MIDLANDS NET ZERO HUB

Welcome to the Electrification of Depots Webinar

Today's session will:

- Reflect on the completion of Round 1 of the Electrification of Depots projects and the Local Authority Fleet Reviews.
- Share insights from feasibility studies and depot reviews.
- Outline next steps for councils to move from fleet reviews to detailed depot designs.
- Launch Round 2 of the Electrification of Depots (EOD2) Competition.

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The Agenda

- Reflections from Round 1
- Local Authority Fleet Reviews
- Round 2 Competition Launch
- Expert Guidance: Post-Review Action Steps
- Competition FAQ’s
- Q & A

Reflections from Round 1

Electrification Feasibility Study – Key Outputs & Strategic Value

- Jacobs were commissioned by Worcestershire County and Worcester City Councils to deliver a techno-economic feasibility study.

- The study increased certainty around:
  - Cost and space requirements for electrification.
  - Grid connection sizing to enable realistic DNO engagement.
  - Location options for different charger types.

- Provided a phased implementation outline, including early installation to mitigate future cost increases.
- Quantified the ask for the first time, enabling readiness for funding bids.
- The summary has supported internal decision-making and stakeholder engagement.
- Offers a clear foundation for future planning, procurement, and operational delivery.

Local Authority Fleet Reviews – Overview

Cenex were commissioned by the hub to help local authorities evaluate their current fleet providing a foundation for estimating electrical demand and a strategy to electrify their fleets. The main aims of the analysis were:

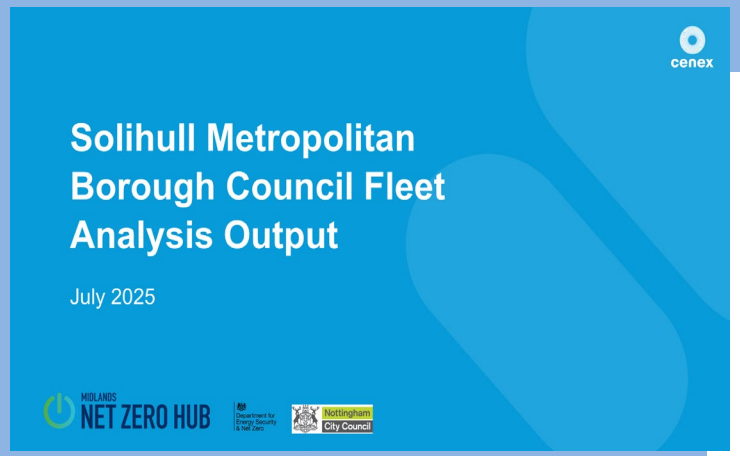
- Electrical demand estimation.
- Review of peak power demand and charging options.
- Roadmap of transitioning their entire fleet over to electric from internal combustion engines.

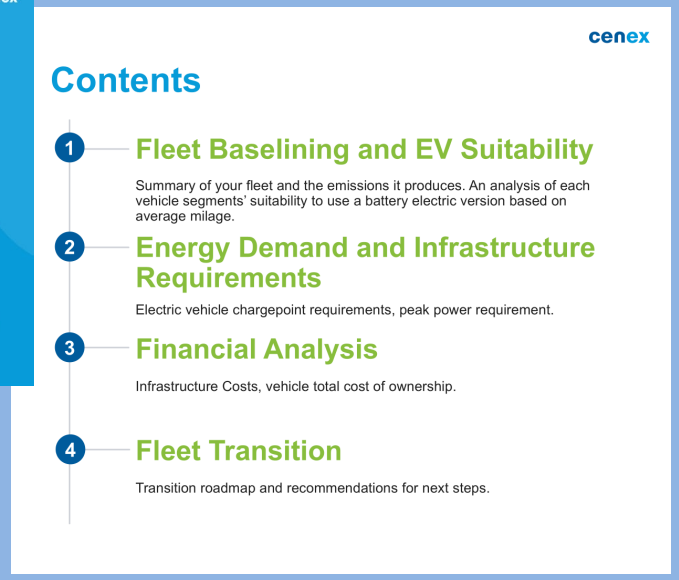
Based on average daily mileages, 90.4% of all vehicles assessed could already be suitable for replacement by battery electric vehicles charged once per day.

