

elementenergy

***Alternative Fuels
Strategy***

Draft Action Plan

for

**CPCA and
New Anglia LEP**

23rd February 2022

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Stakeholder engagement acknowledgements

All work undertaken for the Alternative Fuels Strategy was done so with input from local stakeholder groups. This included workshops where stakeholders were able to provide verbal feedback, which were also used to establish communications channels through which further feedback and data could be provided on an ongoing basis. The workshops held for developing the AFS are listed below:

- Four workshops with local authorities, two for Norfolk and Suffolk and two for Cambridgeshire and Peterborough. One workshop was held to initially feed into the technical evidence base and begin to develop a long-list of recommended actions. A second workshop was held to refine this long-list, for each of the two sets of LAs
- Discussions with sub-national transport bodies (also invited to the LA workshops)
- Workshops with other relevant stakeholders, including: the Cambridge Norwich Tech Corridor, the Greater South East Energy Hub, New Anglia Transport Board, Norfolk and Suffolk Clean Growth Taskforce

Representatives of the following groups attended at least one workshop held for developing this action plan.

Babergh District Council	New Anglia Local Enterprise Partnership
Breckland District Council	Norfolk and Suffolk Clean Growth Taskforce
Cambridge City Council	Norfolk and Suffolk Transport Board
Cambridge Norwich Tech Corridor (private sector focused)	Norfolk Broads Authority
Cambridgeshire and Peterborough Combined Authority	Norfolk County Council
Cambridgeshire County Council	North Norfolk District Council
East Cambridgeshire District Council	Norwich City Council
East Suffolk Council	Peterborough City Council
Fenland District Council	South Cambridgeshire District Council
Great Yarmouth Borough Council	South Norfolk and Broadland District Council
Greater South East Energy Hub	Suffolk County Council

1 Introduction

1.1 Background to Alternative Fuels strategy

- The Cambridgeshire and Peterborough Combined Authority (CPCA) and New Anglia LEP are undertaking work to decide informed action to mitigate and adapt to climate change
- A key component of this is to establish an integrated and sustainable transport network that continues to support residents and businesses, and contributes to recovery from the COVID-19 pandemic
- CPCA and partners have commissioned an Alternative Fuels Strategy (AFS) for East Anglia, being developed alongside CPCA's Local Transport and Connectivity Plan and the work conducted by the Norfolk and Suffolk Clean Growth Taskforce.
- The key aims of the AFS are to:
 - **Support clean growth** by providing the necessary infrastructure for businesses, residents and commuters
 - **Support the decarbonisation aims of Local Authorities**
 - **Accelerate the uptake of Alternative Fuels Vehicles (AFVs) in the region** which has historically been behind the national average
 - **Improve air quality** through uptake of zero emissions vehicles
 - **Provide a combined vision** across the region to result in greater impact through collaboration
 - **Support the creation of commercial opportunities** and develop an innovative supply chain

This document forms **one of the three** core reports making up the Alternative Fuels Strategy. These are:

1. **Technical evidence base:** a detailed technical report summarising all evidence compiled as the foundation for the action plan.
2. **Action plan and roadmap:** This document. Further details in Section 1.2.
3. **Public facing strategy document:** A short public facing document that summarises reports 1 and 2 in a digitally accessible format.

1.2 Background to action plan document

1.2.1 Purpose and contents

This action plan is intended to provide a detailed summary of the actions CPCA, New Anglia LEP and other local stakeholders can take to decarbonise transport across East Anglia. The document includes two main chapters. Chapter 2: Roadmap for action, consists of a graphical roadmap summarising all the key actions given in Chapter 3, and provides target milestones for 2030 and 2040 which are intended to allow stakeholders to assess their progress in decarbonisation. Chapter 3: Detailed action plan, goes into detailed specifics for each recommended action.

The recommended actions have been grouped under 20 themes and these themes have been further grouped into 3 broad categories, which are:

- A1-A6: actions to expand EV charging infrastructure
- B1-B7: actions to encourage AFV uptake
- C1-C7: actions to deliver a modal shift and behavioural change

The 20 action themes are summarised in Table 1, which also identifies whether each action theme is a priority, based on its deliverability, co-benefits and CO₂ impact, relative to its cost. Further details are given in Section 3, which presents each theme in detail. The detailed tables are broken down into the relevant supporting actions. Specifics on the actions are given alongside details on the role of the most appropriate potential key stakeholders, indicative costs of each action, as well as the potential funding options.

For each theme, a timeline for the delivery of key actions is also given. These timelines have been colour coded to show the stakeholder who would be responsible for delivering the given action, and also indicate the expected duration and dependencies of the tasks. The greatest level of detail has been afforded to actions which should be taken in the short-term (to 2025) and medium-term (to 2030).

Note that it is essential that the actions recommended within this document are viewed as an interdependent set of actions. If implemented individually and selectively, the actions stand to achieve far less than if implemented as a collective, and in some cases may even be detrimental. This is best seen through the example of actions under the C theme – delivering a modal shift and encouraging behavioural change. For example, whilst it is recommended that private car use is disincentivised, it is paramount that when doing so effective and affordable alternative transport options are also offered to ensure these policies do not lead to transport or access poverty.

1.2.2 Process by which the actions have been developed

The actions and roadmap presented in this document have been formulated across a multi-phase process which is summarised in Figure 1.

A preliminary, long-list of recommended actions was developed, based on the following core work streams, which together suggested priority areas the actions should address:

- A review of local transport and other policies to identify key gaps, and also a review of existing local opportunities that the actions could leverage to allow East Anglia to lead the way in transport decarbonisation
- A review of best practice for alternative fuels vehicles uptake with a particular focus on successes achieved by local authorities in rolling-out infrastructure, trials, or other innovative schemes
- A summary of the available funding streams (both public and private) open to local authorities and other stakeholders for transport decarbonisation
- Quantitative modelling of different scenarios for transport decarbonisation across East Anglia, which investigate ‘high-electrification’ and ‘high-hydrogen’ futures, as well as the potential impact of transport behavioural change. These were used to understand especially infrastructure and alternative fuels requirements out to 2050.
- Engagement with local stakeholders, including with representatives of the majority of local authorities, representatives of other local governmental bodies, and relevant private sector groups

This long-list was then further refined into the action plan and roadmap presented in this document. This was done with input from key local stakeholders, CPCA and New Anglia LEP, as discussed in the acknowledgements section above.

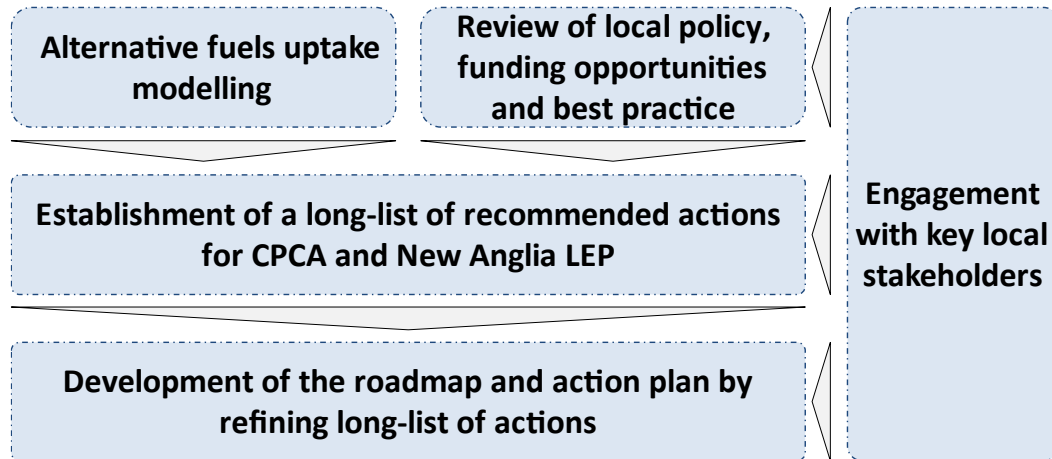


Figure 1: Process by which the action plan has been developed

2 Roadmap for action

This action plan is accompanied by a roadmap, shown below in Figure 2. The roadmap summarises and brings together the actions recommended within this document, and also includes target milestones for transport decarbonisation by 2030 and 2040. The actions included are those considered most essential and are picked out from the individual timelines that support each action theme A1-C7. Whether the action is expected to be public sector or private sector led has been highlighted. The milestones are outputs from the technical modelling conducted in phase 1 of the study.

The main purpose of the roadmap is two-fold:

- To assist local government and other policy makers in planning the decarbonisation of transport across East Anglia, by highlighting in one place the key actions that need to be taken and the relevant timings of these actions.
- To give quantitative milestone targets that can be aimed for, so that stakeholders can assess their progress and determine whether they are on the right trajectory in intermediate years.

The roadmap is broken down into three main categories, which are the same as the action themes recommended in this document. The categories displayed on the roadmap are as follows:

- **AFV uptake (EV charging)** – the actions and milestones relevant to deploying EV charging infrastructure. This includes actions such as developing a procurement framework for EVCPs that caters for local needs. The milestones are an estimated upper bound for the number of public EVCPs that could be needed in that year (both public and private sector), split by en-route, destination and public residential charge points. This corresponds to A1-A6.
- **AFV uptake (wider-action)** – the actions and milestones that will either directly or indirectly lead to the uptake of AFVs. An example action that will directly lead to AFV uptake is to transition public sector fleets to be entirely AFVs, while an example of an action that will indirectly lead to AFV uptake is to ensure employees have appropriate charging infrastructure. The milestones in this category focus on the percentage of the regional vehicle stock that could be AFVs at the given date, split out by mode. This corresponds to B1-B7.
- **Modal shift** – these are the actions and milestones related to shifting both passenger and freight transport onto more sustainable modes. The actions included are both to improve/incentivise more sustainable modes such as bus for passenger transport and rail for freight transport, and also to disincentivise less sustainable modes such as private car use. The milestones are an indication of the shift modelled as achievable in the given year. This corresponds to C1-C7.

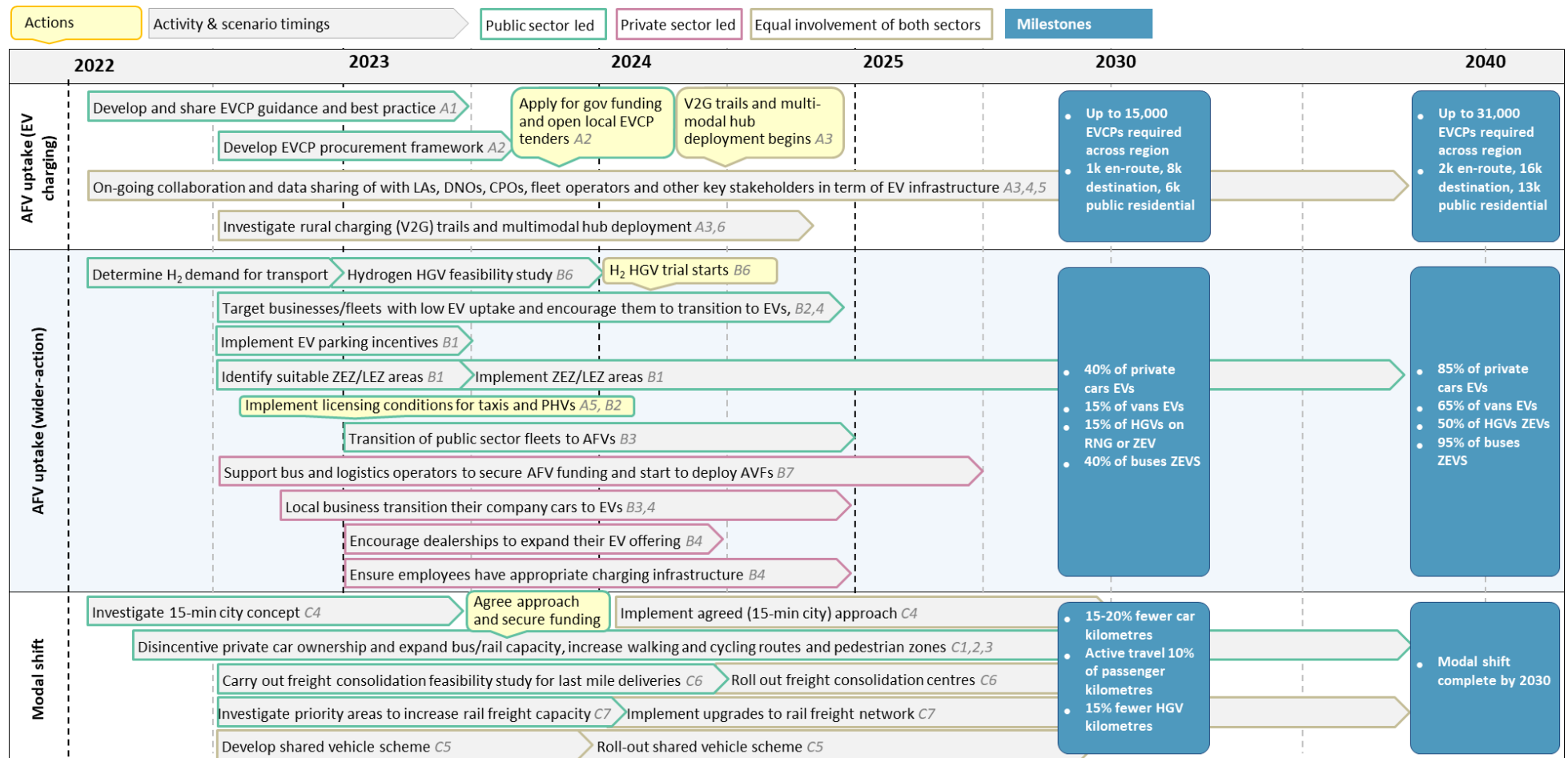


Figure 2: Roadmap summarising key actions set-out in the action plan as well as milestone targets

3 Detailed action plan

3.1 Summary

Table 1 summarises each of the 20 action themes recommended within this action plan. For each theme, indicative ratings are given across the criteria listed below, to assess whether the actions under each theme are a priority based on benefits relative to costs.

The following evaluation criteria have been used:

Cost:

For the purposes of Table 1, an order of magnitude rating of the cost of the action has been given. Note that the detailed action tables give a more accurate estimate of associated costs where these are available, and hence should be referred to if more detail is required. Also note that in general actions have been costed in isolation, and the actual costs may vary depending on the implementation of other actions.

