



7 April 2016

Ecological Focus Areas: features on farms in England 2014/15

This release provides a baseline assessment of Ecological Focus Area (EFA) features on farms with arable land in England prior to the implementation of the new CAP Greening requirements in 2015. It also provides estimates of the number of these farms that might have needed to implement changes in order to meet the requirements. The information was collected from a subset of farms within the 2014/15 Farm Business Survey which covered the 2014 harvest. Key results are given below:

Farms affected by EFA requirement

Of those farms with an arable area¹ in 2014/15:

- A fifth of farms would have been exempt from the EFA requirements. These farms accounted for around 2% of the arable area. There was considerable variation between farm types; whilst over 80% of horticulture farms with arable land would have been exempt from complying with the EFA requirement, almost all cropping farms would have needed to comply.
- Almost two thirds (62%) of farms would not have needed to implement any changes in order to meet their EFA requirement, as they already had sufficient areas of qualifying features present. These farms accounted for 77% of the arable area. This varied from around 85% of cereal farms to 9% of horticulture farms.
- Around a fifth (18%) may have needed to implement changes. These accounted for around 21% of the arable area. Dairy farms were most likely to have to implement some change in order to meet the EFA requirement.

Areas of features that could be used to meet EFA requirements in England

The areas below are only for those farms with an arable area. They include features on farms that would have been exempt from the EFA requirement.

- Of the features that could be used to meet the EFA requirement in England in 2015, fallow land, hedges and nitrogen fixing crops offered the largest potential areas; accounting for around 4%, 5% and 3% respectively of the total arable area (with EFA weightings applied²).
- Field margins, rotational fallow and wild bird seed mix accounted for around 60% of the total fallow land (194,200 hectares).

¹ The survey was restricted to just those farms with an arable area as it is only these farms that might need to comply with the EFA requirement. See the [survey methodology section](#) for more details.

² See Appendix A for details of the conversion and weighting factors.

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Areas of features currently not applicable to farms in England

The areas below are only for those farms with an arable area and include those on farms that would have been exempt from the EFA requirement.

- Of those features not currently applicable to farms in England, ditches had the largest area at around 40,200 hectares (with weightings applied), accounting for around 0.9% of the arable area.
- Isolated trees had the smallest area at around 500 hectares (weighted).

Areas featured in Agri-Environment Schemes (AES)

The areas below are only for those farms with an arable area.

- The total area of features that could be used to meet the EFA requirement within an AES scheme was around 214,000 hectares, which accounted for 36% of the total area of these features (approximately 595,000 hectares).
- Over half of the total area of buffer strips (68%), afforested areas (63%), fallow land (58%) and stone walls (54%) was already included within an AES scheme.
- Only 5% of the total area of groups of trees or field copses was included within an AES scheme.

Potential changes required due to greening

Farmers were also asked (in spring 2015) whether they had to do something different for the 2015 harvest in order to meet the EFA and crop diversification rules.

- Sixty percent of farm businesses with an arable area indicated that they would not need to change their cropping for the 2015 harvest in order to meet the crop diversification rules; 28% indicated that they had to make a change whilst 12% thought the rule did not apply to them.
- Over 50% of farm businesses with an arable area indicated that they would not need to do something different for the 2015 harvest in order to meet the EFA requirement; 32% indicated that would need to make a change whilst 12% thought the rule did not apply to them.

Background

In 2015 the Single Payment Scheme was replaced by a new system of direct payments comprised of the Basic Payment Scheme (BPS) and additional 'greening' payments. The new 'greening' rules specify the requirements that eligible farmers must meet in order to receive a greening payment worth 30% of the total direct payment. There are 3 greening rules³:

1. **Permanent grassland:** Under this rule, if the percentage of permanent grassland in England – relative to the area of agricultural land – falls by more than 5%, farmers who have ploughed permanent grassland may have to re-instate it.
2. **Crop diversification:** this has also been called the '2 or 3 crop rule'. If a farmer has 10 or more hectares of arable land, they will have to follow the crop diversification rules on the minimum number of crops they grow and the areas they cover – unless they qualify for an exemption.
3. **Ecological Focus Areas (EFAs):** if a farmer has more than 15 hectares of arable land, they will need 'Ecological Focus Areas' on their arable land – unless they qualify

³ Please see the Basic Payment Scheme guidance document for more information on the greening rules <https://www.gov.uk/government/publications/basic-payment-scheme-guidance-for-2015>

for an exemption. EFAs are areas and/or features drawn from the list of areas and features which the EU has decided are beneficial for the climate and the environment. Five of the EFA options have been selected as applicable in England. If a farm does need to apply the EFA requirement, the areas and features used must be equivalent to at least 5% of the total arable land the farmer declares on their BPS application.

Some farms, such as those certified as organic or farms with large amounts of eligible land which is fallow and/or in grass, are exempt from the greening requirements.

An additional module was included within the 2014/15 Farm Business Survey (FBS) to collect information on the total area of EFA features on farms in England prior to the implementation of the greening rules. This was to establish a baseline and to allow an assessment of the impact of the greening requirements. In England the following features count towards a farm's EFA requirement:

- **Fallow land** - land which has no crop production or grazing on it, but is maintained in a state suitable for grazing or cultivation for the first six months of the year.
- **Hedges** - A 'hedge' is any hedgerow (a row of bushes) growing on or adjacent to (next to) arable land which forms part of a farm business.
- **Buffer strips** - A buffer strip is an area of land maintained in permanent vegetation that provides an intermediate protection zone between cropped or grazed land and areas of conservation value. To count as EFA, a buffer strip must be next to a watercourse or parallel with and on a slope leading to a watercourse.
- **Areas of catch crops or green cover** - Catch crops are those crops which are planted after the harvest and before the sowing of winter crops. Green cover is present on the land throughout winter. Catch and cover crops are designed to protect the soil and use available nutrients between harvest and sowing.
- **Area of nitrogen fixing crops** - These are crops which are able to draw nitrogen from the air and store it in their roots e.g. legume plants such as peas and beans. When the plant dies, the fixed nitrogen is released and becomes available to other plants. This helps to fertilize the soil.

As well as collecting information about these features, the module also collected data on the full list of features identified by the EU Commission as being beneficial for the climate and the environment (Appendix A).

The data collected from this module will enable us to explore the impact of Greening on farm businesses and provide an evidence-based assessment to inform future CAP reform discussions. The data will provide an important baseline for evaluating the economic and environmental impacts of the new EFA requirement as part of Greening within the CAP from 2015. It will also allow an analysis of the economic impacts on individual farm businesses and help us explore the economic impacts of any future changes to Greening implementation in England. Similar data will also be collected as part of the 2015/16 FBS.

The data used for this analysis have been collected from a subset of 926 farms within the 2014/15 FBS. The FBS covers those farms with at least 25 thousand euros of standard output⁴. **Completion of the EFA module was voluntary and restricted to farms with an**

⁴ Please see the Survey methodology section for more information on the FBS.

arable area. Some 83% of farms in the FBS population had an arable area⁵. Weights were derived for this sub sample in line with the method described in the survey methodology section (e.g. to preserve the population totals for robust farm types and farm size groups). For some farms, it was not possible to complete a full record, as the data were not readily known by the farmer or researcher. In these cases, we have imputed⁶ values for missing items. For more information please see the [data analysis section](#).

