FIELD FORWARD

SUSTAINABLE AGRICULTURE INITIATIVE

CRISP
THE FINEST MALT

RICHARDSON

ABC
GROWER GROUP

PLEASE CLICK ON THE TITLES IN THE CONTENTS BELOW TO BE TAKEN STRAIGHT TO THAT SECTION

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FIELD FORWARD IS THE UK MALTING INDUSTRY'S LARGEST SUSTAINABLE AGRICULTURE INITIATIVE, FOCUSED ON

TRANSFORMING HOW BARLEY IS GROWN, NOT JUST HOW MALT IS MADE.

FIELD FORWARD

Field Forward is an initiative created by us in partnership with our Grower Groups with the purpose of improving on-farm sustainability.

Our farmers will submit data on our four impact areas: soil health, water usage, biodiversity, and climate. This data gives us an overview of current farm practices and highlights where improvement can be made.

Group targets will be set in partnership with the farmers and we will integrate these targets into a group wide continuous improvement plan. This will highlight opportunities for rolling out farm practices which will encourage progress towards these targets.

The performance of our Grower Groups will be audited by an independent third party to verify our achievements, in alignment with SAI Platform's, Regenerating Together Programme.

HOW IT WORKS...

DATA COLLECTION

We collect data using Map of Ag across the four impact areas: soil health, water, biodiversity and GHG emissions.
We have surveyed our growers on their current practices, and used national datasets, to understand the context in the region.
This highlights opportunities where improvements can be made.

KNOWLEDGE SHARING

Our farmers feed back to the group on the practices that work best across different soil types and regions. This drives real positive change across the group, and quickly.

COLLABORATIVE GOAL SETTING

In partnership with the merchants and farmers, we have set realistic targets based on their land and circumstances. This is entirely driven by the results from the data collection. We are not dictating the practices that farms should implement because every farm is different and what works in one farm may not work in another.

CONTINUOUS MONITORING

We track the same farms year after year to show genuine progress over time. This repeatability is key and unique to our initiative. We are driving transition through a continuous improvement plan with measurable targets.

THIRD-PARTY VERIFICATION

Our claims will be verified through the SAI Platform's Regenerating Together Programme - a global standard for sustainable agriculture that can be applied to all crops, in all contexts, across the globe.

OUR GROWERS

At Crisp Malt, we know that security is key for farmers to produce consistent grain, so back in 2005, we established the ABC Grower Group.

This partnership, with grain merchants Adams & Howling and H.Banham Ltd, is a partnership with 200 local farms within 40 miles of our two Norfolk malting sites.

Through this agreement, we guarantee three-year rolling contracts to farmers to grow our winter and spring barleys.

All our growers are assured to FSA Silver and this partnership enables us to collaborate with our growers to gather data on farming practices and develop transition plans that support the resilience of the malting barley crop, year on year.

ABC GROWER GROUP

FIELD FORWARD

A&H

H.BANHAM LTD AGRICULTURAL MERCHANTS

200
LOCAL FARMS
WITH TWO MERCHANTS

WITHIN 40 MILES
OF TWO OF OUR MALTING SITES

20 YEAR PARTNERSHIP
ALL GROWERS ASSURED TO FSA SILVER

OUR IMPACT AREAS

DATA COLLECTION

YEAR 1

39 FARMS COMPLETED THE SURVEY

TOTAL FARM AREA COVERED:
48,100 HECTARES
(8,500 Ha OF MALTING BARLEY)

