



Appendix A  
SWANSEA ENERGY &  
TRANSPORT HUB



**Batri**<sup>®</sup>

# OUR MISSION

ACCELERATING THE  
TRANSITION TO RENEWABLE  
ENERGY BY DELIVERING  
ENVIRONMENTS THAT WORK  
IN HARMONY WITH NATURE  
AND NURTURE INNOVATION.



“Swansea Transport Hub and Port Development holds dear the importance of place. A place to live and thrive, providing prosperity and development, whilst recognising the importance of being a custodian for future generations.

The regeneration of our towns and cities is an opportunity for nature to power change and for sustainable and enriching environments to power future generations.”

**Tony Miles**

# A DESIGN FOR THE FUTURE



**ENERGY & TRANSPORT HUB**  
WITH HYDROGEN & EV CHARGING



**DISTRICT HEATING**  
POWERED BY GREEN DATA CENTRE



**RE-IMAGINING**  
THE INDUSTRIAL LANDSCAPE

**BATTERY**  
MANUFACTURING FACILITY



**SOLAR & BATTERY FARM**

**RESEARCH CENTRE**  
& RECREATIONAL SPACES



**TIDAL LAGOON**  
FLOATING SOLAR









SWANSEA  
ENERGY &  
TRANSPORT  
HUB



# SWANSEA ENERGY & TRANSPORT HUB

People, energy, and innovation working in harmony.

-  Energy & Transport Hub with H<sub>2</sub> Production - Zone 1
-  Park & Ride - Zone 2
-  Energy & Transport Hub - Zone 3
-  Solar and Battery Farm - Zone 4





**ZONE 1**  
ENERGY &  
TRANSPORT  
HUB WITH H<sub>2</sub>  
PRODUCTION



**ZONE 1**



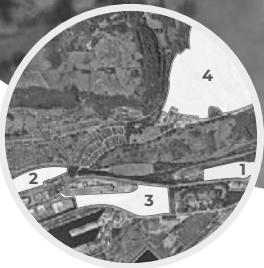
- Solar canopies
- Vehicle maintenance centre
- Bus parking
- H<sub>2</sub> bus refuelling
- Hydrogen hub



**UP TO  
100MW**  
H<sub>2</sub> PRODUCTION  
CAPACITY

## ENERGY & TRANSPORT HUB WITH H<sub>2</sub> PRODUCTION

Supporting Swansea's transition to green transportation, the Energy & Transport Hub provides EV charging, hydrogen production and refuelling, along with a purpose built 4,800m<sup>2</sup> maintenance centre for hydrogen, electric and diesel vehicles.





**ZONE 2**  
PARK & RIDE





- Bus stop
- ebike & scooter rental
- Solar canopies & parking
- Visitor terminal

CAPACITY TO GENERATE  
**2,600 MWh**  
 PER YEAR

**ZONE 2**



## PARK & RIDE

Developing the existing park and ride facility that currently supports 573 vehicles, the reimagined centre will accommodate up to 790 canopied spaces generating more than 2,600 MWh of green energy annually.

The onsite EV charging facilities will offer a range of charging speeds. Visitors can access public transport links or enjoy the restaurant and flexible working areas located in a new green building within the complex.

