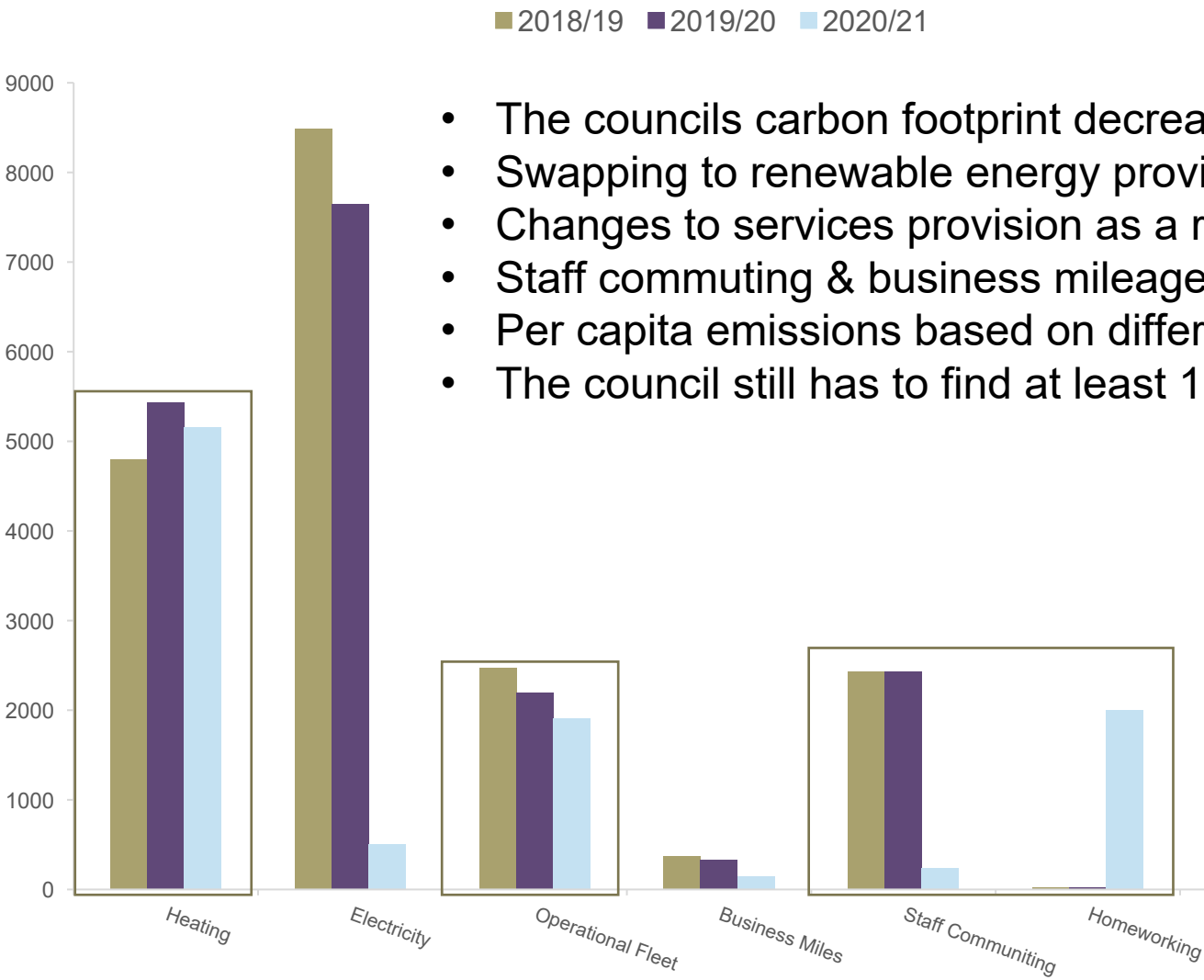


# Scrutiny Panel Vibrant and Sustainable City 21<sup>st</sup> October 2021



# Update on the Council’s Decarbonisation

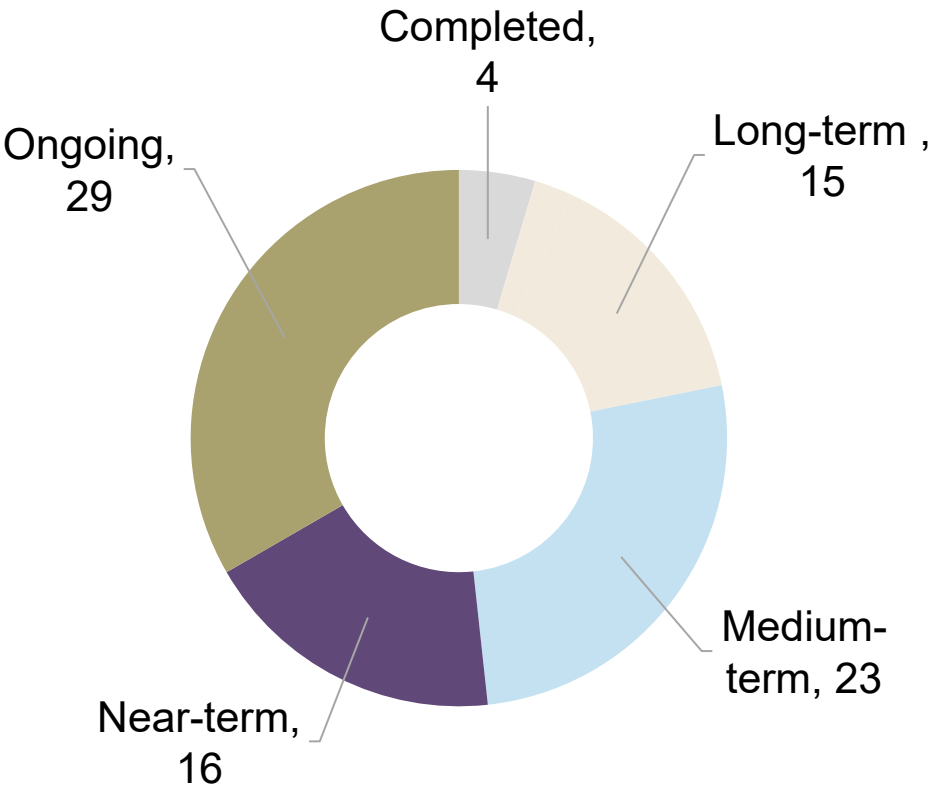


- The councils carbon footprint decreased by 8200 tonnes since 2019/20
- Swapping to renewable energy provider saved 7150 tonnes
- Changes to services provision as a result of Covid saved a further 1050 tonnes
- Staff commuting & business mileage emissions gave way to agile working emissions
- Per capita emissions based on different working arrangements have been calculated
- The council still has to find at least 10,000 tonnes of annual carbon savings by 2028

| Rank | Working Scenario                 | Carbon impact tCO2e per employee |
|------|----------------------------------|----------------------------------|
| 1    | Home working with others at home | 0.3                              |
| 2    | Solo home working                | 0.8                              |
| 3    | Office based + Commute           | 1.3 (0.7 + 0.6)                  |

# Tangible Outputs

Action Plan Time Scales



Most actions in in development and on going, some tangible outputs have already been realised:

- Council Procured renewable energy provider
- LED street Light programme 50% complete
- Staff climate Tool Kit has recently been Completed
- Council carbon footprint and Covid Impact assessment completed
- Council 2028 action plan approved

Anticipated completion of all ongoing actions expected within the next year.

| Action                              | Anticipated Delivery Date |         |         |
|-------------------------------------|---------------------------|---------|---------|
|                                     | 2021/22                   | 2022/23 | 2023/24 |
