

# Agenda – Climate Change, Environment, and Infrastructure Committee

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Meeting Venue:

Committee room 4 Tŷ Hywel  
and video Conference via Zoom

Meeting date: 22 February 2024

Meeting time: 09.30

For further information contact:

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Committee Clerk

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## Hybrid

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**Private pre-meeting (09.15–09.30)**

**Public meeting (09.30–16.00)**

### 1 Introductions, apologies, substitutions, and declarations of interest

(09.30)

### 2 Infrastructure (Wales) Bill – Stage 2 Proceedings

(09.30–12.30)

Julie James MS, Minister for Climate Change

Neil Hemington, Chief Planner – Welsh Government

Owen Struthers, Head of National Consenting – Welsh Government

Nicholas Webb, Lawyer – Welsh Government

Documents relevant to Stage 2 proceedings will be available on the [Bill page](#).

The Climate Change, Environment, and Infrastructure Committee agreed on 31 January 2024, under Standing Order 26.21, that the order of consideration for Stage 2 proceedings would be:



Sections 1–60; Schedule 1; Sections 61–90; Schedule 2; Sections 91–142;  
Schedule 3; Long Title

**Lunch break** (12.30–13.15)

**3 Infrastructure (Wales) Bill – Stage 2 Proceedings continued**  
(13.15–16.00)

**4 Papers to note** (16.00)

**4.1 Electric vehicle charging**

(Pages 1 – 50)

Attached Documents:

Letter from the Deputy Minister for Climate Change to the Chair in relation to the Committee's report on Electric Vehicle Charging – January 2024

Additional response from the Welsh Government to the Committee's report on Electric Vehicle Charging – January 2024

Welsh Government Strategic Outline Business Case (SOBC) Executive Summary

**4.2 Cable ploughing**

(Pages 51 – 87)

Attached Documents:

Letter from the Llanarthne Area Community Pylon Group to the Chair in relation to cable ploughing

**4.3 Inter-Institutional Relations Agreement**

(Page 88)

Attached Documents:

Letter from the Deputy Minister for Climate Change to the Chair of the Legislation, Justice and Constitution Committee in relation to the Transport Inter-Ministerial Standing Committee

#### **4.4 The Interministerial Group on Net Zero, Energy and Climate Change**

(Pages 89 – 90)

Attached Documents:

Letter from the Minister for Climate Change to the Chair in relation to the Interministerial Group on Net Zero, Energy and Climate Change – 6 February 2024

Letter from the Minister for Climate Change to the Chair in relation to the Interministerial Group on Net Zero, Energy and Climate Change – 16 February 2024

#### **4.5 The Windsor Framework (non-commercial movement of pet animals) Regulations 2024**

(Pages 91 – 92)

Attached Documents:

Letter from the Minister for Rural Affairs and North Wales, and Trefnydd to the Chair in relation to the Windsor Framework (non-commercial movement of pet animals) Regulations 2024

#### **4.6 Scrutiny of Natural Resources Wales**

(Page 93)

Attached Documents:

Letter from Natural Resources Wales to the Chair in relation to the Scrutiny of Natural Resources Wales

#### **4.7 Resources and waste common framework**

(Page 94)

Attached Documents:

Letter from the Minister for Climate Change to the Chair in relation to the Packaging Waste (Data Collection and Reporting) (Wales) (Amendment) Regulations 2024

**5 Motion under Standing Order 17.42 (vi) and (ix) to resolve to exclude the public from the 6 March meeting**

(16.00)

Llyr Gruffydd MS  
Chair  
Climate Change, Environment, and Infrastructure (CCEI) Committee

[SeneddClimate@senedd.wales](mailto:SeneddClimate@senedd.wales)

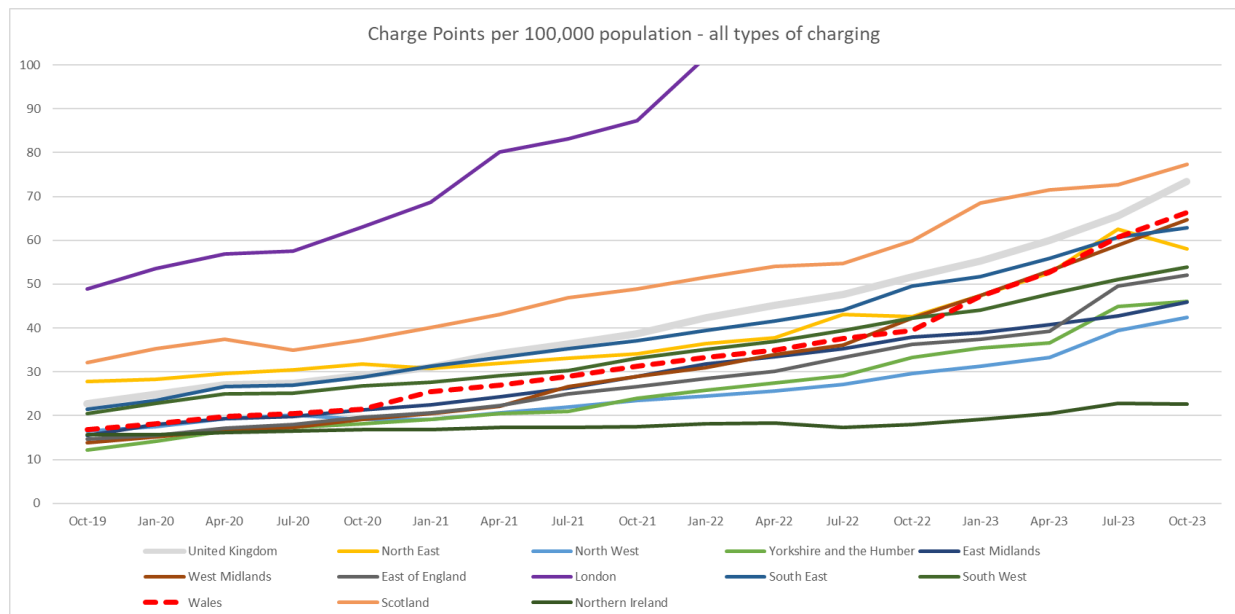
25 January 2024

Dear Llyr,

I am writing to provide the Committee with an update and to show the significant progress we have made since our previous response to the Committee's report on our Electric Vehicle Charging Infrastructure Strategy and Action Plan (March 2023).

An update on the 21 recommendations within the Committee's report on EV charging infrastructure is attached. The update explains that new evidence-based forecasts for EVs in Wales have been developed to reflect market demand.

The latest report from the Department for Transport indicates that the number of EV charge points in Wales has grown 68% annually and total infrastructure per head of population is surpassed only by London and Scotland. The dotted red line on the graph below illustrates this progress.



[Electric vehicle charging device statistics: October 2023 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/electric-vehicle-charging-device-statistics)

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Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

The Welsh Government will continue to work with and support local authorities and private sector chargepoint operators to deploy adequate charging provision of EV infrastructure across Wales, recognising this will help drive the uptake in electric vehicles.

Given the budget and capacity constraints the Welsh Government is currently facing, over the next few months our focus will be on developing mechanisms that will incentivise the private sector to install and operate charging infrastructure where market failure has been identified.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Lee', is centered on a light-colored rectangular background.

**Lee Waters AS/MS**

Y Dirprwy Weinidog Newid Hinsawdd  
Deputy Minister for Climate Change



# The Welsh Government's EV charging infrastructure strategy and action plan

## Update for the CCEI Committee

January 2024

In March 2023, the Climate Change, Environment, and Infrastructure Committee submitted its report on the Welsh Government's Electric Vehicle Charging Infrastructure Strategy and Action Plan. This update restates the 21 Committee recommendations and the Welsh Government's response, and includes updates on recommendations where available.

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## Introduction

Since the Welsh Government published our EV Charging Strategy in 2021, we have invested over £26 million in charging infrastructure across Wales, increasing the number of public devices by 120%, corresponding to a total of 1,465 charge points as at 1<sup>st</sup> January 2023.

Between October and December 2022, Wales had the greatest increase in total charging devices at 17.3%, and the largest percentage increase in rapid charging or above devices at 26.9% compared to all regions across the UK.

Significant further investment will be required to meet projected levels of EV uptake and demand, especially after the proposed internal combustion engine (ICE) ban and into the 2030s.

Working with our delivery partners, we want to seize the opportunity to lead by example and help build a reliable, efficient EV charging network in Wales, transforming the way residents and visitors travel. To achieve this, Welsh Government has developed a programme-level roadmap, setting out actions across five key priorities for Welsh Government and delivery partners for the next 3-5 years, pivotal to the successful acceleration of EV charging infrastructure across Wales, and meeting the defined KPIs set by the Strategy.

I thank the members of the Climate Change, Environment and Infrastructure Committee for their report on the Welsh Government's EV charging infrastructure strategy and action plan. I have set out my response to the Report's individual recommendations below.

## Response to the 21 recommendations

### Recommendation 1

The Committee recommends that:

The Welsh Government should revisit the EV Charging Strategy in light of the changing patterns of EV usage and the growth of commercial EVs. The Welsh Government should set a timeline for this work and consult with relevant stakeholders, including drivers and charging infrastructure providers.

**Response:** Accept

We recognise that, owing to the increasing uptake of electric vehicles, including battery electric vans, advancements in battery capacities and charging technology, patterns of EV usage are changing rapidly. However, we developed the EV charging strategy with this in mind and believe that the primary objectives of the strategy, increasing provision through supporting private sector roll-out and addressing gaps in the market as well as enabling longer distance travel throughout Wales, remain valid. Nevertheless, we will monitor emerging trends and seek to address specific requirements for public chargepoints where this would be useful.

As noted by the Committee, a plan for freight is being developed and we agree that decarbonisation should be considered as part of that plan. We are developing a greater understanding of potential requirements for infrastructure through engagement with experts as a signatory of the Global MoU on zero emission HDV (heavy duty vehicles), with the DfT and various fora, and are promoting Welsh participation in the Zero Emission Road Freight Trials.

**Financial Implications** – this work will be accommodated within existing budgets.

**Update:** TfW continues to monitor and adapt its delivery approach according to EV adoption rates, new innovation opportunities and changes to national standards and best practices. New information is shared through bi-monthly seminars with all Local Authorities and other public sector bodies, with Scottish Power Energy Networks (SPEN) and National Grid Electricity Distribution (NGED) via the Connections Working Group and with the commercial sector via the Charge Point Operators Working Group.

### Recommendation 2

The Committee recommends that:

The Welsh Government should provide an update on the development of the Transport Decarbonisation Programme, which will support the decarbonisation of buses and taxis and private-hire vehicles.

**Response:** Accept

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Net Zero Wales Carbon Budget 2 sets out the full range of policies to deliver carbon reductions during the period 2021 to 2025.

Welsh Government will provide an update on the Transport Decarbonisation Programme, which will support the decarbonisation of buses and taxis and private-hire vehicles, by the Autumn.

**Financial Implications** – None.

Update: The Minister for Economy and the Deputy Minister for Climate Change agreed to the establishment of a Task and Finish Group (TFG) to develop plans for Bus Fleet Decarbonisation and Demand Aggregation. This Group formulated recommendations in a final paper in March 2022.

We are investing in and supporting moves to invest in new green zero emission vehicles for use on the local bus services across Wales. Plans for the decarbonisation of the service bus fleet by 2035 are now nearing completion with an outline business to be completed by the end of this financial year

Fully electric buses are now in daily service in Cardiff and Newport and we have grant funded fleets of new electric buses in west and north Wales for use on the Welsh Government funded TrawsCymru network. These deployments in Wales mean we are broadly in line with other areas of the UK, in terms of percentage of the service bus fleet having been decarbonised.

- There are 14 electric buses operating on the Traws Cymru service in North and West Wales which cost Welsh Government £8.519.
- Newport Bus have purchased 44 EV vehicles funded by UK Government and with a commercial loan of £1.85m from Welsh Government. In 2023 Newport bus were awarded a grant of £6.323m from Welsh Government which will secure a further 13 buses due to be delivered early in 2024.
- Cardiff Bus have purchased 36 EV vehicles. In 2023 Cardiff Bus were awarded a grant of £8m from Welsh Government which will secure a further 19 buses, due to be delivered early in 2024.

The budget for 2023-24 is £11m but this will also cover some network reform costs and the cost of preparation for franchising.

The Deputy Minister for Climate Change has consulted on proposals for a Taxi and Private Hire Vehicles (Wales) Bill. In October 2023, the Deputy Minister published a summary of consultation responses and made an Oral Statement on the Bill.

We recognise that there are challenges for the taxi and private hire vehicle trade including: the cost of buying a ZEV, anxiety about vehicle range and the availability of charging infrastructure.

To encourage transition to zero emission vehicles, we are:

- Trialling charging points dedicated for electric taxis in key locations to try and

make sure they have priority charging when they need it; and,

• Providing funding towards 44 electric taxis used for a “try before you buy” scheme in Wales

### **Recommendation 3**

The Committee recommends that:

The Welsh Government should ensure that the EV Charging Strategy takes into account questions of equality and social justice.

**Response:** Accept

The Welsh Government has developed an equality impact assessment (EqIA) which looks at risks around the Welsh Government EV Charging delivery portfolio (initiatives, projects and studies) resulting in disproportionate or differential equality effects for protected characteristic groups. The EqIA has been carried out in line with the public sector equality duty in section 149 of the Equality Act 2010 (the Act). Whilst not an EqIA requirement, the report also identifies how equality issues have been integrated into the development of the EV charging portfolio to date. A copy of the EqIA report is attached.

**Financial Implications** – None.

**Update:** The modelling tool which is being used to guide investment in EVCI by local authorities is weighted towards areas which are most at risk at missing out on commercial investment. This will be implemented from the next funding round of the Ultra-Low Emission Vehicle Transformation Fund.

### **Recommendation 4**

The Committee recommends that:

No later than six months after the publication of this report, the Welsh Government should provide the Committee with a detailed update on progress against the Action Plan; progress against the commitments it gave in written evidence (set out in paragraph 13 of this report); and progress towards the delivery of each of the recommendations in this report.

**Response:** Accept

Officials constructed an ambitious delivery programme supported by modelling tools, National Standards and effective relationships with key delivery partners.

TfW has been leading a project to deliver 19 rapid EV charging points on the Strategic Road Network. This is being delivered by a unique partnership whereby the network is largely funded commercially, but public funding is focused on “unlocking” sites with severe grid constraints through funding DNO works. The location of these sites is focused in areas which are considered unlikely to benefit from purely commercial investment in the near to mid-term, yet are vital for

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ensuring consistency of provision across the SRN for “top up” charging en-route to key tourist and other destinations across Wales. Development is also focused on sites in public ownership, with the added benefit of providing a modest income stream from the lease with charge point operators. Sites have also been carefully selected based on the facilities nearby, including their ability to provide benefits to existing local businesses and the hospitality sector. Completion of this project in 2023 will see rapid charge points at least every 25 miles and for most of the network every 20 miles across Wales – two years ahead of the Action Plan target.

**Update: All but three of the sites on the SRN have been delivered, the exceptions being those where complex third party issues have emerged.**

This baseline charging infrastructure across Wales’ SRN is a major step towards providing users with the confidence that they can drive across Wales without running out of charge – and the strategy’s vision that “By 2025, all users of electric cars and vans in Wales are confident that they can access EV charging infrastructure when and where they need it.”

By January 2023, the number of chargepoints per 100,000 residents installed in Wales has increased from 21 to 47.2 (UK average is 55.3) or around 125% growth. Wales is showing the greatest increase of any UK region in both total charging provision (17.3%) and rapid charging (26.9%).

**Update: The encouraging rate of growth continues, with the number of chargepoints per 100,000 residents now at 66.4, with Wales now third in the UK behind Scotland and London.**

**Financial Implications** – None.

## **Recommendation 5**

The Committee recommends that:

The Deputy Minister should clarify how the deliverability plan will relate to the Action Plan and reassure the Committee that the production of plans is not a substitute for action.

**Response:** Accept

The purpose of the deliverability plan is to set out how the strategy and action plan will be delivered in practice, to be referred to as the EV charging Infrastructure Programme (the Programme), as Welsh Government sets out to accelerate the roll-out of charging infrastructure across Wales.

The Programme focuses on the deliverability of the financial, commercial and management cases of the strategy and action plan. A copy of the Executive Summary of the Programme report is attached.

The financial case suggests a total capex cost of between £351 million to £1,550 million for On-Route and Destination charging by 2040, with no growth after that

point, with £114 million to £689 million spent on On-Route charging and £236 million to £861 million on Destination charging. By this point On-Route chargepoints number 1.1 to 6.5 thousand and Destination 6.4 to 61.8 thousand, with a total of 7.4 to 68.4 thousand. Charging capacity reaches 141 to 1,165 MW, spread across 968 to 23,500 sites. This analysis is agnostic of which body is taking financial responsibility.

From a commercial perspective (and considering the considerable costs mentioned above), Welsh Government expects that most of the charging infrastructure will be delivered by the private sector. The role of Welsh Government is to facilitate private sector investments across Wales and ensure equality of access for all by focussed market interventions such as subsidies, concessions, etc. The plan for EV charging is to ensure more equitable coverage throughout the development of the network.

The Programme recommends that two elements of the delivery strategy be prioritised first (before moving on to others): the on-route network and destination / on-street charging in built-up areas. These elements will have the most short-term benefit for users in Wales, providing a strong cross-national network and catering to users who have a greater need for public charging.

The management case outlines the key considerations when delivering and managing the programme of interventions needed to facilitate and deliver the preferred network. The scale and complexity of delivering the EVCI programme necessitates a strong and effective management structure which determines how Welsh Government and delivery partners will deliver and manage the EVCI programme. This is a significant step-up from the Welsh Government resources that are devoted today.

More work and development are needed to implement the EVCI programme in the next phase, harnessing the work done to date (e.g. National Standards, early market engagement). To achieve this, a programme-level roadmap has been developed, setting out actions across five key priorities for Welsh Government and delivery partners for the next 3-5 years, to deliver successful acceleration of EV charging infrastructure across Wales, and meet the defined KPIs set by the Strategy.

#### 5 key priorities:

1. Establish a Project Management Office (PMO) to govern delivery arrangements, set standards and monitor progress.
2. Provide support and guidance to enable local authorities (and private sector) to deliver the preferred network.
3. Engagement with the private sector to ensure we optimise the delivery of the preferred network and foster public-private sector collaboration.

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4. Develop the mechanisms, knowledge and tools to deliver the preferred network.

5. Leverage the resource and mechanisms necessary to rapidly deliver the network in line with policy objectives.

**Financial Implications** – This work is being delivered by TfW (via the Remit letter), with support from Welsh Government.

**Update:**

- PMO in place in TfW, coordinating delivery projects, managing risks, governance of action groups and plans and monitoring delivery in public and private sectors.
- Local Authority support is now in place, involving monthly seminars, access to the Cenex 'NEVIS' suite of advice and guidance for delivery (including procurement plans, leases, delivery strategy optimisation) and insights into forecast BEV and charge point uptake for each local authority. This is complemented by the Preferred Network Mapping tool that aids with identifying the types of commercial models that will work in specific locations, and ensuring that funding awards are aligned to this.
- The Charge Point Operator working group was established in spring 2023 and is actively developing a portfolio of actions for individual members and public sector. The aim is to disseminate key recommendations to facilitate delivery in autumn 2023.
- Mechanisms and resources include the Preferred Network Mapping tool described above, additionally appraisal tools for renewables co-location, template leases, procurement best practices and commercial engagement strategies.

## **Recommendation 6**

The Committee recommends that:

The Welsh Government should review the KPIs in the Action Plan. For Actions to be delivered to a longer timescale, such as Actions 1 and 7, it should aim to develop more specific KPIs, with sub-actions and associated deadlines.