GROUP AVERAGE NUMBER OF PLANT FAMILIES GROWN IS **5.8**

GROUP AVERAGE NUMBER OF PLANT SPECIES GROWN IS **6.4**

CROPS PRECEDING MALTING BARLEY: **70%** IS **SUGAR BEET**

THE PRECEDING CROP INFLUENCES THE MANAGEMENT OF THE FOLLOWING MALTING BARLEY CROP

SOIL

87% GROW **OVERWINTER COVER CROPS**

67% **INCORPORATE LIVESTOCK TO GRAZE OFF OVERWINTER COVER CROP**

AVERAGE NUMBER OF **PLANT SPECIES GROWN** IN COVER CROP MIXES IS **4.4**

23% HAVE **ADOPTED COMPANION CROPPING**

50% **GROW LEGUMES** **IN THE ROTATION** – POSITIVE INCLUSION FOR NITROGEN FIXING PROPERTIES

AVERAGE PERCENTAGE OF THE YEAR OF WHICH SOIL COVER IS OVER 30% IS **63.8%**

85% **USE ORGANIC MANURES** IN THEIR SOIL MANAGEMENT

AVERAGE PERCENTAGE OF THE YEAR **WITH LIVING ROOTS IS** **68.3%**

WATER

92% **ALREADY HAVE A WATER RISK MAP OF THEIR FARM**

85% **ARE IN A NITRATE VULNERABLE ZONE (NVZ)**

60% **USE IRRIGATION ON THEIR FARMS**

80% **HAVE SANDY SOILS** which are at higher risk of leaching and soil erosion, although the runoff risk is reduced due to the generally flat/gently sloping topography

MITIGATIONS ADOPTED TO PROTECT WATER QUALITY (WITH POTENTIAL TO HIGHLIGHT IMPROVEMENT OPPORTUNITIES):

- **82%** tramlines are across the contour
- **80%** have edge of field grass buffer strips
- **36%** have gateways located up-slope

59% **ARE SOURCING WATER DIRECTLY FROM GROUNDWATER BOREHOLES** highlighting potential vulnerabilities and risks to groundwater resources and abstraction risk

BIODIVERSITY

OVER 50% **ARE USING PRECISION TECHNOLOGY IN PESTICIDE APPLICATION TO REDUCE THE USE OVERALL**

80% ALREADY CREATE AN ANNUAL **IPM PLAN (INTEGRATED PEST MANAGEMENT PLAN)** FOR EACH CROP

44% DO NOT USE ANY INSECTICIDES ON THEIR CROPS

AVERAGE PROPORTION OF **NON-CULTIVATED LAND USED FOR BIODIVERSITY IS 34%**

- **87%** grow winter bird food mix
- **75%** grow pollen and nectar flower mix
- **5%** have woodland areas
- **40%** grown bumblebird mix

CLIMATE

↑ 88%

OF TOTAL ON-FARM GHG EMISSIONS

NITROGEN USE EFFICIENCY (NUE) IS A KEY METRIC

N_2

NUE IS INFLUENCED BY FACTORS SUCH AS:

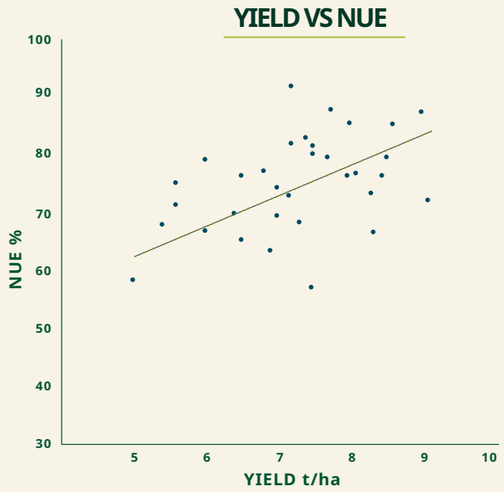
- The previous crop
- Sowing date
- Barley variety
- Crop residue treatment
- Type of applied N fertiliser

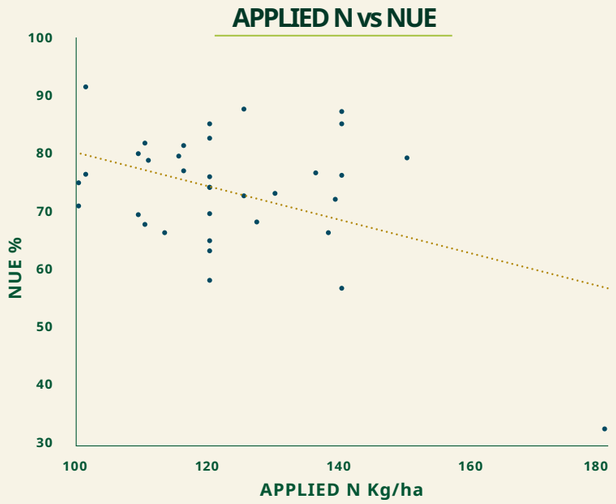
NUE IS THE MEASURE OF TOTAL N INPUT TO THE CROP COMPARED TO TOTAL N OUTPUT.