- **Low:** Total costs estimated to be less than £250,000 over the full time period of implementation
- **Medium:** Costs between £250,000 and £10 million where significant external funding is not available, or capital investments greater than this which can be expected to be recovered through revenue generation or which provide valuable assets.
- **High:** Outright costs greater than £10 million without clear potential for revenue generation or a valuable resulting asset

Deliverability:

Deliverability was primarily determined by the level of influence of CPCA and partners and local authorities, according to the following categories:

- **High:** Areas CPCA and partners directly control
- **Medium:** Areas CPCA and partners can strongly influence through policy
- **Low:** Areas CPCA and partners can only influence locally (and via key stakeholders)

Co-benefits:

- The strength of co-benefits associated with delivering each of the actions
- Consideration is given both to the type of co-benefit and to the likely scale of the benefits associated

CO₂ impact:

- While broad measures (e.g. reduced travel demand) have modelled CO₂ savings, several actions contribute to a single measure and the contribution of each towards the total savings remains uncertain
- In order to draw a distinction between action themes, we have broadly estimated the scale of the contribution; any action theme that contributes to significant CO₂ savings per year based on the modelling in the Technical Evidence report is labelled 'high'. The distinction between 'low' and 'medium' has also been made in this way, based on estimating the likely scale of impact on emissions
- Themes are assigned an 'enabling' CO₂ impact when they do not in themselves create an emissions savings but are required for the completion of a separate action which does create such savings

Priority action:

- The priority actions identified are those in which the intended outcome has a relatively large CO₂ impact and co-benefits, and the action itself is deliverable, in proportion to how much the actions will cost
- Actions for which the focus is on communications have been labelled as ‘enabling’

Table 1: Overview of the actions recommended within this strategy

No	Description of action theme	Cost	Deliverability	Co-benefits	CO ₂ impact	Priority action
A1	Provide guidance and best practice knowledge sharing of EVCP deployment for local authorities	Low	High	High	Enabling	Yes
A2	Decide on a procurement framework for EVCPs to facilitate the procurement process for LAs	Low	High	Low	Enabling	Yes
A3	Consider options to support rural charging and EV switch	High	High	High	Medium	Yes
A4	Facilitate data sharing between LAs and DNOs	Low	High	Medium	Low	Yes
A5	Facilitate on-going communication and collaboration with private sector	Low	High	Low	Low	Yes
A6	Support the establishment of multi-modal hubs	Low	Medium	Medium	Enabling	Enabling
B1	Work with LAs to make EVs an attractive option locally	High	High	High	High	Yes
B2	Focus policy to target uptake in high mileage sectors	High	Medium	High	High	Yes
B3	Lead by example by encouraging LAs to	High	Medium	Medium	Low	Enabling

No	Description of action theme	Cost	Deliverability	Co-benefits	CO ₂ impact	Priority action
	decarbonise their fleets					
B4	Raise awareness around the switch to EVs amongst local businesses	Medium	High	Low	Medium	Enabling
B5	Work with LAs to ensure that planning facilitates refuelling infrastructure rollout	Low	High	Low	Medium	Enabling
B6	Support local fleets and projects to facilitate hydrogen for transport	Low	High	Low	Medium	Enabling
B7	Support local bus and logistics operators in the switch to AFVs	Low	Low	High	High	Enabling
C1	Work with local authorities to disincentivise private car use	Medium	High	High	High	Yes
C2	Work with local authorities to expand bus and rail capacity	High	Medium	High	High	Yes ¹
C3	Support an increase in walking and cycling across the region	Medium	High	High	Enabling	Enabling
C4	Explore options for rolling-out 15 minute city concept across region	High	High	Medium	High	No
C5	Support shared vehicle opportunities	Low	Medium	Medium	Medium	Enabling
C6	Support freight consolidation and	Medium	Medium	High	High	No

¹ Although potential costs are high, delivering improved public transport infrastructure is necessary to support reduced private car use and therefore needs to be a priority alongside action to disincentivise car travel

No	Description of action theme	Cost	Deliverability	Co-benefits	CO ₂ impact	Priority action
	sustainable last-mile delivery					
C7	Work to deliver a modal shift towards rail freight	High	Low	High	Medium	Yes

3.2 Potential synergies in delivering actions

Many of the actions under A1-C7 have a significant communications component to their delivery. For example, A2 suggests setting up a working group with all local authorities to work towards a combined EVCP procurement framework, and A3 suggests sharing the findings of projects such as plug-in Suffolk across the region to help with EVCP deployment. Clearly there is significant overlap in the persons these communications will be directed at, and many can be undertaken in the same meetings.

Whilst there are benefits to dealing with each action separately to ensure specific issues are sufficiently targeted, where possible, the aim should be to combine as many communicative actions as possible into common workstreams. This could take the form of:

1. Initially combining all necessary communications with other local stakeholders from the actions that fall under A, B and C into core communications streams. Where engagement is targeted with one specific stakeholder, this should remain separate. A grouping of the main CPCA led engagement actions might be:
 - I. A1 (provide links to existing guidance for EVCP deployment), A2 (set up a public sector working group for EVCP deployment), A3 (share learnings from Plug-in Suffolk), A4 (Give guidance of alternative infrastructure solution)
 - II. B1 (co-ordinate schemes to reduce EV parking charges across region), B2 (co-ordinate actions to encourage EV uptake across LAs), B3 (share best practice for transitioning LA fleets)
 - III. B5 (engage with logistics fleets to understand future demand for alternative fuels and priority areas for refuelling infrastructure), B7 (engage with logistics fleets to understand existing plans for decarbonising their fleets)
 - IV. C1 (engage with LAs to understand existing plans for WPLs), C2 (set guidance and share best practice with LAs for using EPs), C3 (facilitate collaboration between LAs relating to cycle route upgrades)
2. Establish the lists of stakeholder who the delivery of each group is relevant to. Whilst there will be significant overlap in these lists, the groups should at least be dealt with separately to avoid confusion.
3. Set-up a meeting with each set of stakeholders. The agenda is then the subpoints picked out in each group above. Note that the timings suggested for different communications may require an initial meeting as well as a meeting at a later date, to cover actions which should be addressed later.
4. These meetings should gauge the interest of each stakeholder in involving themselves in specific actions (say the working group in A2), and should ultimately lead to identifying smaller subgroups of stakeholders that will contribute to the delivery and direction of each action.

3.3 A1: Provide guidance and centralised information sharing of best practice for LAs in deploying charging infrastructure

3.3.1 Timeline

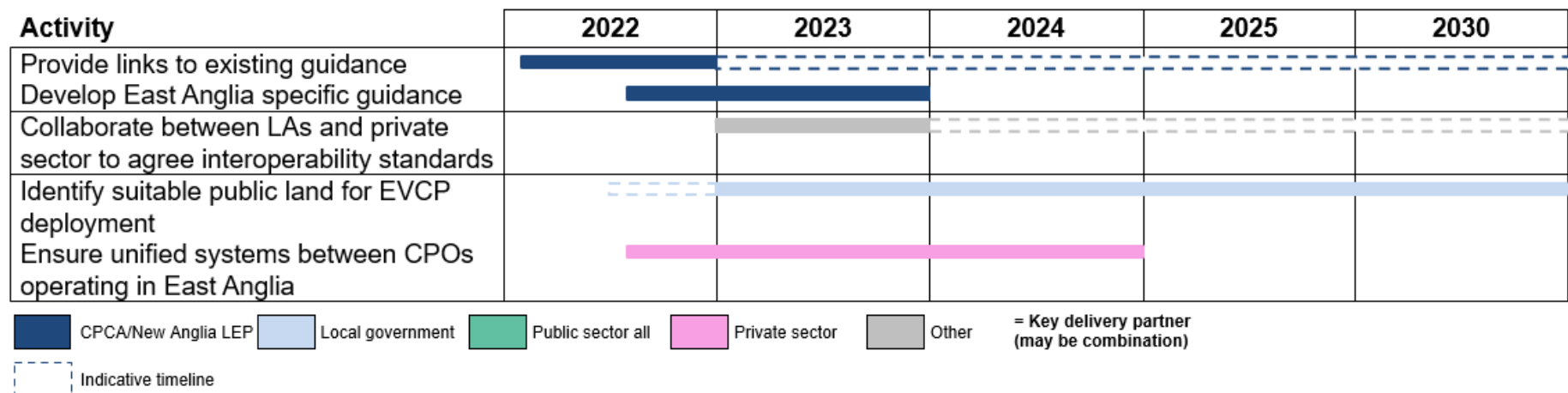


Figure 3: Timeline for key actions to guide LAs in deploying charging infrastructure

3.3.2 Description of supporting actions

Table 2: Key actions to guide LAs in deploying charging infrastructure

Actions	Role of key stakeholders	Cost	Funding options
Provide links to existing guidance and advice – including recently published OZEV guidance ¹ and resources such as UKPN's services	CPCA and partners to lead engagement and distribute resources to LAs and other relevant parties	Negligible	N/A

Actions	Role of key stakeholders	Cost	Funding options
in identifying grid constraints at sites before tendering			
Develop East Anglia specific guidance to assist LAs in deployment and ensure consistency across East Anglia (using any existing guidance as a starting point). Including: accessibility and interoperability guidelines, split of charging speeds, best practice deployment examples and key deployment challenges and guidance on how these can be mitigated	CPCA and partners to develop guidance with input from LAs on most relevant/helpful content to include. A third party could assist in the development of this guidance	Negligible if developed by CPCA	N/A
Use existing communications channels to between LAs and private sector to ensure a unified system for pricing, payment mechanisms and charging to ensure interoperability between CPOs	CPCA and partners to lead engagement between LA, CPO and other private sector bodies. Final agreement will ultimately be between the CPOs and LAs , and if deployment is on public land LAs would need to stipulate requirements in contracts with CPOs – any interoperability regulations on private land must come from the government (OZEV or DfT)	Negligible	N/A
Support LAs in identifying suitable public land (which can be offered in a tender) – this could be done through a mapping and making relevant	CPCA and partners to make mapping and analysis available to LAs.	Negligible if developed by CPCA, a model/mapping tool could be developed by a third party this could	N/A

Actions	Role of key stakeholders	Cost	Funding options
<p>datasets available to LA and giving guidance on parameters which make a site suitable Ensure an equitable distribution of sites/land across different LAs/ within an LA</p>	<p>LAs could suggest possible council owned sites which are suitable for charging infrastructure – these sites can then be filtered using guidance from CPCA and partners</p>	<p>cost £10-30k depending on the level of sophistication .</p>	

3.4 A2: Decide on the preferred procurement framework for the region to facilitate the process for LAs – either using the existing Vehicle Charging Infrastructure Solutions Framework or a locally-designed solution

3.4.1 Timeline

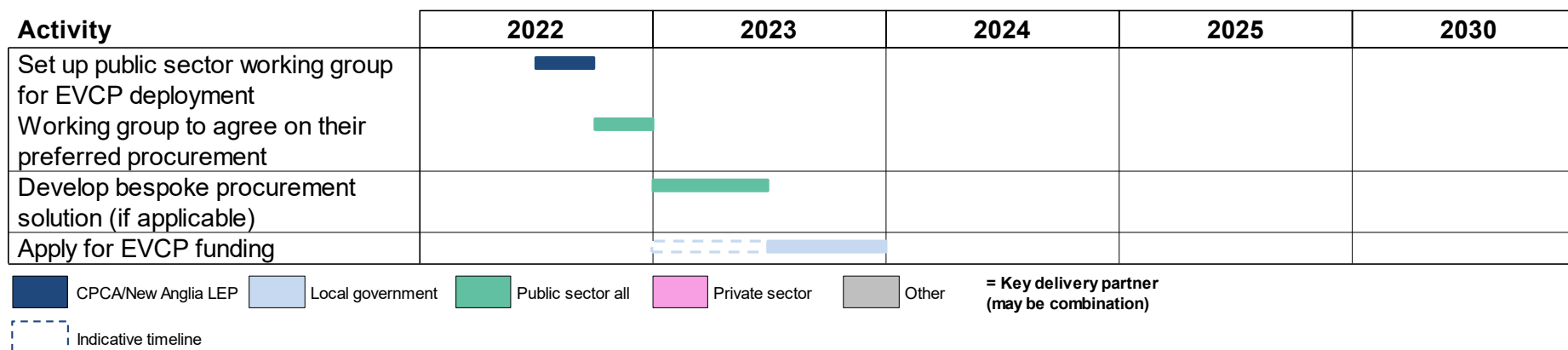


Figure 4: Timeline of key actions to assist LAs with EVCP procurement

3.4.2 Description of supporting actions

Decide on the preferred **procurement framework** for EVCPs to facilitate the procurement process for LAs. Before a procurement framework is set up LAs in East Anglia need to decide how the procurement will be set up. Multiple options:

- Each LA develops their own tender
- The region splits into several regions, and each runs a separate tender
- A template procurement is developed between the LAs and then each LA or region runs their own tender
- East Anglia region runs a single tender for a procurement framework with multiple CPOs – each LA can tender from CPOs on this framework

Options 3 or 4 are recommended as a robust, streamlined procurement framework would significantly reduce the workload of each LA and ensure a cohesive deployment across the region. In all cases CPCA/ LA working group needs to ensure interoperability across the region (i.e. payment mechanisms)

Table 3: Key actions to assist LAs with EVCP procurement

Actions	Role of key stakeholders	Cost	Funding options
Set up a working group with all Local Authorities across the local districts to decide how a procurement framework will run across East Anglia – each LA needs to decide if they can offer land as part of the tender	CPCA and partners to initiate the development of a working group and lead the funding applications for any group procurement LAs should be given the final decision on how procurement will be split across East Anglia with CPCA and partners heavily involved in discussions and ensuring a cohesive approach across the region	N/A	N/A
Working group needs to decide the best procurement approach (from options below). The preferred solution can be supported with funding (e.g. as is done in London) to further support LAs.	LAs have the final decision in collaboration with CPCA and partners	N/A	N/A
<i>Option 1:</i> use the existing Vehicle Charging Infrastructure Solutions Framework	CPCA and partners to lead in implementing the framework	Negligible as existing scheme is being used	N/A
<i>Option 2:</i> Develop a bespoke solution, tailored to local needs – for example, defining approaches to procuring rapid and on-street	CPCA and partners to lead design of framework or appointment of third party, in collaboration with LAs are best placed to advise of any infrastructure specifications to be	New scheme designed in house; ~£50k if framework designed by third party	N/A

