Appendix EI.3

LAND USED TO PRODUCE CROPS FOR BIOFUELS, BIOLIQUIDS AND BIOMASS FUELS

Summary of Requirements

Producers who may supply crops into the biofuel, bioliquid and biomass supply chains must not produce from areas of land with high biodiversity or of high carbon stock or peatland (unless evidence is provided that the cultivation and harvesting does not involve drainage of previously undrained soil. This is a requirement under the revised Renewable Energy Directive EU/2018/2001; articles 29(3), 29(4), 29(5)[1].

Producers will be assessed for compliance against these requirements, as per standard EI.3.

All documents associated with the Renewable Energy Directive EU/2018/2001 verification must be retained for 5 years and made available for inspection by the assessor. This includes traceability records, store records, risk assessments and crop management records.

Definitions

Biofuels - means liquid fuel for transport produced from biomass

Bioliquids - means liquid fuel for energy purposes other than for transport, including electricity and heating or cooling, produced from biomass

Biomass - means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste.

Biomass Fuels - means gaseous and solid fuels produced from biomass

Requirements of revised Renewable Energy Directive EU/2018/2001 Article 29(3)

Conservation of biodiversity
Biofuels, bioliquids and biomass fuels produced from agricultural biomass shall not be made from raw material obtained from land with a high biodiversity value, that is land that had one of the following statuses in or after January 2008, whether or not the land continues to have that status:

- **Land that was primary forest, other wooded land or old growth forest**
  Primary forest and other wooded land, namely forest and other wooded land of native species, where there is no clearly visible indication of human activity and the ecological processes are not significantly disturbed; and old growth forests as defined as “A forest stand or area consisting of native tree species that have developed, predominantly through natural processes, structures and dynamics normally associated with late-seral developmental phases in primary or undisturbed forests of the same type. Signs of former human activities may be visible, but they are gradually disappearing or too limited to significantly disturb natural processes”.[2]

- **Land that was highly biodiverse forest**
  Highly biodiverse forest and other wooded land is defined forest and other wooded land which is species-rich and not degraded, and has been identified as being highly biodiverse by the relevant competent authority, unless evidence is provided that the production of that raw material did not interfere with those nature protection purposes

- **Areas designated:**
  - by law or by the relevant competent authority for nature protection purposes; or
  - for the protection of rare, threatened or endangered ecosystems or species recognised by international agreements or included in lists drawn up by intergovernmental organisations or the International Union for the Conservation of Nature, subject to their recognition in accordance with Article 30 (4), first subparagraph

1 DIRECTIVE (EU) 2023/2413 OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652 https://eur-lex.europa.eu/eli/dir/2023/2413/oj
2 https://data.consilium.europa.eu/doc/document/ST-7736-2023-INIT/en/pdf#:~:text=2.3.,-Definition%20of%20an&text=Old%2Dgrowth%20forest%3A%20'A,forests%20of%20the%20same%20type

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An exception is possible if evidence is provided that the production of that raw material did not interfere with those nature protection purposes

- **Land that was highly biodiverse grassland**
  a) Highly biodiverse grassland is defined as:
  - natural, namely grassland that would remain grassland in the absence of human intervention and which maintains the natural species composition and ecological characteristics and processes or
  - non-natural, namely grassland that would cease to be grassland in the absence of human intervention and that is species-rich and not degraded and has been identified as being highly biodiverse by the relevant competent authority, unless evidence is provided that the harvesting of the raw material is necessary to preserve its status as highly biodiverse grassland

Retained EU legislation Commission Regulation (EU) No1307/2014[3] establishes the following definitions:

