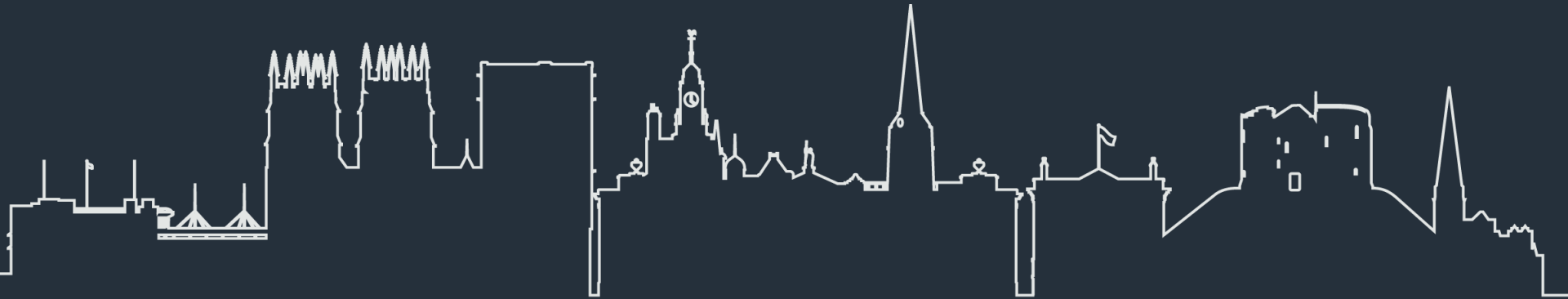


# Yorks Fleet Decarbonisation and Depot Design Project

Ian Hoult

Head of Fleet and Operations

28<sup>th</sup> June 2023



# Objectives

- Reduce our carbon output of the fleet
- Provide a suitable infrastructure to support the BEV fleet
- Upskill, train and develop our in-house maintenance fleet team to maintain and support our fleet and end users
- Upskill and train our drivers



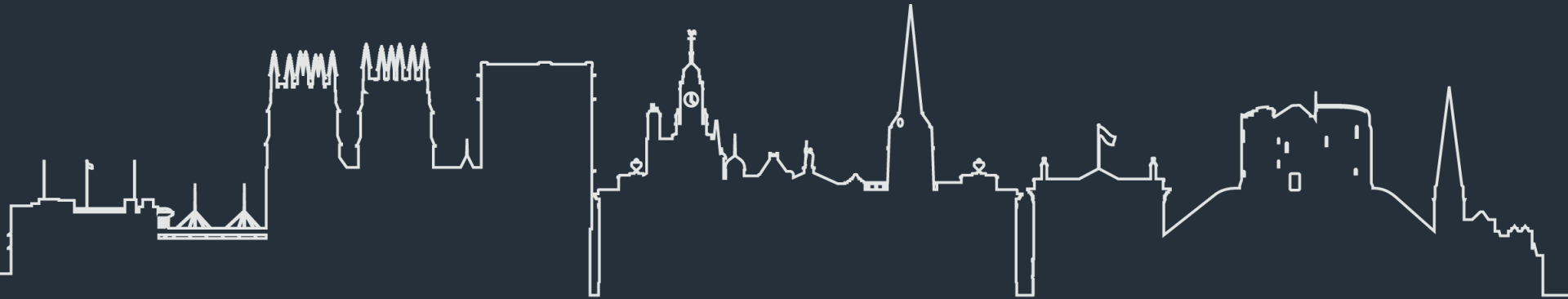
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# Asset and Depot Plan



In March 2020 our administration agreed a fleet asset replacement plan and strategy to convert the full fleet to an alternative one.

- Phase 1 – Immediately start the project to replace all assets up to and including 3500kg with BEV's. Replace two refuse HGV's with BEV's and replace the rest of the HGV fleet with Euro 6. Completion by 2025/26. Implement a charging infrastructure.
- Phase 2 – Transition the HGV fleet to alternative fuel and upgrade the infrastructure. Completion by 2030.