This release provides a baseline assessment of Ecological Focus Area (EFA) features on farms with an arable area in England prior to the implementation of the new CAP Greening requirements. It also provides estimates of the number of farm businesses that might have needed to implement changes in order to meet the EFA requirement.

The results are presented together with [confidence intervals](#). The results presented in this notice can be found at:

<https://www.gov.uk/government/collections/farm-business-survey#other-analysis-from-the-farm-business-survey>

Detailed Results

1 Farms affected by EFA requirement

Key findings:

Of those farms with an arable area in 2014/15:

- A fifth of farms, with an arable area, would have been exempt from the EFA requirements. These farms accounted for around 2% of the arable area. There was considerable variation between farm types; whilst over 80% of horticulture farms would have been exempt from complying with the EFA requirement, almost all cropping farms would need to comply.
- Almost two thirds (62%) of farms would not have needed to implement any changes in order to meet their EFA requirement as they already had sufficient areas of qualifying features present. These farms accounted for 77% of the arable area. This varied from around 85% of cereal farms to 9% of horticulture farms.
- Around a fifth (18%) may have needed to implement changes. These farms accounted for around 21% of the arable area. Dairy farms were most likely to have to implement some change in order to meet the EFA requirement.

Subject to some exemptions (see Appendix B) all farmers claiming the Basic Payment with more than 15 hectares of arable land must have EFAs. A farm's total EFA must be equivalent to at least 5% of their total arable land area⁷. In 2014/15 the total arable area of the farms represented by this survey was 4.5 million hectares.

Whilst the greening rules don't apply to land which is certified as organic (including land 'in conversion'), farmers can choose to count their organic land in their arable area when they do their greening calculations. For the purpose of this analysis we have included organic

⁵ The survey was restricted to just those farms with an arable area as it is only these farms that might need to comply with the EFA requirement. See the [survey methodology section](#) for more details.

⁶ Imputation is a process whereby missing values in a data set are replaced with known acceptable values.

⁷ For the Basic Payment Scheme, arable land is: Land cultivated for crop production, fallow land and temporary grassland

land within the arable area, as we do not know whether a farmer would choose to include their organic land or not.

Each EFA feature (fallow land, hedges, buffer strips, catch crops/green cover and nitrogen fixing crops) has a different weighting towards the total EFA area. These weightings apply in all Member States and can be found in Appendix A.

Based on the data collected we can estimate the total EFA area for each farm business. We can also estimate the number of farm businesses that would have been exempt from the EFA requirement, those that would not have needed to implement any changes and those that might have needed to implement changes in order to meet the EFA requirement.

Results

The results are only for those farms which had an arable area in 2014/15. Some 83% of farm businesses in the FBS had an arable area in 2014/15 (see [survey methods](#) for further information). Data was not collected for those farms which did not have an arable area.

A fifth of farms with an arable area would have been exempt from complying with the EFA requirement (Table 1). These farms accounted for just 2% of the arable area. Around 62% of farms (accounting for 77% of the arable area) would not have needed to implement any changes. Eighteen per cent of farms (accounting for 21% of the arable area) may have needed to implement changes.

Table 1: Farm businesses affected by EFA requirement, England 2014/15^{(a)(b)}

	Percentage of farm businesses (%)	Arable area (thousand hectares)	Percentage of arable area (%)
Exempt	20 (±0)	80 (±16)	2
Farms that would not have needed to change	62 (±0)	3,475 (±264)	77
Farms that would have needed to change	18 (±0)	953 (±176)	21
All farms	100	4,508 (±220)	100

Source: Farm Business Survey.

(a) Based on responses from 926 farm businesses with an arable area in 2014/15.

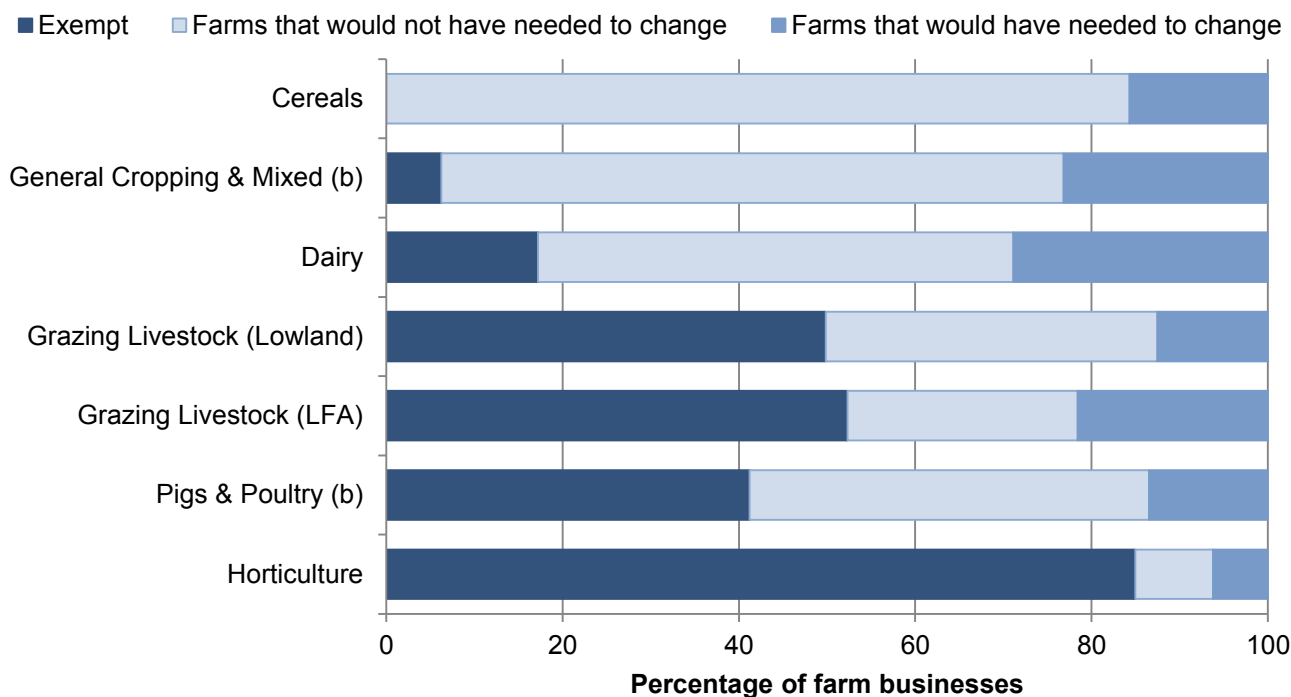
(b) 95% confidence intervals shown in brackets below estimate.

Over 80% of horticulture farms with an arable area would have been exempt from the EFA requirement; almost all cropping farms would need to comply. Nearly 85% of cereal farms (84%) would not have needed to implement any changes. Around 30% of dairy farms with an arable area may have needed to implement changes in order to meet the EFA requirement.

Around 10% of very large farms with an arable area would have been exempt from the EFA requirement compared to around 20% for other farm size groups. For those farms that would not have needed to implement changes there is little variation across farm size

groups. Around 30% of very large farms with an arable area may have needed to implement changes in order to meet the EFA requirement.

