

L•A•S•E•R[®]



F&HDC Net Zero Project Options Appraisal Workshop

17 September 2020



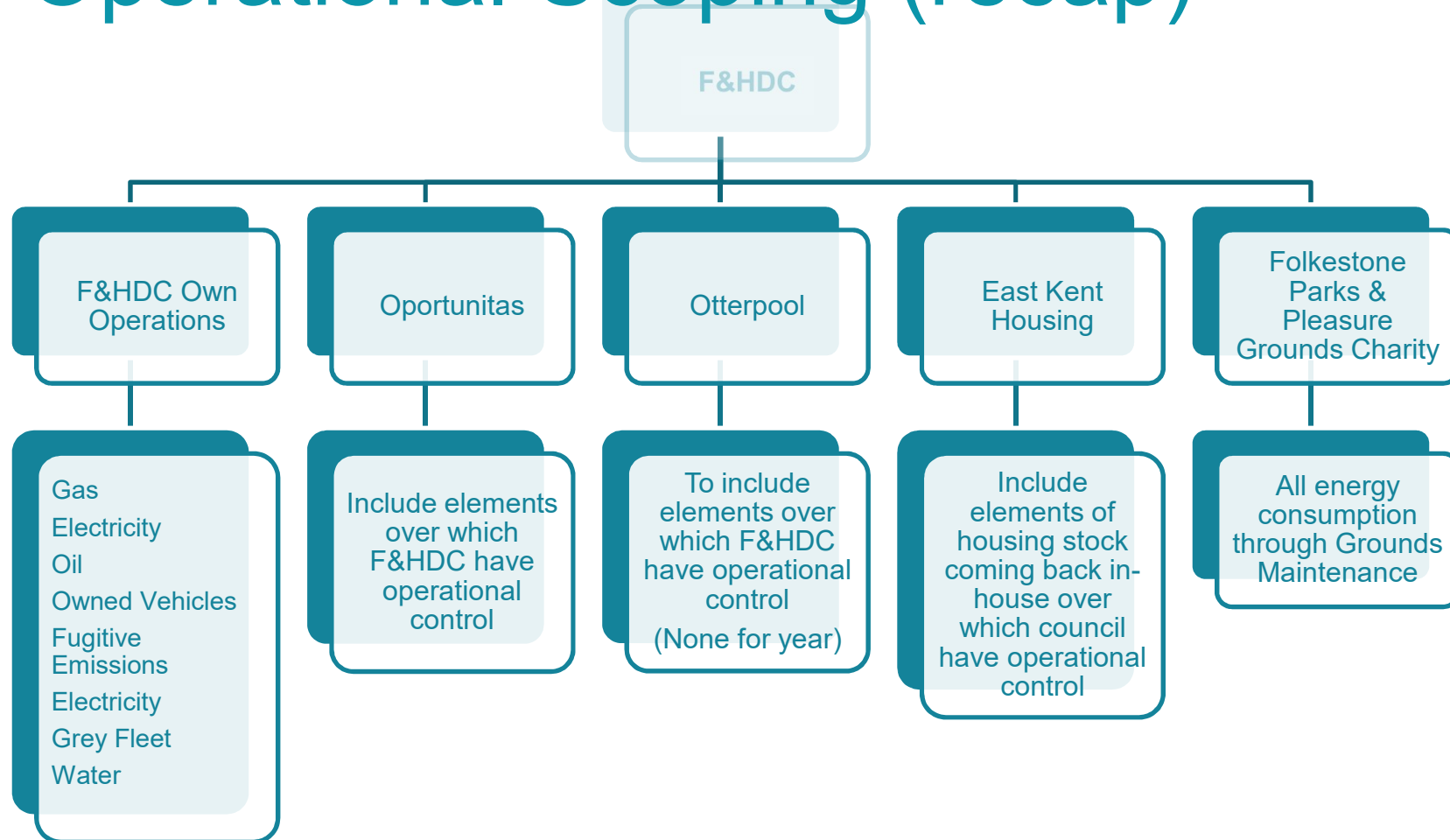
Agenda

- Project Update
- Results of Carbon Footprint
- Forecast to 2050
- Options Appraisal Process and Output
- Current Projects
- Project Assessment Through Success Factors