It is calculated from available N (within the soil and applied), harvested yield and harvested grain total nitrogen.

TARGET RANGE FOR OPTIMUM EFFICIENCY IS **70-90%**

The Rate Of Nitrogen Application & The Resulting Barley Yield Are Key Drivers Of NUE:

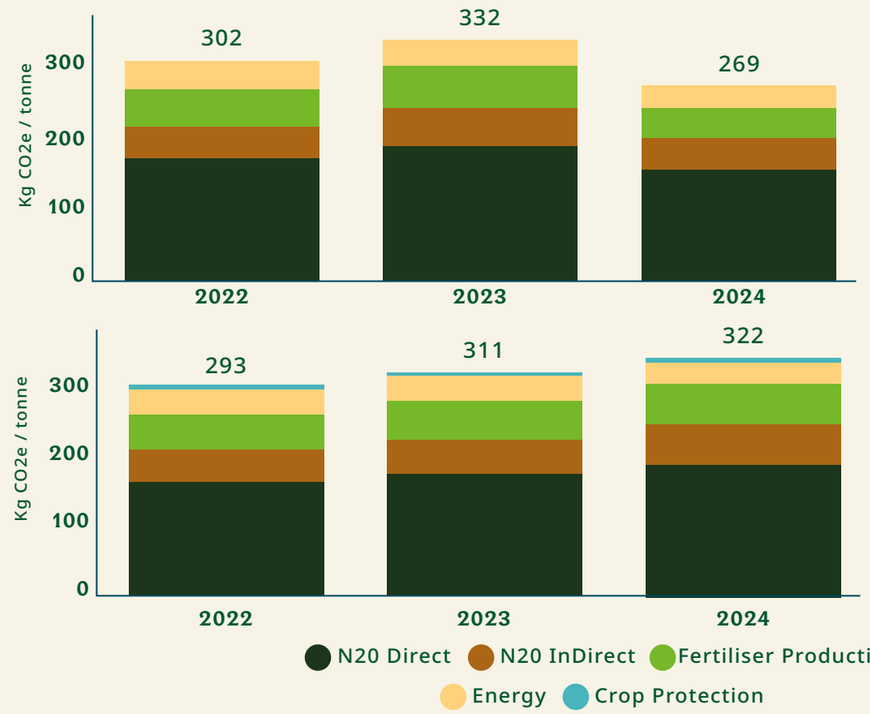


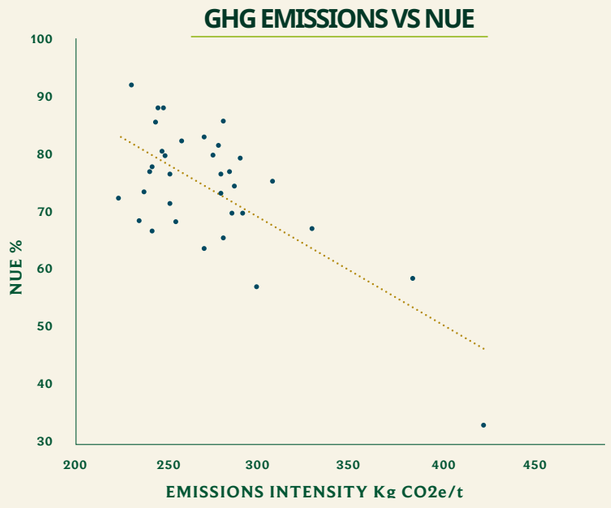


GHG EMISSIONS & NUE

Understanding the impact of NUE on the crop, in the specific context of individual farms, **can be used to inform our sustainable farming strategy.**

Farmers can use this knowledge to influence their on-farm decisions, to optimise their yields and lower their carbon footprint.





The higher the rate of NUE, the greater the yield of the crop, and the lower the emissions intensity of the crop per tonne of barley

CONTEXT ANALYSIS

The purpose of the context analysis is to understand the environmental context at both farm and landscape levels to identify key environmental risks associated with the Grower Group.

This context analysis is based on 12 material criteria, in alignment with SAI Platform's Regenerating Together Framework. We gathered information from our ABC Grower Group via surveying our farmers, as well as reviewing national datasets. Such as those available through DEFRA's MAGIC Map.

