

PWYLLGOR STRATEGAETH A CHYNLLUNIO
STRATEGY & PLANNING COMMITTEE

DYDDIAD Y CYFARFOD: DATE OF MEETING:	24 April 2025
TEITL YR ADRODDIAD: TITLE OF REPORT:	Energy & Carbon programmes of work – New Energy Performance Contract update
CYFARWYDDWR ARWEINIOL: LEAD DIRECTOR:	Andrew Carruthers, Chief Operating Officer Lee Davies, Executive Director of Strategy & Planning
SWYDDOG ADRODD: REPORTING OFFICER:	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 update the Strategy and Planning Committee (SPC) on the planned new Energy Performance Contract and the work being progressed to develop a business case to Welsh Government to secure authority and funding via their established Re:Fit 4 Wales framework (Re:Fit 4) programme, facilitated by Salix Finance.

A report was presented to Strategic Development and Operational Delivery Committee (SDODC) on the 19 December 2024 to provide awareness of the work ongoing on the following programme of works, namely:

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

These developments will ensure that Hywel Dda University Health Board (HDdUHB) continues to work towards its obligations to meet Welsh Government (WG) decarbonisation net zero public sector targets by 2030 and beyond.

The aim of the paper is to provide assurance to the Committee on the EPC project delivery plans and to support a report to be presented at the Board meeting on 29 May 2025, to seek Welsh Government approval of the business case to secure capital funding via the All-Wales Funding Programme. The report will update on the status, set out the scheme outputs, financial and governance arrangements, risk implications and next steps.

The Committee will receive future updates on the Private Wire Solar Farm project near the Prince Philip Hospital (PPH) site and future developments with the Heat Network Efficiency Schemes (HNES), as these schemes are progressed.

Cefndir / Background

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 ended on 31 March 2025, and preparations have been established to manage the transfer of operational and financial responsibility from Centrica to HDdUHB. A report was presented to the Executive Team on 19 March 2025 to update on these arrangements.

In terms of the new EPC approach, the concept remains similar with a 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 previous EPC which benefited from circa £10m WG capital funding because I2S funding is 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 EPC programme is supported by the Refit 4 framework provider Local Partnerships (LP), NHS Wales Shared Services Partnership (NWSSP) 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 conservation measures (ECMs) to be implemented, this with no contract or financial commitment at this stage.

In addition to the Re:Fit 4 programme funding request the Health Board has also submitted a capital grant bid to seek further funding via the HNES. As previously reported to SDODC, this is a UK Government funding scheme targeted at 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. This route has been used to secure significant capital funding for NHS Trusts in England so has proven to be applicable in hospital settings.

HDdUHB appears to be the only Welsh Health Board currently pursuing this source of funding and to date has secured and delivered 3 x £24k grants at Prince Philip (PPH), Bronglais (BGH) and Withybush (WGH) hospitals respectively to develop digital twins of the heating systems and feasibility studies for optimisation of the system. Following the feasibility study for PPH, this HNES approach has supported a capital grant application to UK Government for the PPH site, which was intended to supplement the financial position for the EPC bid.

Asesiad / Assessment

HDdUHB appointed Vital Energi as a partner to deliver a new EPC via a procurement exercise in line with the established Re:Fit 4 framework. This approach is well established, and a route being taken by all the Health Boards in Wales. A subgroup has been established to oversee reporting and to provide contract management oversight, this group is attended by

representatives from across the Health Board, Vital Energi, Local Partnerships and WG Energy Service. In terms of the project status the updated work programme is outlined below:

MILESTONE	TARGET DATE
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 Appraisals (HLA) by the appointed Service Provider	Complete
Submission of Draft Investment Grade Proposal by the appointed Service Provider	Complete
UHB Investment Grade proposal (IGP) review	Ongoing
Strategy and Planning Committee paper	24 April 2025
Local Partnerships and WG Energy Service IGP review	2 May 2025
IGP Sign Off	13 May 2025
Procurement of HDdUHB client side appointments	14 May – August 2025
Public Board paper	29 May 2025
Salix Finance technical review	14 May – 3 June 2025
Welsh Government funding application submission, review and decision	4 June – 6 August 2025
Date of drafting and entering into Works/Optimisation Services (WOS) Agreement	14 May – 8 August 2025
On-site installation works commence	September / October 2025
Works/Optimisation Services completed including all ECMs, agreement of monitoring and verification to verify savings, and Maintenance responsibilities	Targeted completion November 2027

