

# 'A Fenland Farming Vision for the Future'

*Balancing Climate and Farming in  
the Fens*

**FENLAND SOIL**



Sustainability | Opportunity | Innovation | Learning

**Farmer's Dialogue  
Group**

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## Summary

Farming lowland peat and organo-mineral ('wasted peat' or 'skirt fen') soils inevitably leads to soil loss and greenhouse gas emissions. The government's Sixth Carbon budget stated that 'although the lowland accounts for 14% of UK peatland, it is responsible for around 56% of peatland emissions (CCC, 2020). Due to out-of-date mapping, a large proportion of the Fens is still designated as peat despite no longer being a peat soil. However these organo-mineral soils still hold much more carbon than mineral soils elsewhere in the country, meaning that national efforts to mitigate emissions from soil will affect farmers across most of the Fens rather than just the true deep peats.

Due to these threats the Cambridgeshire and Peterborough Combined Authority's Independent Commission on Climate set up the 'Fenland SOIL' (Sustainability, Opportunity, Innovation and Learning) committee as a dedicated team with farmers at its core to tackle these issues in the Cambridgeshire Fens. The committee aims 'to inform and develop 'whole farm' land use policies aimed at enabling farmers to continue to run profitable businesses while maximising climate change mitigation and biodiversity enhancement in the Fens. The committee will also help establish an agreed set of numbers for the Greenhouse Gas (GHG) Emissions of Fenland soils'. The committee operates across five workstreams, one being the Fenland Farmers Dialogue Group (FFDG).

The Fenland Farmers Dialogue Group aims to act as a facilitator and a forum for learning and collaboration between Fenland Farmers and provide advice feeding into both the Combined Authority and also DEFRA's Lowland Agricultural Peat Task Force (LAPTF). By acting as a united voice and showing proactivity we will be able to influence and shape policy so that it is fair and realistic for those implementing it.

The vision of the Fenland Farmers Dialogue Group for the future of the Fens is:

- a.) To fill the existing gaps in the data and literature to inform policy on emissions going forward by improving estimates of emissions.
- b.) To facilitate the learning of sustainable farming practices between Fenland Farmers.
- c.) To allow farmers the opportunity to influence policy in dialogue with government
- d.) To work on community outreach to educate the non-farming population of the Fens about our industry and to help change negative perceptions.
- e.) To create updated maps on the extent and condition of Fenland soils.
- f.) To open a dialogue with those responsible for managing our water, both in terms of supply and drainage.
- g.) To create space for nature within farming systems in the Fens.

Government is determined to see peatlands in the uplands and lowlands rewetted where possible, but has stated via the LAPTF that any rewetting in the lowlands should not compromise agricultural production and profitability. Balancing these two objectives is not easy, and, in order to maintain business profitability, compensation will be required where land use changes reduce production. There is no guarantee from government that funding will be forthcoming.

It is therefore vital that farmers take responsibility for gathering and presenting the facts on what will and will not work. This requires more basic research as outlined above on mapping soils and measuring emissions and assessing different mitigation options and alternative production systems and nature based options.

By becoming a member of the Fenland Farmers Dialogue Group, farmers will receive the following benefits:

- Research
  - Get involved in supporting emissions measurements through deploying flux towers on yours or your neighbour’s farm
  - Work with researchers to improve the mapping of the current soil types on your farm
- Learning
  - Visits to sites across the Fens and beyond in order to learn from existing projects
  - Talks by leading industry experts, conservationists and other leading figures to further understanding
  - Access to up-to-date data and research to inform decision making
- Influence
  - Feeding into dialogue with local government and DEFRA to try to influence policy.
  - Dialogue with water suppliers and IDBs to plan for better water management.
- Social
  - As a side effect of the events, visits and talks being run, there is an opportunity for the group to also have a social aspect.
  - There will also be exclusive access to WhatsApp and other social media groups for idea sharing, discussion, advice and issue reporting.

The work of Fenland SOIL is supported by a financial contribution from the Combined Authority on condition that this is match funded by the food industry. We are actively seeking and obtaining funding commitments from the farming supply chain and others with interests in our industry, looking at carrying out the work over a five year period. Research grant funding is also being sought.

