

# CITY AND COUNTY OF SWANSEA

## ULTRA LOW/ZERO EMISSION FLEET VEHICLE TRANSITION 2021-2030

### 1. Introduction

- 1.1 The Council declared a Climate Change Emergency in June 2019 and a subsequent target of becoming a **net zero organisation by 2030**, committing to actively reduce the impact of its activities on the environment in line with its sustainable delivery and wellbeing objectives.
- 1.2 The Welsh Government set out its expectations with regards to public sector fleets in its 2019 strategy 'Prosperity for All : A Low Carbon Wales', outlining its ambitions for all new cars and light goods vehicles to be ultra-low emission by 2025 and all heavy goods vehicles by 2030.
- 1.3 The Council's Green Fleet Policy was adopted in 2018 with an aim to ensure that the acquisition, use and management of the City and County of Swansea's corporate vehicle fleet consistently and continuously seeks to contribute to the Council's Corporate Plan commitments with regard to the Well-Being of Future Generations (Wales) Act 2015.

### 2. Vision

- 2.1 The Green Fleet Policy's principal aim is to continuously reduce the environmental impact of the Council's fleet operations in terms of air quality and to strive towards achieving **the Council's vision of an optimised, sustainable decarbonised vehicle fleet by 2030**.
- 2.2 The current Policy targets of incremental annual 5% improvements will not meet the 2030 deadline and are being reviewed, but the expectation is that the targets will need to at least double.
- 2.3 This Ultra Low Emission Vehicle (ULEV) Transition Plan seeks to set out the strategic delivery programme to achieve these aims.

### 3. Context and Scope

- 3.1 The Council currently operates fleet of @ 850 vehicles, ranging from pool cars to specialist heavy commercials, that cover approximately 5.7 million miles per annum with the majority of the journeys being undertaken in and around urban areas.
- 3.2 The fleet is mainly diesel powered using @ 1.71 million litres of fossil fuel and its operation is estimated to equate to 3750 tonnes of greenhouse gases per annum.
- 3.3 The fleet already has 42 battery electric vans and 6 hybrid vehicles, with a further 40 full electric also on order. There are 40 fleet vehicle charge points established across 12 sites, with an intention to establish a further 60 before the end of 2021/22.
- 3.4 The fleet is holistically supported by the Central Transport Unit (CTU), providing a one stop shop for all fleet requirements. The vehicles are predominantly on 5 year

renewal cycles, with a mixture of funding options used to acquire, although there are a proportion older than 5 years. Vehicle fuel is managed by CTU across 5 sites and recharged directly to the user sections.

- 3.5 The Council's 'Grey fleet', whereby staff use private vehicles for Council business, undertook 1.61 million miles of business travel during 2019/20, resulting in 429 tonnes of CO2 per annum.
- 3.6 The Council commissioned a Business Travel Review in November 2018, with recommendations arising around establishing a Business Travel Policy and Hierarchy. The CV19 pandemic, the resulting changes to new ways of working and revised accommodation strategies has altered the landscape in this regard.
- 3.7 The Welsh Government Energy Services (WGES) undertook a review of the Council's corporate and grey fleet in 2021, with the aim of supporting and advising on the transition to ultra-low and zero emission vehicles over the next @ 10 years.
- 3.8 The review concluded that a full transition to electric fleet vehicles would result in a 90% reduction in greenhouse gases (GHG) and a 70% reduction in energy costs, saving @ £1.15m per annum.
- 3.9 The Council established an emissions baseline in October 2021 in relation to its transport, energy and land use, in accordance with the Welsh Government's Net Zero Carbon Status 2030 Route Map guidance. The Fleet element of this equated to 24% of the overall for 2020/21.
- 3.10 The overall aim of this transition is therefore is to deliver **the following key objectives** to meet the Council's vision
- Transition the Council's fleet to zero emission equivalents in support of the organisational Net Zero commitment by 2030
  - Transition the Council's fleet to zero emission equivalents in accordance with the Welsh Government's expectation of light commercial vehicles by 2025 and other vehicles by 2030
  - Establish a fleet vehicle charge point infrastructure that supports this transition
  - Optimise fleet vehicle use and efficiency
  - Decarbonise grey fleet travel
  - Establish integrated data systems for GHG measurement
  - Revise and approve the appropriate supporting policies, procedures and working practices
- 3.11 The transition plan has identified the following **20 actions as the principal areas** that need to be addressed, each of which are considered in greater detail below.