- 'grassland' means terrestrial ecosystems dominated by herbaceous or shrub vegetation for at least 5 years continuously. It includes meadows or pasture that is cropped for hay but excludes land cultivated for other crop production and cropland lying temporarily fallow. It further excludes continuously forested areas as defined in Article 17(4)(b) of Directive 2009/28/EC unless these are agroforestry systems which include land-use systems where trees are managed together with crops or animal production systems in agricultural settings. The dominance of herbaceous or shrub vegetation means that their combined ground cover is larger than the canopy cover of trees;
- 'human intervention' means managed grazing, mowing, cutting, harvesting or burning;
- 'natural highly biodiverse grassland' means grassland that:
  a) would remain grassland in the absence of human intervention; and
  b) maintains the natural species composition and ecological characteristics and processes;
- 'non-natural highly biodiverse grassland' means grassland that:
  a) would cease to be grassland in the absence of human intervention; and
  b) is not degraded, that is to say it is not characterised by long-term loss of biodiversity due to for instance overgrazing, mechanical damage to the vegetation, soil erosion or loss of soil quality; and
  c) is species-rich, that is to say it is:
    i. a habitat of significant importance to critically endangered, endangered or vulnerable species as classified by the International Union for the Conservation of Nature Red List of Threatened Species or other lists with a similar purpose for species or habitats laid down in national legislation or recognised by a competent national authority in the country of origin of the raw material; or
    ii. a habitat of significant importance to endemic or restricted-range species; or
    iii. a habitat of significant importance to intra-species genetic diversity;
    or
    a habitat of significant importance to globally significant concentrations of migratory species or congregatory species; or a regionally or nationally significant or highly threatened or unique ecosystem

- **Heathland[4]**
  Heathland vegetation occurs widely on mineral soils and thin peats (0.5m). For the purposes of this plan upland heathland is defined as lying below the alpine or montane zone (at about 600–750m) and usually above the upper edge of enclosed agricultural land (generally at around 250–400m but descending to near sea-level in northern Scotland).

  Lowland heathland occurs below the upper limit of agricultural enclosure and supports a range of birds, reptiles and invertebrates not found on upland heath; this habitat is covered by a separate habitat action plan. Montane heaths, restricted to high-altitude mountain summits and ridges, are also excluded from the upland heathland plan.

3 Retained EU legislation Commission Regulation (EU) No1307/2014 **https://www.legislation.gov.uk/eur/2014/1307/data.pdf**
4 **UK BAP Priority Habitat Descriptions (Dwarf Shrub Heath) (2008) | JNCC Resource Hub**

Blanket bog and other mires, grassland, bracken, scrub, trees and woodland, freshwater and rock habitats frequently form intimate mosaics with heathland vegetation in upland situations. This plan recognises the importance of this habitat mosaic. Habitat action plans have been produced for some elements of this complex, for example, blanket bog and upland calcareous grassland.

Upland heath in 'favourable condition' is typically dominated by a range of dwarf shrubs such as heather Calluna vulgaris, bilberry Vaccinium myrtillus, crowberry Empetrum nigrum, bell heather Erica cinerea and, in the south and west, western gorse Ulex gallii. In northern areas juniper Juniperus communis is occasionally seen above a heath understorey.

Wet heath is most commonly found in the wetter north and west and, in 'favourable condition', should be dominated by mixtures of cross-leaved heath Erica tetralix, deer grass Scirpus cespitosus, heather, and purple moor-grass Molinia caerulea, over an understorey of mosses often including carpets of Sphagnum species. This habitat is distinct from blanket mire which occurs on deeper peat, and which usually contains frequent occurrence of hare's-tail cotton grass Eriophorum vaginatum and characteristic mosses.

High quality heaths are generally structurally diverse, containing stands of vegetation with heather at different stages of growth. Upland heath in 'favourable condition' also usually includes areas of mature heather. Upland heathland encompasses a range of National Vegetation Classification (NVC) plant communities. Ulex gallii - Agrostis curtisii (H4) and Calluna vulgaris - U. gallii (H8) are restricted to southern Britain. Calluna - V. myrtillus (H12) is particularly widespread in the east. Calluna - E. cinerea (H10), Calluna - V. myrtillus - Sphagnum capillifolium (H21), and Scirpus cespitosus - E. tetralix (M15) are especially characteristic of western margins. Vaccinium myrtillus - Deschampsia flexuosa (H18) is generally widespread in the uplands but other communities are more local in distribution, notably Calluna - D. flexuosa (H9), Calluna - Arctostaphylos uva-uri (H16) and E. tetralix - Sphagnum compactum (M16).

The distribution of these communities is influenced by climate, altitude, aspect, slope, maritime influences and management practices including grazing and burning. An important assemblage of birds is associated with upland heath, including red grouse Lagopus lagopus, black grouse Tetrao tetrix, merlin Falco columbarius and hen harrier Circus cyaneus. Some forms of heath also have a significant lower plant interest, including assemblages of rare and local mosses and liverworts that are particularly associated with the wetter western heaths [5].

