

Report of the Farming Conservation Liaison Officer

Subject: Greening Agriculture Report 2022–2025

Purpose of Report

To provide Members with a review of the work undertaken over the past three years through the Greening Agriculture programme and the Traditional Boundaries Grant. The report outlines key achievements, detailed farm case studies, carbon and biodiversity impacts, and lessons learnt from delivering decarbonisation support to landowners and farms across Pembrokeshire.

Summary Table

Milk Producers Supported	9 (covering 2,039 ha) including 2 trial farms
Carbon Reduction	14+ million liters of milk decarbonised annually
Solar Power Installed	72 kW
Battery Storage Installed	100.4 kWh
Efficiency Enhancements	4 Heat Recovery Units, 2 Vacuum on Demand systems

Background

To date PCNPA have aided the decarbonisation of 9 milk producers within the Park, influencing an area of 2,039 hectares. The work funded has reduced the carbon footprint of over 14 million litres of milk on an annual basis. The fund has contributed to the installation of 72 kW of solar power and 100.4 kWh of battery storage. Other efficiency enhancements have included 4 Heat Recovery Units and 2 Vacuum on Demand systems.

Activity Undertaken

Over the reporting period (2022–2025), PCNPA supported both farm-based energy efficiency and renewable energy projects, alongside boundary restoration work to enhance carbon sequestration and biodiversity. Key achievements include:

- 5,663m of new hedgerows planted (~39,641 whips at 7/m).
- 1,282m of hedgerows laid and 7,329m of protective fencing installed.

- 8 dairy farm projects supported with renewable energy systems and efficiency upgrades.
- Estimated carbon savings exceeding 100,000 kWh per year from farm projects.
- Strengthened biodiversity and connectivity through wildlife corridors.
- Generated high levels of interest, with over 60 enquiries to the Traditional Boundaries scheme.

Greening Agriculture Farms

The following case studies provide detailed farm background, project details, feedback, and highlighted testimonials, showcasing the impact of the programme.

Court Farm, Castlemartin

Farm Background:

Court Farm is a 220-hectare spring-calving dairy farm run by William McFarland. The farm milks 380 Friesian cross cows on a grass-based system, focusing on soil health and sustainable grass management. William is a first-generation farmer operating under a 20-year tenancy.

Project Details:

With PCNPA support, Court Farm installed a heat recovery system that captures waste heat from milk cooling fans. This heats water from 5°C to 65°C, saving ~16,425 kWh annually and reducing reliance on electricity for parlour and tank cleaning.

Feedback:

The project has delivered substantial cost savings and efficiency improvements. The grant was essential, enabling the farm to adopt technology that would otherwise have been financially out of reach.

“The heat recovery system has transformed our water heating — saving energy, lowering costs, and helping us meet our sustainability goals.”

— William McFarland, Court Farm



Caerfai Farm, St Davids

Farm Background:

Caerfai Farm operates a highly diversified organic enterprise, including dairy production, cheese processing, cottages, a campsite, and EV charging. The farm has long invested in renewable energy, including solar PV and wind generation, supplying its own mini-grid.



Project Details:

Funding supported the installation of a 50 kWh battery system, enabling stored renewable energy to be used after sunset. This powers the robotic milking system, cottages, campsite, and cheese pasteuriser, improving energy independence.

Feedback:

The farmers reported significant reductions in costs and greater stability in energy bills. Challenges included infrastructure capacity, which required relocating the batteries, causing minor losses. In hindsight, they would have opted for even greater capacity to meet demand.

“A way of producing renewables and using them after the sun goes down. A full battery means power can be used until 9:30 pm, which is handy with the robots. It supplies not only the farm but also the cottages, campsite, and pasteuriser for cheese.”

— Caerfai Farm

Clerkenhill Farm, Slebech

Farm Background:

Clerkenhill Farm runs a herd of 210 British Friesian cows with 80 followers, plus 60 beef cattle. The farm also operates an adventure park and educational visitor facilities, combining farming with public engagement. Conservation and low-input grazing practices are central to the business.

Project Details:

The project installed a 19 kW solar array with 17.4 kW of battery storage. This complements investments in water harvesting, energy-efficient lighting, GPS spreading, and plate coolers, reducing grid reliance across both farm and adventure park operations.

Feedback:

The family emphasised that the system not only reduces costs but also demonstrates their sustainability commitment to thousands of visitors each year. The project represents the next step in their environmental journey.

“The solar and battery system is the next step in our sustainability journey, supporting both the farm and our visitor-facing activities.”

— Clerkenhill Farm



Pearson Farm, St Brides

Farm Background:

Pearson Farm manages 300 pedigree Holsteins alongside potatoes, barley, and maize. Robotic milking, modern animal housing, and a focus on cow health underpin the farm's operation. Sustainability is a key driver, with wind, solar, and energy recovery already in use.

