CRoW Appendix 4 (140_10_SD02)

CRoW Act 2000: Natural Resources Wales application for permission - Formal Notice

Cyfoeth Naturiol Cymru Natural Resources Wales

Natural Resources Wales Formal Notice.

Requirements of Section 28I of the Wildlife & Countryside Act 1981 as amended by the Countryside and Rights of Way Act (CRoW) 2000.

Duty in relation to granting any consent, licence or permit for activities likely to damage Sites of Special Scientific Interest (SSSI).

Guide to filling in this form for Natural Resources Wales staff:
To be completed by Permitting Officers for any applications for a permission which the Natural Resources Wales has considered under S28G duties to protect and enhance SSSIs. This applies to all proposed permissions within a SSSI, and to operations outside the SSSI boundary which are likely to damage its special features.
Refer to OI 140_10 'Applying the Countryside and Rights of Way (CRoW) Act 2000 to applications for permits with potential for impact on Sites of Special Scientific Interest (SSSI)', including the flowchart in Appendix 2.

Pink italic text – drafting notes, to be deleted before completion/consultation.
Blue text – examples, to be replaced with permission-specific information.
Ensure you have completed all sections.

1. Natural Resources Wales area/region/NPS hub:	Bridgend, Rhondda Cynon Taff and Merthyr Tydfil Environment Team
2. Name of SSSI:	• Llantrisant Common and Pastures • Rhos Tonyrefail
3. Type of permission:	Environmental Permit
4. Date for Natural Resources Wales permit determination:	15/02/2023
5. Predicted 28 day date for response from NRW conservation/ecology (under S28 I(4)):	N/A filed for audit
6. Natural Resources Wales reference no:	PAN-005576-V003
7. National grid reference:	ST 303716 184399
8. Description of proposal:	Dragon Fruit Holdings Ltd have applied for an additional or third biomass boiler to the two already in operation at their site on the Edward Business Park, Llantrisant. The change to the permit will see an additional emission point (A3) for the boiler which has the same net thermal input of 1.2MWth as the previous 2 resulting in emissions to air of NOx and particulate matter. The plant will sit within the curtilage of the current permitted boundary. The boiler will be subject to the Medium Combustion Plant (MCP) Regulations and operating under existing techniques.
9. Is the proposed activity within (wholly or partially) the SSSI boundary?	No
10. Has there been any pre-application discussion or correspondence with NRW conservation/ecology	No

11. What aspect(s) of the proposed permission may damage the features which are of special interest for the SSSI?

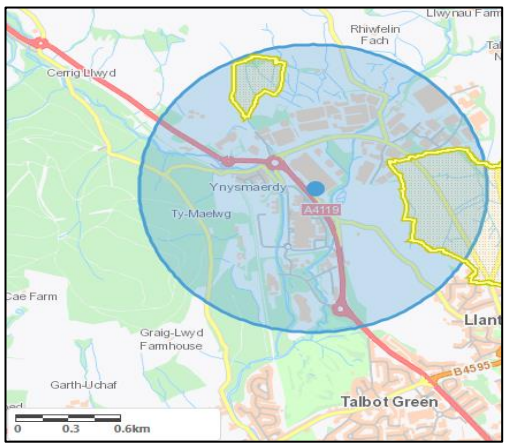
The following 'Operations Requiring Consent' (or other activities associated with the permission) that may cause damage) are relevant to the proposed permission.

7. Dumping, spreading or discharging of any materials

Operational impacts were based on the facility operating for a maximum of 8,760 hours per year.

Using the AQTAG 14 (Guidance on identifying 'relevance' for assessment under the Habitats Regulations for Environmental Permitting Regulations (EPR) installations with combustion processes dated November 2021) the appropriate screening distances for this type of facility were applied.

From the screening report the following SSSIs were found to be within 1km of the proposal:



The following SSSI features and mechanisms of impact have been considered to assess the likelihood of damage:

Llantrisant Common and Pastures

- Marshy grassland
- Acid flush
- Acid grassland
- Species-rich neutral grassland
- Cornish moneywort
- Bog earwort

Rhos Tonyrefail

- marshy grassland,
- acid flush,
- species-rich
- neutral grassland,
- acid grassland
- wet heath
- blanket mire

The potential for any impact pathway to the features is through emissions to air from the new proposed boiler: Oxides of Nitrogen from the burning of virgin wood (biomass) in the boiler resulting in smothering, nutrient nitrogen deposition and acidity.

Emissions associated with the combustion of biomass as a fuel has the potential to cause an increase in pollutant concentrations in the vicinity of the site. Dispersion modelling was therefore undertaken by the applicant and submitted for assessment. Both short term and long-term scenarios formed part of the modelling.

An assessment was undertaken into the critical levels (CL) used for the protection of features for the pollutants identified. These were found to be correct and an Oxides of Nitrogen (NOx) 30µg/m^3 Annual Mean and 200 µg/m^3 24-hr mean using the IAQM guidance and a justification in respect of ozone and SO_2 background concentrations in order to do so, in line with the guidance.