There is a need for the farming community itself to contribute to the cost of this work – this is a direct requirement of the Combined Authority’s funding – and it is therefore proposed that farmers pay an annual fee for belonging to the Fenland Farmer’s Dialogue Group.

The fee for joining the group will be on a per farm basis and there is a banded payment system in which the payments increase with the size of the farm to ensure that the payment is proportional to the potential benefit to the business. The bands for the first year are shown in the following table:

	<b>Area Actively Farmed</b>	<b>Payment (per annum)</b>
<b>Band A</b>	<b>Up to 199 ac (80ha)</b>	<b>£50</b>
<b>Band B</b>	<b>200 to 499 ac (81 to 201 ha)</b>	<b>£100</b>
<b>Band C</b>	<b>500 to 1999 ac (202 to 808 ha)</b>	<b>£300</b>
<b>Band D</b>	<b>2000 to 4999 ac (809 to 2022 ha)</b>	<b>£500</b>
<b>Band E</b>	<b>Over 5000 ac (2023 ha)</b>	<b>£1000</b>

The budget and sources of income to the group will be reviewed annually with the aim of ensuring that the farmer contribution is set to fill the **residual gap left from other funding sources and no more.**



# Fenland Farmers Dialogue Group

## Vision for the Future of Fenland Farming

### What is the Farmers Dialogue Group?

Following the announcement of the Conservative Government's Sixth Carbon Budget in December 2020 it became clear that action needed to be taken in the Cambridgeshire Fens on Climate Change. As a result the Cambridgeshire and Peterborough Combined Authority (CPCA) set up the Cambridgeshire & Peterborough Independent Commission on Climate (CPICC). The report stated the fact that 'although the lowland area accounts for 14% of UK peatland, it is responsible for around 56% of peatland emissions' as well as an emphasis on the need for 'low carbon farming practices and technology' (CCC,2020).

Due to this emphasis on agriculture and peat the CPCA CPICC set up the Fenland Peat Committee as a dedicated team to tackle these issues in the Cambridgeshire Fens and the Committee came into being in early 2021, chaired by John Shropshire (G's Fresh). The committee aims to 'inform and develop 'whole farm' land use policies aimed at achieving climate change mitigation and biodiversity enhancement in the Fens, and to help establish an agree set of numbers for the Greenhouse Gas (GHG) emissions of fenland soils.'. The committee operates across five workstreams, one being the Fenland Farmers Dialogue Group (FFDG) headed by Nick Allpress (Allpress Farms). Following outreach by the Fenland Farmers Dialogue Group (FFDG) it was concluded that the name Fenland Peat Committee was too exclusive and did not accurately sum up the work of the committee. It was therefore rebranded to Fenland SOIL (Sustainability, Opportunity, Innovation and Learning) as these values far greater represent the committee and what it is setting out to achieve.

### What are we trying to achieve?

The aim of the Fenland SOIL Farmers Dialogue Group (FFDG) is to act both as a facilitator and a forum for learning and collaboration between Fenland Farmers and provide advice feeding into DEFRA's Lowland Agricultural Peat Task Force (LAPTF). The hope is that by acting as a united front and showing proactivity we will be able to positively influence and help shape policy so that it is fair and realistic for those that will be implementing it. A quote from Tom Clarke, an arable farmer from Cambridgeshire sums this up well: 'the best defence for farming is to stop being so defensive' (T. Clarke, 2021). Tom's sentiment, that if we engage proactively with decision makers rather than getting defensive, illustrates what we are trying to achieve. When asking another Fenland farmer what they would want from the organisation they replied; **'to facilitate and enable fenland farmers to find the best solution to increasing pressure for a sustainable and deliverable management strategy that not only engages NGOs but also the wider public and all responsible parties'**. The aims of the Farmer's Dialogue Group and the wider Fenland SOIL organisation revolve around the four pillars of Sustainability, Opportunity, Innovation and Learning.

### ***Sustainability***

The group aims to help farmers within the Fens to continue to farm sustainably going forward for future generations. This includes a commitment to working towards the NFU target of Net Zero by 2040 as outlined in Achieving Net Zero- Farming's 2040 Goal (NFU, 2019a) or as close as it is possible to get to this target whilst taking into consideration current techniques and technology.

This is aggregate goal for the farming industry as a whole and some farms will be able to go further than others.