Update

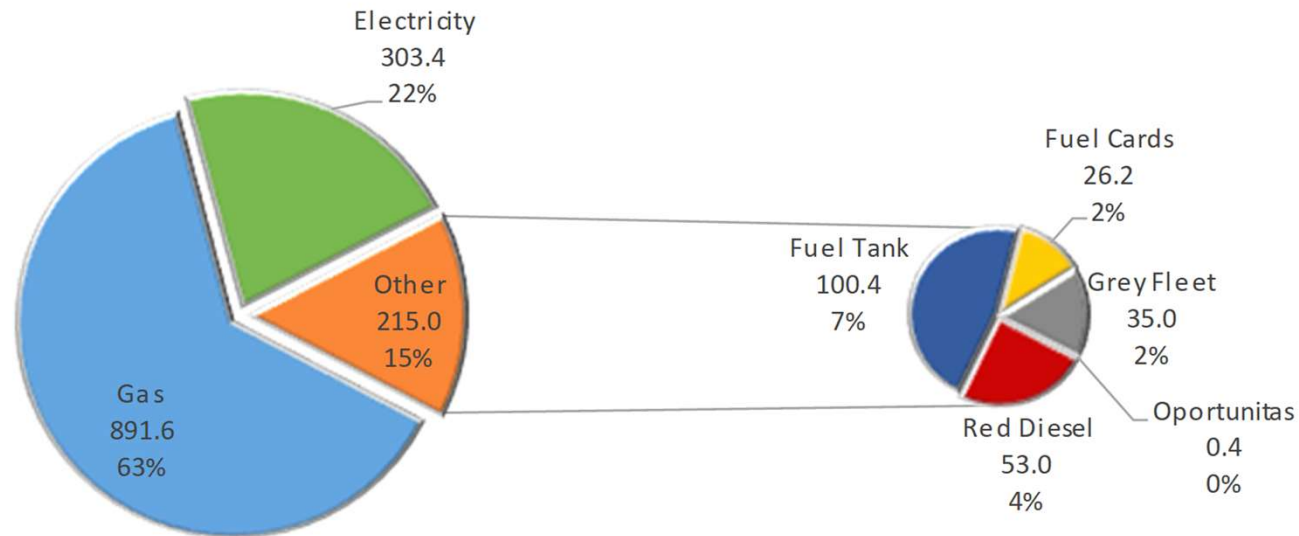
- Wide range of data from variety of sources including vehicle fuel and meter readings from multiple properties has been collected
- F&HDC's carbon footprint has been calculated (some refinement will be required)
- Forecast of future emissions under BAU scenario undertaken
- Finalising energy data (some housing and minor supplies)

Operational Scoping (recap)