***#1 Establish as corporate transformation programme***

***#2 Establish multi-disciplinary transition team and resource***

***#3 Establish transition action plan***

***#4 Realign vehicle renewal programme***

***#5 Continue the decarbonising of the existing (diesel) fleet***

***#6 Consolidate and integrate fleet data systems***

***#7 Introduce fleet performance monitoring***

***#8 Determine the EV charging infrastructure demand***

***#9 Consider alternative (non EV) option infrastructure requirements***

***#10 Understand the cost implications in terms of additional expenditure and opportunities for savings and income generation***

***#11 Pursue additional funding streams***

***#12 Establish the strategy and funding implications as a corporate risk***

***#13 Align cyclical procurement planning with fleet renewal programme***

***#14 Apply a 'diesel by exception' principle***

***#15 Adopt a whole life costing principle for fleet renewals***

***#16 Implement a stakeholder engagement and communications plan***

***#17 Assess impact on CTU operations and reskill vehicle maintenance staff***

***#18 Invest in specialised workshop equipment***

***#19 Co-opt Business Travel Review workstream into programme***

***#20 Establish Programme Risk Register***

#### **4. A Corporate Transformational Approach**

- 4.1 The key enabler for this plan is establishing it as a **corporate transformation programme (#1)**, with appropriate governance and resources, to monitor and ensure it delivers the expected outcomes. As a highly significant change in terms of vehicle provision and use, its environmental, financial and operational impacts will cut across the whole of the organisation.
- 4.2 The programme would subsequently require **the establishment of a multi-disciplinary team (#2)** capable of coordinating and driving the transition action plan.
- 4.3 It is proposed that this team is championed by a Cabinet member, and comprises senior management as well as subject matter experts that should include Fleet, Facilities, Energy, Property Services/Electrical, HR, Finance and Procurement. Additional (internal and external) expertise and stakeholders should be brought on board as and when required.

- 4.4 Additional resource will be necessary to support key stakeholders throughout the transition, as well as manage data demands and integration. A new Fleet/ULEV Performance role, as recommended by the WGES review, will be vital in ensuring the transition and funding will be required to establish the new post.
- 4.5 **A transition action plan will be established (#3)** to track and manage delivery of clear and measurable key outcomes. This action plan will be monitored by the team and reviewed annually, focussing on the following 10 principle areas
- Fleet Renewals programme
  - Fleet Utilisation
  - Fleet Data and Performance
  - Vehicle Charging and Other Infrastructure
  - Funding
  - Procurement
  - Stakeholders
  - Vehicle Maintenance
  - Grey fleet
  - Risk and Dependencies
- 4.5 Appropriate reporting mechanisms, milestones and performance targets will be incorporated into the action plan to reflect the Council's expectations, including
- Programme milestone progress
  - Total Annual Fleet size
  - ULEVs adopted
  - Total Annual Mileage
  - Fossil fuel reductions/energy savings
  - Carbon reductions
  - Costs
  - Infrastructure volumes
- 4.6 It is acknowledged that the transition programme is anticipated as initially lasting until 2030, during which the plan will be reviewed as the respective technologies and circumstances change

## **5. Fleet Renewals and Utilisation**

- 5.1 The current fleet renewal programme (attached) has been broken down into the respective financial years, providing an indication of timelines and volumes for fleet changes and the subsequent infrastructure requirements, as well as determining the attendant funding, procurement, stakeholder engagement and risk implications.
- 5.2 The Council's Green Fleet Policy states that the Council will, wherever viable, recommend the greenest vehicle renewal option available. Key considerations in determining this include
- Vehicle specification, design and payload
  - Fuel type options and efficiency
  - Greenhouse gas emissions
  - Cost