There is also an aim to increase biodiversity within the Fens by working with groups such as the Ely Nature Friendly Farming Network, and various conservation partners such as the National Trust, Wildlife Trust and RSPB to foster collaboration between farming and conservation. This feeds into the overall aim of Fenland SOIL to ‘consider at farm level the contributions that regenerative and nature friendly farming techniques could make to emission mitigation’ (Committee Terms of Reference point e, found in Appendix A).

### ***Opportunity***

Traditionally, the farming community has acted reactively to changes in policy that have been implemented. We are in the fortunate position that we are able to foresee the coming changes with regards to climate related policy. Therefore, we should seize the opportunity to be proactive and work towards influencing the policy that will impact farmers for generations to come by ensuring that changes made are deliverable, measurable and rewardable, with public money being paid for the public goods generated through cleaner air, carbon sequestration, enhanced biodiversity and improved environmental quality. It is unreasonable and unfeasible for all of the cost burden of changes to practice to fall only upon growers with no change for customers or consumers.

The coming changes need to be seen therefore as a great opportunity to shape a sustainable future of farming and be a part of Farming’s next Green Revolution. There is a profound opportunity to farm in a more planet friendly, sustainable way whilst still maintaining or even improving upon profit and yield, allowing us to safeguard the industry and food security for the future.

### ***Innovation***

To progress towards a sustainable farming future a fundamental change in practices will be required across the Fens.

There is a great need for advancements in technology to allow us to better manage water, reduce machinery passes, improve soil structure and health and increase crop resilience, to name but a few. There is a need, therefore, for investment and collaboration in Agri-Tech to allow these changes to be made a feasible reality to allow profitable farming to continue in the future. The FFDG hopes to help facilitate these advances in sustainable agriculture by identifying funding opportunities, linking partners and sharing expertise between members.

### ***Learning***

The group hopes to expand and grow its membership to create a network across the Fens where management practices can be shared, advice given and evidence on issues collated to best inform practice going forward. It will host visits from experts and industry leaders as well as peer learning opportunities on sites across the Fens and beyond so that we are learning from existing projects including existing farm and conservation led projects.

## Feedback from Fenland Farmers

In order to gather the views of Fenland Farmers on the climate issues in the Fens, FFDG held a series of meetings for which an open invitation was sent out to the farmers and landowners of the Fens. The events were supported by the NFU with a launch event hosted at Park Farm in Thorney followed by visits to three local NFU branch meetings. At these events we put three questions to the farmers:

- a.) What makes the Fens special which we should try to protect?
- b.) What challenges do we or will we face in the Fens?
- c.) What opportunities do we have in the Fens?

The answers to these questions were then recorded anonymously and then collated to show the key themes that were identified across all of the meetings.

### *What Makes the Fens Special?*

In terms of what makes the Fens special, the factor identified most frequently was the agriculturally productive soil of the Fens (Figure 1). The soils of the Fens are incredibly productive and therefore vital to the agricultural economy of the area, 50% of the UK's total Grade I agricultural land is located in the Fens (NFU,2019b). With Fen soil being of such economic and social importance it is vital it is protected, therefore one of the key aims of the group is to develop ways of farming more sustainably to manage soil health and preserve the highly productive soil.

The land drainage network in the Fens was also identified as a key asset to preserve; there are more than 1780 miles of drainage ditches across the Fens that provide key corridors of biodiversity as well as keeping agricultural land, businesses and settlements safe from flooding (NFU, 2008). The management of this extensive network will be crucial in terms of water management and control in the region which will become increasingly important in the coming years as water becomes a scarcer resource. East Anglia is already the driest region of the UK with only 71% of the UK's average precipitation and high evaporation losses, and is projected to see a significant decline in water availability in the coming decades (Anglian Water, 2021). In the future it will be necessary to invest in reservoirs to hold excess water on the land following storm events, rather than allowing it all to drain out to sea, which will also require investment in drains, pumps, and sluices to transfer the water from the land into the reservoirs. Collaboration with Internal Drainage Boards and water companies is therefore essential to ensure that investments and improvements are targeted to the right areas.

Farming and food production, especially the potential for increasing the UK's food security also featured heavily in feedback at all 4 meetings. Ranking higher than even economic factors it was clear that the farming community of Fenland takes great pride in its role in feeding Britain. Going hand in hand with this is the fact that the Fens also have exceptional cropping diversity. The continuation of this long held tradition therefore needs to be considered as part of the vision going forward.