## TECHNOLOGY & ENERGY AT ZONES 1 & 2



EV CHARGING

**EV CHARGING** - Fast, Rapid and Ultra Rapid chargers available across the energy zones.



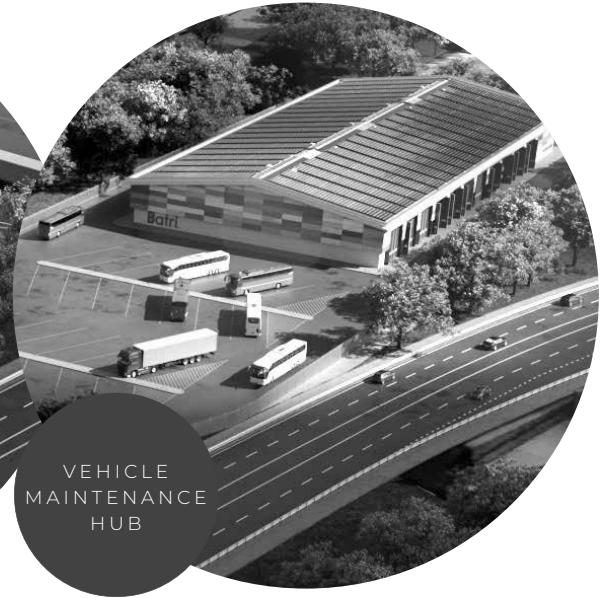
SOLAR CANOPIES

**SOLAR CANOPIES** - over 20,000m<sup>2</sup> of solar canopies generating power for use across the zones.



HYDROGEN

**HYDROGEN PRODUCTION & REFUELLING** - a minimum of 12 tonnes of H<sub>2</sub> can be produced at the Swansea location per day – enough to fuel the equivalent of 340 buses or 800 refuse vehicles.