The above programme is being developed by HDdUHB's selected partner Vital Energi but may be subject to change as the project progresses. Note the High-Level Assessment (HLA) has been agreed through review and the current phase includes the development and agreement of the Investment Grade Proposal. The scope of the works was agreed at HLA stage and is targeted at the following estate namely, PPH, BGH, Glangwili General Hospital (GGH), WGH, Hafan Derwen, and Elizabeth Williams Clinic. The works to include Light Emitting Diodes (LED) lighting replacement, heating system upgrades, energy centre and Combined Heat and Power optimisation, air handling unit and chiller fan motor replacements, building management system controls, and insulation, with most works and value focused on PPH and BGH sites.

The current stage is the development and agreement of the Investment Grade Proposal that will inform the business case, and the Welsh Government funding application facilitated by the Salix Finance funding team, established to undertake technical reviews prior to WG review and approval.

IGP overview

The attached IGP report at this stage of reporting is in draft subject to ongoing scrutiny by HDdUHB, LP and WGES representatives prior to the final sign off and submission of the report by Vital Energi by 13th May 2025. **Of note the information presented to this Committee is current but may be subject to variation prior to the Board report submission in May 2025, this following the conclusion of the ongoing scrutiny and agreement of the IGP.**

Vital Energi through the EPC will be committed to deliver on the guaranteed saving of £789k per year generated by each ECM efficiencies, as outlined below. This will be calculated in line with the Measurement and Verification (M&V) plan which is based on agreed unit rates and performance criteria, as agreed in the IGP.

Energy Conservation Measures (ECMs) overview:

- Light fitting replacements. Replacements of old, inefficient light fittings, most of which are no longer manufactured including T5 and T8 models, to more efficient LED light fittings. Fittings with lighting controls will be replaced with controls and fittings with integral emergency light fittings will be replaced with integral emergency fittings.
- Heat distribution system improvements. Pump and valve upgrades are to be undertaken to reduce the electricity and gas consumption of heating and cooling circulation pumps. This will be done by replacing the existing less efficient pump motors with high efficiency, variable speed units, and replacing 3-port valves with 2-port pressure-independent valve configurations.
- Pipework insulation installation. Low temperature hot water distribution pipework, valves and flanges are to be insulated with insulation covers to reduce heat loss.
- Air handling unit fan motor replacements. Replacements of old, inefficient motor models, many of which are belt-driven, to more efficient direct-drive, variable-speed electrocommutative (EC) motors. Connection of these new motors to the building management system to moderate speeds.
- Chiller unit fan motor replacements. Replacements of old, inefficient motor models, many of which are belt-driven, to more efficient direct-drive, variable-speed EC motors. Installation of new fan speed controllers to moderate speeds. This work will have the added benefit of increasing available chiller cooling capacity through improved heat rejection and will increase compressor working life through reduced operation.
- Building management system (BMS) control upgrades and optimisation. The BMS control logic managing the heating and ventilation systems' operation is to be improved to reduce unnecessary heating and cooling. Obsolete BMS controllers will be replaced with the latest models with optimised control logic and will be integrated into the existing head end, and a new central weather station will give accurate temperature measurements.
- Roof insulation installation. Installation of mineral wool roof insulation to reduce heat loss and improve comfort for building occupants.
- Window replacements. Replacements of old, single-glazed windows with unplasticised polyvinyl chloride (uPVC) double-glazed windows with laminated glass.

Summary of ECMs at each site:

- PPH – LED lighting (3,715 new light fittings), heat distribution system improvements (pump upgrades in three plantrooms, valve upgrades in eight plantrooms), pipework insulation (in 15 plant rooms), Electrically Commutated (EC) air handling unit fan motors (56 fans), EC chiller unit fan motors (50 fans), BMS control upgrades and optimisation (in 16 locations), roof insulation (442m²).
- BGH – LED lighting (3,874 new light fittings).
- Hafan Derwen – LED lighting (1,487 new light fittings).
- WGH – EC air handling unit fan motors (40 fans), EC chiller unit fan motors (six fans).
- Elizabeth Williams Clinic – LED lighting (150 new light fittings), pipework insulation (in the plant room), BMS control optimisation (in the plantroom), roof insulation (96m²), double glazing (31 windows).
- GGH – EC chiller unit fan motors (14 fans).