Actions	Role of key stakeholders	Cost	Funding options
charging, and defining preferred suppliers	included in the tender relating to their local needs	<ul style="list-style-type: none"> • Cost of providing funding dependent on scale of scheme designed 	
Apply for government funding to offer as part of the tender to fund CPOs in deploying EVCPs	<p>LA (possibly in partnership with CPO) to lead the application for funding in their respective region. CPCA and partners could assist LAs in completing their application</p>	Negligible cost to submitting an application	<p>Funding will depend on type of infrastructure deployed. Available public funding includes:</p> <ul style="list-style-type: none"> • Local EV Infrastructure Fund • On-street residential charging fund (OCSR) • Rapid charging fund

3.5 A3: Explore options to support charging and EV switch in particular in rural areas

3.5.1 Timeline

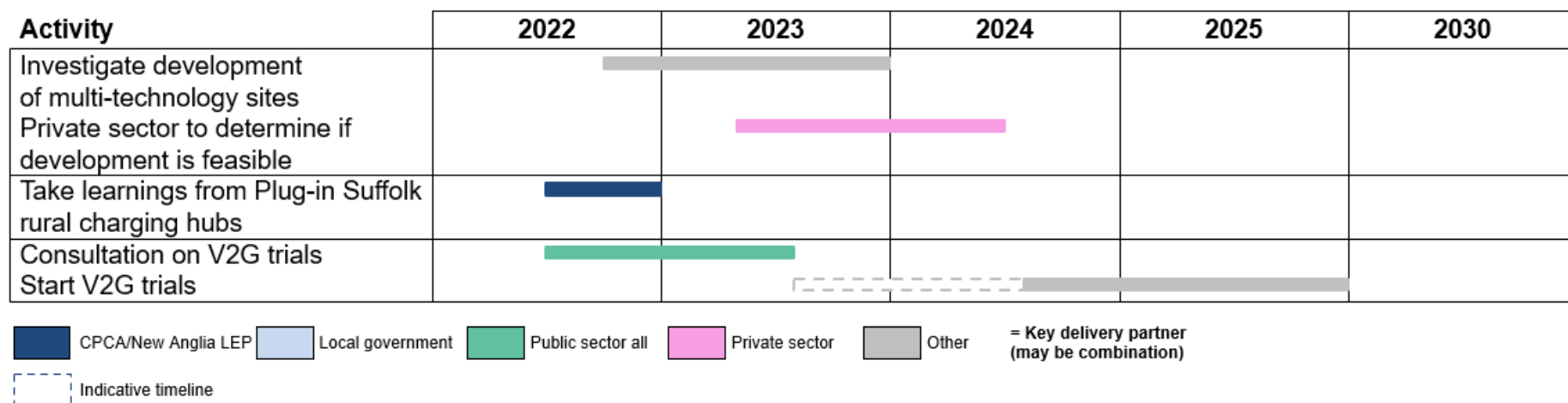


Figure 5: Timeline of key actions to support charging and EV switch in particular in rural areas

3.5.2 Description of supporting actions

Table 4: Key actions to support charging and EV switch in particular in rural areas

Actions	Role of key stakeholders	Cost	Funding options
Investigate how grid constraints can be mitigated through development of multi-technology sites, such as co-	CPCA and partners to initiate discussions with private sector companies offering this technology	Negligible cost to CPCA and partners if they are only part of facilitating discussions	Some companies receiving funding through Transitioning towards Zero Emission Vehicles (infrastructure

Actions	Role of key stakeholders	Cost	Funding options
<p>locating EVCPs with solar panels and battery storage – in particular in large estates such as warehouses and hospitals.</p> <p>A key example of ongoing work in this area includes the smart energy grid which has been granted planning permission at Babraham Road park and ride in Cambridge, which will co-locate solar PVs with on-site EV charging. A similar proposal for St Ives Park and Ride is in the works.</p>	<p>such as: Sun Harvester Limited (Zhyphen EVolution Charging Hub (ZEVCH) project) or Levistor Ltd (Rural Grid Boosting For Ultra-Fast ZEV Charging)</p> <p>CPCA and partners to work with LAs to identify key sites which have a high demand but constrained grid connection which could be part of a trial</p> <p>Developing a hub would need to be driven by the private sector with support, and potentially funding, from the relevant LA</p>	<p>TZEV feasibility studies cost between 400-700k with over half of cost covered by TZEV funding</p> <p>Development of the hub would need to be supported by public or private sector funding – an example project in Stirling cost a total of £1m joint funded by The European Regional Development Fund and Transport Scotland</p>	<p>strand) – currently feasibility studies but future funding rounds are likely to be for trials</p> <p>Private investment: SDCL: SEEIT are keen to invest in multi-technology projects, with no limit on the amount of funding available</p>
<p>Take learnings from plug-in Suffolk's project developing rural charging hubs for local residence to advise on how a similar approach could be implemented in other regions of East Anglia</p>	<p>CPCA and partners to liaise with plug-in Suffolk and consolidate learnings into a guidance document to be shared with local authorities</p> <p>LAs or regional transport bodies would be responsible for deciding whether to set up similar schemes in their area</p>	<p>Developing the plug-in Suffolk scheme cost £300k of LA funding – with the aim that long term the sites will provide income</p>	<p>Local EV Infrastructure Fund/ On-street residential charging fund (OCSR)</p> <p>Transitioning towards zero emissions vehicle infrastructure</p> <p>Private sector may be willing to invest in full CAPEX if development is on council land and dependant on the revenue share and contract length offered</p>

Actions	Role of key stakeholders	Cost	Funding options
Instigate V2G trials to balance grid constraints	CPCA and partners to engage with private sector including charge point operators and the DNO, and to instigate trials	Typical additional cost of £3,700 per V2G charge point installed, relative to a smart charger ¹ – total trial costs dependent on trial scale, and incurrence of costs such as a potential need to incentivise participants	<ul style="list-style-type: none"> • Local EV Infrastructure Fund/ On-street residential charging fund (O CRS) • Transitioning towards zero emissions vehicle infrastructure • Horizon Europe Work Programme/ CEF Energy Work Programme (European Commission) – V2G trials

3.6 A4: Facilitate on-going data sharing between local authorities and DNOs (UKPN in East Anglia) to ensure grid constraints are not limiting

3.6.1 Timeline

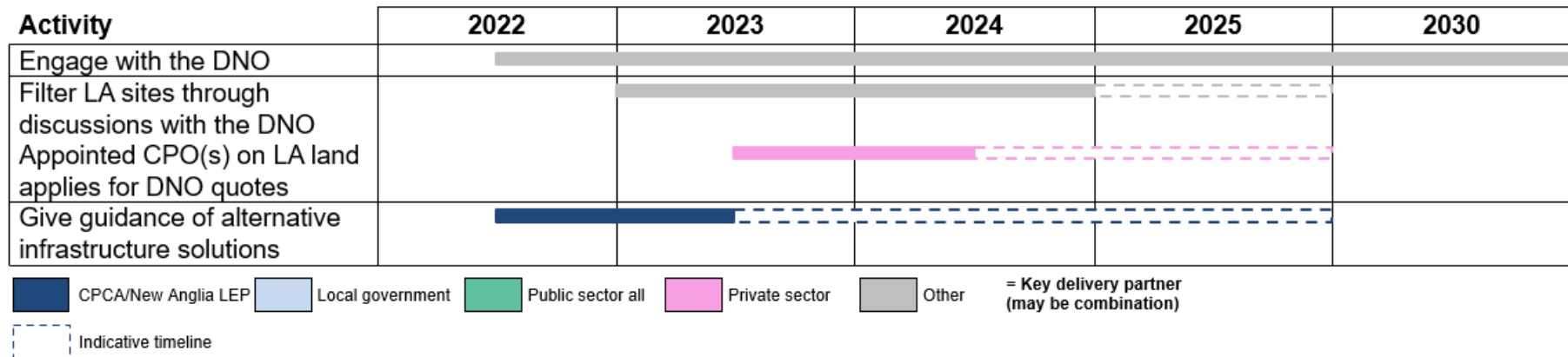


Figure 6: Timeline of key actions to mitigate impact of grid constraints on charging infrastructure deployment

3.6.2 Description of supporting actions

Facilitate **on-going data sharing** between local authorities and DNOs (UKPN in East Anglia) to limit the impact of grid connection. Obtaining sufficient grid capacity at a site is highly likely to require a grid upgrade through the DNO, particularly if deploying rapid charge points, and the cost of upgrading the grid in some areas can be prohibitively expensive. Engaging early with the DNO will allow the grid to be reinforced ahead of demand and identify sites where the cost of upgrading the grid is financially feasible. Note that work in this area is ongoing – UKPN are leading the Charge Collective project in collaboration with Local Authorities to overcome barriers to investment in public charging infrastructure, by reducing network costs and providing upfront support to investors².

² [Charge Collective](#) is led by UKPN and will run until April 2022, having started in August 2020 with a budget of over £800k.

Table 5: Key actions to mitigate impact of grid constraints on charging infrastructure deployment

Actions	Role of key stakeholder	Cost	Funding options
Engage early with the DNO to identify the location of substations and areas with limited grid capacity	CPCA and partners to set up surgery with the DNO (UKPN), LAs should feed into this discussion and have access to any data in order to make local decisions on areas to investigate further CPCA and partners should also share findings with the private sector to accelerate private sector deployment	Negligible costs – costs mainly borne by LAs/UKPN for data processing	N/A
Filter possible LA sites through the DNO to assess grid connection costs and identify 'no-go' sites	LAs would need to first develop a 'long list' of possible sites. These locations then need to be discussed with the DNO to filter any 'no-go' sites. Discussions with the DNO will need to be led by the LA as discussions relate to council-specific matter, however could be supported by CPCA and partners once sites have been identified to give LAs guidance on reasonable grid upgrade costs.	Official quotes from DNOs are generally paid for by the CPO and if taken forward this cost is generally taken off of the total grid connection cost	N/A
Give guidance and best practice examples of alternative infrastructure solutions. e.g. Solar car ports (and in the future with battery storage) Already some in Norwich, Babergh (Sudbury - King Fisher Leisure Centre, Stowmarket). The Energy	CPCA and partners to liaise with companies/ organisations currently offering alternative grid constraint solutions in order to develop guidance for Local Authorities . CPCA and partners to discuss partnership with local experts such as RenEnergy, who have	Negligible costs	N/A

Actions	Role of key stakeholder	Cost	Funding options
<p>Hub is collaborating with the IUK Knowledge Transfer Network and running an Innovation Exchange to explore multi-storey carpark energy centres. NNDC looking to deploy in Sheringham.</p>	<p>previously installed integrated solar PV systems in Norfolk and Suffolk.</p>		

3.7 A5: Facilitate on-going communication and collaboration with key stakeholders, including private sector and sub-national transport bodies

3.7.1 Timeline

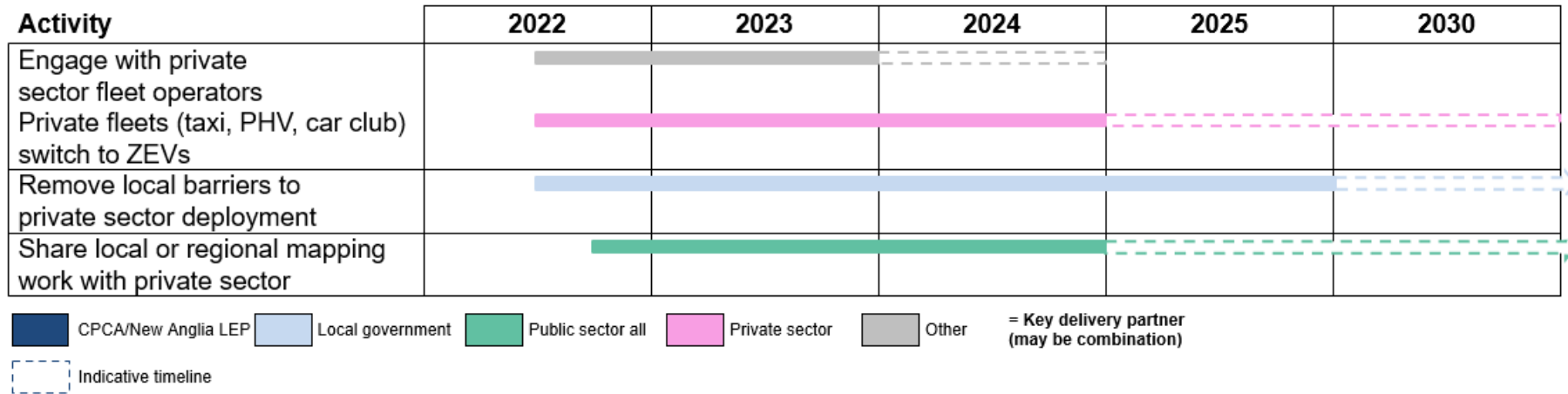


Figure 7: Timeline of key actions to ensure on-going communication with key charging infrastructure stakeholders

3.7.2 Description of supporting actions

Facilitate **on-going communication and collaboration** with private sector – key barriers to private sector is the lack of opportunities such as appropriate sites for CPOs to deploy infrastructure or fleets having access to dedicated charging infrastructure. CPCA and partners and Local Authorities need to ensure that any support given is equitable and not considered state aid, this includes offering funding, land or dedicating chargers on LA land to a single company without an official tender process.