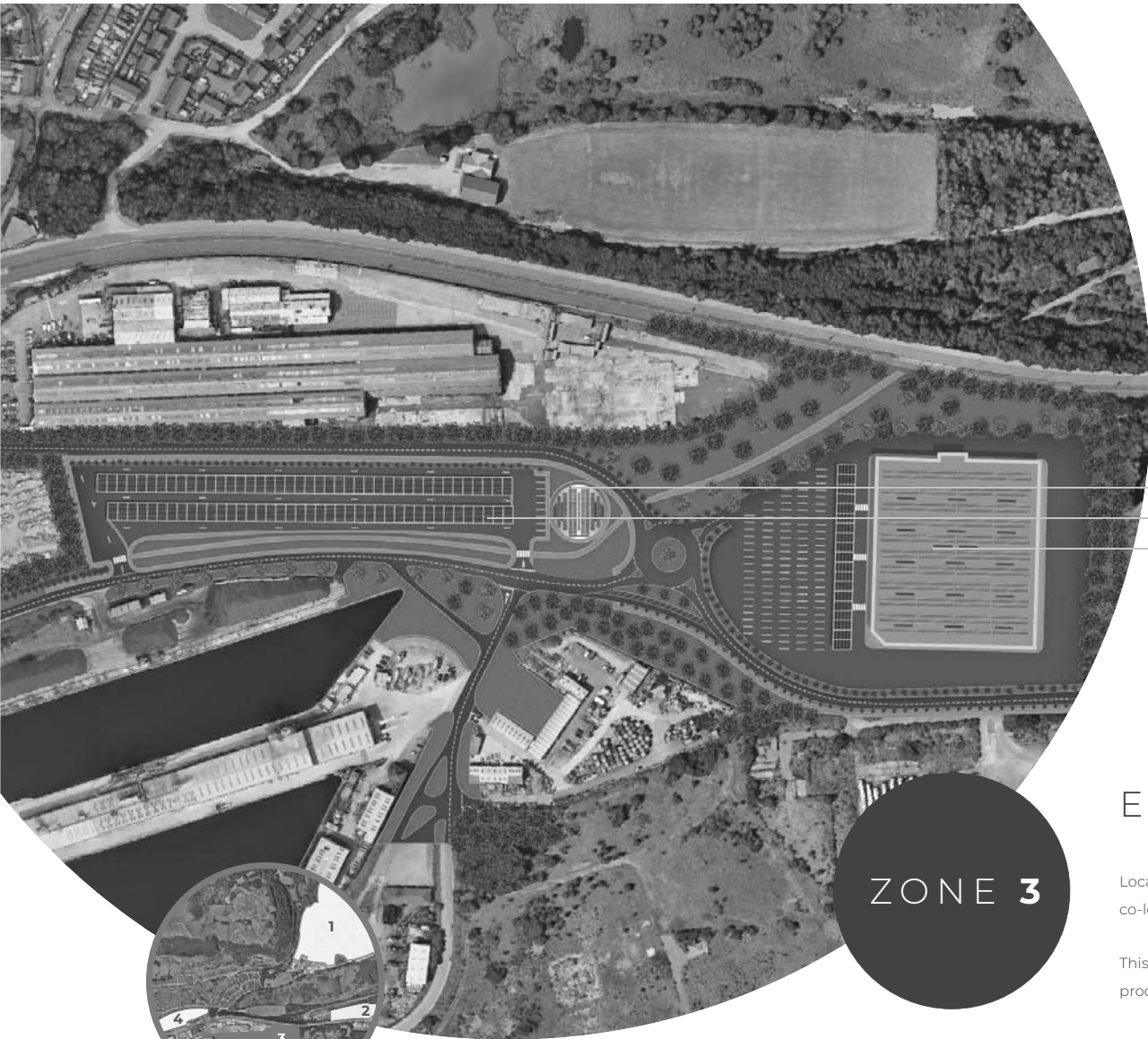


VEHICLE MAINTENANCE HUB

**VEHICLE MAINTENANCE HUB** - built to service 40 vehicles at a time.



**ZONE 3**  
ENERGY &  
TRANSPORT  
HUB



- Visitor terminal
- Solar canopies & parking
- Batri Factory

**5,600m<sup>2</sup>**  
OF SOLAR  
CANOPIES

**ZONE 3**

**ENERGY & TRANSPORT HUB**

Located on the port side of Fabian Way, the hub provides over 350 covered solar canopy parking spaces, co-located with restaurants and working spaces, along with the Batri manufacturing training facility.

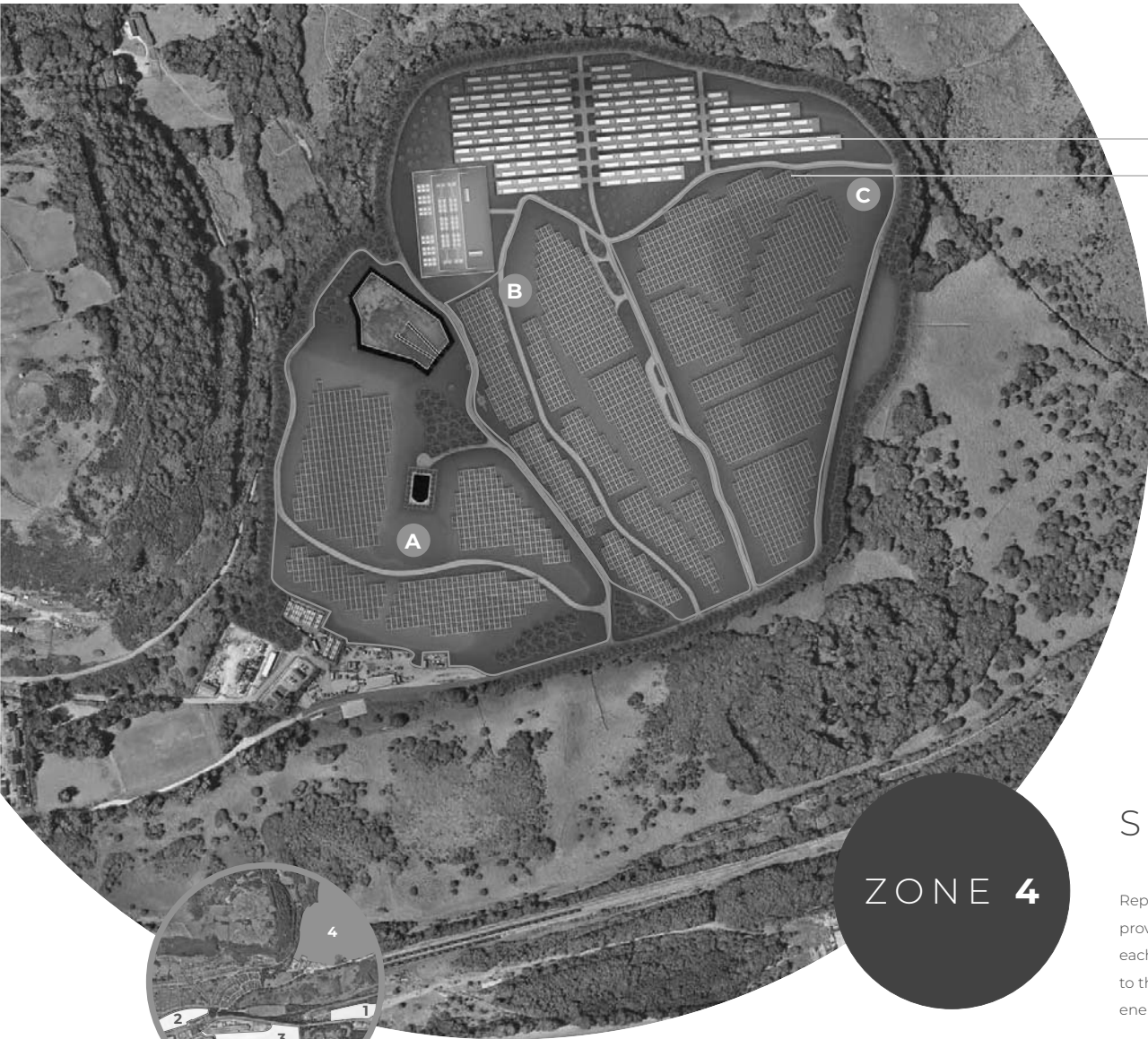
This is the first stage of the proposed giga factory development, designed to train staff and scale production for the 15GWh facility that is planned adjacent to the hub.