The project performance will be reported and reconciled at each quarter, and agreed at financial year end, this based on performance review of each ECM, reflecting the agreed baseline utility rates, weather adjustments, and downtime responsibilities. Where HDdUHB has caused equipment downtime, this will not form part of the guaranteed payment and a potential risk to the financial position and repayment plans. Of note with the type of ECMs this risk is relatively low, when compared to the previous EPC ECMs.

The advantages to delivering energy and carbon schemes via the EPC model is that there is a transfer of operation risk and financial security afforded by the contract to deliver guaranteed annual financial savings and carbon reductions. In addition, under the current EPC model there is a contractual responsibility for the provider to maintain the operation of the ECMs and cover any costs of any repairs during the contract term.

Furthermore, this funding will also deliver targeted investment in estate infrastructure, reduce backlog, reduce maintenance demand and following the loan repayment term HDdUHB will retain all savings benefits. As an example, the majority of light fittings across the estate are T5 fittings, and the manufacture of these has recently ceased, so replacement with LED efficient lighting is priority for the Health Board and through this funding is a route to address the risk on this project and future phases of Re:fit delivery plans.

Financial, energy and carbon savings 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 funding allocation within the Wales Funding Programme is applicable and will be sought. This award and finance administered by WG with 0% interest on the 10-year loan repayable.

In summary, the project has provided HDdUHB with an established circa £789k saving financial baseline position, this potentially supplemented by underperformance payments from Vital Energi within the contract term. The financial and energy consumption outputs of the IGP are outlined below:

Energy Savings	
Anticipated MWh saving per year	3,342
Anticipated MWh saving over 10-year I2S loan period	33,424
Anticipated MWh saving for the 6 sites in scope	4.00%

Greenhouse Gas Emission Savings

Anticipated tonnes of CO ₂ e saving per year	729
Anticipated tonnes of CO ₂ e saving over 10-year I2S loan period	7,293
Anticipated £/tonne of CO₂e saving	388
Anticipated tonnes of CO₂e saving for the 6 sites in scope's energy	4.66%

It is anticipated that HDdUHB will be bidding for £7,732,757 and target delivery of works over the financial years 2025-26 and 2026-27. As noted above these figures may be subject to small variations following a period of further scrutiny of the business case. The source of funding will be this WG I2S repayable loan funding.

Capital Funding summary:

The Capital funding requirements is summarised in the table below:

Capital Value (£)	
<i>Labour</i>	589,539
<i>Materials</i>	2,058,672
<i>Vital Energi Subcontractors</i>	2,516,154
<i>Design</i>	63,749
<i>Monitoring & Verification</i>	106,249
<i>Vital Energi Re:fit overheads & profit</i>	640,124
<i>Vital Energi Re:fit framework discount</i>	-119,490
<i>Vital Energi Contingency</i>	420,746
Vital Energi costs, ex. VAT	6,275,743
Vital Energi costs, inc. VAT	7,530,891
<i>Recoverable VAT on lighting replacement deducted from above</i>	-708,086
Vital Energi costs, inc. irrecoverable VAT	6,822,805
<i>In-House Design</i>	50,000
<i>Cost Advisor</i>	131,937
<i>Local Partnerships</i>	45,000
<i>Project Management</i>	175,618
<i>Building Services Engineer/Clerk of Works</i>	70,000
<i>CDM/Principal Designer</i>	82,434
<i>Site Operational Team Supervisor Roles</i>	20,000
<i>Fee Schedule Risk Contingency</i>	20,000
<i>Legal</i>	10,000
Internal fees, ex. VAT as recoverable	604,989
<i>Asbestos Surveys & Sampling</i>	20,000
<i>Informatics & Telecommunications</i>	40,000
<i>Other Non-cost Items</i>	20,000
<i>Cleaning</i>	20,000
<i>In-House Direct Labour Assistance</i>	40,000
<i>Other Non-works</i>	20,000
<i>Internal Contingency</i>	94,136
Internal non-works & contingency, ex. VAT	254,136
Internal non-works & contingency, inc. VAT	304,963
Internal costs total, inc. irrecoverable VAT	909,952
Welsh Government I2S loan funding bid value	7,732,757

The above figures include 0% VAT reclaim on the LED lighting replacement, as the current fittings are not being manufactured so classed as replacement not an upgrade. This is a position secured by other Health Boards, but of note remains subject to the Health Boards external VAT Advisor review and confirmation prior to Board. If not secured the IGP will be revised to reflect the changed position.