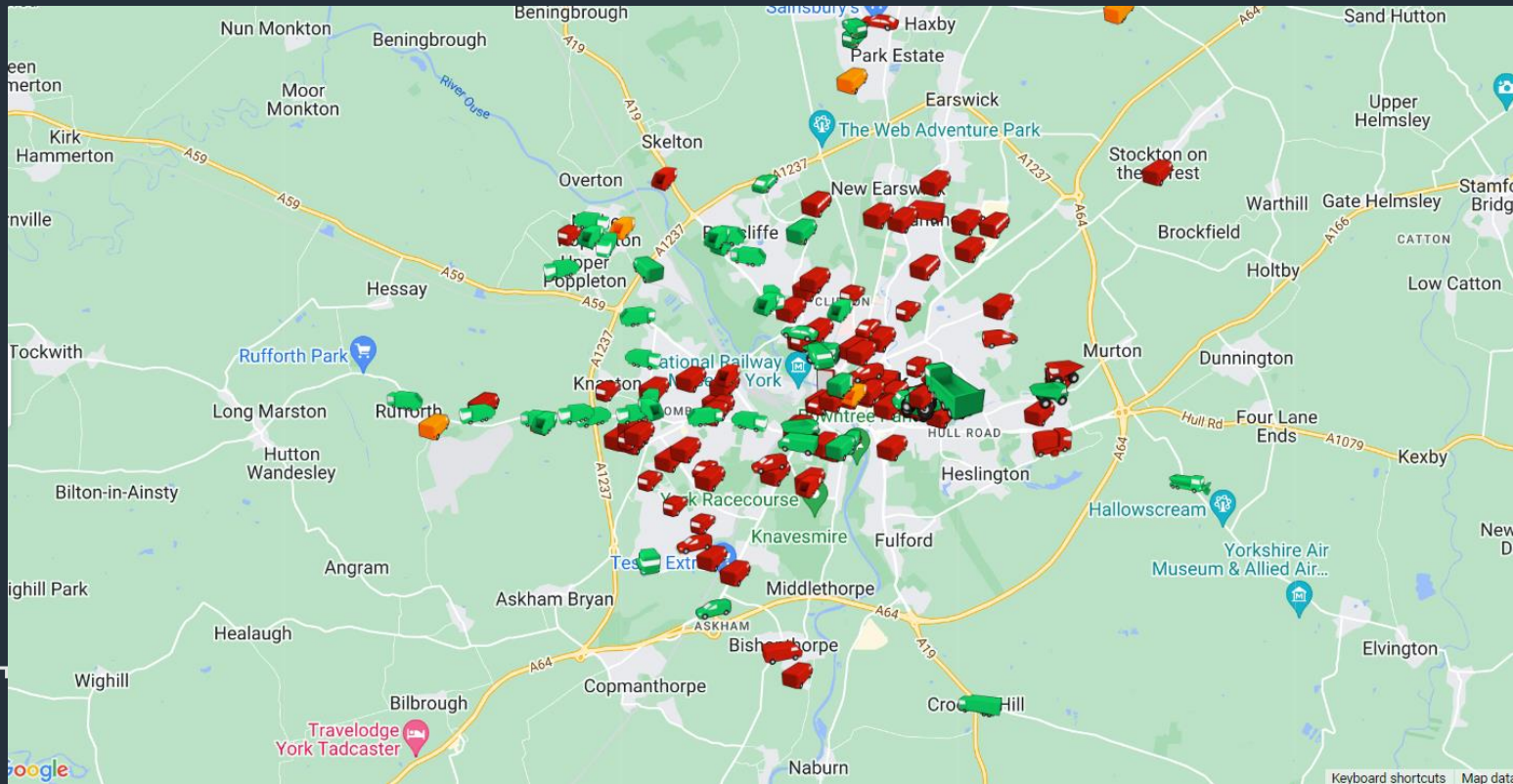
# Considerations

- Where to implement the infrastructure – weighing up the risks. Off street parking, electrical capabilities, corporate risk, cost of investment and reimbursement, lease/rental properties, staff turnover and time.
- End user service delivery
- A recovery of internal electricity charges
- Driver compliance – Compliance is a none negotiable for CYC so what training was needed to remain compliant - AFV training
- Vehicle testing for BEV's 3500kg – 4250kg

# Data Analysis



We decided to analyse tracking data for those employees and job roles that were 'home starters' and this proved to be invaluable. We didn't expect to see the results that were found.