**Response:** Accept

Welsh Government will review the KPIs in the Action Plan to ensure they are specific, measurable, achievable, realistic and timebound (SMART).

Welsh Government believes the Committee's statement that "*Welsh Government had completely failed to deliver many of the Actions in the Action Plan and by the lack of progress towards achieving others*" is an unfair evaluation of the work and results that have been completed to date. The delivery of EV charging infrastructure is not one of the Programme for Government priorities, which

means the project has benefited from very limited resources. However Welsh Government believes that it has achieved considerable progress despite this.

The complexity of delivering the strategy needs to be recognised. Key to the Welsh Government commercial strategy is the underlying principle that there can be no “one size fits all” approach to market intervention. The Welsh Government strategy sets out the need to balance actual charging needs with the goals of the preferred network, maximising return on infrastructure delivery while minimising public spending and allocating most risk to the private sector. Equality gaps in private sector investment need to be assessed on a case-by-case basis. Further, financial intervention need to be targeted and limited, considering factors such as ownership of land, the costs that will be passed on to the consumer, and the actual charging need in the area – for example, the Government could subsidise grid connection capex at key on-route sites where grid capacity is limited or there is a great distance to the nearest point of connection.

Since the publication of the strategy, Welsh Government has focused its limited resources on two key priorities: delivering a baseline charging infrastructure across Wales that gives users the confidence that they can travel across Wales without fear of running out of charge (the vision of the strategy); and developing tools and plans that will help local authorities and other delivery partners accelerate the roll-out of publicly available charging facilities across Wales.

Actions	Expected KPIs	KPIs delivered
1	1 public charge point for every 7-10 EVs by 2025	As at September 2022 (latest data available for the comparison), Wales has 1,417 public chargepoints installed, approximately 1 chargepoint for every 9 BEV. The total UK figure is 1 chargepoint for approximately every 16 BEV.  <b>Update: As at October 2023, Wales has 2,061 public chargepoints</b>
2	Connections Group to report in the current financial year (2021)	Remains to be delivered. See response to Recommendation 12.  <b>Update: Connections group now active.</b>
3	Network of charging forecourts across Wales at approximately 20 miles across the SRN by 2025	The installation of 19 rapid charge points at least every 25 miles and for most of the network every 20 miles across Wales will be completed in 2023 - two years ahead of the Action Plan target.  <b>Update: All but three charging sites across the SRN now in place (all remaining have</b>



		complex third party / private sector consent requirements)
4	WG will deliver a National Quality Standard to be used in public sector procurement by the end of 2021	<p>Welsh Government has developed National Standards for EV Charging Infrastructure in Wales. The online guide details a set of best practice recommendations for safe, accessible, and reliable public electric vehicle charging in Wales. The Standards have been developed for use by public sector organisations, community enterprises and delivery partners involved in the deployment of electric vehicle charging infrastructure in Wales.</p> <p>The guide has been used by local authorities and other deliver partners since January 2022, and will be published on the Welsh Government website in the next few weeks.</p>
5	Review of policy and regulations by 2022 and updates made, where appropriate, to support EV uptake	<p>Welsh Government will consult on draft amendments to Building Regulations during the first half of 2023. The draft amendments are to mandate the provision of EV chargepoints for each new dwelling with an associated car parking space and that every new non-residential building with more than 10 car parking spaces to have one chargepoint and additional cable routing.</p> <p>Welsh Government will work with the electricity industry to facilitate a further review of the Welsh Government policy and regulations to support electric vehicle charging. This will include whether any further measures can be taken to support local and regional spatial planning and a framework for strategic and local development plans.</p> <p>There will be a review of Permitted Development rights in view of industry alignment and addressing any inconsistencies in development control or the way in which it is applied across the UK. There will be ongoing engagement and</p>

		collaboration with local planning authorities to support the development of local approaches.
6	Establishment of a charge point operator working group in 2021	Remains to be delivered. See response to Recommendation 17.  <b>Update: CPO group now active</b>
7	Enhanced public confidence in EV charging, moving Wales from the innovator stage to early majority stage of market maturity by 2030.	Welsh Government is planning a communication programme that will keep stakeholders and the public updated, increasing their confidence in EV charging.  <b>Update: Benefits of EVs communicated to users via the <a href="#">Climate Action Wales (Green Transport Choices) website</a>. CPO group gave talks during the <a href="#">Wales Climate Week 2023</a></b>
8	Complete a supply chain and opportunities review by end of 2021. Establish a programme to realise opportunities for innovation and investment.	The Welsh Government Transport Decarbonisation team is working with the Business & Regions division (including Innovation and the Inward Investment teams) to identify and support innovation and private sector investment opportunities.  Welsh Government is developing a new National Procurement Framework that will provide the opportunity to work collaboratively across the Welsh public sector to ensure a standard delivery model and avoid ad-hoc procurement exercises. It will help deliver wider benefits for Wales, such as the opportunity to develop a supply chain in Wales.  The 19 rapid charging sites on the SRN have been carefully selected based on the facilities nearby, including their ability to provide economic development benefits to existing local businesses and the hospitality sector.
9	Charging infrastructure to be considered in all relevant new and emerging	EV charging is already covered in both Planning Policy Wales and the Future Wales.  Meeting the requirement for EV charging is also a key part of the development of Local Area

	local and regional development plans, starting 2021.	Energy Planning (LAEP), a pioneering approach which addresses the whole energy system.
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**Financial Implications** – None.

### **Recommendation 7**

The Committee recommends that:

The Welsh Government should deliver on its commitment to review the KPIs annually and publish the review's outcome. In addition, the Welsh Government should publish regular updates on progress against the KPIs.

**Response:** Accept in Principle

The Welsh Government recognises that monitoring the progress of EV charging infrastructure provision is a critical task to ensure the programme is on course to achieve the objectives and KPIs set by the Strategy, as well as ensure sufficient charging infrastructure is being provided to meet future EV demand.

The Welsh Government is planning to review and publish the KPIs at strategic points in time, reflecting key stages of the delivery programme and the availability of resources.

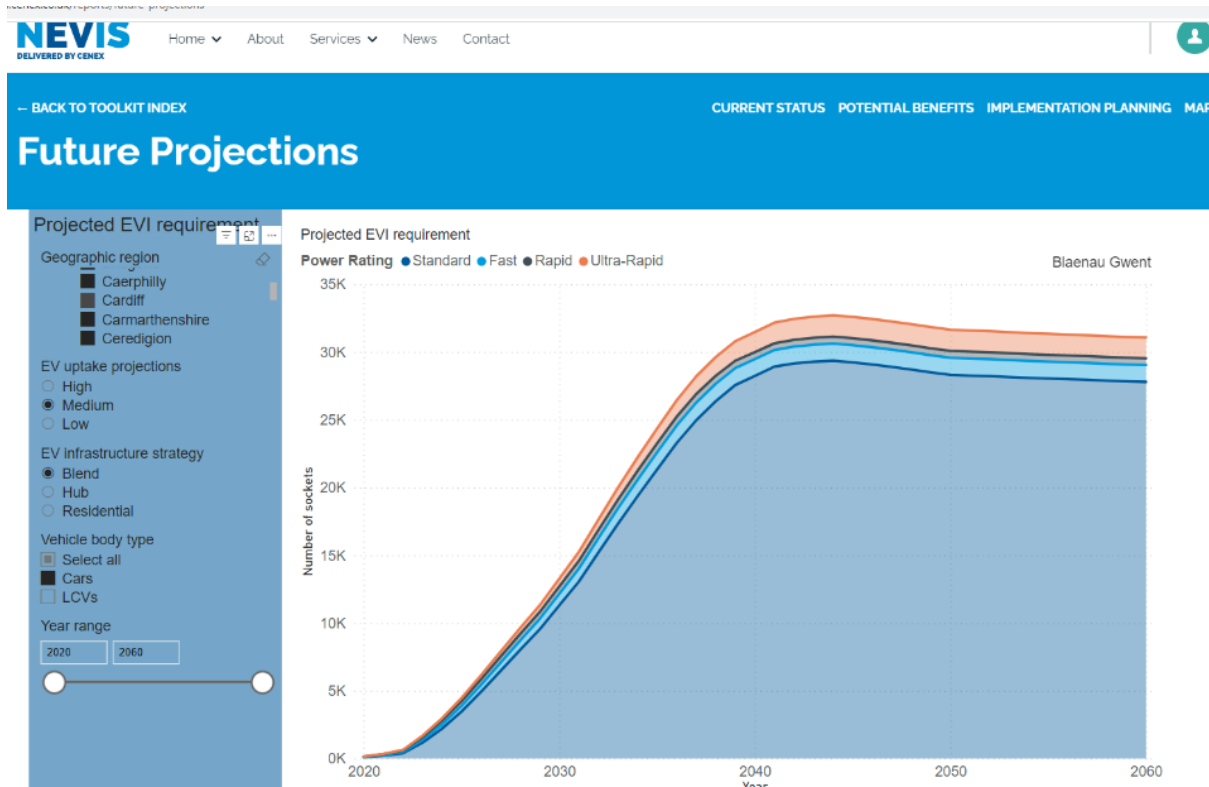
**Financial Implications** – this work will be accommodated within existing budgets.

**Update:** The Wales EV Charging Strategy published in 2021 forecast the number of EVs on the road for future years 2025 and 2030. These forecasts were made at a time when EV adoption was below 1% in Wales, as well as on the National Grid Future Energy Scenario's uppermost estimate of demand ('Leading The Way'). Based on the now reversed 2030 Internal Combustion Engine (ICE) ban it assumes no ICEs would be purchased after 2032. Furthermore, it does not fully address the Welsh Government's stretching targets for significant transfer of car trips to remote working and sustainable modes, contained within the National Transport Delivery Plan (2022-2027). Further evidence on long-term changes of travel habits post-COVID have also become better understood in the past two years.

For the above reasons, Welsh Government provided funding to Welsh local authorities who have appointed Cenex to develop new evidence-based Welsh forecasts for EVs, which will have the following advantages:

- All local authorities have access
- Continuous updating of baseline data

- Disaggregated by each LA for each year
- Linked to forecast vehicle parc and other live datasets
- Nationally accepted standard – used by LAs in England, funded by OZEV



Picture: Illustration of projected EV charging infrastructure requirement for Blaenau Gwent using Cenex National EV Insight modelling tool (NEVIS).

Cenex are already appointed to advise local authorities and other public sector bodies on EV forecasts and strategy. Their snapshot forecasts for 2025 and 2030 will be published as updates to the 2021 Strategy and that their future updates be secured and published as new data becomes available.

## Recommendation 8

The Committee recommends that:

The Deputy Minister should confirm whether the target of rapid charge points at least every 20 miles on the strategic road network is on track to be achieved and confirm when he expects the target to be met.

**Response:** Accept

The installation of 19 rapid charge points at least every 25 miles and for most of the network every 20 miles across Wales will be completed in 2023 - two years ahead of the Action Plan target. Refer to response to Recommendation 13 for further details.

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Financial Implications – None.

[Update: See response to Recommendation 6.](#)

## **Recommendation 9**

The Committee recommends that:

The Welsh Government should provide further details on specific actions related to EV charging infrastructure that the Ultra-Low Emissions Vehicle Transformation Fund (ULEVTF) will be used to fund.

**Response:** Accept

Local authorities have a crucial role to play in enabling the transition to EVs in their areas, including proactively supporting and delivering the rollout of electric vehicle chargepoints.

The purpose of the ULEV grant is to provide local authorities with government funding support to deliver publicly available EV charging infrastructure in their areas in line with the objectives of the EV charging strategy for Wales and its Action Plan.

ULEV eligibility criteria:

- **Delivery of destination charging**  
Destination charging typically takes place at locations the user would otherwise already visit: retail centres, grocers, gyms, etc. The user charges at the destination car park while they visit. In locations where dwell time is longer, e.g. overnight at hotels, slow charging may be used. Most destination chargepoints (CPs) are fast, while some may be rapid, e.g. where dwell time is shorter. PodPoint has projected that 7% of all charging will take place at destinations in a fully fledged EV market. Public rapid and ultra-rapid charging – which includes hub, on-route, and some destination – makes up 45% of public charging demand by energy, as modelled by BloombergNEF.
- **Delivery of on-street charging**  
On-street charging is typically on the slower side of public charging, with vehicles often dwelling at the charger overnight. Slow and fast CPs are often incorporated into street-side lamp posts or are installed along the kerb. Tariffs often range considerably, even within network. Reduced rates can be available for residents charging within their local area, for non-urban areas, and / or for network members. Modelling from BloombergNEF indicates that the majority of on-street charging takes place on slow chargers.

Welsh Government are encouraging local authorities to submit applications to the Office for Zero Emission Vehicle (OZEV) for the On-Street Residential Chargepoint Scheme (ORCS) once the scheme is launched. The purpose of the scheme is to increase the availability of on-street chargepoints in residential streets where off-street parking is not available, thereby ensuring that on-street

parking is not a barrier to realising the benefits of owning an EV. Refer to response to Recommendation 11.

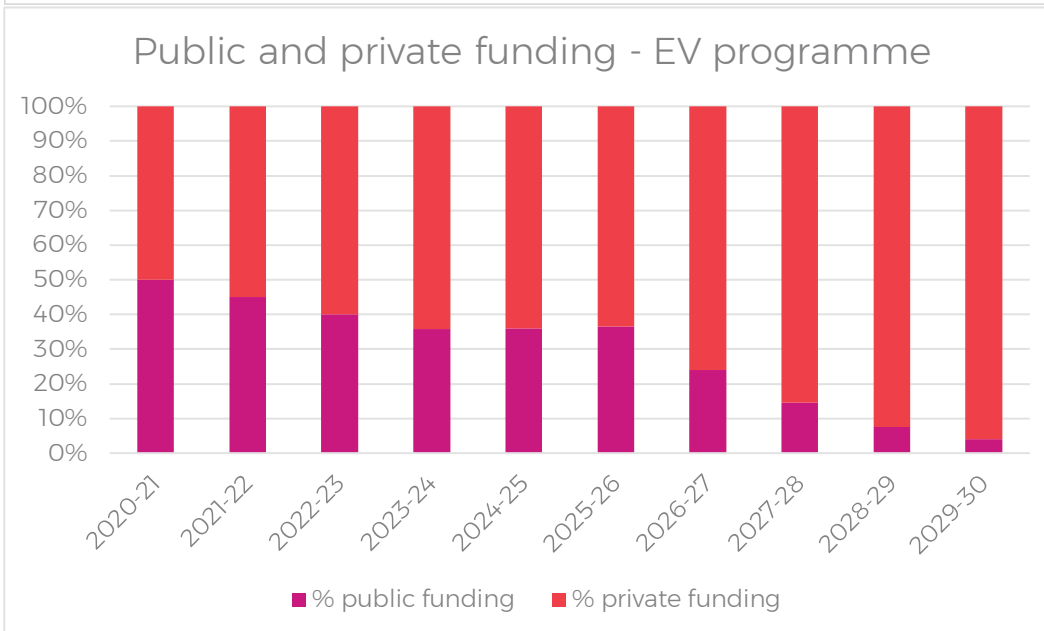
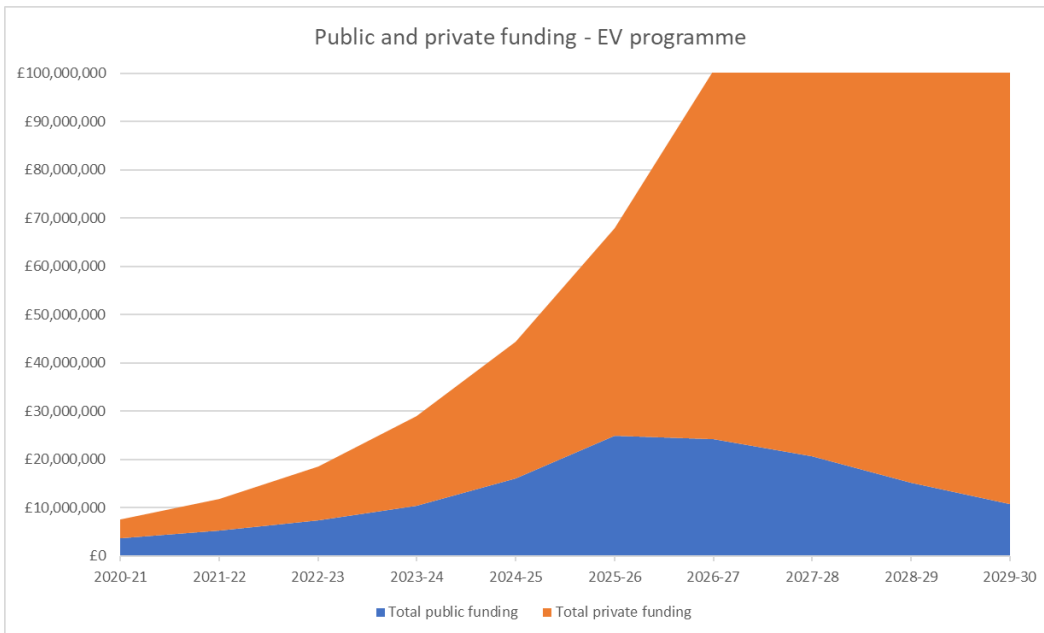
- **Delivery of hub charging facilities**

Hubs are dedicated sites, often serving multi-modal vehicle demand, sometimes with retail or industrial facilities on-site. Charging available at hubs is often rapid and ultra-rapid, with short dwell times. Hubs are sometimes used by drivers charging on-route. They are distinct from street charging and destination charging in their location and charging-focused offering. Hubs can be in remote or urban areas, but grid constraints (limiting the size of connection) and land availability can pose challenges, especially in the latter. Many hubs have charging facilities dedicated to multiple user types, e.g. taxis, fleet vehicles, buses, private cars. It can be challenging to serve different vehicle modes at one hub if their technical charging needs are unique.

- **Delivery of co-location sites**
- **Assess the opportunity for the colocation of renewables with EV charging infrastructure.**

**Financial Implications – We have allocated £8.8 million in ULEV grants for the 2023-24.**

**Future budget forecast – in the development of our Strategic Outline Business Case we have made assessments for future public budget requirements to meet the evident need, however the provision of this funding is not yet agreed and will remain challenging given current budget pressures. To maintain the proportion of charging facilities to EV cars on the road will require a substantial increase in infrastructure delivery over the 2020s, with the proportion of funding provided by the private sector rapidly increasing. The graphs below are illustrations of budget requirements based on assumptions in our business planning and are not agreed budget allocations and will in any case change according to the rate of uptake of EV vehicles.**



Total public funding (under the ULEVT fund) will remain under pressure but the private sector is expected to contribute circa £825m over this period. Transport for Wales will manage the ULEVT fund going forward, with their ability to offer expertise and project management support. This will be complemented by encouraging local authorities to include staff resource dedicated to delivery in their plans, including better engagement with the commercial sector to ensure this outside investment is realised. ULEVT has been restructured to favour projects which enable rather than compete with private sector plans.

## Recommendation 10

The Committee recommends that:

The Welsh Government should work with stakeholders to develop guidelines for best practice in placing public charging infrastructure.

**Response:** Accept

Welsh Government has developed National Standards for EV Charging Infrastructure in Wales. The online guide details a set of best practice recommendations for safe, accessible, and reliable public electric vehicle charging in Wales. The Standards have been developed for use by public sector organisations, community enterprises and delivery partners involved in the deployment of electric vehicle charging infrastructure in Wales. Except where explicitly stated, the recommendations set out in the National Standards are not legally binding. Instead, they have been developed to form an informative best practice guide to support Wales towards its net zero carbon targets.