Retained EU legislation Commission Regulation (EU) No1307/2014 also clarifies that grasslands in the following geographic ranges of the EU shall always be regarded as highly biodiverse grassland:

- habitats listed in Annex I to Council Directive 92/43/EEC (1)
- habitats of significant importance for animal and plant species of Union interest listed in Annexes II and IV to Directive 92/43/EEC

habitats of significant importance for wild bird species listed in Annex I to Directive 2009/147/EC (also retained EU legislation: **https://www.legislation.gov.uk/eudr/2009/147/contents**)

5 The invertebrate fauna is especially diverse. This habitat type is present on an estimated 270,000ha in England, 80,000ha in Wales, up to 69,500ha in Northern Ireland and between 1,700,000 and 2,500,000ha in Scotland. The total upland heath resource in the UK thus amounts to between 2 and 3 million hectares. Dwarf shrub heaths are recognised as being of international importance because they are largely confined within Europe to the British Isles and the western seaboard of mainland Europe. There have been considerable losses of heather moorland in recent times. For example, 27% of heather moorland is estimated to have been lost in England and Wales between 1947 and 1980. On the Berwyn mountains in north-east Wales there was a 44% decline in the extent of heather-dominated vegetation between 1946 and 1984, whereas other upland sites in Wales have shown much smaller losses over similar periods. An estimated 18% was lost in Scotland between the 1940s and 1970s and the trend continued throughout the 1980s with a further estimated loss of 5%. Much of this loss is attributed to agricultural land improvements, heavy grazing by sheep (and, in certain areas, red deer and cattle), and afforestation. It has also been estimated that 440,000ha of land in the uplands in England and Wales have less than 25% cover of heather (i.e. grassland containing suppressed dwarf shrubs). There is likely to be further significant loss of heather moorland to acid grassland if current grazing levels and pressures continue. However, the conversion of heathland to acid grassland is not a purely recent phenomenon. On some sites in Wales (and elsewhere in UK) the major decline in heathland cover probably took place in the 19th century or even earlier.

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Requirements of revised Renewable Energy Directive EU/2018/2001 Article 29(4)

Conservation of carbon stocks

Biofuels, bioliquids and biomass fuels produced from agricultural biomass shall not be made from raw material obtained from land with high carbon stock that is, land that had one of the following statuses in January 2008 and no longer has that status

- **Land that was wetland**
  A wetland is land that is covered with or saturated by water permanently or for a significant part of the year
- **Land that was continuously forested**
  - Continuously forested areas are defined as land spanning more than one hectare with trees higher than 5m and a canopy cover of more than 30% or trees able to reach those thresholds in situ
  - Continuously forested areas do not include land that is predominantly under agricultural or urban land use. Agricultural land use refers to tree stands in agricultural production systems, such as fruit tree plantations, oil palm plantations and agroforestry systems when crops are grown under tree cover
- **Forested land with 10-30% canopy cover**
  Forested areas with 10–30% canopy cover are defined as land spanning more than one hectare with trees higher than 5m and a canopy cover of between 10% and 30%, or trees able to reach those thresholds in situ, unless evidence is provided that the carbon stock of the area before and after conversion is such that, when the methodology laid down in part C of Annex V is applied, the greenhouse gas threshold set out in the Directive would still be fulfilled.

These provisions shall not apply if, at the time the raw material was obtained, the land had the same status as it had in January 2008.

Requirements of revised Renewable Energy Directive EU/2018/2001 Article 29(5)

Conservation of peatlands

Biofuels, bioliquids and biomass fuels produced from agricultural biomass shall not be made from raw material obtained from land that was peatland in January 2008

- An exception is possible if evidence is provided that the cultivation and harvesting of that raw material does not involve drainage of previously undrained soil
- For peatland that was partially drained in January 2008 a subsequent deeper drainage, affecting soil that was not fully drained, would constitute a breach of the criterion

Revised Renewable Energy Directive EU/2018/2001 Documentation Requirements

Documents for verification of previous land status must be retained for 5 years and made available for inspection by the assessor. Such documents may include Single Farm Payment documentation, maps or other of official records showing field location and classification/ use.

For the purposes of the revised Renewable Energy Directive EU/2018/2001, mass balance records must be kept at a site level, as outlined in standard EI.2.

For combinable crops, producers must sign the related declaration on sustainability on the Post-Harvest Declaration (grain passport) for crop loads produced on revised Renewable Energy Directive EU/2018/2001 eligible land.

For sugar beet, in addition to keeping traceability records (as required by standard TI.a), a Grower Identification Card must accompany each load.

Documentation relating to wetlands must reflect seasonal changes within a year.