# Analysis Results – Vehicle Telematics

- ‘Home Starters’ were making regular visits to our operational depot
- Majority of employees were doing minimum to average mileage with only a very small proportion doing higher mileage
- We already had a charging network well under way in the city – hyper hubs
- Decision made and strategy to avoid home charging







Auto Windscreens™

Cycles & Shop

York City Council  
Charging Station

Jewson  
Delivery

Hazel Ct

Hazel Ct

Hazel Ct

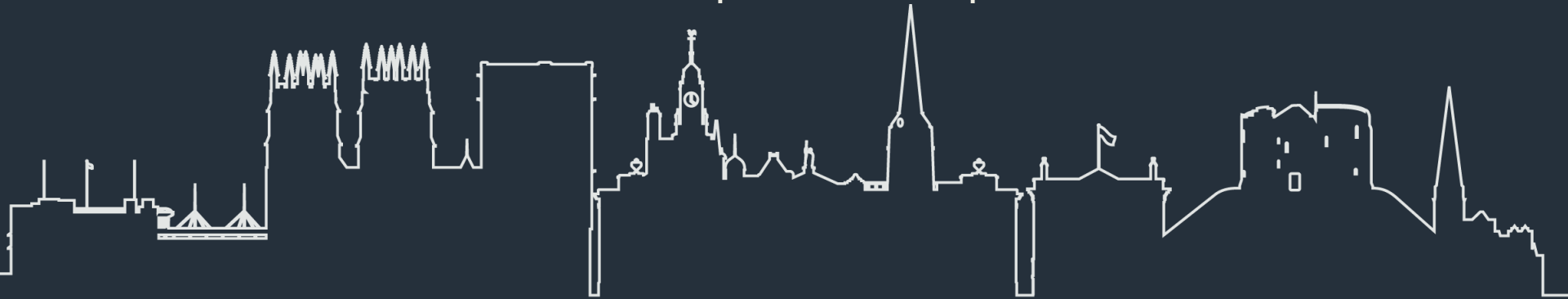
Hazel Ct

# Proposals



Fleet and our Transport teams worked to collaboratively. Lots of more analysis and research was undertaken:






- Average mileage of vehicles per service and task
- How many home starters did we actually have that qualified
- Proposed mileage range of BEV vehicles
- Estimates on how many charges per vehicle and role – this varied
- Depot design and feasibility
- Current depot electrical infrastructure capabilities
- What would cause the least disruption to our operations







# Hazel Court: Fleet Charging (Draft 1.2)

-  BP F7 Double Socket 7kW
-  BP Ultracharge 50kW
-  Plinth and Ducting for future install of 50kW Ultracharge
-  Visitor Parking
-  Substation

### Notes:

- 35 Double fast charge points providing 70 charging bays – Primarily for overnight usage
- 8 Rapid Chargers – Primarily for business hours usage
- Ducting and plinth for 2 additional rapid chargers to be installed in phase 2
- Feeder pillars installed at suitable points so that rows/groups of chargers can be isolated independently.
- Load Balancing software to ensure we keep with 550kVA Limit
- Existing 7kW charger to be removed.
- Visitor parking to be relocated.
- Review Disabled parking bay positions