Table 6: Key actions to ensure on-going communication with key charging infrastructure stakeholders

Actions	Role of key stakeholder	Cost	Funding options
Engage with local taxi, car club, van and HGV fleets to understand their plans, to ensure charging/refuelling infrastructure is well placed to support them	<p>Engagement could be led by CPCA and partners although typically LAs have significant control over the regulation of taxis.</p> <p>Switch to low emission vehicles delivered by private sector</p> <p>Deployment of infrastructure either specified through LA tender or lead by the private sector if land is private</p>	<p>Potential revenue from charging/refuelling infrastructure for landowner dependant on contract</p> <p>Costs of CAPEX could be shared between CPO and LA at uncommercial sites but need to ensure there are not state aid issues</p>	<p>Plug-in vehicle grants available for car, moped, vans, trucks and taxis – funding goes to the private sector</p> <p>Local EV Infrastructure Fund/ On-street residential charging fund (OCRS) – covering infrastructure deployment costs on public land</p>
Accelerate private deployment through removing barriers due to LA or regional processes/ regulations	<p>LAs are responsible for planning regulations and so would need to lead in areas where planning currently acts as a barrier to deployment. This could be achieved through for example simplifying planning permission requirements for EVCPs.</p> <p>CPCA and partners can assist through facilitating knowledge sharing of examples of best practice processes</p>	Negligible	N/A
Communicate with the private sector any key regions identified through LA or CPCA and partners mapping	Engagement led by CPCA and partners and LAs could feed into identifying key regions using local experience	Negligible	N/A

3.8 A6: Support the establishment of multi-modal hubs

3.8.1 Timeline

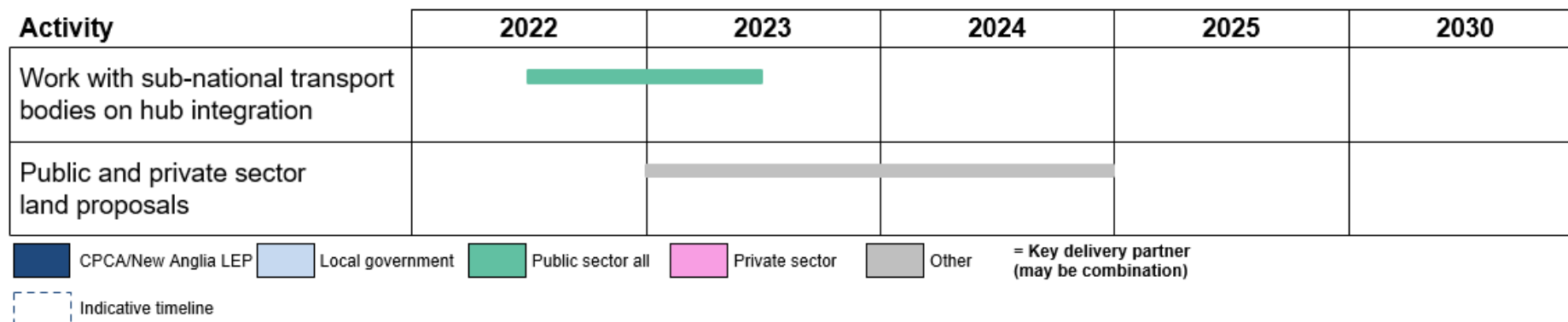


Figure 8: Timeline of key actions to support the establishment of multi-modal hubs

3.8.2 Description of supporting actions

Table 7: Key actions to support the establishment of multi-modal hubs

Actions	Role of key stakeholder	Cost	Funding options
Work with sub-national transport bodies, Energy Hub, and Local Authorities to explore integration of hubs into EV charging plans	<p>CPCA and partners to lead engagement with all other stakeholders</p> <p>Organisations including Sub-national Transport Bodies and Greater South East Energy Hub</p>	Negligible	N/A

Actions	Role of key stakeholder	Cost	Funding options
	to commission work investigating potential sites for multi-modal hubs		
Work with public and private sector to put forward land for potential sites	CPCA and partners to lead engagement with LAs and private land owners	Negligible	N/A

3.9 B1: Work with LAs to make EVs an attractive option locally

3.9.1 Timeline

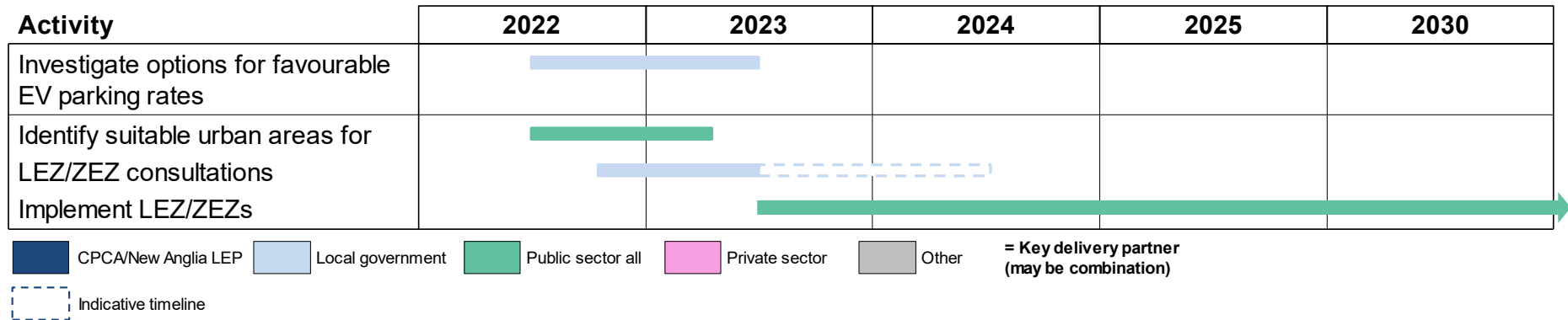


Figure 9: Timeline of key actions to boost EV uptake

3.9.2 Description of supporting actions

Table 8: Key actions to boost EV uptake

Actions	Role of key stakeholder	Costs/potential income	Funding options
Explore options to waive or reduce the rate of parking charges for EVs (cars and vans) and/or creating EV only parking spaces	Local authorities would be responsible for deciding whether to implement any changes to parking charges that favour EVs.	Minimal additional costs to implement changes to parking rates. If EVs were fully exempt from parking charges, lost revenue would	N/A – could be offset by increasing charges for ICE vehicles, and other increases to parking levies, as recommended in C1.

Actions	Role of key stakeholder	Costs/potential income	Funding options
<p>This should be done in tandem with any actions to disincentivise private car use under C1 (e.g. by exempting EVs from workplace parking levies).</p>	<p>CPCA and partners could help co-ordinate any such schemes across the region, in particular avoiding significantly different rates being implemented in towns sharing district borders</p>	<p>equate to an average of £500k and £1,700k per year in 2025 and 2030 respectively, across the local authorities which currently charge for parking.³ This would equate to £8m and £27m across the region in 2025 and 2030 respectively.</p>	
<p>Set regional priorities for establishing low and zero emissions zones</p>	<p>CPCA and partners could develop a long-list of urban centres that would be suitable for implementing a LEZ/ZEZ. This could lead to multiple zones across the region, with CPCA and partners then responsible for sharing the findings and best practice. CPCA and partners could also help secure funding for local authorities to establish the zones. Local authorities could propose towns/cities suitable for an initial trial, and would be responsible for consulting on establishing, and</p>	<p>£50-100k per feasibility study and consultation for establishing a specific LEZ/ZEZ. The scheme being introduced in Oxford in February 2022 will charge cars £2-10, rising to £4-10 in 2025 daily depending on CO₂ emissions/km. Other vehicles will be charged up to £20/day.⁴ The Oxford scheme expected infrastructure costs to be £150-2,040k in 2025, and implementation costs expected at £40-190k/year once operational. Monetised benefits however are expected to be positive, at around £2m/year by 2035⁵.</p>	<p>DfT – Transforming Cities Fund (CPCA awarded £95m, Norfolk County Council awarded £32m). Plug-in grant for electric vehicles will help residents to avoid LEZ/ZEZ charges.</p>

³ Based on baseline increases in parking income and expenditure per [Local Authority Parking Finances in England 2019-2020](#), RAC Foundation, 2020. EV uptake as per the core scenarios modelled for this study. Note that these costs have not been modelled separately and hence do not take account of behavioural change or the impact of reducing the charges on EV uptake, nor does the 2025/2030 parking baseline account for a modal shift away from private car use. Note that the cost impact of B1 would likely be far lower than that indicated when not costed in isolation.

⁴ Charges for Oxford’s Zero Emission Zone (ZEZ), Oxfordshire County Council

⁵ Oxford Zero Emission Zone Feasibility Study, Ricardo 2017

Actions	Role of key stakeholder	Costs/potential income	Funding options
	implementing the LEZ/ZEZ in that area.		

3.10 B2: Focus policy to target uptake in high mileage sectors

3.10.1 Timeline

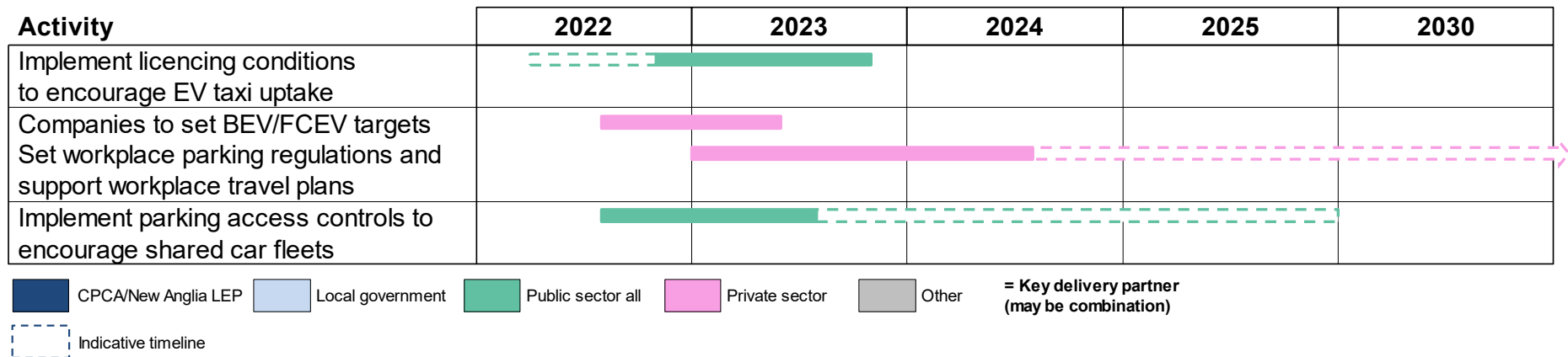


Figure 10: Timeline of key actions to increase EV uptake in high mileage sectors

3.10.2 Description of supporting actions

Encourage LAs to **focus policy to target uptake in high mileage sectors** such as taxis, private hire vehicles, shared cars, and company cars. These vehicles offer the biggest emission saving from a swap to BEV/FCEV and therefore mean that emissions can be reduced as quickly as possible.

Table 9: Key actions to increase EV uptake in high mileage sectors

Actions	Role of key stakeholder	Costs/potential income	Funding options
Increase EV uptake in taxi and private hire fleets through licencing conditions – <i>already an ambition in Cambridge</i>	<p>CPCA and partners to co-ordinate action across LAs to ensure consistency and to support consultation with taxi drivers, private hire fleets and company car fleets where needed to encourage EV uptake</p>	Negligible for CPCA and partners and LAs – within remit of licencing teams	
Increase uptake in company car fleets by encouraging company targets for BEV/FCEV adoption, supporting workplace travel plans and office parking regulations		<p>Small cost associated with consultation with fleet operators and local businesses</p> <p>If supported by incentives (e.g. taxi grants etc.) then total cost of vehicles estimated at an average of £1.3m per LA per year, assuming the switch takes place across the next 5 years¹ (amount covered by incentive/grant provider)</p>	<p>Zenobe – EV Fleets Fund, to help fleet operators to shift their fleet to ZEVs and to fund supporting infrastructure</p> <p>UK government plug-in taxi grant, as an alternative to an LA led grant – available to all taxi drivers and businesses buying/leasing a new purpose-built taxi²</p>
Increase uptake in shared car fleets through parking access controls		Small cost to upgrade signage, and road markings, some profit could come from parking fines	

3.11 B3: Lead by example by encouraging all LAs to fully transition their fleets as early as possible and to address grey fleet emissions

3.11.1 Timeline

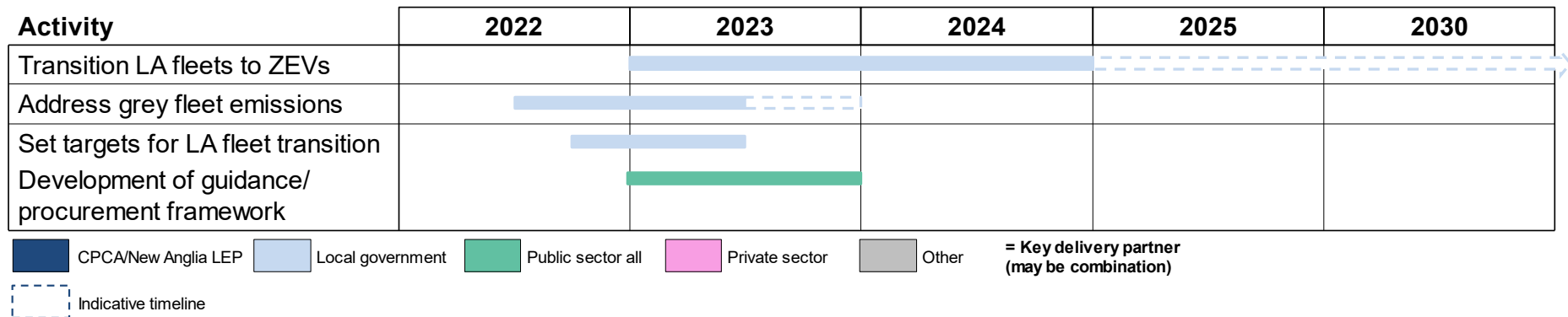


Figure 11: Timeline of key actions to transition LA fleets

3.11.2 Description of supporting actions

Encourage LAs to lead by example - each LAs is at a different stage and have a local focus – **development of guidance and/or a framework** for procurement and setting targets can overcome barriers to uptake

Table 10: Key actions to transition LA fleets

Actions	Role of key stakeholder	Costs/potential income	Funding options
<p>Encourage all LAs to fully transition their fleets to ZEVs as early as possible</p> <p>For example, as part of the Peterborough Integrated Renewables Infrastructure (PIRI) project, Peterborough City Council's fleet will be transition to EVs by 2030 as part of a 3-stage process.</p>	<p>Each Local Authority bears responsibility for transitioning their own fleet, however this should be done with support from CPCA and partners, for example by sharing best practice.</p>	<p>General EV costs for cars and vans:</p> <ul style="list-style-type: none"> • EV cars - £30k for a mid-range medium sized car • EV vans - £25-60k per van depending on model <p>Costs of more specialised vehicles are likely to be higher but cost estimates would need to be assessed by each LA depending on the breakdown of their fleet</p>	<p>Plug in grant – offers proportion off BEV cars, vans, HGVs and motorcycles and includes vehicle fleets</p>
<p>Address grey fleet emissions, through changes in travel policy and/or maintaining a pool of council-owned EVs for business use</p>	<p>Local Authorities to set standards/regulations for their own fleet with best practice support from CPCA and partners</p>	<p>N/A</p>	<p>N/A</p>
<p>Development of guidance and/or a framework for procurement and setting targets can overcome barriers to uptake</p>	<p>CPCA and partners to lead in the development of guidance with Local Authorities feeding into the guidance and ultimately adopting the framework in their local plans.</p>	<p>N/A</p>	<p>N/A</p>