- 5.3 The transition plan will include the **realignment of the renewal programme (#4)**, ensuring that the appropriate vehicle types for the task are available when due for renewal, reinforcing the viability of the programme, principally by considering
- current market maturity
  - available funding streams
  - market developments to include all viable options
  - potential supply constrictions due to global market
  - embed quick wins ahead of 2025/2030 expectations
  - impact of fleet utilisation reviews (see below)
  - infrastructure implications and timelines
  - Complementary and transitional options, including
    - Hydrogen fuel cells
    - Alternative fuels (HVO, CNG etc)
    - Hybrid technologies
- 5.4 Light commercial vehicles will be prioritised in the lead up to 2025, although deferment of renewal will be considered if no viable options are available or if the infrastructure cannot be adopted in readiness.
- 5.5 Concurrent and similar considerations will be applied for heavier vehicles with a view to earliest possible viable transition to secure even greater CO2 reductions prior to 2030, whilst planning to avoid potential ‘end of decade’ supply congestion.
- 5.6 Alongside the renewal programme, the plan includes the aim of **continuing the decarbonising of the existing (diesel) fleet (#5)**. This will seek to address fleet vehicle use and demand, by cyclically
- undertaking annual fleet utilisation reviews
  - challenging the viability of low mileage vehicles
  - recommending downsizing of vehicles with ‘what you carry’ audit outcomes
  - switching to adhoc hire in lieu of fleet where utilisation is low (schools)
  - reviewing business cases for home to work use
  - exploring vehicle optimisation opportunities
  - fuel use monitoring
  - driver behaviour monitoring and training interventions
  - addressing demand management, signposting active travel, potential modal shift, different ways of working etc

## **6. Data and Performance**

- 6.1 The WGES reviews identified integration weaknesses on corporate data relating to fleet, inhibiting the understanding of performance and establishing baselines for future improvements. The previously recognised need for accurate and integrated data systems, principally for fleet management, fuel management and telematics, has been increasingly highlighted by the demands of carbon reporting in particular.
- 6.2 The current reliance on manual interventions to produce basic outputs from a variety of data sources, is no longer sustainable for such a large fleet and the transition plan will seek to address by **consolidating fleet data systems (#6)**

- integrating the fleet, fuel and telematics systems
- addressing source data issues
- implementing telematics across the remainder of the fleet
- adopting CANBUS based telematics to provide greater detail

6.3 In conjunction with improving the data, the plan will seek to **introduce fleet performance monitoring (#7)** across key aspects of vehicle operations, to support and reflect decarbonising by,

- Establishing a new role within CTU to assist with fleet performance and ULEV transition. Embedding the role within CTU will ensure context and a holistic understanding is applied to the performance monitoring.
- Monitor and report on key KPIs and targets including
  - CO2
  - Energy / fuel consumption
  - Mileage
  - Fleet utilisation
  - Detailed analysis of telematics data
  - Transition progress and milestones

6.4 The respective sites' energy consumption will continue to be monitored by Corporate Property Services.

## **7. Vehicle Charging and Other Infrastructure**

7.1 The Council currently has 40 charge points at 12 sites, all introduced to support electric cars and small vans. The charge points are basic, unmetered, 3.8 kW, reflecting an approach to 'slow' charge overnight at the vehicles' base locations, but with the step change expected within this plan, there is a clear need to adopt a more strategically aligned, upgraded and comprehensive approach to implementing the infrastructure.

7.2 The projected long term requirement for charge points if the Council transitioned 100% to electric vehicles is expected to cost a minimum of £750,000 (WGES).

7.3 The 2021/22 plan is to install up to 60 charge points across 5 sites to cater for the new electric vehicles currently on order. The principal approach will be charging vehicles overnight with the adoption of 7.4kW charge points, as well as 50kW for heavier vehicles, the individual site systems future proofed using smart management system design to balance capacity and demand.

7.4 Preliminary infrastructure works are also being considered for a new site to accommodate the redeployment of Waste vehicles in particular.

