



RUGGEDISED's Legacy on Glasgow

Final Event, RUGGEDISED, September 2022

Gavin Slater

Head of sustainability,
Glasgow City Council



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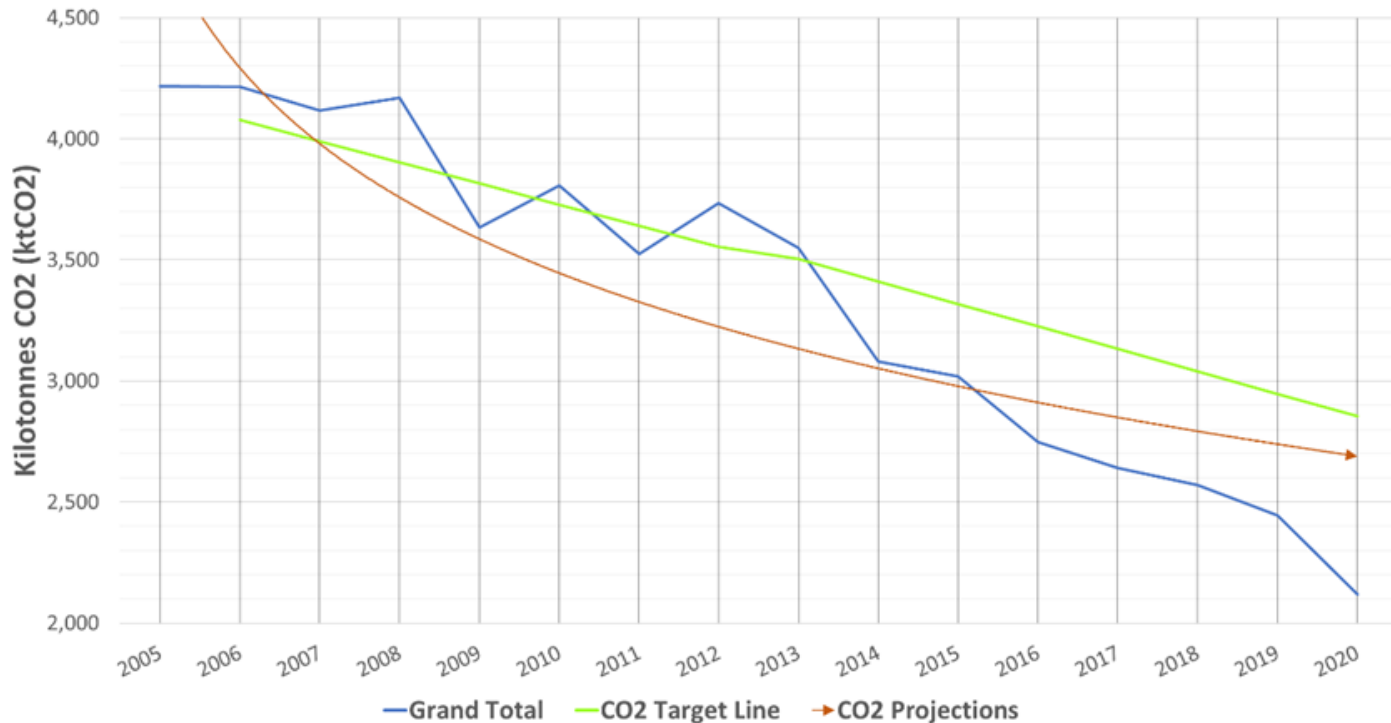
Impact on local policy

GLASGOW'S
OPEN SPACE STRATEGY



Glasgow's Housing Strategy
2017 - 2022

Glasgow Carbon Dioxide Emissions from 2006 up to 2020



Final Event, RUGGED



GLASGOW

LOCAL BIODIVERSITY
ACTION PLAN





Impact on local projects



Sustainable Glasgow

Net Zero Carbon
by 2030



Sustainable Glasgow

Net Zero Carbon
by 2030



▶ **A partnership
which aims to
position Glasgow as**

▶ **Sustainable Glasgow Charter**





Impact on local projects

- Delivery of an alternative, 11kV, renewable energy network
- Developing capped landfill sites
- Learning from PV & battery work in RUGGEDISED
- Delivery of a significant increase in Solar PV on Glasgow City Council Estate
- £2M of GCC capital invested and £2M of external match funding
- Combine with battery storage
- Informed by RUGGEDISED PV & battery work, and modelled data combined with existing installation data across city.





