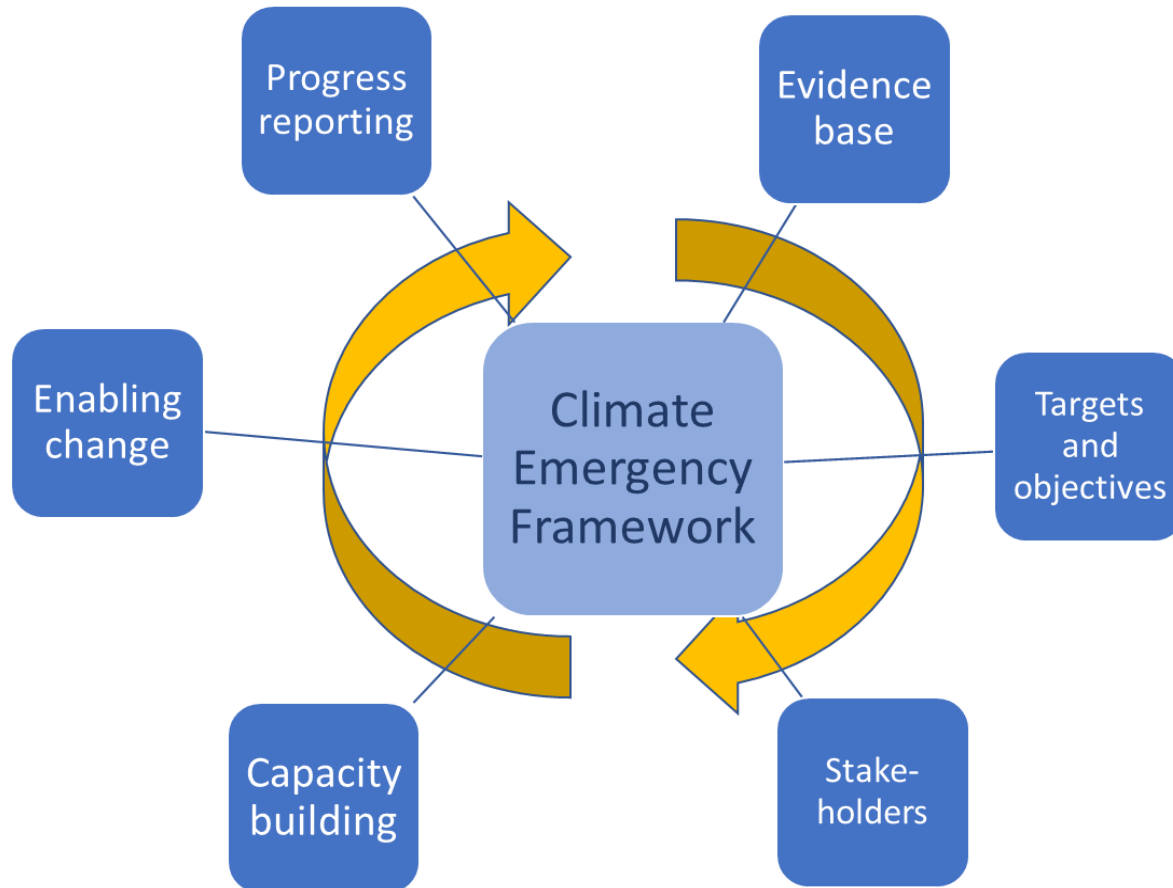




Update from Aether

Merton Climate Action Plan
Support
26th February 2020

Support for developing the Climate Action Plan



- **Task 1:** Greenhouse gas reporting
- **Task 2:** Pathways to decarbonisation
- **Task 3:** Tracking progress
- **Task 4:** Input to the Climate Action Plan process

