

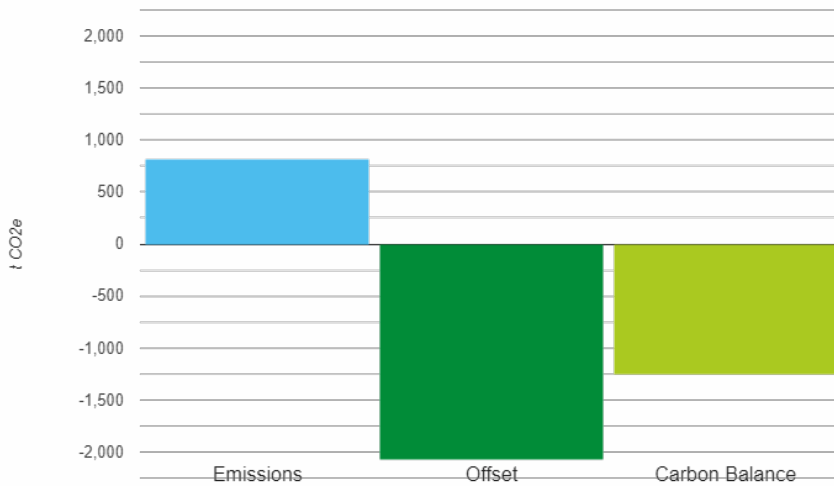


# Farm Carbon Calculator

**Hendwr 20 Sep 2020**

## Summary

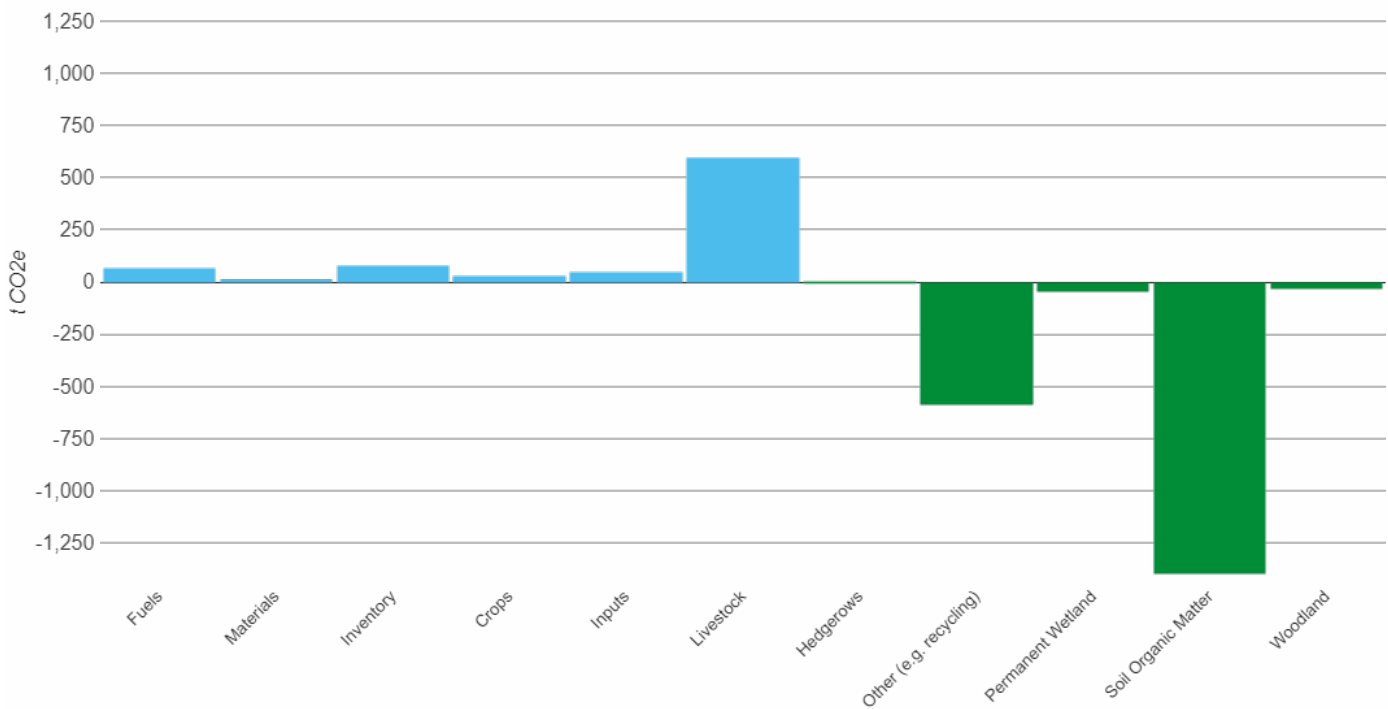
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**-1,254.02**

