Report No. 09/23

Sustainable Development Fund Committee

Report of Farming Conservation Officer

Subject: Greening Agriculture: Applications for Consideration

Purpose of Report
Members are requested to review the top 4 prioritised applications and come to a decision in respect of the requests for grant funding.

Background
As advertised, an expression of interest window closed at the end of April 2023. Four formal expressions were made, and all applications have been scored using the following matrix to establish Priority.

Priority matrix (20 marks Available)	
Location (5)	
Within the NP Boundary	5
Partial (More than 50%)	3
Partial (Less than 50%)	1
Detail in Application (4)	
Detail of project and how it benefits fits the business along with details of capital.	4
Detail of project and how it benefits the businesses without details of capital.	3
Details of Capital Expenditure	2
Listed Capital Expenditure no Details	1
Public Connection (3)	
Direct Sale of Public Goods	3
Public connection - Holiday Let, tourist attraction etc.	2
No direct Public Connection	0
Quoted Capital Expenditure (5)	
Priced Quote	5
Detailed approximation	3
Approximation without Detail	1
No pricing	0

Carbon Audit (1)	
Has Audit	1
Has no Audit	0
Value For Money (2)	
Multiple aspects	2
One Aspect	1

Below outlines a brief description of all 4 enterprises and their intended projects and proposed expenditure.

Reference	Farm Name	Applied for	Cost	Score
GA23/CLE	Clerkenhill Farm Slebech, Haverfordwest	Solar system (19kw) - with 17.4kw Battery Storage Heat recovery system	£31261.59 £6989	16

Clerkenhill Farm, a family-operated establishment known for its commitment to sustainable practices and diversification efforts. The farm's integration of agricultural operations with an adventure park, ecological considerations, and innovative farming techniques showcases a forward-thinking approach to modern farming.

The farm has recently acquired an additional 42.5 hectares of land, including 4.05 hectares of woodland, within the National Parks. This expansion brings the total area owned by the farm within the National Parks to 62.74 hectares, with an additional 18 hectares rented.

The farm's dynamic operations encompass both agriculture and an adventure park. With a herd of 210 British Friesian cows and 80 followers, Clerkenhill Farm engages in responsible dairy production. Additionally, the farm manages a herd of 60 female beef cattle, including Friesian and Hereford crossbreeds. The farm employs a grazing system focused on low-cost, low-concentrate, and low-fertilizer practices. The cows graze for 8 months a year using a back-fenced paddock system. To minimize carbon emissions, the farm utilizes direct drilling and energy-efficient equipment for activities such as silage collection and fertilization including GPS guidance. The farm embraces technology to enhance animal welfare and operational efficiency. Cows are equipped with collars connected to a computer system that optimizes feeding accuracy, heat detection, and overall well-being. Covered yards have been introduced to improve animal welfare and reduce rainwater entering the slurry store. Their commitment extends to conservation efforts, with well-maintained streams, ponds, and hedges fostering a diverse and vibrant ecosystem. The farm's diversification into an adventure park since 2002 showcases a proactive approach to education and public engagement. Features like an educational trail, milking viewing gallery, and farm tours offer valuable insights into farming practices, sustainability, and local collaboration. The farm leverages social media, particularly Instagram (under the name "Sisters in Wellies"), to connect, educate, and influence followers about farm life, animal welfare, and sustainable practices. The enterprise at

Clerkenhill has already invested in water harvesting to conserve water usage and a new Variable speed pump, Plate cool and low energy automatic lights to lower energy consumption along with the use of solar powered electric fences. Clerkenhill believe that next steps to lowering their carbon output are to invest in a solar and battery system and upgrade their heat recovery system.

Reference	Farm Name	Applied for	Cost	Score
GA23/HAF	Hafod Grove, Moylegrove	Solar system	£20,000	13