- Council and borough targets
- November 2019 – March 2020

Definitions of Scopes

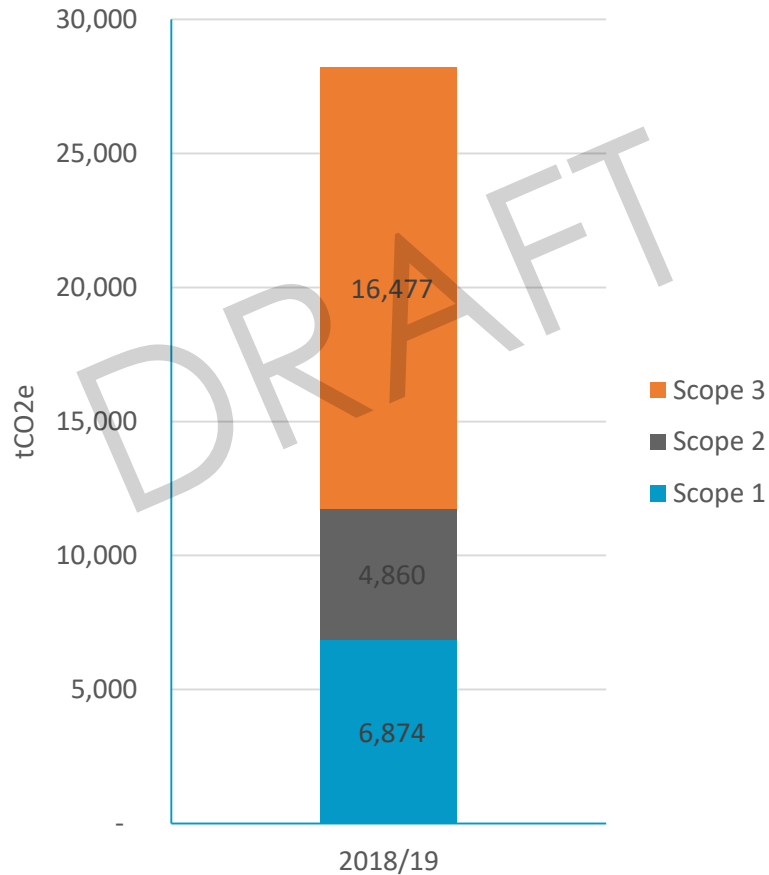
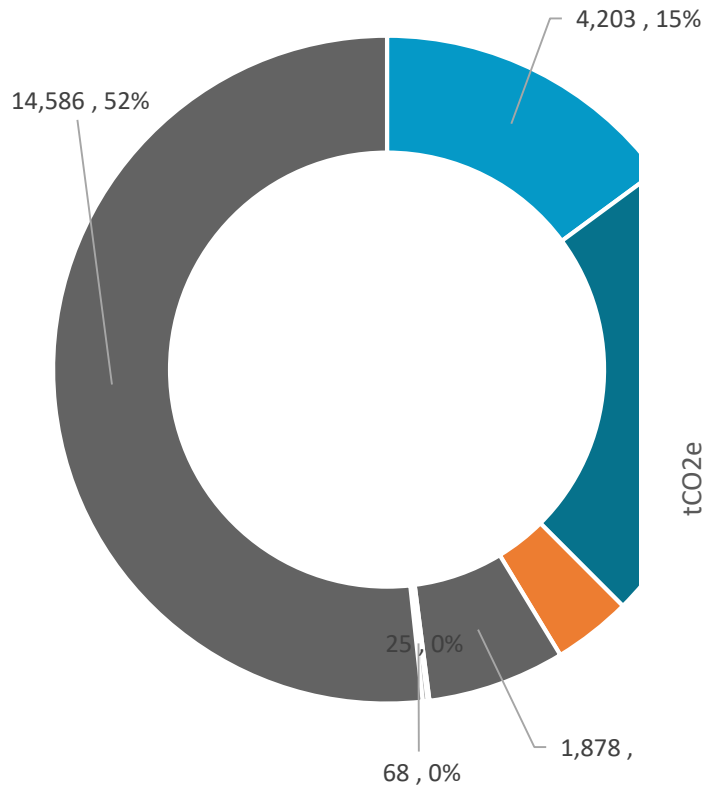
Scope 1