# Review – Are we getting it right?

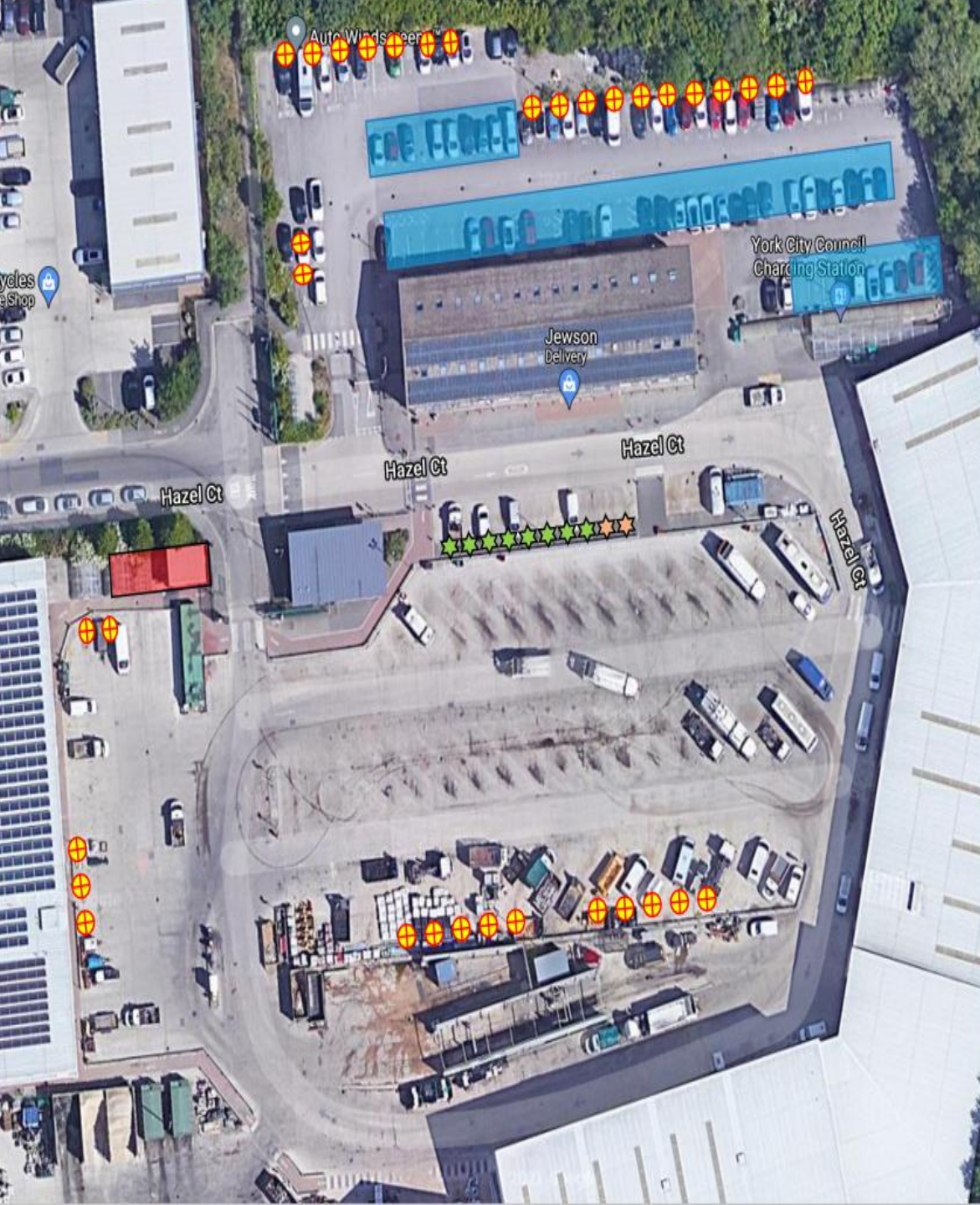
HOS were engaged with the project and were focused on ensuring that there would be minimal disruption to the day to day. That we could still offer the same resilience and support to our employees and teams but keeping in mind that this was a political decision in response to our climate emergency and 2030 carbon neutral ambition.