Llantrisant Common and Pastures

<u>Oxides of Nitrogen – NOx</u>

The modelling considered 5 locations along the nearest edge and closest boundary to along the western boundary of the SSSI.

For the nearest point to the boundary of the SSSI the maximum process contribution (PC) for long term emissions of NOx at the site was 0.93µg/m^3 which was 3% of the long-term standard which is >1% of the environmental standard so could not be ruled out as insignificant. The predicted environmental contribution (PEC) was 15.13 µg/m^3 and calculated to be 50% of the environmental standard. If the PEC is less than 100% of the long-term environmental standard the emissions are considered insignificant.

For the same point closest to this SSSI the max short-term PC was considered and although the modelling report outlines that the CL of 200 µg/m^3 was used the calculated figures correlate in the model with 75 µg/m^3 (predicted 24hr mean NOx). Again with the PC 4.06 µg/m^3 at the closest receptor point to the site this would be 5% of the EQS using CL 75 µg/m^3 or 2% (predicted concentration assessed against CL-200). The PEC is 32.46 µg/m^3 which is 43 % of the EQS (using CL 75 µg/m^3) or 16% (using CL 75 µg/m^3) both figures are below 100% of the environmental standard and considered not significant.

<u>Acidification</u>

Acid deposition has been considered within the air quality dispersion model for this application.

Initial screening: acid deposition as a proportion of the Minimum CL Function (keq/ha/yr)

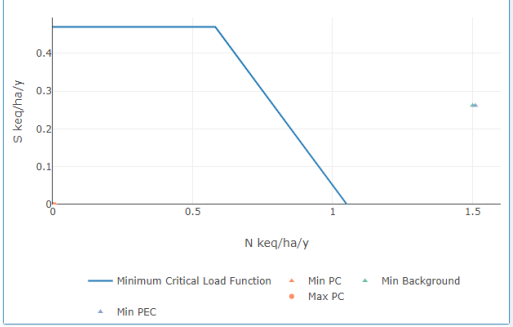
Minimum acid CL values feature ACG

CLminN	CLmaxS	CLmaxN
0.581	0.47	1.051

Submit

Source	Sulphur deposition	Nitrogen deposition	Total acid deposition (S+N)	Acidity	% of CL function
Process contribution (PC)	0	0.0096	0.0096	No exceedance of CL function	0.9
Background (unknown, not pre-filled)	0.262	1.5	1.762	0.71	167.6
Predicted Environmental Concentration (PEC)	0.262	1.5096	1.7716	0.72	168.6

Acidity plot



Appropriate assessment (HRA) / significance test (planning / EIA): acid deposition as a proportion of the Maximum CL Function (keq/ha/yr)

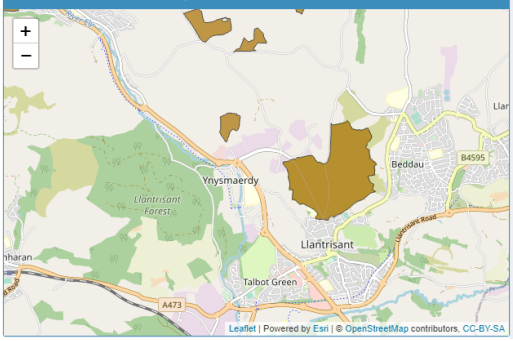
Maximum acid CL values feature ACG

CLminN	CLmaxS	CLmaxN

Submit

Source	Sulphur deposition	Nitrogen deposition	Total acid deposition (S+N)	Acidity	% of CL function
Process contribution (PC)	0	0	0		
Background (unknown, not pre-filled)			NA		
Predicted Environmental Concentration (PEC)	NA	NA	NA		

Selected site and location (spatial resolution 1km)



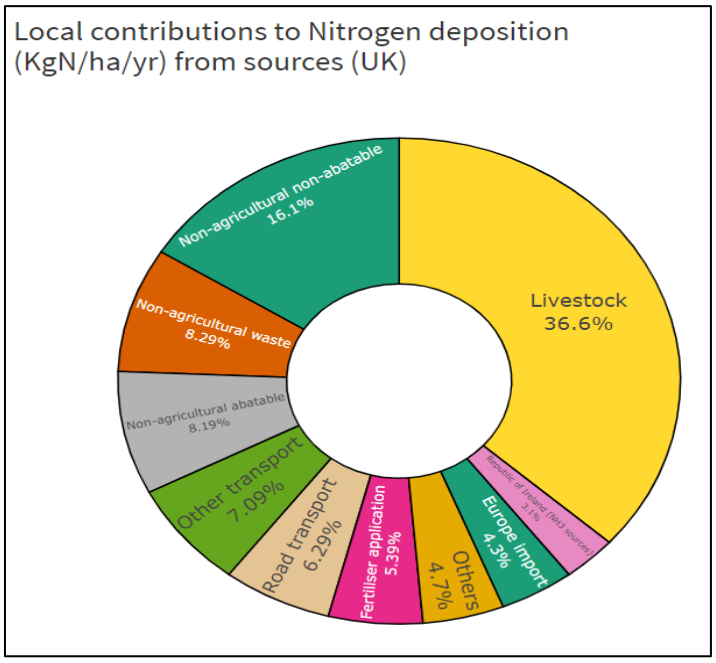
The percentage of the CL was found to be <1% and screens out so can be considered as insignificant.