Scope 2

Scope 3

- Scopes of GHG emissions are used to classify sources into broad types
- Scope 1 = direct emissions occur at the point of use: heating fuels, transport fuels etc
- Scope 2 = electricity and heat provided
- Scope 3 = other indirect emissions
- Scope 3 needs to be defined to limit the breadth of sources covered

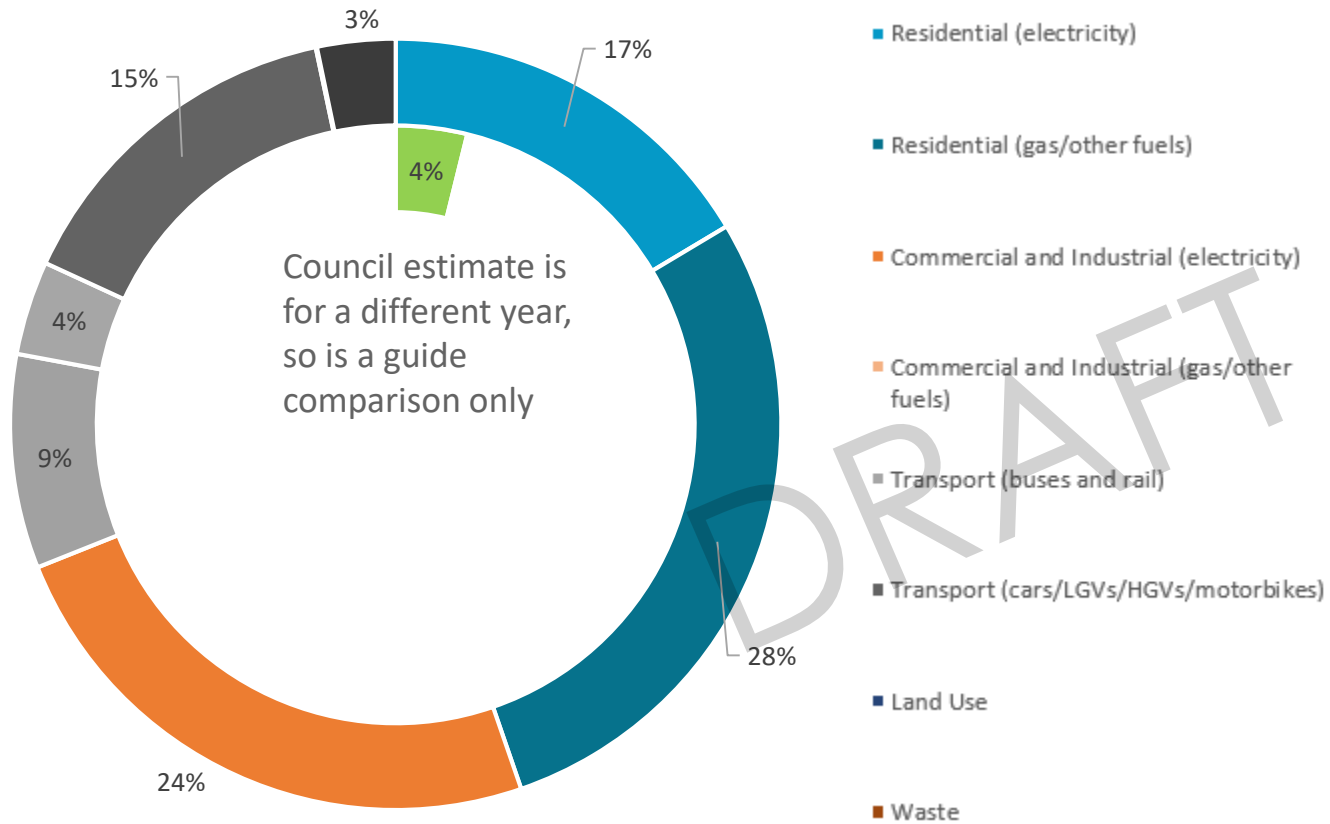
Merton Council Baseline 2018/19 – DRAFT



Sector	tCO ₂ e 2018/19
Buildings (electricity)	4,203
Buildings (gas)	6,381
Streetlighting	1,071
Transport (Council fleet, gey fleet, waste collection)	1,878
ID Verde vehicles & machinery	25
Highway works	68
Waste	14,586
Total	28,211