**ZONE 4**  
SOLAR &  
BATTERY  
FARM



Battery farm  
Solar farm



**11,000MWh**  
POTENTIAL  
ANNUAL SOLAR  
GENERATION

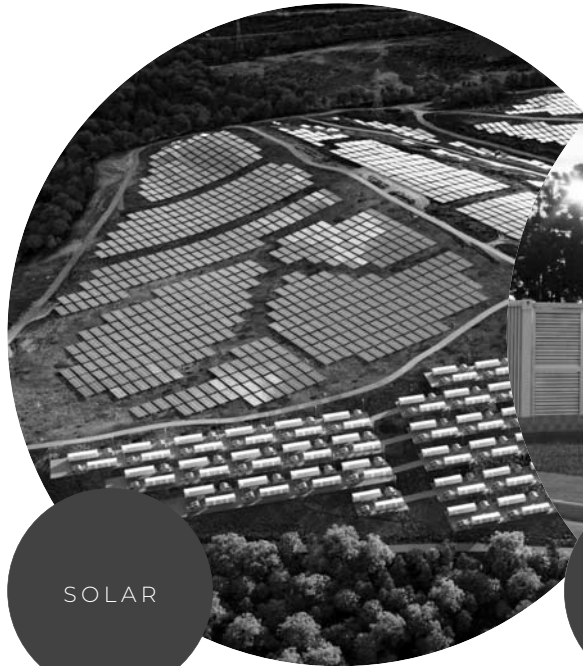
**ZONE 4**

## SOLAR & BATTERY FARM

Repurposing the Tir John landfill site, a nationally significant development of solar energy generation will provide over 11,000 MWh annually when fully operational. Planned to be installed in three distinct phases, each lasting approximately 2 years, the photovoltaic arrays and associated battery storage will be added to the development and linked into the energy and transport hubs ensuring maximum use of the green energy generated.