The recommendations cover areas including the specifications surrounding charge point design, such as speeds, planning requirements and plug connection types, as well as placement of the charge point within the surrounding environment. They also cover aspects of streetscape, including accessibility and security, energy and connection needs, operational aspects, procurement notes and emerging and future considerations. They provide solutions to avoid any obstruction of footways and safeguard travel routes. It is appreciated that not all the recommendations will be applicable in every situation as each individual charge point needs to respond to local needs and nuances, as well as regional and national policy frameworks. However, the National Standards strive to ensure that, going forward, all users of electric vehicles in Wales are confident in their ability to access charging infrastructure wherever and whenever required.

The National Standards will be published shortly.

**Financial Implications** – None.

**Update:** National Standards published and disseminated across LAs and industry.

**[Electric vehicle charging infrastructure: national standards | GOV.WALES](#)**

## Recommendation 11

The Committee recommends that:

The Welsh Government should assess the impact of the decision to no longer allow Welsh Government funding to be used to make up the 25% of funding not covered by a grant under the On-Street Residential Charging Scheme (ORCS) and provide information on discussions it has held with the UK Government on this issue.

**Response:** Accept



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Welsh Government are encouraging local authorities to submit applications to the Office for Zero Emission Vehicle (OZEV) for the On-Street Residential Chargepoint Scheme (ORCS) once the scheme is launched. The purpose of the scheme is to increase the availability of on-street chargepoints in residential streets where off-street parking is not available, thereby ensuring that on-street parking is not a barrier to realising the benefits of owning an EV.

The scheme gives local authorities access to grant funding that can be used to part-fund the procurement and installation of on-street EV chargepoint infrastructure for residential needs. As demand for on-street charging infrastructure grows, Welsh Government expect the private sector to invest more to build and operate a thriving, self-sustaining public network. It is essential that local authorities facilitate commercial models being put in place to ensure networks can continue to expand and improve, to serve residents' needs. Local authorities are encouraged to explore all commercial options available to them when planning EV infrastructure.

ORCS 2023-24 applications will be eligible for 50% ORCS funding and will be required to secure 50% private match-funding. We work closely with the OZEV and agree with them about the need to ensure that private companies are contributing to chargepoints roll-out.

**Financial Implications** – None.

**Update:** As the commercial sector grows together with demand for on-street charging, increasingly EVCI can be delivered on street at reduced or minimal cost to LAs. TfW are supporting LAs already taking this approach and looking to share learnings to roll out demonstrator projects across other areas where off-street parking is limited.

## **Recommendation 12**

The Committee recommends that:

The Welsh Government should explain why the connections Group that it committed to establishing under Action 2 was not established according to the timeline in the Action Plan. The Welsh Government should establish the connections Group within the next few weeks.

**Response:** Accept in Principle

Welsh Government plan is planning to establish a Connections group in early autumn 2023 that will include Welsh Government, TfW and Distribution Network Operators initially to scope the remit of the group. At that point, the group will identify what other parties would need to be involve. The overarching purpose of the Connections group will be to maximise the availability of power for charging vehicles.

Officials have established a good working relationship with both SPEN and National Grid (WPD). It was felt that a robust delivery programme needed to be developed before the Connections Group is established, so that the group could be presented with a clear and agreed direction of travel.

**Financial Implications** – None.

**Update: Connections Group established spring 2023 with encouraging attendance from DNOs, industry and LAs, and a list of actions already providing valuable assistance in delivery across all partners. These have been warmly welcomed by the DNOs. NGED have commented:**

*'National Grid Electricity Distribution appreciate the opportunity to work closely with stakeholder groups such as TfW. The engagement is very valuable and provides a greater level of certainty for the location and build rates for the provision of electric vehicle charging points across Wales that TfW have a direct influence on. By undertaking this engagement at an early stage, NGED are able to build these projections into our strategic planning process and ensure that we invest in our networks to help all of our customers to achieve their decarbonisation ambitions.'*

### **Recommendation 13**

The Committee recommends that:

The Deputy Minister should provide an update on the comments from the Electric Vehicle Association (EVA) Cymru that infrastructure is in place in only 3 of the 21 locations identified by TfW as expecting new infrastructure under Action 3.

**Response:** Accept

The SRN Rapid project included 11 sites originally (not counting Bala as the pilot site). The 21 figure reflected chargepoints for the original 11 sites and not locations.

TfW have added another 7 sites to the project, which means they are delivering 36 chargepoints on 19 sites (if we add in Bala).

A site in Conwy was removed from the project and replaced with a site in Anglesey.

TfW have already delivered 6 of the 19 locations and on track to deliver the remaining 13 locations this year, most of them by Q3 2023.

Location	Local Authority	Site Live	Updates
Bala Pilot - Y Grîn (Pilot Site)	Gwynedd	17/11/2021	Completed - site live Transferred ownership to SWARCO - 22/11/22
Machynlleth - Bank St	Powys	14/07/2022	Completed - site live

Crickhowell - Beaufort St	Powys	27/09/2022	Completed - site live
Newtown - Back Lane	Powys	19/12/2022	Completed - site live
Llandovery - Castle Car Park	Carmarthenshire	23/12/2022	Completed - site live
Llanybydder - CP off Teras-Yr-Osaf	Carmarthenshire	23/12/2022	Completed - site live
Dolgellau - Y Marian Mawr	Gwynedd	26/05/2023	Completed - site live
Porthmadog - Lard-yr-Orsaf	Gwynedd	26/05/2023	Completed - site live
Blaenau Ffestiniog - Diffwys	Gwynedd	26/05/2023	Completed - site live
Ammanford - Carregamman Car Park	Carmarthenshire	Q2 2023	Completed - site live
Corwen Car Park	Denbighshire	Q2 2023	Completed - site live
Welshpool - Church Street	Powys	12/05/2023	Completed - site live
Llandrindod Wells - High Street CP	Powys	19/05/2023	Completed - site live
Porthcawl - Eastern Promenade	Bridgend	Q3 2023 - TBC	Lease to be returned.
Talgarth CP	Powys	Q3 2023 - TBC	Forecast completion still Q3 2023
Newcastle Emlyn - Livestock Market CP	Carmarthenshire	TBC	Car park to be registered before wayleave can clear, then need to build a Transformer.
Craig -y -Nos	Powys - Brecon National Park	TBC	Planning required and 1MW substation to be delivered. Also wayleaves and lease to be completed
Llangurig - Blue Bell	Powys (private landlord)	TBC	Lease to be agreed.
Plas Arthur Leisure Centre	IACC	TBC	Planning required.
Colwyn Bay Princes Drive CP	Conwy		Site removed from the project by Conwy council

**Financial Implications** – Total project costs: £697,959. Approximately £500k of Ofgem Green Recovery funding towards the DNO costs was received for 8 of the 19 sites.

## Recommendation 14

The Committee recommends that:

The Welsh Government should clarify why Action 4 was delivered late and provide an update on when the Standard was completed and whether local authorities have used it since then.

**Response:** Accept

Refer to response to Recommendation 10.

The development of the National Standards formed part of a portfolio of six complex and ambitious workstreams commissioned by Welsh Government and delivered by Arup between April 2022 and March 2023 that will help TfW, local authorities and other delivery partners accelerate the delivery of charging infrastructure across Wales.

The Welsh Government believes it was important to take the time required to develop strong evidence-base Standards.

**Financial Implications** – None.

## **Recommendation 15**

The Committee recommends that:

The Welsh Government should explain why the review of building regulations was not delivered in 2022, as committed to under Action 5.

**Response:** Accept

The requirement to prioritise work meant that the consultation on the amendment of Building Regulations to mandate EV chargepoints was deferred but work has now progressed, and the consultation is due to be launched in summer 2023.

**Financial Implications** – £100k has been allocated to delivering the Building Regulations consultation.

## **Recommendation 16**

The Committee recommends that:

The Welsh Government should work closely with local authorities and stakeholders to ensure the review of building regulations to support EV uptake is completed as soon as possible. The Welsh Government should provide the Committee with a timeline for completing this work. The Government should consider how the planning system can encourage or require the delivery of charging infrastructure alongside other appropriate developments such as hotels, visitor attractions, and fuelling stations.

**Response:** Accept

A consultation on the amendment of Building Regulations to mandate EV chargepoints is due to be launched in summer 2023.

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Both Planning Policy Wales and Future Wales support the provision of EV chargepoints. Future Wales, which has development plan status, states under Policy 12: Regional Connectivity that: "Where car parking is provided for new non-residential development, planning authorities should seek a minimum of 10% of car parking spaces to have electric vehicle charging points."

**Financial Implications** – £100k has been allocated to delivering the Building Regulations consultation.

### **Recommendation 17**

The Committee recommends that:

The Welsh Government should explain why a charge point operator working group was not established in 2021, as committed to under Action 6. The Welsh Government should fulfil the commitment in the Action Plan and establish the charge point operator group within the next few weeks. This group is essential to speed up the deployment of the EV charging infrastructure.

**Response:** Accept in Principle

Welsh Government and TfW agreed that the EV charging Infrastructure Programme (as defined in response to Recommendation 5) was a prerequisite to our formal engagement with a group of CPOs. We expect the majority of the EV charging infrastructure in Wales will be delivered by the private sector (and the UK Government agrees with this position). Our financial case modelling estimates the cost of installing all On-Route and Destination charging infrastructure in Wales to reach £351 million to £1.550 million by 2040. It was therefore crucial that we take the time to establish clear, evidenced-based priorities and actions that will enable public and private sector delivery partners to accelerate the delivery of infrastructure across Wales.

The Infrastructure Programme is now completed and TfW, with support from Welsh Government, will set up a CPO Working group in the summer 2023.

**Financial Implications** – None.

**Update:** [CPO working group now set up as detailed above.](#)

### **Recommendation 18**

The Committee recommends that:

The Committee would like an update on the development of the proposal for an in-house service desk to facilitate all aspects of EV charge point delivery and management, including whether it will be reflected in a revised Action Plan or associated KPIs.

**Response:** Accept

TfW's capacity was increased in September 2022 to oversee the implementation of the in-house service desk. TfW met with each local authority to gain a greater understanding of their EV charging infrastructure plans, issues and support requirements.

The service desk is operational and provides bilingual call out support to public and private sector EV charging delivery partners, enabling them to respond in Welsh to queries from users.

Through the service desk, TfW organises and delivers webinars on issues and topics raised by delivery partners. The first webinar on 14<sup>th</sup> April 2023 delivered a presentation on [the National EV Insight & Strategy \(NEVIS\) tools](#). This resulted in strong positive feedback which led to the decision to enable local authorities and NHS organisations to access the NEVIS tools through the service desk. The Insights toolkit provides data analysis that ensure that delivery partner organisations are equipped to deliver a clear vision, strategy and delivery plan for EV infrastructure. The Knowledge Repository toolkit will equip and resource local authorities and NHS organisations with guidance and key information for each stage of the EV infrastructure delivery process (developing strategy; delivering planning; procurement; mobilisation & installation; and operations). The service also provides a discussion group platform for sharing experience and topic ideas, encouraging collaboration and contribution.

**Financial Implications** – None.

**Update:** [All the above tools continue to be available and are continuously developed for the benefit of commercial and public sector partners.](#)

## **Recommendation 19**

The Committee recommends that:

The KPI for Action 7 – 'Increase public awareness' - should be revisited to make it more granular and measurable.

**Response:** Accept

Welsh Government will review the KPI for Action 7, as part of our wider KPI review (refers to our response to Recommendation 7).

**Financial Implications** – this work will be accommodated within existing budgets.

**Update:** [Benefits of EVs communicated to users via the Climate Action Wales \(Green Transport Choices\) website. CPO group gave talks during the Wales Climate Week 2023.](#)

## **Recommendation 20**

The Committee recommends that:

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The Deputy Minister should clarify why Action 8 – ‘Encourage investment opportunity and innovation’ - was not delivered on time and take steps to progress it within the next six months.

**Response:** Accept

Welsh Government believes it was essential to develop a credible delivery programme and preferred network before engaging with delivery partners to discuss investment opportunities. This work took Welsh Government approximately 12 months to deliver.

Welsh Government is bringing together the Transport Decarbonisation and Business & Regions teams to explore and deliver private sector investment and innovation opportunities in the field of EVs and EV charging.

Welsh Government is building a new National EV Charging Procurement Framework that will help the development of supply chain, innovation and investment opportunities across Wales. The Framework is scheduled to be ready by the end of the summer.

TfW are working with local authorities and private sector to identify and implement innovative solutions and investment opportunities that will help resolve key issues that are currently hindering progress – e.g. on-street charging solutions.

**Financial Implications** – None.

**Update:** TfW are working with on-street charging providers to identify and disseminate information on emerging new technologies and commercial models for delivery.

## **Recommendation 21**

The Committee recommends that:

The Deputy Minister should provide a detailed update on the progress made against Action 9 and the tool it has commissioned to assess the opportunity for the co-location of renewables and EV charging infrastructure.

**Response:** Accept

Welsh Government has commissioned Arup to design and create a modelling tool to assess the opportunity for the colocation of renewables with EV charging infrastructure (referred to as the ‘colocation tool’). The tool is ready and is designed for site level work which may sit within broader Smart Local Energy Systems (SLES) or Local Area Energy Plans (LAEPs).

The purpose of the tool is to appraise opportunities for the use of renewables within EV charging sites. For a given site, the tool will compare:

- Connecting the site to the electricity grid with no renewables.

- Using wind and solar canopy with any excess renewables exported to the grid.
- Using ground mounted solar and solar canopy with any excess renewables exported to the grid.
- Using wind and solar canopy with battery storage.
- Using ground mounted and solar canopy with battery storage.

The tool can also be used to compare different sites.

The colocation tool is designed to improve understanding around the following points:

- The types of EV charging sites most suitable for the colocation of renewables.
- The renewable and storage configurations most suitable for colocation with EV charging.
- High-level indication of the comparative costs of colocation.
- Where additional financial support may be required to support installation of colocation sites.

Installing behind-the-meter renewables at EV sites has the potential benefits of:

- Providing zero or low carbon electricity to EVs
- Reducing demand on electricity networks, particularly in constrained areas

Financial Implications – None.





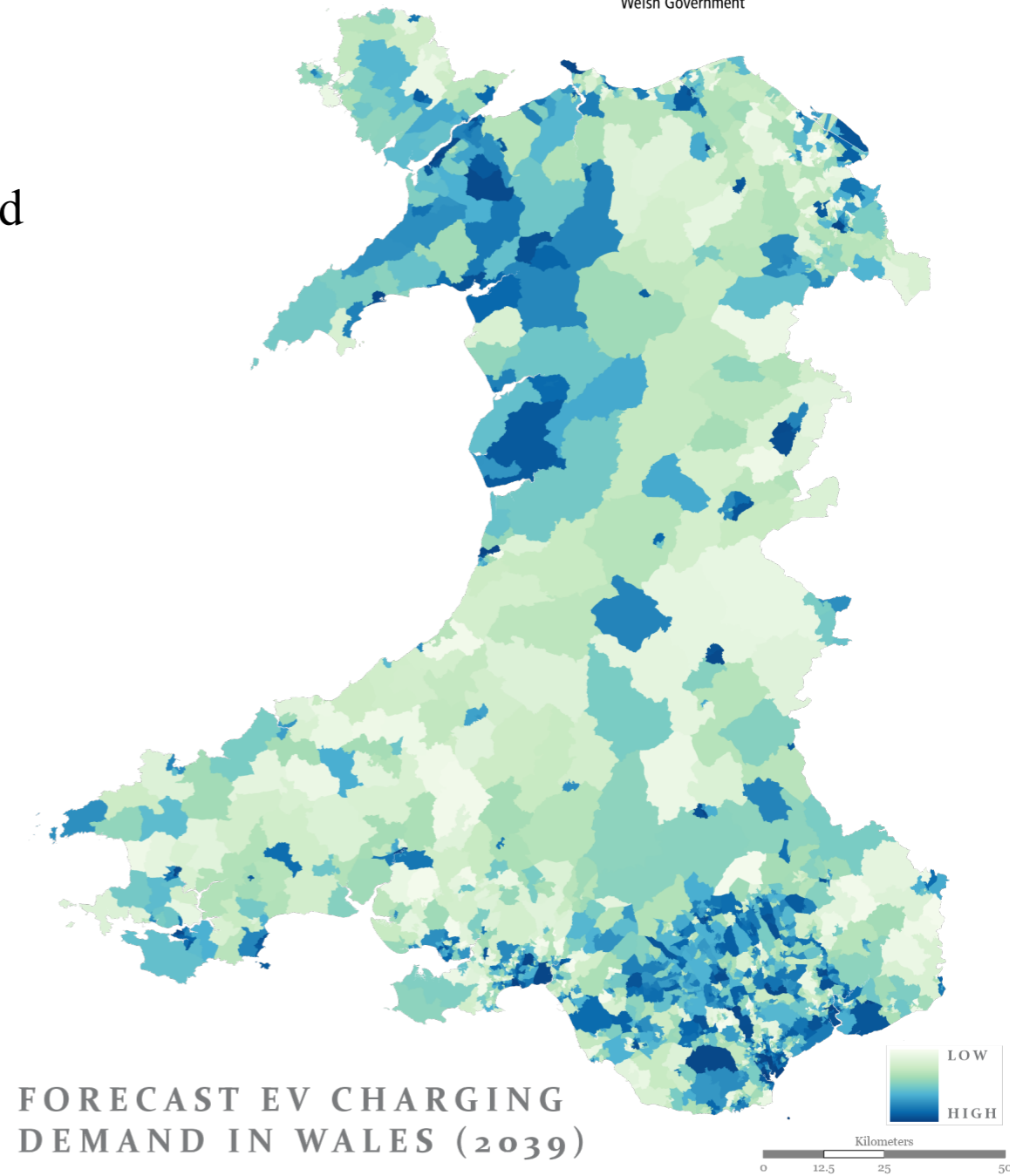
Welsh Government

# Electric Vehicle Charging Infrastructure Programme Strategic Outline Business Case: Commercial, Financial and Management Cases

Executive Summary

Final Arup report to the Welsh Government  
February 2023

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## Reliance on Our Advice and Reports

This report is produced to the Strategic Outline Business case (SOBC) level, the scoping stage. At this stage the costs and affordability figures are indicative only.

This report and the capital expenditure (CAPEX) estimate results included in the Financial Case (the Results) has been prepared by Arup specifically for and under the instructions and requirements of Welsh Government in connection with the Electric Vehicle Charging Infrastructure Strategy for Wales, under the Schedule 2b contract dated 28 February 2022.

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## Glossary of terms

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AIE	The European Association of Electrical Contractors	TfW	Transport for Wales
CE	Consumer Efficiency (demand scenario)	Tx	Transformation
CP	Chargepoint	ULEVs	Ultra Low Emission Vehicles
CPO	Charge point operator	WelTAG	Welsh Transport Appraisal Guidance
DfT	Department for Transport	WG	Welsh Government
DNOs	Distribution Network Operators	WLGA	Welsh Local Government Association
ESG	Environmental, Social, and Governance		
EVCI	Electric Vehicle Charging Infrastructure		
EV	Electric Vehicle		
GS	Government on-Street (demand scenario)		
LA	Local Authority		
LSOAs	Lower Super Output Areas		
MSOAs	Middle Super Output Areas		
OEM	Original Equipment Manufacturer		
RD	Rapid Dominant (demand scenario)		
SOBC	Strategic Outline Business Case		
TfL	Transport for London		

# Executive summary

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# Introduction and context

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## Executive summary

### Introduction

#### Purpose of this document

The purpose of this report is to explore how the Electric Vehicle Charging Infrastructure Strategy for Wales and accompanying Action Plan will be delivered in practice, to be referred to as the Electric Vehicle Charging Infrastructure Programme, as WG sets out to accelerate the roll-out of electric vehicle charging infrastructure across Wales. This report has been prepared for Welsh Government.

In 2021, Welsh Government launched the Electric Vehicle Charging Strategy for Wales (the Strategy), which sets out the vision for electric vehicle charging in Wales, outlining the current context, future charging needs, and how these can be met.

