AYMESTREY PARISH COUNCIL - HEARING STATEMENT IN RESPECT OF HEREFORDSHIRE COUNCIL DRAFT MINERALS AND WASTE LOCAL PLAN POLICES W2 and W3

This representation addresses section W3 questions 102 to 106
Matters raised require Main Modifications

To be presented by vice-chair Helen Hamilton

Policies W2 and W3 offer unqualified support for **anaerobic digesters and livestock units**. Aymestrey Parish Council is concerned about the permissive nature of policy W3 of the draft Minerals and Waste Local Plan (MWLP) and the failure to take into account the wide range of adverse environmental impacts of intensive livestock units and anaerobic digesters, either alone or in combination with other development.

It is now beyond debate that the effect of current intensive farming methods is one of the main causes of the pollution of the River Wye SAC. Our objection has now been reinforced by the findings of the Rephokus research from Lancaster University, which says that Herefordshire needs to significantly reduce the number of livestock in the catchment to address river pollution (The Rephokus report "Re-focusing Phosphorus use in the Wye Catchment" is delivered with and forms part of this submission). The government's Environmental Audit Committee has also recommended a moratorium on intensive poultry units.

One of the Parish Council's main concerns about both intensive livestock units and anaerobic digesters is the large volume of nutrients produced in manure and digestate, which pose pollution risks to soil, air and water.

The research carried out by the Rephokus Team explains why the River Wye Special Area of Conservation (SAC) is especially at risk from excess nutrients, due to a combination of soil types, climate and a high concentration of intensive poultry units. The main nutrient of concern is orthophosphate.

The River Lugg SSSI, a tributary to the Wye SAC, runs through Aymestrey Parish.

Rephokus has found that excess phosphate is accumulating in Herefordshire soils at a rate of 3,000 tonnes per year and has proposed a range of measures to address this problem, **including complete cessation of phosphate applications to land for a period of years and a substantial reduction in livestock numbers.**

The research attributes some 70% of the phosphate pollution to diffuse agricultural sources. Since 2019, there has been an effective moratorium on residential development in the Lugg catchment to address the phosphate problem, but no equivalent control over agricultural development.

The government's Environmental Audit Committee investigating water quality in rivers heard extensive evidence about the pollution risks caused by livestock and made the following recommendation in its report published in January 2022:

"We further recommend that planning authorities in England establish a presumption against granting planning permission for new intensive poultry or other intensive livestock units in catchments where the proposed development would exceed the catchment's nutrient budget, unless evidence is presented of robust mitigation plans in place that are demonstrably effective in reducing the accumulation of phosphate and nitrate loads in soils and river sediments within sensitive areas

in the catchment." (UK Parliament, Environmental Audit Committee, Water Quality in Rivers Final Report January 2022)

The draft MWLP fails to reflect the risk posed to the SAC and the wider environment from any further increase in livestock numbers in the county. While we accept that the policy is aimed at controlling only the physical waste from such developments, we believe that it should be less permissive and should consider the cumulative impact of livestock development on biodiversity in general as well as the Wye SAC.

Policy W3.3 requires *"all development proposals demonstrate delivery of a net reduction in nutrient discharges contributing to nutrient neutrality, or betterment, within the River Wye SAC"*

It is unclear whether this neutrality or betterment requirement applies to the whole of the relevant agricultural holding/farm or to solely to the development or site in isolation. Nor is it clear what geographical area it covers: excess nutrients accumulate in the tributaries of the Wye, so the policy should apply to the whole catchment, not merely the SAC, which incorporates only the main river and some riparian areas.

While Herefordshire Council has adopted clear and specific guidance for residential developers to demonstrate nutrient neutrality, there is no equivalent guidance for agricultural development.

Herefordshire Council's draft Supplementary Planning Document for Agricultural Development proposes the use of DEFRA's Farmscoper model to demonstrate nutrient neutrality. However, this model does not provide the level of certainty required for Habitats Regulations Assessment and is not as stringent as the level of evidence required to demonstrate nutrient neutrality for new housing.