3.12 B4: Encourage local businesses to switch to EVs

3.12.1 Timeline

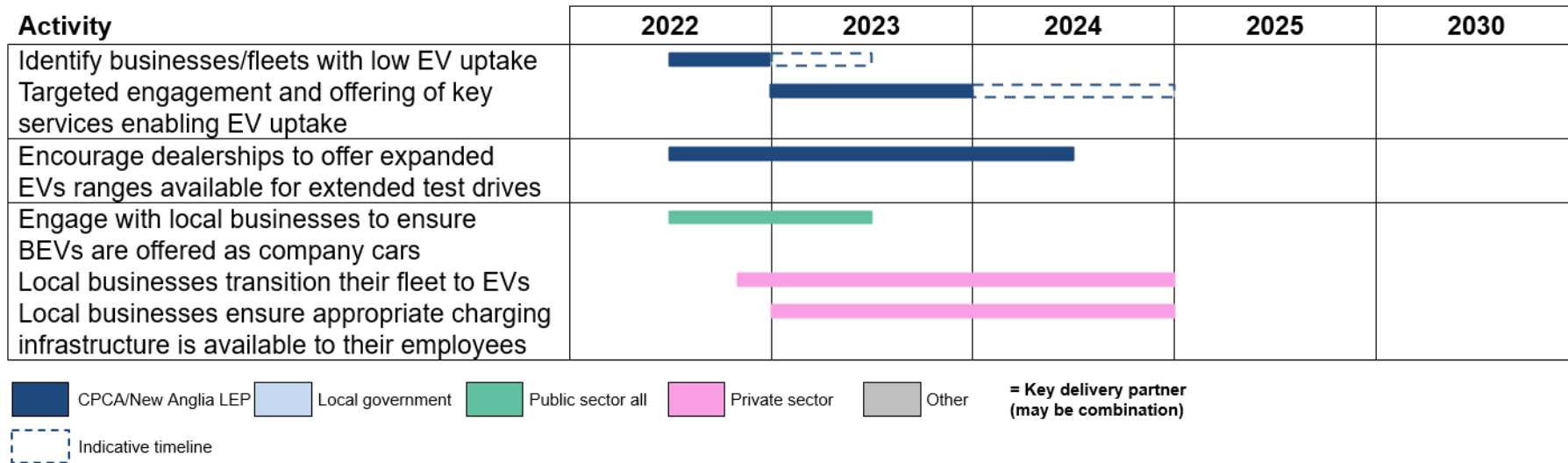


Figure 12: Timeline of key actions to encourage local businesses to switch to EVs

3.12.2 Description of supporting actions

Table 11: Key actions to encourage local businesses to switch to EVs

Actions	Role of key stakeholder	Costs/potential income	Funding options
Enable local businesses and fleets to make data driven decisions that	CPCA and partners could identify local businesses and fleets which currently have relatively low EV	Engagement and information provision costs would be negligible	Zenobe EV Fleets Fund, for fleet operators to switch to ZEVs

Actions	Role of key stakeholder	Costs/potential income	Funding options
<p>encourage a switch to EV uptake. For example by:</p> <ul style="list-style-type: none"> Engaging to mitigate the perception of range and charging infrastructure as a barrier to adoption Providing access to telematics services – especially for small businesses/fleets (or residents) that don't have access already 	<p>uptake. These entities could then be targets for engagement to encourage EV uptake and offered services such as telematics to allow them to make more informed decisions.</p>	<p>given that it is achievable through existing channels.</p> <p>Access to telematics services: £2-10 per tracked vehicle, resulting in an average cost of £90k/LA for the region if all vans used this service⁶</p>	
<p>Work with local dealerships to encourage them to promote EVs to both companies and private car owners through:</p> <ul style="list-style-type: none"> Ensuring sellers endorse the sale of EVs – in particular BEVs Making EVs available for extended test drives Encourage them to expand their EV offering 	<p>CPCA and partners for identifying and working with local dealerships to encourage extended test drives. This may also include incentivising dealerships to expand their EV offerings.</p>	<p>Potential costs associated with incentivising local dealerships dependent on extent.</p>	<p>N/A</p>

⁶ EE modelling

Actions	Role of key stakeholder	Costs/potential income	Funding options
<p>Ensure local businesses offer BEVs for company cars and enable their employees to charge their vehicle easily through:</p> <ul style="list-style-type: none"> • Supporting employees with the installation of a home charge point • Offering workplace charging for employees without access to off-street parking • Enable employees to easily claim back the electricity cost from recharging their vehicle at home and using public charging infrastructure 	<p>The actions are the responsibility of local businesses but Local Authorities can share advice and best practice examples</p>	<p>Cost to local business may be an increase in the upfront cost of purchasing an EV over an ICE (petrol/diesel) vehicle however refuelling an EVs is cheaper than refuelling ICE vehicle</p> <p>Cost of a BEV: £30k for a mid-range medium sized car</p> <p>Average cost of a home charge point varied based on speed:</p> <ul style="list-style-type: none"> • 3kW chargers are £300-£500 • 7kW chargers are £500-£1,000 	<p>Zenobe EV Fleets Fund, for fleet operators to switch to ZEVs</p> <p>Plug-in car grant</p> <p>Electric Vehicle Homecharge Scheme (EVHS) – closing for homeowners in single unit properties in April 2022 but will still be open for homeowners who live in flats and people in rental properties</p> <p>Workplace charging scheme</p>

3.13 B5: Work with LAs and National Government to ensure that planning facilitates refuelling/charging infrastructure rollout

3.13.1 Timeline

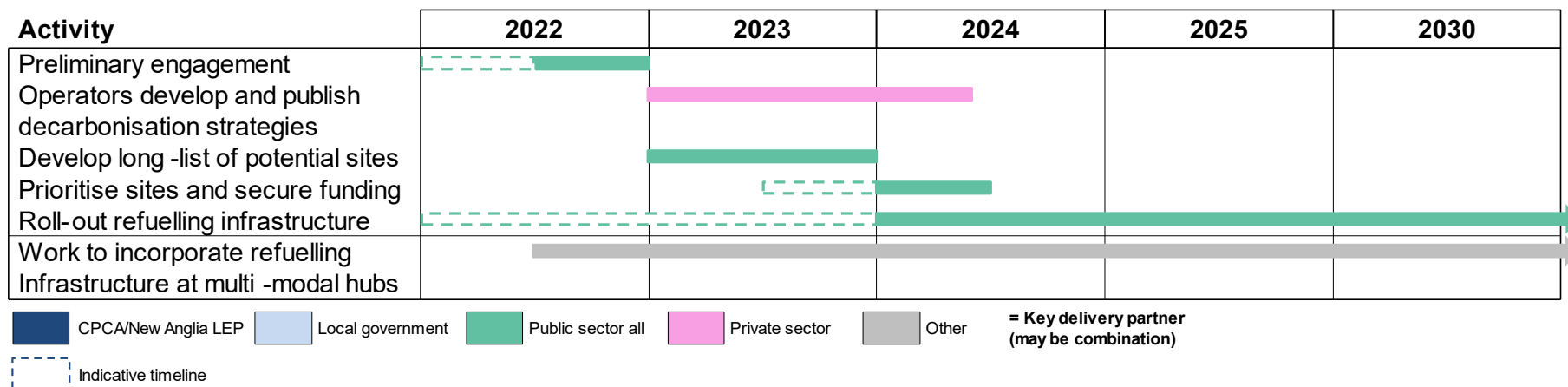


Figure 13: Timeline of key actions to facilitate a refuelling infrastructure roll-out

3.13.2 Description of supporting actions

Table 12: Key actions to facilitate a refuelling infrastructure roll-out

Actions	Role of key stakeholder	Costs/potential income	Funding options
Align LAs on targets for refuelling infrastructure and agree investment	CPCA and partners could engage with sub-national transport bodies to understand existing work into siting infrastructure. If appropriate this could be built on to	Minimal costs for identifying investment priorities where existing work is extensive.	Refuelling stations typically owned and operated by private

Actions	Role of key stakeholder	Costs/potential income	Funding options
<p>priorities across the region, supporting any existing work.</p> <p>Whilst EVCPs will eventually be spatially distributed throughout the region with the highest concentration around urban hubs, hydrogen and RNG refuelling stations will only be needed along key corridors of the strategic road network. A high priority is expected to be the A14/A11/A140 triangle and sections of the A1 passing through the region as these are the key freight routes for the region. Hydrogen refuelling will also occur around key warehousing areas such as Felixstowe port and the regions just north of Spalding.</p>	<p>establish a priority list of investment priorities across the region.</p> <p>The engagement with major fleets in the area (see B7) led by CPCA and New Anglia LEP should be leveraged to understand:</p> <ul style="list-style-type: none"> • Future demand from operators for HRS/ RNG RS (i.e. operators' plans for fleet decarbonisation method) • Priority areas where these would be needed based on operator feedback (i.e. most heavily trafficked routes by road freight). <p>This should then be fed into and used to support any ongoing projects that will contribute to infrastructure rollout.</p> <p>National government may decide to invest in a nationwide refuelling infrastructure roll-out program, in which case CPCA and partners should help guide LAs towards accessing any funding.</p> <p>LAs are most likely to be responsible for delivering infrastructure.</p> <p>The private sector is responsible for developing decarbonisation strategies and sharing data to help identify priority areas for refuelling infrastructure across the region</p>	<p>Up to £50k if a new study is necessary to identify sites for refuelling infrastructure and prioritise investment.</p>	<p>companies who bare the investment costs.</p>
<p>Ensure multi-modal hubs also support CP, Hydrogen and CNG/LNG</p>	<p>As part of the engagement for action A6, CPCA and partners should work with stakeholders to encourage the inclusion of refuelling infrastructure at multi-modal hubs</p>	<p>N/A</p>	<p>N/A</p>
<p>Engage with national government so that key infrastructure priorities in the region are accounted for in national planning and receive appropriate funding.</p>	<p>CPCA and partners should lead the engagement with national government, to understand existing plans for funding key local infrastructure projects, and highlight any upcoming or proposed projects of strategic importance that are in need of further funding.</p>	<p>N/A</p>	<p>N/A</p>

3.14 B6: Support local fleets and projects to facilitate hydrogen for transport

3.14.1 Timeline

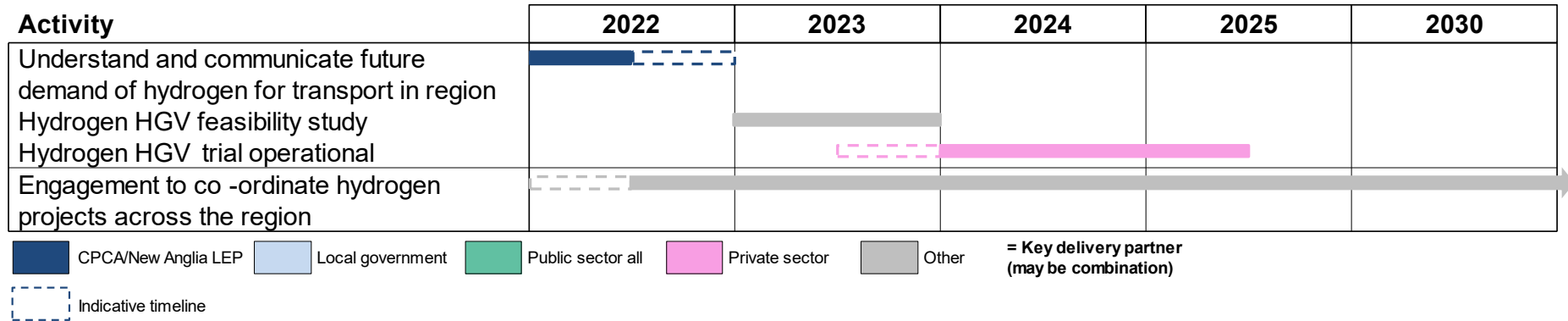


Figure 14: Timeline of key actions to facilitate hydrogen for transport

3.14.2 Description of supporting actions

- Currently all major hydrogen projects in the study region are in Norfolk and Suffolk

Table 13: Key actions to support hydrogen for transport

Actions	Role of key stakeholder	Cost	Funding options
Support Freeport East through: <ul style="list-style-type: none"> • Assessing feasibility of hydrogen for road transport, including considering the specific duty cycles of local fleets to determine 	New Anglia LEP should work with Freeport East to outline potential demand for hydrogen from transport in the region. This should lead to a feasibility study,	Up to £50-100k for the feasibility study. Costs for hydrogen HGV trial would include:	N/A

Actions	Role of key stakeholder	Cost	Funding options
<p>how the hub can support the decarbonisation of road transport</p> <ul style="list-style-type: none"> • Run a pilot trial using Felixstowe as a base to run hydrogen HGV's, to decarbonise freight movement from the port. • Coordinating partners to generate demand and access funding for a trial – including fleets and refuelling infrastructure providers 	<p>undertaken in partnership with local logistics companies, to understand the potential for hydrogen HGVs operating out of the port.</p> <p>If the feasibility study is successful, New Anglia LEP could then become responsible for co-ordinating the trial.</p> <p>Logistics companies would be responsible for owning and operating any hydrogen trucks and feeding back findings (essentially, they would be responsible for the operational phase of the trial).</p> <p>Freeport East would also be responsible for engaging in the study/trial and for supplying hydrogen.</p> <p>New Anglia LEP would also play a co-ordinating role between Freeport East and potential customers of hydrogen/ other key stakeholders.</p>	<p>H2 HGVs: £135k per truck⁷</p> <p>H2 fuel: Typical cost of £33k annually per regional delivery HGV⁷, however potential to reduce trial costs if Freeport East can supply the H₂ at favourable costs</p> <p>HRS at Felixstowe port: £6m CAPEX and £60k OPEX/year⁷</p> <p>0.5 FTEs to administer the trial and collect data into a useful format.</p>	
<p>Build on learnings of SHIFT project to explore opportunities elsewhere in region – for example, through establishing aggregated demand for</p>	<p>CPCA and partners to investigate areas of future high demand of hydrogen (potentially leveraging ongoing work) and relaying to key</p>	<p>N/A</p>	<p>N/A</p>

⁷ Comparison of hydrogen and battery electric trucks, Transport & Environment, June 2020. HGV costs given are those for an articulated truck doing 80,000km annually and operating for regional deliveries. HRS cost is for a station with a total refuelling capacity of 5,468kg_{H2} and a service life of 15 years.

