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Chirk Particleboard Facility



Kronospan

Dust Management Plan

Document approval

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1 Introduction

Kronospan is the UK's leading manufacturer of high quality wood-based panels and associated products and has been operating in the UK since 1970. The main products manufactured by Kronospan at the Chirk site (the Facility) are particleboard, medium density fibreboard (MDF) and laminate flooring.

Following issue of the consolidated Environmental Permit (EP) (Ref: EPR/BW9999IG) by Natural Resources Wales (NRW) the Facility is required to produce a standalone dust management plan (DMP) as part of Improvement Condition (IC) 38. The IC requires that the DMP is in accordance with Environmental Agency (EA) Emissions Management Plan for Dust online guidance and addresses the delivery of all relevant Production Wood-based Panels BAT Conclusions.

The purpose of the DMP is to demonstrate that the control of dust and particulate emissions has been taken into account in the operation of the Facility.

This DMP is a working document and is updated and refined as required throughout the operation of the Facility. The DMP forms an integral part of the site Environmental Management System (EMS) and operational staff have easy access to the document via the site internal computer systems. Further to this the DMP sets out operational procedures to control and mitigate dust and particulate emissions from the Facility, made available to all operational staff working at the Facility.

For the purpose of this report, "dust" refers to the coarse fraction which can deposit and cause annoyance, whereas "particulates" refers to the finer particulates which are suspended in the air and can cause respiratory health impacts. These are generally PM₁₀ or smaller.

1.1 Report structure

This report has the following structure broadly in line with the template DMP guidance provided by the EA, as referred to in the IC by NRW:

- Details of the site location including site address are presented in section 2.
- Review of sources, pathways and receptors, including meteorological data are presented in section 3.
- Measures for dust and particulate management at the Facility are outlined in section 4.
- Proposals for monitoring at the site are described in section 5.
- Further details on the reporting and complaints procedures to be implemented at the Facility are provided in section 6.

2 Site location and description

2.1 The site

The Facility extends to around 40 hectares and comprises a number of large industrial process buildings housing the main manufacturing processes, storage areas for raw materials, warehouse buildings for manufactured products, together with other facilities associated with a discrete manufacturing business.

The western perimeter of the Kronospan site is formed by the Shrewsbury to Chester railway. Improved railway siding facilities have been constructed within the Kronospan site to enable an increased volume of timber to be imported by rail and the new rail sidings are now operational. The Shropshire Union Canal is located to the west of the railway line. Water is abstracted from the canal for use in the manufacturing process. The eastern perimeter of the site is formed by Holyhead Road (B5070). An earth bund, planted with trees, has been developed along the eastern perimeter of the site in order to reduce the visibility, noise and dust impacts of the site operations from neighbouring properties on Holyhead Road

A sewerage pumping station (not owned by Kronospan), training centre and one property (owned by Kronospan), are located to the immediate north of the site. To the immediate south of the site is the Mondelez factory and the Chirk recreational ground.

The main residential area of Chirk is located to the east of the site with residential properties lining the majority of the eastern side of Holyhead Road. Chirk town centre is located approximately 500m to the south east of the site.

The wider area beyond the urban settlement of Chirk is dominated by agricultural fields and woodland. Chirk Castle and its grounds are located to the west of the site, beyond the Llangollen Canal.

The Facility location in the context of the wider area is displayed in Figure 1 of Appendix A.

2.2 Site address

The site address is as follows:

Kronospan Ltd,
Maesgwyn Farm, Chirk,
Wrexham,
LL14 5NT,
United Kingdom

2.3 Summary of operations

The panel board manufacturing process incorporates a detailed multi-step set of operations including creation of sawdust and wood chips, drying processes, pressing, resin manufacture, resin impregnation, packing and storage. The Facility is operated in accordance with the extant varied and consolidated EP (Ref: EPR/BW9999IG), which was granted by NRW on 4th October 2022. A full summary of operations is detailed within the EP, and further details are provided within section 3.2 (potential emissions sources) and section 4.2 (control of fugitive dust and other emissions).

3 Review of sources, pathways and receptors

3.1 Dust

Emissions of dust to air can give rise to annoyance due to soiling of surfaces by dust. Very high levels of soiling can also damage plants and affect the diversity of ecosystems. Long term exposure to elevated concentrations of particulates is associated with a range of health effects.

3.2 Potential sources

The management of the Facility is split into departments. Table 1 below identifies the potential sources of dust and particulates within each department. This includes potential emissions from raw materials, the production process, maintenance, abnormal activities and waste management for each department.