The projected spend profile is summarised below but may be subject to variation if timescales move but will be agreed prior to the agreement of the works contract:

Projected Spend Profile (£)	
Aug-25	59,107
Sep-25	519,504
Oct-25	799,929
Nov-25	66,759
Dec-25	539,702
Jan-26	533,997
Feb-26	526,883
Mar-26	856,660
Apr-26	1,364,904
May-26	510,171
Jun-26	1,031,229
Jul-26	355,190
Aug-26	224,507
Sep-26	133,623
Oct-26	40,703
Nov-26	169,888
Total	7,732,757

HNES funding overview:

A capital grant bid application has been submitted to the HNES scheme to secure 50% funding on a total scheme value of £1,357,939.35, which equated to £678,833.88. HDdUHB match funding was intended to form part of the I2S funding application, but HDdUHB received notification on the 14 April 2025 from UK Government that the grant bid was unsuccessful, on the grounds that the I2S funding had not yet been secured to provide match funding. Whilst disappointing with the VAT reclaim on the LED lighting, the financial model continues to meet payback criteria.

HDdUHB will explore the option of resubmitting the HNES bid again at next funding round if this WG I2S funding is secured. This to be undertaken in consultation with WG and Salix Funding teams and could improve the loan payback commitments.

Energy and Carbon saving position:

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, at £789k per annum forms the basis of the payback period at circa 10 years. The WG-commissioned Salix team will undertake a technical review to confirm approval and finalise the annual repayment plan across the payback period at 10 years. Also, the scheme will need to achieve or be within an acceptable range of the WG cost per tonne of carbon dioxide equivalent (CO₂e) abated at £350 per tonne, for the scheme to be approved. Whilst the scheme is planned to deliver £388 per tonne this is due to the financial

payback constraints and the focus of electrical biased schemes to achieve financial paybacks. HDdUHB and Vital Energi consider this to be within an acceptable range but this is subject to WG agreement.

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 compares to current EPC arrangements, although the financial arrangements differ in that the new EPC is a repayment loan not a capital funded model.

The following levels of savings are being targeted:

Project Financials	
Anticipated £ saving per year	789,219
Anticipated £ saving over 10-year I2S loan period	7,892,190
Anticipated £ saving for the 6 sites in scope's energy	9.01%
Welsh Government I2S loan	7,732,757
Loan repayments per year	773,276
Loan left to repay after 10 years	-159,433
Anticipated loan repayment timescale, years	9.80

There were no upfront fees to arrange the HLA and IGP development costs to date, but all these fees and future Vital Energi fees to deliver the project across the contract term are captured via the funding envelop alongside the LP, legal and HDdUHB professional fees. The intention is to manage the project via the Discretionary Design Team and appoint and fund the client-side support and in-house team via the capital envelope to support with the delivery of the scheme i.e., Project Manager, Engineering design and supervisor role, Cost Advisor etc. The selection of HDdUHB external teams will be managed via local Procurement via a mini competition, the appointments subject to Board approval.

Of note the capital funding includes a contingency to reflect potential issues of estate infrastructure, examples such as electrical infrastructure affecting lighting replacements, 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 HDdUHB and WG approvals the Health Board will enter into the framework works contract (WOS) and standard NEC contract with the service provider to deliver the schemes, this as a typical capital delivery project delivery plan.

Governance Arrangements

The sub-group established to develop the work packages and oversee contract delivery has been formally incepted under the Strategic Property and Environment Taskforce Group (TFG) governance structure. It has an approved Terms of Reference and appropriate representation. The work of this group is then formally reported as part of the Strategic Property and Environment TFG reporting to the AHMWW Infrastructure Plan Group and the Strategy and Planning Committee. However, direction will be sought on decision making to appoint a Senior Responsible Officer (SRO) and a Programme Director for the project.