For example, Farmscoper does not cover all forms of livestock and the inputs, such as those relating to soil type and permeability, are subjective and can be easily be manipulated to achieve a desired result. The mitigations that are built into the model do not deliver certain or long term results and would be difficult to monitor. Farmscoper is a good method of informing the farmer, but inadequate as a measure for regulation.

ADAS, which developed on Farmscoper on behalf of DEFRA, carries this "Cautionary Note" on its website: *"The information supplied in the FARMSCOPER software is for guidance purposes only and is not intended to fully substitute for professional agricultural advice. Users are responsible for ensuring the accuracy and completeness of all data entered and used by FARMSCOPER, and for any commercial decisions taken based on any of the outputs of this software."*

The whole of the River Wye is in unfavourable ecological condition. In recent years, large algal blooms caused by excess nutrients have destroyed most of one of the river's key qualifying features, ranunculus fluitans (Water Crowfoot), with consequent loss of the species and systems it supports. Experts expect it to take many decades to restore the Wye to good condition, even if urgent action is taken.

The measures in the Nutrient Management Plan (NMP) for the River Wye have so far failed to deliver any improvement in the condition of the SAC, which has in fact deteriorated since the NMP was adopted in 2015.

In the Dutch Nitrogen case (Coöperatie Mobilisation), the CJEU held that where the conservation status of a protected site is unfavourable, the scope for authorising activities that may adversely affect the ecological status and conservation objectives of the site concerned *"seems necessarily limited"*. This precautionary requirement is not reflected in policy W3.

Air pollution

A further problem caused by livestock units and ADs is the emission of ammonia and resultant nitrogen pollution.

Most of Herefordshire suffers from ammonia concentrations and nitrogen deposition exceeding critical levels and loads at which harm to biodiversity occurs. (Source: Air Pollution Information System (APIS)). For example, the extract from APIS appended below provides air quality data for a central point in Aymestrey Parish. It shows that the ammonia critical level for broadleaved woodland is exceeded by 2.42 to 0.42 µg m-3. Nitrogen deposition exceeds the critical load range by up to 38.44 kg per annum. (Mean data for 2018-2020)

Damage to lower plants, such as lichens and bryophites, important components of native woodland, occurs at the lower critical loads and levels. Aymestrey Parish contains large areas of ancient woodland as well as heath habitats, which are also vulnerable to air pollution.

Ammonia is emitted from livestock manures, from the movement and storage of AD feedstocks and from the digestate produced by the anaerobic digestion process, which is normally spread to land as fertiliser.

Ammonia undergoes chemical and physical transformation as it disperses from source, leading to different forms of deposition, comprising dry deposition of nitrogen oxide gases and wet deposition of nitrate. Dry deposition of particulate and aerosol nitrate and ammonium can also contribute to soil and water pollution.

In 2014, agriculture accounted for 83% of all UK ammonia emissions, with the largest contributor being livestock manures. (Source: Plantlife - We Need to Talk about Nitrogen)

The River Wye is also vulnerable to increased nitrogen caused by air pollution (and other sources). Nitrogen levels across the whole of the SAC already exceed the target set by Natural England of 1.5 mg/l. (Natural England - European Site Conservation Objectives: Supplementary advice on conserving and restoring site features).

Anaerobic Digesters

Herefordshire Council has granted planning permissions for a number of anaerobic digesters over the past decade on the understanding that these were means of managing the large amount of livestock manures produced in the county. However, these ADs have caused several unforeseen impacts, including likely increases in air pollution.

There have also been several major water pollution incidents resulting from digestate spills, leakages and explosions.

One of the most dramatic effects of the introduction of anaerobic digesters to the county has been a transformation in agricultural production as farmers switched to producing bio feedstocks for the ADS, in particular maize and other silages.