Welsh Government (WG) commissioned Arup to produce the three cases relevant to the deliverability of the Strategy to the Strategic Outline Business Case (SOBC) level, for the Electric Vehicle Charging Infrastructure (EVCI) Programme for Wales:

- **The commercial case** introduces key aspects of the charging market – including the EV charging value chain and a spectrum of potential business models. The case presents the results of a capability and capacity assessment of the public sector, capturing: existing and aspirational capability to deliver the Strategy, the roles to be played by different bodies in that delivery, barriers to strategy roll-out and interventions to overcome, and plans for engagement with the private sector.
- **The financial case** focuses on the total capital costs of the EV charging infrastructure roll-out required to meet future EV demand projections. The financial case presents a high-level estimate of the range of total capital cost of installing all on-route and destination charging infrastructure in Wales, agnostic of which body (whether public or private sector) is taking financial responsibility.
- **The management case** explores how the programme will be overseen, managed and delivered in the next phase, and subsequently. By defining and putting in the place the necessary management plans in place, such as programme management and risks management, this provides the reassurances the programme is achievable and that WG, Transport for Wales (TfW) and other delivery partners have the capacity to deliver the programme, which in this case, is the EV Charging Infrastructure for Wales Strategy.

The development of the three cases above are aligned with HM Treasury’s Green Book and the Welsh Transport Appraisal Guidance (WelTAG).



Figure 1: Electric Vehicle Charging Infrastructure Strategy for Wales

Source: Welsh Government, 2021

## Executive summary

### The EV market today

#### Wales currently has fewer EVs, and fewer chargepoints than other parts of the UK

Wales currently has a relatively low level of EV uptake per capita, compared to other regions of the UK. Installed charging infrastructure is also low, especially for On-Route rapid and ultra-rapid charging, creating gaps in the minimum viable network of charging required for longer trips.

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There are 1,310 public CPs installed in Wales, with eight battery electric vehicles (BEVs) or thirteen plug-in vehicles (BEVs, plug-in hybrids, other) per CP. 3.7% of public UK CPs are installed in Wales, where 2.2% of BEVs and 2.1% of all EVs are licensed.

Among UK regions, Wales ranks 10th in number of installed CPs, 2nd in CPs per licensed BEV, 3rd in CPs per licensed EV (BEVs and others), 6th in CPs per capita, and 10th in EVs per capita (out of 12 major UK regions). Lower levels of public charging infrastructure can have a dampening effect on EV uptake.

	# CPs	# BEVs /CP	# EVs /CP	# People /CP	# People /EV
Greater London	11,272	5	9	799	91
South East	4,606	24	40	2,001	50
Scotland	3,562	8	14	1,535	110
West Midlands	2,617	14	22	2,278	105
South West	2,438	30	46	2,321	50
East of England	2,303	17	35	2,722	77
North West	2,253	24	46	3,270	71
Yorkshire and the Humber	1,952	18	32	2,831	89
East Midlands	1,847	13	23	2,634	112
Wales	1,310	8	13	2,420	183
North East	1,069	8	12	2,508	203
Northern Ireland	352	17	29	5,385	184

**KEY:** Less infrastructure More Infrastructure

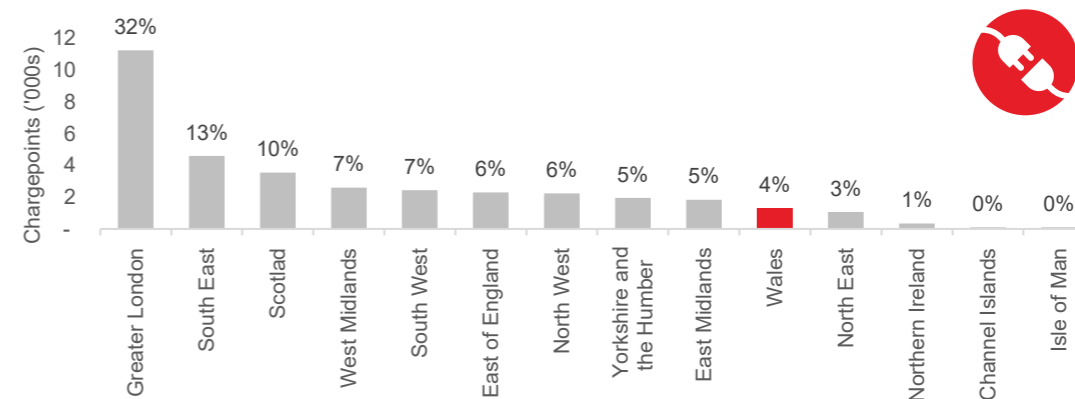


Figure 2: UK public chargepoints by region

Source: ZapMap August 2022

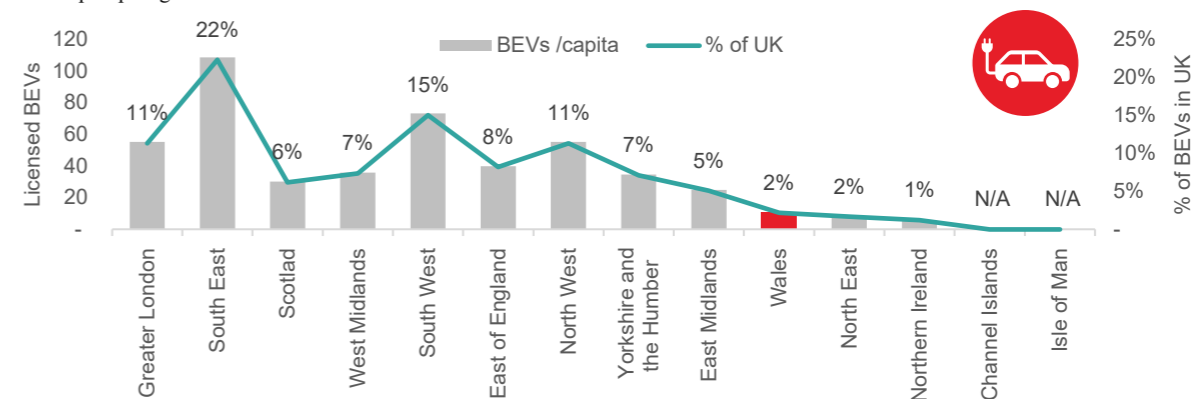


Figure 3: UK battery electric vehicles (BEVs) by region

Source: DfT, 2022



## Executive summary

### The EV market: future development and challenges

#### The current pace of EV charging roll-out in Wales is too slow and government intervention is needed to achieve the aims of the Strategy

Based on Arup modelling, to fulfil demand, the projected number of fast chargers needed across Wales will reach around 34,000 chargers by 2030. As of August 2022, Wales currently has 1.2% of this total installed. Furthermore, around 4,000 rapid chargers are projected to be needed by 2030, with 1.7% of this total installed so far.

DfT statistics currently show the growth of the number of licensed EVs in Wales is outpacing the growth of publicly-available chargers by a factor of almost three. Between October 2019 and July 2022, the number of licensed EVs increased by 305%, yet the number of publicly-owned chargers increased by 125%.

Key strategy elements include encouraging transport decarbonisation, delivering at high standards, and equality of coverage and access.

Given the impending 2030 ban on new wholly diesel and petrol car sales, the pace of delivery will need to accelerate significantly if the WG is to deliver sufficient and equitable accessibility to a CP across Wales, as per the Strategy.

As such, continuing with current trends and levels of intervention is highly unlikely to be enough to deliver the charging infrastructure needed to meet current and future demand.

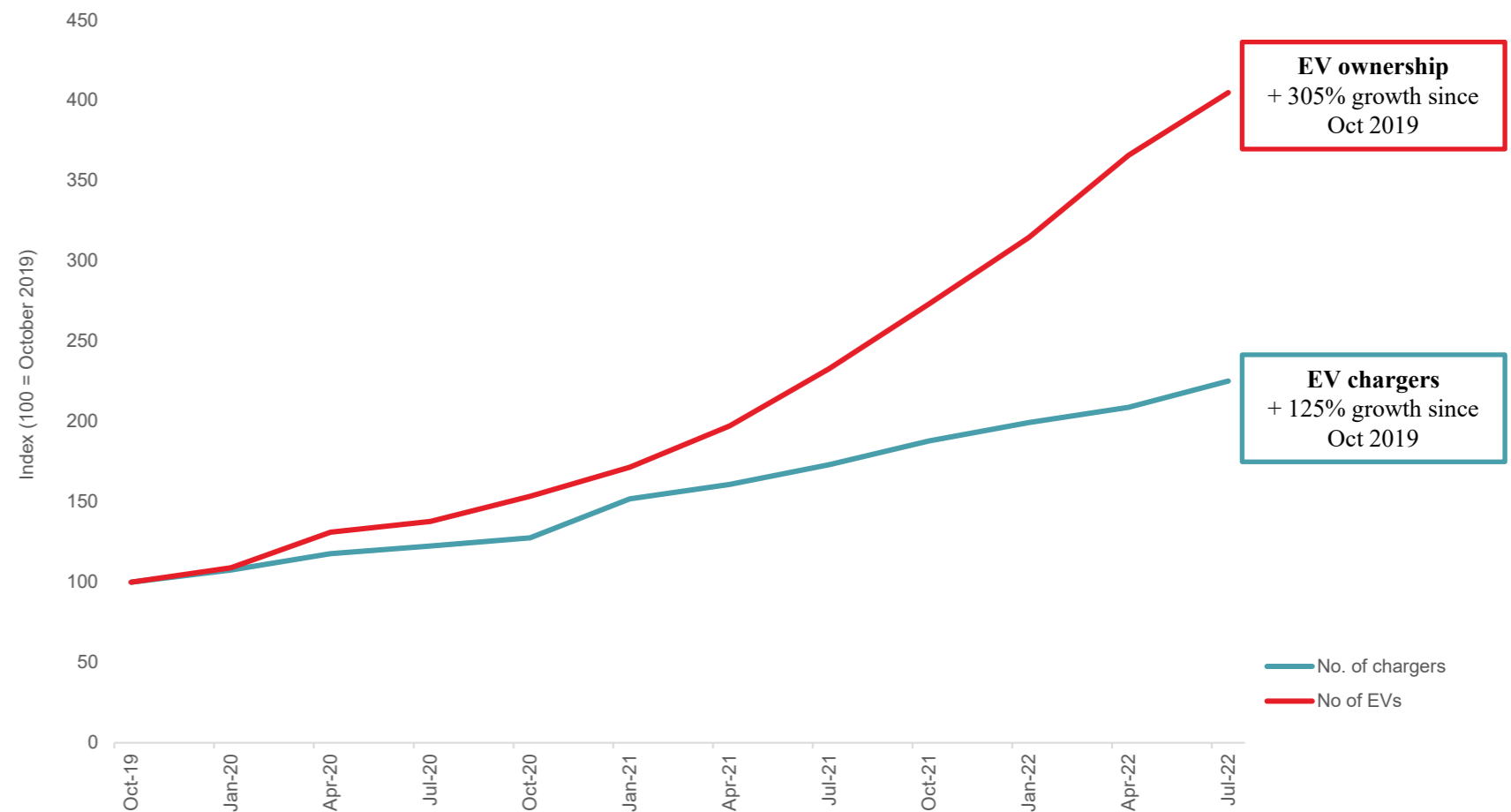


Figure 4: No. of EV chargers vs no. of licensed EVs in Wales (base index = 2019)

Source: DfT, as of October 2022

# Key findings of the commercial, financial and management cases

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## Executive summary

### Key findings of the Strategic Outline Business Case: commercial, financial and management cases

#### Commercial case [1/2]

Arup expects that the majority of charging will be delivered and funded by the private sector; however, where private sector roll-out would lead to opportunity gaps in the WG strategy, Arup recommends considering intervention through policy, selected subsidies, plans and developments. WG has a choice about the areas of the value chain in which to intervene, the role it will play and the funding or benefits funding it will provide – these should be considered on a case-by-case basis.

- Emerging recommendation
- Potential pathway
- Not recommended
- Not applicable

Opportunity Type:	Key Take-Aways	Sites Developed on Private Land by Private CPOs	Sites Developed in PPP on Private Land	Sites Developed on Public Land by Private CPOs	Sites Developed in PPP on Public Land	Sites Developed on Public Land by Public Sector
<span style="background-color: #c8e6c9; border-radius: 50%; padding: 2px;">*</span> Policy Intervention	The Welsh Government's main role across all opportunities lies in policy-based interventions that remove barriers, promote decarbonisation, and incentivise investment. These policy interventions can support both the private sector and other public sector bodies.	<span style="color: green;">●</span>	<span style="color: green;">●</span>	<span style="color: green;">●</span>	<span style="color: green;">●</span>	<span style="color: green;">●</span>
<span style="background-color: #cccccc; border-radius: 50%; padding: 2px;">A</span> Subsidy / auction / franchise	Out of all Welsh public sector bodies, the Welsh Government has the most capacity – skill and resource – to financially intervene. This should be considered on a case-by case basis, with specific and targeted beneficiaries, with a special focus on closing equality gaps.	<i>Consider on a case-by-case basis where equality gaps emerge – all financial intervention should be targeted (specific sites, capex types, or areas) and balanced against other public needs.</i>			<i>Access to grants can help Local Authorities capture local opportunities.</i>	
<span style="background-color: #cccccc; border-radius: 50%; padding: 2px;">A</span> Plan and lease / licence	On publicly-owned land that is well suited to EV charging, public sector delivery entities (TfW and Local Authorities) could plan sites and lease them out to private CPOs. The public sector could also offer planning support to private investors to help de-risk and incentivise.	<i>Planning support can be offered by the public sector to help de-risk private investment</i>		<span style="color: green;">●</span>	<span style="color: green;">●</span>	<span style="color: grey;">●</span>
<span style="background-color: #cccccc; border-radius: 50%; padding: 2px;">A</span> Develop and lease / licence	On publicly-owned land that is well suited to EV charging, public sector delivery entities (TfW and Local Authorities) could plan sites and develop sites, then lease them out to private CPOs. This option is more capital intensive, with not much public sector capability.	<span style="color: red;">●</span>	<span style="color: red;">●</span>	<span style="color: yellow;">●</span>	<span style="color: yellow;">●</span>	<span style="color: grey;">●</span>
<span style="background-color: #cccccc; border-radius: 50%; padding: 2px;">B</span> Low-control JV	In a low-control JV, public sector delivery entities could have a degree of control over charging outcomes at the site, without taking on the full investment risk (however, still facing demand risk). Operations should largely be outsourced to private CPOs.	<span style="color: red;">●</span>	<span style="color: yellow;">●</span>	<span style="color: grey;">●</span>	<span style="color: green;">●</span>	<span style="color: grey;">●</span>
<span style="background-color: #cccccc; border-radius: 50%; padding: 2px;">B</span> High-control JV	In a high-control JV, a private sector partner would likely expect significant public sector investment, and the public sector would face demand risk. Operations should largely be outsourced to private CPOs, but the public sector could offer support (e.g., user experience).	<span style="color: red;">●</span>	<span style="color: red;">●</span>	<span style="color: grey;">●</span>	<span style="color: yellow;">●</span>	<span style="color: grey;">●</span>
<span style="background-color: #cccccc; border-radius: 50%; padding: 2px;">C</span> Own and appoint operator	The private sector could retain full ownership of a charging site on suitable public land and outsourcing site operations to a private sector CPO. This would require significant capital investment and full exposure to demand risk.	<span style="color: red;">●</span>	<span style="color: red;">●</span>	<span style="color: grey;">●</span>	<span style="color: yellow;">●</span>	<span style="color: green;">●</span>
<span style="background-color: #cccccc; border-radius: 50%; padding: 2px;">C</span> Own and operate	Arup does not recommend this option to be deployed on a wide-scale basis, as it is in conflict with the Welsh Government's low appetite for operational risk. Select opportunities – especially in the On-Route network could be owned and operated by TfW.	<span style="color: red;">●</span>	<span style="color: red;">●</span>	<span style="color: grey;">●</span>	<span style="color: red;">●</span>	<span style="color: yellow;">●</span>

## Executive summary

### Key findings of the Strategic Outline Business Case: commercial, financial and management cases

#### Commercial case [2/2]

Next steps should include socialising the EV charging strategy, engaging with the private sector and tailoring the approach to intervention.

#### Capability of the public sector

Public sector capability is strongest in planning, finance, power supply, and contract management activities. Significant gaps exist in public sector site design, CP installation and civils, operation, and maintenance capability.

#### Next Steps:

##### 1. Roles across the Public Sector

Roles of the public sector should include:

- **Welsh Government** – oversight and socialisation of the EV charging strategy, setting standards, monitoring strategy progress, policy intervention, and financial intervention.
- **Transport for Wales** – delivering and monitoring the strategy at On-Route sites and rail station car parks, and providing delivery support to LAs and Welsh Government.
- **Local Authorities** – delivering and monitoring the strategy locally, at destinations and on-street, with support from TfW.

##### 2. Engagement with the private sector

To understand the size and scope required public sector intervention, further engagement with the private sector is required. How much infrastructure will the public sector roll out? Where will this be located and who will it serve?

##### 3. Prioritisation of Delivery

Arup recommends that two elements of the delivery strategy be prioritised first (before moving on to others): the **on-route network** and **destination /on-street charging in built-up areas**. These elements will have the most short-term benefit for users in Wales, providing a strong cross-national network and catering to users who have a greater need for public charging.

#### 4. Approach to Intervention

There is no “one size fits all” business model or approach to public sector intervention. Different locations, modes, and sites will require different amounts and types of intervention. The table opposite outlines key take-aways from Arup’s emerging recommendations around business models to be employed on a targeted basis. Arup recommends that procurement take into account steps to mitigate identified barriers to strategy implementation – including flexible procurement, and larger opportunities and longer contractual terms that reflect the appetite of the private sector.

## Executive summary

### Key findings of the Strategic Outline Business Case: commercial, financial and management cases

#### Financial case

The financial case suggests a total capex cost of between £351 to £1,550m for On-Route and Destination charging by 2040. This analysis is agnostic of which body is taking financial responsibility.

#### Financial case modelling

The financial case presents a high-level estimate of the cost of installing all On-Route and Destination charging infrastructure in Wales, agnostic of what body is taking financial responsibility. The case includes on On-Route and Destination charging only. Capital costs include grid connection and substation costs, equipment supply and installation, planning, and civils. The range of results is wide because of uncertainties inherent to the development of the EV charging market – in terms of EV uptake, total demand, user behaviour, and both location and speed of charging

From the minimum to maximum range across all scenarios and sensitivities, capex reaches **£351 to 1,550 million by 2040**, with no growth after that point, with £114 to 689 million spent on On-Route charging and £236 to 861 million on Destination charging. By this point On-Route chargepoints number 1.1 to 6.5 thousand and Destination 6.4 to 61.8 thousand, with a total of **7.4 to 68.4 thousand**. Charging capacity reaches 141 to 1,165 MW, spread across 968 to 23,500 sites.

#### Legend:

- Central case results
- Range of min to max results (sensitivities applied to *Central Case* demand)
- Range of min to max results (sensitivities applied to all demand scenarios)

#### Next Steps

We recommend the following next steps:

1. **Refine the range of results:** consider location-specific costs, like grid connection; excluded costs, like land and opex; and evaluate LSOA-level demand and indicative costs.
2. **Engage with the private sector to understand plans:** form a view of private sector roll-out that will happen without intervention to identify gaps; collaborate with the private sector to align investment to the preferred network.
3. **Determine the phasing of roll-out:** prioritise intervention in the on-route network and public local charging in built up areas; evaluate the effects of roll-out phasing on public and private financial investment into public charging.
4. **Determine the size & scope of the funding envelope:** once the range of results, private sector engagement, and phasing have been considered, determine the size of the government funding envelope – how much is the public sector willing to invest? What non-financial actions could be taken to reduce the need for financial intervention? In what aspects of the public charging value chain is the government willing to invest?
5. **Explore options for financing:** once the public funding envelope has been determined, explore the means for financing and detailed commercial approach – this might include bundling sites and using Financial Transaction Reserve.

