the use of electric vehicles across the county including in rural areas'*. In response to the location of the electrical charging points, the Head of Highways and Transportation stated that there would be significant developments in electrical charging infrastructures over the next 5 years and that an electrical charging infrastructure was currently being developed which would be shared to Scrutiny Members in due course.

The following comments/queries were raised on in relation to the actions attributed to the Public Protection portfolio:-

- Reference was made to action number 15099 cited on page 45 of the agenda pack *'We will develop a pro-action Air Quality Delivery Plan, in conjunction with other Council Divisions and key partners'*. In response to a query in relation to the air quality of specific areas, the Cabinet Member for Public Protection stated that specific areas throughout the County was currently being monitored. The Head of Homes and Safer Communities echoed the Cabinet Members response in that there were a number of air quality management areas throughout the County namely; Llandeilo, Carmarthen and Llanelli which the monitoring of these areas was reported to this Committee. It was confirmed that a Corporate Steering Group had been established which would monitor the targets and progress against the Air Quality Delivery Plan.
- In response to a query relating to agency staff being utilised to carry out inspections on food establishments, the Cabinet Member confirmed that over the period of the pandemic this was necessary as staff had been redeployed to cover other emergency roles. However, since the end of redeployment, the inspections had been caught up and was now on target. The Head of Homes and Safer Communities added that during the Covid-19 pandemic many food outlets and premises were closed. In terms of the economic recovery post pandemic, it was reported that the Food Standards Agency had set revised targets and that the department was confident the targets would be met. Furthermore, it was highlighted that a significant number of new food establishments had opened up over the last 18 months and one of the key priorities was to ensure that each new establishment was visited in addition to contacting all existing premises. Reassurance was provided to Committee Members that the department had the necessary number of staff members to deliver what was required by the Food Standards Agency, however there were aspirations to consider the wider resources going forward into the future.
- Reference was made to action number 15065 on page 46 of the agenda pack *'We will work with departments to ensure compliance with the new corporate CCTV policy'*. In response to a query raised in relation to the new CCTV Lead Officer role, the Corporate Policy and Partnership Manager clarified that the role would be to manage the Council's internal systems and not the town centre CCTV systems as these were being monitored by the Police. The action was in reference to a piece of work that was being undertaken internally

in terms of all the systems that the Council manage.

In response to a further query, the Corporate Policy and Partnership Manager stated that the role of CCTV Lead Officer would be to ensure that the Council's CCTV systems comply with the Surveillance Camera Commissioner requirements and that the different systems would be monitored by the individual services and not by a central centre.

It was asked if there was a possibility to place CCTV cameras in known fly-tipping areas. The Corporate Policy and Partnership Manager stated that whilst the Council's CCTV was in the main attributed to the security of Council buildings, it was acknowledged that a future discussion could be arranged with Police to utilise the CCTV within town centres and neighbourhood systems.

The following comments/queries were raised on in relation to the actions attributed to the Communities and Rural Affairs portfolio:-

- In response to a concern raised regarding the targets set in relation actions attributed to Net Zero Carbon, the Sustainable Development Manager provided reassurance that the targets set for 2030 were continuously monitored and that milestone targets would be set to assist in the long-term monitoring process as advised by the guidance received from the Welsh Government earlier this year.

The following comments/queries were raised on in relation to the actions attributed to the Social Care and Health portfolio:-

- With reference to action number 14987 - public conveniences, it was commented that this was a basic human need and that it was pleasing to note the outcome of the review.

The Head of Waste and Environmental Services, in response to a query relating to the public conveniences within Burry Port explained that these toilets were under the jurisdiction of Burry Port Harbour and therefore was unable to provide an update on the future plans.

UNANIMOUSLY RESOLVED that the report be received.

7. FUTURE WASTE STRATEGY

The Committee considered the Future Waste Strategy report which was presented by Cabinet Member for Environment.

The report information on the proposed future strategy, actions and considerations for the Waste Service, in order to achieve 70% recycling by 2024/25 and provide a base for improvements to achieve zero waste by 2050.

The following comments/queries were raised on the report:-

- Reference was made the Service Comparison and Performance Section of the report. In relation to the table which depicted the performance against collection methodology of the 22 Welsh Authorities in 2019/20, it was observed that the percentage rate of the average reuse, recycling and composting rate across the Authorities seemed to portray little difference despite some already having adopted the Blueprint methodology. The Cabinet Member for Environment emphasised that the Welsh Government would only provide the necessary funding if the Authority adopted the Blueprint methodology.

In addition, it was explained to Members that this methodology would facilitate cleaner materials lessening contamination enabling expediate recycling within the UK. The Head of Waste and Environmental Services explained that the difficulties in relation to the comparison table was that the baseline where Local Authorities started prior to the adoption of the Blueprint methodology was not identified.

Furthermore, Members were informed that fundamentally the Blueprint methodology embraced a circular economy, enabling better use of existing materials and adopting better quality of materials supporting the composition of the circular economy.

