Cyfoeth Naturiol Cymru
Natural Resources Wales

Natural Resources Wales permitting decisions

Kronospan Ltd
Chirk Particleboard Factory

Decision Document

Contents

Variation of a Bespoke Permit

The variation number is: EPR/BW9999IG/V007

The operator is: Kronospan Limited

The Installation is located at: Chirk Particleboard Factory, Holyhead Road, Chirk, Wrexham, LL14 5NT.

We have decided to issue the variation for Chirk Particleboard Factory operated by Kronospan Limited.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

This document should be read in conjunction with the application and supporting information and permit variation notice.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Key issues of the decision

Background to the Variation

Kronospan Limited operate a wood-based panels manufacturing facility at their site in Chirk. This permit variation allows the operation of combustion plant comprising three thermal oil heaters (K1, K5 and K6), five gas engines and two gas turbines (GTs), all of which are fired on natural gas. The combustion plant is used for the production of electricity, heat and steam for use within the board manufacturing processes. The total rated thermal input of this combustion plant is approximately 180MW.

Thermal oil heaters K1, K5 and K6, together with the two gas turbines are existing operational plant. However all of the 5 gas engines can be considered to be new plant. Of these, three are already installed on site, whilst the remaining two gas engines are due to be installed alongside the three existing ones in future.

Consultation

The consultation requirements were identified and implemented. The decision was taken in accordance with EPR RGN 6 “Determinations involving Sites of High Public Interest”, our Public Participation Statement and our Working Together Agreements.

We sent copies of the Application to the following bodies, which includes those with whom we have “Working Together Agreements”:

- Wrexham County Borough Council Environmental Protection Department
- Health and Safety Executive
- Public Health Wales
- Betsi Cadwaladr University Health Board
- Canal and River Trust

These are bodies whose expertise, democratic accountability and/or local knowledge make it appropriate for us to seek their views directly.

The public consultation started on 25th January 2017 and ended on 22nd February 2017. An advert was placed on our website. The consultation with the external organisations listed above started on13th February 2017 and ended on 13th March 2017.

The web publicising and consultation responses were taken into account in the decision. A summary of consultation comments and our response to the representations we received can be found in Annex 1. We have taken all relevant representations into consideration in reaching our determination.

Operator

We are satisfied that the applicant (now the operator) is the person who will have control over the operation of combustion plant K1, K5, K6, Gas Engines 1 – 5 and Gas Turbines 1 and 2 after the issue of this variation. The decision was taken in accordance with EPR RGN 1 "Understanding the meaning of Operator".

The Regulated Facility

This permit applies to only one part of the regulated facility. The other processes on site are currently regulated by Wrexham County Borough Council under permit number WCBC/PPC/KR/(V3) as detailed in the permit's introductory note. (See also **The Site** section below for further information).

The part of the regulated facility covered by NRW permit EPR/BW9999IG is an installation which comprises the following activities listed in Part 2 of Schedule 1 to the Environmental Permitting (England and Wales) Regulations 2016 (EPR) and the following directly associated activities:

- S4.1 A(1) (ii) – producing organic chemicals containing oxygen
- S4.1 A(1) (viii) – producing organic chemicals such as polymers
- S1.1 A(1) (a) – burning any fuel in an appliance with a rated thermal input of 50 or more megawatts

together with the following non-EPR listed Directly Associated Activities (DAAs):

- VITS Paper Impregnation Process
- Surface Water Lagoons 1 and 2
- Surface Water Lagoon 3.

The S1.1 A(1) (a) combustion activity has been added as part of this variation and comprises the following appliances: K1, K5, K6, Gas Engines 1 – 5 and Gas Turbines 1 and 2.

European Directives

All applicable European directives have been considered in the determination of the application.

The applicability of the following European directives have particular relevance to combustion plant applications. We have therefore assessed their relevance to this particular variation as follows:

Industrial Emissions Directive 2010/75/EU (IED), Chapter III Special Provisions for Combustion Plant

Whilst the installation has significant combustion capacity, all combustion gases from Gas Engines 1 – 5 and Gas Turbines 1 and 2 are used for direct drying in the board production process and are therefore regulated by the Best Available Techniques (BAT) Reference document (BREF) for the Production of Wood-based Panels, rather than by Chapter III of IED. Specifically, the wood-based panels BREF covers:

“on-site combustion plants (including engines) generating hot gases for directly heated dryers”.

This is underpinned by IED for combustion plants, Chapter III which states that this chapter will not apply to the following combustion plants:

“plants in which the products of combustion are used for the direct heating, drying or any other treatment of objects or materials”.

On this basis, we consider that Chapter III of IED will not apply to Gas Engines 1 to 5 and Gas Turbines 1 and 2.

Natural Gas boilers K1, K5 and K6 are not used for direct drying within the board production process. However they do not fall within the scope of Chapter III of IED because para 3, article 29 of IED states that "for the purpose of calculating the total rated thermal input of a combination of combustion plants … individual combustion plants with a rated thermal input below 15MW shall not be considered". K1 and K5 have rated thermal inputs of 2.25MW and 14.1MW respectively, so are outside the scope of IED Chapter III based on their individual sizes. K6 boiler has a thermal input of 16.5MW. However, we consider that it is still outside the scope of IED Chapter III, based on the fact that exhaust gases from the K6 boiler are released via a dedicated stack (emission point A18 on site plan in Schedule 4 of the variation notice). No other combustion plant discharges to emission point A18, therefore the total rated thermal input of 16.5MW which discharges to this stack is less than 50MW, and K6 is therefore outside the scope of IED Chapter III as per Article 28 of IED.

Medium Combustion Plant Directive (MCPD)

The Medium Combustion Plant Directive (2015/2193/EU) must be transposed into UK law by 19th December 2017. The Directive will improve air quality by introducing emission limits for key pollutants and by bringing within regulatory control all medium combustion plant (MCP) in the 1-50MWth input range. The emission limit values apply from 20 December 2018 for new plants and by 2024 and 2029 for existing plants, depending on their size, fuel type, age and operating hours.

Whilst the installation has significant combustion capacity, all combustion gases from Gas Engines 1 – 5 and Gas Turbines 1 and 2 are used for direct drying in the board production process and are therefore regulated by the BREF for the Production of Wood-based Panels, rather than by MCPD. Specifically, the BREF note for the production of wood-based panels covers:

"on-site combustion plants (including engines) generating hot gases for directly heated dryers".