Actions	Role of key stakeholder	Cost	Funding options
<p>public fleets (buses, vans, refuse collection vehicles etc), identifying land, and securing funding for vehicles</p> <ul style="list-style-type: none"> • Opportunities are likely to be concentrated in city centres with high volumes of vehicles, depending on appetite of local authorities 	<p>local stakeholders, both on the supply side and demand side.</p>		
<p>Work with Hydrogen East to help co-ordinate hydrogen projects across the region</p>	<p>Hydrogen East for co-ordinating between H2 stakeholders in the East of England – CPCA and New Anglia LEP should engage to facilitate this work and understand how they can best contribute.</p>	<p>N/A</p>	<p>N/A</p>

3.15 B7: Support local bus and logistics operators in the switch to AFVs

3.15.1 Timeline

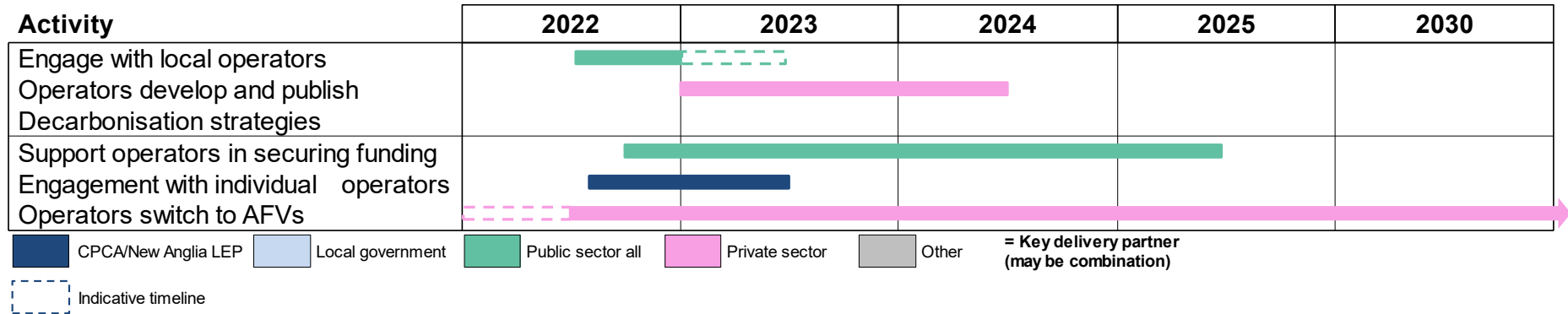


Figure 15: Timeline of key actions to boost AFV uptake amongst local operators

3.15.2 Description of supporting actions

Table 14: Key actions to boost AFV uptake amongst local operators

Actions	Role of key stakeholder	Cost	Funding options
Encourage local bus and logistics operators to develop decarbonisation strategies for their fleet, directing them towards relevant funding streams for the strategies/studies.	Operators are responsible for developing their own decarbonisation strategies, although for some smaller businesses a FTE with the time and knowledge to develop an appropriate may be limited and so	£10-50k per operator for developing decarbonisation strategy	N/A

Actions	Role of key stakeholder	Cost	Funding options
	<p>strategies may be contracted to third parties.</p> <p>Local government could engage with operators to understand existing work on decarbonisation strategies, ensuring timescales are suitably aligned across operators. For bus fleets local government could encourage decarbonisation ambition through the agreements made in the enhanced partnerships.</p>		
<p>Support local operators in getting funding for Zero Emissions Buses and Zero Emissions HGVs, as well as the supporting infrastructure</p>	<p>Local government can either directly apply or help operators apply to the relevant fundings streams, monitoring different options as and when they become available.</p> <p>Operators will ultimately be responsible for owning and operating all vehicles/infrastructure.</p>	<p>Minimal costs associated with funding applications.</p> <p>Around £180k/135k per BEV/FCEV truck operating on a regional delivery duty cycle, excluding any subsidy.⁸</p>	<ul style="list-style-type: none"> • Zero emissions bus regional area scheme (ZEBRA), for both ZEBs and supporting infrastructure (CPCA/Norfolk have already successfully applied) • Zero emission road freight trial (ZERFT), covering vehicle trials and supporting infrastructure. Currently close but a second phase of funding applications is expected in 2022.
<p>Target in particular the large private sector logistics fleets in the region for a transition to AFVs. These include companies such as:</p>	<p>CPCA and New Anglia LEP would need to engage with each of these operators individually to understand their existing plans to transition to</p>	<p>Minimal</p>	<ul style="list-style-type: none"> • Funding options for the switch as above

⁸ Comparison of hydrogen and battery electric trucks, Transport & Environment, June 2020.

Actions	Role of key stakeholder	Cost	Funding options
<ul style="list-style-type: none"> • Royal mail • Ryder • Tesco • Gist • Turners <p>As well as logistics areas such as:</p> <ul style="list-style-type: none"> • Port of Felixstowe Road • Area around the B1180 outside of Pinchbeck, Spalding 	<p>AFVs, and encourage a greater level of ambition where relevant. A key objective for these meetings should be to understand what barriers the operators are perceiving to the transition, particularly with respect to infrastructure and network constraints. This work can also be taken alongside supporting the operators to secure funding.</p> <p>CPCA and New Anglia LEP would then need to work with the relevant local stakeholders to address the identified barriers, largely in-line with the recommendations set out in this document.</p>		

3.16 C1: Disincentivise private car use

3.16.1 Timeline

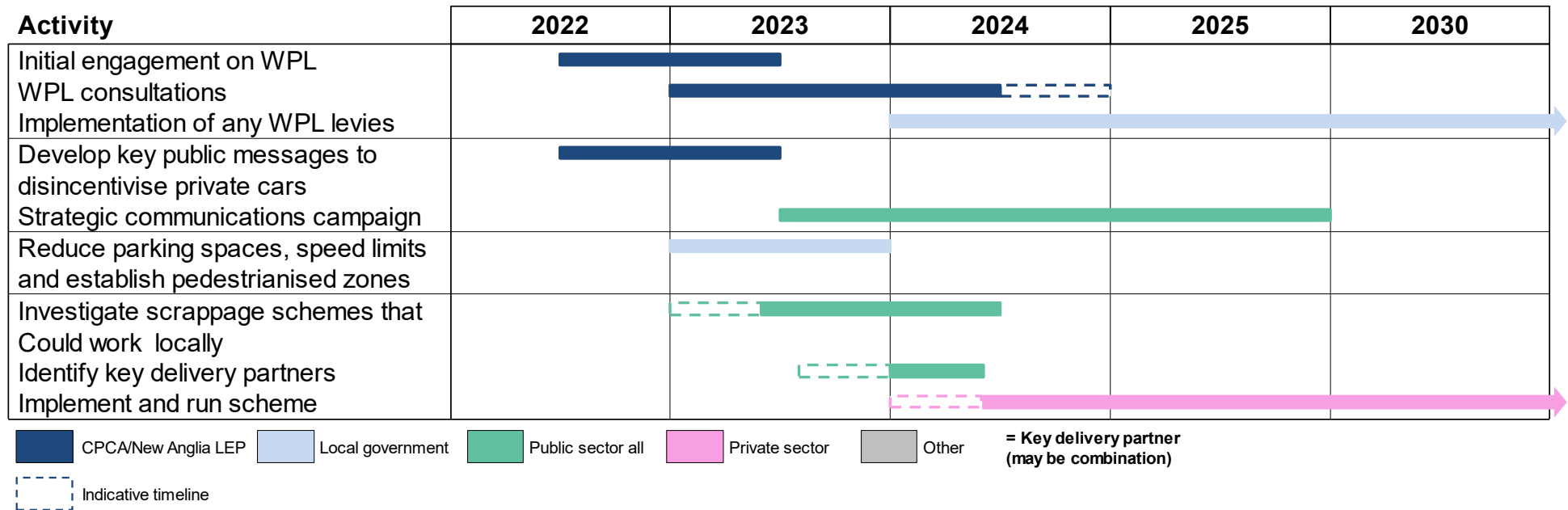


Figure 16: Timeline for key actions to disincentivise private car use

3.16.2 Description of supporting actions

- Any car disincentives must always be accompanied by equally strong incentives for alternative transport options such as bus and rail. It is therefore important that actions under C1 are not adopted in isolation, and instead are implemented alongside the rest of the actions under the ‘C’ theme to ensure people are not trapped with increasing car costs and no alternative. This relates to the point made in the Introduction (1.2.1), that to

achieve a **just transition**, disincentives must be matched by incentives. In particular, both need to be flexible enough to not disproportionately affect low income households or households where car use is essential due to location or a lack of alternatives.

- Additionally, any measures to disincentivise private car use should be adopted on a place-by-place basis. For example, measures which reallocate or increase charges for parking spaces are relevant to urban areas where parking is already strained and charged for, such as Norwich city centre.
- For all actions, the main role of CPCA will be to co-ordinate between local authorities, local planning authorities and developers to understand and help implement the actions below which are relevant in each district.
- All implementation costs will depend on the scale of any scheme and are expected to be borne by local authorities, however, funding options and revenues are available as indicated in Table 15.

Table 15: Recommended actions to disincentivise private car use

Actions	Role of key stakeholders	Costs/potential income	Funding options
Explore the introduction of a workplace parking levy	<p>CPCA and partners should engage with the local authorities to understand any existing plans/the potential for introducing workplace parking levies.</p> <p>Where relevant, local authorities could launch consultations to implement local workplace parking levies, and would then become responsible for administering the schemes once active.</p> <p>With the Nottingham and forthcoming Leicester schemes, employers are responsible for paying the levy when they have over a certain number of</p>	<p>Income: £26-29/city resident/year Net benefit through unlocking further grants: £125-208/city resident/year</p> <p>Nottingham City Council have raised £83m since implementing a WPL in 2012 (~£29/city resident/year), which has helped fund upgrades to the city’s tram system and Link bus network.⁹ Estimated net benefit through unlocking further grants of £600m (£208/city resident/year).</p> <p>Leicester City Council are consulting to implement a similar scheme and hope to raise £95m across 10 years</p>	N/A

⁹ Workplace parking, Nottingham City Council, accessed Jan. 2022. Estimate based on having run for 9 years and an average population of 320,000 (ONS).

Actions	Role of key stakeholders	Costs/potential income	Funding options
	spaces, although may choose to pass the cost on to the employees.	(~£26/ city resident/year). Estimated net benefit of £450m (£125/city resident/year) ¹⁰ .	
Reduce and reallocate road and parking spaces (primarily in urban centres; for example reallocating to car clubs) whilst increasing road and parking prices	Local authorities and highways authorities could look to identify suitable areas for removing spaces, increasing parking charges and reducing speed limits.	~£1000 per space for reallocation (Traffic Management Order costs). Revenues are expected from increased charges where demand will remain high.	N/A
Reduce speed limits to 20mph in urban residential areas and as appropriate on major roads	This must take into account plans to rollout EVCPs in any council owned carparks.	£2-5k per km of road. However, significant reduction in KSI collisions are expected.	N/A
Establish pedestrianised zones and limit through access of residential areas	Local authorities could work with developers and the local planning authorities to re-configure areas as pedestrian zones.	Implementation costs associated with re-routing traffic from pedestrianised zones, and with resurfacing pedestrian zones dependent on the scheme. Up to £10s of millions dependent on area size.	Funding for establishing pedestrian zones in urban areas could come from the £95m awarded to CPCA or £32m awarded to Norfolk County council through the DfT's Transforming Cities fund
Limit new road building	National Government and regional transport policy must lead from the top as isolated efforts to limit road building can result in areas becoming cut-off. Local planning authorities and developers for ensuring that all new housing developers do not require	N/A	N/A

¹⁰ Consultation launched on proposed Workplace Parking Levy, Leicester City Council, Dec. 2021. Estimated based on average population of 360,000 (ONS).

Actions	Role of key stakeholders	Costs/potential income	Funding options
	<p>extensive upgrades to existing roads, or entirely new routes.</p> <p>Bus/rail operators and local authorities for ensuring that suitable public transport and active travel alternatives are available.</p>		
<p>Align a strategic communications approach across the region to reinforce to the public that a shift away from private cars will be beneficial</p>	<p>CPCA and partners for aligning local authorities on key messages, examples of historic successes and other relevant information.</p> <p>Local authorities are typically responsible for leading any communications campaigns in their district.</p>	<p>Minimal costs to develop guidance.</p> <p>£10-50k for communication campaign depending on scale.</p>	
<p>Introduce incentives for mobility switching, particularly in urban areas.</p> <p>A particular form this could come in is scrappage schemes with corresponding mobility credits. Higher credits could be provided in return for scrappage of an ICE car or for low income households.</p>	<p>CPCA and partners to investigate the potential for region-wide schemes, in collaboration with key local stakeholders, including bus operators, LTAs and local recyclers.</p> <p>This could involve identifying an existing private company (or even setting up a new entity) to administer the scheme, in particular to become responsible for:</p> <ul style="list-style-type: none"> Designing the scheme and advertising it to car owners 	<p>£1,000-£5,000 per car for scrappage depending on extent of scheme, leading to a total of £10-100m (based on reduction in number of cars)¹¹.</p>	<p>Potential for scheme to be introduced and funded by car OEM's – Kia, Lexus and Renault are all currently offering scrappage grants¹².</p> <p>DfT – Transforming Cities Fund for new local transport - for improving the services being switched to.</p> <p>Mobility incentives specific to new developments could be required to be funded by developers – as with the AtoBetter scheme.</p>

¹¹ If 5% of the private cars eliminated in the Max Ambition scenario by 2030 used the scheme, the cost would be around £45m if £3k is paid per car.