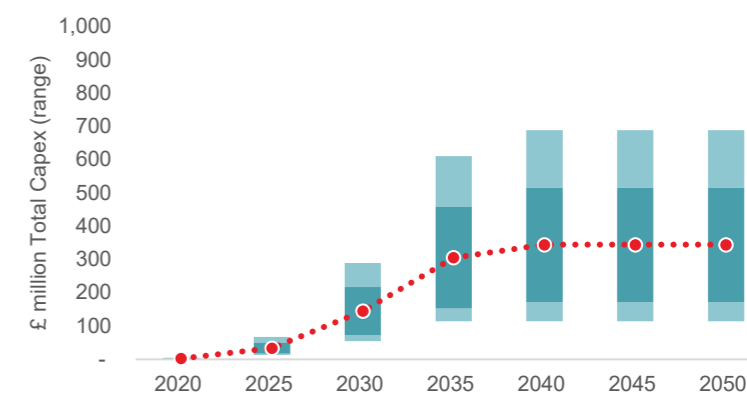


Figure 5: Total capex (£ million, range of results): on-route

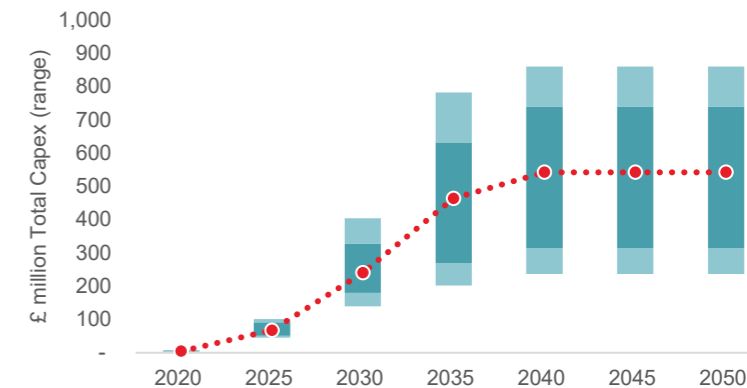


Figure 6: Total capex (£ million, range of results): destination

## Executive summary

### Key findings of the Strategic Outline Business Case: commercial, financial and management Cases

#### Management case

The management case outlines the key considerations when delivering and managing the programme of interventions needed to facilitate and deliver the preferred network.

The scale and complexity of delivering the EVCI programme necessitates a strong and effective management structure which determines how WG and delivery partners will deliver and manage the EVCI programme. This is a significant step-up from the WG resources that are devoted today. Key findings includes:

- The **need for a PMO** to manage and deliver the EVCI programme is imperative to delivering the preferred network in line with policy objectives. Furthermore, portfolios and projects will need to be identified - Figure 7 sets out an illustrative example of a proposed EVCI portfolio structure.
- **Governance arrangements needs to be in place** to oversee and be clear on accountability for the programme, An assurance framework will need to be created to provide independent assurance that the programme is meeting the intended outcomes, and that programme risks and control issues are managed effectively.
- **Monitoring and Evaluation** is critical in understanding the progress of the EV charging roll-out, and whether policy objectives and KPIs are met.
- A programme **risk register and management plan** needs to be developed within the next six months, identifying key risks as early as possible and identify mitigation measures, minimising disruptive impact on the programme.
- A **communications and stakeholder engagement plan** should be developed jointly by WG and TfW, ensuring engagement and messaging is streamlined with the private sector and the public, avoiding duplication of efforts between different parties, as well as raising public awareness of progress and EV charging infrastructure in Wales.

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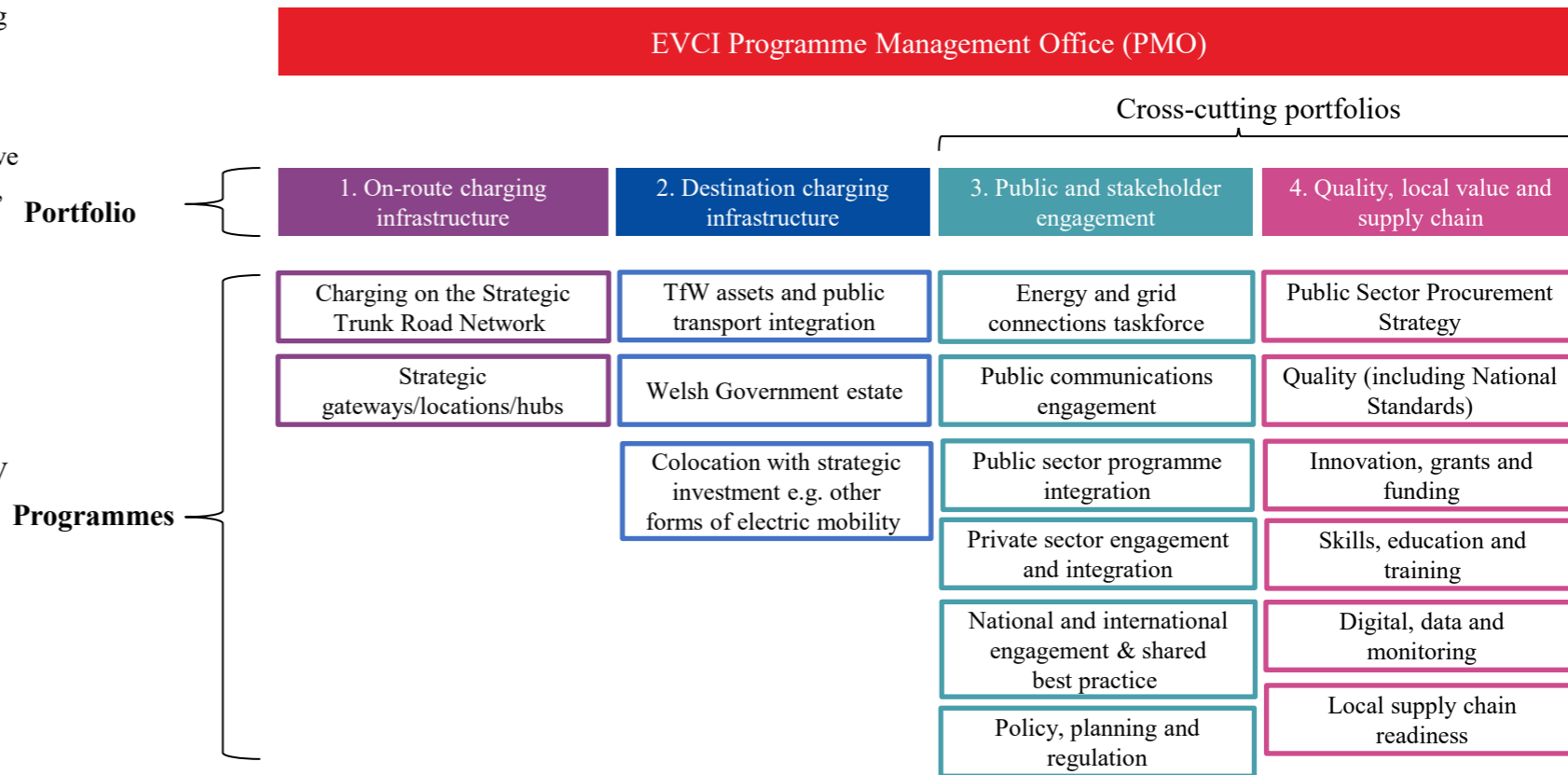


Figure 7: Illustrative example of the proposed EVCI portfolio structure

# Roadmap for accelerating the roll-out of EV charging infrastructure in Wales

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## Executive summary

### Roadmap for accelerating the roll-out of EV charging infrastructure in Wales

#### Next steps: priorities for Welsh Government and delivery partners

The findings of this report suggests that more work and development is needed to implement the EVCI programme in the next phase, harnessing the work done to date (e.g. National Standards, early market engagement). To achieve this, a programme-level roadmap has been developed, setting out actions across five key priorities for WG and delivery partners for the next 3-5 years, to deliver successful acceleration of EV charging infrastructure across Wales, and meet the defined KPIs set by the Strategy. The roles and responsibility of WG, TFW, local authorities and the private sector are summarised on the right.

#### Roadmap: 5 key priorities



**1. Establish a PMO to govern delivery arrangements, set standards and monitor progress**



**2. Provide support and guidance to enable local authorities (and private sector) to deliver the preferred network**



**3. Engagement with the private sector to ensure we optimise the delivery of the preferred network and foster public-private sector collaboration**



**4. Develop the mechanisms, knowledge and tools to deliver the preferred network**



**5. Leverage the resource and mechanisms necessary to rapidly deliver the network in line with policy objectives**

#### Role and responsibility

Delivering the preferred network within the required timescales will depend on the joint effort of the public and private sector, with the following key players:



#### Welsh Government – Strategic Oversight and Policy

Oversight of the EV Charging Infrastructure Strategy, setting standards, monitoring strategy progress, policy intervention and financial intervention.



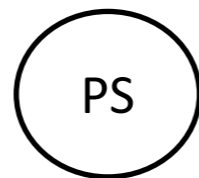
#### Transport for Wales– Delivery Partner

Delivery and monitoring the strategy at the on-route network, providing delivery support to local authorities and Welsh Government.



#### Local Authorities – Delivery Partner

Delivery and monitoring the strategy locally, at destinations and on-street sites, with support from Transport for Wales.



#### Private Sector– Delivery of the Preferred Network

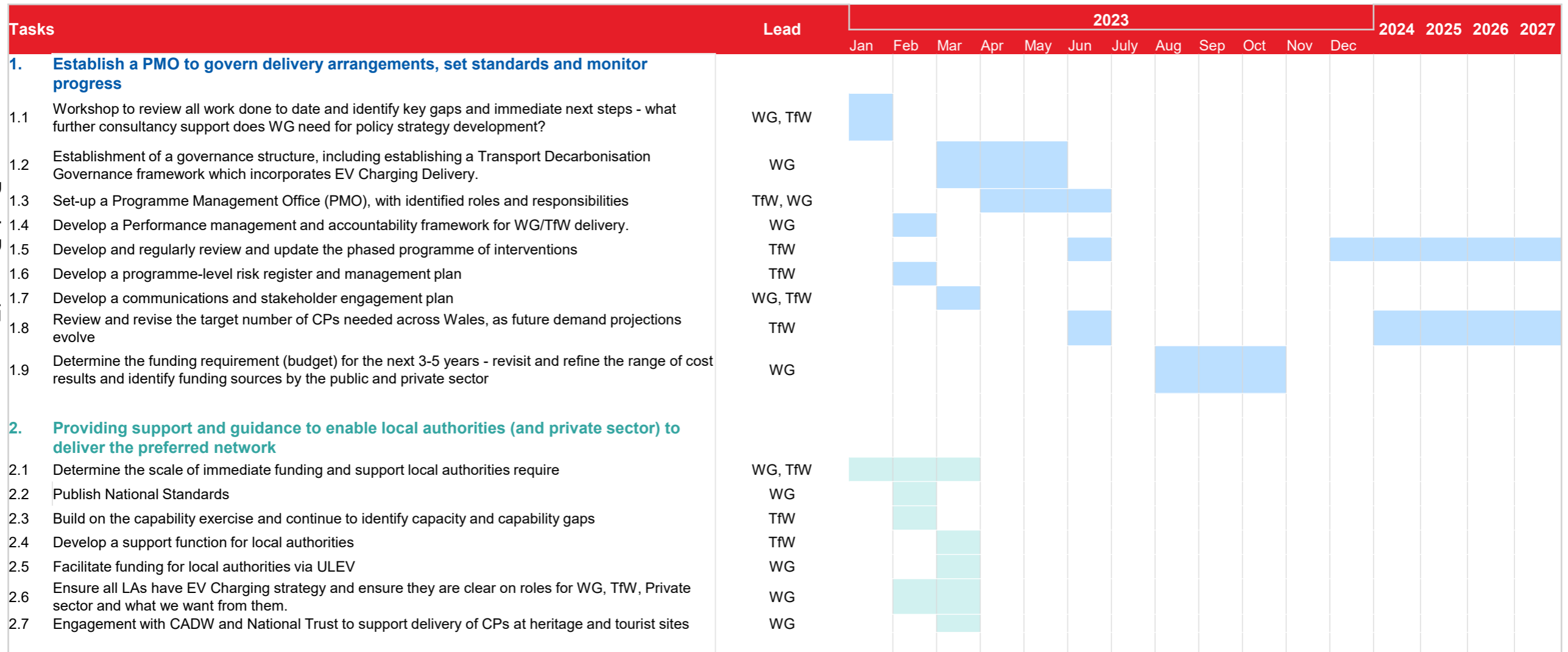
The private sector will largely install and operate the preferred network, public sector intervention is targeted where market failure has been identified (e.g. TFW delivering charge-points at commercially unviable on-route sites).



## Executive summary

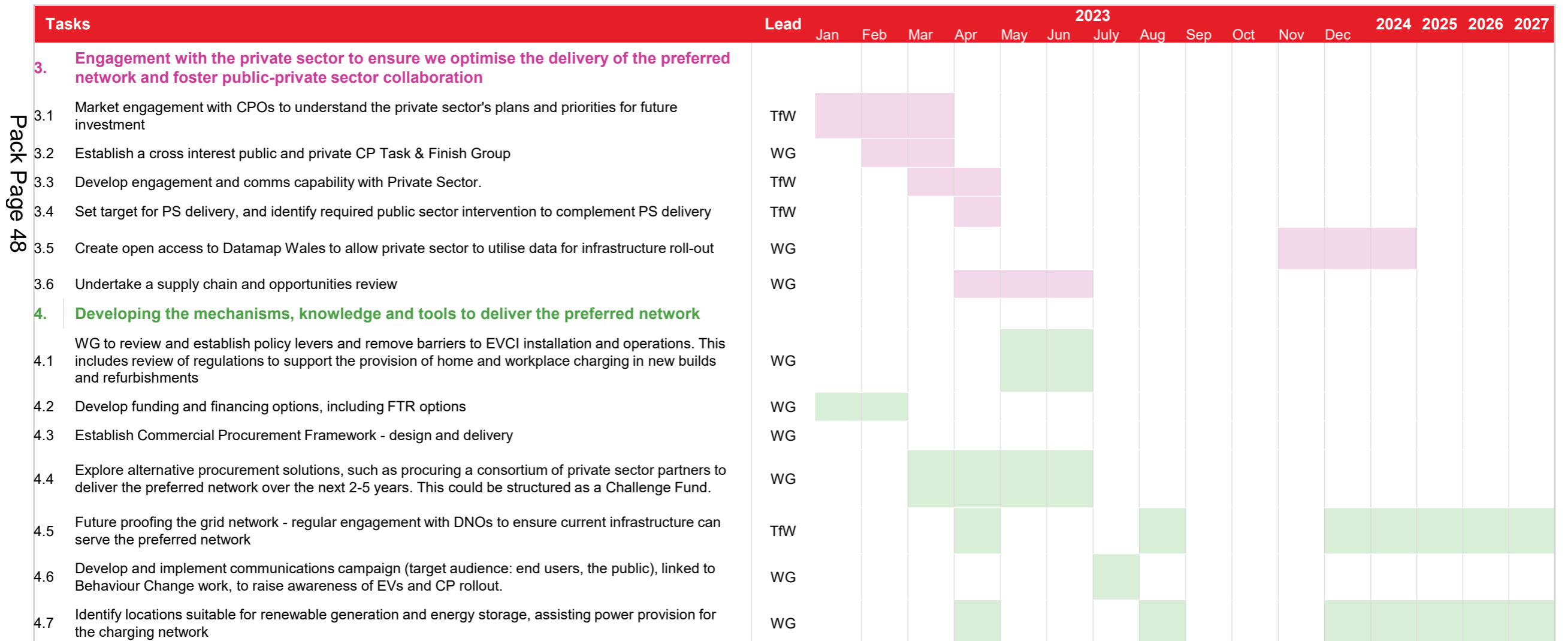
### Roadmap for accelerating the roll-out of EV charging infrastructure in Wales

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## Executive summary

### Roadmap for accelerating the roll-out of EV charging infrastructure in Wales



## Executive summary

### Roadmap for accelerating the roll-out of EV charging infrastructure in Wales

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Tasks	Lead	2023												2024	2025	2026	2027	
		Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec					
<b>5. Leverage the resource and mechanisms necessary to rapidly deliver the network in line with policy objectives</b>																		
5.1 Delivery of the on-route network, with TfW supporting where required (e.g. providing planning support and coordination or delivering CPs in commercially unviable sites)	Private Sector, TfW																	
5.2 Delivery of destination and on-street charging in built-up areas, with local authorities supporting where required	Private sector, LAs																	
5.3 Monitor progress of the EV charging infrastructure roll-out	WG																	
5.4 Knowledge sharing and applying lessons learnt through regular public-private group engagement	WG, TfW																	

ARUP


# Agenda Item 4.2


**From:** Gary Jones Solicitors

**Sent:** Monday, January 29, 2024 10:31 PM

**To:** Climate Change, Environment, and Infrastructure Committee | Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith <SeneddClimate@senedd.wales>

**Subject:** Undergrounding new power lines

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 [Cable Plough 2'27 MP4 \(1\) 2.mp4](#)

FAO: The Chair

The Climate Change, Environment, and Infrastructure Committee,

We refer to our previous exchange of correspondence with the CCEI Committee.

As part of an information gathering exercise, we have received a scanned copy of a statement of evidence from Mr Jason Thomas of ATP Cable Plough, which specialises in laying pipes and cables within the UK and the rest of Europe. Please find attached a copy of the statement of evidence received. Mr Thomas has authorised that we copy to you and to your colleagues sitting on the CCEI Committee.

The statement illustrates the method and operation of cable ploughing, and associated equipment.

The statement is also relevant to:

- . Use at 400 KV;
- . Reduced environmental impact;
- . Speeding up delivery;
- . Minimising community objections;
- . Reduced costs;

The statement confirms:

- . That whether using cable plough or open trenching for 400KV, exactly the same specifications for 400kv projects can be achieved. The end result is the same. It is simply the method of installation which is different. The ducts and cables which can be placed using a cable plough, are at a diameter, and can be placed at a depth, with spacing, bedding, and surround materials, which is the same as per specification drawings for the open trenching of underground 400KV;
- . That cable plough can satisfy requisite specifications to underground 400KV but can do so in a way which is significantly less impactful on the environment and biodiversity, which is quicker and can reduce costs.

Paragraph 7, sub paragraphs (i) – (p), provide more detail, supporting and clarifying that 400KV can be placed underground by cable ploughing.

Paragraph 12, sub paragraphs (k) and (l) are relevant to costing comparatives.

We recently organised for a freelance cameraman to film cable ploughing in action. It is helpful to have footage which is of broadcasting quality. Working from that material, we have prepared two short videos. The links to the videos can be found at the head of this email. The videos, and the photographs attached which accompany the statement, help to illustrate some of the information confirmed the statement.

We understand that Mr Thomas has corresponded with the CCEI Committee offering to attend before the Committee, but has not yet received a response. The statement confirms the willingness of Mr Thomas to assist on an ongoing basis and how best he can assist. No doubt the Committee will wish to liaise with Mr Thomas.

We received confirmation, within earlier correspondence, that once the Committee should receive response to correspondence sent from the Committee to the Minister for Climate Change in respect of cable ploughing, and upon the CCEI Committee receiving more information from ATP, a meeting would be set up, in order that we can discuss with you directly the issues raised in our correspondence. As these conditions have now been addressed, we would be grateful to meet with you, and would be obliged if the Clerk to the CCEI Committee can contact us to make arrangements accordingly.