This is underpinned by Article 2, paragraph 3(d) of MCPD which states that the directive shall not apply to:

"combustion plants in which the gaseous products of combustion are used for the direct heating, drying or any other treatment of objects or materials"

On this basis, we consider that MCPD will not apply to Gas Engines 1 to 5 and Gas Turbines 1 and 2.

Natural Gas boilers K1, K5 and K6 are not used for direct drying within the board production process, so we consider that these will require regulation as existing plant under MCPD from 1st January 2025 for K5 and K6 (which each have a thermal rated input above 5MW) and from 1st January 2030 for K1 (which has a thermal rated input below 5MW).

Energy Efficiency Directive (EED)

Articles 14 (5) – (8) of the Energy Efficiency Directive (2012/27/EU) applies to "thermal electricity generation installations" with a total thermal input of 20MW or more. The objective of Articles 14(5)-(8) is to promote efficiency in heating and cooling through requirements on developers of these types of installations to consider the opportunities for developing as co-generation, recovering waste heat and supplying heat to district heating and cooling networks. Where cost effective opportunities exist, national authorities are required to authorise and grant permits only to installations developed as co-generation or using waste heat recovery.

In terms of the current variation application, natural gas boilers K1, K5 and K6 do not generate electricity and therefore cannot be considered to be part of a "thermal electricity generation installation". As such we consider that K1, K5 and K6 do not require regulation under EED. Gas Engines 1 to 5 do generate electricity, as do Gas Turbines 1 and 2. Of the gas engines, three are currently installed on the site, whilst a further two are due to be installed alongside the existing gas engines. We are satisfied that all of waste heat and steam generated by the gas engines is utilised within the primary manufacturing process, with steam being used for MDF1 and MDF2

processes and the waste heat being used to directly dry product from the primary manufacturing process via MDF 1 and 2 driers. On this basis, we are satisfied that there are no further opportunities that the operator could consider in terms of recovering waste heat and supplying heat to district heating and cooling networks. As such, a cost benefit analysis in this regard is not required.

The gas turbines are existing plant and are not being refurbished. As such, EED does not apply at this time. Furthermore, we are satisfied that the waste heat from the gas turbines is used for direct drying of product from the primary manufacturing process via MDF 1 and MDF2 driers. As such, a cost benefit assessment would also not be required for the gas turbines, because we consider that there are no further opportunities that the operator could explore in terms of recovering waste heat and supplying heat to district heating and cooling networks.

The site

The operator has provided an updated plan which we consider is satisfactory, showing the extent of the site of the facility, including discharge points. The plan has been amended to show the location and release points associated with boilers K1, K5 and K6, Gas Turbines 1 and 2 and Gas Engines 1 -5. The items shaded in green denote those parts of the overall site that are regulated by Natural Resources Wales (NRW) permit EPR/BW9999IG. The unshaded areas within the red site installation boundary line are currently regulated by Wrexham County Borough Council under permit WCBC/PPC/KR/(V3). For clarity, the red boundary line represents the extent of the entire installation.

A plan is included in the permit and the operator is required to carry on the activities permitted by EPR/BW9999IG within the green shaded areas.

Site condition report

The operator has provided a description of the condition of the site.

We consider that the description within the baseline site report is satisfactory for the discrete areas of site that the combustion plant are situated on, where ground cover

is concrete (shown on the Site Plan in Schedule 4 of the variation notice). The decision was taken in accordance with our guidance on site condition reports – guidance and templates (H5).

Modelling Methodology and Scenarios Considered

The applicant used ADMS 5.2 to model predicted Process Contributions (PCs) from all the combustion plant at Kronospan factory. For the ecological assessment, the mapped background concentration at the point of maximum impact within the ecological receptor has been used from the Air Pollution Information System (APIS) dataset. For modelling purposes, the combined impact of all sources of combustion products on site have been considered (including sources currently controlled under an extant Wrexham County Borough Council (WCBC) environmental permit).

Under normal operations, exhaust gases from the combustion plant are used within the particleboard manufacturing process driers and exit to atmosphere via the drier cyclones. The exhaust gases from the drier cyclones will continue to be regulated by WCBC. Therefore, whilst not forming part of this variation application, this scenario has been modelled to demonstrate the impact on local air quality of the normal operating conditions. The consideration of the normal operating scenarios is conservative as it assumes all plant continually operates and does not consider periods of reduced operations on site or shutdowns.

When the driers are offline, exhaust gases from the combustion plant will exit to atmosphere via their own dedicated stacks. The dedicated stacks for K1, K5, K6, gas engines 1 – 5 and gas turbines 1 and 2 will be brought under the regulatory control of NRW as part of this variation application. As emissions from these sources will occur at the same time as emissions from WCBC regulated sources, the cumulative impact of NO_x from the whole facility has been quantified, not just the contribution associated with the combustion sources being applied for. This approach ensures that the impact of the whole facility is considered. In addition, a range of non-standard operating scenarios have been considered assuming that emissions from the combustion sources vent to atmosphere at the same time as emissions from the driers.

The applicant has based the assessment on actual emissions and provided a sensitivity of worst-case impact. It is also noted that the applicant states that modelling has predicted similar concentrations to that observed in the local area. As detailed above, the exhaust gases from the combustion plant are used within the driers and exit to atmosphere via the drier cyclones. Each of these combustion plants has proposed Emission Limit Values (ELV) for NO_x. The mass of NO_x has been calculated assuming each item of combustion plant feeding the driers operates at the ELVs. The applicant states that this has shown that the mass of NO_x released into the driers in this scenario is well above that monitored exiting the driers. Therefore, for this variation application, the following emissions scenarios have been considered:

- **Likely Case**: driers emitting NO_x calculated from typical emissions, all other sources emitting at the relevant ELVs. This is therefore the most realistic case.

- **Limits Case**: Driers emitting NO_x calculated from each item of plant exhausting into the drier operating at the relevant ELV, all other sources emitting at the relevant ELVs. This is indicative of a worst-case scenario and is not based on actual monitoring data from the Driers, so is less realistic than the likely case.