According to research by the Environment Agency, there was a 32% reduction in grassland cover in the Wye catchment between 2016 and 2020 with the loss of more than 21,000 hectares. This was mainly for the production of maize, with maize production up 290% over the period to 12,540

hectares. (Environment Agency, River Wye Management Catchment Integrated Data Analysis Report January 2022)

Maize is a significant contributor to water pollution because fields are left bare over the winter leading to run off of soils containing high levels of nutrients. Silage effluent also poses significant risks to air, soil and water if not stored correctly - DEFRA describes silage effluent as 200 times as strong as untreated domestic sewage. (DEFRA - Silage Pollution and How to Avoid it)

Green feedstocks are preferred by AD operators because they produce much more energy than manures. For example, according to the John Nix Pocketbook for Farm Management 2021, Cattle/pig slurry generates 15-25 m3 of biogas per tonne - valued at £3.25 - £5.40 per tonne - compared with maize grain, which generates 560 m3 per tonne, valued at £121 per tonne.

Poultry manure generates 30-100 m3 per tonne - valued at £6.50 to £21.70 per tonne. Maize silage, the most commonly used feedstock in Herefordshire, generates 190 m3 to 200 m3 per tonne, valued at £41.30 to £47.70 per tonne.

Amenity impacts

Noise, odour and traffic generation are significant problems arising from both intensive livestock and AD development, often causing severe loss of amenity to neighbours.

Such impacts have proved intractable, in part to a lack of resources within the Environment Agency to investigate complaints, but principally because these impacts are inherent features of of ADs and livestock units.

The large numbers of animals in intensive livestock units generate much greater volumes of manure than traditional systems, with consequently more intense odours. The units also generate high numbers of large vehicle movements, including for the removal of manure.

Odours from AD plants arise from the storage and movement of feedstocks, both to and from the plant and within the site as the feedstock is moved from storage areas for loading into the digester. Digestate itself is also highly pungent and causes intense odours when it is moved, stored and spread to land. One AD plant also caused severe odour problems as a result of leaking methane, which has still not been fully resolved a year after discovery.

The delivery of feedstocks generates large numbers of vehicle movements, especially at harvest time, when the narrow lanes can be dangerous for other users due to speeding tractors and trailers on narrow lanes.

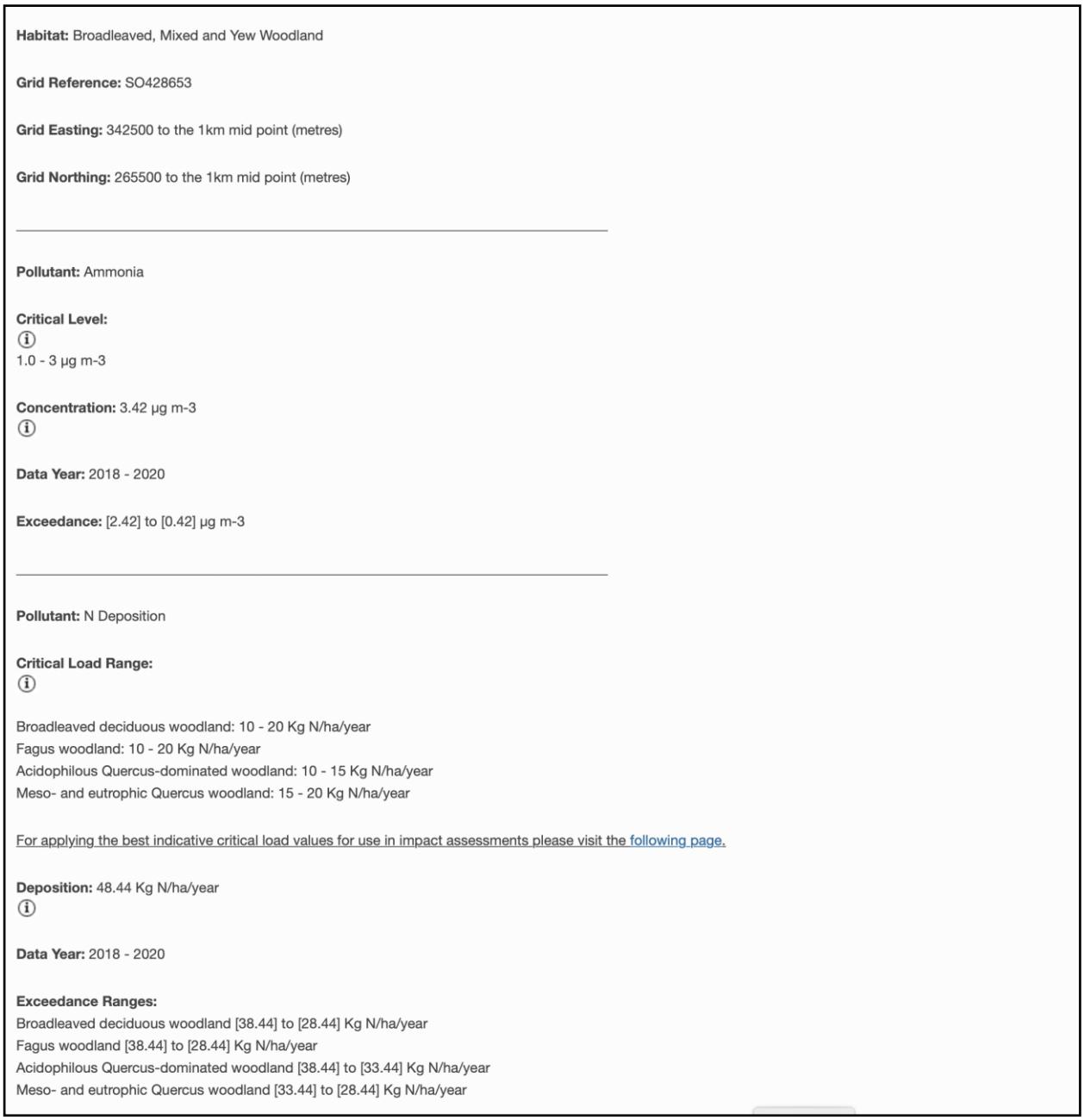
There is a case for refusing all new anaerobic digester applications.