7.5 The 2021/22 Welsh Government Electric Vehicle Charge point Infrastructure grant of £300,000 will be used to fund these specific projects,

7.6 Aligning the longer term infrastructure needs to the fleet renewals programme will provide an indication of when each 'phase' would be required. Focussed analysis on vehicle use data will **determine the EV charging infrastructure demand (#8)**. The transition plan will

- determine what types, how many and where
- consider impact of any depot rationalisation plans
- consider charge at home opportunities for home to work use
- engage with local distribution network operator (DNO)
- establish site electrical capacities and headroom
- design the most appropriate and cost effective system to maximise capacity, including smart charger management control systems
- consider any potential network upgrade costs
- consider other on site generation/private wire solutions (including own renewables)
- establish overall indicative costs
- consider interoperability and sharing opportunities with other stakeholders
- establish an initial implementation plan for annual review by the programme
- consider 3<sup>rd</sup> party hubs to supplement in-house infrastructure

7.7 The Council however recognises that battery electric is not expected to be the only alternative vehicle drivetrain or fuel option available. The shorter term choices of hybrid powered vehicles or alternative fuels, such as hydrotreated vegetable oil (HVO) for example, will be continually appraised, as well as the longer term complimentary potential of hydrogen fuel cell vehicles.

7.8 These **alternative options (non EV) have their own infrastructure implications (#9)** and the transition plan will take these into account as part of the overall vehicle renewal considerations.

## 8. Funding

8.1 Finance will be represented as part of the programme transition team

8.2 The extent of the funding gap for both the acquisition of the ultra-low/zero emission vehicles and their supporting infrastructure is relatively unknown at the outset of this.

8.3 It is estimated that there will be fuel cost savings of £1.17 million per annum accruing from the transition (WGES, compared to 2019/20 expenditure of £1.85m), as well as vehicle maintenance cost reductions. The savings depend on the changes being implemented as outlined in the strategy and it is proposed that these savings are 'ring fenced' as contributions to the programme but the investment required will still remain relatively substantial.

8.4 The programme will continually monitor, project and report on **cost implications (#10)** to inform on the potential gaps as the transition progresses. Again, this may be aligned with the need to extend renewal cycles on vehicles as mitigation.

8.5 **Additional funding streams will be pursued (#11)** including Office for Zero Emission Vehicles' grants for workplace charging, income generation opportunities and cost reduction measures. The Welsh Government EVCI grant of £300,000 will support the 2020/21 immediate infrastructure needs, however additional funding will be required from Welsh Government to ensure the Council can deliver the whole of the transition strategy.

8.6 Funding will subsequently be **raised as a corporate risk (#12)** to allow the corporate finance teams to consider the required short and medium term financial planning implications.

## **9. Procurement**

9.1 Procurement will be represented as part of the programme transition team

9.2 The approach to procuring both the vehicles and infrastructure will be undertaken in consultation with corporate procurement teams and the key stakeholders.

9.3 **Cyclical procurement planning will align with the fleet renewal programme (#13)**, commencing at least 12 months in advance of the required dates for both the vehicles as well as the infrastructure, to reflect the potential supply chain constrictions and ensure available procurement resources. The Council will utilise existing or new national frameworks, as well as exploring potential collaborative tendering opportunities.

9.4 **A 'diesel by exception' principle will apply to fleet renewals (#14)**, with only a business case, signed off by the relevant Head of Service, deferring the transition to other drivetrains where a current viable option is not available at the time of scheduled vehicle change. Cost will not be a reasonable justification and should not form part of the service decision, as this will be corporately determined.

9.5 Procurement evaluations will **adopt a whole life costing principle (#15)** that includes carbon accounting to assist with determining option viability to understand the longer term 'payback' benefits of ULEVs from a 'Price' perspective. Existing 'Green Fleet' benefits evaluations will continue to be adopted and refined as part of the 'Quality' criteria.

9.6 Infrastructure will be procured either by utilising the in-house electrical engineering section, externally sourced expertise or a combination of both, depending on the respective installation phase scope, intricacies and deadlines.

9.7 As with all Council Procurement, the Well-Being of Future Generations (Wales) Act 2015 requirements will be embedded in the processes.

## **10. Stakeholders**

10.1 Human Resources and Organisational Development will be represented as part of the programme transition team.

10.2 The Council will seek to engage with all relevant stakeholders throughout the transition programme. The transition team, when established, will be responsible for the **stakeholder engagement and communications plan (#16)** to identify who, how and when.

