

## **Guide to evidence supporting claims of compliance with RED land criteria for UK grown biofuels**

The following table compiled by Defra aims to assist economic operators with the types and sources of information that might be used to show that the biofuels grown in the UK have been sourced in a manner that is consistent with the sustainability criteria in the Directive.

The information suggestions in this table are not meant to be exhaustive. Local Record Centres are considered a useful starting point. The countryside agencies and Forestry Commission/Northern Ireland Forestry Service (for woodland-related evidence) may be able to help in some instances and there are a number of web-based sources which could provide information, particularly on land cover in 2008. Information from several sources may be required as the suggestions in this table have not been designed specifically to show compliance with the sustainability criteria. It is for the economic operator and their verifier to be satisfied that the evidence provided is sufficient to demonstrate that their biofuel meets the relevant sustainability criteria in the Directive. Please note that some suppliers may levy a charge for their information.

It is important to note that the suggestions are for biofuels sourced in the UK. Also, it is important to note that the information suggestions are not meant to demonstrate compliance with other relevant laws, whether they be environmental or otherwise.

Annex A: Useful websites

Annex B: Areas designated for the purposes of nature conservation

Annex C: Advisory thresholds that show the harvesting of non-natural highly biodiverse grasslands is necessary to preserve its grassland status

### Renewable Energy Directive: Suggested types and sources of Information that may show sustainability of biofuels

Land Status	Test	Justification	Possible Evidence to Meet Test	Possible Evidence Sources
Primary forest and other wooded land of native species with no clearly visible indication of human activity and ecological processes not significantly disturbed - Art. 17(3)(a) of RED.	Land <b>not</b> of the type in column 1 on or after January 2008	Protection of land of high biodiversity value		<b>Note: there is no primary forest nor any undisturbed woodland of native species in the UK.</b>
Areas designated by law or by competent authority for nature protection purposes - Art 17(3)(b) <sup>1</sup> .	Land is <b>not</b> a designated area on or after January 2008.	Protection of land of high biodiversity value	<ul style="list-style-type: none"> <li>• Maps of designated areas and the date of their designation. If <b>not</b> on these maps, not thought to be designated areas. (NB: important to check a number of sources to capture as many designated areas as possible)</li> </ul>	<ul style="list-style-type: none"> <li>• Local Record Centres; Nature conservation authorities (Natural England, Scottish Natural Heritage, Countryside Council for Wales; Northern Ireland Environment Agency, Joint Nature Conservation Committee); websites (see annex A); National Biodiversity Network (NBN).</li> </ul>
	For land that is a designated area, the cultivation of the land has <b>not</b> interfered with nature protection purposes	Protection of land of high biodiversity value	<ul style="list-style-type: none"> <li>• Statement from expert that the cultivation has <b>not</b> interfered with nature protection purposes.</li> <li>• Farm and other records (e.g., aerial photos, satellite images) showing that the land has been cultivated within the last 15 years.</li> <li>• Forestry Commission-approved forest plan, Forestry Commission-approved woodland management plan, felling licence, woodland grant scheme showing that cultivation is in accordance with the UK Forestry Standard</li> </ul>	<ul style="list-style-type: none"> <li>• Certified expert – The Institute of Ecology and Environmental Management has details of relevant experts; Nature conservation authorities (see above)</li> <li>• Farm records; Local Record Centres</li> <li>• Forestry Commission</li> </ul>