Figure 1: Proportion of farm businesses affected by EFA requirement by farm type, England 2014/15^(a)

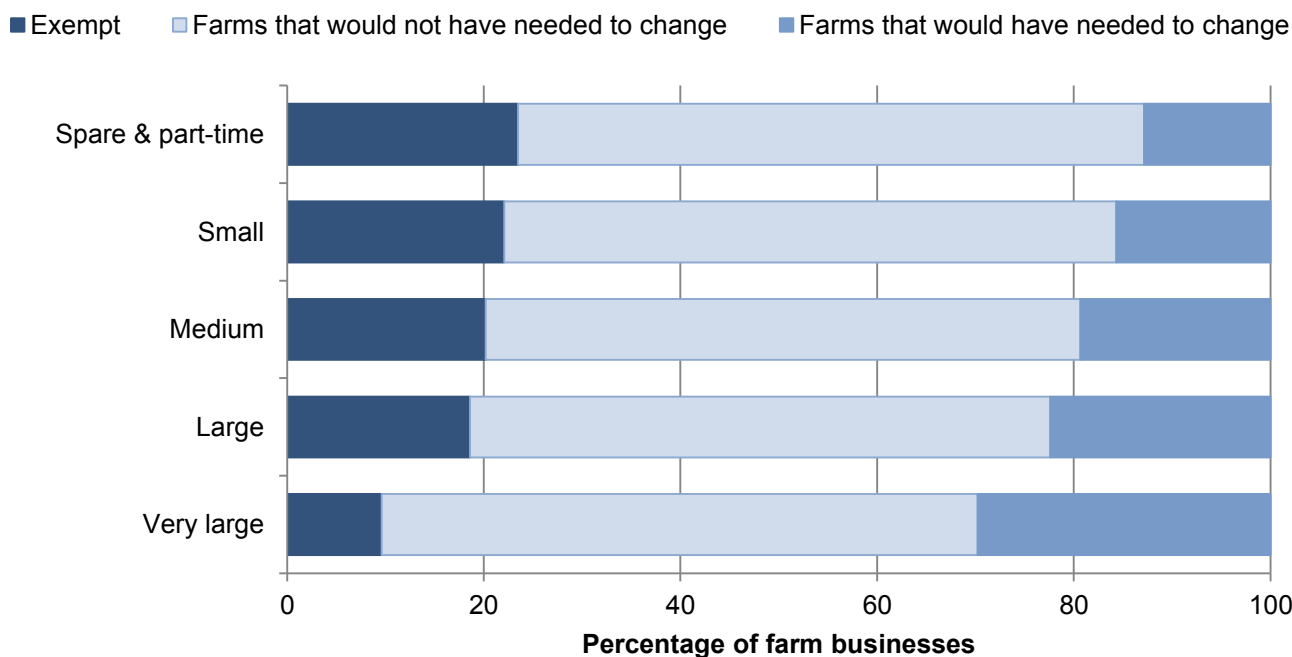


Source: Farm Business Survey.

(a) Based on responses from 926 farm businesses with an arable area in 2014/15.

(b) These farm types have been combined due to insufficient observations

Figure 2: Proportion of farm businesses affected by EFA requirement by farm size, England 2014/15^(a)



Source: Farm Business Survey.

(a) Based on responses from 926 farm businesses with an arable area in 2014/15.

2 Areas of Ecological Focus Area features

Key findings:

The areas below are only for those farms with an arable area. They include features on farms that would have been exempt from the EFA requirement.

- Of the features that could be used to meet the EFA requirement in England in 2015, fallow land, hedges and nitrogen fixing crops offered the largest potential areas; accounting for around 4%, 5% and 3% respectively of the total arable area (with EFA weightings applied).
- Field margins, rotational fallow and wild bird seed mix accounted for around 60% of the total fallow land (194,200 hectares).
- Of those features not currently applicable to farms in England, ditches had the largest area at around 40,200 hectares (with weightings applied), accounting for around 0.9% of the arable area.
- Isolated trees had the smallest area at around 500 hectares (weighted).

In England, fallow land, hedges, buffer strips, catch crops/green cover and nitrogen fixing crops are currently the features which can count towards a farm's EFA requirement. The survey collected information on the total area of these features on farms with an arable area in 2014/15 (2014 harvest), prior to the implementation of the new CAP Greening requirements. The survey also collected areas for some of the other features that Member States could include within the requirement. These have been separately presented. The results shown here have been presented before (Tables 2 and 4) and after the application of the EFA feature weights⁸ (Tables 3 and 5).

2.1 Features applicable to farms in England

The features with the largest areas that were potentially available for use as EFAs were fallow land, hedges and nitrogen fixing crops; these each accounted for around 4% of the total arable area (unweighted) and for around 4%, 5% and 3% respectively of the total arable area once the weighting had been applied (Table 2 and 3). For these features, the majority of the areas were found on farms which do not need to implement any changes.

⁸ See appendix A for details of the conversion and weighting factors.

Table 2: Total area of EFA features (unweighted), England 2014/15^{(a)(b)}

	Total area of features (thousand hectares)				Percentage of arable area (%)			
	Exempt	Farms that would not have needed to change	Farms that would have needed to change	All farms	Exempt	Farms that would not have needed to change	Farms that would have needed to change	All farms
Fallow land	8.9 (±4.0)	174.7 (±28.9)	10.6 (±4.3)	194.2 (±28.7)	0.2	3.9	0.2	4.3
Hedges	18.7 (±20.5)	131.7 (±18.4)	9.5 (±1.9)	160.0 (±27.2)	0.4	2.9	0.2	3.5
Buffer Strips	0.4 (±0.3)	15.9 (±4.4)	0.7 (±0.4)	17.0 (±4.4)	0.0	0.4	0.0	0.4
Catch crops/ green cover	0.5 (±0.6)	31.3 (±14.3)	1.2 (±1.1)	33.1 (±14.4)	0.0	0.7	0.0	0.7
Nitrogen fixing crops	0.1 (±0.2)	189.7 (±34.9)	0.8 (±1.2)	190.6 (±34.9)	0.0	4.2	0.0	4.2

Source: Farm Business Survey.

(a) Based on responses from 926 farm businesses with an arable area in 2014/15.

(b) 95% confidence intervals shown in brackets below estimate.

Table 3: Total area of EFA features (weighted), England 2014/15^{(a)(b)}

	Total area of features (thousand hectares)				Percentage of arable area (%)			
	Exempt	Farms that would not have needed to change	Farms that would have needed to change	All farms	Exempt	Farms that would not have needed to change	Farms that would have needed to change	All farms
Fallow land	8.9 (±4.0)	174.7 (±28.9)	10.6 (±4.3)	194.2 (±28.7)	0.2	3.9	0.2	4.3
Hedges	24.8 (±23.4)	206.0 (±28.0)	14.6 (±2.9)	245.5 (±35.8)	0.6	4.6	0.3	5.4
Buffer Strips	0.6 (±0.5)	23.8 (±6.5)	1.1 (±0.5)	25.5 (±6.6)	0.0	0.5	0.0	0.6
Catch crops/ green cover	0.2 (±0.2)	9.4 (±4.3)	0.4 (±0.3)	9.9 (±4.3)	0.0	0.2	0.0	0.2
Nitrogen fixing crops	0.1 (±0.1)	132.8 (±24.4)	0.6 (±0.8)	133.4 (±24.4)	0.0	2.9	0.0	3.0