Organisation Risks and next steps

- As highlighted above the IGP submission and information summarised within this paper will be subject to ongoing scrutiny by HDdUHB, LP and WGES representatives prior to the final sign off and submission of the report by Vital Energi by 13 May 2025. Any variations will be reflected in the Board report.
- The 0% VAT reclaim of the LED lighting is subject to the Health Board's external VAT advisor's confirmation prior to Board reporting.
- Confirmation of the award of the grant funding bid from HNES is still awaited. If not approved a significant delay in the business case submission and approval process will result.
- The scheme remains subject to the IGP sign off, Board approval, Salix technical review, works contract approval and WG business case approval. WG have been informed of progress and outline funding requirements.
- Utility rates are based on baseline established at tender stage. Energy prices will inevitably change over the 10-year loan repayment term, so there will be some difference between the actual saving and our 'guaranteed' saving as part of our contract with Vital. However over 10 years energy prices are expected to rise so in this scenario savings would be higher. Conversely if energy prices decrease we will be paying more on our loan repayments on 9% of our energy but ultimately paying less on the other 81% of our energy consumption.
- Potential financial risk of HDdUHB causing downtime on the repayment plan. With the type of ECMs the overall risk for failures is much reduced, when compared against the previous EPC project i.e. in most cases the saving will be fixed with low risk of ECM failures during the term e.g. lighting, insulation etc. A robust monitoring and verification process will be established to confirm performance, and any deviation will be closely monitored and reported.
- As noted above the scheme has not met the tonnes of carbon target so WG may ask HDdUHB to review the IGP, although a case will be tabled on the reasons for this deviation.
- A review of resource requirements to manage the contract internally will be undertaken, within Maintenance (during works) and Environment (monitoring and verification for 10-year loan repayment period) teams to ensure that the project delivery is suitably supported.

Welsh Government's Wales Funding Programme invest-to-save funding route for this EPC and the Re:fit framework allow for multiple phases of work over multiple funding rounds. The EPC work discussed in this paper is expected to form a Phase 1, with the potential for a Phase 2 commencing 2027/28. This could include measures such as lighting upgrades at Glangwili and Withybush hospitals and heating system upgrades at Bronglais Hospital.

Argymhelliad / Recommendation

The Committee is asked to:

- **RECEIVE ASSURANCE** from the current project development including the financial and risk status.
- **NOTE** the ongoing scrutiny to finalise the Investment Grade Proposal to support sign off to inform the Board paper for May 2025, and WG business case approval process.
- **NOTE** the further procurement work and approval requirements to appoint the HDdUHB client side support team.
- **RECOMMEND**, for onward ratification by Board on 29 May 2025 the Energy & Carbon programmes of work – New Energy Performance Contract outline.

Amcanion: (rhaid cwblhau) Objectives: (must be completed)	
Committee ToR Reference: Cyfeirnod Cylch Gorchwyl y Pwyllgor:	Strategic Property & Environmental Task Force Group 9reports to AHMWW Infrastructure & Estate Plan Group)
Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol: Datix Risk Register Reference and Score:	1544
Parthau Ansawdd: Domains of Quality Quality and Engagement Act (sharepoint.com)	7. All apply
Galluogwyr Ansawdd: Enablers of Quality: Quality and Engagement Act (sharepoint.com)	3. Data to knowledge
Amcanion Strategol y BIP: UHB Strategic Objectives:	All Strategic Objectives are applicable
Amcanion Cynllunio Planning Objectives	8 Estates plans
Amcanion Llesiant BIP: UHB Well-being Objectives: Hyperlink to HDdUHB Well-being Objectives Annual Report 2021-2022	1. Plan and deliver services to increase our contribution to low carbon

Gwybodaeth Ychwanegol: Further Information:	
Ar sail tystiolaeth: Evidence Base:	REFIT Framework and IGP
Rhestr Termiau: Glossary of Terms:	Contained in the report.
Partion / Pwyllgorau â ymgynhorwyd ymlaen llaw y Pwyllgor Datblygu Strategol a Chyflenwi Gweithredol: Parties / Committees consulted prior to Strategy and Planning Committee:	SDODC / Executive Team / Capital Sub Committee

Effaith: (rhaid cwblhau) Impact: (must be completed)	
Ariannol / Gwerth am Arian: Financial / Service:	Linked to capital and revenue delivery plans

Ansawdd / Gofal Claf: Quality / Patient Care:	Improved quality of service and access.
Gweithlu: Workforce:	Improved quality of workforce environments
Risg: Risk:	Carbon impact, infrastructure and financial.
Cyfreithiol: Legal:	Subject to legal review of contracts.
Enw Da: Reputational:	Links to organisational responsibilities for decarbonisation and the estate performance.
Gyfrinachedd: Privacy:	Works being arranged in patient environments.
Cydraddoldeb: Equality:	Subject to future review but may not be required.