<sup>1</sup> See Annex B

<p>Areas designated for the protection of rare, threatened or endangered ecosystems or species recognised by international agreements or drawn up in intergovernmental organisations and IUCN lists – Art 17(3)(b)ii.</p>	<p>Land is <b>not</b> a designated area (as per the conditions stated) on or after January 2008.</p>	<p>Protection of land of high biodiversity value</p>	<ul style="list-style-type: none"> <li>• Maps of designated areas and the date of their designation. If <b>not</b> on these maps, not thought to be designated areas. (NB: important to check a number of sources to capture as many designated areas as possible)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Note: The European Commission has formally to recognise these designated areas. No areas have been recognised to date</b></li> </ul>
	<p>For land that is in a designated area, the cultivation of the land has <b>not</b> interfered with nature protection purposes</p>	<p>Protection of land of high biodiversity value</p>	<ul style="list-style-type: none"> <li>• Statement from expert that the cultivation has <b>not</b> interfered with nature protection purposes.</li> <li>• Other evidence, which will be dependent on the types of areas recognised by the Commission.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Note: The European Commission has formally to recognise these designated areas. No areas have been recognised to date</b></li> </ul>
<p>Highly biodiverse grassland - Art 17(3)(c).</p>	<p>Land is <b>not</b> highly biodiverse grassland in or after January 2008</p>	<p>Protection of land of high biodiversity value</p>	<ul style="list-style-type: none"> <li>• Farm and other records (e.g. aerial photos, satellite images, land use/cover maps) showing land was <b>not any type</b> of grassland in or after January 2008.</li> <li>• Farm or other records showing land has been cultivated within the last 15 years</li> <li>• Farm or other records showing the grassland is <b>not</b> highly biodiverse (await European Commission criteria)</li> <li>• Nature conservation authority has not identified the land of as highly biodiverse grassland, e.g. <b>not</b> a UK Biodiversity Action Plan priority grassland habitat.</li> </ul>	<ul style="list-style-type: none"> <li>• Farm records; Local Record Centres; Centre for Ecology and Hydrology; National Biodiversity Network (NBN)</li> <li>• As above</li> <li>• As above</li> <li>• Local Record Centres; Nature conservation authorities (see above); National Biodiversity Network (NBN).</li> </ul>

			<ul style="list-style-type: none"> <li>• Statement from certified expert that the land is not highly biodiverse grassland.</li> </ul>	<ul style="list-style-type: none"> <li>• Certified expert – see above</li> </ul>
	<p>For <b><u>non-natural, species-rich grassland</u></b>, the harvesting of the grasses was necessary to preserve the grassland status</p>	<p>Protection of land of high biodiversity value</p>	<ul style="list-style-type: none"> <li>• Farm or other records showing that the harvesting is consistent with the management prescriptions for the agri-environment scheme associated with the site or a comparable.</li> <li>• Farm or other records showing that the harvesting is consistent with a restoration plan for the site or a comparable site recognised by nature conservation authority.</li> <li>• Farm or other records showing that the harvesting is in line with the advice at Annex C</li> <li>• Harvesting practices are consistent with published research for comparable sites that clearly shows that the harvesting is necessary to preserve the grassland status</li> </ul>	<ul style="list-style-type: none"> <li>• Farm records</li> <li>• Farm records</li> <li>• Farm records</li> <li>• Farm records</li> </ul>
<p>Wetlands - land that is covered with, or saturated by, water permanently or for a significant part of the year - Art 17(4)(a).</p>	<p>Land <b><u>not</u></b> wetland in January 2008.</p>	<p>Avoiding a change in land use on land with high carbon stock</p>	<ul style="list-style-type: none"> <li>• Land use/cover maps which show wetlands that meet the definition in column 1. If <b><u>not</u></b> on these maps, this points to land not being a wetland. (NB: important to check a number of sources to capture as many wetlands as possible)</li> <li>• Dated satellite images showing land <b><u>not</u></b> wetland</li> <li>• Dated aerial photos showing land <b><u>not</u></b> wetland</li> </ul>	<ul style="list-style-type: none"> <li>• Local Record Centres; Centre for Ecology and Hydrology; Nature conservation authorities (see above); Water authorities (Environment Agency, Scotland Environment Protection Agency); websites (see above).</li> <li>• As above</li> <li>• As above</li> </ul>
	<p>If land was wetland in January 2008, that it still has a wetland status</p>	<p>Avoiding a change in land use on land with high carbon stock</p>	<ul style="list-style-type: none"> <li>• Land use/cover maps (NB: important to check a number of sources to capture as many wetlands as possible)</li> </ul>	<ul style="list-style-type: none"> <li>• Local Record Centres; Centre for Ecology and Hydrology; Nature conservation authority (see above); water authorities (see above); websites (see above).</li> </ul>

