



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

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.**

<b>1. Natural Resources Wales area/region/NPS hub:</b>	Monmouthshire & Torfaen, South East  <b>This form will also be sent to Natural England for consultation</b>
<b>2. Name of SSSI:</b>	Severn Estuary SSSI 33WGX (England & Wales) River Wye (Lower Wye) SSSI 33WEB (England & Wales) Pennsylvania Fields Sedbury SSSI (England) – unable to locate SSSI code
<b>3. Type of permission:</b>	Environmental Permit Application
<b>4. Date for Natural Resources Wales permit determination:</b>	10 July 2020
<b>5. Predicted 28 day date for response from NRW conservation/ecology (under S28 I(4)):</b>	NRW: 28 days: 29/04/20  NE: 20 working days: 29/04/20
<b>6. Natural Resources Wales reference no:</b>	PAN-007607
<b>7. National grid reference:</b>	ST52979 91272

**8. Description of proposal:**

ALUK (GB) Limited in Chepstow manufacture a variety of Aluminium systems including window and door products. During the first stage of the process the aluminium profiles are loaded onto a conveyor belt where they hang vertically. The sections are first pre-treated in a pre-treatment tunnel in which they are rinsed from top to bottom with a cascade system, they are rinsed with an alkaline treatment then an acid rinse. The profiles can then either undergo a flash anodising process prior to drying or dried straight away with no anodising. Anodising involves dipping the aluminium sheets in large baths of sulphuric acid in order to prevent their corrosion. The sheets are then dried in a drying oven and then undergo powder coating, then cured in a curing oven and offloaded from the conveyor and packaged ready for dispatch.

There are 2-point source emissions to air via stacks with scrubber abatement systems fitted; one for the pre-treatment process and the other for anodising process. The pollutants emitted are sulphuric acid mist, hydrogen fluoride, nitrogen oxides, sulphur dioxide, volatile organic compounds and particulate matter. The applicant has submitted detailed air dispersion modelling for all these pollutants, regardless of whether they screened out in the H1 tool assessment. The modelling is overly conservative as has been completed at maximum 8760 hours per year whereas in reality the plant runs for approximately 3472 hours per year. There are three modelling scenarios, one at BAT-AELs (best available techniques associated emissions levels), one at proposed ELVs (emission limit values) which are lower than BAT-AELs but higher than actual emissions (to allow for process variation) and one at actual emissions following an emissions monitoring survey. As the process can achieve much lower emissions than the BAT-AEL levels it is expected that any ELVs set in the permit will be between the 'actual' and 'proposed ELV' values which will achieve considerable environmental protection whilst being representative of operations.

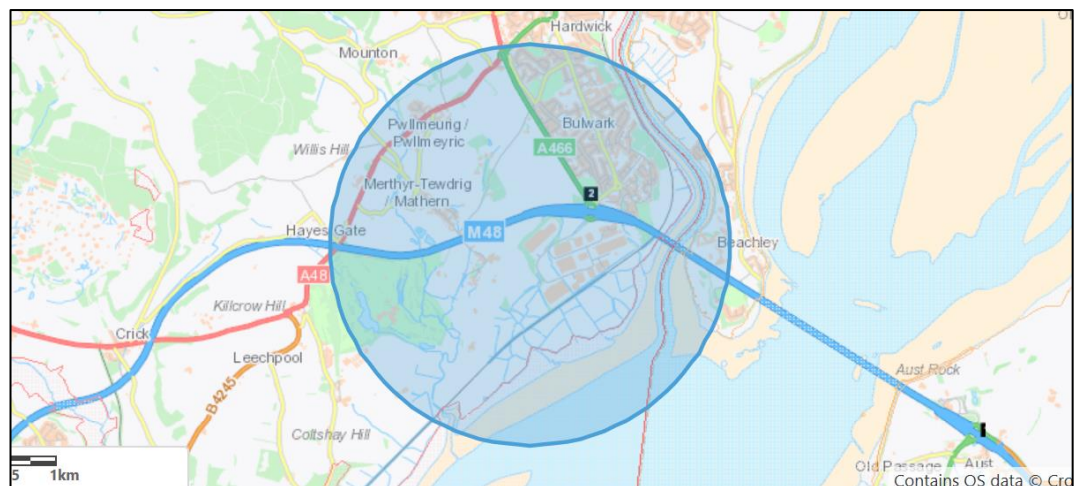
This Appendix 4 Form has been completed using the data obtained from all the modelling scenarios.