The local heritage of the Fens was also mentioned as a key part of what makes the Fens special, and farmers in Fenland are proud of their history and their connection to the land. The people of the Fens have always been integral to its character, draining them and turning them into the productive agricultural land we see today. Biodiversity and wildlife was also equally important, and with the Fens being home to more than 13,000 species (Mossman et al, 2012).

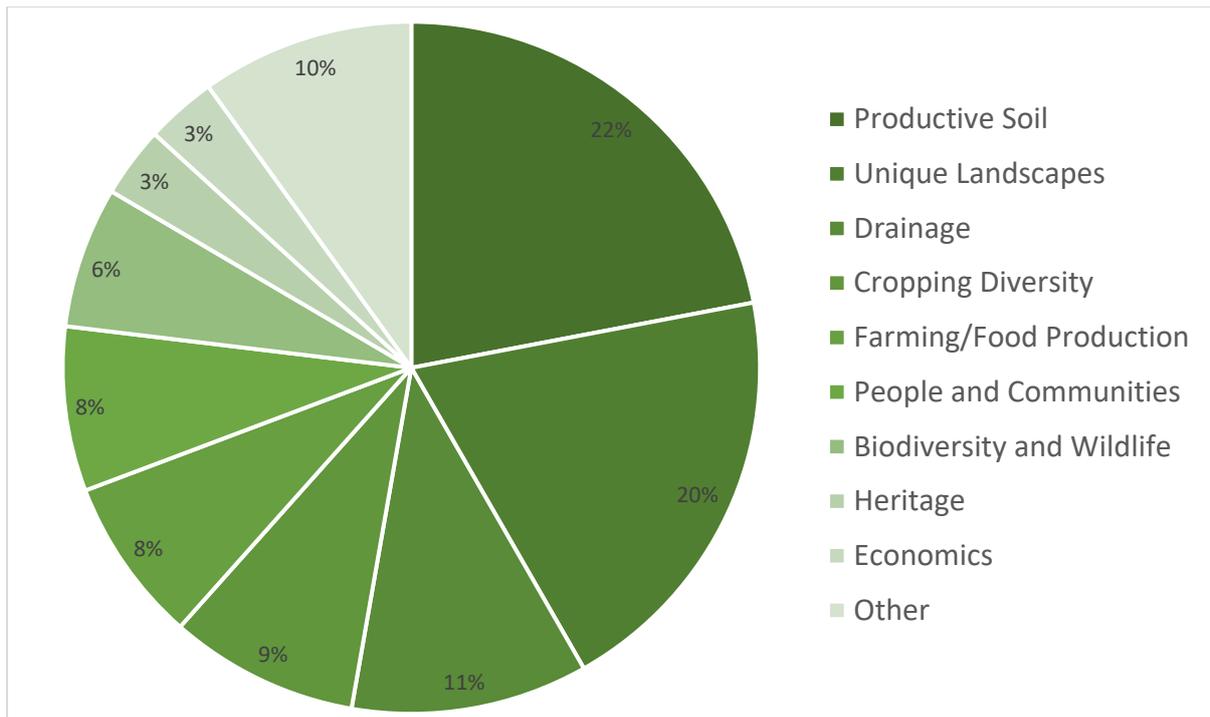


Figure 1 The factors identified that make the Fens special.

### *What Challenges do we face in the Fens?*

There were a number of challenges by those that attended the four events, with soil erosion and emissions being the top challenge identified with 13% of responses identifying this as a key challenge. It has long been known that soil in the Fens is prone to aeolian erosion, with the characteristic ‘fen blows’ making the news (BBC, 2013) in which ‘tonnes of peat, formed under waterlogged conditions over thousands of years, are lifted up and carried away as dry powder’ (Irvine, 2020). There are also significant issues in the fens with peat shrinkage from oxidation, which is gradually worsening as soils are continuing to be drained with wastage as high as 10-25mm per year (Landshoff, 2020). Degradation of the peat also causes emissions of carbon dioxide which could account for up to 45% of the total emissions for Cambridgeshire or 2.6 million tonnes of carbon dioxide equivalent per year (CPICC, 2021).