Hafod Grove Farm is an agricultural establishment situated near Moylegrove. The farm's approach to dairy production, crop cultivation, and sustainable energy initiatives is highlighted, showcasing their commitment to both traditional values and modern sustainability. Hafod Grove 147 hectares, though traditionally an organic dairy farm, market pressures prompted a shift to conventional farming practices while still maintaining a strong organic ethos. This balance reflects the farm's adaptive approach to meet both economic and ethical considerations. The farm's dairy operations revolve around a herd of 240 cows, including a mix of Jersey, Freisian, and Montbéliarde cattle. Their year-round calving schedule reflects their commitment to consistent milk production. They rear their own replacements and select crossbred calves. The farm places a strong emphasis on self-sufficiency. The cultivation of crops to feed their cattle is a testament to this commitment. This integrated approach ensures feed quality and supports the farm's overall sustainability goals. They have made significant investments in enhancing cow housing to align with environmentally conscious practices. By focusing on both eco-friendliness and cow comfort. Hafod Grove Farm's commitment to sustainable practices extends to slurry management. An aeration system has been implemented, maintaining slurry in a mixed and aerobic state rather than an anaerobic one. This innovative system benefits soil health and reduces odours by an impressive 75%, showcasing the farm's proactive approach to responsible waste management. The farm currently operates a 37kW solar system, a step towards embracing sustainable energy sources. With an eye toward improving their energy efficiency, Hafod Grove Farm plans to expand this solar system. This expansion is geared towards reducing energy costs related to the slurry aeration system, illustrating their dedication to innovative energy solutions. While upgrading their parlour in favour of a rotary that will consume half as much energy. In expanding the Solar System and adding batteries the slurry aeration system could be fully off-grid.

Reference	Farm Name	Applied for	Cost	Score
GA23/PEA	Pearson farm St Brides	Solar system (53kw) -with 33.kwh Battery Storage	£60,078.93	15

Pearson Farm operates a dairy system centred around 300 pedigree Holstein cows, producing an average of 12,000 Liters of milk per year. A recent focus on cow health is evidenced by adaptations in animal housing, optimizing airflow to regulate temperatures and foster a comfortable environment for the livestock. Incorporating modern technology, Pearson Farm employs 5 milking robots, streamlining the milking process and enhancing overall operational efficiency. This not only boosts productivity but also underscores the farm's commitment to combining innovation with traditional practices. In addition to dairy production, Pearson Farm manages a diversified farming enterprise encompassing the cultivation of potatoes, barley, and maize. This holistic approach to agriculture maximizes land use and reflects the farm's commitment to sustainable and balanced farming practices. The farm's potato enterprise takes an active stance on environmental responsibility. Comprehensive carbon audits are conducted for both salad and main potatoes, highlighting Pearson Farm's dedication to minimizing its carbon footprint and adopting sustainable practices. The farm's 20 kW wind turbine significantly contributes to offsetting the annual energy usage of 250,000 kWh, demonstrating their proactive approach to renewable energy integration. Building on its existing sustainability efforts, Pearson Farm has successfully implemented a new heat recovery system. With aspirations to further enhance cost savings and environmental impact reduction, the farm is exploring the installation of ground-mounted solar PV panels.

Reference	Farm Name	Applied for	Cost	Score
GA23/TED	Tedion Farm, Lawrenny	New Lobe Vacuum Pump with VOD Or VOD for existing Pumps Upgraded Heat Recovery System	£13000 £4670 £9000	14

Tedion Farm, a unique agricultural establishment situated near Lawrenny on the boundary of the National Park. The farm combines responsible land management, dairy production, organic practices, and sustainable energy initiatives. Spanning across 130 hectares of productive land, the farm holds the responsibility of safeguarding an extensive Site of Special Scientific Interest (SSSI). The farm's core dairy production involves the management of a herd of 270 crossbred cows following a spring calving system. Tedion Farm has a distinct emphasis on self-sufficiency, aiming to maximize production from their homegrown forage resources. Their dedication to sustainable practices is exemplified by their adherence to an organic ethos, having proudly held organic certification for over a decade. Tedion Farm has already embraced sustainable energy practices through the installation of solar photovoltaic (PV) panels. These panels harness solar energy to contribute to the farm's power needs, reducing its reliance on conventional energy sources. This move not only reflects their environmental consciousness but also supports long-

term cost savings. With an ongoing commitment to sustainability, Tedion Farm is actively exploring additional avenues for energy efficiency. By investing in energy-efficient technologies and practices, the farm aims to further reduce its carbon footprint. Their investment in a foliar feeding system is a notable step towards minimizing artificial fertilizer usage by an impressive 40%. This innovative approach not only enhances the farm's environmental stewardship but also showcases their willingness to adopt cutting-edge techniques. Tedion is now looking at ways to improve the efficiency of their milking system after consultation with their engineer he has advised that the 2 principal ways of improving efficiency and cutting down on water an energy usage are to install a New Vacuum pump with VOD control and an upgraded heat exchange system.