# TECHNOLOGY & ENERGY AT ZONES 3 & 4



SOLAR



BATTERY



TRAINING  
FACILITY



FACTORY



SWANSEA  
PORT  
DEVELOPMENT





## PORT DEVELOPMENT

People, energy, and innovation working in harmony.

-  Batri Giga Factory - Zone 5
-  Data Centre & District Heating - Zone 6
-  Domes & Recreation Area - Zone 7
-  Eco Homes - Zone 8
-  Tidal Lagoon - Zone 9
-  Floating Solar Array - Zone 10
-  Lagoon Littoral - Zone 11



**ZONE 5**  
BATRI GIGA  
FACTORY



**60,000m<sup>2</sup>**  
BATTERY  
MANUFACTURING  
CENTRE

ZONE **5**

## BATRI GIGA FACTORY

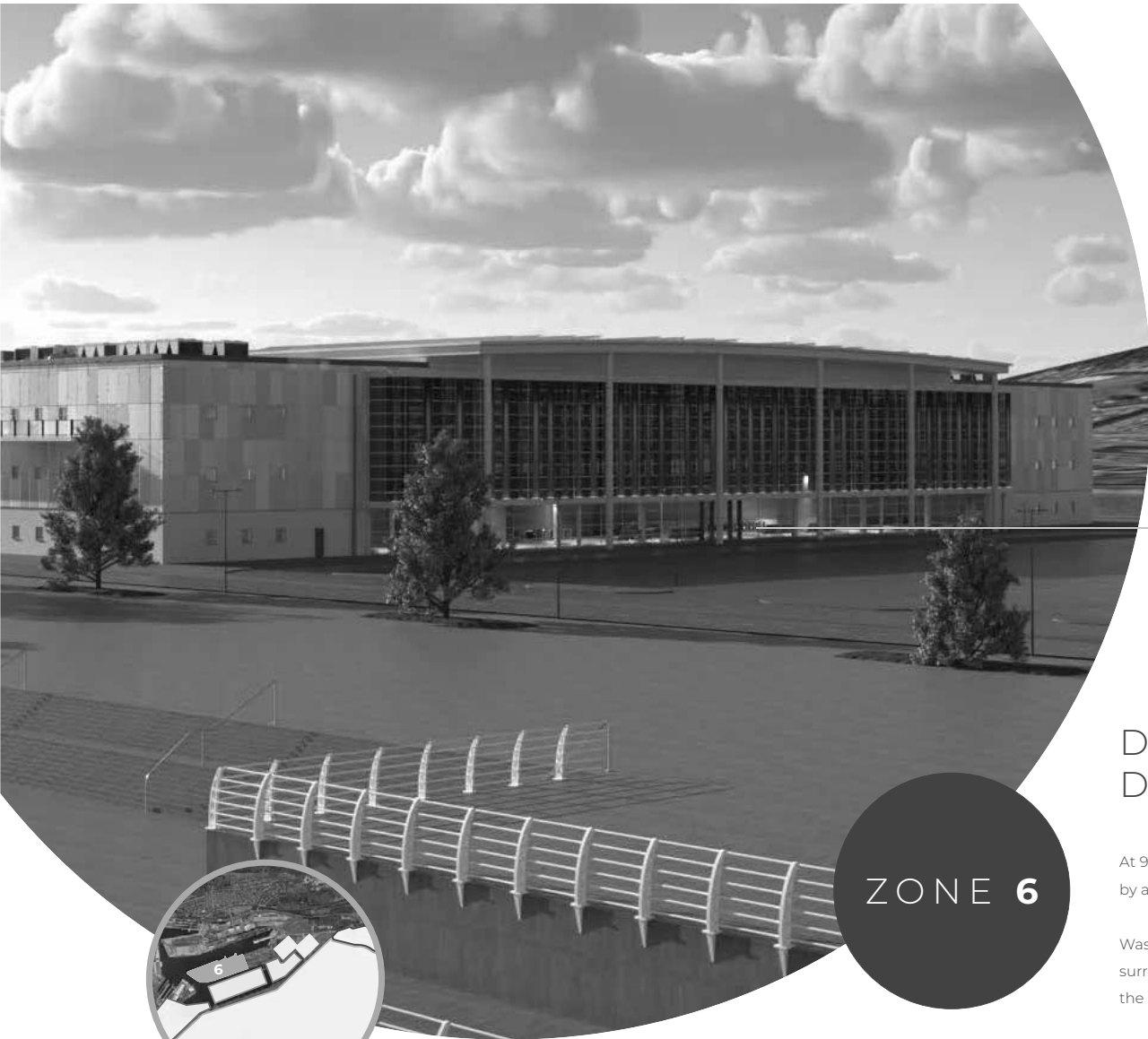
A 60,000m<sup>2</sup> battery manufacturing centre (15GWh capacity), is set to employ over 1,000 people and place Swansea as a global hub for green energy technology.





