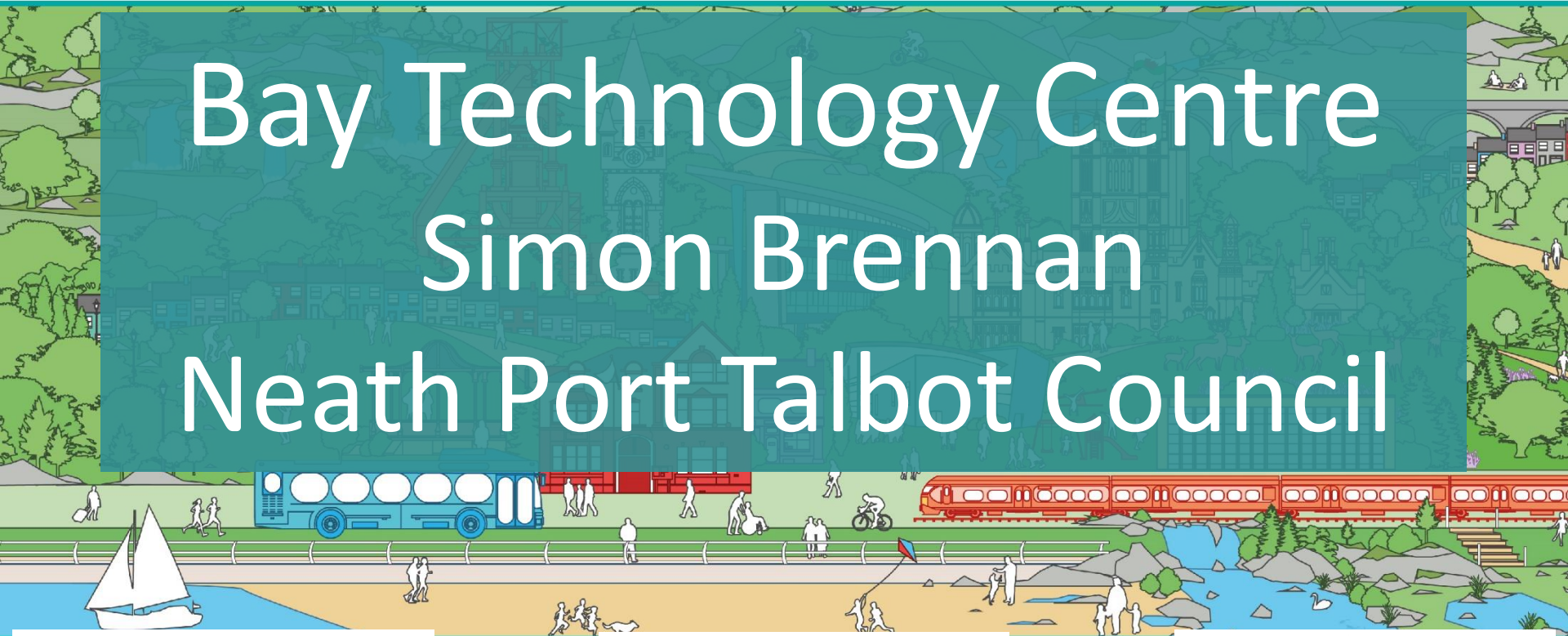




Cyngor Castell-nedd Port Talbot  
Neath Port Talbot Council

# Bay Technology Centre Simon Brennan Neath Port Talbot Council



UK Government  
Llywodraeth y DU



Llywodraeth Cymru  
Welsh Government

# Introduction

- Bay Technology Centre
- Baglan Energy Park
- Hybrid facility
- Office and laboratory space
- Energy positive ambition



# Responding to need / demand

- Responding to well evidenced shortage of high quality, flexible commercial property to support economic growth
- Need to transition to net zero
- NPT Economic Development team enquiry list
- Supporting local growth, inward investment and spin outs from academia