*Small changes can make a big difference*








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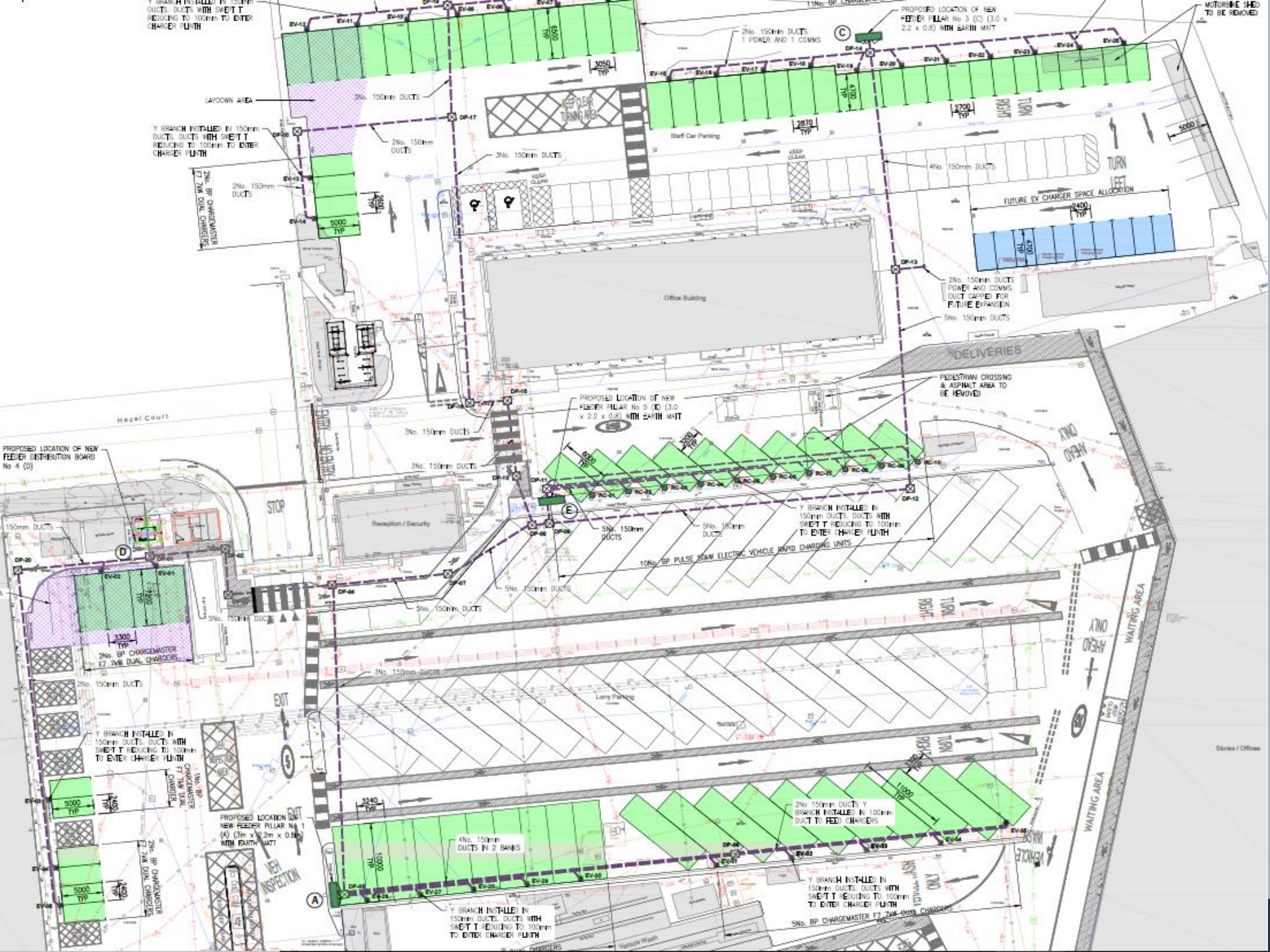
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Y BRANCH INSTALLED IN 150mm DUCTS WITH SWEET REDUCING TO 100mm TO ENTER CHARGE PILE IN

LAYDOWN AREA

Y BRANCH INSTALLED IN 150mm DUCTS WITH SWEET REDUCING TO 100mm TO ENTER CHARGE PILE IN

2No. BP CHARGE MASTER 7x 7m DUCT CHARGERS

PROPOSED LOCATION OF NEW FEEDER PILLAR No 3 (C) (3.0 x 2.2 x 0.8) WITH 2x 150mm DUCTS

MOTORBIKE SHED TO BE REMOVED

KEEP CLEAR

Staff Car Parking

KEEP CLEAR

FUTURE EV CHARGER SPACE ALLOCATION

2No. 150mm DUCTS POWER AND COMMS DUCT GROUP FOR FUTURE EXPANSION

DELIVERIES

PEDESTRIAN CROSSING & ASPHALT AREA TO BE REMOVED

HEAD ONLY

HEAD ONLY

WAITING AREA

WAITING AREA

HEAD ONLY

PROPOSED LOCATION OF NEW FEEDER DISTRIBUTION BOARD No 4 (D)

