



**PWYLLGOR DATBLYGU STRATEGOL A CHYFLENWI GWEITHREDOL  
STRATEGIC DEVELOPMENT AND OPERATIONAL DELIVERY COMMITTEE**

<b>DYDDIAD Y CYFARFOD: DATE OF MEETING:</b>	19 December 2024
<b>TEITL YR ADRODDIAD: TITLE OF REPORT:</b>	Energy & Carbon programmes of work update Decarbonisation
<b>CYFARWYDDWR ARWEINIOL: LEAD DIRECTOR:</b>	Andrew Carruthers, Chief Operating Officer Lee Davies, Executive Director of Strategy & Planning
<b>SWYDDOG ADRODD: REPORTING OFFICER:</b>	Paul Williams, Head of Property Performance

**Pwrpas yr Adroddiad (dewiswch fel yn addas)  
Purpose of the Report (select as appropriate)**

Er Sicrwydd/For Assurance

**ADRODDIAD SCAA  
SBAR REPORT**

**Sefyllfa / Situation**

This paper will provide the committee with awareness of the work ongoing to deliver on the following programmes of work that will target reductions in the energy use and carbon impact on the estate, namely:

- A new Energy Performance Contract (EPC).
- Heat Network Efficiency Scheme (HNES) optimisation and funding.
- Private wire solar farm project near Prince Philip Hospital (PPH).

A paper was tabled to the Capital Sub Committee (CSC) on the 8 March 2024 to update on the plans to deliver a new EPC, via the Re:Fit 4 Wales framework programme (Re:Fit 4). A further paper was tabled to the Business Executive Team on 13 November 2024 to update on the three current project plans, and to seek approval to submit a capital bid application to secure funding via the UK Government funded HNES for Phase I works at PPH, which has since been actioned.

These developments will ensure that Hywel Dda University Health Board (HDdUHB) is working towards its obligations to meet Welsh Government (WG) decarbonisation new zero public sector targets by 2030, but also to ensure it benefits from opportunities such as the solar farm. For all these projects further Health Board and Welsh Government approvals will be sought as they progress; and prior to any matters of contract and financial commitments being made.

The paper will update the Committee on the status of the projects, set out the next steps and financial and risk implications and provide assurance on the work ongoing to deliver on each.

**Cefndir / Background**

**Energy Performance Contract**

An EPC project supports Health Boards to target carbon reductions and achieve substantial guaranteed performance improvements including financial benefits through energy efficiency and/or renewable energy generation to support the organisation to deliver on the Welsh Government NHS Decarbonisation Strategic Plan.

The existing EPC 10-year contract, the first in Wales with Centrica ends in March 2025, and preparations are ongoing to manage the transition of Centrica-maintained equipment to HDdUHB responsibility. The impact and risks of this change will be reported separately to outline the impact on the operational delivery and financial risks, but the key risks are:

- A transfer of risk from the provider Centrica to HDdHB on operational delivery and maintenance of the energy efficiency measures (ECMs) so the onus to maintain operation will be wholly with the Health Board.
- Loss of the guaranteed saving position, with no ability to reclaim revenue losses annually through contract.
- Loss of the providers contract obligation to fund repairs on ECM failures, this option is not available on the new standalone maintenance contracts for reasons of age and the risk to the providers, so any costs is a call on capital.

In terms of the new EPC approach, the concept remains similar with the selection of a partner to deliver turnkey energy and carbon reduction projects with guaranteed financial savings outputs. The key difference with the new EPC model is that it is procured via an established framework, namely Refit 4 and is funded via the Wales funding programme, for the NHS the WG 'Invest to Save' (I2S). This differs from the current EPC which benefited from a circa £10m WG capital funding because I2S funding is in the form of an interest-free WG loan which the Health Board would repay from the revenue savings gained from reduced energy consumption; and therefore lower costs. The payback term is typically 10 years. The I2S funding approach is consistent across Wales and is seen by WG to be the preferred route to manage limited resources, as demand for services continues to rise.

The programme is supported by the Refit 4 framework provider Local Partnerships (LP), Shared Services (SS) Procurement and Legal and WG Energy Services (WGES). HDdUHB has signed an Access Agreement and Client Support Agreement and through a procurement process selected a partner Vital Energi to develop the new EPC, including the scope of energy efficiency measures (ECMs) to be implemented, this with no contract or financial commitment at this stage.