ABC GROWER GROUP

In Alignment with

Regenerating Together Programme

BY SAI PLATFORM

SOIL

SOIL EROSION	MEDIUM
SOIL FERTILITY LOSS	MEDIUM-HIGH
SOIL SALINITY	LOW-MEDIUM
SOIL COMPACTION	HIGH

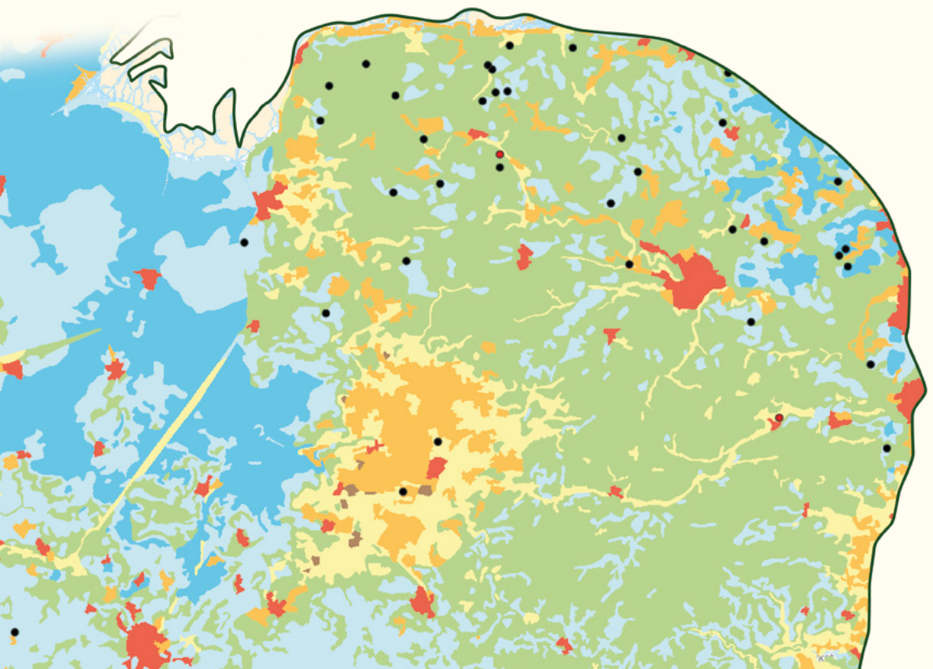
RISK

Agricultural Land Classification provides a framework for understanding land capability and vulnerability, with grades reflecting factors that influence yield, crop choice and reliability, including soil quality, climate and topography. Grades 1 to 3 represent excellent to good quality land, while Grades 4 and 5 indicate poorer land that is more susceptible to degradation and erosion.

The predominance of Grade 3 agricultural land across East Anglia reflects soils that are productive but moderately limited and highly dependent on management. In Norfolk and the Breckland region, light, sandy Grade 3 soils are naturally susceptible to wind erosion; however, widespread use of overwinter cover crops by more than 80% of our growers and existing landscape features has reduced this risk from high to medium.

Soil fertility remains vulnerable due to continuous arable rotations and limited organic matter return, although most farms apply organic manures and over 40% of rotations include legumes, helping to support nutrient cycling and soil health.

Water-related risks are generally low inland, but coastal and reclaimed areas, including The Broads, face increasing salinisation risk from sea-level rise and groundwater pressures. Grade 3 sandy soils are structurally less resilient and the use of heavy machinery, particularly in potato and sugar beet systems, continues to pose a significant risk to soil structure and infiltration.