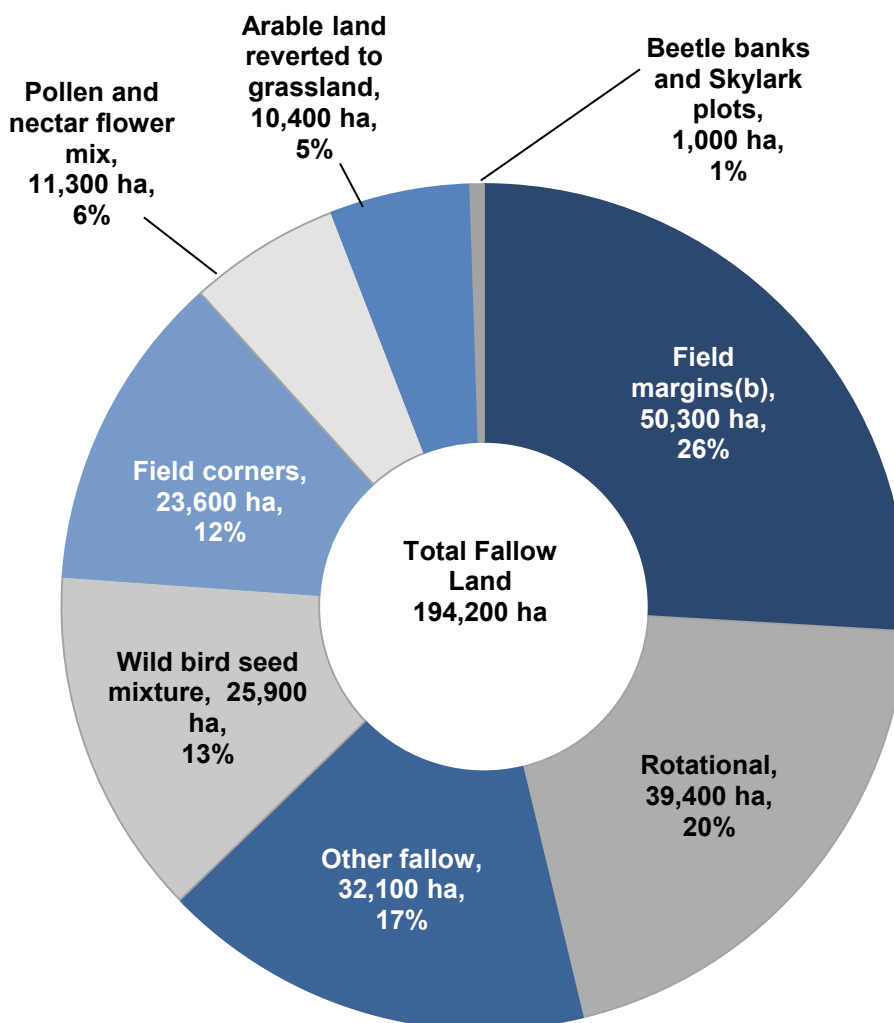
Source: Farm Business Survey.

(a) Based on responses from 926 farm businesses with an arable area in 2014/15.

(b) 95% confidence intervals shown in brackets below estimate.

The module collected a breakdown of fallow land into managed fallow areas e.g. skylark plots and field corners (Figure 3). Over 60% of the total fallow land (194,200 hectares) was made up of field margins (50,300 hectares), rotational fallow (39,400 hectares) and other fallow features (32,100 hectares). Beetle banks and skylark plots accounted for 1% of the total fallow land (1,000 hectares).

Figure 3: Total areas of fallow land features, England 2014/15^(a)



Source: Farm Business Survey.

(a) Based on responses from 926 farm businesses with an arable area in 2014/15.

(b) Field margins do not include those that are part of cross compliance requirements

2.2 Features currently not applicable to farms in England

The areas of these other features were small; ditches had the largest area at around 20,000 hectares, unweighted, and 40,200 hectares, weighted (Table 4 and 5). This accounted for around 0.5% and 0.9% of the arable area respectively. Isolated trees had the smallest area at around 300 hectares, unweighted, and 500 hectares, weighted.

Table 4: Total area of other features (unweighted), England 2014/15^{(a)(b)}

	Total area of features (thousand hectares)				Percentage of arable area (%)			
	Exempt	Farms that would not have needed to change	Farms that would have needed to change	All farms	Exempt	Farms that would not have needed to change	Farms that would have needed to change	All farms
Isolated trees	0.02 (±0.01)	0.28 (±0.08)	0.04 (±0.01)	0.34 (±0.09)	0.00	0.01	0.00	0.01
Trees in a line	0.22 (±0.23)	1.27 (±0.52)	0.15 (±0.08)	1.64 (±0.57)	0.00	0.03	0.00	0.04
Groups of trees/Field copses	0.04 (±0.05)	2.27 (±1.97)	0.18 (±0.13)	2.50 (±1.97)	0.00	0.05	0.00	0.06
Ponds	0.04 (±0.03)	1.40 (±0.44)	0.17 (±0.08)	1.61 (±0.44)	0.00	0.03	0.00	0.04
Ditches	0.81 (±0.40)	15.58 (±2.28)	3.70 (±1.61)	20.09 (±2.68)	0.02	0.35	0.08	0.45
Stone walls	0.06 (±0.07)	0.44 (±0.27)	0.18 (±0.16)	0.68 (±0.32)	0.00	0.01	0.00	0.02
Strips along forest edges	0.01 (±0.01)	0.78 (±0.36)	0.12 (±0.17)	0.91 (±0.40)	0.00	0.02	0.00	0.02
Afforested areas	0.92 (±1.18)	10.96 (±8.77)	0.82 (±0.92)	12.70 (±8.89)	0.02	0.24	0.02	0.28
Short rotation coppice	0.00 (±0.00)	2.37 (±3.31)	0.73 (±1.42)	3.10 (±3.60)	0.00	0.05	0.02	0.07

Source: Farm Business Survey.

(a) Based on responses from 926 farm businesses with an arable area in 2014/15.

(b) 95% confidence intervals shown in brackets below estimate.

Table 5: Total area of other features (weighted), England 2014/15^{(a)(b)}

	Total area of features (thousand hectares)				Percentage of arable area (%)			
	Exempt	Farms that would not have needed to change	Farms that would have needed to change	All farms	Exempt	Farms that would not have needed to change	Farms that would have needed to change	All farms
	0.03	0.42	0.07	0.51	0.00	0.01	0.00	0.01
Isolated trees	(±0.01)	(±0.13)	(±0.02)	(±0.13)				
	0.44	2.54	0.30	3.28	0.01	0.06	0.01	0.07
Trees in a line	(±0.47)	(±1.04)	(±0.16)	(±1.14)				
Groups of trees/Field copses	0.07	3.40	0.28	3.75	0.00	0.08	0.01	0.08
	(±0.08)	(±2.95)	(±0.20)	(±2.96)				
	0.06	2.10	0.25	2.41	0.00	0.05	0.01	0.05
Ponds	(±0.05)	(±0.65)	(±0.12)	(±0.66)				
	1.62	31.16	7.41	40.18	0.04	0.69	0.16	0.89
Ditches	(±0.81)	(±4.57)	(±3.22)	(±5.35)				
	0.06	0.44	0.18	0.68	0.00	0.01	0.00	0.02
Stone walls	(±0.07)	(±0.27)	(±0.16)	(±0.32)				
	0.01	1.17	0.19	1.37	0.00	0.03	0.00	0.03
Strips along forest edges	(±0.02)	(±0.54)	(±0.26)	(±0.59)				
	0.92	10.96	0.82	12.70	0.02	0.24	0.02	0.28
Afforested areas	(±1.18)	(±8.77)	(±0.92)	(±8.89)				
	0.00	0.71	0.22	0.93	0.00	0.02	0.00	0.02
Short rotation coppice	(±0.00)	(±0.99)	(±0.43)	(±1.08)				

Source: Farm Business Survey.