### **Heat Network Efficiency Scheme**

The HNES provides funding to public, private and third sector applicants, to support improvements to existing district heating or communal heating projects in England and Wales that are operating sub-optimally and resulting in poor outcomes. HNES is a route to provide grant support to help address the increasing costs for heat networks and enables better operational efficiencies in the medium to long term. HDdUHB appears to be the only Health Board currently pursuing this source of funding and to date has secured and delivered a £24k grant application at PPH site for a digital twin of the heating system and feasibility study for optimisation of the system. This has generated a report setting out four stages of potential project developments on the site, with Stage 1 an optimisation project in the range of £1.4m.

Further feasibility grant applications have been submitted for Glangwili (GGH), Bronglais (BGH) and Withybush (WGH) Hospital sites. Gemserv, the facilitators of the HNES programme have confirmed that the BGH grant application was successful, not supported GGH site application and we await WGH grant application decision. HDdUHB has submitted a capital grant bid to secure 49.9% match funding for the PPH scheme, to be delivered via the new EPC project route.

### **Private Wire Solar Farm**

An opportunity to arrange an electrical supply via the connected infrastructure from a planned 9 Megawatt (MW) private solar farm project near PPH site is being explored with a private developer. The scheme remains at planning stage and the Health Board has made early representation and provided an expression of interest to secure an optimum supply, subject to solar farm planning approval, technical reviews, power purchase agreement (PPA) and necessary HDdUHB approvals.

## Asesiad / Assessment

### Energy Performance Contract

An EPC and Estates / Buildings Decarbonisation subgroup has been established to manage the project, this group previously reporting into the Climate Change Task Group with the Sustainable Resource Committee (SRC) as the reporting Committee, but this arrangement is subject to current review following a change in the decarbonisation Executive portfolio. The table below sets out the progress to date and the next steps:

<b>MILESTONE</b>	<b>TARGET DATE</b>
Soft-market test with framework providers	Complete
Submission of Invitation to Tender (ITT)	Complete
Tender Return	Complete
Selection of Service Provider (evaluation period – bidders day / presentation / site visits)	Complete
Commencement date (date of entering into the Contract)	Complete
Submission of High-Level Appraisal (HLA) by the appointed Service Provider	November 2024
Submission of Draft Investment Grade Proposal(s) by the appointed Service Provider	January 2025
Approval of Industrial Growth Plan (IGP)	March 2025
Board and Welsh Government approval of funding	April 2025
Date of entering into Works/Optimisation Services Agreement (WOS)	May 2025
On-site installation works commence	Q1 2025/26
Works/Optimisation Services completed including agreement of Monitoring and Verification Services and Maintenance responsibilities	Programme to be agreed

The above programme is being developed by HDdUHBs selected partner, Vital Energi and a Phase I scope of works has been agreed but may be subject to change. These works are targeted at the following estate namely, PPH, BGH, GGH, WGH, Elizabeth Williams Clinic, and Hafan Derwen sites and is focused on combinations of LED lighting replacement, Solar Photovoltaic (PV), heating system, Energy Centre and Combined Heat and Power optimisation, Air Handling Units fan replacements, building management system controls and insulation for each site.

### Financial overview

The Wales Funding Programme is the title scheme and application approach which is managed as a single WG budget. For Health Boards the WG Invest to Save (I2S), will be sought, this award and finance administered by WG with 0% interest on the loan repayable.

It is anticipated that HDdUHB will be bidding for around £8.7m in the first phase and target delivery of works over the financial years 2025-26 and 2026-27. The main source of funding

will be WG I2S repayable loan funding (£8.0m), supplemented by HNES capital grant funding if this is successful (£0.7m). WG were keen to ensure that Health Boards going through the current framework selection process (Betsi, Cwm Taf Morgannwg, Aneurin Bevan) included an option for Alternative Finance in their agreements, although it is not expected this will be required in Phase 1, but is available as an option in future phases.

The scheme outputs will need to meet the Wales Programme funding criteria, which requires a maximum 10-year payback on the investment, the repayments generated from the contracted guaranteed utility revenue savings. Under this EPC model any underperformance against the guaranteed position would be covered by the contract, unless it is agreed that the issue was caused by HDdUHB, so this will need to be carefully managed and controlled. This is no different to current EPC arrangements, although the financial arrangements differ in that the new EPC is a repayment loan not a capital funded model.