LANDSCAPE CLASSIFICATIONS

- GRADE 1
- GRADE 2
- GRADE 3
- GRADE 4
- GRADE 5
- NON - AGRICULTURAL
- URBAN

WATER

GROUNDWATER DEPLETION	MEDIUM-HIGH
SURFACE WATER DEPLETION	MEDIUM
PESTICIDE LEACHING	MEDIUM-HIGH
NUTRIENT LEACHING	HIGH

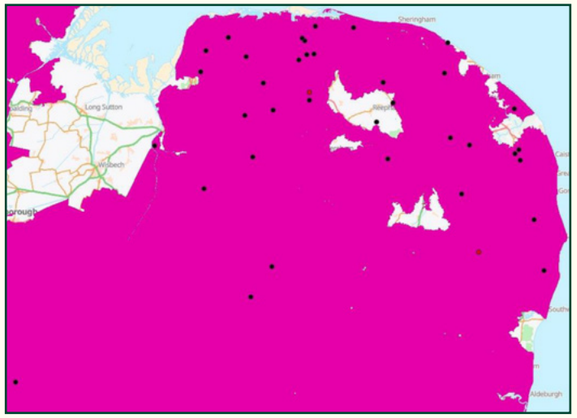
RISK

Water-related risks across East Anglia are strongly influenced by the region's medium to high groundwater vulnerability, reflecting free-draining soils, permeable geology and shallow water tables. The reliance on irrigation for potatoes and vegetable production places significant pressure on water resources, with over-abstraction from chalk aquifers posing a particular risk during dry summers, especially across south Norfolk and Suffolk. River abstraction further contributes to low-flow conditions, which become more pronounced during droughts and periods of peak irrigation demand.

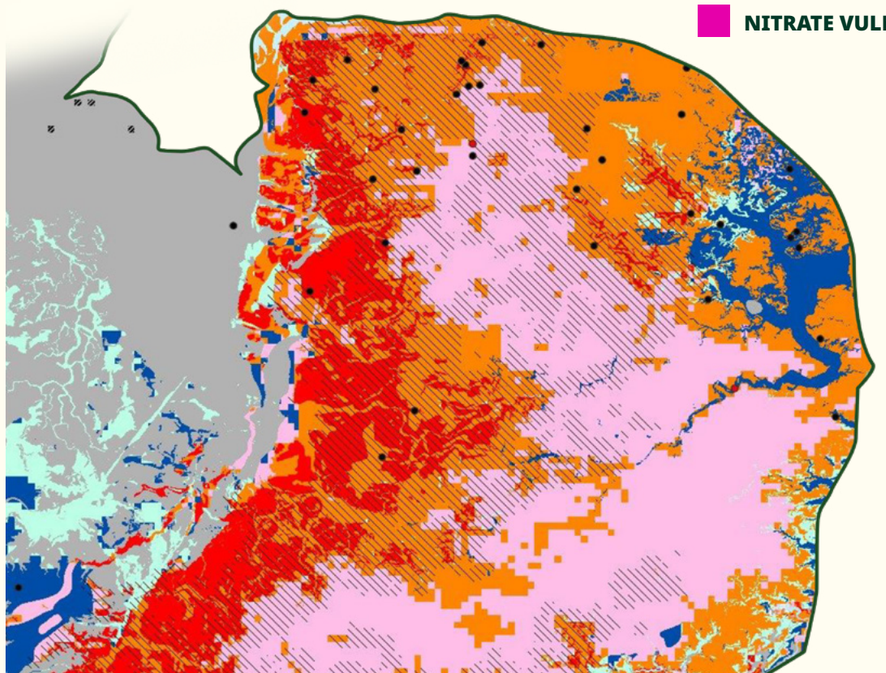
Many farms are also located within Source Protection Zones, increasing sensitivity to groundwater contamination. The region's sandy, highly permeable soils heighten the risk of pesticide leaching, particularly following heavy rainfall events.

In addition, much of East Anglia lies within Nitrate Vulnerable Zones, where lighter soils and shallow groundwater significantly increase the risk of nitrate losses to both surface and groundwater, reinforcing the need for careful nutrient and water management.