Flooding from rivers (9%) and from sea level rise (9%) were also identified as major challenges by the farmer groups surveyed. This is supported in the literature by projections of future climate change, with changes to rainfall regimes forecast which will cause rainfall to occur in more infrequent but higher intensity storm events (National Geographic, 2021). There is also a high projected risk of flooding from sea level rise by 2050, causing issues not only with inundation but also salinisation of groundwater which will present challenges for growers and groundwater abstraction (Anglian Water, 2018). A further 7% of the responses also expressed a concern about climate change broadly as a challenge facing the fens for the future. As a low rainfall, low lying region, the Cambridgeshire Fens are particularly vulnerable to climate change, putting the Fens in prime position in the battle against climate change. (CPICC, 2021).

An interesting challenge also raised was the perception of farming by those outside the industry, with the public, customers and government all being described as groups that may perceive farming negatively with 7% of the responses mentioning perception of farming as a major challenge (Figure 2). There were concerns raised that the non-farming population of the Fens do not

fully understand the industry and are therefore unwilling to lend support, and instead villainise them for holding up traffic and other inconveniences. Similarly, farmers also feel that they are not supported by government, often being used as scapegoats over issues such as food security, labour and environmental degradation. Some of the farmers (7% of the responses) also felt that government policy also has the potential to cause challenges to the industry over the coming years, particularly with regards to a lack of financial support in reaching Net Zero and also the end of BPS and Countryside Stewardship. There is concern that all of the cost of reducing emissions will be borne by farmers, reducing already small profit margins, and 5% of responses also raised profitability as a challenge.

Additional challenges raised by farmers at the discussion meetings included Brexit, Competing Land Uses, Disease, Education, Social Deprivation, Labour Shortages and the variation in soils across the county. A whole host of challenges faces the Fens, however with challenge comes the opportunity for positive change, some of which have been identified in the next section. The Fenland Farmer’s Dialogue intends to use the challenges identified, as well as evidence from the literature to inform the framework of our Vision for the Future of Fenland Farming.