**ZONE 6**  
DATA CENTRE  
& DISTRICT  
HEATING





Data centre

ZONE 6

# DATA CENTRE & DISTRICT HEATING

At 94,000m<sup>2</sup>, this substantial data centre will be the first off grid data centre in the UK, entirely powered by an uninterruptable renewable energy supply and Batri back-up.

Waste heat generated from the building will be repurposed as a continuous supply of heating for surrounding businesses and homes, contributing to Swansea's sustainability targets and firmly placing the development as a world leader in innovation and green thinking.





**ZONE 7**  
DOMES &  
RECREATION  
AREA



ZONE 7



Floating pavilion



Visitors dome



DOMES

Designed by industry leaders Blue21, the series of domes will become cultural and scientific centres to be enjoyed by all.

Inspired by the Floating Rotterdam Pavilion created by Rutger De Graaf-van Dinther, Dr Bart Roeffen, Karina Czapiewska and their team, the domes will become iconic landmarks on the coastline and provide a snapshot of the future of waterside developments.



ZONE 7



RESEARCH  
CENTRE  
& RECREATIONAL  
SPACES

## RESEARCH & INNOVATION CENTRE

Placing academic research and innovation at the heart of the development, the facility will be a worldwide hub for the vital work needed to address climate change, cementing Wales as the centre for knowledge and skills in this field.





**ZONE 8**  
FLOATING  
ECO-HOMES



ZONE 8



## FLOATING ECO-HOMES

Situated in the vibrant waterfront, a balanced mix of affordable housing and assisted living areas, along with houses and luxury apartments will enable a diverse community to develop and grow.

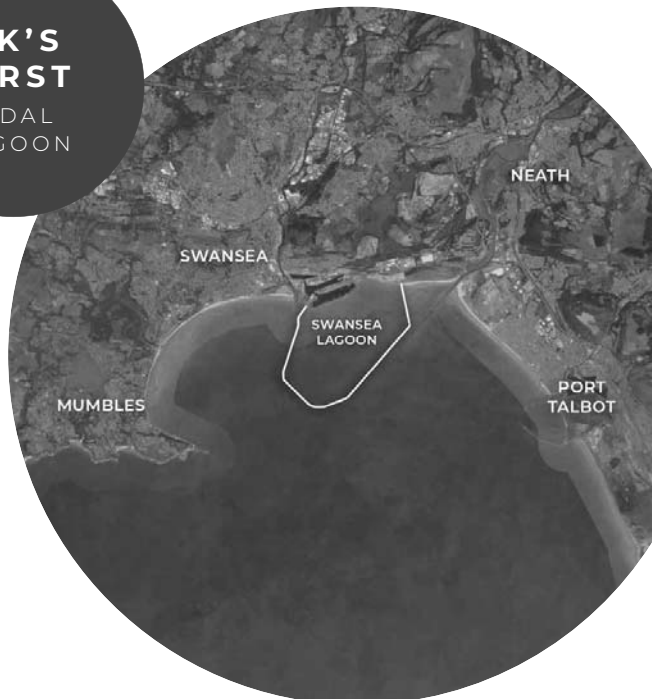
Floating homes, inspired by the water homes located in the city of Delft, employ the latest innovation and technology and provide housing solutions with minimal ecological impact. Included as part of this unique development, each home will have up to 20 years' renewable energy and heat provision included with the sale of the property.