Deposition of Nutrient Nitrogen

The applicant used the APIS website to identify the critical loads for nitrogen deposition. However it is also noted in the applicants report that Llantrisant Common has no critical load assigned on the current version of the App for this SSSI. The modelling report outlines that a min CL of 15 (kgN/ha/yr) has therefore been applied.

To assess the potential impact of the sites feature through deposition. The highest PC at the closest receptor is calculated at 0.13 (kgN/ha/yr) which is 0.86 or 1% of the EQS using 15 (kgN/ha/yr) / 1.6 or 2% using 8 (kgN/ha/yr). The PEC is 19.33 (kgN/ha/yr) which is 129% of the min CL at 15 (kgN/ha/yr) or 241% of the min CL at 8 (kgN/ha/yr). At this stage of the assessment both these figures are above 1% and cannot be ruled out as insignificant and NRW must consider the likelihood of adverse impact.

Further investigation on APIS notes that local contributions of nutrient nitrogen deposition is mainly from livestock and the background is already exceeding (above 100% of the CL). Animal grazing is a key reason to the site being a designated habitat.



Source APIS – Percentage of Nitrogen Deposition by Apportionment.

It also needs to be considered that the highest PC as a percentage is the most conservative value against the minimum critical load and for the majority of the of the SSSI the PC is below 1% and screens out which is considered insignificant.

It is considered therefore that there will be no likely damage to the features of the SSSI associated with the annual mean nitrogen deposition.

Rhos Tonyrefail

The modelling considered 6 locations along the nearest edge and closest boundary to along the western boundary of the SSSI.

The PC for the closest point to this SSSI was a predicted concentration of 0.18 µg/m^3 in the modelling which is calculated to be 0.6% rounded to 1 % of the proportion of the EQS. The PEC was 17.08 µg/m^3 or 56.9% of the proportion EQS and considered not significant. Again despite the report outlining predicted concentrations were assessed against the relevant CL 200 µg/m^3 the results indicate that the tighter limit of 75 µg/m^3 was used. For the closest point to this SSI from the site a PC of 2.12 µg/m^3 (using CL 75 µg/m^3) this is 2.8% (3%) of the EQS however using CL 200 µg/m^3 its 1.06%.

The PEC is 35.92 µg/m^3 which was found to be 47.8% of the EQS and reported in the model however it is 17.9% using a CL 200 µg/m^3 both percentages are considered not significant as they are below 70% of the EQS.

Deposition of Nutrient Nitrogen

On assessment of the modelling report the applicant showed that the PC from the proposed MCP towards nutrient nitrogen deposition was 0.03 kgN/ha/year which is 0.2% of the critical load of 15 kg/N/ha/year. This is below 1% of the min CL or 0.3% using the most conservative value of 8 kg/N/ha/year, both of which screen out as insignificant.

Acidification

Select features

Acid grassland

Background unkno

Initial screening: acid deposition as a proportion of the Minimum CL Function (keq/ha/yr)

Minimum acid CL values feature ACG

CLminN 0.581

CLmaxS 0.49

CLmaxN 1.071

Submit

Source	Sulphur deposition	Nitrogen deposition	Total acid deposition (S+N)	Acidity	% of CL function
Process contribution (PC)	0	0.0018	0.0018	No exceedance of CL function	0.2
Background (unknown, not pre-filled)	0.262	1.191	1.453	0.38	135.7
Predicted Environmental Concentration (PEC)	0.262	1.1928	1.4548	0.38	135.8

Using APIS the PC was as a proportion of the EQA to be below or <1% at the nearest receptor and location and impacts can therefore be screened out as insignificant as a result. It is considered therefore that there will be no adverse impact of the features of the SSI associated with annual mean acid deposition.

12. Decision

i) The proposed permission is **not likely to damage** any of the flora, fauna or geological or physiological features which are of special interest.

(please refer to the discussions in the above text).

Natural Resources Wales is minded to:
Issue the permission variation

13. Name and job title of Natural Resources Wales officer:	Karen Dunn Senior Permitting Officer
14. Date form sent to NRW conservation/ecology	N/A Filed for audit
For Natural Resources Wales use only, once NRW conservation/ecology response received	
15. NRW conservation/ecology comment on assessment:	N/A Filed for audit
16. Name and job title of NRW conservation/ecology officer:	
17. Date of receipt of NRW conservation/ecology response:	