Table 1: Potential sources

Department	Potential dust sources
Logyard	• Timber transportation to site and empty vehicles leaving site • Offloading of wood residue deliveries and movement of material within the Logyard • External storage of wood residues • Chipping of oversize material • Cleaning of chipper roof • Movement of heavy vehicles on Logyard roadways. • Storage of wood material - potential for dust or smoke from fires.
Paper Impregnation	• VITS Dryers – failure of wet scrubbers
Particleboard	• Transfer and processing of recycled timber • Discharge of material into skips / dumps • Storage and transfer of sawdust, fines, and recycled timber into silos • Storage and transfer of ash into storage compound • Activation of explosion relief panels • Failure of dust extraction filter boxes / blockages within / replacement of filter socks • Unblocking or failure of rotary valves, conveyors, chutes, screws, or blowlines • Dryer 4 – failure of WESP 21 • Particleboard press – failure of the wet scrubber abatement • Roof / high level cleaning • Dust handling systems - potential for dust or smoke from fires.
Biomass Boilers	• Release of lime during transfer to silo. • Release of ash into skips. • Release of fly ash.

Department	Potential dust sources
	• Failure or unblocking of rotary valves, conveyors, chutes, screws, or blowlines • Storage of APC residues in flexible IBC bags
Finishing Lines / Tongue & Groove (T&G)	• Sanding and cutting of boards. • Activation of explosion relief panels. • Failure of dust extraction filter boxes / blockages within / replacement of filter socks • Unblocking or failure of rotary valves, chutes, screws, or blowlines • Roof cleaning • Storage of boards – potential for dust or smoke from fires. • Dust handling systems - potential for dust or smoke from fires.
Formalin	• <i>No specific dust sources identified</i>
Medium Density Fibreboard (MDF)	• Storage and transfer of wood chips in silos • Transfer and processing of wood fibre • Discharge of material into dumps • Dryers – failure of MDF 1 / MDF 2 cyclones • Activation of explosion relief panels • Failure of dust extraction filter boxes / blockages within / replacement of filter socks • Unblocking or failure of rotary valves, conveyors, chutes, screws, or blowlines • MDF 1 / MDF 2 presses – failure of the wet scrubber abatement • Roof / high level cleaning • Dust handling systems - potential for dust or smoke from fires.
Melamine Facing (MF)	• Cutting of boards • Activation of explosion relief panels • Failure of dust extraction filter boxes / blockages within / replacement of filter socks • Unblocking or failure of rotary valves, conveyors, chutes, screws, or blowlines • Roof cleaning • Storage of boards leading to fire • Fire within dust handling systems
Resin	• Urea offload during the movement and storage of material • Melamine handling and storage • Process dust release
Sawmill	• Movement of sawmill wood chips and wood dust • Processing of round wood
Kronoplus	• Cutting of boards

Department	Potential dust sources
	• Activation of explosion relief panels • Failure of dust extraction filter boxes / blockages within / replacement of filter socks • Discharge of material into trailers • Unblocking or failure of rotary valves, chutes, screws or blowlines • Fire within dust handling systems

3.3 Pathways

Dust released from the sources or fugitively from the Facility is released to air and has the potential to be conveyed to nearby receptors via transfer through the air. The extent to which dust is detectable or of nuisance at sensitive receptors is dependent upon the pathway. This is influenced by meteorological conditions, for example wind speed, wind direction and rainfall as well as the location and height of the source.

3.3.1 Meteorological conditions

The nearest World Meteorological Organisation (WMO) meteorological station representative of conditions at the Chirk site is at RAF Shawbury, located approximately 30 km south east of the Facility. Wind roses for the years 2018 to 2022 (See Figure 2 of Appendix A) show that the predominant wind direction is from the south west, so receptors to the north east of the Facility are at greater risk of nuisance from dust emissions.

Rainfall acts as a natural dust suppressant. The Met Office climate averages for 1991-2020 from Shawbury¹ have been reviewed to show that there is an average of 131 'wet' days out of 365 days in the year (it has been assumed that a 'wet' day is one where there has been >1mm of rainfall). This indicates that there is an average of 234 days in a year in which supplemental dust control measures may need to be applied in the absence of sufficient rainfall to control fugitive dust emissions.

In addition the air quality monitoring sites in Chirk (Chirk Green and Chirk Hospital) operated by Wrexham County Borough Council (WCBC) includes a monitors for wind speed and direction, temperature and humidity. This is reported on the AirQWebsite (<https://www.airqweb.co.uk>) and is regularly accessed to provide immediate data if required.

Site management is responsible for monitoring weather forecasts to determine if long dry spells are forecast – this enables the proactive application of dust control measures (for example, using a water bowser to dampen down site roadways).