**ZONE 9**  
LAGOON



**UK'S  
FIRST**  
TIDAL  
LAGOON



- Rock armour
- Tidal lagoon
- Tidal lagoon walkway
- Recreation area

**ZONE 9**

## LAGOON

The 9.5 kilometre structure will generate 320MW of renewable energy and create the UK's first tidal lagoon.

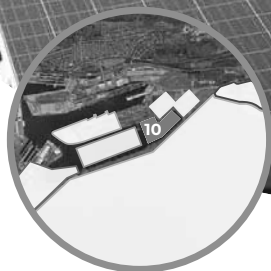
The new enhanced design incorporates the latest advances in turbine efficiencies. Taking into consideration the forecasted sea level rises, construction of the lagoon will enhance the much needed flood defences required against future climate change events.





**ZONE 10**  
FLOATING  
SOLAR ARRAY





ZONE 10

TIDAL  
LAGOON  
FLOATING  
SOLAR



## FLOATING SOLAR ARRAY

At 72,000 m<sup>2</sup> this will be the largest floating solar array in the UK, capable of generating up to 5,250 kWp of energy. An array of this size is estimated to prevent over 2,000,000 kg of CO<sub>2</sub> per year.



**ZONE 11**  
LAGOON  
LITTORAL



ZONE 11

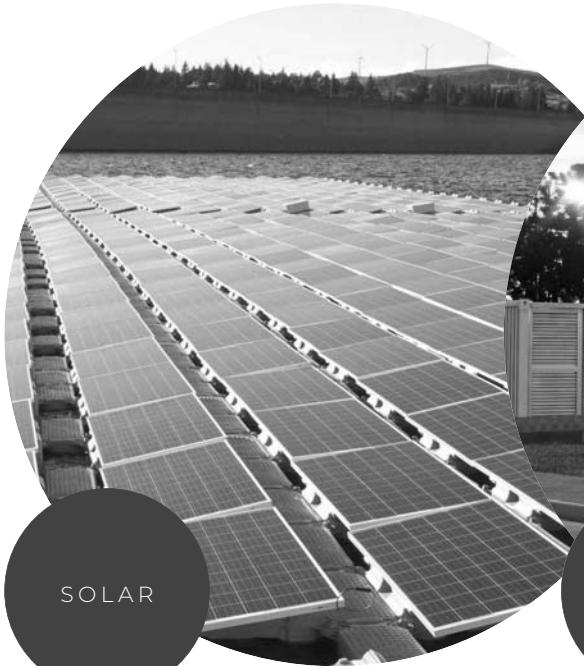
BATTERY UTILITIES & SERVICE AREA



LAGOON LITTORAL

Located in the eastern section of the Swansea development, the area comprises of parking and recreational areas, battery utility and services area, along with access to the 9.5km lagoon walkway.