26t RCVs and truck-mounted sweepers have the lowest range suitability, and large vans have the best range suitability.

The analysis found that a total of **1,245 chargers** were needed across all 10 councils,

It was estimated that the transition to EV for the 10 fleets would be**~£11.4 mil in capital cost** and **~£0.3 mil in operational cost.**



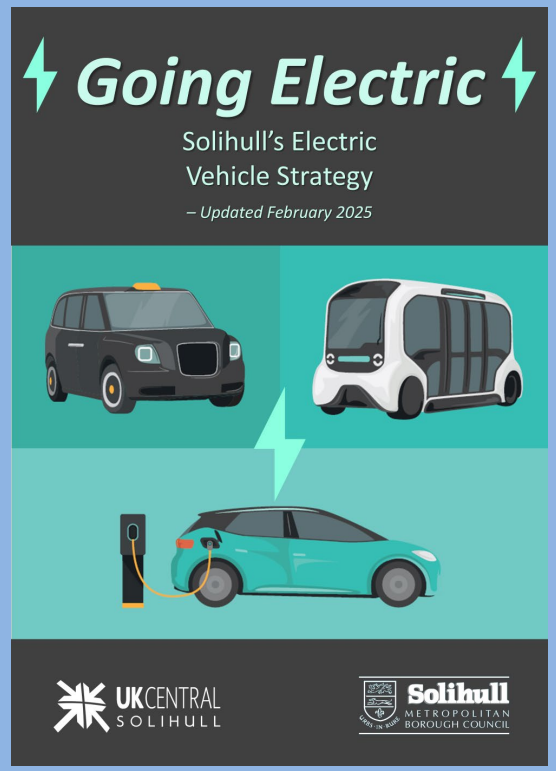


Solihull MBC – Fleet Review 2025

Martin Schaeferbarthold – ULEV Project Manager, SMBC

Strategic Context: Solihull's EV Strategy

- **Updated Strategy & Action Plan approved in March 2025**
- Sets public charge point targets out to 2030
- Council Operations Net Zero Target 2030 (end of)
- Precursor to Fleet Decarbonisation Plan



So, we've set an ambitious fleet EV target…

Now what?

- **We've already started with some of the low hanging fruit, i.e., cars and small vans, and we have some 7kW chargers (some than others, so data is patchy)**
- What we needed next was a deep dive into how our existing vehicles are used, where they are kept, and what an EV (or other low emission) alternative
- **But our fleet isn't one fleet, its several, all managed separately, so we had to start with creating a single fleet asset register (more challenging than it sounds)**
- Before we can figure out where best to focus effort, we need to understand which vehicles are feasible to switch now, and in the near term…AND…devise a charging strategy for each

Solihull Fleet - Snapshot

- **Core fleet comprised of**

  65 SMBC operated vehicles (mainly leased)

  75 Solihull Community Housing vehicles (medium and large vans)

  plus, Strategic Environment Contract and Highways Contract vehicles

Table 1 Vehicle overnight locations

Location	Car	LCV	HGV	Total
Moat Lane	13	81	62	156
Driver's Homes	0	57	0	57
Chapelhouse Depot	0	15	0	15
Other Locations	11	6	0	17
Total	**24**	**159**	**62**	**245**

The current fleet emits 658 tonnes of greenhouse gas emissions each year, based on the current fuel types use on the fleet.

94% of vehicles in the fleet are able to complete the average daily mileage on one charge when converted to battery electric vehicles.