| Low carbon Staff Travel Policy      |                           |         |         |
| First 48 EV's & chargers            |                           |         |         |
| Internal governance established     |                           |         |         |
| Carbon Coding in reports            |                           |         |         |
| Grey fleet and mileage claim system |                           |         |         |
| Asset Energy Surveys                |                           |         |         |
| Fleet Telematics System             |                           |         |         |

# LED Street Light Programme

## Programme Objectives



30,000 Street  
lights



Expected energy  
reduction of  
approx. 40%



Estimated total  
carbon reduction  
of 1781 tonnes



Expected  
Completion Date  
September 2022

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## Programme Progress



12,500  
installations to  
date



Approx. 20%  
reduction in  
energy  
consumption



£350K of energy  
savings so far



# LED Street Light Programme

No Ecological survey has been conducted, but recent research suggests:

48% more Flies and Moths attracted to LEDs than HPS [1]

Possible impacts on sleep cycles of small mammals and birds at high brightness

Conflicting theories on bats, but suggested it may alter roosting habits (as do normal streetlights)

Depending on species

- Increased bat presence due to increase in certain insects
- Avoidance by other due to reduction in other insect species

LED's do not produce UV light, and so has a lesser impact on other animals compared to HPS/Mercury/Flourescent

LEDs don't contain toxic components such as mercury

[1] [LED lighting increases the ecological impact of light pollution irrespective of color temperature - Pawson - 2014 - Ecological Applications - Wiley Online Library](#)