A third emissions scenario named **"Worst Case"** was also assessed by the applicant. This scenario is defined as "Driers emitting NO_x calculated from BAT-AEL, all other sources emitting at the relevant ELVs". This **"Worst Case"** scenario falls outside the scope of the existing variation because the Driers themselves are outside the scope of this variation and the BAT-AELs referred to are from the wood-based panels BAT Conclusions, which the site will need to comply with by 24th November 2019. This scenario will therefore be assessed as part of a future variation application anticipated following an expected interim direction from Welsh Government, which will enable regulatory control of the site to be transferred from Wrexham County Borough Council to NRW. This anticipated variation will include a review of plant on site against the wood-based panels BREF and associated BAT Conclusions.

Operating scenarios which occur for 1-hour or less have not been considered in the assessment because the Critical Levels (CLe) and Critical Loads (Clo) are expressed as annual and daily means and annual deposition rates respectively.

Conservative Nature of the Assessment:

The following criteria used in the applicant's assessment mean that the modelling predictions under both the Likely and Limits cases are very conservative:

- **All items of plant run at peak capacity when operating.** (Each item of plant is not continually operated at peak capacity as operations are dependent on production).
- **Emissions from all combustion plant are at the ELVs.** (The applicant states that monitoring of emissions from the existing combustion plant on site show that these normally operate below the ELVs).
- **Operation of all items of plant occur during the worst-case weather conditions for dispersion.** (The applicant states that it is unlikely that the non-standard operations would occur at the same time as the adverse conditions for dispersion of emissions to occur).
- **The predicted impacts are based on the maximum predicted concentration using 5 years of weather data.**
- **The prevailing wind direction in the UK is from the south west.**

In addition, because Kronospan is an existing site, some of the plant which has been included in the modelling, will also be included in the background concentrations, so an element of double counting will exist. This is supported by the following statement from the applicant: "It was considered appropriate to base the assessment on the actual emissions and provide a sensitivity of the worst-case impact. This is also supported by the modelling which has predicted similar concentrations to those observed in the local area". This also supports the premise that the Likely Case is more realistic than the Limits Case.

Biodiversity, Heritage, Landscape and Nature Conservation

The following nature conservation sites are within the relevant screening distances for an EPR installation with discharges to air. The protected habitats and species search was centred on the main cluster of combustion plant emission points to air (grid reference: SJ 28487 38348), hereafter known as "the search point".

European Sites within 10km of the search point:

- Berwyn a Mynyddoedd de Clwyd / Berwyn and South Clwyd Mountains (SAC)
- Johnstown Newt Sites (SAC)
- River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (Wales) (SAC)
- River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (England) (SAC)
- Berwyn (SPA)

There are no Ramsar Sites within 10km of the search point.

Sites of Special Scientific Interest within the 2km of the search point.

- River Dee (Afon Dyfrydwy)
- Chirk Castle and Parkland / Castell Y Waun a'i Barcdir

Non-statutory sites within 2km of the search point:

- Barracks Field (Local Wildlife Site)
- Chirk Castle (Local Wildlife Site)
- Coed-Y-Camlas / Canal Wood (Local Wildlife Site)
- Pentri Wood (Ancient Woodland)
- There are 67 Ancient Woodland sites within 2km of the search point, the closest of which is Coed-y-Camlas / Canal Wood (Restored Ancient Woodland Site), located approximately 140 metres to the west.

There are no National Nature Reserves or Local Nature Reserves within 2km of the search point. We are also satisfied that there are no European Protected Species outside of the designated sites above within the locality of the installation, where the maintenance of favourable conservation status could be affected by this variation.

A full assessment of the application and its potential to affect the sites, species and habitats has been carried out as part of the permitting process. We consider that the application will not affect the features of the sites, species and habitats.

The main emissions to air associated with the combustion plant are oxides of nitrogen (NOx) and carbon monoxide (CO). However, no critical level or load is set for carbon monoxide, so this parameter is screened out from further consideration. As there are

no process emissions to water associated with this variation, the habitats assessment focused exclusively on aerial releases of NO_x.

European Sites and Protected Species Assessment

Berwyn a Mynyddoedd de Clwyd / Berwyn and South Clwyd Mountains (SAC)

The potential impact pathways which were assessed for the features of the SAC (where an impact pathway could exist in principle) were nutrient enrichment and acidification. The features which were assessed were: Bogs and Wet Habitats, Dry Grassland, Dry Heathland Habitats and Upland. We are satisfied that for all features the maximum Predicted Contributions (PC) under both Likely and Limits Cases are <1% and <10% of the annual and daily mean CLes for NO_x respectively. In all cases the PCs for nutrient nitrogen deposition are <1% of the lower CLo and for acid deposition, all PCs are <1% of the maximum CLo. We have therefore concluded that NO_x emissions from the combustion plant will not have a likely significant effect on the SAC.

Berwyn (SPA)

We assessed the likelihood of a potential impact via nutrient enrichment and acidification for the upland bird species which are a feature of the SPA. We are satisfied that the maximum PC under both Likely and Limits Cases are <1% and <10% of the annual and daily mean CLes for NO_x respectively. The maximum PC for nutrient nitrogen deposition is <1% of the lower CLo and for acid deposition, the maximum PC is also <1% of the maximum CLo. We have therefore concluded that NO_x emissions from the combustion plant will not have a likely significant effect on the SPA.

Johnstown Newt Sites (SAC)

We assessed the likelihood of a potential impact via nutrient enrichment and acidification for the Great Crested Newt which is the SAC feature. We are satisfied that the maximum PC under both Likely and Limits Cases are <1% and <10% of the annual and daily mean CLes for NO_x respectively. APIS does not set Clos for nutrient nitrogen deposition and acid deposition in respect of Great Crested Newts, hence no assessment of deposition was required. We have concluded that NO_x emissions from the combustion plant will not have a likely significant effect on the SAC.

River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (Wales) (England) (SAC)

For the River Dee and Bala Lake SAC, the only feature within the 10km screening distance where impact pathways due to nutrient enrichment and acidification could exist is Riverine Habitats and Running Waters, (Rivers with floating vegetation often dominated by water-crowfoot). APIS does not set Clos for nutrient nitrogen deposition and acid deposition in respect of Riverine Habitats and Running Waters, hence no assessment of deposition was required. The maximum PC of 5.6% for NO_x (occurring under the limits case, based on monitoring data from K7) exceeds the 1% significance screening criteria for the annual mean CLe. Similarly, the maximum PC of 31.3% for NO_x (occurring under the limits case for normal operation and based on monitoring data for K7), exceeds the 10% significant screening criteria for the daily mean CLe. As such, we concluded that a likely significant effect on the SAC feature due to NO_x emissions from the combustion plant could not be ruled out. An appropriate assessment examining the PCs added to existing background NO_x concentrations to give a Predicted Environmental Concentration (PEC), was therefore required to determine the likelihood of the CLes being exceeded.