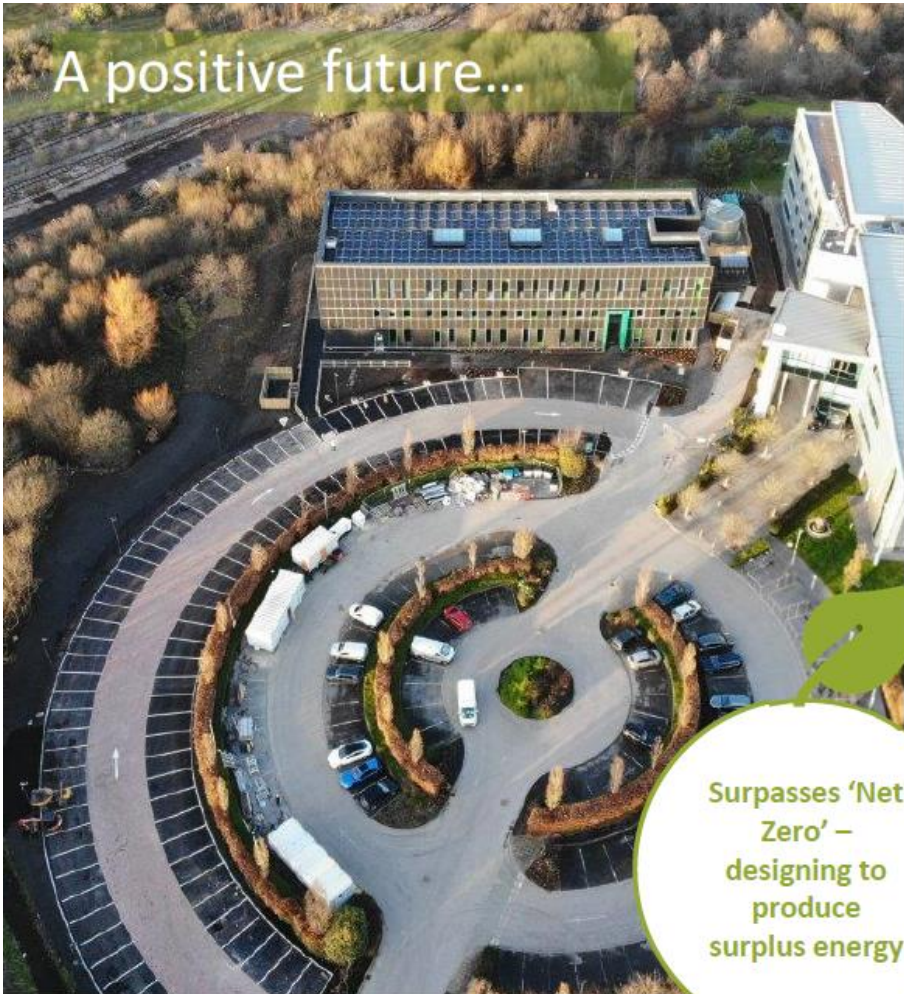


# What we've created ...

- Hybrid facility
- Energy positive design
- PV design to minimise waste
- Link to USW Hydrogen Centre
  - Excess electricity from BTC exported via local electrical network to hydrogen research centre to produce green hydrogen.
- <https://www.hydrock.com/projects/bay-technology-centre>



A positive future...



Surpasses 'Net Zero' – designing to produce surplus energy

Through designing out waste - produced only

**2.4 tonnes per 100m<sup>2</sup>**

Typical UK project – 11 tonnes/100m<sup>2</sup>

**59 tonnes** of construction waste was recycled/recovered (BREEAM Exemplary)

**96%** construction waste diverted from landfill

## Summary

### Why this work stands out from the crowd

- First commercial facility in Wales that is energy positive in operation
- Produces more energy than it consumes
- Traditional heating system entirely omitted – this reduced carbon impact for this project for the whole lifecycle of the building
- Photovoltaic panels in the façade provides a clean source of energy
- All electric building with no fossil fuels used
- Ongoing legacy of the building as a carbon sequestering asset.

**92%**  
of building fabric  
can be recycled



**0.998**  
Energy  
performance  
ratio – a 281%  
improvement  
over building  
regulations

**486%**  
net gain on  
area-based  
biodiversity  
through  
enhanced  
habitats

# Issues / lessons learned

- Proof of concept
- Speculative build due to funding constraints
- Private wire network – H2 linkage issues
- Local contractors / embedded knowledge



# Economic benefits

- Supporting SMEs
- Local expansions and new investments
- Spin outs from academia
- Support economic regeneration
- Delivery of regional and local Economic Plans
- Opportunity to encourage clustering e.g. renewable energy industry, med tech
- Decarbonisation of the economy
- **BTC launch video with case studies**





- <https://www.youtube.com/watch?v=Kex3ayO-8Ns&t=1s>

[www.npt.gov.uk](http://www.npt.gov.uk)



Cyngor Castell-nedd Port Talbot  
Neath Port Talbot Council



# Awards

- Net Zero Award, 2022 Constructing Excellence Wales (CEW) Awards
- Sustainability Award, Insider Wales Property Awards
- Commercial Property Project of the Year, British Construction Industry Awards 2022



[www.npt.gov.uk](http://www.npt.gov.uk)