SUMMARY

Policies W2 and W3 offer unqualified support for anaerobic digesters and livestock units and ‘more of the same’ in terms of policy requirements. Notwithstanding current restrictions the condition of the Lugg, the Wye and the associated catchment areas, SSSI and SAC, has deteriorated and is deteriorating further.

We submit that intensive livestock and anaerobic digester development

"should be permitted only where adverse impacts generated by the waste can be fully and demonstrably controlled. These impacts include the risk of pollution, either alone or in combination with other development, of soil, air and water and relate to the whole of the enterprise and not solely the development proposed".



Habitat: Broadleaved, Mixed and Yew Woodland

Grid Reference: SO428653

Grid Easting: 342500 to the 1km mid point (metres)

Grid Northing: 265500 to the 1km mid point (metres)

Pollutant: Ammonia

Critical Level:
ⓘ
1.0 - 3 µg m-3

Concentration: 3.42 µg m-3
ⓘ

Data Year: 2018 - 2020

Exceedance: [2.42] to [0.42] µg m-3

Pollutant: N Deposition

Critical Load Range:
ⓘ

Broadleaved deciduous woodland: 10 - 20 Kg N/ha/year
Fagus woodland: 10 - 20 Kg N/ha/year
Acidophilous Quercus-dominated woodland: 10 - 15 Kg N/ha/year
Meso- and eutrophic Quercus woodland: 15 - 20 Kg N/ha/year

For applying the best indicative critical load values for use in impact assessments please visit the following page.

Deposition: 48.44 Kg N/ha/year
ⓘ

Data Year: 2018 - 2020

Exceedance Ranges:
Broadleaved deciduous woodland [38.44] to [28.44] Kg N/ha/year
Fagus woodland [38.44] to [28.44] Kg N/ha/year
Acidophilous Quercus-dominated woodland [38.44] to [33.44] Kg N/ha/year
Meso- and eutrophic Quercus woodland [33.44] to [28.44] Kg N/ha/year

Ammonia and Nitrogen deposition to centre of Aymestrey Parish, 2018-2020 mean. Source: Air Pollution Information System

Both intensive livestock and AD development are also damaging to residential and local amenity and generate additional traffic on Herefordshire's roads. These impacts should form part of the consideration of the way that waste is managed in any planning application for these types of development and appropriate planning policies incorporated and implemented.