The maximum predicted PEC for annual mean NOX at the SAC is 41.9% which occurs under the Limits Case during both normal operation and when MDF2 is offline). As the predicted PEC is <70% of the annual mean NOx CLe, we are satisfied that the predicted releases screen out at the second stage of the screening criteria and it can be considered that no adverse effect on site integrity will be caused.

The maximum predicted PEC for daily mean NOX is 44% which occurs under the Limits Case during normal operation, using monitoring data from K7. As the predicted PEC is <100% of the daily mean NOx CLe, we are satisfied that the predicted releases will not cause an exceedance anywhere within the SAC. We have therefore drawn a conclusion of no adverse effect on site integrity.

In terms of relevant conservation objectives, our assessment of maximum predicted PECs, shows that there is unlikely to be any exceedance of the NOx CLes within the SAC, so no adverse effect on Bank and Riparian Zone vegetation is predicted as a result of aerial releases of NOx from the installation's combustion plant. We also consider that addition of NOx from aerial sources will not adversely affect water quality,

or substrate within the river and will also not promote the growth of species indicative of eutrophication. This is because water is continually flowing in the river and aerial deposits are therefore being continually washed away, so accumulation of NOx due to aerial sources is unlikely. Furthermore, there are no process emissions to water associated with this variation. All emissions of process waters (e.g. boiler blowdown) are released to sewer. In-combination assessment with other plans/projects was not required for this specific variation.

In summary, we have concluded that the combustion plant will not undermine the conservation objectives for the River Dee and Bala Lake SAC and that the operation of the installation will not adversely affect the integrity of the SAC either alone or in combination.

We have consulted with the conservation body in Wales on our assessment of all the European Sites listed above. We also consulted with Natural England on our assessment for the River Dee and Bala Lake SAC. The conservation body in Wales are in agreement with our conclusions. We did not receive a response from Natural England. However, the border of England and Wales runs down the middle of the River Dee, where the English part of the site was identified as being within the relevant screening distance criteria. As such, one bank is the welsh SAC and the opposite river bank is the English SAC. It is therefore logical (and indeed there is no reason why) agreement of the conservation body in Wales would not be the same for Natural England.

SSSI Assessment

For the **River Dee (Afon Dyfrydwy),** all parts of the SSSI within the 2km screening distance of the search point were limited to aquatic features only. There are no Critical Levels (CLe) or Critical Loads (CLo) for aquatic features, as it is considered that the CLe for atmospheric nitrogen oxides (as NO2) concentrations and Clos for nutrient nitrogen and acid deposition are not applicable to river systems, due to low sensitivities from aerial sources. As such, further consideration of nitrogen or acid deposition was not required and we concluded that NOx emissions associated with the combustion plant are not likely to damage any of the special interest features of the River Dee (Afon Dyfrdwy) SSSI.

For the **Chirk Castle and Parkland / Castell Y Waun a'i Barcdir SSSI**, we are satisfied that the 30 µg/m^3 annual mean CLe for NO_x will not be exceeded, as PECs for both the Likely and Limits cases are less than 70% of the CLe. We also consider that an exceedance of the 75 µg/m^3 daily mean CLe for NO_x is unlikely. This is based upon a maximum PEC of 68.2% for the Limits Case (occurring when MDF2 is off line) based on monitoring data for K7 and taking into account the conservative nature of the assessment as described in the **Modelling Methodology and Scenarios Considered** section above.

The applicant presented a detailed assessment of annual mean nitrogen deposition and acid deposition for the Likely and Limits Cases for Chirk Castle SSSI as part of the application. The PC from the installation has been calculated and compared against the relevant critical loads for semi-natural woodland (Lowland Mixed Deciduous Woodland).

For nutrient nitrogen deposition, the background already exceeds the Upper CLo, although the largest proportion of this background (42%) is attributed to Livestock Contributions (in APIS), as the surrounding area is predominantly rural. The existing background attributable to Industrial Combustion is 0.2 KgN/ha/yr (total deposition) which is equivalent to 1.1%. The maximum predicted PC from Kronospan is 3.39% of the Upper Critical Load) occurring under the Limits Case (during normal operations) based on monitoring data for K7. In practice however, we consider that this prediction is very conservative for the reasons described in the **Modelling Methodology and Scenarios Considered** section above and because there is likely to be an element of double counting between the predicted PC and the background values. The **Modelling Methodology and Scenarios Considered** section also explains that other combustion plant on site, which is currently regulated by WCBC, has been included in the impact assessment to ensure that the impact of the whole facility has been considered. This other plant remains under the vires of WCBC. However, an interim direction from Welsh Government is expected, which will enable regulatory control of the site to be transferred from Wrexham County Borough Council to NRW. This will trigger a further variation application to include the entire site in the NRW permit. Therefore, the impact of the entire site will be reassessed then, when NRW have the

vires to consider the other combustion plant and emissions from the main particleboard manufacturing process.

For acid deposition, the maximum predicted PC was 1.06 keq/ha/yr which is predicted to occur for the Limits Case, under normal operation. The Critical Load Function Tool on APIS was used to check whether the Predicted PC falls within the "safe envelope" between min and max CLo. The Critical Load Function Tool stated that the predicted PC is 56% of the CL function and confirmed that no exceedance of the CL function will occur.

In summary, we are satisfied that the NOx emissions associated with the combustion plant are not likely to damage any of the special interest features of Chirk Castle and Parkland / Castell Y Waun a'i Barcdir SSSI. We have consulted with the conservation body in Wales on this assessment and they are in agreement with our conclusions.

Non-statutory sites Assessment

For non-statutory sites, Natural Resources Wales impact assessment criteria considers whether or not an installation can cause significant pollution. If the process contribution from an installation is less than 100% of the critical level or load for a site, we consider that no significant pollution will be caused.