(a) Based on responses from 926 farm businesses with an arable area in 2014/15.

(b) 95% confidence intervals shown in brackets below estimate.

3 Areas featured in an Agri-Environment Scheme (AES)

Key findings:

The areas below are only for those farms with an arable area.

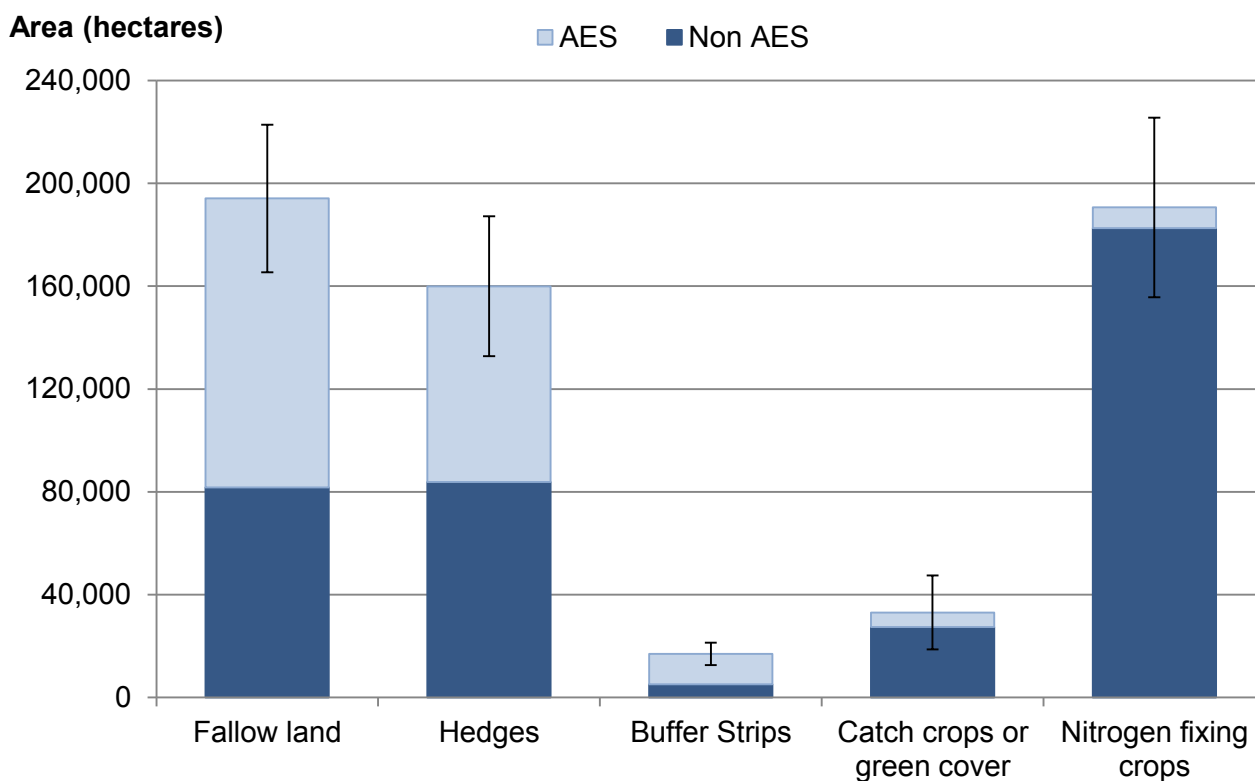
- The total area of features that could be used to meet the EFA requirement within an AES scheme was around 214,000 hectares, which accounted for 36% of the total area of these features (approximately 595,000 hectares).
- Over half of the total area of buffer strips (68%), afforested areas (63%), fallow land (58%) and stone walls (54%) was already included within an AES scheme.
- Only 5% of the total area of groups of trees or field copses was included within an AES scheme.

Agri-environment schemes (AES) provide funding to farmers and land managers to farm their land in a way which is sensitive to the environment. Until 2005, these were targeted at specific areas or landscape types considered to be of high conservation value, largely through Environmentally Sensitive Areas (ESAs) or the Countryside Stewardship Scheme

(CSS). Environmental Stewardship (ES) was introduced in March 2005, providing funding to farmers and land managers throughout England who deliver effective environmental management on their land. ES is a two tiered scheme providing an Entry Level (ELS) and a Higher Level (HLS). Farmers can use all appropriate ELS/OELS (Organic Entry Level) options to meet their EFA requirements under greening, provided they meet the relevant EFA requirements and the ELS option requirements. Some ELS/OELS agreements will have the payment for certain options reduced where there is a risk of double-funding.

The total area of features that could be used to meet the EFA requirement within an AES scheme was around 214,000 hectares, which accounted for 36% of the total area of these features (approximately 595,000 hectares). Over half of the total area of buffer strips (68%), afforested areas (63%), fallow land (58%) and stone walls (54%) was covered under an AES scheme (Figures 3 and 4). Only 5% of the total area of groups of trees or field copses was covered under an AES scheme.

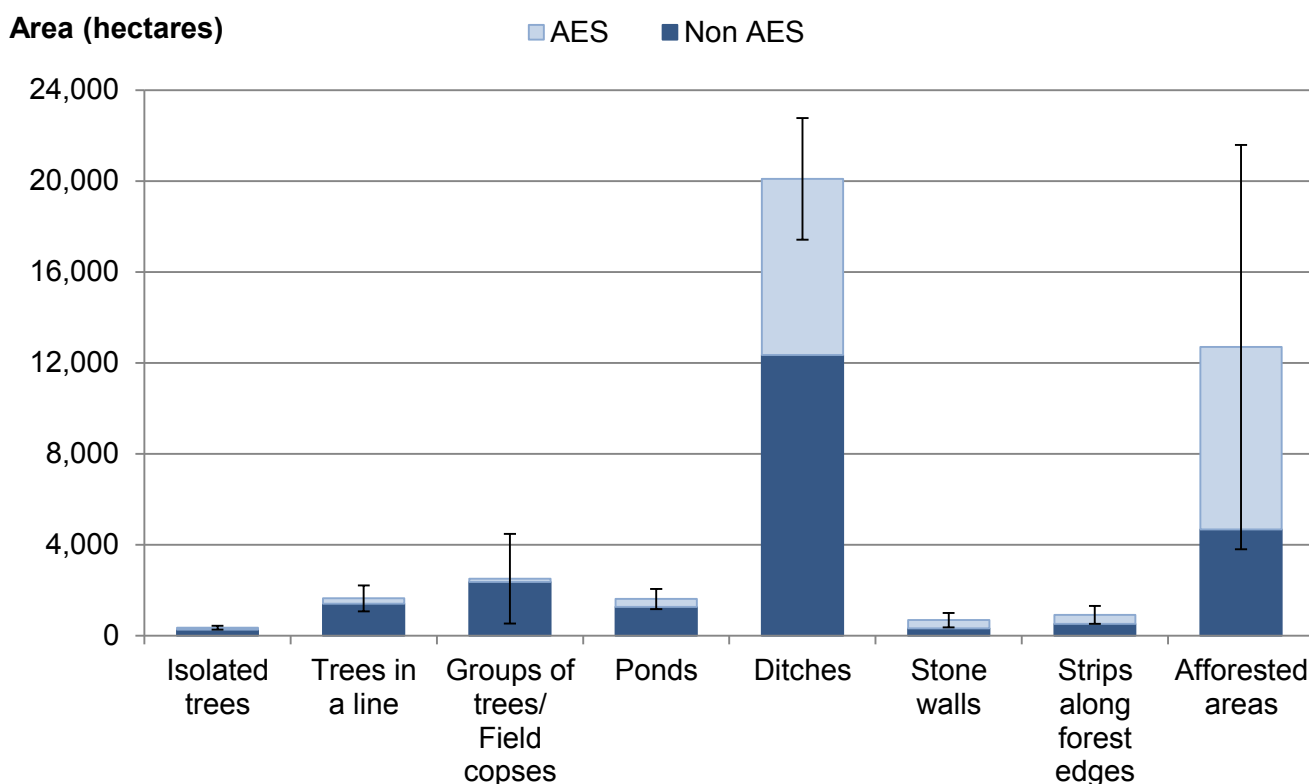
Figure 4: Area of EFA features (unweighted) by agri-environment scheme (AES) membership, England 2014/15^(a)