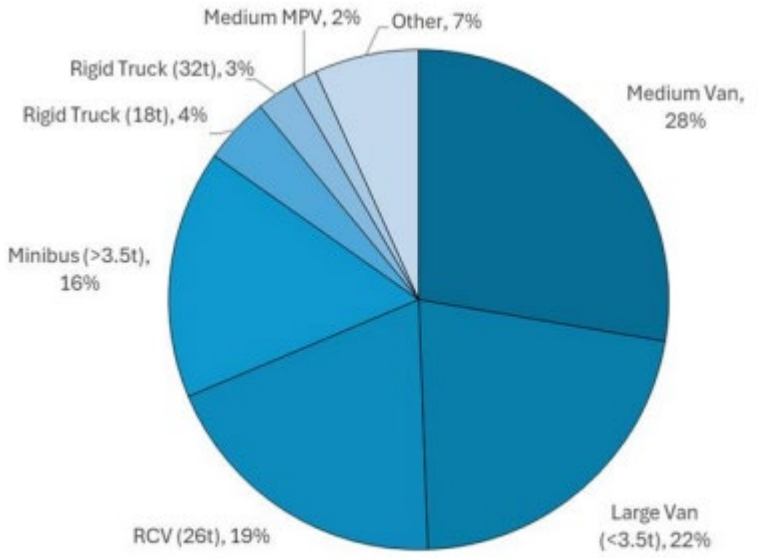


Figure 2 - Greenhouse Gas Emissions by Vehicle Type

Shortcut to the outputs

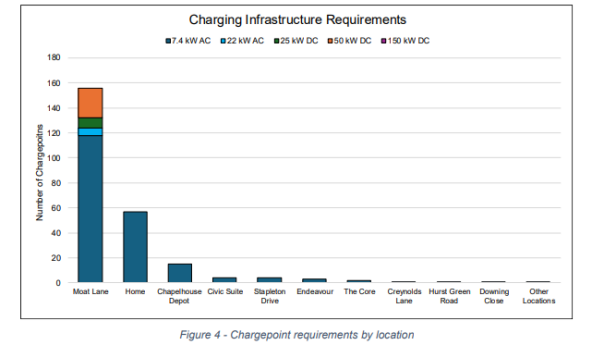


Figure 4 - Chargepoint requirements by location

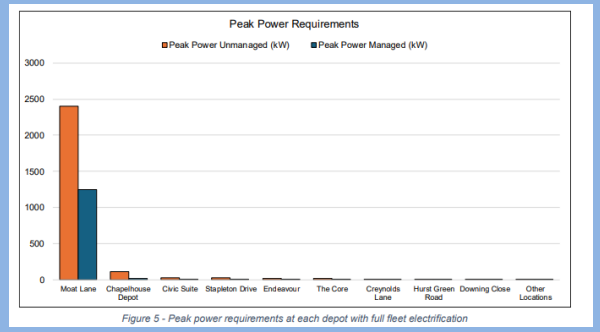


Figure 5 - Peak power requirements at each depot with full fleet electrification

Table 3 - Battery capacity usage and time between charges by vehicle segment

Vehicle Segment	Time before re-charge required	% Daily Battery Capacity Used
RCV (26t)	1 day	78%
Truck-mounted Sweeper	1 day	76%
3-axle Tractor Unit	1 day	61%
RCV (18t)	1 day	55%
Rigid Truck (32t)	2 – 5 days	39%
Minibus (>3.5t)	2 – 5 days	23%
Midsized SUV	2 – 5 days	17%
Medium Van	2 – 5 days	15%
Rigid Truck (18t)	2 – 5 days	15%
Pickup Truck	2 – 5 days	14%
Large Van (<3.5t)	2 – 5 days	14%
Rigid Truck (<7.5t)	5 – 10 days	12%
Medium MPV	5 – 10 days	11%
Small Car	5 – 10 days	11%
Crossover SUV	5 – 10 days	10%
Small Van	5 – 10 days	10%
Large SUV	5 – 10 days	9%
Large Van (>3.5t)	5 – 10 days	8%
Medium Car	10+ days	7%
Large MPV	10+ days	6%
Large Car	10+ days	3%

Table 6 Infrastructure cost by depot

Location	Total Chargers	Chargepoints Capital Cost	Chargepoints Operating Costs
Moat Lane	94	£1,420,000	£29,300
Driver's Home	57	£57,000	£0
Chapelhouse Depot	8	£68,600	£2,500
Other Locations	11	£94,300	£3,300
Total	**170**	**£1,640,000**	**£35,100**

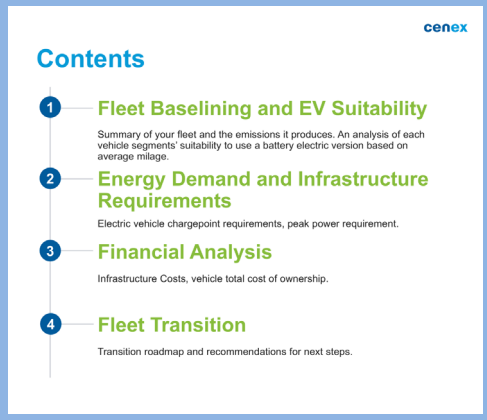

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Table 7 Summary of Vehicle Total Cost of Ownership by Vehicle class