Borough Baseline 2017 – DRAFT



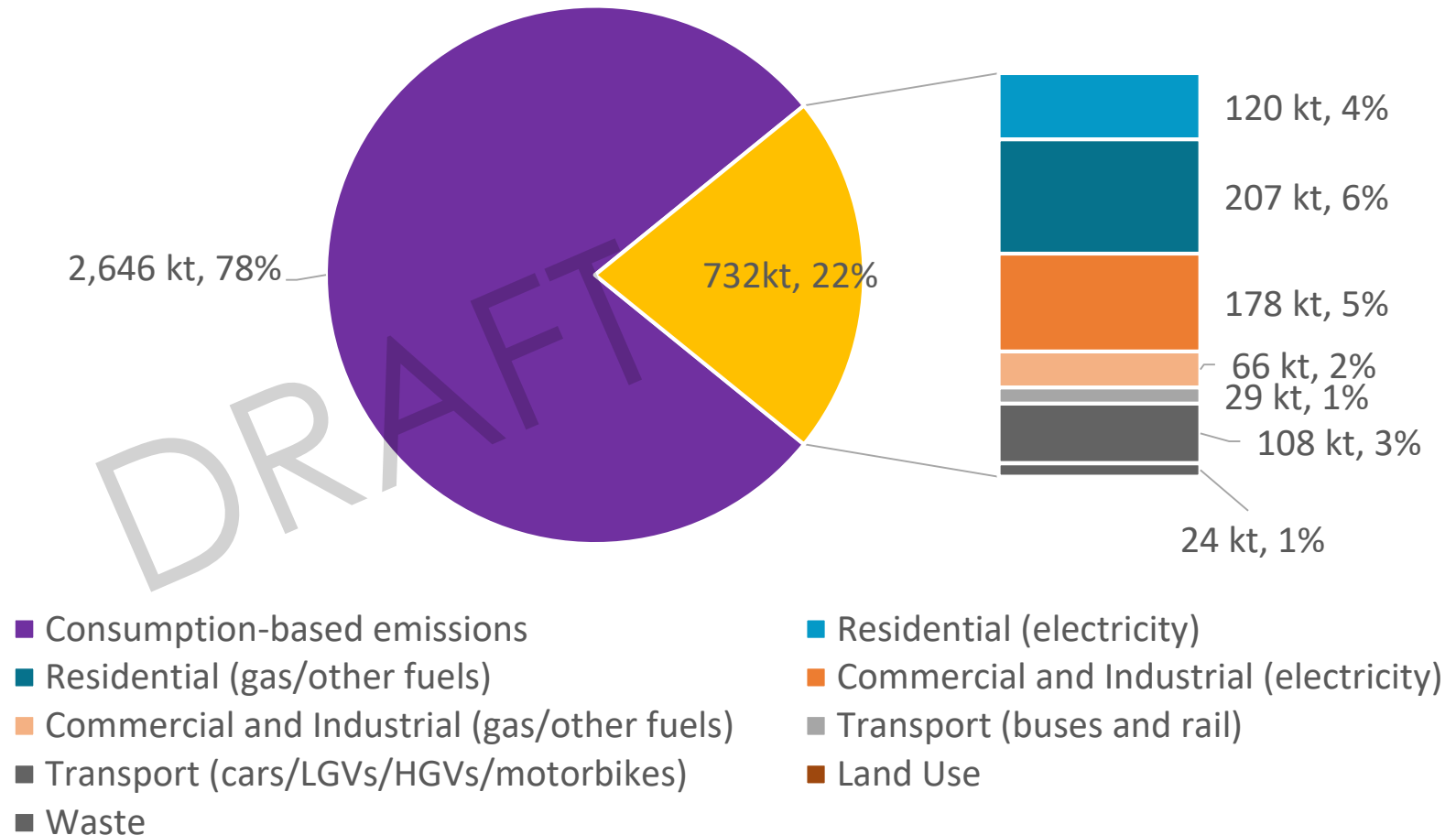
Sector	ktCO ₂ e	2017
Residential (electricity)		120
Residential (gas/other fuels)		207
Commercial and Industrial (electricity)		178
Commercial and Industrial (gas/other fuels)		66
Transport (buses and rail)		29
Transport (cars/LGVs/HGVs/motorbikes)		108
Land Use	-	0.4
Waste		24
Total		732