Impact on local projects

- Technical and financial solutions to achieve climate neutrality
- Targeting 100% renewable heat, power and transport
- Informed by RUGGEDISED DH contracts, EV charging, and battery storage.
- Seeks to implement a river source heat pump powered district heating network
- Number of GCC buildings within ID
- Linked to Sustainable Glasgow





Impact on local projects

- Investigation into an approx 6km deep geothermal well on banks of the River Clyde
- Potential 11x the capacity of Queens Quay (~100MW power/60MW heat)
- Funding in place to complete feasibility, likely to then create £60M project.
- Area includes river-source heat pump for Peel development and H₂ production site with international investors.
- Informed by RUGGEDISED DH contracts, EV charging, and battery storage.
- Huge transformational potential.





Impact on local projects

- Mainstreaming of electric vehicles in Glasgow
- Growth of battery storage as support mechanism for EV charging
- Installation of an EV tariff
- Development of a Glasgow City Region approach to EV charging network
- Developing private sector involvement
- Informed by the EV charging work (car park and integrated infrastructure) & battery storage work of RUGGEDISED





Impact on local projects

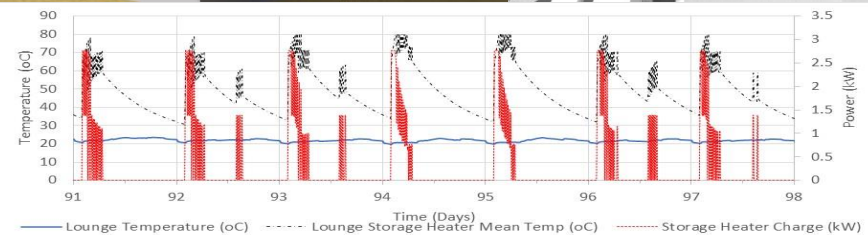
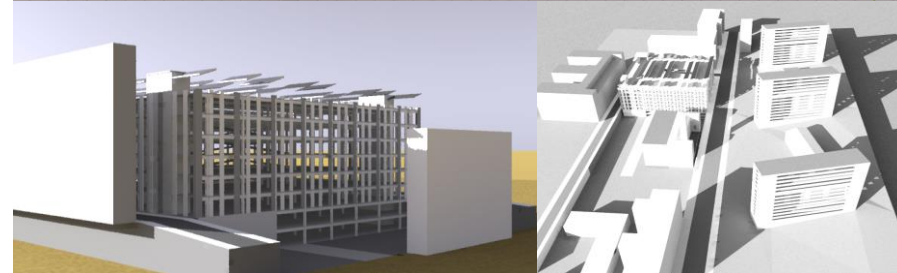
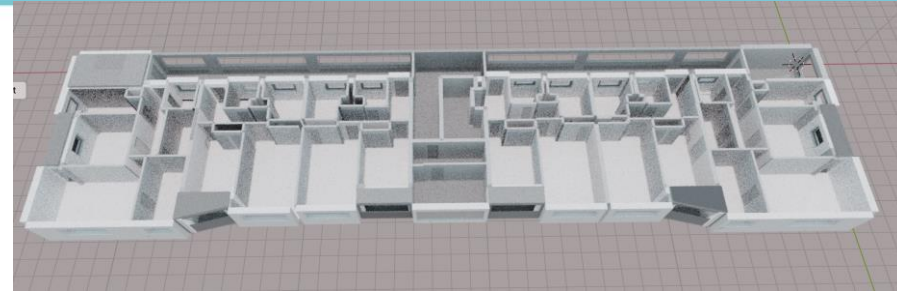
- Proof of effectiveness
- ~20% reduction in energy use
- Reduction in Fuel Poverty
- Satisfaction, Comfort, Control
- Mainstreaming >10,500 installs
- Network management opportunities
- Development of innovative tariffs





Impact on local projects

- Tools and models developed and used for digital twinning of Glasgow solutions being used to support development of new UK Standard Assessment Procedure (SAP 11) with BRE and BEIS
 - SAP 11 is the evolution of SAP to support net-zero dwellings
 - Will be used to assess energy performance to all UK domestic new build and retrofit projects ~2025 onwards
- Modelling tools used to assess performance of Ruggedised DSM G9 solution (smart heater control) applied to housing complex in London





Conclusions

- RUGGEDISED's impact on projects and policy in the city of Glasgow is evident.
- Despite challenges, the ambition and ethos of the project has never faltered.
- Glasgow is fundamentally a better place thanks to the work undertaken in RUGGEDISED and the partnerships forged locally and internationally.
- Its been a bumpy ride but one we are grateful to have been on.
- Thank you.