Source: Farm Business Survey.

(a) Based on responses from 926 farm businesses with an arable area in 2014/15.

Figure 5: Area of other features (unweighted) by agri-environment scheme (AES) membership, England 2014/15^(a)



Source: Farm Business Survey.

(a) Based on responses from 926 farm businesses with an arable area in 2014/15.

4 Potential changes required due to greening

Key findings:

Farmers were also asked (in spring 2015) whether they had to do something different for the 2015 harvest in order to meet the EFA and crop diversification rules.

- Sixty percent of farm businesses with an arable area indicated that they would not need change their cropping for the 2015 harvest in order to meet the crop diversification rules; 28% indicated that they had to make a change whilst 12% thought the rule did not apply to them.
- Over 50% of farm businesses with an arable area indicated that they would not need to do something different for the 2015 harvest in order to meet the EFA requirement; 32% indicated that would need to make a change whilst 12% thought the rule did not apply to them.

During the spring of 2015, farmers were asked whether they had to do something different for the 2015 harvest in order to meet the EFA and crop diversification rules.

4.1 Crop diversification

Sixty percent of farm businesses with an arable area indicated that they had not had to change their cropping for the 2015 harvest (Table 6), 28% indicated that they had to make a change whilst 12% thought the rule did not apply to them.

Table 6: Changes required due to crop diversification^(a)

Has the crop diversification rule meant that you had to do something different this year (2015)?		
	Percentage of farm businesses (%)	95% Confidence Interval (%)
Yes, significant change	11	±2
Yes, but limited	17	±3
No – nothing	60	±4
Not applicable	12	±2

Source: Farm Business Survey, England 2014/15.

(a) Based on responses from 926 farm businesses with an arable area in 2014/15.

4.2 EFAs

Farmers were asked whether the introduction of the EFA requirement had meant that they had to do something different for the 2015 harvest (Table 7). Over half of farm businesses with an arable area (56%) indicated that they had not had to do something, 32% indicated that they had to make a change, whilst 12% thought the rule did not apply to them.

Table 7: Changes required due to EFAs^(a)

Have EFAs meant that you had to do something different this year (2015)?		
	Percentage of farm businesses (%)	95% Confidence Interval (%)
Yes, significant change	11	±2
Yes, but limited	21	±3
No – nothing	56	±4
Not applicable	12	±2

Source: Farm Business Survey, England 2014/15.

(a) Based on responses from 926 farm businesses with an arable area in 2014/15.

Survey details

Survey content and methodology

The FBS is an annual survey providing information on the financial position and physical and economic performance of farm businesses in England. The sample of around 1,900 farm businesses covers all regions of England and all types of farming with the data being collected by face to face interview with the farmer. Results are weighted to represent the whole population of farm businesses that have at least 25,000 Euros of standard output⁹ as recorded in the annual June Survey of Agriculture and Horticulture. In 2014, this accounted for approximately 57,500 farm businesses.

For further information about the Farm Business Survey please see:

<https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/series/farm-business-survey>

Within the 2014/15 Farm Business Survey (FBS) an additional module was included to collect information on the total area of EFA features on farms, prior to the implementation of the greening rules. The information collected covered:

- Total area of features on farm including the area under an agri-environment scheme and the area on organic land.
- Questions on potential changes needed due to greening

Completion of the EFA module was voluntary and restricted to those farms which had an arable area. Table 8 shows that around 17% of the FBS population did not have an arable area in 2014/15. This group is largely made up of livestock farms and represents around 9,700 farms in the population.

Table 8: Percentage of farm businesses in the FBS population with and without an arable area by farm type

	No arable area	Has an arable area
Cereals	0%	100%
General cropping	0%	100%
Dairy	9%	91%
Grazing livestock (Lowland)	28%	72%
Grazing livestock (LFA)	51%	49%
Pigs	45%	55%
Poultry	62%	38%
Mixed	3%	97%
Horticulture	18%	82%
All farms	17%	83%

Source: Farm Business Survey, England 2014/15

Data was collected from a sample of 926 farms. The farms that responded to the EFA module had slightly different characteristics to those farms in the main FBS which were eligible. There were a greater proportion of cereal farms, farms in East England and smaller farms responding to the EFA module compared to those eligible farms in the main FBS. There were a smaller proportion of grazing livestock (LFA) farms, farms in the West Midlands and very large farms responding to the module compared to those eligible in the

⁹ For a definition of standard output please see the UK classification document here <https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

main FBS. Full details of the characteristic of responding farms can be found at Appendix C.

Data analysis

The results from the FBS relate to farms which have a standard output of at least 25,000 Euros. Initial weights are applied to the FBS records based on the inverse sampling fraction for each design stratum (farm type by farm size). These weights are then adjusted (calibration weighting¹⁰) so that they can produce unbiased estimators of a number of different target variables.

The data used for this analysis is only for those farms which completed the EFA module in 2014/15 FBS. Completion of the EFA module was voluntary and restricted to those farms which had an arable area. A sample of 926 farms was achieved in 2014/15. In order to take account of non-response, the results have been reweighted using a method that preserves marginal totals for populations according to farm type and farm size⁴ groups. These population totals have been restricted to reflect just those farms in the population which were eligible for the module (those that have an arable area); the farms in the EFA module represent around 42,700 farms in the population.

Table 9 shows the data completion codes for all features collected within the module. For some farms, it was not possible to complete a full record, as the data were not readily known by the farmer or researcher these have a code of 'Feature on the arable area of the farm but area/length/quantity not available' in table 9. For some features there was no missing data, or very small amounts less than 1%, but 16% of the records had missing data for ditches. For these cases we have imputed values for the missing items. Imputation is a process whereby missing values in a data set are replaced with known acceptable values.

Imputation was undertaken using a nearest neighbour approach. Those farms which required imputation were separated from the farms with complete data for the feature being imputed (base farms). A nearest neighbour was identified by calculating the minimum distance between each potential proxy farm (base farms) and the farms to be imputed based on farm type, farm size, region, arable area, utilised arable area (UAA) and the total fallow land recorded in the core FBS (where appropriate). For each recipient farm the maximum absolute difference between the recipient farm and the potential proxies are found. The proxy farm with the lowest maximum absolute difference was selected. Where several potential proxies with the same lowest maximum absolute difference were identified, one was selected at random. The value for the feature being imputed was transferred from the proxy farm to the farm to be imputed.