Borough Baseline 2017 – DRAFT

Consumption-based emissions

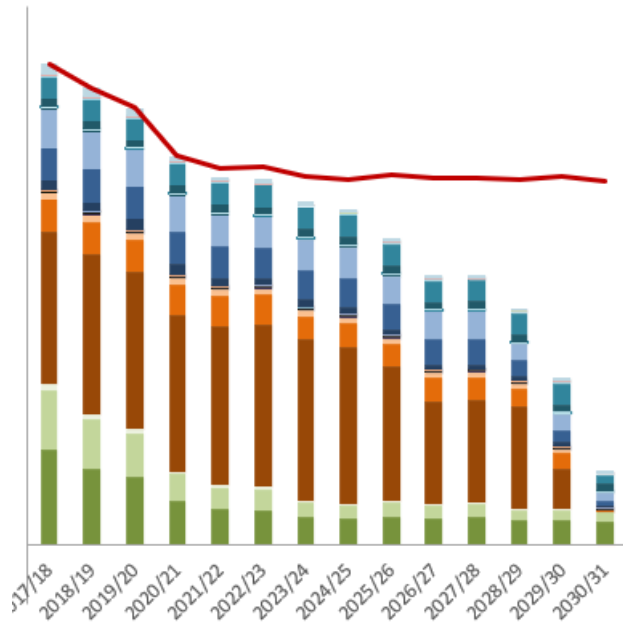
- Buildings and infrastructure construction
- Food
- Clothing and textiles
- Electronic equipment and household appliances
- Private transport manufacturing
- Aviation