LAND - BASED DESIGNATIONS



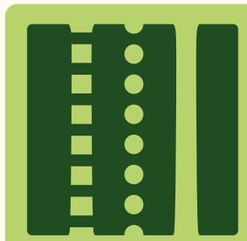
- NITRATE VULNERABLE ZONES



GROUNDWATER VULNERABILITY

- LOCAL INFORMATION
- SOLUBLE ROCK RISK
- HIGH
- MEDIUM - HIGH
- MEDIUM
- MEDIUM - LOW
- LOW
- UNPRODUCTIVE

BIODIVERSITY

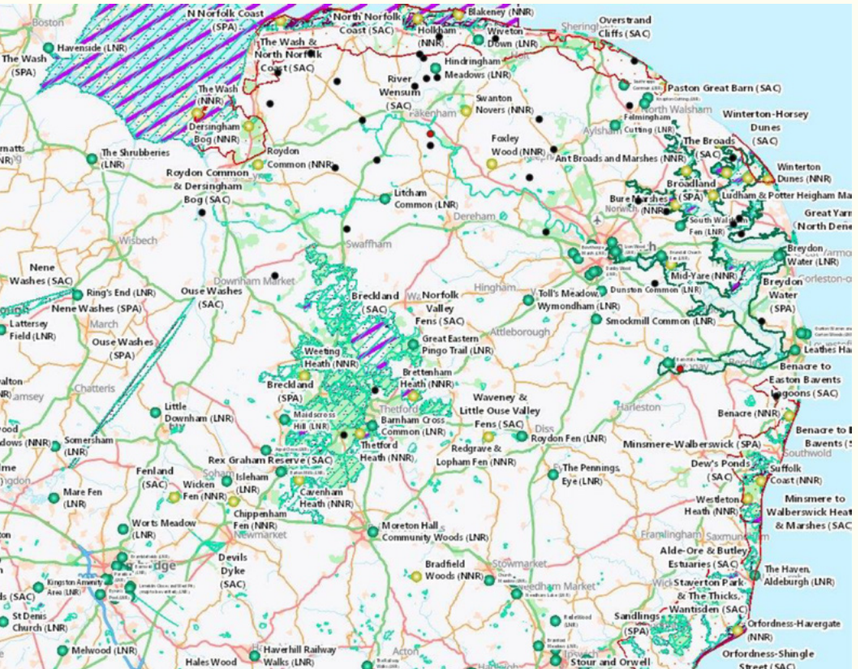


CROP DIVERSITY LOSS	MEDIUM-HIGH	RISK
HABITAT LOSS	MEDIUM	

Due to the nature of the Norfolk and Breckland region's soils, they are naturally vulnerable to erosion and nutrient loss, making biodiversity features and soil-cover practices particularly important for system resilience. The majority of farms maintain uncropped land – on average around 34% - and support a diverse range of permanent biodiversity features, including extensive hedgerow networks; although regional biodiversity remains under pressure from intensive arable systems, habitat fragmentation, and land-use change.

The region contains a network of designated conservation sites, including SSSIs, AONBs, SACs and Local Wildlife Sites, which support nationally and internationally important habitats and species. However, these areas are sensitive to nutrient enrichment, hydrological changes, pesticide leaching, invasive species, and coastal or wetland habitat loss.

Cover cropping helps counter these pressures by providing ground cover and food sources for invertebrates and birds, yet the nature of continuous arable rotations and heavy cultivations can still limit habitat availability and disturb soil ecosystems. Overall, biodiversity resilience in East Anglia is supported by existing features such as hedgerows, uncropped areas, cover crops, and protected sites, but remains at risk from fragmentation and pressures on soil and water resources, highlighting the need for integrated habitat and farmland management.



LAND BASED DESIGNATIONS

(England)

- **STATUTORY** Areas of Outstanding Natural Beauty
- **LOCAL NATURE RESERVES**
- **NATIONAL NATURE RESERVES**
- **NATIONAL PARKS**
- **SITES OF SPECIAL SCIENTIFIC INTEREST**
- **SITES OF SPECIAL SCIENTIFIC INTEREST**
- **SPECIAL PROTECTION AREAS**

