Annex (iv) – SSSI Assessment Form

SSSI Assessment for permit/licence and deployment applications	Cyfoeth Naturiol Cymru Natural Resources Wales
To be completed by Permitting Officers for any applications for a permission which Natural Resources Wales has considered under S28I duty to notify SNCB and take their advice into account. This applies to all proposed permissions within a SSSI, and to operations outside the SSSI boundary which are likely to damage its special features. NRW as a Section 28G authority has, when exercising its functions, a general duty to take reasonable steps, consistent with the proper exercise of its functions, to further the conservation and enhancement of the flora, fauna or geological or physiological features by reason of which the site is of special interest' Part 1 – SSSI Assessment Part 2 – Formal notification to SNCB (to be completed if part 1 assessment concludes likely damage, not likely to damage because of conditions or you cannot conclude no likely damage) Part 3 – Decision	

Part 1 – SSSI Assessment

1. Permitting officer/team	Victoria Seller, Installations and RSR Permitting
2. Permit application reference and site name	PAN-026533 Baglan Paper Mill (EPR.BU2489IT)
3. a. SSSI name(s) b. location c. NRW Operational Area/Environment Team	a. Crymlyn Burrows (33WPC) b. Fabian Way, Neath Port Talbot c.South West Wales/Neath Port Talbot a. Earlswood Road Cutting and Ferryboat Inn Quarries (33WXN) b. Briton Ferry, Neath Port Talbot c. South West Wales/Neath Port Talbot
4. Brief description of proposal	The application is to vary the permit for Baglan Paper Mill, a paper manufacturing installation. The application seeks to remove the existing 8Wth waste wood co-incinerator from the permit and replace it with a 9.1MWth solid biomass (virgin woodchip) boiler. The boiler will be used to raise steam in the paper-making process. The boiler is classed as a new medium combustion plant.and it will operate for a maximum of 8600 hours per year. Emissions to air from the

	combustion plant will be discharged via a 30m tall stack. Emissions to air via gaseous concentration in air and aerial ground deposition are the principal pollutant pathways from the combustion plant stack. Emissions from the boiler stack will be controlled via emission limits and monitoring for oxides of nitrogen (NO_x) and dust. There will also be a requirement for to monitor emissions of carbon monoxide. Emissions to air is the only pollutant source associated with this combustion plant. There are two SSSIs within the relevant screening distance (1500m for boiler combustion plant fired on solid biomass). These are: • Crymlyn Burrows – 456m west • Earlswood Road Cutting and Ferryboat Inn Quarries – 1136m north Earlswood Road Cutting and Ferryboat Inn Quarries SSSI is designated for geological features and therefore is not susceptible to damage from airborne pollution. This assessment therefore focusses on the impact on Crymlyn Burrows SSSI.

5. What aspects of the proposed permission are likely to damage the SSSI features of special interest?

The following activities are likely to cause damage:

For this type of combustion unit (i.e., boilers fired on solid biomass with a net rated thermal input of MW), we consider that SSSIs within a 1,500m radius of the exhaust point to have the potential to be impacted by emissions of NO_x and dust. There are two SSSIs – Crymlyn Burrows and Earlswood Road Cutting and Ferryboat Inn – located within 1,500m of the site.

The following SSSI(s) features and potential impacts have been considered to assess the likelihood of damage:

The applicant has completed a dispersion modelling assessment to assess the impact of emissions of oxides of nitrogen (NO_x) and dust from the combustion unit.

As it is designated for geological features only, which cannot be damaged by airborne pollution, Earlswood Road Cutting and Ferryboat Inn Quarries SSSI can be discounted from this assessment.

For Crymlyn Burrows SSSI, the Process Contributions (PC) calculated by the dispersion model for airborne NO_x, are less than 1% and 10% of the NO_x annual and daily Critical Level, respectively.

Similarly, the PC for annual Nutrient Nitrogen deposition is less than 1% of the relevant annual Critical Load for the most sensitive habitat feature (sand dunes: 5kg N/ha/yr) present in the SSSI (as shown on APIS). Therefore we consider that the impact of oxdies of nitrogen concentration in air and nutrient nitrogen deposition on the Crymlyn Burrows SSSI are isignificant.

There are no relevant Critical Loads for acid deposition at Crymlyn Burrows SSSI.

The applicant has not calculated specific PCs for dust at Crymlyn Burrows SSSI. The maximum long-term and short-term PCs for PM_{10} within the modelled doman are 0.07µg/m^3 and 1µg/m^3, respectively. Theses are below 1% and 10% of the respective long-term and short-term Air Quality Standards (AQS) for human health.

In relation to dust, the mechanism for damage to habitats is deposition and subsequent smothering. There are no applicable environmental assessment levels for the impact of dust on habitats sites. However, the IAQM Guidance on the Assessment of Mineral Dust Impacts for Planning guidance document indicates that impacts on sites that are greater than 1km from the source of minerals quarries are negligible and do not need to be assessed. We therefore consider that the impact of dust on the Crymlyn Burrows SSSI is insignificant for the following reasons:

- The maximum PCs in the modelled domain are below the significance thresholds for long-term and short-term impacts when compared to the AQSs for human health;
- Although the site is within 1km of the stack (456m), which is below the threshold for detailed assessment given in the IAQM mineral guidance, it is relevant that the mineral guidance is related to dust emissions from quarries. Quarry dust is likely to be emitted in greater concentrations and contain coarser dust fractions when compared to the emission of fine particulate matter from the solid biomass combustion unit. Consequently, the potential for damage from smothering is much lower from combustion units, given the small mass concentration and size fraction of particulate matter.

As such, we consider the that emissions of dust from the combustion unit are insignificant at Crymlyn Burrows SSSI.

Therefore we consider that the impact of emissions to air from the combustion unit is not likely to damage the features of the SSSIs.

6. Summary of any informal advice received from internal experts (if required and including pre-app advice)	N/A
7. Recommendation	The proposed permission is **not likely to damage** any of the flora, fauna or geological or physiological features which are of special interest.
8. Signature and date assessment made	Victoria Seller, 24/07/2025
9. Officers name and job title	Victoria Seller, Lead Specialist Permitting Officer