There is one discharge to foul sewer via their on-site effluent treatment plant (ETP). They have a discharge consent from Welsh Water in place for this discharge. All process rinse water and surface water drainage from process areas is directed through the ETP process in a separate drainage system to the uncontaminated surface water drainage system. Water quality monitoring is undertaken periodically by Dŵr Cymru and ALUK, water quality monitoring and ELVs on relevant parameters will be replicated in any permit issued by NRW.

There are two balancing lagoons which collect clean uncontaminated surface water from their surface water drainage system water prior to discharge into the nearby Rhyne, (ditch) which travels to the Severn Estuary. The operator has detailed a number of measures in place to meet the requirements set out in Guidance for Pollution Prevention (GPP) including multiple class 1 oil separators and maintenance CCTV surveys.

Apart from uncontaminated surface water there are no other discharges to ground or surface water.

2 km buffer around installation:



	
<p><b>9. Is the proposed activity within (wholly or partially) the SSSI boundary?</b></p>	<p>NO</p> <p><i>The installation is located approximately:</i>  1 km from the Severn Estuary  1.3 km from the River Wye  1.5 km from Pennsylvania Fields</p>
<p><b>10. Has there been any pre-application discussion or correspondence with NRW conservation/ecology</b></p>	<p>Yes – attached are various e-mails of correspondence between me and conservation specialists.</p> <ol style="list-style-type: none"> <li>Regarding the location of Neutral Grassland feature within the Severn Estuary SSSI – it has been confirmed it is not within the Welsh part of the SSSI Severn Estuary therefore has only been assessed for the English part of the SSSI Severn Estuary</li> </ol>
<p><b>11. What aspect(s) of the proposed permission may damage the features which are of special interest for the SSSI?</b></p> <p>The following 'Operations Requiring Consent' (or other activities associated with the permission) that may cause damage) are relevant to the proposed permission.</p> <p><i>Air emissions from ALUK process. There are no discharges to surface water or ground that is not uncontaminated surface water.</i> The applicant has submitted air dispersion modelling for all pollutants: NO<sub>x</sub>, SO<sub>2</sub>, HF, VOCs, H<sub>2</sub>SO<sub>4</sub> mist and particulate matter. Ecological assessment has included NO<sub>x</sub>, SO<sub>2</sub> and HF as there are no Environmental Standards for the other pollutants, therefore assessment is not required. Emission of H<sub>2</sub>SO<sub>4</sub> mist has been included in the acid deposition modelling. The modelling is overly conservative as has been completed for 365 days per year, 24 hours per day operation (8760 hours), in reality the plant operates for approximately 3500 hours, therefore over half of what has been modelled. There has been three scenarios modelled:</p> <ol style="list-style-type: none"> <li>Emissions at the BAT-AELs (best available technique associated emission levels)</li> <li>Emissions at proposed ELVs (Emission Limit Values) – these are lower than the BAT-AELs but higher than actual emissions to allow for process variation</li> <li>Emissions at the actual levels</li> </ol> <p>This Appendix 4 form has been completed using the modelling results using all three scenarios.</p> <p>The following SSSI features and mechanisms of impact have been considered to assess the likelihood of damage:  This form has been completed using the following documents as reference:</p> <ul style="list-style-type: none"> <li>Severn Estuary Site of Special Scientific Interest Views about Management / Management Statement</li> <li>The Severn Estuary / Mor Hafren European Marine Site 'Severn Estuary SAC, SPA and Ramsar site: Regulation 33 Advice from CCW and Natural England, June 2009</li> <li>River Wye (Lower Wye) Site of Special Scientific Interest SMS Confirmation March 2008</li> <li>Pennsylvania Fields (Sedbury) Views About Management, Countryside and Rights of Way Act 2000, Schedule 11(6) Version date: 21-09-04</li> </ul> <p><b>Toxic Contamination:</b></p> <ul style="list-style-type: none"> <li>Increased NO<sub>x</sub> concentration and potential increased nutrient nitrogen deposition and acid deposition.</li> <li>Increased SO<sub>2</sub> concentration and potential increased acid deposition (including impacts from H<sub>2</sub>SO<sub>4</sub> emissions)</li> <li>Increased HF concentration</li> </ul> <p><b>Nutrient Enrichment – potential increased nutrient nitrogen deposition from NO<sub>x</sub> emissions</b></p>	