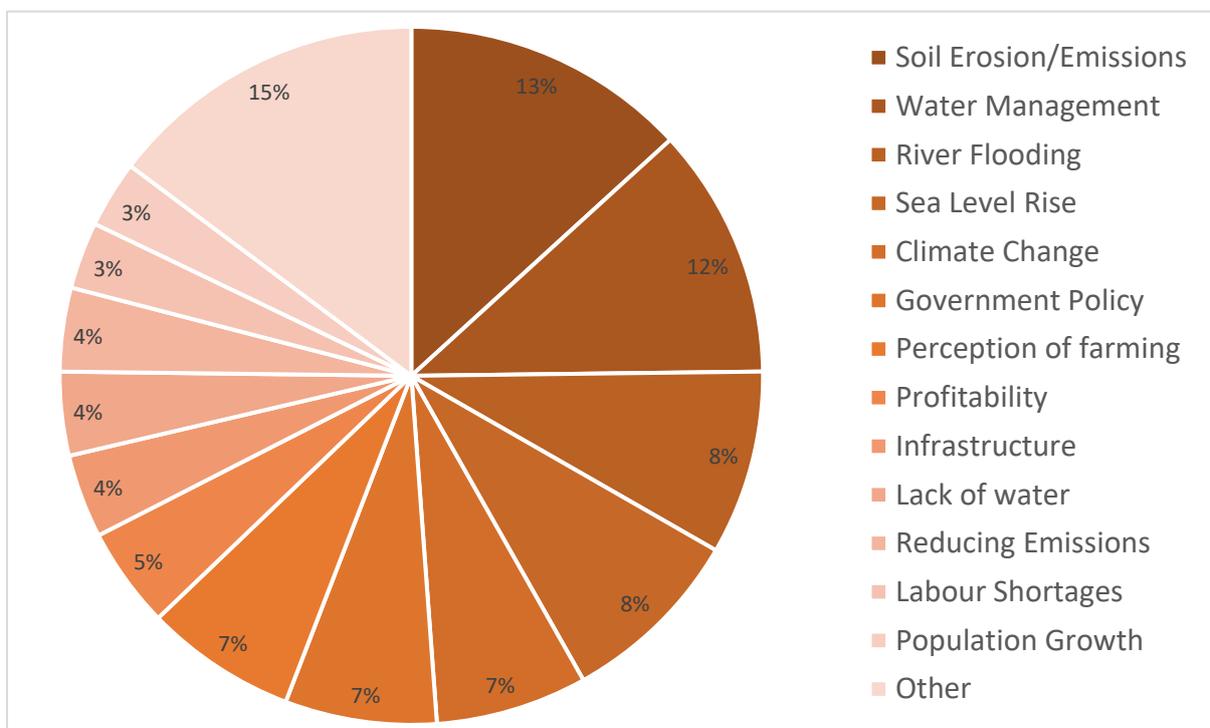


Figure 2 The summary of the challenges identified by the Fenland Farmers at the dialogue meetings, October 2021. Note that soil erosion and emissions were identified as the major challenge facing the fens.

### *What Opportunities do we face in the Fens?*

Whilst a number of challenges were identified by farmers in the Fens there are also plenty of opportunities. The greatest opportunity identified by farmers for the future of the Fens was the potential to generate food security, with 18% of responses referring to this. The Fens produces 7% of the UK's food on just 4% of the land area, and grows 1/3 of the UK's fresh produce (NFU, 2019b) which means that East Anglia is key to maintaining food security. After food security the next most important opportunities were the potential to enhance biodiversity by increasing land in stewardship schemes and maximising the effectiveness of existing schemes and diversification through tourism, each making up 11% of the responses (Figure 3). Some farms in the county are already making the most of these opportunities successfully and therefore there is undoubtedly the

#### **Case Study: Ely Nature Friendly Farming Zone**

Ely Nature-Friendly Farming Zone is a network of 16 Nature-Friendly farmers based around the Ely area. Each farm in the group sets aside a minimum of 3% of their land area for birds, bees and wildlife.

Some of the techniques employed include:

- Nectar Mixes
- Fallow and Skylark Plots
- Wild Bird Seed Sowing
- Ditch Management
- Field Margins
- Habitat Creation

The efforts made by these farmers are helping to benefit many rare and endangered species, such as corn buntings, bees, water voles, barn owls, lapwings and more.



*Image credit: Ely Photographic Club*

#### **Case Study: F C Palmer & Sons – Business Diversification**

One way of increasing the resilience of an agricultural business is by diversifying, and F C Palmer & Sons have done this in several ways:

1. 250 ac of land have been put into solar sites operating above a raised water table with sheep grazing between panels, producing 75MW of electricity.
2. Water park – first opened in 2011 and has now expanded to have a capacity of up to 100 people per hour.
3. Fenland Glasshouse (scheduled for completion 2022) is an 88 acre greenhouse site that will be used to grow salad crops. It will be using the UK's largest water source heat pumps to heat the greenhouse.



*Image Credit: Cambridge Aquapark*

with the right investment.

potential for them to be rolled out more widely

Regenerative agriculture also featured as an opportunity for the future of the Fens going forward at 9% of the responses. There is undoubtedly huge potential for regenerative agricultural practices to be introduced into agricultural systems across the Fens to improve soil health and structure and increase carbon sequestration. There is potential for this on organo-mineral soils which may still be emitting greenhouse gases but do not have a significant enough deposit of peat for other management options to be effective.

In addition to the potential for diversification through tourism the potential for other diversifications of income such as Green Energy production through wind and solar (7% of responses) and the potential for payments to farm carbon, through carbon capture and storage and carbon credits (6% of responses). Investment in Agri-Tech is also a potential opportunity that has been identified, with investment in less disruptive cultivation options, lighter equipment to reduce issues with compaction, and smarter more targeted application of fertiliser and pesticides to reduce inputs to where they are strictly necessary. The potential for the introduction of new crops into the Fens was also identified as an opportunity for the future with 5% of the responses, projects are

### Case Study: Wetland Farming

There are several projects in Europe now experimenting to test the commercial viability of palludiculture crops. One such example is the Water Works project at the Great Fen in Cambridgeshire, a 3-year project carrying out the UK's first field-scale palludiculture trials. Crops currently being trialled include sphagnum moss, bullrush, reed, sweet manna grass, wild celery and flag iris. (Great Fen, N.D).



already testing the feasibility of introducing wet farming crops into a commercial agricultural system at the existing Great Fen Project and the planned CANAPE Wetland Farming Project at Horsey.