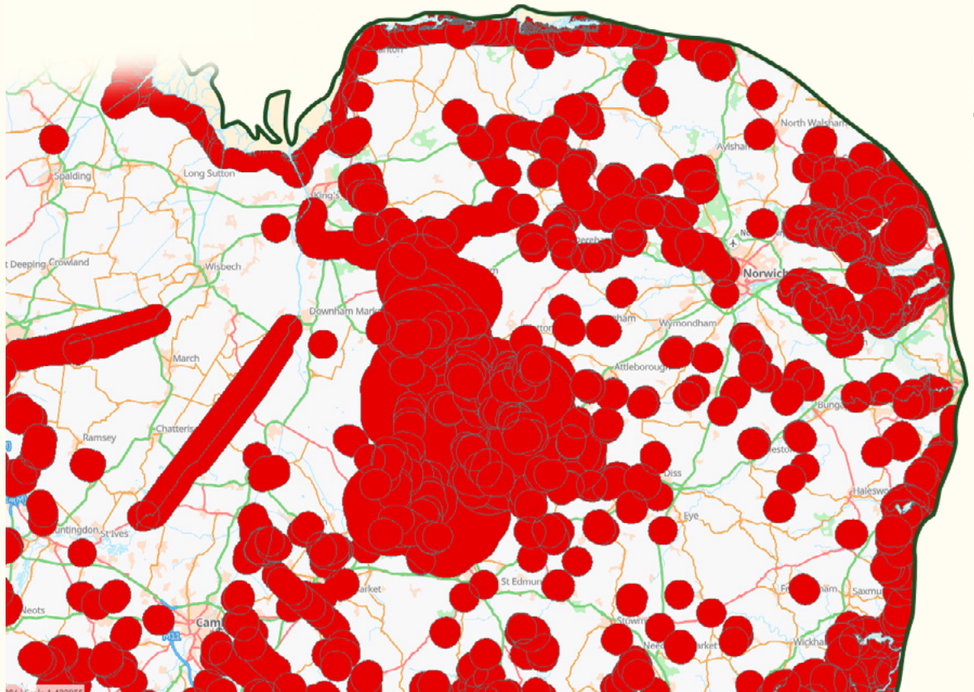
CLIMATE

AIR POLLUTION	MEDIUM-HIGH	RISK
NON-RENEWABLE ENERGY USE	MEDIUM	

Air-quality risks in East Anglia are closely linked to arable systems and nitrogen management. The location of the air quality priority areas show widespread exceedance of critical loads for nitrogen deposition and critical levels for ammonia around SSSIs, including a 2 km buffer around affected sites and a 5 km buffer around Shared Nitrogen Action Plan areas, notably covering Breckland. The mapping highlights numerous hotspots across the region, demonstrating that nitrogen-related air pollution is already a significant issue.

These exceedances align with known emission sources in East Anglia's arable systems, where nitrogen fertiliser use, manure management (particularly FYM), and fossil-fuel-powered machinery are the main drivers of ammonia and greenhouse gas emissions. Additional contributions arise from fertiliser manufacture, diesel use in field operations, and energy demands for irrigation.

Improving nitrogen-use efficiency through precision application, enhanced-efficiency or low-carbon fertilisers are effective pathways to reducing emissions and mitigating air-quality and ecological risks, particularly near sensitive designated sites.



COUNTRYSIDE STEWARDSHIP TARGETING & SCORING LAYERS

Cross-Cutting

- **CATCHMENT SENSITIVE FARMING AIR QUALITY PRIORITY AREAS**

COVER CROPPING WITH BEN JONES

Ben Jones is a member of our ABC Grower Group, farming 600 acres around Holt, Norfolk. Since 2015, he has integrated regenerative farming practices into his arable system, with the primary goal of preventing bare stubble over winter.

Fodder radish is Ben's cover crop of choice, as the light land benefits from the plant's characteristics. The radish has a deep root, which helps to improve soil structure and quality, as well as improve moisture and drainage control.

The fodder radish's PCN resistance also prevents the disease's impact on the crop. After the harvest of malting barley, fodder radish is drilled in the first week of September at 8kg/ha and left to grow over the winter.

Incorporating livestock is another important regenerative farming practice, allowing manure to integrate through the field as a natural fertiliser, adding to the nutrient content and reducing reliance on high-carbon nitrogen fertiliser.

IN FEBRUARY, SHEEP GRAZE THE CROP OVER THREE WEEKS

Ben also plants legume mix as a cover crop, which he drills at 15kg/ha, under a 2-year stewardship scheme. This encourages further habitat diversity within the farming system. Flagon malting barley will supersede this and benefit from the soil's improved structure and drainage.

Ben samples the soils to test soil organic matter every year, and he has noticed a significant improvement since integrating cover crops. 20 years ago, soil organic matter was as low as 1.5% in some areas, and measurements today are up to 3.5%.

He has a keen interest in trialling more varieties of cover crops to understand the different benefits that other species can bring to the soil's health and characteristics, as well as helping to increase biodiversity on his farm. He would also like to understand better the impact of seed drilling density on the cover crop quality.

GET IN TOUCH

We love nothing more than visiting breweries and distilleries, talking to you about your business and getting hands on to help you get the very best out of Crisp malt.

We know this can only happen when we build strong relationships with our customers, and we'd love to help you in your ambitions for supply chain resilience and sustainability.

Get in touch to learn more about Field Forward:

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