# Buildings and Energy

## GAS



~5000 tonnes of CO2 per year from heating



£800K in energy bills every Year



84 Corporate buildings to decarbonise



Fabric First approach required

## ELECTRICITY



3000 tons of co2 equivalent electricity used every year in buildings



Renewable electricity provider procured 2019



£1.8M in electricity bills every year



0.5 MW of Solar already installed on buildings





# Buildings and Energy

|                            | 2021/<br>22 | 2022/<br>23 | 2023/<br>24 | 2024/<br>25 | 2025/<br>26 | 2026/<br>27 | 2027/<br>28 |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| energy Audits              | Ongoing     |             |             |             |             |             |             |
| Decarbonisation<br>roadmap | Ongoing     |             |             |             |             |             |             |
| Insulation<br>Retrofits    |             |             |             |             |             |             |             |
| Heating<br>Decarbonisation |             |             |             |             |             |             |             |
| Energy Efficiency          |             |             |             |             |             |             |             |
| Roof Mounted<br>Solar PV   |             |             |             |             |             |             |             |

The council will take a fabric first approach ensuring maximum energy efficiency to maximise the carbon and financial savings

Fully Costed Programme to be established through the energy audits and creation of asset decarbonisation roadmap



# Fleet Electrification

The Current Diesel Fleet Produces:



~2500 tonnes of  
CO2 per year  
from fuel



5 Tonnes of  
Nitrous oxides



61 Kg of  
particulate  
matter



Approximately  
£1M in annual  
fuel costs alone

An All Electric Fleet Would Lead To:



87- 100%  
reduction in  
CO2e



100% reduction  
in NOX



£817K of fuel  
cost savings  
every year

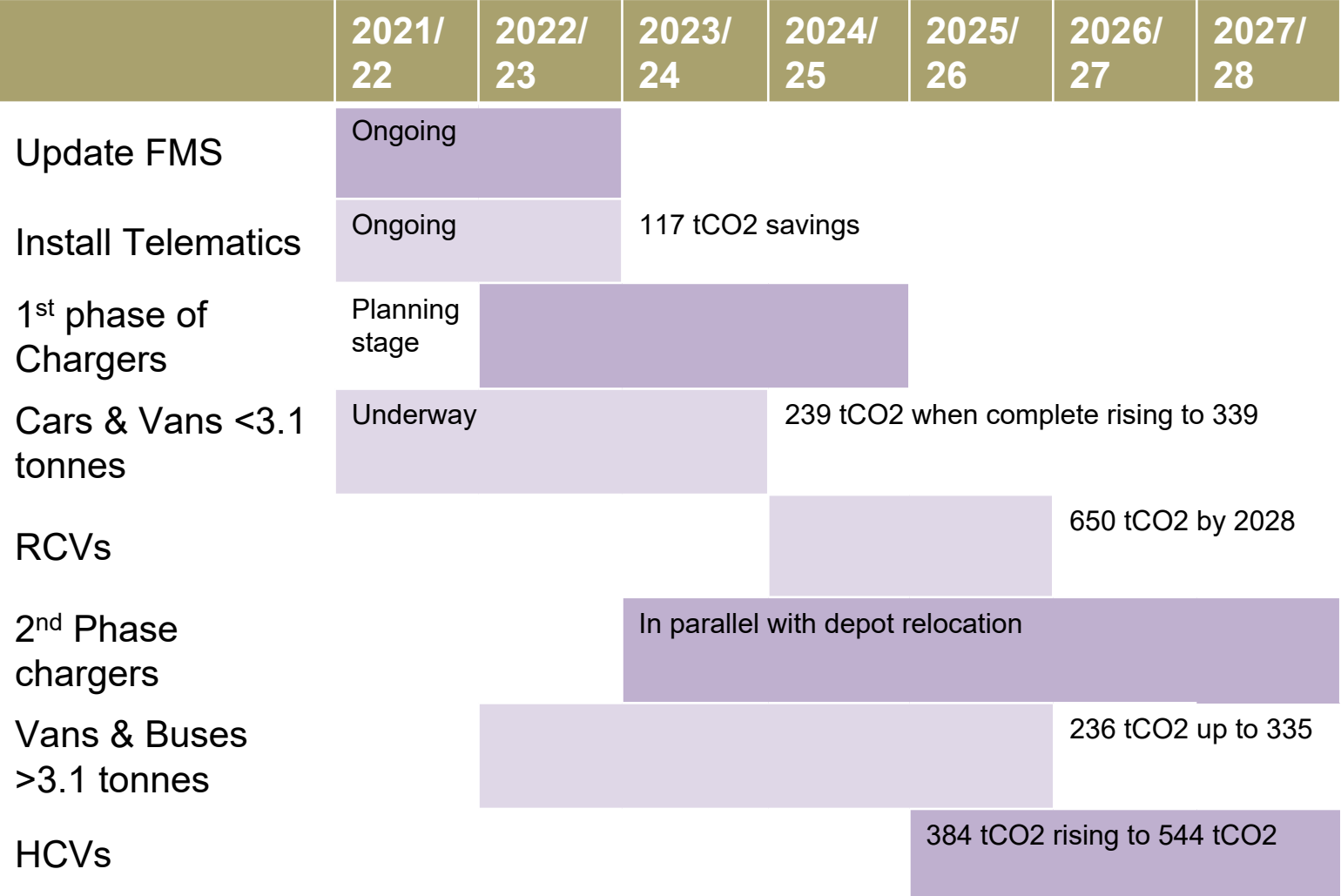


Significant  
reduction in  
maintenance  
costs





# Fleet Electrification



# Consumption, Waste & Plastics

Plastics Removed from Committee Rooms 2019 but more work needed to remove from other areas.

Café trialled Reusable salad containers 2019

Plastic use has decreased significantly since covid with people being at home

Steps are being taken to ensure that future contracts include recyclable packaging

Procurement are identifying ways in which waste and climate change can be incorporated into future tenders following government advice