Accuracy and reliability of the results

We show 95% confidence intervals against the results. These show the range of values that may apply to the figures. They mean that we are 95% confident that this range contains the true value. They are calculated as the standard errors (se) multiplied by 1.96 to give the 95% confidence interval (95% CI). The standard errors only give an indication of the sampling error. They do not reflect any other sources of survey errors, such as non-response bias. For the Farm Business Survey, the confidence limits shown are appropriate for comparing groups within the same year only; they should not be used for comparing

¹⁰ Further information on calibration weighting can be found here:
<https://www.gov.uk/farm-business-survey-technical-notes-and-guidance>

with previous years since they do not allow for the fact that many of the same farms will have contributed to the Farm Business Survey in both years.

We have also shown error bars on the figures in this notice. These error bars represent the 95% confidence intervals (as defined above).

Availability of results

This release contains headline results for each section. The full breakdown of results can be found at: <https://www.gov.uk/government/collections/farm-business-survey#documents>

Defra statistical notices can be viewed on the Food and Farming Statistics pages on the Defra website at <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/statistics>. This site also shows details of future publications, with pre-announced dates.

Table 9: Data completion codes for all features

	Feature on arable area of farm, data complete (i.e. no estimation)	Feature on the arable area of the farm but area/length/ quantity estimated	Feature on the arable area of the farm but area/length/ quantity not available	Feature not on the arable area of the farm
All fallow land	34%	13%	1%	51%
Rotational	9%	4%	0%	87%
Field corners	16%	8%	1%	74%
Wild bird seed mixture	16%	6%	1%	77%
Pollen and nectar flower mix	9%	3%	1%	87%
Beetle banks	2%	1%	0%	96%
Skylark plots	2%	1%	1%	96%
Arable land reverted to grassland	3%	1%	0%	97%
Field margins	13%	16%	5%	66%
Other fallow	12%	5%	0%	83%
Hedges (both sides)	20%	52%	13%	15%
Hedges (one side)	20%	49%	14%	18%
Isolated trees	23%	12%	6%	59%
Trees in a line	4%	9%	6%	82%
Groups of trees/Field copses	3%	6%	4%	87%
Ponds	6%	17%	5%	72%
Ditches	13%	31%	16%	40%
Stone walls	3%	5%	3%	89%
Buffer strips	9%	8%	6%	76%
Strips along forest edges	3%	2%	2%	94%
Afforested areas	2%	1%	0%	96%
Catch crops or green cover	5%	1%	0%	94%
Nitrogen fixing crops	19%	2%	0%	79%

Source: Farm Business Survey, England 2014/15

Data Uses

Data from the main FBS are provided to the EU as part of the Farm Accountancy Data Network (FADN). The data have been used to help inform policy decisions (e.g. Reform of Pillar 1 and Pillar 2 of the Common Agricultural Policy) and to help monitor and evaluate current policies relating to agriculture in England (and the EU). It is also widely used by the industry for benchmarking and informs wider research into the economic performance of the agricultural industry.

The data collected from this module will enable us to explore the impact of Greening on farm businesses, and provide an evidence-based assessment to inform future CAP reform discussions. The data will provide an important baseline for evaluating the economic and environmental impacts of the new EFA requirement as part of Greening within the CAP from 2015. It will also allow an analysis of the economic impacts on individual farm businesses and help us explore the economic impacts of any future changes to Greening implementation in England.

User engagement

As part of our ongoing commitment to compliance with the Code of Practice for Official Statistics <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>, we wish to strengthen our engagement with users of these statistics and better understand the use made of them and the types of decisions that they inform. Consequently, we invite users to make themselves known, to advise us of the use they do, or might, make of these statistics, and what their wishes are in terms of engagement. Feedback on this notice and enquiries about these statistics are also welcome.

Definitions

Farm Type

Where reference is made to the *type of farm* in this document, this refers to the 'robust type', which is a standardised farm classification system.

Farm Sizes

Farm sizes are based on the estimated labour requirements for the business, rather than its land area. The farm size bands used within the detailed results tables which accompany this publication are shown in the table below. Standard Labour Requirement (SLR) is defined as the theoretical number of workers required each year to run a business, based on its livestock and livestock activities.

Farm size	Definition
Spare & Part time	Less than 1 SLR
Small	1 to less than 2 SLR
Medium	2 to less than 3 SLR
Large	3 to less than 5 SLR
Very Large	5 or more SLR

Utilised Agricultural Area (UAA)

Utilised Agricultural Area (UAA) is the crop area, including fodder, set-aside land, temporary and permanent grass and rough grazing in sole occupation (but not shared rough grazing) i.e. the agricultural area of the farm. It includes bare land and forage let out for less than one year.

Arable Land

For the Basic Payment Scheme, arable land is: Land cultivated for crop production, fallow land and temporary grassland.

Fallow land

Land which has no crop production or grazing on it, but is maintained in a state suitable for grazing or cultivation during the period 1 January to 30 June.

Hedges

A 'hedge' is any hedgerow (a row of bushes) growing on or adjacent to (next to) arable land which forms part of a farm businesses.

Buffer strips

A buffer strip is an area of land maintained in permanent vegetation that provides an intermediate protection zone between cropped or grazed land and areas of conservation value. To count as EFA, a buffer strip must be next to a watercourse or parallel with and on a slope leading to a watercourse.

Areas of catch crops or green cover

Catch crops are those crops which are planted after the harvest and before the sowing of winter crops. Green cover is present on the land throughout winter. Catch and cover crops are designed to protect the soil and use available nutrients between harvest and sowing.

Area of nitrogen fixing crops

These are crops which are able to draw nitrogen from the air and store it in their roots e.g. legume plants such as peas and beans. When the plant dies, the fixed nitrogen is released and becomes available to other plants. This helps to fertilize the soil.

Rotational fallow land

Land that is left fallow as part of the normal crop rotation.

Field corners

The provision of unmanaged areas on arable land (including temporary grassland) to increase the wildlife interest of the farm. Field corners create wildlife habitats, buffer features and minimise run-off and erosion.

Wild bird seed mixture

These are mixtures of small-seed bearing crops or pollen and nectar rich plants sown at the edges of fields in strips or blocks, in early spring or late summer. These are an unharvestable mix of at least two crops that support wildlife and pollinators. They should be an area with a balanced combination of small-seed bearing crops. For example, Barley, Triticale, Kale, Quinoa, Linseed, Millet, Mustard, Fodder radish, Sunflower. This will benefit over-wintering birds.

Pollen and nectar flower mixture

These are mixtures of small-seed bearing crops or pollen and nectar rich plants sown at the edges of fields in strips or blocks, in early spring or late summer. These are an unharvestable mix of at least two crops that support wildlife and pollinators They should be an area with a mixture of nectar-rich plants. For example, Red clover, Alsike clover, Bird's foot trefoil, Sainfoin, Musk mallow, Common knapweed. This will benefit nectar feeding insects like butterflies and bumble bees.