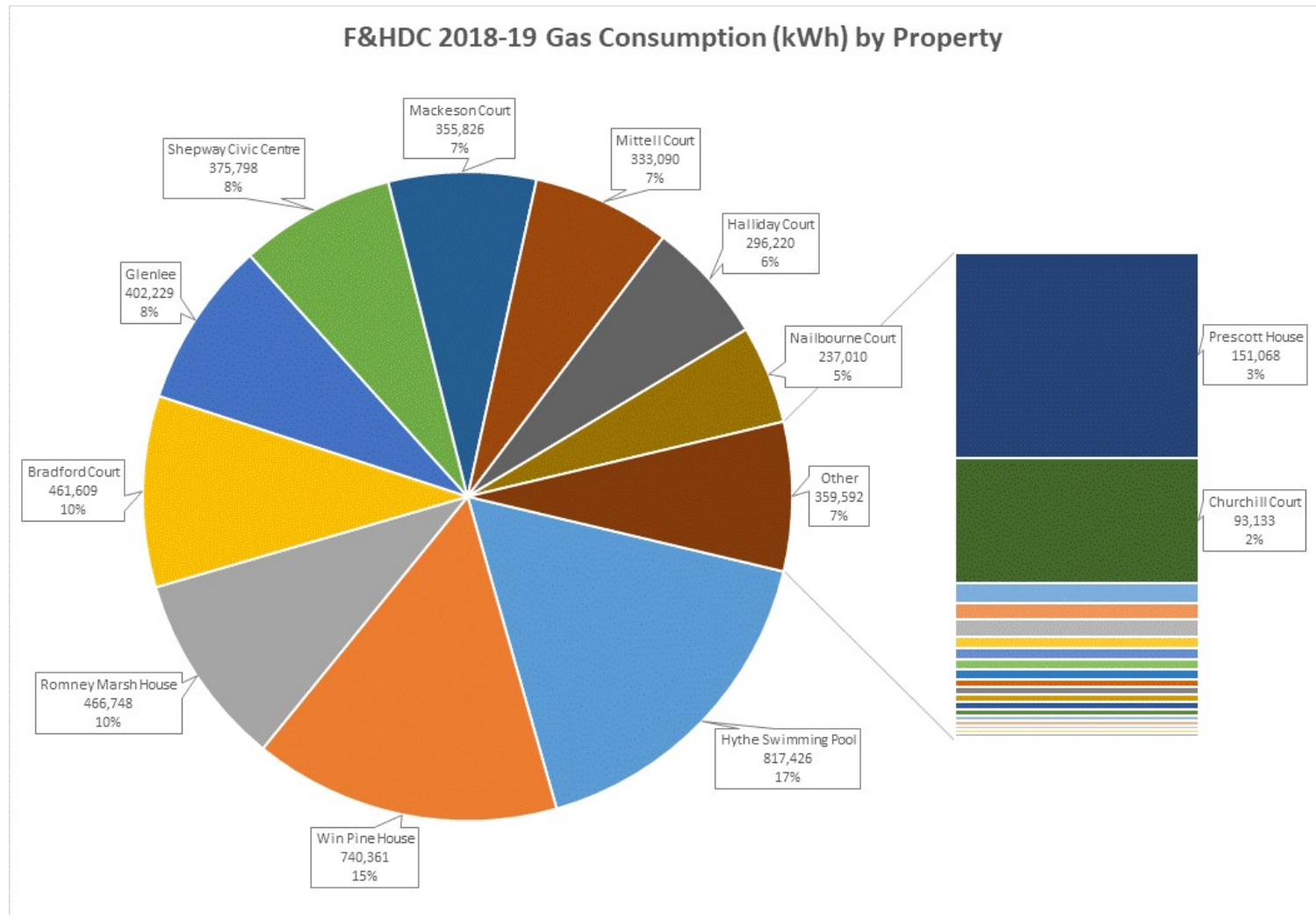


F&HDC Emissions

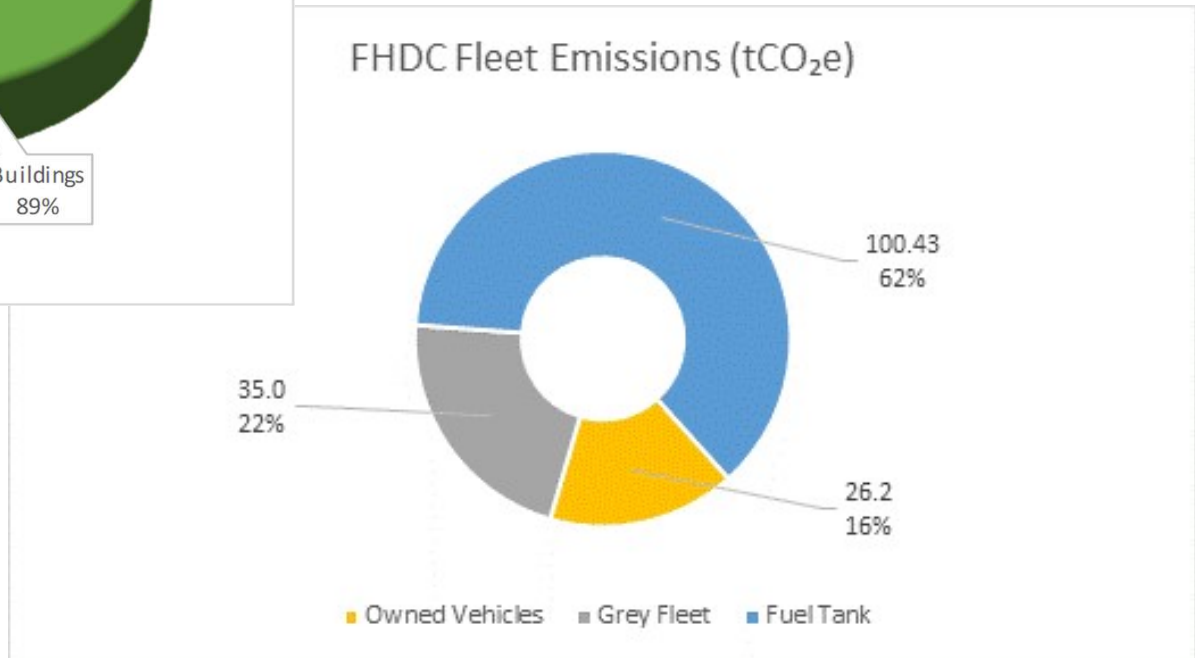