Canal Wood is a Restored Ancient Woodland and Local Wildlife Site, and is the closest non-statutory site to the habitats search point, lying approximately 120 metres from the search point and adjacent to the western installation boundary. The nearest plantation on ancient woodland is approximately 700 metres to the south-west of the search point. The nearest semi-natural ancient woodland is located approximately 720 metres to the west of the search point. The nearest part of Chirk Castle LWS is 830 metres to the south west of the search point. Barracks Field is approximately 1.69 km to the north east of the search point.

The applicant has modelled the predicted Process Contributions (PCs) at each of the non-statutory sites. As the predicted PCs for NO_x releases decline quickly with distance from the source, this assessment focuses on predicted PCs at Canal Wood and the closest areas of semi-natural ancient woodland and plantation on ancient

woodland where maximum predicted PCs will be seen. As such, it follows that if predicted PCs are less than 100% of the relevant Critical Level and Loads at the closest non-statutory sites, they can be expected to be even less at those non-statutory sites which are further from the release sources.

Critical levels for nitrogen oxides (as NO_2) (NO_x)

We are satisfied that the 30 µg/m^3 annual mean CLe for NO_x will not be exceeded at any of the non-statutory sites under both normal operations and operations where MDF2 is offline in both the Likely and Limits Cases (based on monitoring data from K7). The highest predicted PC is approximately 20% of annual mean NOx at Canal Wood LWS. This is predicted to occur when MDF 2 is offline under the Limits Case.

We are also satisfied that the 75 µg/m^3 daily mean CLe for NO_x will not be exceeded at any of the non-statutory sites under both normal operations and operations where MDF2 is offline in both the Likely and Limits Cases (based on monitoring data from K7). The highest predicted PC equates to 85% of daily mean NOx at Canal Wood LWS. This is predicted to occur during normal operations under the Limits Case.

Critical Loads for Nutrient Nitrogen Deposition

We consider that the most appropriate CLo for nutrient nitrogen deposition are as follows:

- Restored and Semi-Natural Woodland =10 – 20 Kg/N/ha/yr
- Plantation on Ancient Woodland = 20 Kg/N/ha/yr
- Barracks Field LWS (semi-improved grassland) = 30 Kg/N/ha/yr

The highest PC for nutrient nitrogen deposition is approximately 18% of the lower CLo of 10 Kg/N/ha/yr at Canal Wood, which occurs during the Limits Case when MDF2 is offline (using K7 monitoring data). The highest PC occurring at the nearest Plantation on Ancient Woodland site is approximately 3% of the CLo of 20 Kg/N/ha/yr. This is predicted to occur for the Limits Case when MDF 2 is offline. The highest PC occurring at Barracks Field LWS is approximately 1.2% of the 30 Kg/N/ha/yr, which is predicted to occur for the Limits Case under normal operations.

Critical Loads for Acid Deposition

We consider that the most appropriate upper CLo for acid deposition at the ancient woodland sites is 1.892 kgN/ha/yr, which is what was used for the Chirk Castle and Parkland SSSI assessment. The highest PC is approximately 40% of the CLo which occurs at Canal Wood LWS for the Limits Case during both normal operations and operations when MDF2 is offline and monitoring data from K7 is used. However, generally for acid deposition, we consider the upper CLo which reflects wet deposition of pollutants in rain. As such, it can be argued that the non-statutory sites (including Barracks Field LWS) are too close (within 2km) to the source of combustion plant emissions to be affected by wet deposition, as rain would be formed over a longer distance. Therefore it can be argued that for these sites, we only need to consider dry deposition, which is covered by the assessment of nutrient nitrogen deposition against the relevant CLes and Clos.

In summary because all PCs at the non-statutory sites are below 100% of the respective CLe and CLo, we are satisfied that significant pollution will not be caused at these sites.

Environmental Risk Assessment

We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory.

This section of the decision document deals primarily with the dispersion modelling of emissions to air from the combustion stacks (as described in the **Modelling Methodology and Scenarios Considered** section above) and its impact on local air quality. The Applicant has assessed the combustion plant's potential emissions to air against the relevant air quality standards, and the potential impact upon human health.

Air

The main releases to air associated with the combustion plant are oxides of nitrogen (NOx) and carbon monoxide (CO).

Oxides of Nitrogen (NO_x)

Normal Operations

The annual mean air quality standard (AQS) for NO_x for the protection of human health is 40 µg/m^3. For the Likely Case, under normal operations, we are satisfied that the AQS will not be exceeded as the maximum PEC on the modelling grid is 54% of the AQS and the maximum PEC at a receptor is less than 44%. For the Limits Case, under normal operations, the maximum PEC on the modelling grid is 54.8%, whilst the maximum PEC at a relevant area of exposure is 54.3%.

The 1-hour mean air quality standard for NO_x for the protection of human health is 200 µg/m^3. For the Likely Case, under normal operations, we are satisfied that the AQS will not be exceeded as the maximum PEC on the modelling grid is 47% of the AQS and the maximum PEC at a receptor is 24%. For the Limits Case, under normal operations, the maximum PEC on the modelling grid is 48.1% of the AQS, whilst the maximum PEC at a relevant area of exposure is 31.6%.

Abnormal Operations

A number of abnormal operating scenarios have been considered including operation of the combustion plant when MDF 1 and 2 are offline and also combustion plant operation when K7 and K8 are offline. For the Likely Case, the maximum predicted PEC on the modelling grid is 67% of the annual mean AQS for NO_x and the maximum PEC at a relevant area of exposure is 57% of the AQS. This occurs when MDF 1 and 2 are offline. For the Limits Case, the maximum predicted PEC on the modelling grid is 89% of the annual mean AQS for NO_x and the maximum PEC at a relevant area of exposure is 62% of the AQS. This occurs when K7 and K8 are offline.

For the 1-hour mean for NO_x, the Likely Case maximum PEC on the modelling grid is 84% and the maximum PEC at a relevant area of exposure is 43%. This occurs during an emergency scenario in which all driers are offline. This scenario is expected to occur for periods of less than 1 hour, as if the MDF driers are not online, the power and heat needed for site would be reduced and the combustion plants would not be needed and would be shutdown. The next highest abnormal scenario for the likely case 1-hour mean is when MDF1 and 2 are offline and maximum PEC on the

modelling grid is 63%, whilst the maximum PEC at a receptor is 32% of the 1-hour mean AQS.