There are no upfront fees to arrange the HLA and IGP development costs, these captured via the funding envelop alongside any Health Board consultant fees. The intention is to appoint and fund the client-side support and in-house team via the capital envelope to support with the delivery of the scheme ie, Project Manager, Engineering design and supervisor role, Cost Advisor etc.

Of note the capital funding includes a contingency to reflect potential issues of estate infrastructure, as an example such as electrical wiring to maintain safety, out of hours working and any issues identified during the works specific to the ECM. As a focused energy project with the constraints on costs, paybacks and carbon criteria, this contingency will not address wider estate infrastructure backlog. Any additional funding requirements would need to be funded from other sources if to be addressed during these works.

Subject to the necessary Health Board and WG approvals HDdUHB will enter into the framework works contract (WOS) with the service provider to deliver the schemes.

### **Heat Network Efficiency Scheme funded by UK Government**

The proposal is to include the implementation as part of the EPC project, with a target to implement Stage 1 into the first phase EPC scope of projects, subject to further technical review and agreement with Vital Energi. The following four stage outputs were identified:

- **Stage 1: Hydraulic optimisations:** The potential benefits include boiler house optimisations to valves and pumps, alongside investment to the building management controls systems.
- **Stage 2: Adding Air Source Heat Pump (ASHP) to the return leg of the energy Centre:** Retain gas boilers and CHP to provide 15% heat supply and deliver energy cost savings / consumption, with a CO2 reduction of approximately 223 tonnes per year.
- **Stage 3: Removing Gas boilers:** Adding two ASHP with the Combined Heat and Power (CHP) to provide 55% of the heat but with a negative energy cost saving approximately 28%, with a CO2 reduction of approximately 663 tonnes per year.
- **Stage 4: Remove CHP – Fully Decarbonised Solution:** A fully electric system consisting of a 2-stage ASHP system can provide 100% of the heat but with a negative energy cost saving approximately 113%, with a CO2 reduction of approximately 957 tonnes per year.

The intention is to deliver the Stage 1 works via the Phase I EPC scheme, with the remaining stages potentially forming part of future phases of the EPC programme.

### **Financial overview**

The Stage 1 capital costs have been developed via the EPC project scope with Vital Energi who have supported HDdUHB to develop early design and costs to support a grant bid submission to the scheme. A capital bid application has been submitted to secure 49.9% funding on a total scheme value estimated at £1.4m, which is not repayable.

The Health Board will need to fund the 50.1% match funding to meet the HNES criteria, with the intention to fund via the I2S funding application. If the grant bid is successful but wider WG funding is not approved, HDdUHB would not draw down monies, or will explore alternative funding options. If the HNES funding bid is rejected, the full funding requirements will be sought via I2S funding, which will follow the EPC repayment criteria.

The savings benefits from the Stage 1 scheme will be included as part of the EPC delivery plan business case. Of note if HDdUHB was to progress with Stages 3 and 4, this would deliver a carbon positive position, but alongside a negative financial position resulting from the additional costs of operating ASHPs and the removal of gas boilers and CHPs units ie at PPH site this would represent 113% carbon reduction but introduce an estimated £100k Stage 3 and £500k Stage 4 annual revenue cost pressure at PPH. If this position was mirrored across all sites, as an example, the removals of the CHPs and gas boilers at WGH this figure will be significantly higher when considering the whole estate.

As an indication of scale, the CHP units at PPH and WGH and BGH generate annual savings of circa £410k/year (average last three years) £180k at PPH, £126k at WGH, and £105k at BGH. Of note annual savings have been higher and there is fluctuation in the performance year on year, with the units having suffered infrastructure issues in recent years. A large proportion of these costs have been offset by the underperformance guaranteed savings, but these are not included in the above figures. The CHPs units are nearing 10 years in age for PPH and WGH and over 10 years old for BGH, and the life expectancy is circa 15 years, so prior to this stage a decision on the phased replacement strategy will need to be made, reflecting technologies at the time and noting that WG currently will not support replacement to gas boilers or gas fuelled CHPs

Whilst this is a Health Board and WG ambition and policy to not to replace CHPs and to transition away from gas to an electrification model to meet public sector net zero carbon targets, the impact on the revenue position will need to be highlighted and raised as a key risk to the delivery plans.