			<ul style="list-style-type: none"> <li>• Dated satellite images showing land still wetland</li> <li>• Dated aerial photos showing land still wetland</li> </ul>	<ul style="list-style-type: none"> <li>• As above</li> <li>• As above</li> </ul>
Continuously forested areas - land spanning more than 1ha with trees higher than 5m and canopy cover of more than 30%, or trees able to reach those thresholds in situ - Art 17(4)(b).	Land <b>not</b> a continuously forested area in January 2008.	Avoiding a change in land use on land with high carbon stock	<ul style="list-style-type: none"> <li>• Land use/cover maps of forested areas meeting the definition described in column 1. If <b>not</b> on these maps, this points to land not being a forested area. (NB: important to check a number of sources to capture as many forested areas as possible)</li> <li>• Woodland and forest inventories</li> <li>• Dated satellite images</li> <li>• Dated aerial photos</li> </ul>	<ul style="list-style-type: none"> <li>• Local Record Centres; Centre for Ecology and Hydrology; Forestry Commission; Department of Agriculture and Rural Development's Northern Ireland Forest Service; websites (e.g. see above).</li> <li>• As above</li> <li>• As above</li> <li>• As above</li> </ul>
	If the land was a continuously forested area in January 2008, that it still has that status	Avoiding a change in land use on land with high carbon stock	<ul style="list-style-type: none"> <li>• Land use/cover maps of forested areas meeting the definition described in column 1. (NB: important to check a number of sources to capture as many forested areas as possible).</li> <li>• Woodland and forest inventories</li> <li>• Dated satellite images</li> <li>• Dated aerial photos</li> </ul>	<ul style="list-style-type: none"> <li>• As above</li> <li>• As above</li> <li>• As above</li> </ul>
"Other wooded areas" – land spanning more than 1ha with trees higher than 5m and canopy cover of between 10 - 30%, or trees able to reach those thresholds in situ - Art 17(4)(c).	Land <b>not</b> "other wooded areas" in January 2008.	Avoiding a change in land use on land with high carbon stock	<ul style="list-style-type: none"> <li>• Land use/cover maps of wooded areas meeting the definition described in column 1. If <b>not</b> on these maps, this points to land not being "Other wooded area". (NB: important to check a number of sources to capture as many wooded areas as possible)</li> <li>• Woodland and forest inventories</li> <li>• Dated satellite images</li> </ul>	<ul style="list-style-type: none"> <li>• As above</li> <li>• As above</li> <li>• As above</li> </ul>

			<ul style="list-style-type: none"> <li>• Dated aerial photos</li> </ul>	<ul style="list-style-type: none"> <li>• As above</li> </ul>
	If land was an “other wooded area” in January 2008, that it still holds that status	Avoiding a change in land use on land with high carbon stock	<ul style="list-style-type: none"> <li>• Land use/cover maps of wooded areas meeting the definition described in column 1. (NB: important to check a number of sources to capture as many wooded areas as possible).</li> <li>• Woodland and forest inventories</li> <li>• Dated satellite images</li> <li>• Dated aerial photos</li> </ul>	<ul style="list-style-type: none"> <li>• As above</li> <li>• As above</li> <li>• As above</li> <li>• As above</li> </ul>
	The carbon stock of the land of “other wooded areas” before and after conversion generate a greenhouse gas emission saving of at least 35% <sup>2</sup>	Avoiding a change in land use on land with high carbon stock	<ul style="list-style-type: none"> <li>• Results of applying the formula in Annex V of the Directive</li> </ul>	<ul style="list-style-type: none"> <li>• Economic operator</li> </ul>
Peatlands - Art 17(5).	Land <b>not</b> peatland in January 2008	Avoidance of greenhouse gas emissions associated with peatland drainage <sup>3</sup>	<ul style="list-style-type: none"> <li>• Land use/cover maps of peatlands. If <b>not</b> on these maps, this points to land not being peatlands. (NB: important to check a number of sources to capture as many peatlands as possible)</li> <li>• Dated satellite images</li> <li>• Dated aerial photos</li> </ul>	<ul style="list-style-type: none"> <li>• Local Record Centres; Centre for Ecology and Hydrology; Nature conservation authorities (see above); websites (see above)</li> <li>• As above</li> <li>• As above</li> </ul>

<sup>2</sup> Unless it can be proved that the balance of carbon stocks before and after conversion still permit the biofuels produced to comply with required levels of greenhouse gas savings under the Directive

<sup>3</sup> Unlike for the other land uses specified in the Directive, the justification for this criteria is not explicitly set out in the Articles of the Directive. However, the impact of peatland drainage on greenhouse gas emissions is referenced in the recitals of the Directive, hence, this is interpreted as the justification for the presence of this requirement.