Decarbonisation pathways

Pathway to decarbonisation – modelling concepts

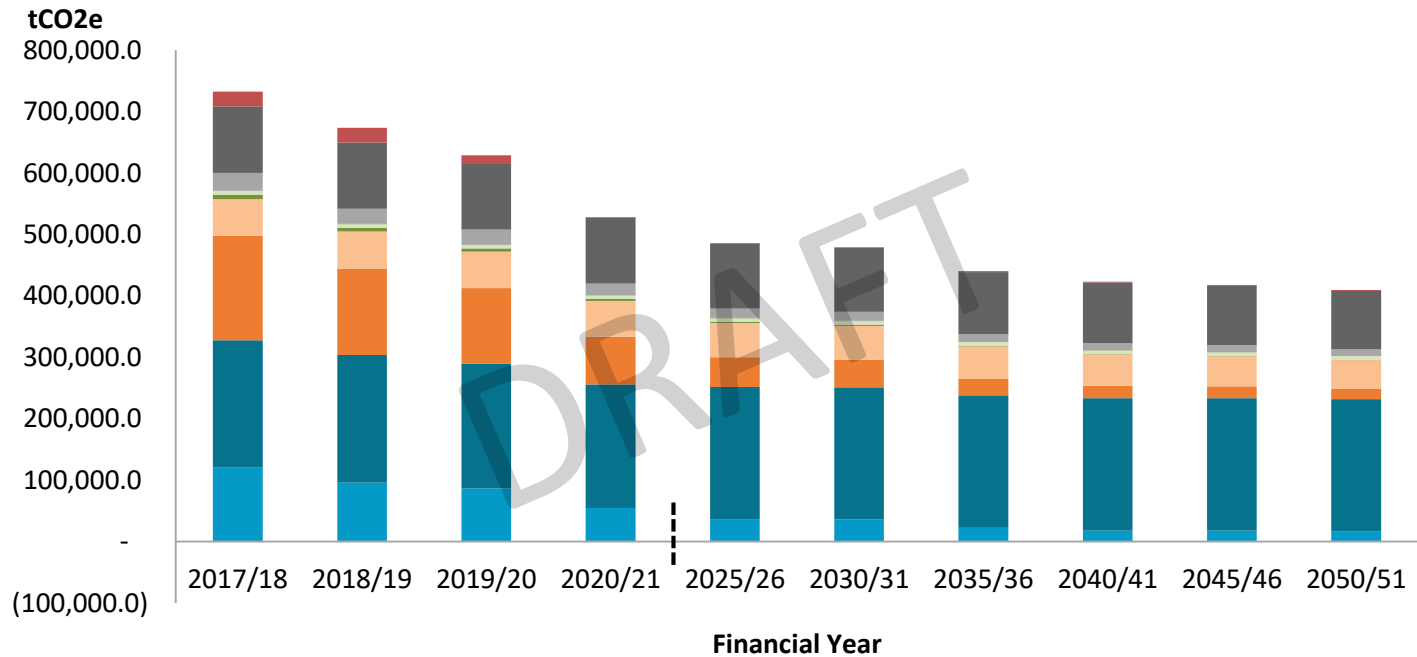
- Baseline **emissions projection** to 2030 & 2050 based on national energy projections
- **Projects / policies** to reduce emissions: estimates of scale of impacts
- Combinations of projects into **scenarios**:
 - Business as usual (currently committed actions)
 - Radical stretch scenario to aim for net zero



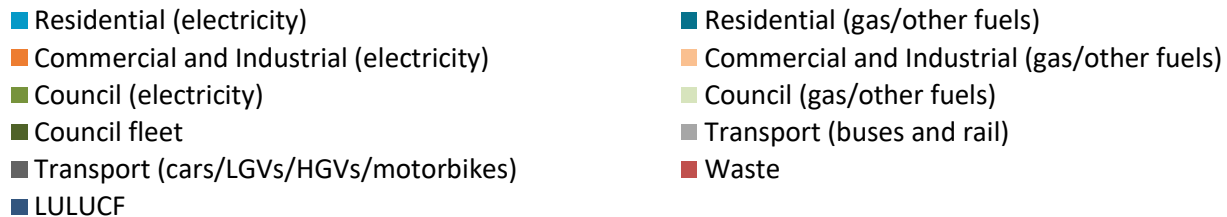
Examples of quantifiable projects / policies

- 1. Buildings fuel switching:** retrofit insulation and convert to ASHP
 - Known current gas consumption (kWh) to be saved
 - Estimate of reduced heat demand by adding insulation
 - Estimate of required increase electricity for the ASHP (kWh)
- 2. Increase rate of active travel:** install cycle pathways and reduce space for cars
 - Estimate number of journeys shifted to cycling and walking
 - Estimate length of journey
 - Calculate fuel saved from car journeys no longer taken
- 3. Residential energy efficiency:** install insulation in private housing
 - Estimate number of houses to be retrofitted
 - Average fuel consumption per house based on average fuel mix
 - % saving from insulation measures provides estimate of total saving