Under the limits case, the maximum PEC on the modelling grid is 106% of the 1-hour mean AQS and the maximum at a receptor is 48% of the AQS. Again this scenario would occur when all driers are offline and is an emergency scenario not expected to exceed 1-hour in duration because it would lead to the combustion plant being shut down. Whilst the maximum on the modelling grid exceeds 100% of the 1-hour mean AQS, we are satisfied that the modelling methodology is conservative and that predicted PECs at relevant areas of exposure will be less than 100%. The next highest abnormal scenario for the Limits Case 1-hour mean is when K7 and K8 are offline and the maximum PEC on the modelling grid is 99%, whilst the maximum PEC at a receptor is 40%.

In summary, we are satisfied that for the scenarios considered the annual and 1-hour mean AQSs for NO_x will not be exceeded at any areas of relevant exposure.

Carbon Monoxide

The operator assessed predicted CO emissions using the 400 mg/Nm3 BAT emission benchmark for Spark Ignition Engines given in EPR 1.01 “Additional Guidance for Combustion Activities”. This assessment was done using the H1 Software tool. The assessment showed that although the predicted PC could not be screened as insignificant, the PEC screened out from further assessment. As such, detailed dispersion modelling was not undertaken for CO and we are satisfied that the air quality objective for CO is unlikely to be exceeded.

Water

There are no point source emissions of process water to surface water, ground or groundwater associated with this variation. Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent pollution of ground and surface water.

Sewer

Gas Engines 1 – 5 will release boiler blowdown which drains to emission point S1 (Middle Road Pit) prior to final discharge to public sewer. This discharge is regulated under a Dŵr Cymru Welsh Water trade effluent discharge consent, which includes emission limits for volume, temperature, pH, suspended solids and COD. On this basis, we have not set emission limits or monitoring requirements for this release, in order to avoid duplicate regulation and reporting.

Noise

The applicant submitted a noise assessment for Gas Engines 1 – 5, using BS4142:2014 "Methods for rating and assessing industrial and commercial sound". The other combustion plant included in the application has not been considered as "additional plant" within the scope of this determination, because it is existing plant which is already operational at the site. Other plant noise from the site will be considered as part of a future variation application anticipated following an expected interim direction from Welsh Government, which will enable regulatory control of the site to be transferred from Wrexham County Borough Council to NRW.

The applicant has assessed the impact of noise from the gas engines at the nearest residential receptors around the site. The applicant's study concludes that the predicted noise contribution from the gas engines will be at least 9 dBA below the 2011 baseline background noise level at these sensitive receptors. More specifically, the applicant's highest prediction is 9dB below the background LA90 for night-time noise at sensitive receptor location 3 (Holyhead Rd/West View). BS4142:2014 states that:

"Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context".

We agree that the gas engines will have a low impact on surrounding sensitive receptors based on the location of the engines within the wider Kronospan Site. The engines are located within the south west part of the site, whilst the majority of residential receptors are located to the north and east of the site across the main

Holyhead Road. The gas engines therefore benefit from the screening effects of surrounding buildings and the relatively high ambient noise levels in the area.

The applicant has stated that mitigation measures will be undertaken to ensure that the noise break-out from the gas engine building is limited to 75dB(A) at 1m. The mitigation measures are described as follows:

“Introducing suitable cladding to the building that provides adequate noise insulation. Noise via door openings and ventilation louvre, cowls or ducting fitted with suitable attenuators to limit noise `break-out’ to limit noise level”.

These have been incorporated into Table S1.2 of the permit as Operating Techniques and are therefore enforceable. As predicted noise levels from the gas engines will be low (as per BS4142:2014), we are also satisfied that existing permit condition 3.4.1 is sufficiently protective.

Odour

All combustion plant subject to the variation is fired on natural gas. We agree with the applicant’s conclusion that there will not be any sources of odour from the combustion of natural gas and consider that existing permit condition 3.3.1 is sufficiently protective.

Fugitive emissions

We agree with the applicant’s conclusion that there will not be any fugitive emissions from the combustion of natural gas within the combustion plants. The applicant has also considered risks associated with aqueous leaks, containment failure, and fugitive releases which could result from fire and vandalism. We are satisfied that suitable control measure are in place to prevent pollution due to accidents. These control measures are described in “Annex 4 – Environmental Risk Assessment” in the variation application and include: kerbed containment for hardstanding areas where appropriate, bunding for chemicals, routine inspection and maintenance programmes, use of fire detection systems and security fences. These control measures have been incorporated into the permit via Table S1.2 “Operating Techniques” and are

enforceable. We are also satisfied that existing permit conditions 3.2.1, 3.2.2 and 3.2.3 are sufficiently protective.

Waste

We are satisfied that the operation of the combustion plant will not give rise to significant amounts of solid waste. Where waste does arise (e.g. empty containers and packaging), existing permit condition 1.5.1 requires the operator to take appropriate measures to ensure waste is minimised and recovered if practicable in line with the waste hierarchy.

Operating techniques

We have reviewed the proposed techniques used by the operator and we have compared these with those techniques set out in EPR 1.01 “How to Comply with Your Environmental Permit: Additional Guidance for Combustion Activities” Sector Guidance Note (SGN) and concluded that the operating techniques conform with BAT.

The combustion plant will incorporate the following techniques that are considered to be BAT:

1. K1, K5, K6, Gas Engines 1 – 5 and GTs 1 and 2 all run on natural gas which is considered to be a sulphur free fuel;
2. Gas Engines 1 - 5 will have combustion controlled to provide an optimum compromise between CO concentration, NO_x concentration and thermal efficiency;
3. Gas Engines 1 - 5 will control NOx emissions via the combustion control system which will run the engines at a tuned setting of “Half TA Luft”. All other combustion plant subject to this variation has been designed with combustion control systems which will minimise the formation of NO_x.
4. Gas Engines 1 – 5 use catalytic oxidation in the exhaust gas stream to reduce carbon monoxide emissions;
5. Exhaust gases from the Gas Engines (and standby plant K5, K6 and the Gas Turbines when operational) are used in the MDF drying process

The proposed techniques / emission levels for priorities for control are in line with the benchmark levels contained in the relevant sector guidance note and legislation. We therefore consider them to represent appropriate techniques for the facility.