150mm DUCTS

2No. BP CHARGE MASTER 7x 7m DUCT CHARGERS

2No. 150mm DUCTS

Y BRANCH INSTALLED IN 150mm DUCTS WITH SWEET REDUCING TO 100mm TO ENTER CHARGE PILE IN

2No. BP CHARGE MASTER 7x 7m DUCT CHARGERS

PROPOSED LOCATION OF NEW FEEDER PILLAR No 6 (A) (3m x 1.2m x 0.8m) WITH 2x 150mm DUCTS

2No. BP CHARGE MASTER 7x 7m DUCT CHARGERS

Y BRANCH INSTALLED IN 150mm DUCTS WITH SWEET REDUCING TO 100mm TO ENTER CHARGE PILE IN

PROPOSED LOCATION OF NEW FEEDER PILLAR No 5 (E) (3.0 x 2.2 x 0.8) WITH 2x 150mm DUCTS

10No. BP PULSE 30kW ELECTRIC VEHICLE RAPID CHARGING UNITS

Y BRANCH INSTALLED IN 150mm DUCTS WITH SWEET REDUCING TO 100mm TO ENTER CHARGE PILE IN

5No. 150mm DUCTS

Y BRANCH INSTALLED IN 150mm DUCTS WITH SWEET REDUCING TO 100mm TO ENTER CHARGE PILE IN

2No. 150mm DUCTS Y BRANCH INSTALLED IN 100mm DUCT TO FEED CHARGERS

Y BRANCH INSTALLED IN 150mm DUCTS WITH SWEET REDUCING TO 100mm TO ENTER CHARGE PILE IN

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2No. BP CHARGE MASTER 7x 7m DUCT CHARGERS

Stores / Offices

# Workforce and Employee Engagement

- Group briefings with employees
- Reassurance – Range anxiety began to take over
- Transparency throughout
- Justification as to why we have chosen this strategy
- Evidence – Data sharing
- Key stakeholders in the room



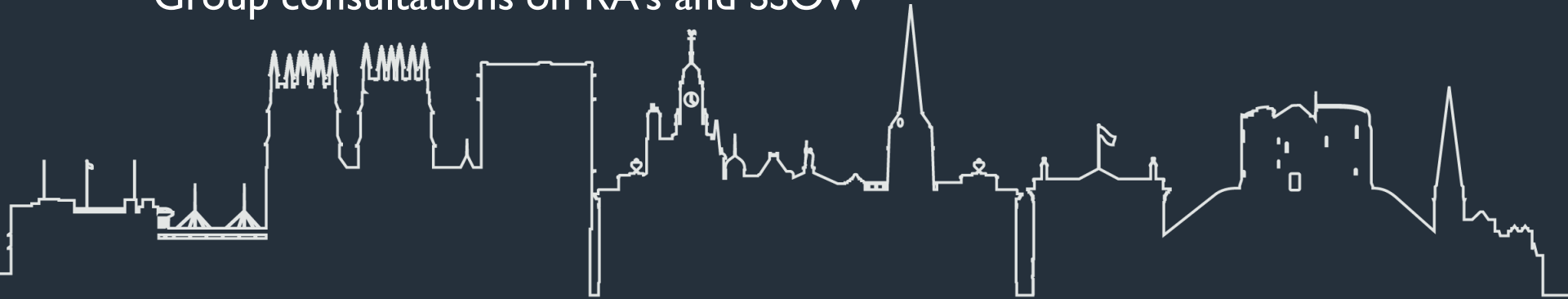
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# Maintaining and Developing our Workforce



- All workshop engineers, supervisors and managers were trained up to a level 3 hybrid and BEV working safely. This isn't removing or replacing high voltage components
- All category B license holders were given 5 hours alternative fuel vehicle (AFV) training. This is one off training but we are considering refresher courses due to its success
- 'Open Days' – come and try your new fleet vehicles
- Familiarisation training on vehicle handover, then regular check-ins
- Investment into our workshops
- Group consultations on RA's and SSOW



## Category B driving licence concession for alternatively fuelled commercial vehicles

### Briefing note

The following briefing highlights the Department for Transport's (DfT's) introduction of a concession that will allow a driver who holds a category B driving entitlement to drive an alternatively fuelled vehicle (AFV) above 3,500kg and up to 4,250kg after five hours of training from 29 April 2019.