- In order to raise awareness and inform householders of what material to place in which colour bag and to promote recycling, it was suggested that a leaflet be distributed alongside the annual deliveries. The Environmental Services Manager stated that in respect of both black bag and blue recycling bag collections, educational letters would be distributed to households where an issue had been identified, this would be supported by a visit if necessary.
- It was asked if the Blueprint methodology were to be adopted, would the glass recycling centres remain in situ as they were a vital service for all communities? The Environmental Services Manager explained that the current network of Glass Bring Sites would be reduced which would be considered on the basis that the most utilised site would be retained. However, this process would not take place until the weekly glass kerbside collections were in place across the County in 2024.
- A concern was raised echoing the concerns raised within the Waste Collection Engagement Thematic Analysis appended to the report regarding the collection of 3 black bags every three weeks and the possibility that the proposal would increase the likelihood of vermin, odour and fly-tipping in communities. The Cabinet Member for Environment referred a section within the report, which stated that in 2017, Carmarthenshire County Council commissioned a waste analysis survey to identify the recyclable element of residual waste disposed of through the kerbside residual waste collections. The results from this study presented in the table, exhibited that 46.1% the contents of residual waste bags (black bag) comprised of recyclable material, food waste and garden waste. It was reported that should householders increase their household recycling, the 3-week collection of 3 black bags would be sufficient.

The Environmental Services Manager added that, by January 2022 the Council would be rolling out an expanded Absorbent Hygiene Products (AHP) service to households who subscribe to the service, to include the collection of children's nappies. Furthermore, exceptions to include large households of more than 6 people would be retained. Reassurance was provided that the concerns raised within the consultation would be addressed in the service future design.

In response to a concern regarding the potential increase of fly-tipping as a result of the reduction of black bag collection to a 3 week collection, the Cabinet Member for Environment reiterated her earlier response regarding the high percentage of recyclable material being placed in black bags and emphasised that should householders make more use of the recycling facilities available, not only would fly-tipping be unnecessary, it would be irresponsible and enforcement would be carried out where necessary.

The Environmental Services Manager informed Members that prior to any changes to the waste services regime an engagement programme would take place and Officers would be available to provide support and guidance.

- A concern was raised regarding women's sanitary products and the unhygienic nature of these products being sat within black bags for up to 3 weeks prior to collection. It was asked, if these products could be added to the current collection service for incontinence products. The Environmental Services Manager stated that whilst sanitary products would not be accepted by the treatment provider, this was an area which would be considered as part of the future service design.
- In response to further concerns regarding the issues of fly-tipping, the Director of Environment reminded Members that fly-tipping was a criminal act and that enforcement action would be carried out where possible subject to the evidence available.

Committee Members wished to note their gratitude to officers for their prompt work in responding to fly-tipping matters.

UNANIMOUSLY RESOLVED TO RECOMMEND TO CABINET THAT THE FOLLOWING RECOMMENDATIONS BE APPROVED:

- 7.1 the direction of travel for service delivery set out for an interim solution followed by a longer-term service change. Including the interim proposals of:**
 - a. the move to weekly recycling collections.**
 - b. the change to three weekly residual collections.**
 - c. the separate collection of glass at the kerbside (3-weekly in the interim).**
- 7.2 to commence the procurement of the additional vehicles required for the interim solution;**

7.3 To develop the programme of longer-term service change for delivery in 2024 of:

- a. **The move to Welsh Government “Blueprint” compliant recycling collections**
- b. **Weekly Glass recycling as part of the kerbside sort collection methodology.**
- c. **Additional material collections – textiles, Small Domestic Appliances and batteries.**

8. SCRUTINY COMMITTEE - ACTION UPDATE

The Committee received a report detailing the progress achieved in relation to requests or referrals emerging from previous meetings during 2020/21 and 2021/22 respectively.

UNANIMOUSLY RESOLVED that the report be received.

9. REFERRAL FROM THE COMMUNITY AND REGENERATION SCRUTINY COMMITTEE - PROVISION OF PAVEMENTS IN RURAL AREAS

The Committee received a report for consideration in relation to a referral from the Community and Regeneration Scrutiny Committee in relation to the provision of pavements in rural areas.

Community and Regeneration Scrutiny Committee Members noted during the consideration of the Council’s Draft Annual Report for 2020/21, at its meeting on 1st July, 2021 made reference to the increase in walking and cycling during the pandemic and to the lack of pavements on public highways in many rural areas to facilitate safe walking, with there being over 300 applications for pavements currently outstanding. A view was expressed that the Authority should examine this position, possibly via a Task and Finish Group. As this matter did not fall within the Committees remit Members of the Community and Regeneration Scrutiny committee agreed to refer the matter to the Environment and Public Protection Scrutiny Committee.

In addition, the report also included information of a discussion that took place within the Policy and Resources Committee on 21st July 2021 which expressed concern over the backlog of requests for the provision of pavements in rural areas.

In acknowledgement that this matter did fall under the remit of this Committee it was raised that this matter was a significant concern which needed to be explored further. It was therefore proposed that this Committee accept the referral and in order for the Committee to consider the matter appropriately, it was proposed that a report be included on the Committee’s Forward Work Programme to provide background information and the current position in relation to the provision of pavements in rural areas. This was duly seconded.

UNANIMOUSLY RESOLVED that:

- 9.1 the Referral from the Community and Regeneration Scrutiny Committee be received and accepted;**
- 9.2 a report be included on the Committee's Forward Work Programme to provide background information and the current position in relation to the provision of pavements in rural areas.**

10. FORTHCOMING ITEMS

The Committee received a list of forthcoming items to be considered at its next meeting to be held on the 25th November 2021.

RESOLVED that the list of forthcoming items for the Committee meeting to be held on the 25th November 2021 be agreed.

11. TO SIGN AS A CORRECT RECORD THE MINUTES OF THE MEETING OF THE COMMITTEE HELD ON THE 2ND JULY 2021

RESOLVED that the minutes of the meeting of the Environment and Public Protection Scrutiny Committee held on the 2nd July, 2021 be signed as a correct record.

CHAIR

DATE