3.4 Receptors

A human sensitive receptor is any location where a person may experience the annoyance effects of airborne dust or dust soiling or may be exposed to PM₁₀ over a period of time relevant to the air quality objectives. Sensitive human receptors can include:

- Residential dwellings;

¹ Source: <https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-averages/gcqh76ug7> {accessed 09/03/2023}

- Schools;
- Hospitals;
- Care homes;
- Childcare facilities;
- Hotels;
- Gardens (where relevant public exposure is likely i.e. excluding extremities of gardens or front gardens);
- Sensitive commercial premises including; vehicle showrooms, food manufactures; and electronics manufactures.

In addition to the above, amenity impacts of dust and other emissions must be considered. These impacts could arise on neighbouring 'clean' industry and manufacturing processes, such as paint shops, offices, food manufacturing and food outlets, agricultural land, areas of car parking, etc. Cumulative impacts should also be considered in relation to neighbouring generators, busy roads, power stations, etc. Furthermore, environmental or ecological receptors sensitive to dust and particulates must be considered – such as environmental habitats sites or protected species sites.

According to the EA's DMP template and guidance, receptors up to 1 km from the Facility should be included, as these are considered to be the most likely to be impacted by dust and particulates (such as those resulting from generators, mobile plant and road vehicles) from the site. For the Facility, there are several receptors located within the village of Chirk to the east. A selection of these has been chosen as to be representative of receptors within each wind direction. The receptors used within this DMP are consistent with the receptors used within air quality assessments associated with the EP. It is recognised that they are not an exhaustive list and that consideration of impacts across the area should also be considered.

It is also important to consider ecological receptors. Ecological receptors could include internationally, nationally or locally designated sites. There are 2 ecologically designated sites within 1 km of the installation boundary.

The sensitive receptors are tabulated in Table 2 and shown in Figure 3 of Appendix A. As shown in Figure 3, the closest sensitive receptors to the Facility are to the east along the B5070. There is some potential for cumulative dust emissions from the Facility with any dust emissions produced from traffic along the B5070 and other residential roads.

Table 2: Selected representative receptor locations

Ref	Name	Type	Distance from Installation Boundary (m)	Direction from Facility
R1	Afron Bradley Farm	Residential/farm	550	NW
R2	Lodge Farm	Residential/farm	670	NE
R3	Lodgevale Park	Residential/farm	360	NE
R4	Rhosywaun	Residential	85	E
R5	Chirk Community Hospital	Hospital	460	NE
R6	Chirk Infant School	School	160	E
R7	Highfield Farm	Residential/farm	760	E
R8	Maes-y-Waun	Residential	53	E

Ref	Name	Type	Distance from Installation Boundary (m)	Direction from Facility
R9	Colliery Road	Residential	290	SE
R10	St Mary's Church	Community	1,300	SE
R11	Station Avenue	Residential	390	S
R12	Llwyn-y-cil	Residential	430	SW
R13	New Hall	Residential	890	W
R14	Chirk Court	Residential (care home)	30	E
E1	River Dee and Bala Lake SAC, SSSI	Ecological (SAC and SSSI)	1,000	S
E2	Chirk Castle SSSI	Ecological (SSSI)	500	W
E3	Ceod-Y-Canal Wood	Ecological (LWS)	<50	W

4 Dust and particulate management

4.1 Responsibility for implementation of this plan

This DMP is a working document. Initially, it is intended to demonstrate that the control of dust and particulate emissions has been considered as part of the day to day operation of the Facility.

Kronospan has responsibility for the implementation, reviewing and updating of the DMP. Reviews are undertaken on an annual basis, and whenever new equipment or mitigation measures are implemented at the Facility.

Kronospan aims to ensure that any persons performing tasks for it, or on its behalf, which have the potential to cause significant environmental impact, are competent on the basis of appropriate education and training or experience. Key management roles at the Facility include the Senior Management Team, the Environment, Health & Safety (EHS) Department and the Departmental Managers. The EHS Department Management are responsible for ensuring that procedures are in place for dust, noise and odour management on site and responsible for responding to and investigating off-site environmental complaints. The Departmental Managers are responsible for ensuring that dust, noise and odour control measures are in place in their department, and for investigating any justified environmental complaints that have been caused by dust, noise or odours originating in their department. The managers are responsible for ensuring that all employees are fully trained on dust and particulate control, with all employees at the Facility responsible for following site procedures.

The Facility is split into the following departments, for which the Departmental Manager is responsible.

