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CAFRE Hill Farm Centre

Research & Innovation in Practice

Gary Haslem
Head of Sustainable Land Management, CAFRE

DAERA
Department of Agriculture, Environment and Rural Affairs
www.daera-ni.gov.uk

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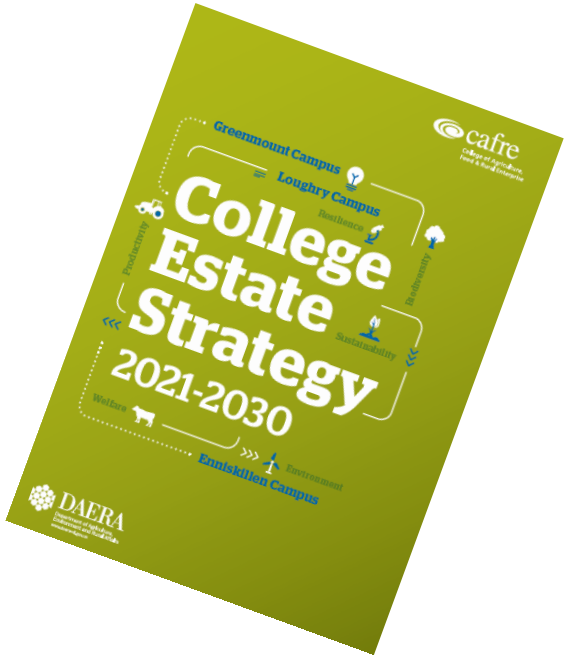
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- A Division within Northern Irelands Department of Agriculture, Environment and Rural Affairs.
- Northern Irelands Land Based College – Three Campuses.
- 1360ha teaching and demonstration platform showcasing innovations to help farmers and growers thrive sustainably.
- Education programmes ranging from Awards and Certificates up to Masters Degree in Agriculture, Agri-Business, Agricultural Engineering, Equine, Food, Horticulture and Veterinary Nursing.
- Advisory, Knowledge Transfer and Innovation Programme delivery, driving the uptake of DAERA Agricultural Policy.

CAFRE Farm Enterprises Demonstrate….

Agriculture and Environment





Practical integration of sustainable practices into profitable, commercially viable farm enterprises

CAFRE Estate Strategy Targets

2021 - 2030

1. CAFRE to be 50% Carbon Neutral by 2030
2. Eliminate the use of peat in horticulture by 2025
3. CAFRE air quality to not impact on local habitats and health by 2030
4. Reduce anti microbial usage by 95% by 2030
5. CAFRE water to be of "Good" quality status by 2030
6. CAFRE productive land to be in "Good" soil health status by 2030
7. Eliminate CAFRE land fill waste by 2025
8. CAFRE habitats to be in favourable condition by 2030



CAFRE Innovation – What's it about?

Environmental Sustainability



'To identify and investigate innovations that improve the uptake of DAERA Agricultural Policy priorities, demonstrate these on the CAFRE farms and transfer the knowledge around implementation through our KT and Education programmes.'

Improved Resilience



Enhanced Productivity



Effective Supply Chain



Context

In Northern Ireland 459,065 ha (44%) is classified in the same category as the CAFRE Hill Farm (SDA)*

In ROI 1.4 million ha is classified as upland (above 500 feet) with 0.5m ha of this land being peat soils**



Peatlands cover almost ¼ of Northern Ireland (243,000ha)