Acidification – potential increased acid deposition from NO<sub>x</sub>, SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions

Smothering – potential increased acid deposition and nutrient nitrogen deposition from NO<sub>x</sub>, SO<sub>2</sub>, H<sub>2</sub>SO<sub>4</sub> and particulate matter emissions

Changes in salinity regime, changes in thermal regime, turbidity and siltation – no impact pathway as only discharge of uncontaminated surface water

Habitat Loss – no impact pathway as installation is over 1 km from closest SSSI

Physical Damage – no impact pathway as installation is over 1 km from closest SSSI

Entrapment – no impact pathway as there is no water abstraction activities

Disturbance (Noise) – no impact pathway as installation is over 1 km from closest SSSI and noise from the installation is considered insignificant

### SSSI Severn Estuary features

The Severn Estuary is also designated a SAC, SPA and RAMSAR. Special features of the SSSI include:

- Estuary processes – tidal range
- Intertidal mud and sand
- Rocky shores
- Saltmarsh
- Reeds and swamp
- Eel grass beds
- Assemblage of birds
- Assemblage of fish
- Assemblage of invertebrates
- Flood plain grazing marsh / Neutral grassland (currently designated in England only, unsure of the location therefore has been included in this assessment for completeness)

### SSSI River Wye (Lower Wye) features

The whole of the River Wye is also designated a SAC. Special features of the SSSI include:

- Running water supporting Ranunculus vegetation
- Otter
- Atlantic salmon
- Twaite shad
- Sea lamprey, river lamprey
- Bullhead
- Rare plant: flowering rush
- Rare mosses and liverworts
- Goosander
- White clawer or Atlantic stream crayfish
- Aquatic invertebrates
- Habitats: broadleaved woodland, scrub, flood plain grassland, tall weeds, swamp, marginal vegetation, intertidal mud, saltmarsh and river gravel, sandbanks

### SSSI Pennsylvania Fields (England) features

- Neutral grassland
- Littoral sediment

#### 1. SSSI Severn Estuary (ENGLAND & WALES)

##### Toxic Contamination:

**NO<sub>x</sub>:** *BAT-AEL emissions:* A long-term critical level of 30 µg/m<sup>3</sup> NO<sub>x</sub> (annual) and short-term critical level of 75 µg/m<sup>3</sup> NO<sub>x</sub> (hourly) has been assumed for the SSSI Severn Estuary. The maximum long-term process contribution (PC) is >1% and PEC is <70% of the long-term critical level therefore long-term impact from NO<sub>x</sub> emissions can be considered insignificant. The maximum short-term PC is >10% (13.28%) of the short-term critical level, therefore the short-term impact from NO<sub>x</sub> emissions cannot be considered insignificant. The PEC is 43.44 % of the short-term critical level and <100 % therefore there is unlikely to be an exceedance of the critical level and the impact from the short-term NO<sub>x</sub> emissions can be considered not significant. *Proposed ELV emissions:* The maximum long-term process contribution (PC) is <1% of the long-term critical level therefore long-term impact from NO<sub>x</sub> emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from NO<sub>x</sub> emissions can be considered insignificant. *ACTUAL emissions:* The maximum long-term process contribution (PC) is <1% of the long-term critical level therefore long-term impact from NO<sub>x</sub> emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from NO<sub>x</sub> emissions can be considered insignificant.