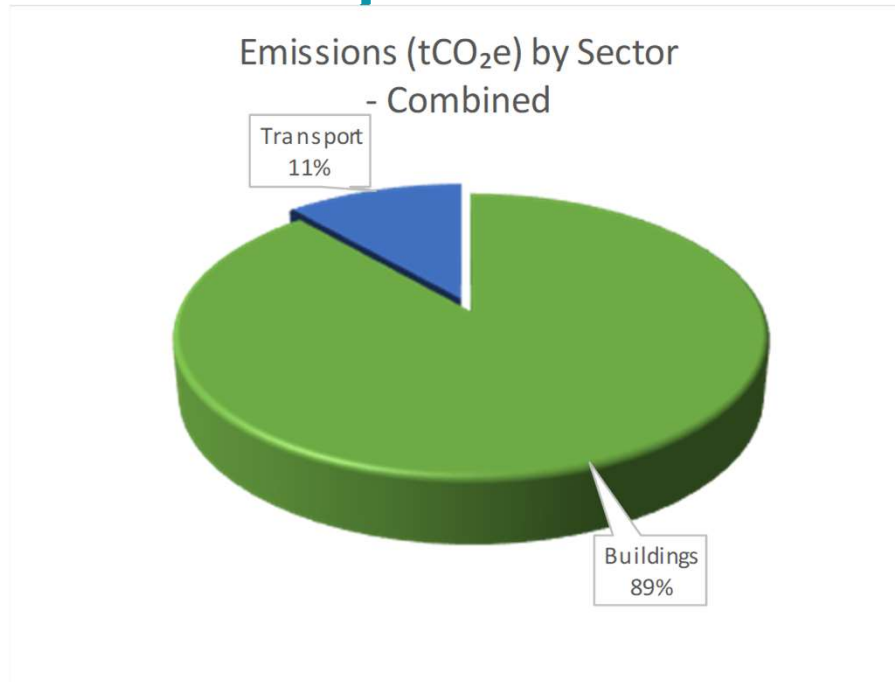
Emissions (tCO₂e) by Emissions Source