### **Private Wire Solar Farm**

The opportunity to agree a Power Purchase Agreement (PPA) to procure electrical supply to Prince Philip Hospital (PPH) from a private wire solar farm located near the hospital is being scoped. If feasible and approved the scheme has the potential to deliver reduced energy cost savings, provide a net zero carbon option, and provide wider resilience and cost certainty benefits. The scheme is being planned for early 2026/27 and early discussions are being held to consider the technical and funding options with the developer and through funding sources. A key barrier to delivery is the electrical infrastructure on the PPH site, this scheme identified as a priority business continuity project, but there is a risk that timescales may not align with continued delays in the funding. This position is to be raised with WG representatives to discuss options to deliver and fund the project.

### Next Steps:

- EPC: The next stages are to agree the HLA in November 2024 and move to the IGP development stage.
- HNES: The outcome of the WGH feasibility grant is expected in December 2024 and PPH site grant application is expected in early 2026.
- Private solar farm: To continue to work with the developer as they progress their project, and work with WG and shared service colleagues to consider the technical and funding challenges.

The schemes are being managed via HDdUHB EPC and Building/Estate Decarbonisation Sub-Group, which currently reports to the Climate Change Task Force Group, this structure is subject to change to governance arrangements, following a change in the executive portfolios. The schemes will require internal HDdUHB approval including Board approval for the EPC, and WG approval to the funding application via the Wales Funding Programme and HNES funding routes, prior to any agreement of contract.

### Argymhelliad / Recommendation

The Committee are asked to:

- **RECEIVE ASSURANCE** on the progress being made to deliver on the Energy Efficiency and sustainability projects with the aim to reduce energy costs and environmental impact.
- **NOTE** the content of the report.
- **NOTE** the progress being made on each project and risks and financial position set out in the paper.
- **NOTE** the impact of carbon initiatives on the financial revenue position.

<b>Amcanion: (rhaid cwblhau)</b>	
<b>Objectives: (must be completed)</b>	
Committee ToR Reference: Cyfeirnod Cylch Gorchwyl y Pwyllgor:	Climate Change Task Force
Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol: Datix Risk Register Reference and Score:	1793
Parthau Ansawdd: Domains of Quality <a href="#">Quality and Engagement Act (sharepoint.com)</a>	1. Safe 2. Timely 3. Effective
Galluogwyr Ansawdd: Enablers of Quality: <a href="#">Quality and Engagement Act (sharepoint.com)</a>	2. Culture and valuing people
Amcanion Strategol y BIP: UHB Strategic Objectives:	6. Sustainable use of resources

Amcanion Cynllunio Planning Objectives	8 Estates plans
Amcanion Llesiant BIP: UHB Well-being Objectives: <a href="#">Hyperlink to HDdUHB Well-being Objectives Annual Report 2021-2022</a>	1. Plan and deliver services to increase our contribution to low carbon

<b>Gwybodaeth Ychwanegol: Further Information:</b>	
Ar sail tystiolaeth: Evidence Base:	Decarbonisation strategy
Rhestr Termau: Glossary of Terms:	Within report
Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y Pwyllgor Datblygu Strategol a Chyflenwi Gweithredol: Parties / Committees consulted prior to Strategic Development and Operational Delivery Committee:	Business Executive Team on the 13 <sup>th</sup> of November 2024

<b>Effaith: (rhaid cwblhau) Impact: (must be completed)</b>	
<b>Ariannol / Gwerth am Arian: Financial / Service:</b>	Financial impact included in the report
<b>Ansawdd / Gofal Claf: Quality / Patient Care:</b>	Not applicable
<b>Gweithlu: Workforce:</b>	Will be assessed as part of the project delivery
<b>Risg: Risk:</b>	Will be assessed as part of the project delivery

<b>Cyfreithiol: Legal:</b>	Legal representation will be in place
<b>Enw Da: Reputational:</b>	Communication team to support the programme.
<b>Gyfrinachedd: Privacy:</b>	Not applicable
<b>Cydraddoldeb: Equality:</b>	This will need to considered.