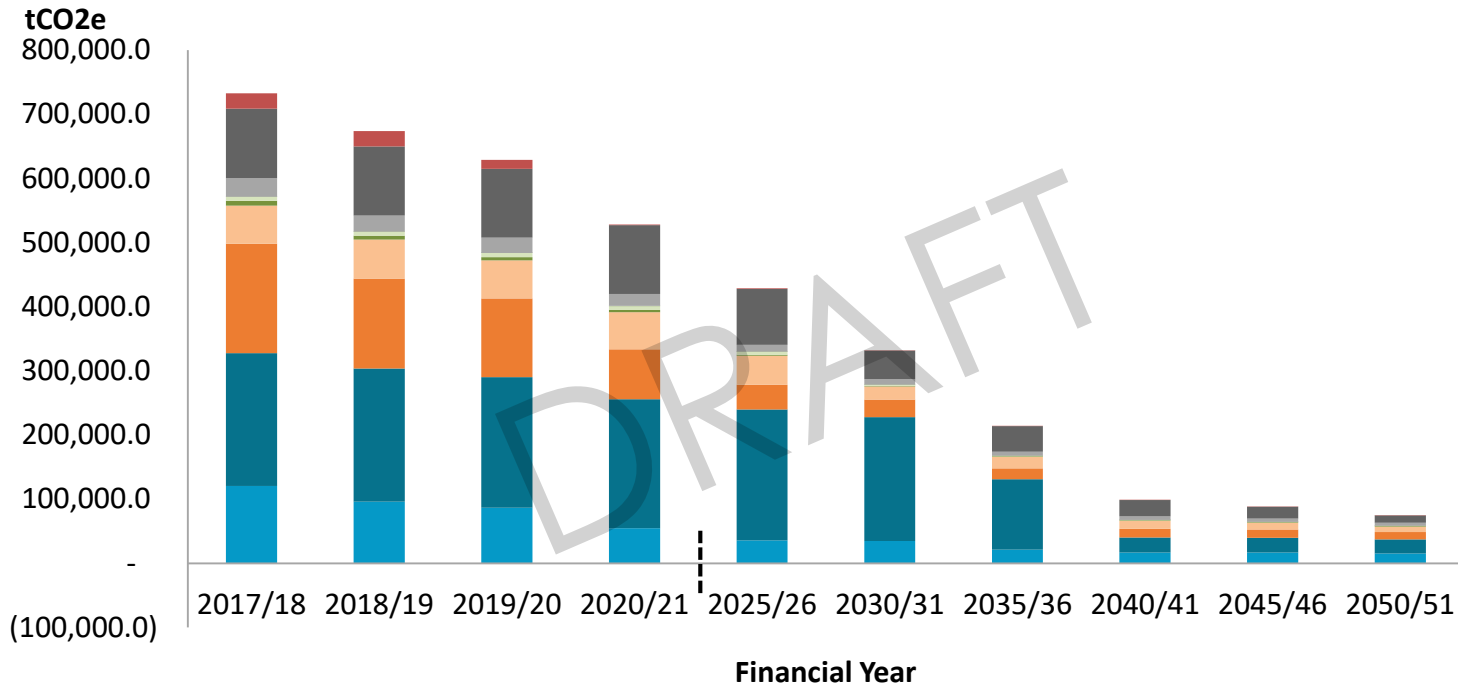
Business as usual – DRAFT



- Grid electricity decarbonisation
- Diversion from landfill



Merton scenario – DRAFT



- Grid electricity decarbonisation
- Diversion from landfill and waste generation reduction
- Further energy efficiency savings
- Switch from gas central heating to electric/other
- Rapid electrification of car and van fleet, 100% electric cars by 2050
- Reduction in private vehicle use



Monitoring

- Need to consider how to monitor actions to see if having the desired effect
- Identify existing data sets or new data to be collected
- Waste reduction measure example:
 - Volumes of waste collected on per capita basis
 - % of households who have food and recycling separate collections
 - Number of facilities of reuse



A note on trees...

- ~1,465 ha of green space in Merton inc. private gardens
- Borough emissions for 2017 = 732,006 tonnes of CO₂e
- $732,006/270 = 2,711$ ha need to be forested and kept for 40 years – to offset one year of emissions
- Approx. 1.6 million trees