Vehicle Segment	Number of Vehicles	Purchase Cost Difference per Vehicle	Running Cost Difference per Vehicle	Avg TCO Difference per Vehicle	TCO Difference Overall Fleet	Vehicles with TCO Savings
Car	16	-£156	-£2,588	-£2,744	-£43,904	69%
LCV	155	£5,793	-£3,502	£2,291	£355,171	20%
HGV	62	£196,301	-£40,194	£156,107	£9,678,613	0%
Total	**233**	**£56,078**	**-£13,203**	**£42,875**	**£9,989,880**	

Table 9 Impact of grid decarbonisation

	Current Fleet	Full Fleet Transition in 2025	Full Fleet Transition in 2030
Greenhouse Gas Emissions (tonnes)	658	726 (+10%)	273 (-59%)
NOx Emissions (kg)	1,020	0 (-100%)	0 (-100%)
PM Emissions (kg)	6	0 (-100%)	0 (-100%)

Next Steps for Solihull

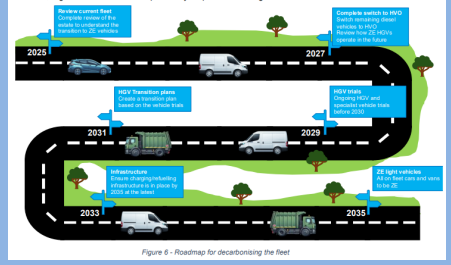

Figure 6 - Roadmap for decarbonising the fleet

- **What the Fleet Analysis has shown is that every vehicle we operate, from small cars to HGVs to specialist plant and agricultural units has a BEV equivalent that already exists.**

But…

- The market maturity differs greatly across vehicle classes, and consequently so do costs and TCO.
- HVO has bought us time from a carbon perspective for the big stuff, but we'll still need to push hard for 2030
- Because we are so space constrained, we'll need a comprehensive charging strategy that covers individual vehicles, sub-sets of the fleet, and the fleet as a whole in order to manage the infrastructure costs and operational demands of delivering core council services. We're going to need to do some testing in certain vehicle classes to build user (and budget holder) confidence.
- The data has already supported Procurement Board decisions on the next round of vehicle selections, and the Results Dashboard tool allows us to plug in real vehicle and price data to support business case development for future procurement rounds.
- To turn what we have into a meaningful Fleet Decarbonisation Strategy we want to follow up with a full depot electrification study for Moat Lane to inform the art of the possible there, what we might need from a future alternative depot location, and what off-depot interim measures we may need to plan for.

Round 2 Competition Launch

Purpose: Support Midlands Local Authorities in progressing from fleet reviews to detailed, investable depot designs for electric fleet infrastructure.

Scope of Funded Work (not limited to):

- RIBA Stage 3-level depot designs
- Renewable energy integration (solar PV, battery storage)
- Cost modelling and risk assessments
- Delivery timelines and milestones

Round 2 Eligibility Criteria

You must...

- ❑ Be a Local Authority within the Midlands Net Zero Hub region
- ❑ Have completed a fleet review (funded or self-funded)
- ❑ Include renewable energy system integration
- ❑ Commit to sharing findings (anonymised if needed)

Provide:

- ❑ Signed corporate approval
- ❑ Ability to mobilise by **30 Nov 2025**
- ❑ Match funding of **at least 35%, maximum funding is £25k per applicant**