¹² Car scrappage scheme list: all the 2022 deals and offers, Parkers, January 2022

Actions	Role of key stakeholders	Costs/potential income	Funding options
<p>Norfolk County Council's AtoBetter sustainable travel incentives are another example of mobility switching incentives (developers fund cycling/bus/rail travel)</p>	<ul style="list-style-type: none"> • Issuing mobility credits and making payments for scrapped cars • Establishing contracts with bus operators, other mobility providers and recyclers <p>Schemes may also be run separately by car OEM's at a national level, and may also be introduced nationally</p>		

3.17 C2: Work to expand bus and rail capacity

3.17.1 Timeline

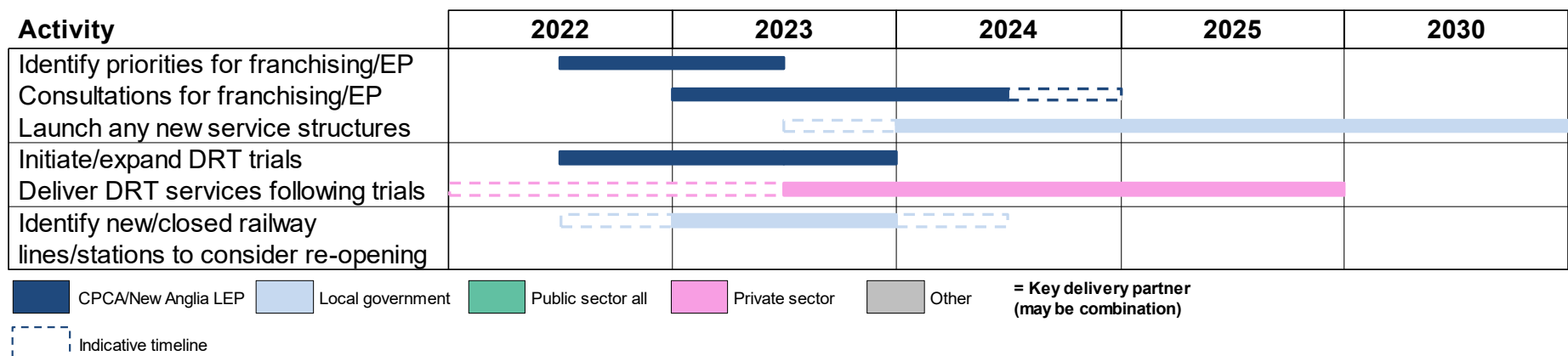


Figure 17: Timeline for key actions to expand bus and rail capacity

3.17.2 Description of supporting actions

Table 16: Recommended actions to help expand bus and rail capacity

Actions	Role of key stakeholders	Costs/potential income	Funding options
Set regional priorities for routes to be served through Enhanced Partnership or Franchising	CPCA and partners for co-ordinating with sub-national transport bodies, local transport authorities and bus operators to	All costs expected to be outweighed by benefits - DfT have previously estimated that major bus-related	Access to Government funding as set-out in 'Bus Back Better' can be conditional on LTAs franchising bus services or establishing Enhanced

Actions	Role of key stakeholders	Costs/potential income	Funding options
	<p>understand which routes to prioritise/ investigate.</p> <p>Local transport authorities for establishing franchise contracts with operators, and bus operators for providing services to contract. Bus operators for delivering improved services, and</p>	<p>schemes yield £4 in benefits for every £1 invested¹³</p>	<p>Partnerships across their entire areas under the Bus Services Act.¹⁴ Potential streams include: DfT – Transforming Cities Fund for new local transport DfT – Bus Service Operator Grant OLEV (Ultra-Low emission Bus scheme for purchasing ULE buses) to expand fleet The Greater Cambridge Partnership also carries out significant ongoing work improving and expanding bus routes through the Cambridge City Deal.</p>
<p>Align objectives and best-practice for leveraging Enhanced Partnerships between LAs and bus operators to decarbonise local bus fleets</p>	<p>CPCA and partners could set guidance¹⁵ and share best-practice with LAs for how to use Enhanced Partnerships for decarbonising bus fleets in their districts. Guidance might include giving operators who take action to decarbonise their fleets priority lanes/lights, making their services more efficient and thus profitable.</p>	<p>Costs to local government entirely dependent on level of incentives provided to bus operators.</p> <p>Costs to bus operators of £10-50k to initially develop a decarbonisation strategy for their fleet.</p>	<p>N/A</p>

¹³ Value for money assessment for major bus-related schemes, DfT, February 2016

¹⁴ Bus Back Better, Department for Transport, March 2021

¹⁵ For example by tailoring the guidance set at a national level to suit local needs. [National Bus Strategy. Creating an Enhanced Partnership: example format and structure](#)

Actions	Role of key stakeholders	Costs/potential income	Funding options
	<p>Local authorities would be responsible for negotiating and contracting enhanced partnerships with operators.</p> <p>Bus operators would be responsible for developing strategies for decarbonising their fleet, and fulfilling any terms set-out in the Enhanced Partnership contract.</p>		
<p>Expand existing trials of Demand Responsive Transport (DRT) (e.g. Katch in Suffolk) to other areas with current poor transport links to develop comprehensive service</p>	<p>CPCA and partners to set-up a forum for:</p> <ol style="list-style-type: none"> 1) Sharing the findings of such trials in the region 2) Expanding successful trials 3) Identifying areas where new services may be helpful <p>Private sector for delivering any DRT services, potentially in partnership with local/county councils (as is the case with Katch)</p>	<p>DRT expected to be profitable if sufficiently utilised. Typical income of £7/4 for an adult return/single (Katch fare).</p> <p>Initial costs for a trial include: Vehicles: £35-60k/ electric minibus and 1-2 FTEs per vehicle depending on operating hours. EVCPs: The EVCP installed for Katch at Wickham Market Train station cost £7,700. Marketing/admin: 0.5-1 FTE</p>	<p>The DfT's Rail Network Development Fund funded Katch EVCPs at Campsea Ashe train station¹⁶, and might be used similarly for future trials</p>
<p>Identify closed/new railway stations/lines with significant potential. The King's Lynn – Hunstanton line is an example which</p>	<p>CPCA and partners and sub-national transport bodies for co-ordinating efforts across the region.</p>		<p>DfT – Restoring Your Railway Fund. 'Ideas Fund' for funding early-stage studies of re-opening stations and lines. Currently closed to applications</p>

¹⁶ A new electric taxi-bus services launches in East Suffolk, Suffolk County Council, May 2021

Actions	Role of key stakeholders	Costs/potential income	Funding options
<p>would bring significant benefits (in particular alleviating the A149) and has an ongoing campaign to be reopened. Reinstating the train line between King’s Lynn and Norwich also offers a more sustainable alternative to road upgrades on the full A47 and would significantly reduce congestion.</p> <p>The delivery of existing major proposed schemes, including the Cambridge South Station and East-West rail should also be supported.</p>	<p>LTAs for identifying specific lines and stations to prioritise for re-opening.</p> <p>National Government/Network Rail for making central decisions on the extent of support and funding for expanding/re-opening the rail network.</p>		<p>although similar may run in future. The King’s Lynn Hunstanton Railway Campaign has previously been unsuccessful in applying to this fund to carry the proposal forward in more detail¹⁷.</p>

¹⁷ [King’s Lynn Hunstanton railway campaign](#), November 2021

3.18 C3: Support an increase in walking and cycling across region

3.18.1 Timeline

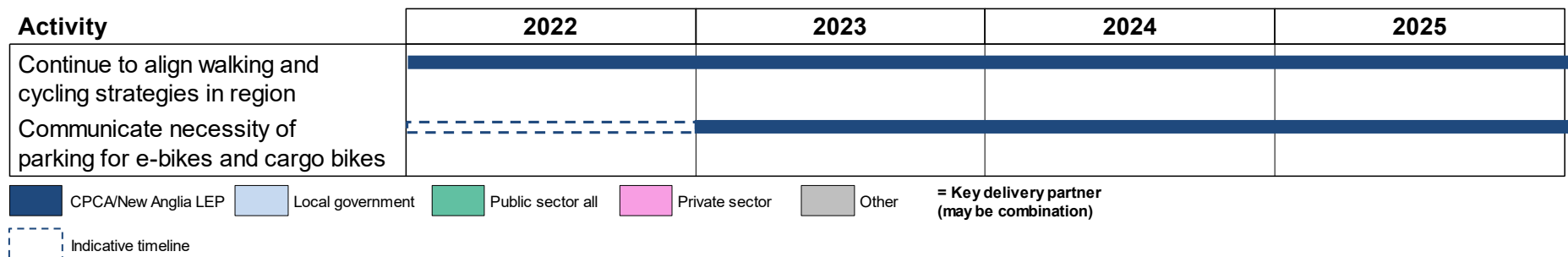


Figure 18: Key actions in aligning walking and cycling strategies

3.18.2 Description of supporting actions

Table 17: Recommended actions to align walking and cycling strategies

Actions	Role of key stakeholders	Cost	Funding options
Ensure cycling and walking strategies across the region are compatible and provide good connectivity within and between key centres. They should also ensure any walking and cycling schemes	CPCA and partners to facilitate collaboration between local authorities on key matters relating to cycle route upgrades, in particular ensuring consistency where routes cross local and regional borders,	Minimal to CPCA and partners for overseeing any collaboration. Typical infrastructure cost of £0.5-1m per km for high quality segregated cycle lane.	Greater Cambridge Partnership carries out significant ongoing work in improving walking and cycling routes through the Cambridge City Deal.

Actions	Role of key stakeholders	Cost	Funding options
<p>meet good user safety standards with physical protection from motor vehicles.</p>	<p>and also ensuring that cycling infrastructure is distributed equitably across the region. Areas currently without a strategy that would benefit from one should also be identified. Local/county authorities for developing strategies in light of work in neighbouring districts and at a more/less local level.</p> <p>Delivery of infrastructure by County Councils, UAs and associated stakeholders (infrastructure providers, Highways England)</p>		
<p>Ensure strategies include provision of secure parking for e-bikes and e-cargo-bikes</p>	<p>CPCA and partners for communicating that this is a regional priority to any authority developing a strategy.</p> <p>Local/county authorities for ensuring this is included in any strategy.</p>	<p>Cost of cycle parking ranges from £0.2-2.5m per hub, with an upper limit in the region of several £m per LA for improved residential cycle parking provision</p>	

3.19 C4: Explore options for rolling-out 15 minute city concept across region

3.19.1 Timeline

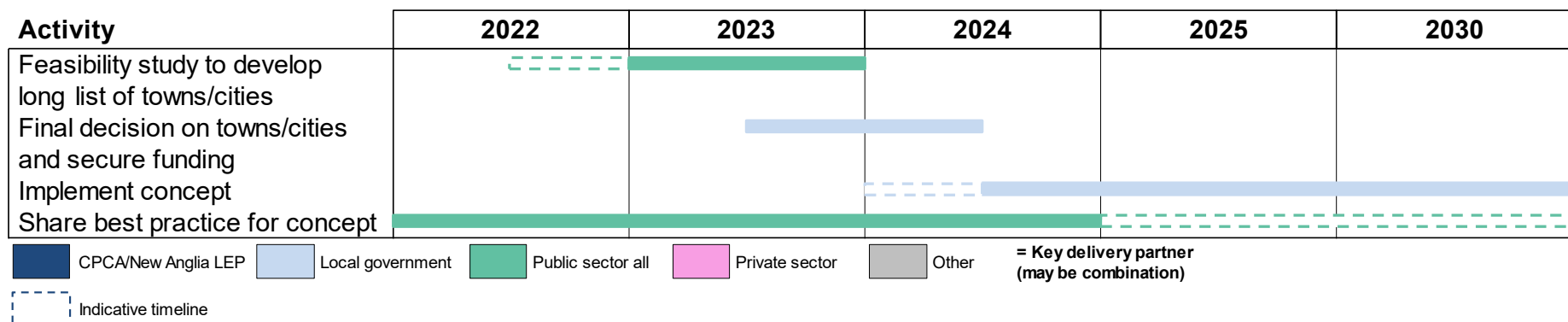


Figure 19: Timeline of key actions to support the roll-out of the 15 minute city concept

3.19.2 Description of supporting actions

Table 18: Key actions to support the roll-out of the 15 minute city concept

Actions	Role of key stakeholders	Cost	Funding options
Identify urban areas to which the 15-minute concept could be rolled-out.	CPCA and partners in tandem with LAs could undertake a feasibility study into the concept across the region. This could lead to a longlist	Up to £50k for initial region-wide feasibility study, and similar for each location specific study. £25m grant to Ipswich for advancing 15-minute concept provides	Government Towns fund (source of Ipswich grant) DfT – Transforming Cities Fund (CPCA awarded £95m, Norfolk County Council awarded £32m)

Actions	Role of key stakeholders	Cost	Funding options
	<p>of viable target towns, cities, and new developments.</p> <p>Ultimately LAs would be responsible for deciding whether the concept is locally relevant and for incorporating it into local planning. CPCA and partners could then support LAs in accessing funding and conducting location specific feasibility studies.</p>	<p>indicative cost for a town of this scale. This equates to roughly £184/resident¹⁸, however costs will vary significantly between settlements depending on existing infrastructure.</p>	
<p>Support towns and cities in the region in their transformation by sharing best practice in the 15-minute concept, and other learnings such as guidance for accessing fundings schemes.</p>	<p>CPCA and partners to coordinate information provision to local authorities in relation to best practice, gathering learnings from those with relevant experience (currently just Ipswich).</p>	<p>Negligible</p>	<p>N/A</p>
<p>Avoid building new developments where residents will depend on car use.</p>	<p>CPCA and partners could communicate with local government to encourage planning not to allow new developments which are inaccessible or poorly accessible by existing public transport options, and to ensure that key services are located nearby.</p>	<p>Negligible</p>	<p>Negligible</p>

¹⁸ Based on a population of 136,000, ONS.