Project Details:

Supported the installation of a 53 kW solar PV system with 33 kWh battery storage, complementing an existing 20 kW wind



turbine and heat recovery system. Combined, these generate ~75,000 kWh annually, significantly cutting grid demand.

Feedback:

Feedback showed high satisfaction with reduced and stabilised costs. Planning permission proved a barrier, and the farmers noted they would mount panels directly on sheds in future to simplify connections.

“Between wind and solar, it’s the ideal combo for reducing our carbon footprint over the whole farm.”

— Pearson Farm

Tedion Farm

Farm Background:

Tedion Farm operates a block-calving dairy system. The farm had been exploring parlour upgrades but was constrained by costs and competing investment needs due to water pollution regulations.

Project Details:

Funding enabled installation of a Variable Output Drive (VOD) vacuum pump and a heat exchanger system. These upgrades improved energy efficiency and hot water supply, though required coordination of multiple trades and infrastructure modifications.

Feedback:

The farmers highlighted strong carbon and cost savings, but noted moderate satisfaction due to project complexity and delays. They later added a hot water tank and, in hindsight, would have built this in from the outset.

“We are grateful for the support from PCNPA throughout the process to enable us to move forward and modernise at a difficult time where other aspects of the farm business were being prioritised due to the new water pollution regulations being enforced.”

— Tedion Farm

Lower Broadmoor Farm, Talbenny

Farm Background:

Lower Broadmoor Farm is a family-run dairy enterprise with significant hot water demand for parlour and tank cleaning. Prior to support, heating water was a major driver of high energy use and emissions.

Project Details:

The project funded a refrigerant heat recovery system and digital control panels, using waste heat from refrigeration units. The system is expected to save over 40,000 kWh annually, reducing costs and emissions.

Feedback:

The system has delivered noticeable reductions in electricity demand and operating costs, while improving control and efficiency in hot water provision.

“The new system has made a noticeable difference in reducing electricity demand, lowering both costs and emissions.”

— Lower Broadmoor Farm



Penrallt Ddu, Pontfaen

Farm Background:

Penrallt Ddu is a family dairy farm where most milking occurs during dark winter evenings, limiting the usefulness of existing solar generation. Improving energy efficiency was therefore essential.

Project Details:

The farm upgraded to a Lobe-type VOD vacuum pump, a larger double bank plate cooler, and a 500L heat recovery system. These upgrades reduced refrigeration load, improved cooling efficiency, and provided large hot water savings.

Feedback:

The upgrades led to lower energy costs, improved efficiency, and greater sustainability across the milking process.

“The upgrades have lowered our electricity bills and made the milking process more efficient.”

— Penrallt Ddu



Traditional Boundaries Projects

Across the three years, Traditional Boundaries projects supported 30+ holdings, planting 5,663m of hedgerows (~39,641 whips at 7/m), laying 1,282m, and protecting 7,329m with fencing. The scheme has restored habitats, created wildlife corridors, and maintained Pembrokeshire's traditional landscape character. £22,558 was awarded in 2022/23, £25,273 in 2023/24, and £28,368 in 2024/25 for Traditional Boundaries. Farm projects received individual awards ranging from £150 to £3,500.



Hedge Near Portclew- 150m of Planting- 300m of Protective Fencing- In recent history this hedge had been left unfenced and as a result it had been grazed out by sheep. The newly Planted hedge is adjacent to a bridleway and an area of ancient woodland.



Hedge near Cas Fwch - 95m of Hedgerow Planting - 190m of Protective fencing

In addition to the hedging whips we were able to support the landowners ambition of creating a wider 4m wildlife corridor through the funding of 2m +trees. These included Wych Elm, Wild Crab Cherry and Peach, Field Maple Rowan Sessile Oak, Downy birch Hornbeam and Lime. All though a small hedge it acts as a vital connection from the nearby Heathland Common and Rhos pasture.

Risk Considerations

Risks included weather delays affecting hedge planting, planning constraints for renewable energy systems, and coordination challenges in complex farm infrastructure projects. Despite these risks, all projects were successfully progressed, with some deferred works planned for 2024/25.

Compliance

The programme contributes directly to PCNPA's well-being objectives, Wales' Net Zero targets, and commitments under the Environment (Wales) Act 2016. It supports

Prosperity for All – A Low Carbon Wales (2019) and aligns with Net Zero Wales Carbon Budget 2 (2021–25).

Biodiversity Implications/Sustainability Appraisal

The Traditional Boundaries Grant delivered positive outcomes for biodiversity by restoring hedges, creating wildlife corridors, and planting native species. These measures enhance habitats for pollinators, birds, and small mammals. Energy efficiency measures in dairy farms also support broader sustainability goals.

Welsh Language

Engagement activities for the Traditional Boundaries and Greening Agriculture programmes complied with Welsh Language Standards, including bilingual communications and promotional material.

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