Over 10,000 farms consist mainly of SDA land in Northern Ireland*

* DAERA Economics and Statistics
** The Soils of Ireland

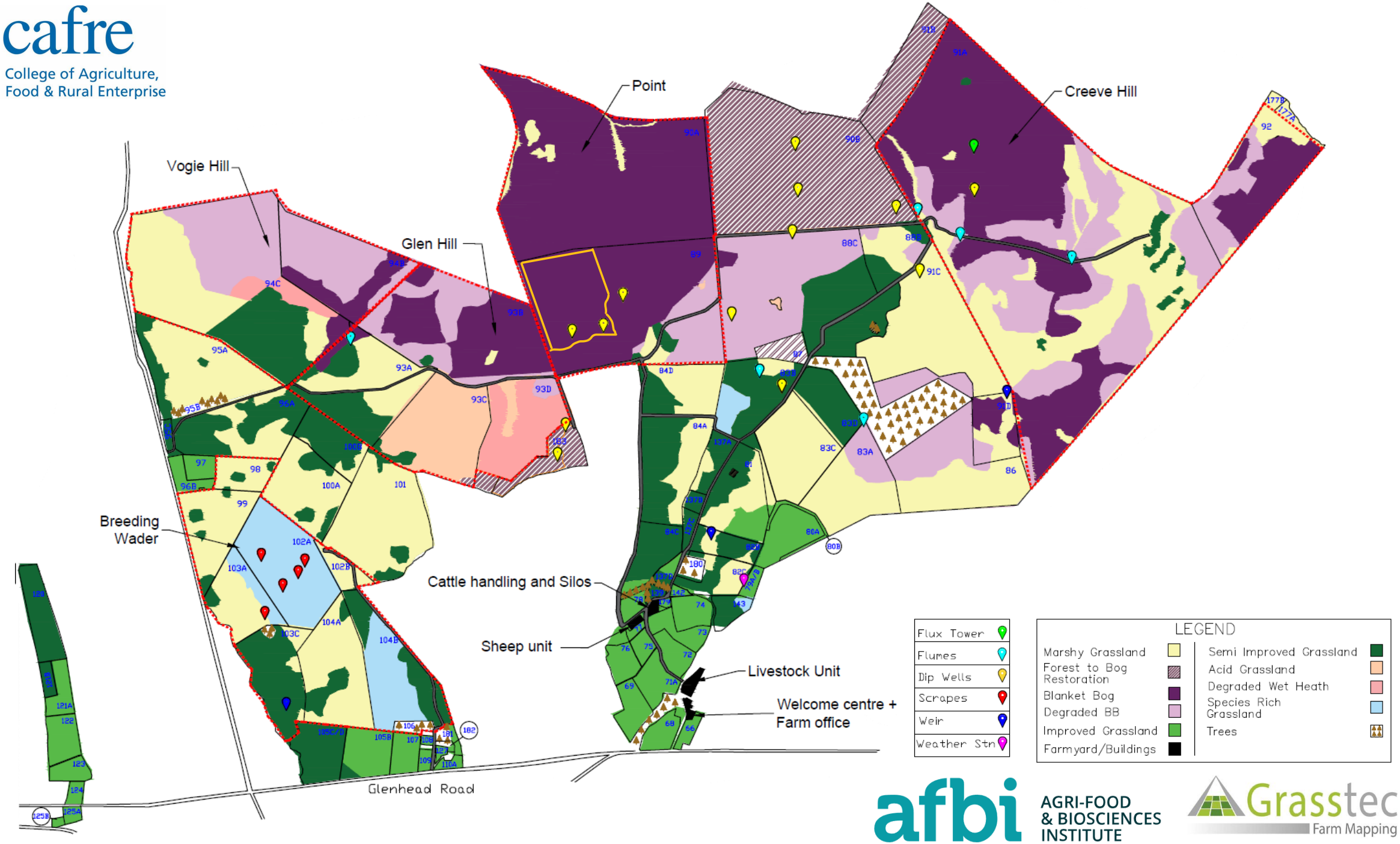
The CAFRE Hill Farm Centre





- 960 ha ranging from 600 – 1000 feet above sea level
- Set within the Antrim Hills SPA (Special Protection Area) for Hen Harrier & Merlin
- 450ha of semi-improved, unimproved, & species rich grasslands
- 450ha of blanket bog, degraded bog, rough moorland
- 5% is in bye land. Ryegrass swards for winter fodder.
- 100 suckler cows – 3 way breed cross Limousin, Angus, Shorthorn.
- 1100 ewes.

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afbi
AGRI-FOOD & BIOSCIENCES INSTITUTE

Grasstec
Farm Mapping

Hill Farms and Uplands - Complexity

- What habitat are we trying to maintain?
- Why is it there?
- What has resulted in degradation of this habitat?
- What is the sustainable way forward?
- How can livestock deliver the required outcome?
- How can we demonstrate activity to industry?
- How do we measure, and receive credit for, outcome?







OUTCOME Vs ACTIVITY

Glenwherry Hills Regeneration Partnership

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The Irish Grouse Conservation Trust

rspb giving nature a home Northern Ireland

NIEA Northern Ireland Environment Agency
www.ni-environment.gov.uk

afbi AGRI-FOOD & BIOSCIENCES INSTITUTE

Department of Agriculture, Environment and Rural Affairs

QUEEN'S UNIVERSITY BELFAST
EST 1845



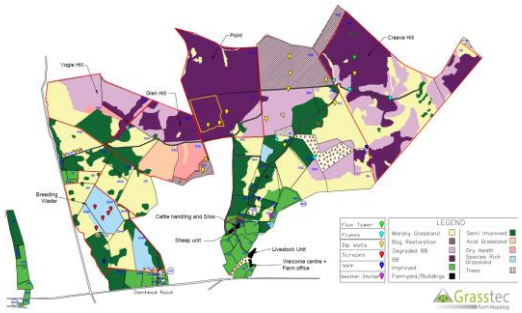
Hill Farm Enterprise – Key Developments

- Peatland restoration work at the old 68ha forestry site has been completed.
- Innovations to manage water table on blanket bog -12ha plot.
- Carbon flux tower (CO2 exchange) and five flumes in operation.
- CAFRE Deep Carbon Coring data.
- Habitat types mapped across Hill Farm.