# City 2041 Action Plan Updates

Objectives taken from Scatter Cities and WMCA 2041 5 year plan

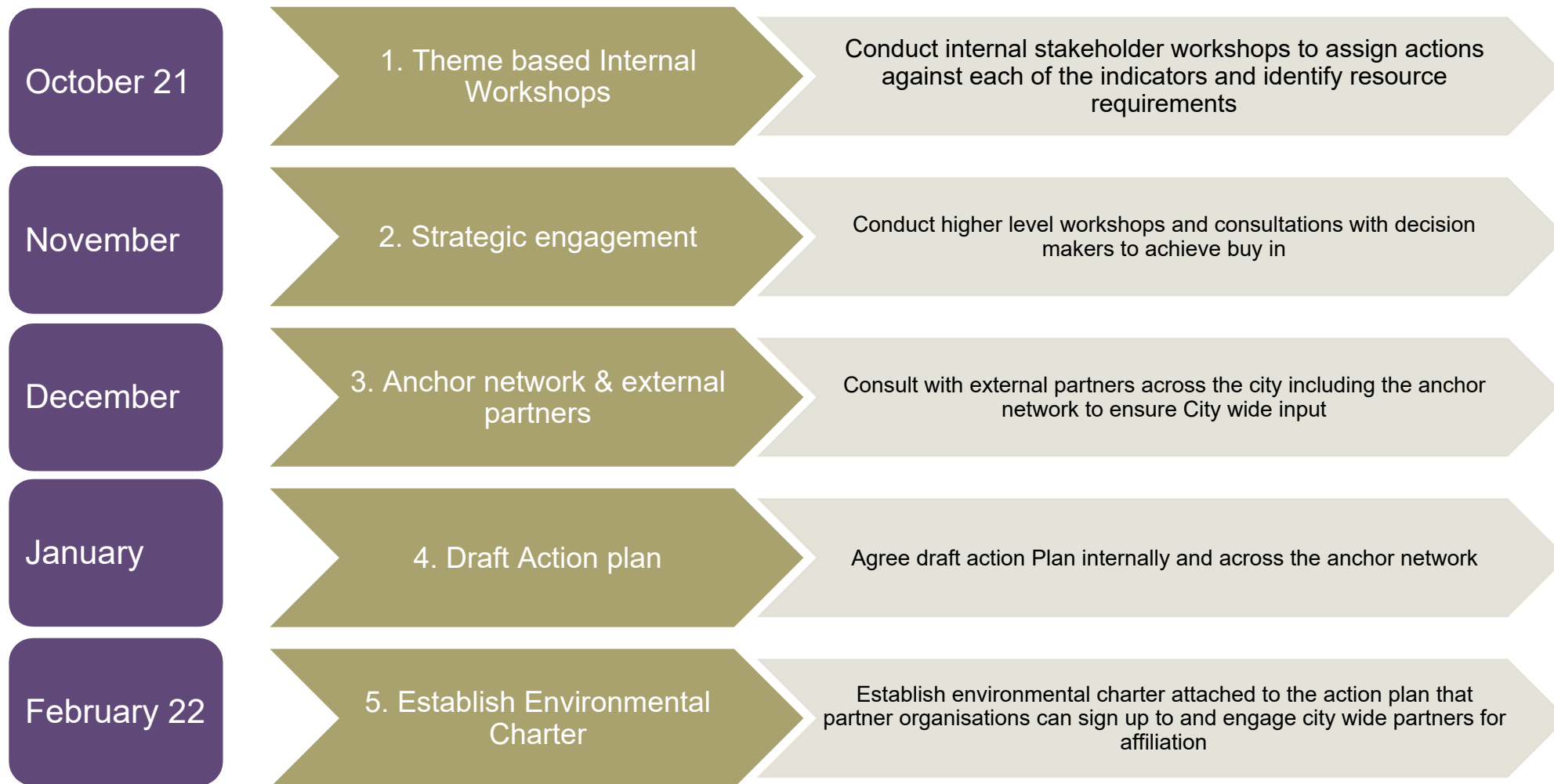
Accelerated Scenario

| Accelerated Scenario  |                            |                        | 2021  | 2026 | 2031  | 2036  | 2041               |
|---|----------------------------|------------------------|---|------|---|---|--------------------|
|    | Transport                  | Avoid                  | 25% less personal and retail trips by 2030  |      |   | 35% of people tele-commuting 50% of time  |                    |
|   |                            | Shift                  | Bike up 10% of trips  |      |   | mode share of cars vans and motorbikes down from 78% to 38%, public transport up to 27% by 2041 |                    |
|   |                            | Improve                | Cars, buses, vans 100% electric by 2036   |      |   |   | 100% HGVs electric |
|    | Domestic buildings         | Energy efficiency      | 100% new builds passive house, 80% of stock deep retrofit, 100% cooking electric, energy demand 27% of current levels               |      |   |   |                    |
|   |                            | Heating                | low carbon heating retrofit in 100% of households by 2041, and all new build properties built to passive hours of net zero standard |      |   |   |                    |
|   |                            | Renewable Energy       | Increase rooftop Solar capacity to 2400 kWh per household by 2030   |      |   | 5200 kWh per household by 2041  |                    |
|   | Commercial Buildings       | Energy efficiency      | Energy efficiency measures in 100% of buildings, new builds built to highest energy efficiency ratings                              |      |   | 100% of commercial cooking electrified, and commercial energy demand down by 25%                |                    |
|   |                            | Heating                | Low carbon heating retrofit in 100% of buildings  |      |   |   |                    |
|   |                            | Renewable Energy       | Increase rooftop Solar capacity to 2400 kWh per household by 2030   |      |   | 5200 kWh per household by 2041  |                    |
|   | Industrial processes       | Energy efficiency      | 10% energy efficiency, electricity consumption is 50% of total energy consumption by 2031   |      |   | Electricity consumption is 65% of total by 2041,  |                    |
|   |                            | Heating                | 17% deployment of hydrogen gas and 40% Carbon Capture and Storage for high temp processes   |      |   |   |                    |
|   |                            | Renewable Energy       | Increase rooftop Solar capacity to 2400 kWh/year per household by 2030  |      |   | 5200 kWh per household by 2041  |                    |
|  | Waste and Consumption      | Reduction              | Total Volume of Waste is 61% of 2017 levels   |      |   |   |                    |
|   |                            | Recycling              | 65% recycling, 10% landfill, 25% incineration by 2030   |      |   | Recycling increasing to 85% by 2050   |                    |
|  | Natural Capital & Land use | Tree coverage          | Tree planting to increase coverage by 30% by 2026   |      | And by a further 20% over the next 15 years                   |   |                    |
|   |                            | Large scale Renewables | 200kWh solar and 2.8 MWh of small scale wind per hectare  |      | Up to 400kWh of solar and 3.3 mWh of small Scale wind by 2041 |   |                    |

According to the WMCA 5 year Plan, 0.5 Bn investment required in Wolverhampton by 2026



# City 2041 Action Plan Updates



# Comms & Citizens Assembly



Citizens assembly participants couldn't be contacted as none selected follow-up engagement



Future Citizens assemblies will be conducted as part of future consultation process



Citizens assemblies should be a regular occurrence



A public Newsletter is being created that will be distributed across all available channels



The Newsletter will provide regular updates on council progress against it's 2028 and it's 2041 action plans



The newsletter will offer a two was channel of engagement and inform people of tools and services the can access to decarbonise



# Thank you All for Listening

**Any Questions**