Gary Jones  
Solicitor (Non-Practising)  
Llanarthne Area Community Pylon Group



### Statement

I Jason Lloyd Thomas, of Glanafon, Dolgran, Pencader, Carmarthenshire SA39 9BX, confirm as follows:

1. I am the Managing Director and sole shareholder of the company called 'A Thomas Plant Hire Limited.' The Company registration number is 06550558. The registered office is Glanafon, Dolgran, Pencader, Carmarthenshire SA39 9BX. The company is often referred to as 'ATP Cable Plough'.

2. Experience and expertise:-

a) The evidence set out in this statement is derived from:

- My direct involvement in cable ploughing;
- My direct involvement in laying cables, pipes and ducts using open trenching;
- My knowledge of industry practices, gained from direct experiences, accumulated knowledge, and many industry contacts, established over many years.

b) My company was incorporated on 01.04.08. The business involves specialised construction activities. The company is a specialist utility plough contractor operating in the UK and in the rest of Europe. Our cable ploughs are used to install a variety of service media. These include fibre optic and communication ducts for telecoms, gas, water and sewerage pipes, in addition to electricity cables. On incorporation in 2008, my company absorbed the unincorporated business in which I had been involved for many years, which began with my grandfather in the 1960s.

c) Prior to 2014 my business utilised conventional ploughs rather than the more modern technology. In 2014, my company acquired the first of the four spider ploughs which we now own. The cost exceeded 2.1 million. A second machine was acquired in 2016. A third machine was purchased in 2018 but sold on due to its smaller size in 2021. More recently we acquired a further two machines. I understand that there may be in the region of forty-five machines throughout the world. Therefore, we have an eleventh or thereabouts of the world supply.

d) I have approximately 27 years' experience in laying cables underground, including an extensive experience of laying cables using excavation and open trenching methods, and an extensive experience of laying cables using various cable plough machinery. I have extensive experience of the placement underground of various utility media, including electricity cables.

e) I have attached as a schedule to this statement a list of works and projects in which my company has been involved. The list is not exhaustive.

3. The reasons for this statement:

a) The Chair of the Climate Change Environment and Infrastructure Committee (the Senedd/Welsh Parliament) sent me a letter requesting information relevant to cable ploughing.

b) I have received several enquiries, during 2023 and continuing into 2024, some general, and some specific, about cable plough machinery and technology.

c) In contrast, prior to last year, interest tended to be limited to enquiries from District Network Operators or contractors requiring our services. However, in 2023, there was a sudden emergence of interest in cable ploughing,

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from politicians, from developers and industry figures, and from the media. This seems to reflect the wish at local and national level to explore an appropriate and balanced grid system whilst achieving minimised impact.

d) The questioning about cable ploughing includes:

- How does it work?
- Is it available?
- Is it proven technology used for recent and current projects in Wales, the UK and Europe?
- Can it minimise impacts?
- Can it reduce environmental impact, especially compared to the use of pylons with overhead lines and compared to undergrounding using open trenching and excavation?
- What does it cost?
- Is it more expensive than other alternatives?
- Does it allow costs to be reduced?
- What is the speed of delivery?
- Is it a feasible, viable, and beneficial alternative to pylons?

e) I am providing this statement as a platform for the evidence which I can provide to Government and to Parliamentary Committees, but also as a means of response to other more general sources of enquiry.

4. This introductory statement will concentrate on:

- How cable ploughing machines work, what they can do (including the size of the ducts and the cabling and the voltage which they can accommodate), the availability, and the potential offered by cable ploughing;
- The reduced impacts which cable ploughing can offer, including reduced land disruption and reduced environmental impacts;
- The 'build speed' which is available;
- How and why costing reductions could be secured by using cable ploughing;

5. My company uses machines manufactured by FOECK. The manufacturer could be a source of useful data by way of confirmation of my evidence as to the capacity and capabilities of its machines.

6. Method of operation:

a) The front vehicle is a winch which can be tracked depending on the terrain. The cable plough follows behind, and is winched forward from the leading vehicle. Both the winch and the plough can be driven separately and independently, but the independent operation of the plough is very limited; the tracked crawler, as the front vehicle, has a significant traction and pulling strength.

b) The cable plough can be used to lay cable direct directly into the ground. Alternatively, the cable plough can be used to lay pipes or ducts, and relevant to electrical installations, the cables can be pulled through the ducts once the ducts have been laid.

c) Cables or ducts can be carried on the cable plough. When laying electricity cable directly into the ground, the earth cable and the accompanying fibre optic cable can be carried on separate coils on the front of the cable plough, and both cables feed into the cable chute together with the main cable, so that they are laid together. Likewise with warning tape and the protective plate. Depending on volume/size, or the nature of the project, cables or ducts or

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additional coils can be fed into the cable plough from a drum carried on an independent drum carrier which can be a tractor or tracked crawler drawn cable trolley. It is possible for additional coils to be dropped if required, using land or air transport, at particular strategic points, ahead of the machinery, to be collected at intervals as the machinery proceeds along the agreed route. Another option, is for the duct to be laid out, uncoiled, running adjacent to the immediate route of the cable plough, and the duct or pipe can then be lifted manually and fed into the cable plough which will lay it in the prescribed way.

d) The cable plough machine places the cable or duct in a sensitive way, installing the cable or duct within a groove cut in the ground.

e) If the cable is to be laid directly into the ground, or if a duct is to be laid, then if the specifications provided from the client require the cable or duct to be laid on a bed of stone dust or other material or if dust or other material is to be used as a surround or cover for the cable or duct, the cable or duct can be laid simultaneously together with the dust or other support materials as required. When a bed or surround or cover comprising stone dust or other materials is required, we have a machine running alongside or behind the cable plough which carries the selected bedding material which then passes via a conveyor into a chute fitted to the blade of the plough. The machine can carry thirteen ton of stone dust which feeds in a controlled way into the plough via the conveyor and thereafter into the slit or groove immediately as it is being opened. The process is controlled and timed so that if a bed of material is required the material is placed in the slit whilst the cable or duct remains suspended until the bed has been laid.

f) We carry out operations to correspond with the specific design drawings provided to us by the client. Each of the Tier 1 contractors will have cable designers who will specify their preference for the materials and design to be used. Cable designers can perhaps on occasion be more cautious than they need to be, and there is a need for balance in order to achieve a safe and efficient project without undue cost. We make the observation that if the specification drawings can avoid the use of a bed or surround of materials, to be compensated by a cable or duct of increased diameter, this can speed up even further the process of laying the cable or duct and can reduce the machinery required for a project. There is less likely to be a requirement for bedding if laying ducts, but this can depend on the preference of the designer. We do not hold out an expertise in cable design, but cable manufacturers have the expertise as to cable specifications required for higher voltage. If the designer may prefer to dispense with backfill by stepping up the cable size, then we can then proceed without a separate vehicle to carry the bedding materials, and without the requirement to wait for refilling of the vehicle each time its content is used. Also, if ducts are laid out on the ground in readiness, the machinery required for a project can be limited, to the front winch, the plough, and the excavator following to close up, which allows for even quicker progress to be made and for minimised impact.

g) GPS is used to vary the height of the cutting blade adjusting automatically to the ground surface. The unique design of the combined blade and guidance system means that pipes and cables are laid exactly in accordance with regulations – whatever the speed of travel.

h) The slit opened by the plough is closed by the tracks of the excavator which follows behind. It is just flattened back over. If we are ploughing firm ground, the excavator may need only drive over the slit to close it back. If the ground is wetter, or if ground conditions are such that there is a need for more attention to prevent scarring, there may be some bucket work with the excavator but limited to ensure a smooth surface ready for seeding.

i) With the associated machinery described, the cable plough cuts, installs and backfills in one operation. The process can be completed all in one pass, as cable plough technology has significantly advanced.

## 7. Actual and potential use:

a) We have used cable plough machinery to lay a variety of electricity cables, including cables at 220kV, 132kV, 66kV, 33kV and 11kV.

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- b) When laying lower voltage electricity cable, it is more usual for the client specification to provide for the cable to be placed directly into the ground within a single slit and without ducting.
- c) If required to lay a second lower voltage line within a parallel slit then the two slits can be kept just 400mm apart.
- d) For higher voltage cables at 132kV or above we would expect the client specification to provide for a duct or pipe to be laid whereby the cable is pulled through after the duct is first laid. This is the process we would anticipate for all higher voltage projects, including 132kV and 400kV, based on the projects we have undertaken and based on the various design drawings which we have received.
- e) The most recent 132kV we undergrounded by way of cable plough was a double circuit. For this particular project involving 132kV, we were required to reference the WPD cable installation manual CA 6A. The manual permits for double circuits to be placed within the same duct, but expresses a preference that for double circuits each circuit is placed within a separate duct and that the ducts are kept separate. The cross sectional drawing on page 20 of the manual shows 132kV phases in trefoil, whereby each set of cables is shown as 100mm in diameter spaced 650mm apart. For this project, the cable for each single circuit consisted of the three phases in trefoil, tightly together, within a separate duct, each placed into an individual slit. Therefore two slits, each carrying one duct. The ducts were laid at a depth of 1.2m, and the centre to centre distance was 1.5m.
- f) We would consider a ducted system as appropriate for 132kV or over. The pipes or ducts are installed firstly using the cable plough and then the cables are pulled through into the ducts. This would also allow cables to be switched out in the event of a fault, or to allow for replacement with larger cables in the future (future proofing). If required, cables can be brought to site at strategic joint bay locations and pulled into ducts
- g) The 'Sea Green' project in which we were involved was a 220kV link, comprising three circuits. The system was ducted and completed via the cable plough system. The ducts were 225mm in diameter. The communication ducts laid at the same time were 110mm. The machine also installed the master tile with a 100mm separation from the electrical duct and marker tape (warning tape) 100 mm above the stock board. The client for the Sea Green project came to us and asked-can you do it that way. Whilst we will advise or discuss with a designer, based on the experience and knowledge which we have accumulated, responsibility for the design rests with the client and we will install as per the specifications received from the design team engaged by the client as appropriate.
- h) For cabling up to 220kV, the designer/client may prefer a trefoil design, whereby the three phases are arranged in a vertical triangular shape, or the designer may prefer a design whereby the three phases are laid out horizontally. Phases can be placed horizontally or in trefoil, depending on the specifications preferred for the job.
- i) To date, we have not laid underground electricity cable at 400kV or 275kV, using cable ploughing, simply because there has been no call to do so as yet from the transmission operators. So far as we are aware, no-one in the UK has laid 275kV or 400kV using cable plough, simply because the client has not asked for it. The important questions are, can it be done at 275kV and at 400kV, and if so, should it be done?
- j) Based on my experience and use of cable plough technology, I am aware of what the technology can offer and achieve, in terms of the size of cables which can be handled and laid by the cable plough machines. The machines can accommodate cable, pipe or ducts, with a diameter of 620 mm max which can be placed at a maximum depth 2.8m. The width of the slit is dictated by the size of the chute opening affixed to the blade on the plough. Chutes can be manufactured to accommodate specific cable or duct specifications. By way of a useful comparison, specification drawings received in respect of more than one open trenching project at 400kV specify the ducts required to carry 400kV cable as just 250mm in diameter.
- k) I have reviewed various specification drawings for the undergrounding of 400kV using the older method of open trenching/excavation. The important point to emphasise, is that using the cable plough, we can achieve the same end result as if the cables had been laid consistent with the specification drawings for open trenching, save by using cable ploughing, we can avoid the disruption and impact associated with open trenching, we can deliver far more quickly, and at a significantly reduced cost. Cable plough is just a different means of installation. A different method,

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in order to arrive at the same end result. Using the cable plough we can achieve exactly the same end result as if the installation was consistent with specification drawings received for open trenching, whereby the pipes or ducts can be at the same depth and are placed at the same distance apart and can be placed within the same bedding, as shown in the design drawings prepared for the installation of 400kV by way of open trenching. The method of installation need not affect the end result, which can be the same whether undergrounding using a cable plough or open trenching. The placement of 400kV cables underground using open trenching has already been verified and there are various projects in the UK which involve the undergrounding of 400kV cables. The undergrounding of 400kV using open trenching, is indicative, that it is feasible and practical to lay 400kV underground. We simply confirm that we can place the cables/ducts underground, with the same end specification, using cable plough as a preferred alternative.

l) For cables at 400kV, retaining each phase within a separate duct, to comply with the specification drawings which I have reviewed, there would be three slits, each containing an individual phase within its own individual duct. The centre to centre measurements between each of two outer ducts and the central duct would be between 400mm and 725mm. Each of the three ducts would be 250mm in diameter. Based on the design drawings, the total width for a circuit of 400kV including the spacing between three ducts could be circa 2.2m. My understanding is that it is possible to lay another circuit of 400kV alongside the first circuit, keeping the spacing between the outer ducts of each circuit at an approximate 5m dependant on design requirements. Therefore, two circuits at 400kV could be laid within a strip of circa 9.4 m in width.

m) The specification drawings which I have reviewed, for 400kV placed using open trenching, allow for a maximum depth of 1100 mm between the top of the duct and ground level whereby the depth of the slit to accommodate this, together with a duct of diameter 250mm on a bed of 100mm, would be 1450mm, which is easily achieved using the cable plough which permits for ducts to be laid at a depth of up to 2.8m.

n) Each cable plough machine can provide for one slit per run. Therefore, if laying a double circuit at 132kV or 220kV, the cable plough would complete one slit over a stretch of ground and then return to complete the second slit over the same stretch parallel to the first slit. The GPS technology used allows for precision. If laying 400kV, as per the specifications described earlier in this statement, keeping each phase within a separate duct and each duct to remain separate, over any given stretch of ground the cable plough would need to pass over three times, opening, installing and backfilling one slit during each of the three manoeuvres. However, on any given project, more than one cable plough machine can be used to expedite, each working on a different section of the route. Also, there would be an individual design for each project, and should undergrounding using cable ploughing be adopted as the starting point for national policy for the delivery of new electricity infrastructure, no doubt this would encourage innovation in the design process to simplify the design consistent with good practice.

o) I am aware that should a length of cable be laid within varying ground or geological conditions, the designer may prefer to insulate all or part of the cable towards a comparable heat loss throughout the overall length, promoting a consistency of transmission despite the different types of ground condition along the route. Improved transmission and heat release can also be regulated depending on the depth of the installation and the diameter of the conductor. These are not areas within my expertise, as the function of my company is to install and not to design. I can simply re-iterate, that the fact that 400kV has been placed underground within the UK, and design drawings for undergrounding 400kV have been prepared, approved and utilised, is indicative that 400kV is operational underground, and cable plough offers an alternative method of installing, whatever the voltage of the new cables to be laid, providing for an end result consistent with the depth, spacing, bedding and diameter preferred within specifications for projects involving open trenching at 400kV.

p) I am aware that cable plough can also be used for transmission using direct current (DC) rather than Alternating Current (AC). Only two phases are utilised for DC, so if the specification was to lay the two phases within separate





ducts whereby each duct would be placed in a separate slit the process would involve two parallel slits rather than the three parallel slits required for 400kV in AC.

q) We are often requested to lay fibre optic cable simultaneous with the installation of electricity cables. We have done this many times, and the installation is relatively easy. It involves feeding the fibre optic cable or the ducting for the fibre optics together with the electricity ducts or cables using the feeder on the plough. The fibre optic duct or cable will usually position above or on the shoulder of the electrical installations. We have not encountered a problem laying fibre optic cables with new electricity cables, which can be common practice.

#### 8. Facility for inspection, repair or maintenance:

a) Joint bays allow access for joining cable lengths together and allow access to the cable or into the duct once laid. Maintenance, repair or replacement should not be necessary unless a section of cable is defective and as cables are pre-tested, before they are laid, to ensure that they are satisfactory, the chances of laying a bad conductor should be negated.

b) The location of Joint bays for 400kV, 275kV and 132kV cables and for 66kV, respectively, would be broadly the same. Joint positions are placed on average every 750m, but in the UK can range from 400m to 1500m dependant on cable size and terrain. Depending on the lengths of cables used, or specific to an individual project, the distance of the joint bays may vary. For convenience and ease of access joint bays are often placed adjacent to a hedge or field entrance.

#### 9. Conditions and obstacles:

a) We have posted on our web site, within the section entitled 'Our work', photographs and descriptors relevant to various project works which we have undertaken. A small selection of the photographs from our company web-site, are reproduced for ease of reference, within a schedule attached to this statement.

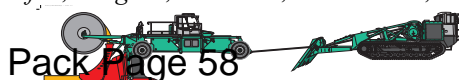
b) The cable plough equipment is suitable for various soil conditions, including sand, gravel, and moor. Difficult ground conditions have been encountered and managed. The hydraulically adjustable ripper shoe, allows the desired depth to be maintained continuously, even with changing soil conditions. This allows work to be carried out without interruption and avoids costly reworking.

c) The cable plough machines can adapt to difficult terrain. The enormous pulling force of the mobile winches and the tractive force is a big advantage, together with the adjustable outriggers on the plough. If laying high voltage, it is important that the tracked crawler is well grounded, but the flexibility and manoeuvrability of the machines, provides a potential to work on significant terrain and gradient. We have been comfortable using on gradients up to 45 degrees. The adaptability of the cable plough enables it to cope with a variety of surfaces, whether flat, hilly, or undulating terrain. The photographs for the Boat of Garten project, displayed on our web- site, are indicative of what can be achieved in terms of gradient and terrain.

d). Obstacles such as ditches and water crossings have been encountered. By way of example, we were involved in the Henstridge project for UK /DNO in June 2019. Hedge crossings and ditches were passed in a number of locations on the route removing the need for horizontal directional drilling (HDD), offering considerable cost savings to our client. All sites ploughed were reinstated within twenty-four hours to minimise the environmental impact.

e) The machinery is capable of operating in wet and adverse areas, such as across marshland, through ditches and even into rivers. For small rivers or tributaries, as the cable plough is classed as trenchless, we can plough across the river bed. We can negotiate water crossings up to a depth of 1.9 m. If a river is wide or deep or protected then horizontal drilling would be an alternative and horizontal drilling can be used to accompany or supplement the work with the cable plough. ATP does not undertake drilling work but works in unison with whichever drilling company is

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contracted. The need for drilling would be limited because of the potential which the cable plough machines can offer. We were involved in the De Weel project in the Netherlands in 2021. Ditch crossings eight metres wide and with one and a half metre depth of water were successfully passed in a number of locations. The project passed through sensitive and valuable arable land. The route was also reinstated within twenty-four hours to minimise the environmental impact and to assist with top soil / sub soil protection.

f) When encountering hard rock or rock layers, we were able to break it out first before continuing to cable plough. It may also be possible to route around hard rock. We were involved in the Boat of Garten (Vista) project in February 2020, as sub-contractor for Morgan Sindall which was the Tier 1 contractor. Ground conditions were particularly hard in places with boulder fields and fractured rock sections, and a covering of deep peat in others. The plough tied in well with HDDs and joint bay positioning.

g) Cable ploughing close to obstacles is possible. The underground cables can be laid using cable ploughing at short distances from objects such as walls or hedges. The photographs on our web-site are illustrative of the precision which is possible, such as the photograph for the Sandford project which shows cable ploughing in close proximity to a fledgling hedge.

h) Road side projects are possible using the cable plough, providing the roadside verges have not already been utilised for a variety or collection of service media. A minor road can be opened up during the short period of time which is permitted, and ploughed through before filling with sand and putting plates over so the road is passable pending resurfacing. More major works involving placement under road surfaces can be carried out with the requisite controls.

i) If pipework is encountered, then depending on depth, the pipework can be capped with concrete and cable ploughed over, or alternatively a mini digger or drilling can be used so that cabling can be run under it. Land drains are not always on a plan, or a plan showing the position of land drains may not be accurate. If we cut through a land drain, the exact location is recorded. After the duct or cable has been laid, the slit is folded back down, but a specialist drainage firm will then attend to repair the break in the drainage pipe. If damaged during the passage of the cable plough, the ground beneath the drainage pipe, save for the small dimension of the blade, will have remained compacted, therefore providing good support for the land drain including the replacement connection. The contractor would excavate the small depth to find it but in the course of the repair would not excavate underneath it, thereby retaining stability. In contrast, if a land drain is broken during open excavation, the section of replacement land drain would be situate on a base which is insufficiently compact, whereby within the replacement section water could hold or a blockage could occur if the replaced pipe begins to sag because it is not sufficiently supported.