**SO<sub>2</sub>:** *BAT-AEL emissions:* A long-term critical level of 10 µg/m<sup>3</sup> SO<sub>2</sub> (annual) has been assumed for the SSSI Severn Estuary. The maximum long-term process contribution (PC) is >1% and PEC is <70% of the long-term critical level therefore long-term impact from SO<sub>2</sub> emissions can be considered insignificant. *Proposed ELV emissions:* The



maximum long-term process contribution (PC) is <1% of the long-term critical level therefore long-term impact from SO<sub>2</sub> emissions can be considered insignificant. **ACTUAL emissions:** The maximum long-term process contribution (PC) is <1% of the long-term critical level therefore long-term impact from SO<sub>2</sub> emissions can be considered insignificant.

**HF: BAT-AEL emissions:** A long-term critical level of 0.5 µg/m<sup>3</sup> HF (weekly) and short-term critical level of 5 µg/m<sup>3</sup> HF (daily) has been assumed for the SSSI Severn Estuary. The maximum long-term process contribution (PC) is >1% and PEC is <70% of the long-term critical level therefore long-term impact from HF emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from HF emissions can be considered insignificant. **Proposed ELV emissions:** The maximum long-term process contribution (PC) is >1% and PEC is <70% of the long-term critical level therefore long-term impact from HF emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from HF emissions can be considered insignificant. **ACTUAL emissions:** The maximum long-term process contribution (PC) is <1% of the long-term critical level therefore long-term impact from HF emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from HF emissions can be considered insignificant.

### Nutrient Enrichment

**BAT-AEL emissions:** The minimum nutrient nitrogen critical load value of 15 kgN/ha/yr (fen, marsh & swamp) has been assumed for SSSI Severn Estuary. The maximum nitrogen deposition process contribution is <1% of the lower critical load value, therefore impacts from nitrogen enrichment can be considered insignificant. **Proposed ELV emissions:** The maximum nitrogen deposition process contribution is <1% of the lower critical load value therefore impacts from nitrogen enrichment can be considered insignificant. **ACTUAL emissions:** The maximum nitrogen deposition process contribution is <1% of the lower critical load value therefore impacts from nitrogen enrichment can be considered insignificant.

### Acidification

There is only one SSSI feature within the SSSI Severn Estuary that is sensitive to acidification or has acid deposition critical load values on APIS: Neutral grassland - this is only designated in England therefore will be assessed for the English parts of the SSSI Severn Estuary and will be discounted from the assessment for the Welsh part of the SSSI Severn Estuary. This was confirmed in correspondence with internal NRW conservation specialists, see attached e-mails. The four locations that have been modelled are all within the Welsh part of the SSSI Severn Estuary as they are closest to the installation boundary. Therefore impacts at the English parts of the SSSI Severn Estuary are expected to be smaller than those presented below.

**BAT-AEL emissions:** The acid deposition critical load values of 0.223 kEq/ha/yr (Min N), 1.063 kEq/ha/yr (Max N) and 0.84 kEq/ha/yr (Max S) have been assumed for the SSSI Severn Estuary. Using the critical load function tool on APIS the maximum total acid deposition process contribution is 0.04 kEq/ha/yr (3.8%) and <100% of the critical load function, therefore there is unlikely to be an exceedance of the critical load function and the impact of acidification can be considered not significant. It is important to note that the applicant has modelled four locations of the SSSI Severn Estuary, and all are within the Welsh part of the SSSI Severn Estuary, Neutral Grassland is the only feature within the SSSI Severn Estuary that is sensitive to acidification and it is only designated in the English part of the SSSI. Impacts within the English part of the SSSI Severn Estuary are expected to be less than those modelled.

**Proposed ELV Emissions:** The maximum total acid deposition process contribution is <1% of the critical load function. Therefore, acid deposition impacts SSSI Severn Estuary (English Part) can be considered insignificant.

