



Report of the Cabinet Member for Service Transformation

Cabinet – 18 May 2023

Update on Progress of Blue Eden

Purpose:	To advise on progress of discussions with various parties on the project formerly known as Blue Eden specifically concerned with completion of collaboration agreement and proposed land transactions to facilitate the development.
Policy Framework:	Well-being of Future Generations Act & Swansea Council Well-being Plan. Financial Procedure Rules Land Transaction Procedure Rules
Consultation:	Legal, Finance, Property and Access to Services.
Recommendation(s):	It is recommended that Cabinet: <ol style="list-style-type: none">1. Acknowledges the progress made to date on discussions with DST and wider partners including Network Rail and Transport for Wales.2. Approves the disposal of the land listed below and delegates authority to officers to agree the final heads of terms and conclude documentation for disposal/occupation by way of lease of:<ul style="list-style-type: none">• The site adjacent to the Fabian Way Park and Ride together with the enhancement of the existing site• The land comprising the closed elements of the Tir John site proposed for Solar Farm development;• Part of former Morrissey Site in SA1.3. Approves the grant funded acquisition of part of Burrows Yard and it's subsequent disposal if needed at commercial terms and delegates authority to officers to agree the necessary heads of terms and documentation to complete the transactions.
Report Author:	Geoff Bacon
Legal Officer	Debbie Smith
Finance Officer:	Ben Smith
Access to Services Officer:	Rhian Millar

1. Introduction

This report sets out proposals for a number of land transactions which will enable further progress on the project formerly known as Blue Eden development creating a Swansea Energy and Transport hub. The transactions are at a relatively early stage however to ensure momentum for the proposals this report sets out tentatively agreed heads of terms for leasehold arrangements that will be contained in an overarching legal framework.

2. Background

It has been recognised that there is significant support to create a major project of change for the City Region, based on renewable energy technology, which would help to address the significant socio-economic challenges that the region has faced since the decline of the major steel and coal industries since the 1980's. The concept of using the significant environmental benefit of the large tidal range in Swansea Bay to generate energy from a renewable source is unquestionably valid, particularly if it can be delivered in an economically viable fashion.

In 2018 the UK Government determined that the emerging proposals from a 3rd party to harvest this Tidal energy were not economically viable due to the level of contract for difference (CFD) that was required. The response of Swansea Council (SC) and Swansea Bay City Region leadership to this assessment was not to ignore the potential benefits, but instead significant technical resource was invested to investigate other possibilities to create a viable project from this valuable natural resource.

Following several technical and commercial studies (2018 - 2020) the concept of an Integrated Renewable Energy Project (iREP) was created under the banner of Dragon Energy Island. The basic hypothesis for this was that if multiple elements of complimentary renewable energy assets were combined, in a similar fashion to a mixed-use real estate project, then they could cross-subsidise each other to produce a combined financially viable project. This hypothesis was evidenced by further detailed analysis and reporting, supported by SC, and the details of this concept project were published. As a result of the vision, investment and commitment by the SC leadership team a number of major industry players became aware of the potential to develop a new form of renewable energy project in Swansea Bay.

This resulted in an approach by the Bridgend based international technology group led by DST Innovations in 2020, who are developing a new form of coal-based renewable battery technology which aligned with the iREP strategy.

DST Innovations recognised the opportunity to collaborate with SC to develop the iREP concept into a commercial reality. SC and DST Innovations agreed to collaborate together to explore DST's new battery

storage technology combined with multiple renewable energy technologies to underpin the financial viability of the reconfigured iREP project.

In conjunction with the executive leadership of SC, the DST team have worked together to develop a number of renewable assets/components that work together to create an independently financially viable project, which does not require subsidy from central or local government. A Community Economic Benefits study has detailed the wider local, regional and national benefits that flow from the iREP project that has been developed by DST Innovations in collaboration with SC. As the project has evolved, with input and support from the SC leadership team, it has become clear that a number of significant local and regional benefits have become possible as part of the expanded project.

The masterplan sets out in **Appendix A** the overall aspirations for the site. Specifically, the activities planned for the land that is the subject of this report is as follows.

- A hydrogen manufacturing station of up to 100MW production utilising renewable electricity from the development. This will be aligned with the EV bus refuelling station and park and ride facility for Swansea supporting Swansea's transition to green transportation. The Energy & Transport Hub provides EV charging, hydrogen production and refuelling, along with the opportunity to create a purpose built 4,800 m² maintenance centre for hydrogen, electric and diesel vehicles.
- The opportunity to develop and enhance the existing park and ride facility that currently supports 573 vehicles, the reimaged centre will accommodate up to 790 canopied spaces potentially 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.
- The development of a battery manufacturing facility creating a large scale giga factory and training centre.
- Expand on the approved solar farm by re-purposing the whole of 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.
- The combined benefits of the Blue Eden proposals and the associated projects are initially projected to deliver an annual GVA impact of around £114 million, and a one-off impact from the

construction phase of £183 million. The potential employment impact could be in the range of 1,000 to 2,500 full time employees (with approximately 16,000 jobs supported in associated supply chain businesses in the South Wales region).

2.1 Wider developments

The above are the planned development DST indicate for the “Council” land that is the subject of this report. In addition, the wider masterplan includes the remaining aspects of the development but the overall principles have to be taken as a single scheme and as such the disposal of the Council land is however integral to its overall delivery.