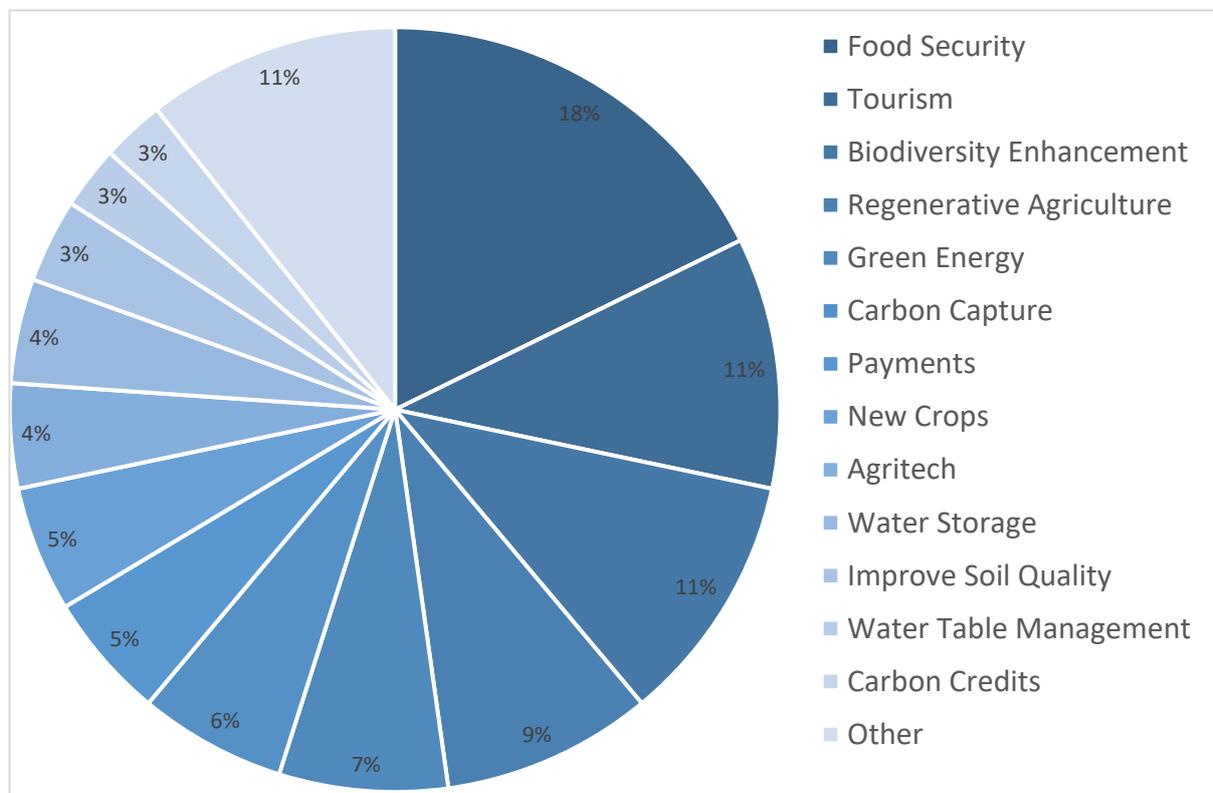


Figure 3 The key opportunities identified for the future of the Fens. Note that food security was the most frequently identified opportunity.

## Our Fenland Farming Vision for the Future

The vision of the Fenland Farmers Dialogue Group for the Future of the Fens is:

- h.) To fill the existing gaps in the data and literature to inform policy on emissions going forward by improving estimates of emissions.
- i.) To facilitate the learning of sustainable farming practices between Fenland Farmers.
- j.) To allow farmers the opportunity to influence policy in dialogue with government
- k.) To work on community outreach to educate the non-farming population of the Fens about our industry and to help change negative perceptions.
- l.) To create updated maps on the extent and condition of Fenland soils.
- m.) To open a dialogue with those responsible for managing our water, both in terms of supply and drainage.
- n.) To create space for nature within farming systems in the Fens.

### Farmer's Dialogue Membership

By becoming a member of the Fenland Farmers Dialogue Group, farmers will enjoy many benefits, the main two being education and the opportunity to influence policy.