**ACTUAL Emissions:** The maximum total acid deposition process contribution is <1% of the critical load function. Therefore, acid deposition impacts SSSI Severn Estuary (English Part) can be considered insignificant.

### Smothering

See above for impacts from nutrient enrichment and acidification. There is no environmental standard for particulate matter to assess smothering of SSSI features, however for the human health assessment long term and short-term impacts from particulate matter have screened out as insignificant at all sensitive human receptor locations for all modelling scenarios.

## 2. SSSI River Wye (Lower Wye) (ENGLAND & WALES)

### Toxic Contamination:

**NOx: BAT-AEL emissions:** A long-term critical level of 30 µg/m<sup>3</sup> NOx (annual) and short-term critical level of 75 µg/m<sup>3</sup> NOx (hourly) has been assumed for the SSSI River Wye. The maximum long-term process contribution (PC) is >1% and PEC is <70% of the long-term critical level therefore long-term impact from NOx emissions can be considered insignificant. The maximum short-term PC is >10% (11.15%) of the short-term critical level, therefore the short-term impact from NOx emissions cannot be considered insignificant. The PEC is 46.15 % of the short-term critical level and <100 % therefore there is unlikely to be an exceedance of the critical level and the impact from the short-term NOx emissions can be considered not significant. **Proposed ELV emissions:** The maximum long-term process contribution (PC) is <1% of the long-term critical level therefore long-term impact from NOx emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from NOx emissions can be considered insignificant. **ACTUAL emissions:** The maximum long-term process

contribution (PC) is <1% of the long-term critical level therefore long-term impact from NO<sub>x</sub> emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from NO<sub>x</sub> emissions can be considered insignificant.

**SO<sub>2</sub>:** *BAT-AEL emissions:* A long-term critical level of 10 µg/m<sup>3</sup> SO<sub>2</sub> (annual) has been assumed for the SSSI River Wye. The maximum process contribution (PC) is >1% and PEC is <70% of the long-term critical level therefore long-term impact from SO<sub>2</sub> emissions can be considered insignificant. *Proposed ELV emissions:* The maximum process contribution (PC) is <1% of the long-term critical level therefore long-term impact from SO<sub>2</sub> emissions can be considered insignificant. *ACTUAL emissions:* The maximum process contribution (PC) is <1% of the long-term critical level therefore long-term impact from SO<sub>2</sub> emissions can be considered insignificant.

**HF:** *BAT-AEL emissions:* A long-term critical level of 0.5 µg/m<sup>3</sup> HF (weekly) and short-term critical level of 5 µg/m<sup>3</sup> HF (daily) has been assumed for the SSSI River Wye. The maximum long-term process contribution (PC) is >1% and PEC is <70% of the long-term critical level therefore long-term impact from HF emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from HF emissions can be considered insignificant. *Proposed ELV emissions:* The maximum long-term process contribution (PC) is >1% and PEC is <70% of the long-term critical level therefore long-term impact from HF emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from HF emissions can be considered insignificant. *ACTUAL emissions:* The maximum long-term process contribution (PC) is <1% of the long-term critical level therefore long-term impact from HF emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from HF emissions can be considered insignificant.

#### Nutrient Enrichment

There are no nutrient nitrogen critical loads present on APIS to assess this impact, please advise on a site-specific basis.

#### Acidification

There are no acid deposition critical loads present on APIS to assess this impact, please advise on a site-specific basis.

#### Smothering

See above for impacts from nutrient enrichment and acidification. There is no environmental standard for particulate matter to assess smothering of SSSI features, however for the human health assessment long term and short-term impacts from particulate matter have screened out as insignificant at all sensitive human receptor locations for all modelling scenarios.

### 3. SSSI Pennsylvania Fields (ENGLAND ONLY)

#### Toxic Contamination:

**NO<sub>x</sub>:** *BAT-AEL emissions & Proposed ELV emissions & ACTUAL Emissions:* A long-term critical level of 30 µg/m<sup>3</sup> NO<sub>x</sub> (annual) and short-term critical level of 75 µg/m<sup>3</sup> NO<sub>x</sub> (hourly) has been assumed for the SSSI Pennsylvania Fields. The maximum long-term process contribution (PC) is <1% of the long-term critical level therefore long-term impact from NO<sub>x</sub> emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from NO<sub>x</sub> emissions can be considered insignificant.