#### 10. Reduced environmental impact:

a) The process of cable ploughing, is environmentally friendly compared to traditional open cut methods of service laying, and compares favourably when contemplating the environmental damage and land impacts which can be associated with overhead lines supported by cables.

b) Cable ploughing enables designers to soften the impact of schemes when designing, reducing disruption to geological structure. With only a narrow cut into the ground, there is little damage.

c) No soil is excavated, thus avoiding soil structure changes and subsequent compaction. There is no removal or mixing of soil layers. The cable plough displaces, rather than excavating or lifting. This makes the process significantly more environmental friendly and less disruptive.

d) An important advantage of the cable plough technique is that limited preparatory work can be required. The cable plough process can reduce the need for removal of vegetation, and can avoid altogether the removal of topsoil.



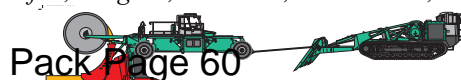


- e) If there is a need to cross a hedgerow, the limited section of the hedge affected can be lifted completely and then re-instated completely within twenty four hours.
- f). Another environmental advantage, compared to long-lasting construction sites required for pylons and open trenching, is the opportunity for lower fuel consumption and a reduction in the associated CO<sub>2</sub> emissions. With cable plough laying, the manufacturers' specification is limited to around 50 litres of diesel fuel consumed per 1,000 metres of laying distance. We have recorded fuel consumption, using HVO diesel, at 58 litres per km per slit on the Sea Green project. By comparison, installing the same distance with overhead lines and pylons, using alternative machines, such as heavy cranes, can consume far more diesel fuel and laying cables with an excavator for open trenching could involve diesel use which is 10-15 times more than cable ploughing.
- g) For more difficult terrains, as all machines used are tracked as necessary, there is no requirement for haul roads, in contrast to the extensive requirement for haul roads required for pylons. The provision of haul roads, increase the carbon footprint, require the production and carriage of stone, construction work, and the excavation and removal of waste. Of course, haul roads also involve additional cost.
- h) The cable ploughing techniques used, enable the installation of cable underground in a most efficient and effective way. We were involved in the Dunstable Downs AONB project, working within land owned or managed by the National Trust, and operating for KEIR/UKPN. A short video as to the project, with footage from the scheme, and comments and observations from those overseeing the project, is available on our web-site.
- i) We arrange an ecology study before starting work, engaging a reputable ecologist. The ecologist will monitor as appropriate as work proceeds. We can then take the mitigating measures required by the ecologist.
- j) The cable plough process can allow for a reduction in the easement width required. It can be limited to circa the width of the cable plough.
- k) The sensitivity of the cable plough process can allow for shorter and more direct routes as an alternative to longer and diversionary routes which may be required for pylons and open trenching.
- l) Cable plough technology can minimise land impacts, will not interfere with bird flight paths, will not prejudice Ministry of Defence flight exercises, will not prejudice visual amenity, and will not risk a prejudice to the economy, as undergrounding using cable ploughing should not affect visitor revenue and tourism, or prevent future use for agriculture, or cause property devaluation.

#### 11. Build speed/Speed of delivery:

- a) The equipment we use, together with our highly skilled teams to operate the equipment, leads to fast, efficient laying of cables, in addition to minimising ground damage and reducing environmental impacts.
- b) Cable ploughing can offer a significant reduction in time money and risk. It can provide for a huge increase in productivity over and above traditional ways of working. For example, for projects we have undertaken, trenching/excavation would have taken up to three weeks per one km distance, compared to one day per one km distance using cable plough, plus no additional delay from restoring trenches prior to cable installation or de-watering excavations.
- c) It was interesting to read the summary provided by a prospective developer of overhead lines with pylons within a recent report, as to the likely time features for a proposed overhead project. The description reads: 'The total duration of construction activity at any single tower site is approximately two weeks for tower foundations, a further two weeks for tower construction, and up to four weeks for conduction erection and stringing (this depends on the size of the tower and the number of conductors being strung). However, these timescales will not be consecutive as a gap of 4 weeks will be required for the foundation concrete to 'cure', a further gap will be required for all the towers in a section to be erected before any wiring works can commence. The total construction period is expected to be approximately 4 months per tower'. The report confirms, in addition, that time is required for the construction

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of haul roads, and for access roads to the site of each individual pylons, and hard standings for crane platforms and tower assembly. In contrast, for the 'Sea Green' project, we averaged 1.45 km per day, opening, installing, and closing, using just one cable plough machine.

#### 12. Reducing costs:

- a) As the cable plough cuts into the ground, installs and backfills in one operation, it can complete a considerable distance in a day. The speed of progress, for so called 'build time' is important. Each project has compound costs including electricity, water, project managers, security, ecology and archaeological specialists. On a project, compound costs can be £35,000 to £40,000 per week. Therefore, the faster the job, the more economic it is.
- b) The 'conventional methods' of laying pipes and cables or erecting overhead lines can be extremely labour intensive and time consuming. Because of the way the cable plough operates, it requires less manual input than traditional methods, relevant to both installation and reinstatement, and therefore relevant to costings.
- c) If existing utilities which are on or above the surface, would be in proximity to new overhead high voltage lines, there is an additional cost should the existing utilities require undergrounding, whether as a legal necessity or as a sensible precaution. The secondary costs in consequence of new overhead high voltage lines should be an additional factor to be considered.
- d) Undergrounded cables are protected from the elements, unlike overhead conductors and supports which are exposed to the elements and which are vulnerable in storms; thereby undergrounding using cable ploughing should reduce the need for ongoing maintenance, and should reduce the likelihood of outages, therefore diminishing the resultant costs
- e) The cost of fencing, in order to protect the site, has to be factored in for pylons or for any work involving excavation or open trenching; by contrast cable ploughing does not involve excavation so the work site does not need to be fenced. This provides a considerable saving, avoiding fencing costs for both erection and removal, by using a cable plough.
- f) Compensation to landowners can be reduced, as the route does not require fencing off to facilitate cable ploughing. A period of restricted access to land which otherwise would be fenced off from the remainder of the holding, can be avoided, whereby owners can use, and pass between, land either side of the route, apart from on the day on which the installation is immediate.
- g) As the cable plough can complete on average 1km and upwards per day, and ground disturbance is limited, with restoration and handback the same day or the next day, whereby the areas disturbed can be seeded and back in use quickly, whilst the land either side of the corridor can be available to the landowner with loss of use limited to one day, the compensation payments otherwise payable to landowners are reduced.
- h) Cable ploughing is helpful in terms of limiting impact and costings, as it can leave land drainage pipework intact or subject to quick and effective repair, without affecting water movement, and there is no soil contamination.
- i) A significant part of the overall costings for infrastructure projects is attributable to compensatory payments to landowners based on loss of value, loss of use during construction and restoration, loss of revenue from land and permanent loss of use. Cable plough minimises property devaluation, minimises ground disturbance, and permits reduced impact, and cable ploughing reduces the period and nature of loss of use and loss of revenue. Cable ploughing can therefore significantly minimise compensation payments otherwise payable to landowners. The speed of process, the minimised land impacts, reduced preparatory work, limited restoration works, and the speed of restoration, can help drive down the significant compensatory payments otherwise associated with pylons or with open excavation or open trenching. An assessment of the reduced compensation payments attributable to use of cable ploughing, could be the subject of separate and careful enquiry.
- j) There is also potential that unless land impact is minimised in the way offered by cable ploughing, single farm payments and subsidies could be affected. Further, if farmers are prevented from releasing slurry because of

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restricted access to, or restricted use of, sections of their land, whether permanently or during extended periods of construction and restoration, there may be an obligation or necessity to reduce herds pending full restoration, which in turn can reduce incomes and place a pressure on the ability to service loans. I have a direct involvement in agriculture, and therefore a perception of the merits of cable ploughing as a means of reducing land impacts and minimising financial loss, for those impacted, and for the public purse or for private enterprise, wherever the responsibility shall rest for compensating consequential loss.

k) I have been asked whether the costs involved for undergrounding using cable ploughing are likely to be less than the costs of undergrounding using open cut trenching/excavation. The answer is that the cost of cable ploughing can be significantly less.

l) I have been asked whether the cost of cable ploughing new electricity cables could be comparable to the cost of pylons and overhead lines. In given circumstances the costs could be broadly similar or with no significant differential.

### 13. Expanding from this statement:

a) I have had to be very careful when responding to enquiries on costings, not to share any commercially sensitive information derived from projects in which my company has been involved in the past or relevant to projects in which my company may be involved currently or in the future; my commercial contacts would expect nothing less than the highest standards of confidentiality, integrity and trust, which my company has always offered.

b) I have to exercise caution in reply to questions about costings for projects in which my company has a past, pending, or current involvement, or in respect of costings of which I have knowledge, or relating to specific fees or quotations, and likewise, I have to be sensitive in respect of any correlation between sub-contractor costs and the fee mechanism applied by Tier 1 contractors. In a climate of competitive tendering, there is a need for sensitivity.

c) The need for sensitivity may not preclude the sharing of information. Before consenting to the release of information, I may need to speak with commercial partners or contractual parties if material could be considered commercially sensitive or confidential. It may be that assurances of confidentiality would be required, as a condition of the release of information. In the right circumstances there should be opportunity to inform and share knowledge and understanding on costings, based on many years of information gathering, tendering, and relevant experience. A discrete feasibility study or small working group or investigative study (a controlled forum), offering assurances of sensitivity, may be well placed to receive information on costings from those prepared to share information as part of an official and protective enquiry.

d) The evidence which I can confirm, can contribute as part of an overall picture. Matters such as whole life costs, referencing maintenance and repair, projected longevity, de-commissioning, projected outages, and the control of loss of energy and thermal resistance in transmission, are specialised topics. We each have our own areas of expertise. I can both assist in providing direct evidence, but also in directing towards other reliable sources.

e) It should help to gather relevant information widely from manufacturers, energy companies, energy associations, contractors, sub-contractors, cable designers, cable manufacturers, financiers, and funders, involved in cable plough and overhead projects in the UK and in Europe, with direct experience and knowledge, relevant as to technical implications and financial costs and viability. It can also serve to obtain evidence from research and academic sources, and from governmental departments in countries which have considered or applied the alternative technologies available. Of course, viability may not be just about comparative construction costs. It may also involve consideration of how the costs of a project can be satisfied, in the context of margins and returns and the funding support available, feasibility, and the whole life costs and implications.

f) There is often an inertia, which can prevent change, despite the fact that change would be both expedient and beneficial. There can be a lack of awareness of how technology has moved on, or a refusal to embrace the

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technological advancements which have been made. Too often, there is a rigidity which holds back exploration of what is now available. There have been occasions, when I have tendered for projects for new infrastructure, offering to cable plough the power lines, but have failed to secure the contract to cable plough, purely because of an ignorance or a prejudice or resistance to change, and yet, having lost the opportunity to plough a given project, ATP has been awarded the contract for the open cutting of the scheme, at a contract price which is significantly higher than the amount which we would have received if our tender to cable plough had been accepted.

g) We have not encountered any community or public or landowner opposition in respect of our cable ploughing projects, whereas we are aware of a concerted opposition to new pylons; our experience appears to be mirrored by the commitment to the removal of pylons funded by Ofgem as part of the Visual Impact Provision scheme and the VISTA scheme. Cable ploughing, could be a means of balancing the need for new electricity infrastructure, with the importance of minimising, not only costings, but also protecting against unnecessary environmental and various other impacts.

h) I would be prepared to appear before the Senedd Climate Change, Environment and Infrastructure Committee and the Senedd Economy, Trade and Rural Affairs Committee. I would also be prepared to appear before the Energy Security and Net Zero Committee (UK Parliament), the Welsh Select Affairs Committee (UK Parliament) or before the Environment, Food and Rural Affairs Committee (UK Parliament). I have co-operated in response to an initial enquiry from the Welsh Government and would assist with any enquiry originating from UK Government or the Welsh Government. I am more confident in expressing myself verbally, and direct discussion allows the opportunity to expand and explain as appropriate.

i) The opportunity exists for policy makers and industry figures to obtain the information required to make a valued and informed decision on the use of cable plough technology and equipment to install underground new electricity infrastructure which will be required.

j) I would encourage more detailed enquiry into the lifetime costs of projects, considering maintenance, energy transmission losses, and the wear and tear of infrastructure, the investigation of data comparisons relevant to the carbon footprints of alternative methods and technologies, and vigorous enquiry about domestic and international projects that involve undergrounding by cable ploughing

k) This statement is made to help the process of examining and exploring the possibilities which exist, towards open minded and factual consideration of the options, so that decision making, and policy formation can be reasoned and informed. Within the right forum, in conditions of sensitivity, I would be able to expand on the information provided within this introductory statement, and also signpost to invaluable sources of additional information. Accordingly, this statement is provided, as a means of releasing information, and as confirmation of a willingness to assist further in the manner outlined within this statement.

A handwritten signature in black ink, appearing to read 'J. Thomas', written in a cursive style.

.....  
Jason Lloyd Thomas

Dated the 23<sup>rd</sup> day of January 2024.





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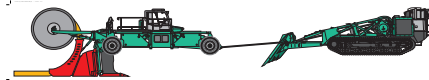


**Schedule - Work Projects:**

<b>Client</b>	<b>Project</b>	<b>Voltage</b>	<b>Location</b>	<b>Type</b>	<b>Date</b>
National Grid	Green Link, Pembrokeshire	11kV Green Link Substation Connection	11kV	Ploughed	Sep-23
Visser Smit Hanab	Netherlands	Ombouw G-H gas Nuon Power Diemen	12" Steel Gas Pipe	Ploughed	Aug-23
Power Systemns UK	Stokeford farm Renewables	33kV Ducted system	33kV	Ploughed	May-23
SSEN	Ash Vale	11kV Undergrounding scheme of existing OHL	11kV	Ploughed	Feb-23
Bentley	Chilton Foliat	160mm Foul Main	160mm	Ploughed	Feb-23
SSEN	Golinston Hill	11 & 33kV AONB Scheme 8.4km	11 & 33kV	Ploughed	Nov-22
SSEN	Valley of the Stones	11kV installation 8.6km	11kV	Ploughed	Oct-22
Welsh Water Morgan Sindall	Middlegate	90mm Foul Main	90mm Duct	Ploughed	Jul-22
Welsh Water Morgan Sindall	Nomans Heath	160mm Foul Main	160mm Duct	Ploughed	Jul-22
Welsh Water Morgan Sindall	Nomans Heath	110mm Foul Main	110mm Duct	Ploughed	Jul-22
Balfour Beatty	BW Undergrounding	132kV undergrounding - Portishead	132kV	Ploughed	April 21 - Aug 2023
RJ McLeod	Cumberhead	33kV Turbine Connections Approx 11km	33kV	Ploughed	Aug-22
SSEN	Killin - Vista	33kV circuits in AONB 4km	33kV	Ploughed	Feb-22

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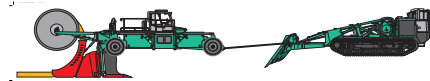




WPD	Rhadermyn Mast connection	11kV connection to new MOD Mast 8km	11kV	Ploughed	May-22
RJ McLeod	South Kyle	33kV Turbine Connections Approx 42km	33kV	Ploughed	Dec 2022 / Mar 2022
A-Hak	De-Weel Phae 2	33kV - New Connection (Multiple circuits)	33kV	Ploughed	Oct-21
SSEN	Burley, New Forest	11kV installation in AONB - 10.5km	11kV	Ploughed	Sep-21
Bentley	Norwich to Wyndham	315mm Water Main SDR11 - 12km	315mm Water	Ploughed	Feb & March 2021
A-Hak	Alphen	20kV New Connection - Twin Circuit	20kV	Ploughed	Feb-21
WPD	Ammanford Solar Park	33kV New Connection 8km	33kV	Ploughed	Feb-21
Roadbridge	Sea Green	3 x 220kV circuits 4.5km	220kV	Ploughed	Dec 2020 / Jan 2021
WPD	Whitland	11kV & 33kV Cable installation	11 & 33kV	Ploughed	Nov-20
RJ McLeod	Windy Rig Wind Farm	33kV Turbine Connections Approx 8km	33kV	Ploughed	Nov-20
RJ McLeod	Windy rig	33kV dual circuit	33kV	Ploughed	Sep-20
SSE	Petersfield River Crossing	33kV dual circuit - SDR11 Ducted complete with coms	33kV	Ploughed	Autumn 2020
SSE	Petersfield - Fernhurst	33kV dual circuit	33kV	Ploughed	Jul-20
SSE	Passfeld	11kV Undergrounding	11kV	Ploughed	Mar-20
SSE	Boat of Garten	33kV	33kV	Ploughed	Feb - May 2020
SSE	Sumners Pond	11kV New Connection	11kV	Ploughed	Feb-20
SSE	Tegleys Farm	11kV - Network Upgrade	11kV	Ploughed	Oct-19

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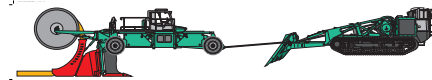
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 Glanafon, Dolgran, Pencader, Carmarthen, SA39 9BX





SSE	Letterbox Cottage	11kV Wayleave Termination	11kV	Ploughed	Nov-19
WPD	Treafwr WT	33kV New Connection 12km	33kV	Ploughed	Aug-19
WPD	Carmarthen Sub	Earthing	Earth	Ploughed	Jul-19
SSEN	Henstridge	11kV - Network Upgrade	11kV	Ploughed	Jul-19
A-Hak	De-Weel	33kV - New Connection (6 circuits 32km)	33kV	Ploughed	Sep-19
A-Hak	Drenste (DMO)	33kV New Connection 30km	33kV	Ploughed	Feb - May 2019
WPD	Llangranog	11kV New Connection - SSSI	11kV	Ploughed	Mar-19
SSEN	Bramley	11kV Overlay	11kV	Ploughed	Feb-19
WPD	Valero	Fibre - 62mm x 2 duct installation	Fibre	Ploughed	Jan-19
WPD	Golden Hill	33kV New Connection	33kV	Ploughed	Jan-19
SSEN	Stockbridge	11kV Undergrounding - River Crossing - EA Permits and SSSI	11kV	Ploughed	Feb-19
WPD	Forest Fach Fault	132kV Cable Fault Forest Fach	132kV	Open Trench	Dec 2018 - Jan 2019
SSEN	Upavon	11kV Undergrounding - MOD site	11kV	Ploughed	Nov-18
SSEN	Bigna Park	11kV Undergrounding - River Crossing	11kV	Ploughed	Oct-18
SSEN	Foxbury	11kV Undergrounding	11kV	Ploughed	Oct-18
WPD / Balfour Beatty	Fault Works	132kV Llanelli - Cable Fault Restoration	132kV	Open Trench	Jun-18
SSEN	The Ridings	11kV Undergrounding	11kV	Ploughed	Jun-18
WPD	MYG	160mm Trifoil Duct with 32mm comms duct	132kV	Ploughed	Apr-18
Farrans	MYG	110mm Trefoil Duct with 32mm comms duct	33kV	Ploughed	Mar-18
A-Hak	Netherlands	20kV New Connection	20kV	Ploughed	Jan-18