- 60,000 m2 battery manufacturing and training centre (15 GWh capacity), is set to employ over 1,000 people and place Swansea as a global hub for green energy technology.
- The creation of a 94,000 m2 data centre which will be the first off grid data centre in the UK, entirely powered by an uninterruptable renewable energy supply and battery 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.
- The series of cultural and scientific centres deployed via “domes” 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, to be enjoyed by all.
- 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.
- The delivery of the Tidal Lagoon with a 9.5-kilometre structure will generate 320 MW 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.

- 72,000 m² of floating solar array, the largest 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 CO₂e per year.
- Significant research opportunities by working with the University sector and private sector partners both in the scheme development and post implementation opportunities to share the future of the net zero agenda.
- Wider linkages utilising the surplus heat generated from the data centre to implement a new district heating network covering strategic assets within the site and the wider city centre.

DCO process

The above set out the elements of the scheme and a fundamental part remains the delivery of the Tidal Lagoon. It is understood DST continue to develop the preliminary work for the development consent order process (DCO) which is likely to be a UK government application.

2.2 Timeline

Appendix A sets out the indicative timeline for the overall development with the initial phases due for completion by the end of 2027 with the remaining elements phased over the subsequent 4 years. The DCO and delivery of the tidal lagoon will run in parallel with the overall scheme due and lagoon for completion by 2031.

3. Land Proposal

- 3.1 Due to the nature of the collaborative approach as set out above it is important that the Council as lead partner assist the delivery of such a strategic project. To that end the intention is to see a comprehensive regeneration of the site/s in accordance with a comprehensive master plan to be agreed based on a phased development made up of a number of land transactions.

Due to commercial sensitives associated with these transactions the exempt report sets out the current proposed heads of terms relating to potential leasehold disposals and acquisitions relating to the following: -

- Sites in SA1 for data centres
- Bus depot and refuelling for hydrogen buses.
- Tir John solar farm enabling private wire to facilitate hydrogen processing.

3.2 Economic Impact

In addition to delivering the world's first integrated renewables project work has also been undertaken funded from UK CRF monies to assess a high level, order of magnitude only assessment of the range and scale of

economic impacts that could flow from the proposed project, formerly known as Blue Eden.

In order to make this assessment the Council commissioned input from SQW, who are recognised experts in this field, with an impressive track record of supporting the full range of detailed Public/Private Sector economic studies. It is necessary to clarify that the analysis and studies carried out are based on very early-stage project information and should not be considered as a formal outline business case, rather a well-informed expert opinion as to the likely range of benefits to flow from the project. The project formerly known as Blue Eden proposes the UK's first Integrated Renewables Project (IRP) based on tidal energy production, storage and use, supporting clean, renewable energy generation alongside industrial, residential, leisure and research uses in Swansea Bay.

While the project builds on previous proposals for a tidal lagoon, the detail of the current scheme is still in its relatively early stages. As it proceeds, further information will enable a full economic impact assessment to be prepared. However, to give an indicative scale of the impact, this paper draws on previous studies and the known components of the Blue Eden project to provide a high-level estimate.

This suggests that Blue Eden could have an annual GVA impact of around £114 million, in addition to the circa £4 bn total investment in the project delivery. The potential employment impact could be in the range of 1,000 to 2,500 full time employees (with approximately 16,000 jobs supported in associated supply chain businesses in the South Wales region). These figures should be seen as initial and notional, and further work will need to take place to develop a full impact assessment.

4. Integrated Impact Assessment (IIA) Implications

4.1 The Council is subject to the Equality Act (Public Sector Equality Duty and the socio-economic duty), the Well-being of Future Generations (Wales) Act 2015 and the Welsh Language (Wales) Measure, and must in the exercise of their functions, have due regard to the need to:

- Eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Acts.
- Advance equality of opportunity between people who share a protected characteristic and those who do not.
- Foster good relations between people who share a protected characteristic and those who do not.
- Deliver better outcomes for those people who experience socio-economic disadvantage.
- Consider opportunities for people to use the Welsh language.
- Treat the Welsh language no less favourably than English.
- Ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.

- 4.1.1 The Well-being of Future Generations (Wales) Act 2005 mandates that public bodies in Wales must carry out sustainable development. Sustainable development means the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the 'well-being goals'.
- 4.1.2 Our Integrated Impact Assessment (IIA) process ensures we have paid due regard to the above. It also takes into account other key issues and priorities, such as poverty and social exclusion, community cohesion, carers, the United Nations Convention on the Rights of the Child (UNCRC) and Welsh language.
- 4.2 IIA Screening Forms (**Appendix B**) have been completed with the agreed outcome that a full IIA report was not required. However, these IIA's will need to be revisited if the land transactions are approved.
- 4.3 The IIA process also provides evidence that the initiative complies with Welsh Language Standards: specifically, that we have considered how to maximise any benefits and minimise any adverse effects on:
- opportunities for people to use the Welsh language.
 - treating the Welsh language no less favourably than English.

5. Financial Implications

Notwithstanding the significant economic and wider benefits of the scheme, the potential disposals, as set out in the report, would be undertaken on a commercial basis. As such, it is not expected that the Council will need to commit any funding to the scheme.

If any Council funding is required, a separate and future report would be required in line with financial procedure rules.

6. Legal Implications

All land transactions referenced in this report will need to comply with the Council's Land Transaction Procedure Rules and the Council's constitution as relevant.

Background Papers: None

Appendix A: Masterplan/Timeline

Appendix B: IIA Screening Forms