10.3 The principal internal stakeholders will include

- Members
- Senior management
- Staff (drivers, service managers)



- Central Transport Unit (maintenance staff)
- Trade unions
- Schools

10.4 The principal external stakeholders will include

- Welsh Government
- District Network Operator (DNO)
- Suppliers
- Regional public sector organisations
- Other public sector organisations
- Best practice forums/networks (public and private)

10.5 Interoperability and accessibility will be key design features of the charging infrastructure, and engagement with stakeholders will assist in shaping the specification

10.6 Change management processes will be continuously adopted to engage with those staff who may be affected to support the transition, alongside the provision of demonstration vehicles to address any initial concerns, vehicle induction, maintenance upskilling and eco-driving training. Particular attention will be paid to the current home to work vehicle use scheme.

## **11. Service, Maintain and Repair**

11.1 The wholesale change of the fleet from diesel powered to alternatives will impact on the Central Transport Unit's maintenance team.

11.2 The transition plan will address the **upskilling of technicians to Institute of Motor Industry (IMI) standards of competency (#17)** to allow them to safely and effectively work on the respective vehicles.

11.3 Discussions with Further Education establishments and potential funders including Trade Unions and Welsh Government have begun as part of the first phase of the plan as the fleet already includes some ULEVs.

11.4 **Specialised workshop equipment and personal protective clothing will also require investment (#18)** and is expected to be met by existing revenue budgets.

11.5 The expected outcome of the training and re-equipping will ensure a skilled and resilient support service for the fleet in terms of service, maintenance and repair, as well as providing potential income streams from third party work, as the expected fleet maintenance demands reduce and a broader adoption of ULEVs occurs in the region.

## **12. Grey Fleet**

12.1 Grey fleet travel, whereby staff use private vehicles for Council business, equated to 1.61 million miles and 429 tonnes of CO2 in 2019/20. Whereas this represented a 36% reduction in comparison to 2017/18, it still equates to a significant 9% of the Council's road transport total emissions.

- 12.2 The 2018 Business Travel Review and the recent WGES Grey Fleet Review identified a number of key recommendations to decarbonise the grey fleet and these are currently being progressed as a complimentary workstream.
- 12.3 This **workstream will now be included within the transition programme (#19)**, its principal approaches focussing on,
- Improve business mileage claim data systems
  - Monitor and understand new evolving pattern of grey fleet travel
  - Continue development of the Business Travel Policy and Hierarchy to include the new ways of working and accommodation strategies (for subsequent appropriate adoption opportunity), as well as,
    - Consider requiring grey fleet vehicles to be below 100g/km from 2025
    - Consider requiring grey fleet vehicles to be zero emission from 2030
    - Promote salary sacrifice scheme to assist transition
    - Move more employees, particularly those with higher mileage, and critical service provider staff, who currently use grey fleet to fleet ULEV vehicles
    - Consider car club adoption
  - Implement zero emission pool car fleet to cater for demand
- 12.4 The aim of these combined actions is to reduce overall business travel by 35%, whilst also reducing costs by @ £250,000 and 261 tonnes of CO2 per annum (pre CV19).

### **13. Risk and Dependencies**

- 13.1 A corporate transformational programme of this size will inevitably face risks and dependencies. The programme team will **establish a risk register (#20)** to monitor and mitigate for these.
- 13.2 Whereas risks and dependencies will arise throughout the course of the transition, the following areas will form the core of the risk register,
- Resources
  - Financial impacts and funding gaps (cf corporate risk)
  - Schools funding implications
  - Grid upgrade and Network capacity issues
  - Power outage implications and Business Continuity implications
  - Fossil fuel stock implications
  - Impact on daily operations for vehicle users and attendant charging behaviours
  - Home to work vehicle use impacts, barriers, revenues and inequities
  - Depot parking space to accommodate
  - Key site relocation plans (Civics, Pipehouse Wharf and Home Farm)
  - Specialist supply chain constriction and potential dependencies
  - Vehicle and EVCI lead times
  - Technological change and risk of obsolescence
  - 'Sideways' move to grey fleet in lieu of fleet
  - Vehicle maintenance skills and impacts