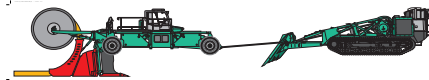
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WPD / Kier	Tarnock	33kV & 11kV Undergrounding for Hinkley Point	11kV & 33kV	Ploughed	Mar-18
WPD / Kier	Sandford	33kV & 11kV Undergrounding for Hinkley Point	11kV & 33kV	Ploughed	Feb-18
SSEN	MOD Bordon	11kV New Connection - ANOB	11kV	Ploughed	Dec-17
WPD / Morgan Sindall	Latteridge Road - Bristol	33kV Single Circuit Networks Upgrade	33kV	Ploughed	Dec-17
SSEN	Kings Hill	11kV New Connection	11kV	Ploughed	Sep-17
SSEN	Monkton	33kV ANOB Undergrounding	33kV	Ploughed	Sep-17
JSM / SSEN	Shripney	33kV Network Upgrade - Undergrounding of OHL Route	33kV	Ploughed	Oct / Nov 2017
SSE Enterprise	Brechfa Windfarm	30km Open Cut Cable Install to turbine base and package subs - LV install and all substation 33kV Connections.	33kV	Open Trench	June - Dec 2017
WPD / BBUSL	Brechfa Windfarm Connection	Undergrounding of 11kV OHL to allow 132kV OHL New Build	11kV	Open Trench	Mar 2017 - Dec 2017
SSE PD	Petersfield Stage 2	AONB	11kV	Ploughed	Apr-17
SSE PD	Slough	AONB	11kV	Ploughed	Mar-17
A-Hak	Netherlands	20kV New Connection	20kV	Ploughed	Dec-17
WPD / BBUSL	Brechfa Windfarm	Windfarm Connection 132kV Duct installation single circuit.	132kV	Open Trench	Mar 2017 - Nov 2017
WPD / BBUSL	Carmarthen	Underground for new OHL route wind farm connection	11kV & 33kV	Ploughed	Mar 2017 - Nov 2017
WPD / BBUSL	Llandeilo	Grid connection	11kV	Ploughed	Dec-16

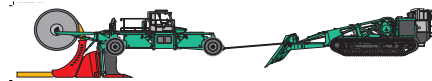
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WPD / BBUSL	Solar Farm Connection - Tenby	Installation of new connection from Tenby Solar farm to WPD Transformer pole.	11kV	Open Trench	Oct-16
SSE PD	Tichborne Stage 2	AONB	11kV	Ploughed	Sep-16
Morgan Sindall / WPD	Cheltenham	Diversion works	66kV	Ploughed	Sep-16
WPD / BBUSL	Cwrt Newydd	Turbine connection	11kV	Ploughed	Sep-16
WPD / BBUSL	St Clears	Wind Turbine	11kV	Ploughed	Sep-16
WPD / BBUSL	Lampeter	Grid connection	11kV	Ploughed	Aug-16
SSE PD	Turville	AONB	11kV	Ploughed	May - August 2016
SSE PD	OXFORD	New Grid Connection	11kV	Ploughed	May - August 2016
SSE PD	EAST MEON	AONB	11kV	Ploughed	May - August 2016
SSE PD	Petersfield	AONB	11kV	Ploughed	May - August 2016
SSE PD	Church Crookham	new connection	11kV	Ploughed	May - August 2016
SSE PD	Tichborne	AONB	11kV	Ploughed	May - August 2016
WPD / BBUSL	Blaun Waun	Grid connection	11kV	Ploughed	Jul-16
WPD / BBUSL	Ammanford - Undergrounding	Undergrounding of existing 11kV & 33kV circuits below existing 132kV OHL Circuits	11 & 33kV	Open Trench	Apr-16
WPD / BBUSL	Haverford West	Grid Connection including hedge and road crossings	33kV	Ploughed	Apr-16
WPD / BBUSL	Whitland	Whitland diversion	11kV	Ploughed	Aug-16
SSE Enterprise	Clyde	Clyde Windfarm	33kV	Ploughed	Feb-16
SSE Enterprise	Aviemore	Cairngorms connection	33kV	Ploughed	Jan 16 - Feb-16
WPD / BBUSL	Trevogan	Grid connection	11kV	Ploughed	Mar-16

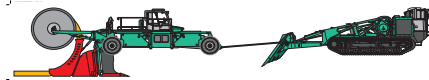
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WPD / BBUS	Cardigan	Grid Connection	11kV	Ploughed	Jan-16
SSE PD	Southampton	AONB	11kV	Ploughed	Jan-16
SSE PD	Buckland Rings	AONB	11kV	Ploughed	Jan-16
WPD / BBUSL	Megan Wells	Overlay	11kV	Ploughed	Jan-16
ISS ltd	Sunnybridge	MOD training camp installation	Fibre	Ploughed	Dec-15
WPD / BBUSL	Tenby	Grid connection	33kV	Ploughed	Nov-15
SSE Enterprise	Moy Windfarm - Tomatin	Windfarm connection	33kV	Ploughed	Nov-15
WPD / BBUSL	Salem	Grid connection	11kV	Ploughed	Nov-15
Folly Farm	West Wales	Turbine connection	11 & 33kV	Ploughed	Nov-15
WPD / BBUSL	Llangadog	New Grid Connection	11kV	Ploughed	Sep-15
EDF / GPC	Jersey	Beach landing from Normandy	120kV	Ploughed	Sep-15
EDF / GPC	Normandy	Export cable to Jersey	120kV	Ploughed	Sep-15
WPD / New Generation Bio	Pengallt	New Grid Connection	11kV	Ploughed	Sep-15
SSE Enterprise	Stirling	Kingsburn connection	33kV	Ploughed	Aug-15
SSE Enterprise	Ness of Quoy	Grid connection	33kV	Ploughed	May - Sept 2015
WPD / Greencat Energy	Gilfach	Wind Farm connection	11kV	Ploughed	May-15
WPD / BBUSL	Narberth	Grid connection	11kV	Ploughed	Apr-15
WPD / BBUSL	Whitland	Overlay plus hedge crossings	33kV	Ploughed	Apr-15
WPD / BBUSL	St Florence	Grid Connection including hedge and road crossings	11kV	Ploughed	Apr-15
RH Howells	Pentre Mawr	Private section of turbine connection	11kV	Ploughed	Apr-15
SSE Enterprise	Petersfield	AONB	11kV	Ploughed	May-15

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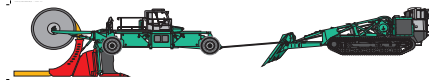




WPD / BBUSL	Haverford West	Grid Connection	33kV	Ploughed	Mar-15
Interserve / NPG	Spurn Point	Tidal area installation	11kV & Water Main	Ploughed	Mar-15
WPD	Ty Groes West Wales	Grid Connection at Ammanford	11kV	Ploughed	Mar-15
Balfour Beatty Civils	PYC Windfarm	Turbine connection	33kV	Ploughed	Jan-15
WPD / BBUSL	Oakwood Park	Grid Connection	11kV	Ploughed	Nov-14
WPD / BBUSL	Sarnau Trelec	Connection	11kV	Ploughed	Nov-14
WPD / BBUSL	Pentre Mawr	Grid Connection	11kV	Ploughed	Oct-14
WPD / BBUSL	Blaun Waun	Overlay plus hedge crossings	11kV	Ploughed	Sep-14
Western power	Canarth	New turbine connection	11kV	Ploughed	Aug-14
WPD / BBUSL	Llandstuhl	Llandysul Diversion	11kV	Ploughed	Jun-14
BBUSL / ABB	Pen Y Cymoedd	Connection to windfarm including steep gradient dual circuit 132 kV	132kV	Open Trench	2014 / 2015
Western power / BBUSL	Carmarthen - Wind turbine x 36	Overlay plus hedge crossings	33kV	Ploughed	Jul-14
Western power / BBUSL	Porlock Saltmarsh scheme	SSSI inclusive of stream and multiple hedge crossings.	11kV	Ploughed	Jul-14
WPD / Kier	Yatton	AONB strawberry line cycle path	11kV	Ploughed	Jan-14
WPD / BBUSL	Pendine Phase 2	Pendine MOD CAMP	Fibre	Ploughed	Dec-13
WPD / BBUSL	Pendine	Pendine MOD CAMP	Fibre	Ploughed	Oct-13
Powersystems	Mynydd y Bwlfa	Windfarm phase 2	33kV	Ploughed	Summer 2013
Powersystems	Mynydd y Bwlfa	Windfarm phase 1	33kV	Ploughed	Autumn 2013

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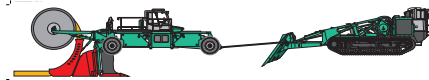
SPEN	North Wales	4.9km 11kV cable laying project - Snowdonia National Park	11kV	Ploughed	Jun-07
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A handwritten signature in black ink, appearing to read 'J. Thomas', written in a cursive style.

JASON LLOYD THOMAS  
DIRECTOR  
A THOMAS PLANT HIRE LIMITED  
23rd January 2023

Pack Page 72

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Glanafon, Dolgran, Pencader, Carmarthen, SA39 9BX*









A handwritten signature in black ink, appearing to read 'Jason Lloyd Thomas', written in a cursive style.

.....

Jason Lloyd Thomas  
Dated the 23<sup>rd</sup> day of January 2024.



# Agenda Item 4.3

Lee Waters AS/MS  
Y Dirprwy Weinidog Newid Hinsawdd  
Deputy Minister for Climate Change



Llywodraeth Cymru  
Welsh Government

Ein cyf/Our ref DC-LW-00115-24

Huw Irranca-Davies MS  
Chair  
Legislation, Justice and Constitution Committee  
Senedd Cymru

[SeneddLJC@senedd.wales](mailto:SeneddLJC@senedd.wales)

2 February 2024

Dear Huw

## **Inter-Institutional Relations Agreement: Transport Inter-Ministerial Standing Committee**

I am writing in accordance with the inter-institutional relations agreement to notify you of the next meeting of the Transport Inter-Ministerial Standing Committee, which will take place on 5 February.

The meeting will be chaired by Lord Davies of Gower, Parliamentary Under Secretary of State for Transport and will cover freight decarbonisation, HGV Driver welfare and data sharing related to freight.

I will provide an update after the meeting.

I am also copying this letter to Mick Antoniw MS, the Counsel General and Minister for the Constitution; the Rt Hon Elin Jones MS, the Llywydd; the Climate Change, Environment, and Infrastructure Committee.

Yours sincerely

**Lee Waters AS/MS**  
Y Dirprwy Weinidog Newid Hinsawdd  
Deputy Minister for Climate Change

Bae Caerdydd • Cardiff Bay  
Caerdydd • Cardiff  
CF99 1SN

Canolfan Cyswllt Cyntaf / First Point of Contact Centre:  
0300 0604400

[Gohebiaeth.Lee.Waters@llyw.cymru](mailto:Gohebiaeth.Lee.Waters@llyw.cymru)  
[Correspondence.Lee.Waters@gov.wales](mailto:Correspondence.Lee.Waters@gov.wales)

Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

Julie James AS/MS  
Y Gweinidog Newid Hinsawdd  
Minister for Climate Change

Agenda item 4.4

Llywodraeth Cymru  
Welsh Government

Ein cyf/Our ref: JJ/PO/0042/24

Huw Irranca-Davies MS  
Chair  
Legislation, Justice and Constitution Committee

Llŷr Gruffydd MS  
Chair  
Climate Change, Environment and Infrastructure Committee

Welsh Parliament  
Cardiff Bay  
Cardiff  
CF99 1SN

6 February 2024

Dear Huw, Llŷr,

The Interministerial Group on Net Zero, Energy and Climate Change, which was scheduled to take place on 6 February 2024, has been postponed by agreement following the welcome news of the restoration of the Northern Ireland Executive. This postponement will allow full and meaningful engagement from all four governments. The Interministerial Group is now expected to take place on 21 February 2024.

Yours sincerely,



**Julie James AS/MS**  
Y Gweinidog Newid Hinsawdd  
Minister for Climate Change

Canolfan Cyswllt Cyntaf / First Point of Contact Centre:  
0300 0604400

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Caerdydd • Cardiff  
CF99 1SN

[Gohebiaeth.Julie.James@llyw.cymru](mailto:Gohebiaeth.Julie.James@llyw.cymru)  
[Correspondence.Julie.James@gov.Wales](mailto:Correspondence.Julie.James@gov.Wales)

Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

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**Julie James AS/MS**  
**Y Gweinidog Newid Hinsawdd**  
**Minister for Climate Change**



**Llywodraeth Cymru**  
**Welsh Government**

Ein cyf/Our ref: JJ/PO/0047/24

Huw Irranca-Davies MS  
Chair  
Legislation, Justice and Constitution Committee

Llŷr Gruffydd MS  
Chair  
Climate Change, Environment and Infrastructure Committee

Welsh Parliament  
Cardiff Bay  
Cardiff  
CF99 1SN

16 February 2024

Dear Huw, Llŷr,

I am writing in accordance with the inter-institutional relations agreement to notify you of a meeting of the Interministerial Group on Net Zero, Energy and Climate Change, which will take place on the 13 March 2024.

I will attend, and UK Government is expected to chair, the Net Zero, Energy and Climate Change meeting. In this virtual meeting I anticipate the discussion will focus on behavioural change, Industrial Decarbonisation and CCUS.

I will provide an update after the meeting.

Yours sincerely,

**Julie James AS/MS**  
**Y Gweinidog Newid Hinsawdd**  
**Minister for Climate Change**

Canolfan Cyswllt Cyntaf / First Point of Contact Centre:  
0300 0604400

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[Gohebiaeth.Julie.James@llyw.cymru](mailto:Gohebiaeth.Julie.James@llyw.cymru)  
[Correspondence.Julie.James@gov.Wales](mailto:Correspondence.Julie.James@gov.Wales)

Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

**Back Page 90**  
We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

Lesley Griffiths AS/MS  
Y Gweinidog Materion Gwledig a Gogledd Cymru, a'r Trefnydd  
Minister for Rural Affairs and North Wales, and Trefnydd



Llywodraeth Cymru  
Welsh Government

Llyr Gruffydd MS Chair,  
Climate Change, Environment, and Infrastructure Committee  
Senedd Cymru  
Cardiff Bay  
Cardiff  
CF99 1SN  
[SeneddClimate@senedd.wales](mailto:SeneddClimate@senedd.wales)

12 February 2024

Dear Llyr

I am writing to inform the Committee of the intention to consent to the UK Government making and laying the draft Windsor Framework (Non-Commercial Movement of Pet Animals) Regulations 2024.

I received a letter from the Minister of State for Biosecurity, Marine and Rural Affairs, Rt Hon Lord Benyon on 16 October 2023, asking for consent to these Regulations. The Regulations intersect with devolved policy and will apply to Wales. The Regulations will extend to England, Scotland, Wales and Northern Ireland (NI) and a similar request for consent has been sent to Scottish Ministers.

The 2024 Regulations relate to the implementation of the Windsor Framework, as agreed between the UK and the EU on 27th February 2023 and are being made under Section 8C(1) and (2) of, and paragraph 21 of Schedule 7 to, the European Union (Withdrawal) Act 2018.

Currently under the Northern Ireland Protocol, all non-commercial movement of pets from GB to NI became subject to full EU third country requirements on 1 January 2021 following the end of the Transition Period. These requirements are established by Regulation (EU) No 576/2013 of the European Parliament and of the Council of 12 June 2013 on the non-commercial movement of pet animals ("The EU Pets scheme").

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CF99 1SN

Canolfan Cyswllt Cyntaf / First Point of Contact Centre:  
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[Gohebiaeth.Lesley.Griffiths@llyw.cymru](mailto:Gohebiaeth.Lesley.Griffiths@llyw.cymru)  
[Correspondence.Lesley.Griffiths@gov.wales](mailto:Correspondence.Lesley.Griffiths@gov.wales)

Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

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The Windsor Framework amends the Northern Ireland Protocol and puts in place a new, sustainable, and durable framework for the movement of pets for non-commercial reasons.

The 2024 Regulations set out the term for pets to be able to move via the Northern Ireland Pet Travel Scheme. They also set out that the pet owner will need to apply for a pet travel document which is valid for the lifetime of the pet animal. When applying for the document, pet owners will need to supply specific information to the relevant competent authority, including a requirement that all dogs, cats and ferrets (including those based in NI) must be microchipped. Pet owners (or those travelling with a pet animal) will be required to make a declaration that the pet animal will not subsequently be moved into the EU.

No requirements beyond the need for a microchip will be placed on NI pet owners, who will be able to travel to and from GB without the need for a pet travel document or any other process.

Although the Welsh Government's general principle is that the law relating to devolved matters should be made and amended in Wales, on this occasion, it is considered appropriate for this instrument to apply to Wales as there is no policy divergence between the Welsh and UK Government in this matter. This ensures a coherent and consistent statute book with the regulations being accessible in a single instrument. I consider that legislating separately for Wales would be neither the most appropriate way to give effect to the necessary changes nor a prudent use of Welsh Government resources given other important priorities.

I have written similarly to Huw Irranca-Davies MS, the Chair of the Legislation, Justice and Constitution Committee (LJCC).

Yours sincerely,

A handwritten signature in cursive script that reads "Lesley Griffiths". The signature is written in black ink and is positioned above the printed name and title.

**Lesley Griffiths AS/MS**  
**Y Gweinidog Materion Gwledig a Gogledd Cymru, a'r Trefnydd**  
**Minister for Rural Affairs and North Wales, and Trefnydd**

# Further written evidence following NRW's Annual Scrutiny session

## Forestry Questions

1. *Following a question from Janet Finch Saunders MS on how much land NRW had purchased and how many trees that meant in real terms, Clare Pillman, NRW CEO, responded to say that we had purchased 75 hectares of new woodland in the last 12 months. She committed to give the detail of this in terms of numbers, and we can confirm that 75 hectares of planting means approximately 150,000 trees.*
2. *Mabon ap Gwynfor MS then asked what percentage of those trees are conifers or broadleaf, and what the purpose of that planting is, too — whether it's for crops of for carbon sequestration?*

*Using the known % from the completed 2022/23 programme, which will be typical, percentages are 62.5% Broadleaves, 37.5% Conifers. The purpose of the planting is sustainable management of natural resources (SMNR). We choose varieties of conifer and broadleaves to create a woodland appropriate to the site and that achieves a balance of economic, social and environmental benefits in the context of climate change, i.e. SMNR. While the broadleaves tend to achieve more for environment and the conifers more for the economy through timber production, all trees contribute to SMNR and we look at the woodland as an integrated whole.*

## NRW's relationship with Fujitsu

3. *NRW currently pays the Environment Agency for the use of their Flood Warning Service which was developed by Fujitsu. We are in the process of developing our own bespoke Flood Warning Service, which is planned to go live later this year.*

# Agenda Item 4.7

Julie James AS/MS  
Y Gweinidog Newid Hinsawdd  
Minister for Climate Change



Llywodraeth Cymru  
Welsh Government

Ein cyf/Our ref: MA/JJ/3318/23

Llŷr Gruffydd MS  
Chair  
Climate Change, Environment, and Infrastructure Committee  
Welsh Parliament  
Cardiff Bay  
Cardiff  
CF99 1SN

16 February 2024

Dear Llŷr,

I am writing to inform you that the Packaging Waste (Data Collection and Reporting) (Wales) (Amendment) Regulations 2024 which will shortly be laid before the Senedd fall under the scope of the Resources and Waste Common Framework.

Yours sincerely,

**Julie James AS/MS**  
Y Gweinidog Newid Hinsawdd  
Minister for Climate Change

Canolfan Cyswllt Cyntaf / First Point of Contact Centre:  
0300 0604400

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CF99 1SN

[Gohebiaeth.Julie.James@llyw.cymru](mailto:Gohebiaeth.Julie.James@llyw.cymru)  
[Correspondence.Julie.James@gov.Wales](mailto:Correspondence.Julie.James@gov.Wales)

Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

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