	<p>If the land was peatland in January 2008, that the cultivation and harvesting of that raw material has <b><u>not</u></b> involve drainage of previously undrained soil</p>		<ul style="list-style-type: none"><li>• Statement from certified expert that the land has not been drained.</li></ul>	<ul style="list-style-type: none"><li>• Certified expert – the Chartered Institution of Water and Environmental Management (CIWEM); and the Institute of Ecology and Environmental Management (IEEM) have details of relevant experts.</li></ul>
--	---	--	---	--

## **Annex A: Useful websites**

Local Records Centres <http://www.nbn-nfbr.org.uk/nbn.php>

### **Certified Experts**

The Institute of Ecology and Environmental Management - <http://www.ieem.net/>

The Chartered Institution of Water and Environmental Management - <http://www.ciwem.org.uk/>

### **Statutory nature conservation authorities (and their data/information website links)**

Countryside Council for Wales <http://www.ccw.gov.uk/>

(GIS downloads via: <http://www.ccw.gov.uk/landscape--wildlife/protecting-our-landscape/gis-download--welcome.aspx>)

Natural England <http://www.naturalengland.org.uk/>

Nature on the Map <http://www.natureonthemap.org.uk/>

Northern Ireland Environment Agency <http://www.ni-environment.gov.uk/>

Back on the Map <http://www.backonthemap.org.uk/>

Scottish Natural Heritage <http://www.snh.org.uk>

Scottish Natural Heritage Information Service (SNHi) <http://www.snh.org.uk/snhi/>

Joint Nature Conservation Committee <http://www.jncc.gov.uk/>

### **Other data/information websites**

MAGIC <http://www.magic.gov.uk/>

National Biodiversity Network <http://www.nbn.org.uk/>

UK Biodiversity Action Plan <http://www.ukbap.org.uk/>

### **Other bodies**

Centre for Ecology and Hydrology <http://www.ceh.ac.uk/>

Environment Agency <http://www.environment-agency.gov.uk/>

Forestry Commission <http://www.forestry.gov.uk/>

Northern Ireland Forest Service <http://www.dardni.gov.uk/forests-service/>

Scottish Environment Protection Agency <http://www.sepa.org.uk/>

## **Annex B: Area types designated for nature protection purposes**

- Sites of Special Scientific Interest (SSSIs)
- Areas of Special Scientific Interest (ASSIs) – Northern Ireland only
- National Nature Reserves
- Local Nature Reserves
- Areas of Special Protection (for Birds) – England and Wales only
- Forest Nature Reserves
- Special Areas of Conservation, candidate Special Areas of Conservation and Sites of Community Importance
- Special Protection Areas and potential Special Protection Areas
- Ramsar Sites
- Local Sites
- Areas of Outstanding Natural Beauty – England, Northern Ireland and Wales only
- National Parks – England, Scotland and Wales only
- The Broads – England only
- Heritage Coasts – England and Wales only

## **Annex C: Advisory thresholds and information to show that the harvesting of non-natural grassland is required to maintain the grassland status**

### *For Neutral Grasslands and Fen Meadows:*

- These grasslands will normally be subject to a single summer hay cut between late June and late July. However, a later cut in late August or September, one year in five, may be required to allow seed production of late flowering species. Cutting dates are weather dependant and may be later in the north of Scotland.
- The growth should be cut back to a height of approximately 5cm and the cut grass, weather permitting, should be dried on site and baled within seven days of cutting.
- Sustained early cutting in May to mid-June is known to reduce species richness, harm breeding birds and insects. Persistent late cutting can cause rank, less diverse vegetation.
- Cutting for silage is generally viewed as harmful to these grasslands as it is associated with more intensive farm management practices, such as fertilisation to increase production and enable two or three cuts to be taken. The first cut typically takes place in late May before farmland birds have had their chicks and before meadow species have flowered and set seed. This reduces the quantity of seed that is returned to the soil. However, an occasional silage cut at hay time (see first bullet) is unlikely to change the plant species composition.

### *For Calcareous or Acid Grasslands:*

- These grasslands are typically less productive than neutral grasslands and are usually managed as pasture, being grazed as livestock with no hay cut. Where a cutting regime is implemented (e.g. in the absence of grazing), between one and three cuts would normally be taken per year depending on geographic location. Generally, fewer cuts are necessary at higher latitudes in order to maintain sward composition and condition, and therefore closely replicating usual local livestock grazing regimes.
- Precise timings of cutting would be influenced by the composition of the sward, rare species present, the prevailing weather conditions in any given year as well as geographic location, where cutting dates tend to be later at higher latitudes. Cuts in May, June and July to a height of 5cm with the grass removed within three days should help to maintain the conservation interest, although cutting dates may be later than this, for example, in the north of Scotland. Regional differences should always be taken into account

### Neutral grasslands include:

- Upland hay meadows, lowland meadows and pastures
- Fen meadows include purple moor grass and rush pastures
- Calcareous grasslands include lowland or upland calcareous grasslands
- Acid grasslands include lowland dry acid grasslands

Descriptions of these grasslands can be found on the Biodiversity Actions Reporting System at:  
<http://ukbars.defra.gov.uk/>