Actions	Role of key stakeholders	Cost	Funding options
	<p>Local government are ultimately responsible for ensuring that developers are not granted planning permission in locations that would be car dependent.</p>		

3.20 C5: Support shared vehicle opportunities

3.20.1 Timeline

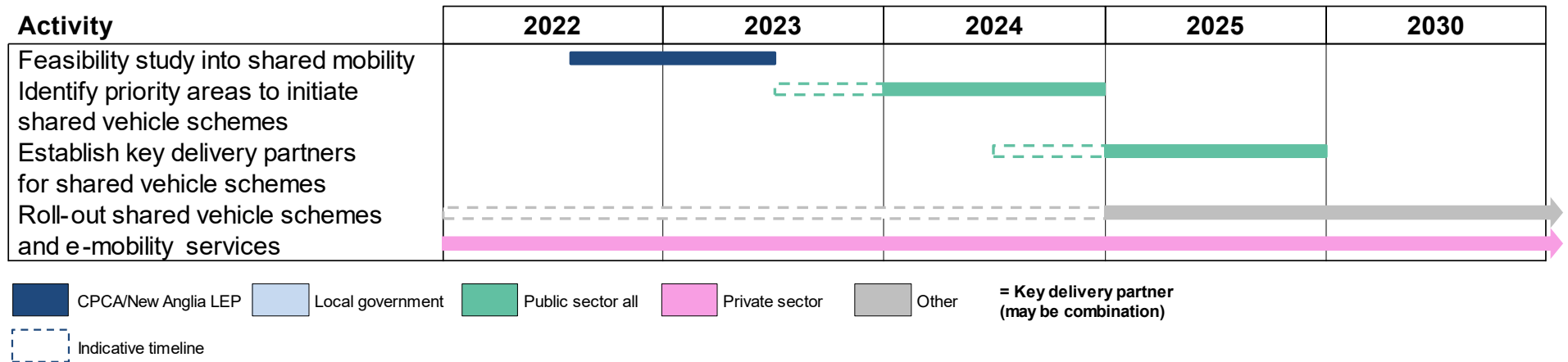


Figure 20: Timeline of key actions to support shared vehicle opportunities

3.20.2 Description of supporting actions

- All shared vehicle schemes could be community, council, or privately led
- Shared vehicle schemes have significant potential to be paired with scrappage scheme, as with the TfL van scrappage scheme
- The Zenobe EV Fleets Fund could be used by in particular local authorities looking to set-up a council-led scheme
- However, commercial schemes where users pay to use vehicles are typically profitable and thus not expected to require ongoing funding

Table 19: Key actions to support shared vehicle opportunities

Actions	Role of key stakeholders	Costs/potential income	Funding options
<p>Launch a feasibility study to assess the potential effectiveness and demand for different types of shared vehicle opportunities across the region.</p>	<p>CPCA and partners could commission a study which covers the entire region. Alternatively, local government could commission studies which focus solely on their district.</p>	<p>£10-50k depending on the number of different types of shared vehicle opportunities assessed in any study, and the extent of the region covered.</p>	<p>N/A</p>
<p>Encourage the establishment of car clubs in suitable areas, including as an option in new developments.</p>	<p>Following the feasibility study, CPCA and partners might want to encourage LAs to initiate schemes, and also help LAs to identify suitable locations for them. Where the success of schemes is demonstrated, CPCA and partners could co-ordinate the expansion of successful schemes across district borders, or where schemes already exist cross-borders, encourage their uptake.</p> <p>Local government could identify areas where shared schemes may be suitable, and support communities in establishing their schemes or approach members of the private sector who may be interested in delivering the schemes.</p>	<p>Shared vehicle schemes are typically profitable although may involve the following main costs:</p> <ul style="list-style-type: none"> • EV cars - £30k for a mid-range medium sized car • EV vans - £25-60k per van depending on model • E-bikes - £500-5,000 depending on model • E-cargo bikes - £5-10k • Number of FTEs to administer scheme entirely dependent on scale • The cost of EVCPs to car sharing companies is dependant on the demand of the location, contract length and revenue share. In many cases CPOs will pay a proportion of the CAPEX • A single 7kW charger is between £500-£1000 however where multiple 	<p>Zenobe EV Fleets Fund</p>
<p>Consider the introduction LA-led shared van schemes for SMEs.</p>			
<p>Expanding or introducing shared e-bikes/e-cargo bike offerings</p> <p>Note there are already e-mobility services in urban areas across the region – including for example voi e-bikes and e-scooters in Cambridge, and Beryl Bikes in Norwich.</p>			

Actions	Role of key stakeholders	Costs/potential income	Funding options
	<p>Local government could also consider communicating with developers to investigate whether a car club would be suitable to planned developments.</p> <p>The private sector typically own and operate e-mobility services – as is the case with Voi, Beryl and other providers. Where possible local government should encourage work with providers to expand services into areas where they may be deemed suitable.</p>	<p>chargers are being deployed there are likely to be additional grid upgrade and operational costs</p> <p>Possible charging mechanisms include by mileage, time, or on a subscription basis.</p>	

3.21 C6: Support freight consolidation and sustainable last-mile delivery

3.21.1 Timeline

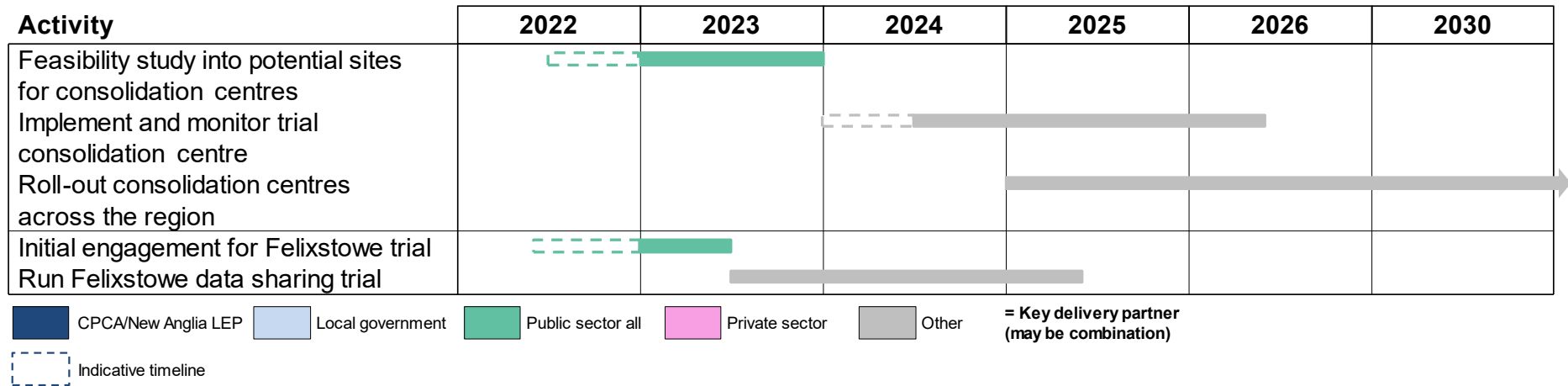


Figure 21: Timeline of key actions to support freight consolidation and sustainable last-mile delivery

3.21.2 Description of supporting actions

Table 20: Key actions to support freight consolidation and sustainable last-mile delivery

Actions	Role of key stakeholders	Cost	Funding options
<p>Investigate feasibility of establishing consolidation/micro-consolidation centres in existing areas of high delivery activity.</p>	<p>CPCA and partners could co-ordinate key stakeholders in launching a feasibility study into potential sites for a trial consolidation centre.</p> <p>The resultant trial could be overseen by a combination of CPCA and partners, the relevant LA or a private/new entity.</p> <p>LAs could contribute by proposing potential sites for consolidation centres which would be the subject of the feasibility study. If trial is successful LAs could then roll-out the concept in their own district, with CPCA and partners sharing guidance and key learnings from the trial.</p> <p>Local planning authorities would need to permit and facilitate the establishment of the centres, while logistics companies will need to be identified to engage in the feasibility</p>	<p>Up to £50k for the feasibility study.</p> <p>The cost of a trial consolidation centre cost will vary significantly depending on scale, likely £1-5m¹⁹. Costs will be reduced significantly by leasing an existing distribution centre as opposed to having a new facility purpose built.</p>	<p>Once set-up a consolidation centre is likely to become profitable if participation is forced. However, a centre where participation is voluntary although is likely to need some form of subsidy.</p> <p>A voluntary centre could alternatively be set up as a Social Enterprise and financed as a Limited Community Interest Company¹⁹.</p>

¹⁹ London Freight Consolidation Feasibility Study Final Report, TfL, February 2019

Actions	Role of key stakeholders	Cost	Funding options
	study and participate in any resultant trial.		
Support a trial for data sharing of good movements to and from Felixstowe to encourage consolidation across companies.	<p>New Anglia LEP could engage with East Suffolk LA and local logistics companies to understand any ongoing work in this area. Based on the outcome of the preliminary engagement, New Anglia LEP could then initiate the trial and co-ordinate between East Suffolk and neighbouring LAs to facilitate the trial.</p> <p>CPCA and partners might then investigate opportunities for roll-out across the region.</p> <p>East Suffolk LA might want ownership of the trial, and also to be responsible for key aspects of it such as identifying suitable land.</p> <p>Hauliers would be needed to participate in the trial and share any necessary data in the requested format.</p>	Costs for trial dependent on form but can range from just the cost of providing land, to £20-500k for funded support, or several £m if solely publicly run.	

3.22 C7: Work to deliver a modal shift towards rail freight

3.22.1 Timeline

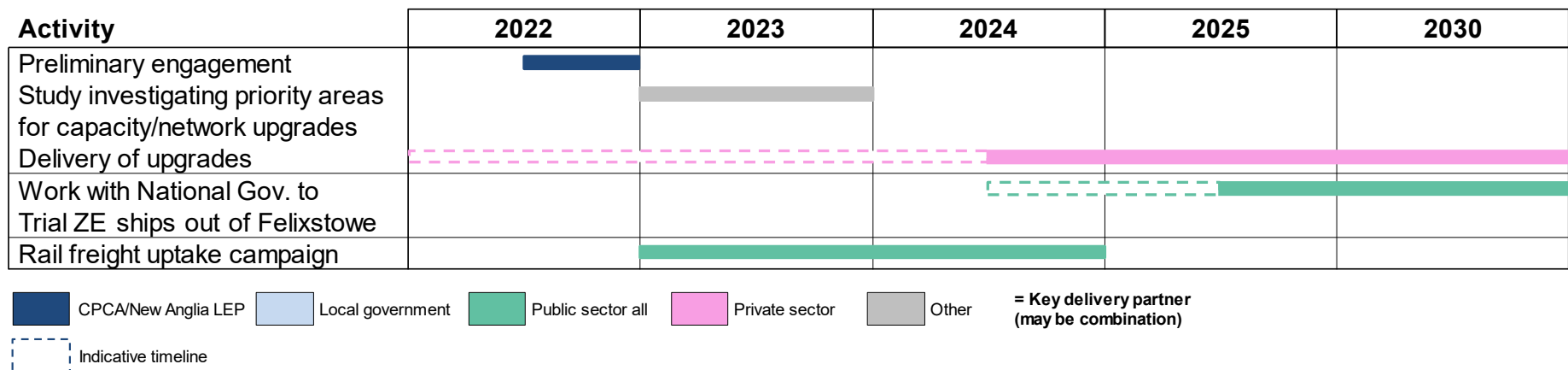


Figure 22: Timeline of key actions to facilitate shifting freight to rail

3.22.2 Description of supporting actions

Table 21: Key actions to facilitate shifting freight to rail

Actions	Role of key stakeholders	Costs/potential income	Funding options
Work to increase rail freight capacity, in particular at bottlenecks such as along the route from Felixstowe	CPCA and partners could engage with rail freight operators, logistic companies and other relevant stakeholders to gather data on existing bottlenecks in the region.	£5-20k for study investigating priorities for network upgrades. Upgrade costs will depend on scale - £60.4m of investment in 2019	

Actions	Role of key stakeholders	Costs/potential income	Funding options
	<p>This would ideally extend to engagement with Network Rail and rail freight operators to understand existing plans for network/capacity upgrades and encourage action at key bottlenecks. Depending on the outcome of preliminary engagement, a study identifying priority areas in the region for network upgrades could be undertaken, also looking at the feasibility of the necessary upgrades. Note that the Ely area capacity enhancement programme has already noted Ely as a bottleneck for freight connecting Felixstowe, the Midlands, Yorkshire and Scotland, and has put forward a proposal for expanding capacity²⁰. The programme could be used as a model for addressing other bottlenecks.</p> <p>National Government must also note that the majority of goods coming through Felixstowe are delivered outside East Anglia. New Anglia LEP could encourage the Government to ensure that expansions to the Felixstowe freight line are factored into national planning and funded appropriately.</p>	<p>allowed a new 1.4km loop on the Felixstowe branch line, allowing 33-47 additional train paths/day in each direction²¹.</p>	

²⁰ The Ely area capacity enhancement programme, [Round 2 Consultation](#), 2021.

²¹ Felixstowe Branch Line capacity enhancement goes live, July 2019

Actions	Role of key stakeholders	Costs/potential income	Funding options
	<p>Network Rail/ rail operators will ultimately be responsible for delivering any increases in rail freight capacity.</p>		
<p>Encourage the National Government to trial zero emission ships that connect Felixstowe with Grangemouth and Teeside²²</p>	<p>New Anglia LEP could encourage the National Government, potentially in collaboration with Freeport East, to commission a zero emissions ship trial operating between Felixstowe and Teeside / Grangemouth.</p>	<p>Zero emissions ships still in development phase and thus costs remain uncertain.</p>	<p>Trial funded at national level.</p>
<p>Work with logistics companies to encourage a modal shift from road to rail freight</p>	<p>In collaboration with LAs, CPCA and partners could engage with logistics companies and other local entities to encourage uptake of rail freight. This might include compiling best practice for local companies seeking to establish more sustainable supply chains.</p>	<p>Estimated cost to switch of around £1-2/tonne of goods lifted. The MSRS financial appraisal offers a maximum grant of £1.50, £0.90 and £0.80 per tonne of goods lifted by rail/water instead of road in 2021, 2022 and 2023 respectively²³.</p>	<p>Mode Shift Revenue Support (MSRS) grant scheme 2020 to 2025, which assists companies with the operating costs associated with running rail freight where this is more expensive than road freight.</p>

²² Although Felixstowe is a deep-water port, Grangemouth and Teeside are not. North-bound freight that is not moved by rail or road from Felixstowe is interchanged to smaller ships, allowing shipment to Grangemouth and Teeside.

²³ Annex E, Guide to Mode Shift Revenue Support (MSRS) Scheme, February 2022