**SO<sub>2</sub>:** *BAT-AEL emissions:* A long-term critical level of 10 µg/m<sup>3</sup> SO<sub>2</sub> (annual) has been assumed for the SSSI Pennsylvania Fields. The maximum long-term process contribution (PC) is >1% (1.07%) and PEC is <70% of the long-term critical level therefore long-term impact from SO<sub>2</sub> emissions can be considered insignificant. *Proposed ELV emissions:* The maximum long-term process contribution (PC) is <1% of the long-term critical level therefore long-term impact from SO<sub>2</sub> emissions can be considered insignificant. *ACTUAL Emissions:* The maximum long-term process contribution (PC) is <1% of the long-term critical level therefore long-term impact from SO<sub>2</sub> emissions can be considered insignificant.

**HF:** *BAT-AEL emissions:* A long-term critical level of 0.5 µg/m<sup>3</sup> HF (weekly) and short-term critical level of 5 µg/m<sup>3</sup> HF (daily) has been assumed for the SSSI Pennsylvania Fields. The maximum long-term process contribution (PC) is >1% and PEC is <70% of the long-term critical level therefore long-term impact from HF emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from HF emissions can be considered insignificant. *Proposed ELV emissions:* The maximum long-term process contribution (PC) is >1 % and PEC is <70% of the long-term critical level therefore long-term impact from HF emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from HF emissions can be considered insignificant. *ACTUAL Emissions:* The maximum long-term process contribution (PC) is <1 % of the long-term critical level therefore long-term impact from HF emissions can be considered insignificant. The maximum short-term PC is <10% of the short-term critical level, therefore the short-term impact from HF emissions can be considered insignificant.

#### Nutrient Enrichment

**BAT-AEL emissions:** The minimum nutrient nitrogen critical load value of 20 kgN/ha/yr has been assumed for SSSI Pennsylvania Fields. The maximum nitrogen deposition process contribution is 0.0664 kgN/ha/yr and is <1% of the lower critical load value. Therefore, the nutrient nitrogen deposition impacts can be considered insignificant. **Proposed ELV emissions:** The maximum nitrogen deposition process contribution is <1% of the lower critical load value therefore impacts can be considered insignificant. **ACTUAL Emissions:** The maximum nitrogen deposition process contribution is <1% of the lower critical load value therefore impacts can be considered insignificant.

#### Acidification

**BAT-AEL emissions:** The acid deposition critical load values of 0.223 kEq/ha/yr (Min N), 1.063 kEq/ha/yr (Max N) and 0.84 kEq/ha/yr (Max S) have been assumed for Acid Grassland SSSI Pennsylvania Fields. Using the critical load function tool on APIS the maximum total acid deposition process contribution is 0.02 kEq/ha/yr (1.9 %) of the critical load function and < 100% therefore no exceedance is considered likely and the effects from acidification can be considered not significant. It is important to note this result is for Acid Grassland within the SSSI Pennsylvania Fields only.

The acid deposition critical load values of 0.856 kEq/ha/yr (Min N), 4.856 kEq/ha/yr (Max N) and 4.0 kEq/ha/yr (Max S) have been assumed for Calcareous Grassland SSSI Pennsylvania Fields. The maximum total acid deposition process contribution is <1% of the critical load function. Therefore, acid deposition impacts on calcareous grassland can be considered as insignificant.

**Proposed ELV Emissions:** The maximum total acid deposition process contribution is <1% of the critical load function for both types of grassland. Therefore, acid deposition impacts on both types of grassland can be considered as insignificant.

**ACTUAL Emissions:** The maximum total acid deposition process contribution is <1% of the critical load function for both types of grassland. Therefore, acid deposition impacts on both types of grassland can be considered as insignificant.