**tonnes CO<sub>2</sub>e per year**

**Sequestered**



**Carbon Balance: -1,254.02 tonnes CO<sub>2</sub>e per year**

**Carbon Balance per hectare:**

**-3.10**

tonnes CO<sub>2</sub>e/hectare/year

**Carbon Balance per tonne of product:**

**-39.6841**

tonnes CO<sub>2</sub>e/tonne of product

**Fuel per hectare:**

**0.1595**

tonnes CO<sub>2</sub>e/hectare from fuel

**Fertiliser emissions:**

**0.1106**

tonnes CO<sub>2</sub>e per ha from fertilisers

**Water:**

**11.3924**

m<sup>3</sup> water per tonne of product

**Carbon Income:**

**£0.00**

carbon income (£)

<b>Emissions</b>	<b>tonnes CO<sub>2</sub>e</b>	<b>%</b>
Fuels	64.43	7.90%
Materials	11.18	1.37%
Inventory	75.18	9.22%
Crops	27.29	3.34%
Inputs	44.78	5.49%
Livestock	592.93	72.68%
<b>Total</b>	<b>815.78</b>	<b>100%</b>

<b>Offset</b>	<b>tonnes CO<sub>2</sub>e</b>	<b>%</b>
Hedgerows	-4.62	0.22%
Other (E.G. Recycling)	-589.31	28.47%
Permanent Wetland	-45.00	2.17%
Soil Organic Matter	-1,400.43	67.66%
Woodland	-30.44	1.47%
<b>Total</b>	<b>-2,069.80</b>	<b>100%</b>

Farm details

**Business name** Hendwr

**Soil Type**

Medium loam

**Date of report** 20-09-2020

**Annual sales of all produce sold (tonnes)**

31.60

**Farm area (hectares)**

Cultivated	0
Grass	404
Non-cropping	
<b>Total</b>	<b>404</b>

## Detailed Summary

Category	Item	tonnes CO <sub>2</sub> e	% total emissions
Fuels			
	Liquid fuels	54.26	6.65%
	Contractors	10.17	1.25%
	<b>Total</b>	<b>64.43</b>	<b>7.90%</b>
Fuels - Offsets			
	Electricity	-554.68	26.80%
	<b>Total</b>	<b>-554.68</b>	<b>26.80%</b>

## Materials

<b>Fencing</b>	<b>8.59</b>	<b>1.05%</b>
<b>Consumables</b>	<b>1.33</b>	<b>0.16%</b>
<b>Water systems</b>	<b>0.96</b>	<b>0.12%</b>
<b>Tyres</b>	<b>0.29</b>	<b>0.03%</b>
<b>Office</b>	<b>0.01</b>	<b>0.00%</b>
<b>Total</b>	<b>11.18</b>	<b>1.37%</b>

## Inventory

<b>Solar Panels</b>	<b>74.52</b>	<b>9.13%</b>
<b>Agricultural buildings</b>	<b>0.31</b>	<b>0.04%</b>
<b>Implements (by weight)</b>	<b>0.25</b>	<b>0.03%</b>
<b>Fuel Tanks</b>	<b>0.10</b>	<b>0.01%</b>
<b>Total</b>	<b>75.18</b>	<b>9.22%</b>

## Crops

<b>Anaerobic Digestion plants</b>	<b>27.29</b>	<b>3.34%</b>
<b>Total</b>	<b>27.29</b>	<b>3.34%</b>

## Inputs

<b>Fertiliser</b>	<b>44.70</b>	<b>5.48%</b>
<b>Sprays</b>	<b>0.08</b>	<b>0.01%</b>
<b>Total</b>	<b>44.78</b>	<b>5.49%</b>

## Livestock

<b>Ewes</b>	<b>349.17</b>	<b>42.80%</b>
<b>Lambs</b>	<b>104.08</b>	<b>12.76%</b>
<b>Beef cows</b>	<b>62.08</b>	<b>7.61%</b>
<b>Beef females for slaughter</b>	<b>52.59</b>	<b>6.45%</b>
<b>Rams</b>	<b>22.27</b>	<b>2.73%</b>
<b>Bulls for breeding</b>	<b>2.62</b>	<b>0.32%</b>
<b>Feed blends</b>	<b>0.13</b>	<b>0.02%</b>
<b>Total</b>	<b>592.93</b>	<b>72.68%</b>

## Waste

<b>Plastics</b>	<b>0.00</b>	<b>0.00%</b>
<b>Batteries</b>	<b>0.00</b>	<b>0.00%</b>
<b>Tyres</b>	<b>0.00</b>	<b>0.00%</b>
<b>Scrap metal</b>	<b>0.00</b>	<b>0.00%</b>

## Waste - Offsets

<b>Scrap metal (Recycling)</b>	<b>-32.19</b>	<b>1.56%</b>
<b>Plastics (Recycling)</b>	<b>-2.35</b>	<b>0.11%</b>
<b>Tyres (Recycling)</b>	<b>-0.06</b>	<b>0.00%</b>
<b>Batteries (Recycling)</b>	<b>-0.02</b>	<b>0.00%</b>
<b>Total</b>	<b>-34.63</b>	<b>1.67%</b>