In summary, the following will apply when driving a vehicle under the provisions of this concession:

Application	Applies to a category B (Group 1) driving licence holder
Training requirement	Five hours of training on the driving of an AFV with a maximum authorised mass exceeding 3,500kg by an instructor on the National Register of LGV Instructors or the National Vocational Driving Instructors Register <sup>1</sup> .
Driver Certificate of Professional Competence (CPC)	As the driver is driving the vehicle on a category B licence they are not in scope of Driver CPC. If driving under category C or C1 licences, Driver CPC will be required.
Testing	Exempt if an electrically propelled motor vehicle is first registered before 1 March 2015 <sup>2</sup> .
Operator licensing	Exempt if vehicle is fuelled entirely by alternative fuels, has a permissible laden mass not exceeding 4,250kg and currently operated in Great Britain <sup>3</sup> .
Drivers' hours and tachograph rules	Exempt if used for the carriage of goods within a 100km radius from the base of the undertaking and propelled by means of natural or liquefied gas or electricity.
Trailers	No trailer allowed if driver only holds a category B licence. Higher licence entitlements are not impacted by this restriction (ie. C1 and C licence holders). A pre-1997 licence will normally hold a C1 entitlement.
Legislative requirements	Drivers will be required to abide by all current laws governing the use of vehicles heavier than 3,500kg, unless otherwise exempt, including vehicle taxation and type approval requirements. Speed limiters will be required on all goods vehicles over 3.5 tonnes.
Validity	The concession shall apply until 04 May 2023, when the government will undertake a review of the legislation (in advance) to assess the impact/benefit with a view to consider if it is still necessary. Authorised vehicles shall not be driven outside the territory of Great Britain.

Please refer to the FTA yearbook regarding established exemptions that could apply.

## Training requirements

Training is not specifically accredited, but the syllabus has been prescribed by the Driver and Vehicle Standards Agency (DVSA) for registered trainers to deliver. The syllabus is comprised of three units:

- **Preparing the vehicle and its contents for daily use.** Drivers should be able to determine that the AFV and load are safe to travel on the public road; the aim of this unit is to ensure this ability, and also help drivers be aware of AFV characteristics and the safety factors associated with the fuel type.
- **Driving the vehicle in accordance with The Highway Code and legislation.** The aim of this unit is to teach drivers why it is important to understand and follow the rules in *The Highway Code* and other regulations that cover driving an AFV on a category B licence. For example: not pulling a trailer, accepting the AFV is limited to a 62-mile radius from base and knowing the AFV has a maximum authorised mass not exceeding 4,250kg.
- **Driving safely and efficiently.** The aim of this unit is that drivers should be able to guide and control their AFV safely and responsibly, taking into account road, traffic and weather conditions. Drivers are responsible for the contents of their AFV and need to make sure that it is loaded correctly for stability and ease of access. Drivers also need to be aware of the feel and handling of their AFV at all times.

### Andy Wheeler (He/Him/His)

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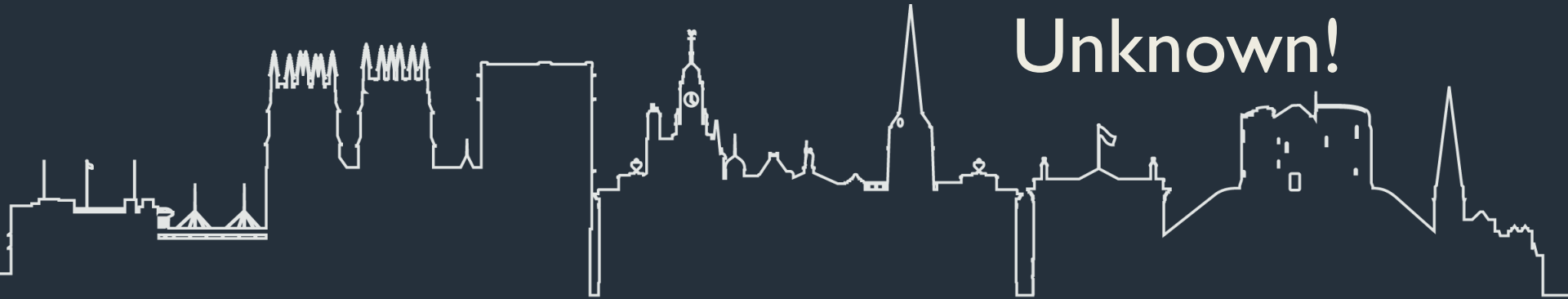
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# Net Zero Future



- Expensive... - Lets start to think differently and not rush
- Challenging – Share knowledge and experiences
- Competitive market for buyers – Gain control of the market
- Compromises – organisation buy in
- Learning – reflection on experiences
- Maintenance hours – Opportunities
- And.....

Unknown!



# Thank you

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**Working together** to improve and make a difference