Hill Farm Enterprise – Key Developments cont.

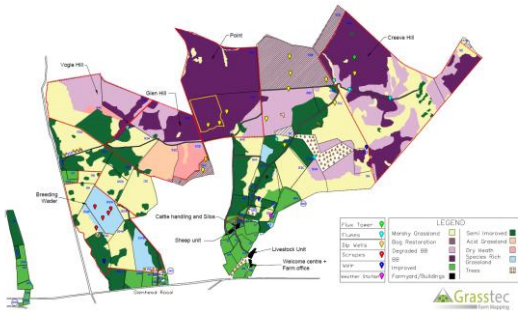
- Industry Advisory Group Established –
  - *Continuous industry consultation*
- 160ha Creeve Moor plan under development
- Continued refinement of wildfire action plan with Northern Ireland Fire and Rescue Service.
- Ongoing animal health planning and genotyping
- 25 cows out wintered using virtual fencing technology.











Additional benefits of outwintering

- Improved habitat for breeding waders
- Outwintering of 25 cows reduces ammonia emissions by 0.22 tonnes per year (16% reduction)
- Saves 180 tonnes of silage.
- Reduces slurry storage and spreading requirement by 127m3 (28,000 gallons)
- Fitter, better tempered cows



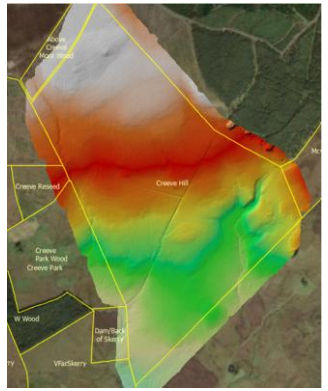


CAFRE HFC Headline Objectives for 2026/27

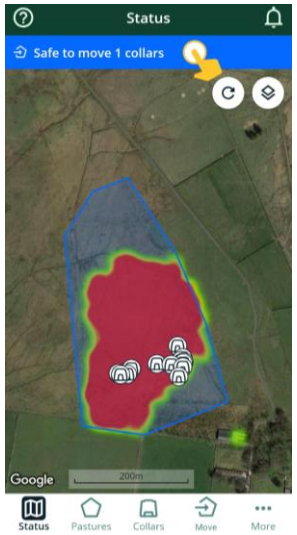


- ***Continue to manage efficient and profitable livestock enterprises.***

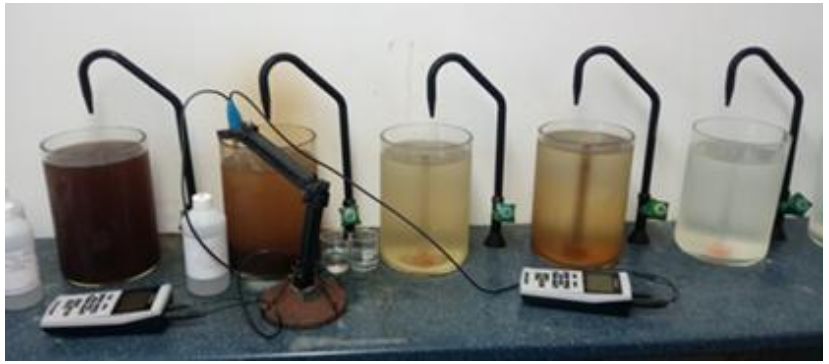
- Restoration plan development for the Creeve Moor in collaboration with RSPB and Ulster Wildlife and establish monitoring & evaluation.
- Carbon coring project reporting will add metrics to the overall understanding of the role of our uplands in GHG emissions reduction.
- Continue with infrastructural investment for habitat and climate research.
- Commencement of AFBI led habitat management research project



Demonstration of Hill Farm *Outcomes*



- Livestock productivity is a given.
- Habitat – Biodiversity.
- Carbon Sequestration.
- Flood alleviation.
- Water quality – ground water *and* drinking water treatment (dissolved organic carbon).







In Ireland and the United Kingdom, approximately 85% of the drinking water is sourced directly from peatlands*

*UCD Peat Hub Ireland

Conclusion

The ultimate aim is to keep carbon in the hill and add to the storage of carbon whilst creating habitat for a diverse range of plant, insect and animal species.

Efficient, productive livestock are key to helping deliver this.

Thank you for listening