#### Smothering

See above for impacts from nutrient enrichment and acidification. There is no environmental standard for particulate matter to assess smothering of SSSI features, however for the human health assessment long term and short-term impacts from particulate matter have screened out as insignificant at all sensitive human receptor locations for all modelling scenarios.

### (i) Decision

#### Conclusion & Summary

The air dispersion modelling was completed using three scenarios:

Emissions at BAT-AELs

Emissions at proposed ELVs (lower emissions than BAT-AELs)

Emissions at actual (considerably lower emissions than both the above)

- (i) The proposed permission is **not likely to damage** any of the flora, fauna or geological or physiological features which are of special interest at **SSSI Severn Estuary**.
- (1) Emissions at BAT-AELs: The impacts on **SSSI Severn Estuary** from long-term and short-term NO<sub>x</sub> airborne emissions can be considered insignificant and not significant (respectively). The impact from long-term SO<sub>2</sub> airborne emissions can be considered insignificant. The impact from long-term and short-term HF airborne emissions can be considered insignificant. The impact from nutrient nitrogen deposition can be considered insignificant. The impact from acid deposition can be considered not significant. Impacts of acid deposition have been modelled at four areas within the welsh part of the SSSI therefore impacts within the English part are expected to be less than what has been modelled.
- (2) Emissions at proposed ELVs and actual emissions: all impacts (airborne and deposition) on **SSSI Severn Estuary** can be considered insignificant.
- (ii) The proposed permission is **not likely to damage** any of the flora, fauna or geological or physiological features which are of special interest at **SSSI River Wye (Lower Wye)**
- (1) Emissions at BAT-AELs: The impacts on **SSSI River Wye (Lower Wye)** from long-term and short-term NO<sub>x</sub> airborne emissions can be considered insignificant and not significant (respectively). The impact from long-term SO<sub>2</sub> airborne emissions can be considered insignificant. The impact from long-term and short-term HF airborne emissions can be considered insignificant.
- (2) Emissions at proposed ELVs and actual emissions: all airborne impacts on **SSSI River Wye (Lower Wye)** can be considered insignificant.
- (iii) The proposed permission is **not likely to damage** any of the flora, fauna or geological or physiological features which are of special interest at **SSSI Pennsylvania Fields (Sedbury)**
- (1) Emissions at BAT-AELs: The impacts on **SSSI Pennsylvania Fields (Sedbury)** from long-term and short-term NO<sub>x</sub> airborne emissions can be considered insignificant. The impact from long-term SO<sub>2</sub> airborne emissions can be considered insignificant. The impact from long-term and short-term HF airborne emissions can be considered insignificant. The impact from nutrient nitrogen deposition can be considered insignificant. The impact from acid deposition can be considered not significant.
- (2) Emissions at proposed ELVs and actual emissions: all impacts (airborne and deposition) on **SSSI Pennsylvania Fields (Sedbury)** can be considered insignificant.

All modelling scenarios determine impacts to be either not significant or insignificant. As the process can achieve much lower emissions than the BAT-AEL levels it is expected that any ELVs set in the permit will be between the 'actual' and 'proposed ELV' values which will achieve considerable environmental protection whilst being representative of operations. All impacts (airborne and deposition) can be considered insignificant from these two modelling scenarios.

**Natural Resources Wales is minded to:  
Issue the permission**

<b>12.Name and job title of Natural Resources Wales officer:</b>	Rebecca Williams Permitting Officer, Installations & RSR
<b>13.Date form sent to NRW conservation/ecology</b>	01/04/2020 sent to NRW and NE
For Natural Resources Wales use only, once NRW conservation/ecology response received	
<b>14.NRW conservation/ecology comment on assessment:</b>	<i>Please delete as appropriate:</i> i) NRW conservation/ecology advise the operation can go ahead
<b>15.Name and job title of NRW conservation/ecology officer:</b>	Liz Lawrie-Meddins Conservation Officer Monmouthshire & Torfaen Environment Team
<b>16.Date of receipt of NRW conservation/ecology response:</b>	27/4/2020