We consider that the emission limits included in the permit reflect the BAT for the installation. (See **Emission Limits** section below).

The permit conditions

Raw materials

We have not specified any limits and controls on the use of raw materials and fuels in Table S3.1 as a result of this variation. However we have added condition 2.3.7, for completeness as this cross-refers to Table S3.1 and was omitted from the permit.

Pre-operational conditions

Based on the information in the application, we consider that we need to impose pre-operational conditions.

PO1 requires the operator to:

> submit a written assessment of the sampling locations used to measure point source emissions to air for Gas Engines 4 and 5. The assessment must use Natural Resources Wales Monitoring Technical Guidance Note M1: "Sampling Requirements for Stack Emission Monitoring". The assessment shall be submitted to Natural Resources Wales for approval at least 4 weeks before the start of operation of Gas Engines 4 and 5.

This pre-operational condition has been set because Gas Engines 4 and 5 have not yet been installed on site, therefore the operator has not had an opportunity to provide an M1 assessment up front as part of the variation application.

Incorporating the application

We have specified that the applicant must operate the installation in accordance with descriptions in the application, including all additional information received as part of the determination process.

The applicant has submitted information explaining that Gas Engines 1 – 5 will be tuned to a setting called “Half TA Luft” in order to minimise releases of oxides of nitrogen (NO and NO_2 expressed as NO_2 (NO_x). An integrated oxidation catalyst system will also be fitted to each engine to minimise Carbon Monoxide (CO emissions). This is of particular importance to the variation, as the control of NO_x and CO emissions from the gas engines using these techniques is considered to be Best Available Techniques (BAT) for the installation. Also, the emission concentrations used in the air quality assessment, (submitted as part of the variation application), for predicting impacts on human health and habitats will be achieved by using these abatement methods. It is therefore vital that these methods are employed at all times when the gas engines are operating. This is described more specifically for NOx control in section 3 of the applicant’s schedule 5 response (dated 26/05/17):

“The justification for tuning the engines at a reduced emission limit for NOx to 250mg/m3 is that this will be the NOx concentration as the flue gases leave the gas engines. The flue gases will then be ducted to the MDF Refiner plant where the heat from the flue gases will be recovered in the drying processes. This process acts as additional abatement for the reduction of NOx emissions.

The only scenario when flue gases from the engines will discharge directly to atmosphere through the individual engine stacks will be when one or both of the MDF 1 & 2 presses are off line. Under normal operations the individual engine emission points are considered to be emergency stacks”.

These descriptions are specified in Table S1.2 “Operating Techniques” within the variation notice and are therefore directly enforceable.

Emission limits

We have decided that emission limits should be set for the parameters listed in the permit.

The following substance has been identified as being emitted in significant quantities and ELVs have been set for this substance:

- Oxides of nitrogen (NO and NO2 expressed as NO2) (NO_x)

It is considered that the ELVs for NO_x will ensure that significant pollution of the environment is prevented and a high level of protection for the environment secured.

The emission limits for NO_x in Table S4.1 of the variation notice apply to releases from the emission points stated in the table. As per footnote 6 to the table, emission points A19 and A20 (Gas Turbines) and A21 – A25 (Gas Engines) are emergency release points. This means that under normal operating conditions, exhaust gases from the Gas Engines (and Gas Turbines in their capacity as standby plant to the gas engines), are released via the two MDF driers, where they are used for direct drying as part of the board production process. As explained in the **European Directives** section above, releases to air which are used for direct drying, are subject to regulation under the Wood-based Panels BREF. Therefore, releases from the MDF1 and MDF2 driers are outside the scope of this particular variation.

In isolation, K1, K5 and K6 would not normally require an emission limit for NO_x because their small size means that individually they fall below the 20MW regulatory threshold at which an EPR permit would be required. However, for the purposes of this variation, K1, K5 and K6 form part of the overall Part A(1) EPR combustion activity, in that they are included in the >50MW qualifying aggregation figure and hence were included in the air quality modelling assessment submitted as part of the variation application. The emission limits for NO_x associated with release points A16, A17 and A18 are therefore required to demonstrate that releases from K1, K5 and K6 will be minimised in line with the concentrations used to predict impacts on human health and habitats as part of the air quality modelling assessment in the application. In addition, the 200 mg/Nm^3 NO_x emission limit for K5 and K6 is consistent with the ELV that these

thermal oil heaters had when they were regulated under Wrexham County Borough Council Permit WCBC/IPPC/03/KR(V3). Footnote 3 has been added to Table S4.1 to show that the emission limit for emission point A16 has been converted from 70 mg/Am^3 at 3.8% exit oxygen (O_2) content, to approximately 90 mg/Nm^3 at the standard 3% reference O_2 content for gaseous fuels. Footnote 3 also explains that the NO_x emission limit for A16 will be reviewed as part of a future variation application from the operator which is expected to be submitted to NRW in November 2017. This has been agreed following the result of a spot test by the operator which measured a NO_x emission concentration of 130 mg/m^3, which is higher than the ELV (and was obtained prior to this variation being issued). We cannot increase the NO_x ELV for emission point A16 above what was used in the modelling, unless the emission point is re-modelled. As the next substantial variation application in November will provide an opportunity for this to happen and the fact that K1 is the smallest NO_x contributor of all the combustion plant assessed (and therefore poses a low environmental risk), we consider that the current ELV of 90 mg/Nm^3 can be reassessed as part of the next anticipated variation application.

The NO_x emission limit for the gas turbine stacks (A19 – A20) has been set in line with the BAT emission benchmark in Defra Process Guidance Note 1/04(11) "Statutory Guidance for Gas Turbines 20 to 50MW Thermal Input"., which is 100 mg/MJ. However, as Gas Turbines 1 and 2 form part of the overall Part A(1) EPR combustion activity for the installation, the measurement unit of mg/MJ has not been carried over from Process Guidance Note PG1/04 because releases from Part A(1) 1.1 installations are reported in mg/Nm^3. We have therefore converted 100 mg/MJ to mg/Nm^3 in order to maintain consistency of reporting units in Table S4.1. Table S4.1 shows that when converted, in this particular case, 100mg/MJ is broadly equivalent to 390 mg/Nm^3.