Beetle Banks

Beetle banks are tussocky grass ridges, generally about 2 m wide, that run from one side of a field to the other whilst still allowing the field to be farmed. They provide habitat for ground nesting birds, small mammals and insects (including those which feed on crop pests). Once created the earth ridge is sown with a mixture of perennial grasses, including some tussock forming varieties such as cocksfoot or timothy. Pesticides, fertilisers or manure are not applied and only spot applications of herbicide are permitted for the control of injurious or invasive weeds.

Skylark Plots

Skylark plots are unsown areas within winter wheat crops between 3 and 12 metres in length and width. After drilling, there is no requirement to manage the plots differently from the remainder of the field (i.e. they can be over-sprayed, receive fertiliser applications, etc) but there must be no mechanical weeding of the plots between 1 April and harvest.

Arable land reverted to grass

These are areas of former arable land which have reverted to grassland. They provide habitats and foraging areas for insects and other wildlife, and can be used to protect archaeology. They are grassy areas with a minimum width of 6 metres that are maintained by light grazing or at least an annual cut which should occur no earlier than 31 July.

Field margins

Field margins shall have a width between 1 and 20 metres on which there shall be no agricultural production. These are grassy strips ideally established by natural regeneration which do not receive any fertiliser or manure. Invasive or injurious weeds may be treated by spot or weed wipe applications of herbicide. The strips may be cut occasionally to control woody growth.

Field margins that were part of cross compliance requirements for the Single Payment Scheme/Basic Payment Scheme were not recorded as part of the module.

Other features which count as fallow land, such as permanent fallow, lapwing plots

Other features which count as fallow land were recorded in this group and would include lapwing plots (fallow land which provides nesting sites for lapwings on arable land) and permanent fallow land.

Isolated trees

Trees are of historic and landscape significance in both arable and grassland situations, and also provide habitat for many invertebrates and birds. Isolated trees must have a crown diameter (The **crown of a tree** consists of the mass of foliage and branches growing outward from the trunk of the tree) of minimum 4 metres.

Trees in a line

Trees in line must have a crown diameter of a minimum 4 metres. The space between the crowns of trees must not exceed 5 metres.

Group of trees/Field copses

Trees in group are where trees are connected by overlapping crown cover. Field copses are areas overgrown with woody plants, not used for agricultural production. The maximum size for both is 0.3 hectares (3000m²). More than one group of trees/field copses can be recorded so the total area can exceed 0.3 hectares.

Ponds

Ponds should have a minimum size of 0.01 hectares (100m²) and a maximum size of 0.1 hectares (1000m²). A strip with riparian vegetation alongside the water with a width of up to 10 metres should be included in the size of the pond. Anything larger than 0.1 hectares is classed as a lake. Reservoirs made of concrete or plastic are not eligible.

Ditches

A ditch is a small to moderate depression created to channel water. A ditch can be used for drainage, to drain water from low-lying areas, alongside fields, or to channel water from a more distant source for plant irrigation. Ditches up to a maximum width of 6 metres can be counted, including open watercourses for the purpose of irrigation or drainage. Channels with concrete walls are not eligible.

Traditional Stone Walls

Stone walls of all types are important for stock management and as landscape and historic features. They are also potentially important habitats for lichens, mosses and ferns, invertebrates, reptiles, birds and small mammals. The walls do not have to be stock proof.

Strips along forest edges

These are areas of land adjacent to a forest in order to create a buffering transition to the bordering forest. The minimum width of those strips is 1 metre and the maximum width is 10 metres.

Afforested areas

This is the planting of trees for the purpose of creating woodland or forest. The area must have been afforested under a RDPE scheme (or a national scheme that meets all the conditions as the RDPE scheme).

This would include any land afforested since 2008 under the English Woodland Grant Scheme (<http://www.forestry.gov.uk/forestry/inf-d6dcegu>) and the Changing Landscape Scheme within the area of the National Forest (<http://www.nationalforest.org/woodlands/woodlandcreation/>).

Forest means land with a minimum area of 0.5 hectares and minimum width of 20 metres under stands of trees with, or with the potential to achieve, a height of 5 metres and crown cover of more than 20% of the ground. To achieve the 20% crown cover there will be a requirement to plant at least 300 trees per hectare.

Short Rotation Coppice

Short rotation coppice (SRC) means areas planted with tree species of CN code 0602 90 41 that consist of woody, perennial crops, the rootstock or stools remaining in the ground after harvesting, with new shoots emerging in the following season. Short rotation coppice (SRC) is harvested on a cycle of only two to four years. The maximum harvest cycle (the period between harvests) is 20 years.

Appendix A: Full list of features identified by the EU Commission^(a)

Features	Conversion factor (m/tree to m ²)	Weighting factor	Ecological focus area (if both factors are applied)
Land lying fallow (per 1m ²)	n.a.	1	1 m ²
Hedges (per 1m)	5	2	10 m ²
Isolated tree (per tree)	20	1.5	30 m ²
Trees in line (per 1m)	5	2	10 m ²
Group of trees/Field copses (per 1m ²)	n.a.	1.5	1.5 m ²
Ponds (per 1m ²)	n.a.	1.5	1.5 m ²
Ditches (per 1m)	3	2	6 m ²
Traditional stone walls (per 1m)	1	1	1 m ²
Buffer strips (per 1m)	6	1.5	9 m ²
Strips along forest edges (per 1m)	6	1.5	9 m ²
Afforested areas (per 1m ²)	n.a.	1	1 m ²
Areas with catch crops or green cover (per 1m ²)	n.a.	0.3	0.3m ²
Areas with nitrogen fixing crops (per 1m ²)	n.a.	0.7	0.7m ²
Areas with short rotation coppice (per1m ²)	n.a.	0.3	0.3 m ²

(a) The list excludes terraces and hectares of agro-forestry as these features do not occur in England.

Appendix B: Exemption Criteria for EFAs

Some farmers with more than 15 hectares of arable land may not need EFAs if any of the exemption criteria apply to them. The exemption criteria for EFAs are as follows:

- Exemption A - More than 75% of a farm's arable land is:
 - fallow land
 - temporary grassland
 - used for cultivation of leguminous crops
 - a combination of the above
 and the remaining arable land is 30 hectares or less.
- Exemption B -More than 75% of a farm's total eligible agricultural area is:
 - permanent grassland
 - temporary grassland
 - used for the cultivation of crops grown in water (such as Watercress)
 - a combination of the above
 and the remaining arable land is 30 hectares or less

Appendix C: Characteristics of responders to the FBS (eligible farms) and the EFA module

	Farms in the FBS eligible for the EFA module ^(a)	EFA module subset
Cereals	23%	29%
General cropping	10%	11%
Dairy	16%	14%
Grazing livestock (Lowland)	14%	13%
Grazing livestock (LFA)	9%	5%
Pigs	3%	3%
Poultry	2%	2%
Mixed	12%	13%
Horticulture	10%	9%
All farms	100%	100%

	Farms in the FBS eligible for the EFA module ^(a)	EFA module subset
North East, Yorkshire & Humber	15%	16%
North West	11%	10%
East Midlands	12%	12%
West Midlands	11%	7%
East of England	17%	22%
South East	12%	13%
South West	22%	19%
All farms	100%	100%

	Farms in the FBS eligible for the EFA module ^(a)	EFA module subset
Spare & part-time	12%	15%
Small	22%	25%
Medium	18%	17%
Large	22%	21%
Very large	27%	22%
All farms	100%	100%

(a) Only those farms with an arable area were eligible for the EFA module, there were 1581 farms in the FBS that were eligible in 2014/15.