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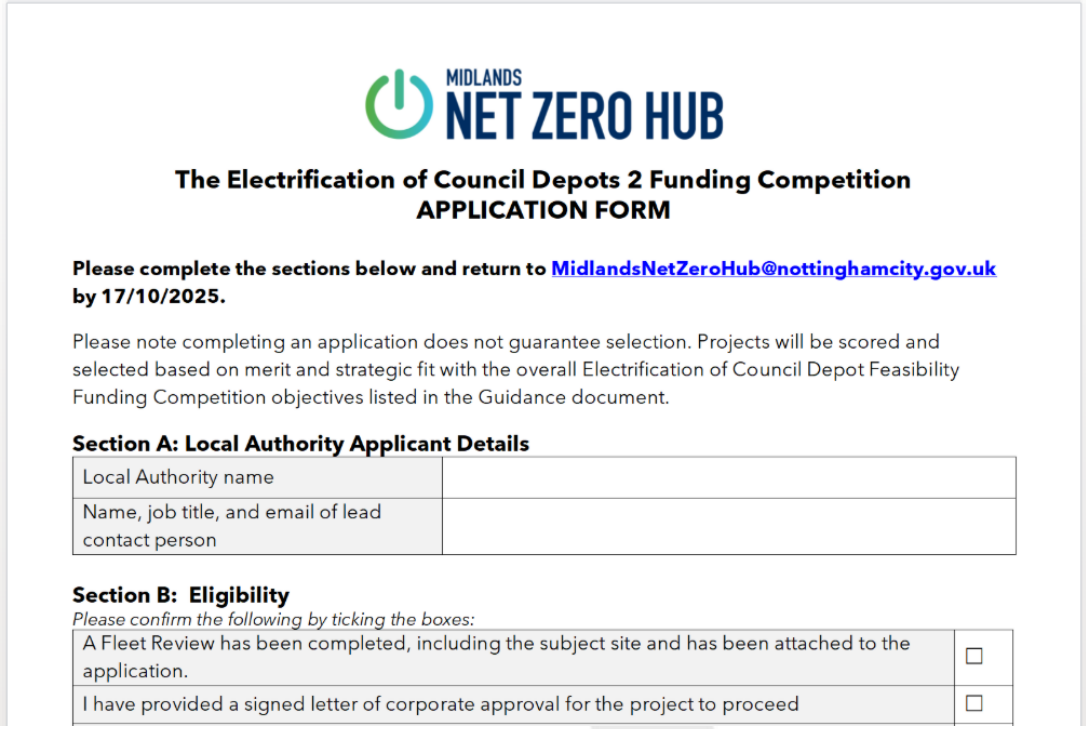
Application Process

Complete the Application Form Covering:

- Eligibility and fleet review outputs
- Project scope and feasibility activities
- Delivery plans and team structure
- Information sharing commitments
- Funding requested and match funding details

Attach Required Documents:

- Fleet review
- Gantt chart (for delivery timeline)
- Signed declaration



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The Electrification of Council Depots 2 Funding Competition
APPLICATION FORM

Please complete the sections below and return to MidlandsNetZeroHub@nottinghamcity.gov.uk by 17/10/2025.

Please note completing an application does not guarantee selection. Projects will be scored and selected based on merit and strategic fit with the overall Electrification of Council Depot Feasibility Funding Competition objectives listed in the Guidance document.

Section A: Local Authority Applicant Details

Local Authority name	
Name, job title, and email of lead contact person	

Section B: Eligibility

Please confirm the following by ticking the boxes:

A Fleet Review has been completed, including the subject site and has been attached to the application.	☐
I have provided a signed letter of corporate approval for the project to proceed	☐

Submit to: MidlandsNetZeroHub@nottinghamcity.gov.uk by 5pm on 17th October 2025

Key Dates

Launch Date:
Tuesday 26th Aug 2025

Notification of Outcome:
Friday 31st Oct 2025

Application Deadline:
5pm on Friday 17th Oct 2025

Project Completion Deadline:
Monday 1st Dec 2026

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Round 2 Competition – FAQs

- The budget allocated per LA will not cover the costs of the works required to get to a business case.
- Why have you stated it should be RIBA Stage 3?
- Is the competition just open to those who completed a fleet review with the hub recently?
- Can we look at shared depots as part of this work for example other public sector organisations?
- Can you support with writing the technical specification of the procurement documents?