The NOx emission limit for the gas engine stacks (A21 – A25) has been set in line with the BAT emission benchmark for spark ignition engines given in EPR 1.01. However, footnote 5 to Table S4.1 explains that the emission limit in the permit has been converted from 250mg/Nm^3 at the 5% reference O_2 concentration given in EPR1.01 to 280mg/Nm^3 at the standard 3% reference O_2 content used in the EPR Permit template for gaseous fuels.

Whilst we require periodic monitoring for carbon monoxide (CO) at the same frequency as NO_x for all combustion plant, we have not set any emission limits for CO. This is based on the fact that we consider that an exceedance of the air quality objective is unlikely and also that under normal operations, exhaust gases from gas engines 1 – 5 and the standby gas turbines are released via the MDF driers which are outside the scope of this variation. In addition, releases from the MDF driers are subject to the Best Available Techniques-Associated Emission Levels (BAT-AELs) in the Wood Panels BAT conclusions document and this document does not set a BAT-AEL for the control of CO. CO ELVs have also not been set for K1, K5 and K6 as individually these are below the threshold for regulatory control under EPR.

Monitoring

We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.

These monitoring requirements have been imposed in order to ensure NO_x emissions are within the ELVs specified in Table S4.1. All monitoring is periodic. We consider that continuous emissions monitoring is not required because under normal operations, emissions from the majority of combustion plant are used for direct drying within the board production process and are released from the two MDF driers, which are outside the scope of this particular variation. The frequency of monitoring for emission points A16 – A25 in Table S4.1 is based on the size of plant and hence associated level of environmental risk associated with its' operation. More specifically, K1, K5 and K6 fall below the 20MW regulatory threshold if they existed in isolation and are therefore considered to be lower risk plant. As such monitoring for these thermal oil heaters is required on an annual basis. This position is also consistent with the previously required monitoring frequency for K5 and K6 within Wrexham Country Borough Council's permit: WCBC/IPPC/03/KR(V3).

Gas Engines 1 – 5 and Gas Turbines 1 and 2 are all above the 20MW size threshold for regulatory control. As such, we consider that these plant items should be monitored on a quarterly basis, because their larger size means they contribute a greater proportion of NO_x releases to air than K1, K5 and K6. Gas engines 1 – 5 and Gas

turbines 1 and 2 therefore warrant more stringent monitoring to ensure that the emission concentrations used in the air quality modelling assessment (within the variation application) are met.

It is acknowledged that K5 and K6 and Gas Turbines 1 and 2 are standby plant. As such, we have added footnote 4 to Table S4.1 which requires that emission testing for each of these plant items is only required when an individual item is brought into use for periods which aggregate to >28 days. This is consistent with the approach used in the Wrexham permit WCBC/IPPC/03/KR(V3) for K5 and K6.

We are satisfied that the stack sampling locations associated existing gas engines 1 – 3 are compliant with EN15259 (Air Quality: Measurement of stationary source emissions. Requirements for measurement sections and sites for the measurement objective plan and report) and therefore meet the requirements of our monitoring technical guidance note M1 "Sampling Requirements for Stack Emission Monitoring". At the time of writing Gas Engines 4 and 5 are not operational. We have therefore imposed pre-operational condition PO1 to ensure that the stack sampling locations meet M1 requirements for these plant items. See **Pre-Operational Conditions** section above.

Permit condition 3.5.3 requires the operator to employ MCERTs certification or accreditation for monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme, unless otherwise agreed in writing.

Reporting

We have specified reporting in the permit to ensure that NO_x emissions are within ELVs and that the combustion plant is being operated in an efficient manner. The reporting frequency for Gas Engines 1 – 5 is every 3 months and reporting for K1, K5, K6, and GTs 1 – 2 is required every 12 months. The gas engines are required at a greater frequency because they are duty plant and therefore the biggest contributor to NO_x emissions out of the combustion plant subject to this variation. In contrast, K5, K6 and GTs 1 – 2 are standby plant and K1 only accounts for a very small proportion of NO_x releases from the site.

We have updated reporting form Air 1 to include emission points A16 – A25. We have also amended the reference conditions in Schedule 7 – Interpretation, to reflect the fact that monitoring data for gaseous emissions used in gas turbines should be reported at 15% reference O_2 concentration. At the request of the operator, we have also added the following text: "11% for catalytic oxidation and incineration processes", which is relevant to the reporting of monitoring data from the formaldehyde plant. We accept that this particular reference condition was in the permit until it's consolidation in April 2009, when the text was removed in error. By adding the text back in as part of this variation we have corrected the error.

OPRA

The OPRA score for the installation has changed from 371 to 416 as a result of this variation. The total rated thermal input of the combustion plant subject to this variation is approximately 176 MW, which equates to 3 x band C regulatory complexities in OPRA. These have been added to the "Listed Activities" worksheet. In addition, we have added a total mass NOx release of approximately 166 tonnes to the "Air" worksheet. This figure is for gas engines 1 – 3 and does not include any contribution from gas engines 4 and 5, which have not yet been installed on site. Finally, two spent convictions have been removed from the score within the "Operator Performance" part of the OPRA spreadsheet.

Administrative Changes

We have replaced references to the "Environment Agency" with "Natural Resources Wales" in Table S5.4 of the variation notice and updated references to the EPR regulations and regulator Schedule 7 - Interpretation.

ANNEX 1: Consultation Reponses

A) Advertising and Consultation on the Application

The Application has been advertised and consulted upon in accordance with Natural Resources Wales Public Participation Statement. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our decision is summarised in this Annex. Copies of all consultation responses have been placed on Natural Resources Wales public register.

1) Consultation Responses from Statutory and Non-Statutory Bodies

Response Received from Wrexham County Borough Council Environmental Protection Department on 14th February 2017 and via telephone conversation on 20th April 2017	
Brief summary of issues raised:	**Summary of action taken / how this has been covered**
No issues raised	N/A

Response Received from Canal and River Trust on 21st March 2017 and via telephone conversation on 19th April 2017	
Brief summary of issues raised:	**Summary of action taken / how this has been covered**
No issues raised.	N/A

No response was received from Public Health Wales (following an email reminder on 6th April 2017) or Betsi Cadwaladr University Health Board. We also did not receive a response from the Health and Safety Executive following a second consultation email on 24th April 2017.

2) Consultation Responses from Members of the Public

Response Received from: No responses received	
Brief summary of issues raised:	**Summary of action taken / how this has been covered**
N/A	N/A

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