In terms of education, farmers will be able to work with industry leaders to learn about sustainable farming practices and nature-based options. There will be opportunities to visit sites across the Fens and beyond in order to learn from work already being done and gain insight on the different options available in terms of regenerative agriculture to help to find options that can work for each farm in the Fens. In addition to visits and events there will also be access to up-to-date data on emissions and mapping in the Fens and information on current research projects such as the Fenland SOIL and partner's Natural England Discovery Grant Project.

In addition to learning opportunities there will also be the opportunity to put views towards government, both in terms of local government through the CPCA and national government through DEFRA. It is also hoped that we will be able to influence ELMS as it evolves and plug some of the gaps that there are at the moment to allow farmers to carry out nature friendly and sustainable farming practices without causing financial issues to their businesses.

In addition to the education and policy influencing benefits, there is also the opportunity for there to be a social aspect to this group with access to a exclusive WhatsApp group for ideas sharing and issue reporting. The visits and meetings are also intended to be more social and less formal.

The Fenland SOIL committee is supported and funded by the Cambridgeshire and Peterborough Combined Authority (CPCA) with a commitment of £50,000 a year. In order to continue advancing research at our current rate and gather evidence more quickly we also need to secure additional funding. We are doing this through 4 different streams of income: grant scheme applications, charity grants, corporate membership schemes and farmer and landowner membership. We are already in talks with charities and corporate partners who have pledged funding, with formal announcements of these partners being made early in 2022. This leaves the final funding stream which is farmer and landowner membership contributions. We understand that farmers are already experiencing significant financial pressures on their businesses and for this reason, we are proposing the five-banded membership system outlined in the table below.

	Size of Farm	Payment
<b>Band A</b>	<b>Up to 199 ac (80ha)</b>	<b>£50</b>
<b>Band B</b>	<b>200 to 499 ac (81 to 201 ha)</b>	<b>£100</b>
<b>Band C</b>	<b>500 to 1999 ac (202 to 808 ha)</b>	<b>£300</b>
<b>Band D</b>	<b>2000 to 4999 ac (809 to 2022 ha)</b>	<b>£500</b>
<b>Band E</b>	<b>Over 5000 ac (2023 ha)</b>	<b>£1000</b>

This banded system of membership payments aims to ensure that payments match the size of the business. This ensures that the financial contributions from the business are proportional to the degree of support that will be needed and to the benefit that the business will see. The budget and sources of income to the group will be reviewed annually with the aim of ensuring that the farmer contribution is set to fill the **residual gap left from other funding sources and no more**. In years where we are able to secure more funding from corporate partners we hope to be able to reduce farmer contributions to minimise the cost burden on businesses.

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## Appendix A – Fenland SOIL Committee’s Terms of Reference

*The Committee aims to inform and develop ‘whole farm’ land use policies aimed at achieving climate change mitigation and biodiversity enhancement in the Fens, and to help establish an agreed set of numbers for GHG emissions for deep, shallow and wasted peat soils.*

*The Committee will:*

- a. *Coordinate and provide expert “on the ground” farming engagement with hydrological and other scientific advisers in the Eastern Region to interact with Defra’s LPTF and Defra’s and BEIS’s Lowland Peat 2 research programme (LP2)*
- b. *Undertake surveys and mapping of the location by types of peat soils to better define the areas where greenhouse gas emissions are occurring at elevated levels and establish best practice for how these emissions are accurately measured*
- c. *Evaluate locally the farming practice mitigations being proposed by the LP2 programme, and in particular the opportunities and/or constraints for:*
  - i. *regenerative agriculture across the Fens; and*
  - ii. *raising water tables within and across the seasons in areas of remaining deep peat*
- d. *Work with local scientific and crop development resources to review opportunities in palludiculture and other plant adaptations*
- e. *Consider, at farm level, the contributions that regenerative and nature friendly farming techniques and, at a landscape level, the contribution a Nature Recovery Network and the Doubling Nature ambition could make to emissions mitigation*
- f. *Work to improve the clarity of what ELMS will fund – aiming to ensure that specific actions for sequestering carbon and for farming on peat and regenerative farming are incorporated – and to explore the potential for other funding mechanisms such as development of a robust system for carbon credits.*
- g. *Establish methods of monitoring the economic and social impacts of the proposed changes on Fenland farming, the wider Fenland economy, and Fenland communities*