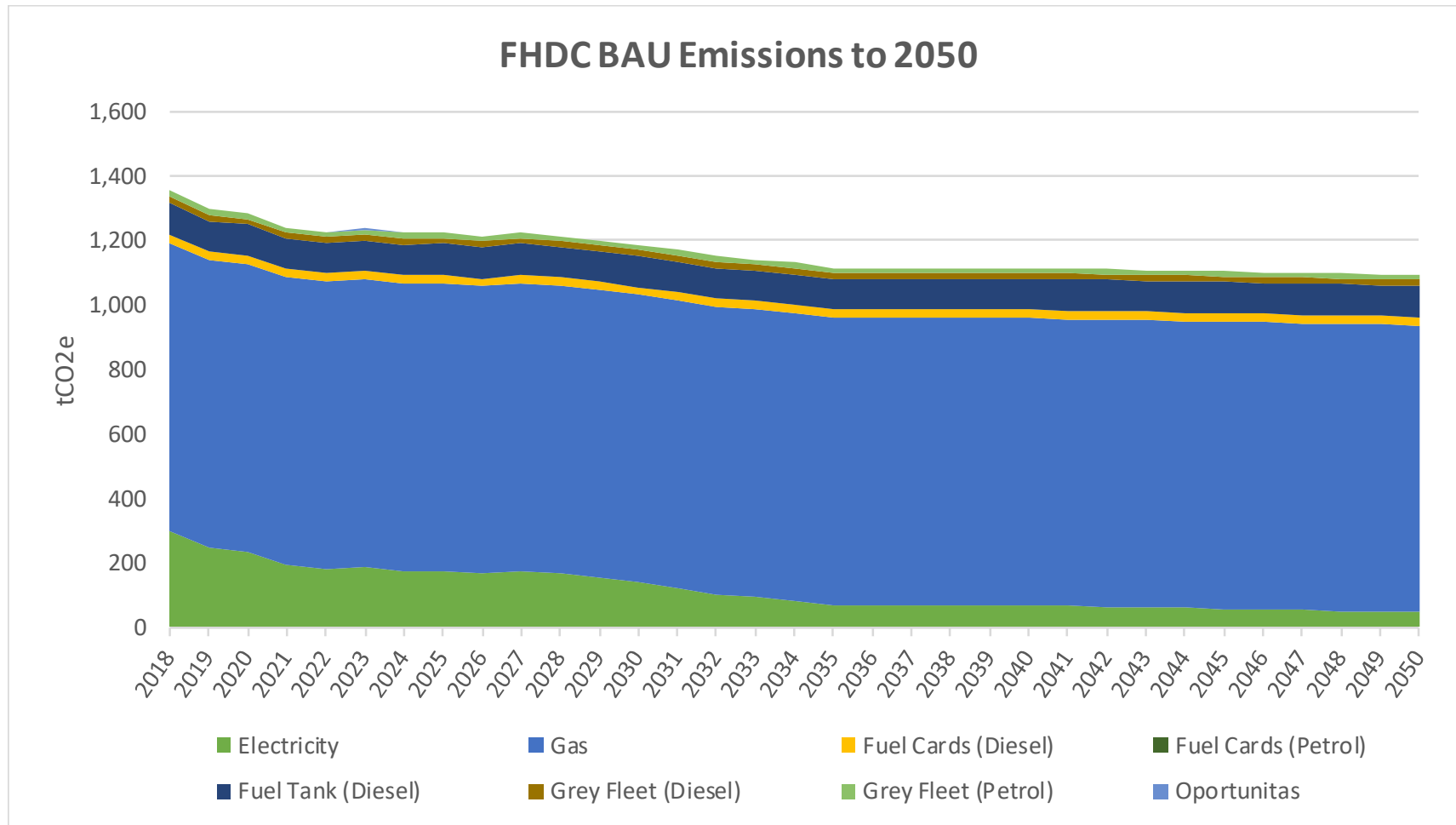
F&HDC Gas Use



Transport Fuel Use



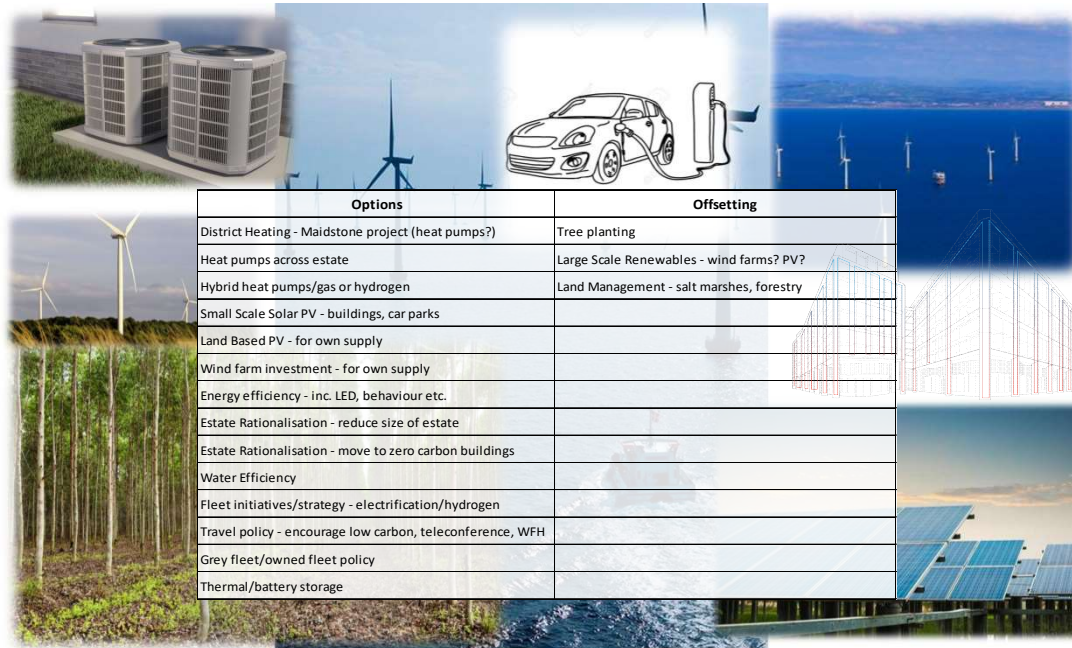
BAU Emissions Forecast



Points of note

- Demonstrates significant ongoing contribution of gas consumption to the carbon footprint
- Demonstrates significance of owned vehicles, particularly those fuelled from the central tank
- Smaller contributions from grey fleet and other sources
- Interventions regarding those 2 emissions sources in particular should be a point of focus