Post Fleet Review – Next Steps Overview

- Secure funding – EoD2
- Recruit consultants to analyse fleet data and assess electrification requirements
- Evaluate existing electrical infrastructure capacity
- Depot electrification design & costings
- Establish project management framework
- Initiate procurement process
- Engage contractors

Recommendations, Reporting & Outputs

- Site assessment, EV Charging & Infrastructure technical evaluation, installation recommendations
- Grid connection upgrade specs, integrating smart charging strategy
- Renewable energy & battery storage options
- Implementation plan with milestones
- Financial analysis & funding opportunities
- Environmental & operational impact assessments

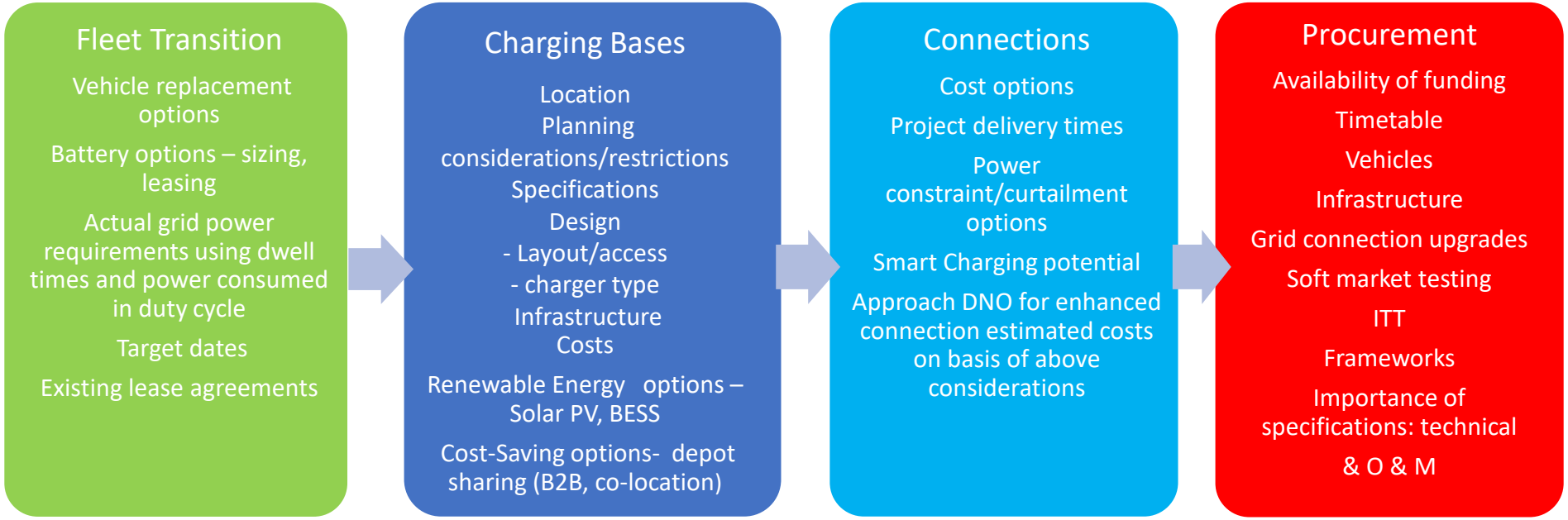
Financial Analysis

- Cost estimates for EV charger installations
- Funding sources & national grants
- Lifecycle cost analysis (capital, operational, maintenance)
- Diesel vs. electric total cost of ownership
- Smart charging cost optimisation
- Charging scenario modelling
- Revenue potential from storage & renewables
- Grid connection cost implications

Environmental & Operational Impact Assessments

- GHG & air pollutant reduction
- Depot carbon footprint alignment with sustainability goals
- Vehicle carbon footprint changes
- Vehicle build costs, lifespan, emissions savings
- Depot operations impact (charging schedules, downtime)
- Staff training & procedural changes

Report implementation: Integrated Planning Considerations



Report implementation
Project Delivery Elements

Charging bases

Construction infrastructure
Managing operational requirements (where applicable)
If staged delivery coordinate with vehicle arrivals
Future proofing
- extra ducts etc.

Fleet

Vehicle Delivery schedules

Connections

Metering
Energy Tariff
Aggregator potential
- Make enquiries based upon survey data

Project & Contract Management

Project implementation: Operations Elements

Charging bases

Manager & Driver training
Charging protocols/routines
Service & maintenance contracts
B2B/sharing potential

Fleet

Training
Service & Maintenance Contracts

Connections

Monitoring and assessment – ASCs, standby charges

Partners:

Smart Charging
Battery storage
Aggregators

Thank you and Questions?

For any further questions, please contact MidlandsNetZeroHub@nottinghamcity.gov.uk

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