# TECHNOLOGY & ENERGY AT ZONES 5 - 11



SOLAR



BATTERY

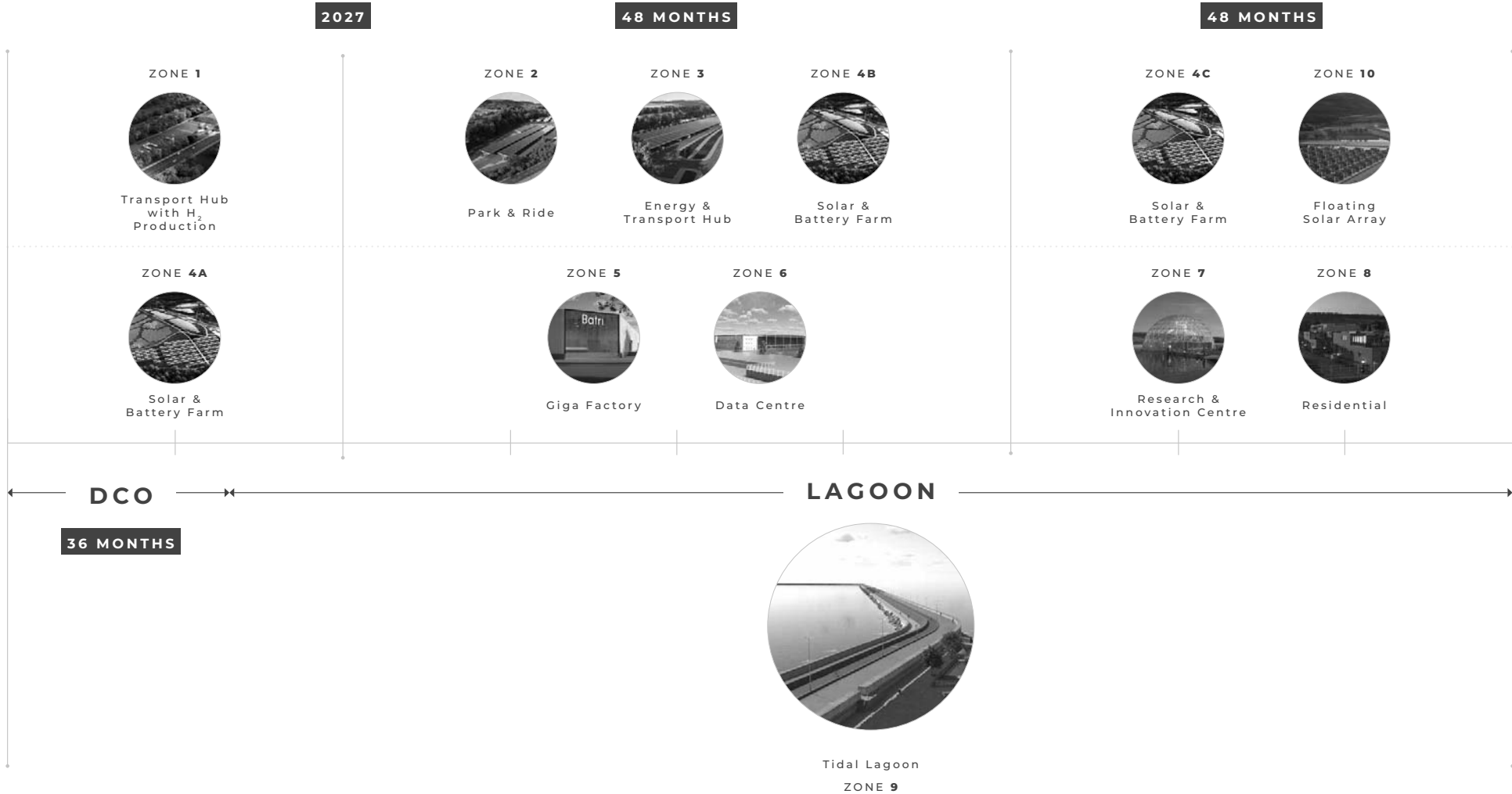


DATA CENTRE & DISTRICT HEATING



GIGA FACTORY

# PROJECT OVERVIEW







**Batri**<sup>®</sup>

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## SWANSEA ENERGY & TRANSPORT HUB

All PV generation data is modelled using historical solar data and is for forecasting purposes only.  
Forecast hydrogen production data provided by the equipment supplier is correct at time of issue.

All proposed timelines are incumbent on planning authorisation and subject to change.

**Confidential: DST Innovations Ltd, Batri Ltd, 2023**