## Sequestration

<b>Soil Organic Matter</b>	<b>-1,400.43</b>	<b>67.66%</b>
<b>Permanent Wetland</b>	<b>-45.00</b>	<b>2.17%</b>
<b>Woodland</b>	<b>-30.44</b>	<b>1.47%</b>
<b>Hedgerows</b>	<b>-4.62</b>	<b>0.22%</b>
<b>Total</b>	<b>-1,480.49</b>	<b>71.53%</b>

## SOM Inventory

### Mountain

Year	2019	2020
SOM (%)	18	18.1

### Lowland





Year	2019	2020
SOM (%)	12	12.2

## Full Data







## Fuels

### Contractors





Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Red diesel - contractors	3,000 litres	10.17	15.79%	  	

### Liquid fuels

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Red diesel	16,000 litres	54.26	84.21%	  	









## Fuels - Offsets

### Electricity




Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Electricity exported to grid	1,752,000 kWh	-554.68	100.00%	  	

## Materials







### Agricultural consumables

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
LDPE bale wrap	500 kg	1.30	11.63%	  	
Polypropylene twine	10 kg	0.03	0.31%	  	





### Complete fencing

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Stock net + 2 strands HT wire	3,000 metres	7.69	68.83%	  	




## Electric fence posts

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Metal posts	300 posts	0.41	3.70%	  	
Plastic posts	300 posts	0.48	4.33%	  	




## Office

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Paper	2 reams (500 sheets)	0.01	0.07%	  	





## Pipes

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
MDPE 25mm diameter	2,000 metres	0.96	8.59%	  	




## Tyres

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Rubber tyres by weight	100 kg	0.29	2.55%	  	





## Inventory

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Combi Clamp	1 tonnes of metal	0.25	0.33%	  	









### Agricultural buildings - Custom build

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Feed Bins	20 m2	0.31	0.41%	  	

### Fuel Tanks





Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Agricultural consumables - General plastic	300 kg	0.10	0.13%	  	

### Solar Panels

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Solar PV - Aluminium rails	100 tonnes	66.70	88.73%	  	
Solar PV - Solar panels	376 m2	7.82	10.40%	  	

## Crops

### Anaerobic Digestion plants




Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Running of an AD plant	255 tonnes (biowaste)	27.29	100.00%	  	

## Inputs

























### Average

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
NPK 15-15-15	30 tonnes of product	44.70	99.81%	  	




### Sprays

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Herbicide	4 kg of active ingredient	0.08	0.19%	  	

## Livestock

Description	Usage	tonnes CO <sub>2</sub> e	%	GWP* Difference (tonnes CO <sub>2</sub> e)	Confidence	Link
Beef cows	25 head	62.08	10.47%	-26.21	  	
Beef females for slaughter	48 head	52.59	8.87%	-17.49	  	
Bulls for breeding	1 head	2.62	0.44%	0.00	  	
Ewes	1,560 head	349.17	58.89%	37.52	  	
Lambs	1,087 head	104.08	17.55%	6.82	  	
Rams	89 head	22.27	3.76%	0.20	  	

### Feed blends

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
18% Fibre blend	132 tonnes	0.13	0.02%	  	

## Waste - Offsets

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Scrap metal	9 tonnes	-32.19	92.97%	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<a href="#">🔗</a>
Tyres	0 tonnes	-0.06	0.18%	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<a href="#">🔗</a>

### Batteries (Recycling)

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Vehicle	0 tonnes	-0.02	0.06%	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<a href="#">🔗</a>

### Plastics (Recycling)

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Average	0 tonnes	-0.05	0.15%	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<a href="#">🔗</a>
HDPE	2 tonnes	-2.30	6.64%	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<a href="#">🔗</a>

## Sequestration

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Permanent Wetland	30.00 hectares	-45.00	3.04%	<span>✓</span> <span>✓</span> <span>✓</span>	<a href="#">🔗</a>
Soil Organic Matter	370.00 hectares	-1,400.43	94.59%	<span>✓</span> <span>✓</span> <span>✓</span>	<a href="#">🔗</a>

## Hedgerows

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Hedgerows (managed)	7,000 metres total length	-4.62	0.31%	<span>✓</span> <span>✓</span> <span>✓</span>	<a href="#">🔗</a>

## Woodland

Description	Usage	tonnes CO <sub>2</sub> e	%	Confidence	Link
Broadleaf woodland	4.00 hectares	-24.77	1.67%	<span>✓</span> <span>✓</span> <span>✓</span>	<a href="#">🔗</a>
Coniferous woodland	1.00 hectares	-5.66	0.38%	<span>✓</span> <span>✓</span> <span>✓</span>	<a href="#">🔗</a>

## SOM Inventory

Mountain		
Year	2019	2020
SOM (%)	18	18.1
Lowland		
Year	2019	2020
SOM (%)	12	12.2