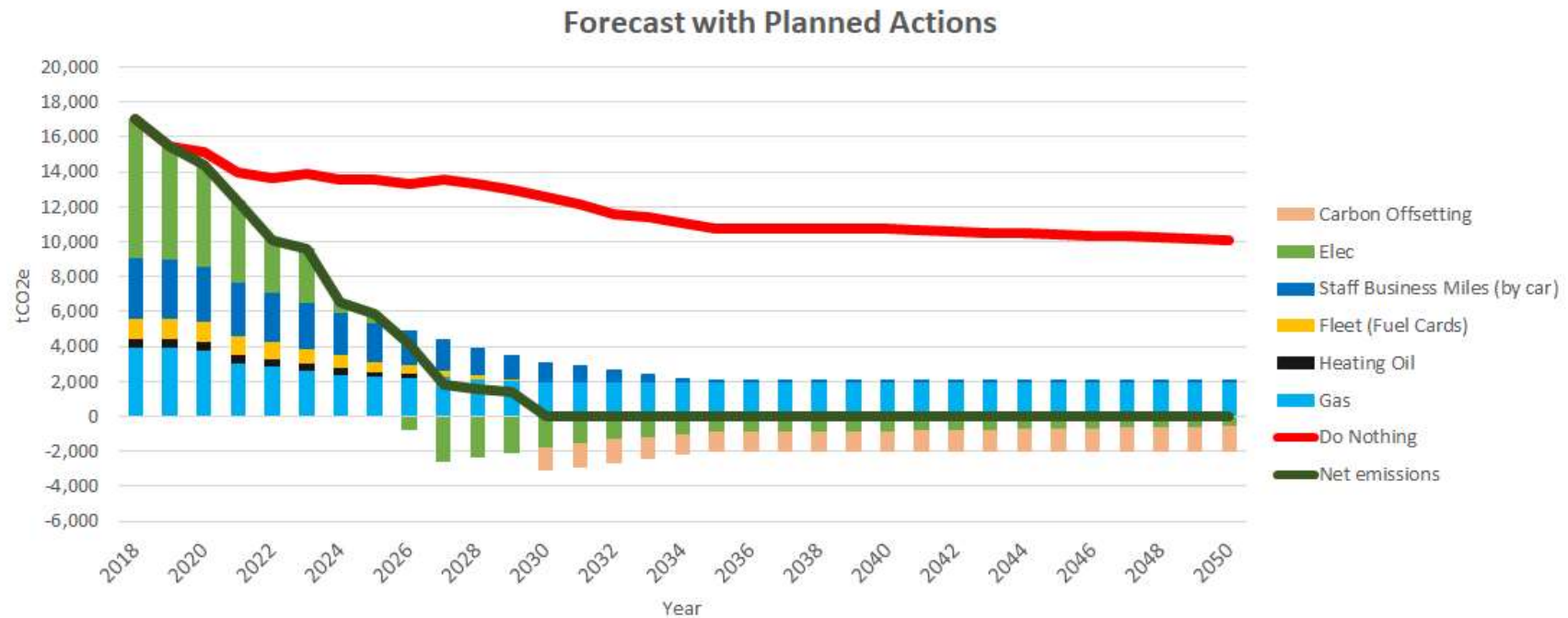
Options Appraisal Workshop



Options	Offsetting
District Heating - Maidstone project (heat pumps?)	Tree planting
Heat pumps across estate	Large Scale Renewables - wind farms? PV?
Hybrid heat pumps/gas or hydrogen	Land Management - salt marshes, forestry
Small Scale Solar PV - buildings, car parks	
Land Based PV - for own supply	
Wind farm investment - for own supply	
Energy efficiency - inc. LED, behaviour etc.	
Estate Rationalisation - reduce size of estate	
Estate Rationalisation - move to zero carbon buildings	
Water Efficiency	
Fleet initiatives/strategy - electrification/hydrogen	
Travel policy - encourage low carbon, teleconference, WFH	
Grey fleet/owned fleet policy	
Thermal/battery storage	

- Understand what's important to FHDC
- What is possible? What is unfavourable / unfeasible?
- LASER model preferred scenario

Options Appraisal Output



Emissions Reduction Pyramid





Success Factors

- Scale of Emissions Reductions
- Speed/Ease to Implement
- Scale of Investment
- Financial Returns
- Public Support
- Project Certainty
- Impact on Operations



Current Projects

- Current projects underway
- Approved projects
- Proposed projects
- Others

Options Appraisal Matrix

RAG (R1,A2,G3)	Critical Success Factors						
Technology / Initiative	Scale of Emissions Reductions	Speed/Ease to Implement	Scale of Investment	Financial Returns (ROI)	Public Support	Project certainty	Impact on Operations
Owned Solar Farm	Green	Red	Red	Green		Yellow	Red
Owned Wind Farm	Green	Red	Red	Green		Yellow	Red
District Heating Network							
Estate Rationalisation							
Rooftop Solar							
LED Lighting Roll Out	Yellow	Green	Yellow	Green	Green	Green	Green
Improve Building Fabric							
Install Heat Pumps							
Reduce Own Fleet Mileage							
Move to Electric Vehicles (Own Fleet)							
Reduce Grey Fleet Mileage							
Move to Electric Vehicles (Grey Fleet)							
LED Streetlighting and Controls							
Offsetting							
PPAs							

What is favourable? What is unfavourable / unfeasible?



Next Steps

- Finalise and share output from workshop
- Indicative modelling of potential projects, initiatives and industry trends
- Production of “forecast with actions” to 2030
- Finalisation of action plan

Any Questions?

- Any other questions?

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