1. Logyard
2. Paper Impregnation
3. Particleboard
4. Biomass Boilers
5. Finishing Lines
6. Formalin
7. MDF
8. Melamine Facing (MF)
9. Resin
10. Sawmill
11. Kronoplus

Systems to assess competence and provide training for relevant staff are provided. Skills, competencies and training requirements for staff (such as understanding and implementation of the DMP) are documented and recorded as part of the internal management systems at the Facility. The EMS contains an archiving procedure to ensure all training (including refresher training) is recorded and all associated records are retained.

4.2 Control of fugitive dust and other emissions

The sources of emissions have been listed in section 3.2. Control of the impact of dust involves breaking the source-pathway-receptor links. Therefore, for each of these sources, a breakdown of the source-pathway-receptor model is presented within the Tables within section 4.2.2 with the final column in the table setting out details of where relationship can be interrupted. Table 13 provides general measures of mitigation/control measures that are in place at the Facility. Should control measures fail and pose a significant risk of dust and particulate emissions, operations at the Facility will be ceased and the NRW will be informed. These tables are reviewed by management as part of periodic reviews of the DMP. This ensures that sources, pathways and receptors of dust and particulates are regularly examined, so that there are no 'gaps' in abating the sources of dust and particulates at the Facility, and as part of Kronospan's aim for continual improvement of management systems.

4.2.1 Permit requirements

The Facility has an EP to operate. Section 3.2 of the EP includes conditions regarding the emissions of substances not controlled by emission limits, this condition states:

"Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions."

"Pollution", other than in relation to a water discharge activity or groundwater activity, is defined in the Environmental Permitting Regulations as:

"Any emission as a result of human activity which may-

- 1. Be harmful to human health or the quality of the environment;*
- 2. Cause offence to a human sense;*
- 3. Result in damage to material or property; or*
- 4. Impair or interfere with the amenities or other legitimate uses of the environment."*

Therefore, the EP controls emissions from all activities on-site. The measures should not only prevent harm to human health but also damage to property which includes dust nuisance. As such, to comply with the requirements of the EP, there are a number of dust and particulate emissions control measures in place at the Facility, including both physical measures and management techniques. These are detailed further in Table 13.

4.2.2 Source Pathway Receptor routes

Table 3: Source-Pathway-Receptor routes - Logyard

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Timber transportation to site and empty vehicles from site	Atmospheric dispersion – low level.	All receptors and receptors along roads (B5070).	Visual soiling, airborne particulates, resident complaints	Rail deliveries of roundwood utilised to reduce road traffic. Designated sweep-off area for exiting vehicles which are inspected on exit from the site and returned to site if not sufficiently cleaned. Water bowser used if necessary. Weather forecast used to inform water bowser operator by 08:00 on weekdays. Minimal traffic at weekends.
Offloading of wood residue deliveries and movement of material within the Logyard (e.g. stock rotation).	Atmospheric dispersion – low level.	All receptors. Receptors to the north east of the Facility in Chirk at higher risk due to predominant wind direction and proximity to the Logyard.	Visual soiling, airborne particulates, resident complaints.	Reception facility provides windbreak from prevailing wind and mist air systems are used to contain material within. Residues not discharged at the reception facility are offloaded within three sided bays to the far west of the site. Loading shovel drop height is minimised. External stockpile heights are monitored and maintained.
Chipping of oversize material.	Atmospheric dispersion – low level.	All receptors. Receptors to the north east of the Facility in Chirk at higher risk due to predominant wind direction.	Visual soiling, airborne particulates, resident complaints.	Water sprays are used to control dust from shredding processes.

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Cleaning chipper roof	Atmospheric dispersion – roof level (8m).	All receptors. Receptors to the north east of the Facility in Chirk at higher risk due to predominant wind direction.	Visual soiling, airborne particulates, resident complaints.	Debris is removed using water to mitigate potential for dust generation and off site release and where possible, vacuums are utilised.
Movement of heavy vehicles on Logyard roadways.	Atmospheric dispersion – low level.	Limited impact to receptors due to level of operation and layout of site – limited potential for windblown.	Visual soiling, airborne particulates, resident complaints.	Logyard roadways scraped clean on regular basis. Road sweeper utilised during the week. Water bowser used if necessary. Weather forecast used to inform water bowser operator by 08:00 on weekdays. Minimal traffic at weekends.

Table 4: Source-Pathway-Receptor routes –Paper Impregnation

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
VITS dryers – failure of wet scrubber.	Atmospheric dispersion – roof level (15m).	Limited impact to receptors as central area – limited potential for windblown.	Visual soiling, airborne particulates.	Preventative maintenance schedules in place. LEV testing on a regular basis to indicate if there are any blockages. Fault alarms audible in the plant area. Low water level alarms on the scrubber tanks.

Table 5: Source-Pathway-Receptor routes –Particleboard

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Transfer and processing of recycled timber.	Atmospheric dispersion – mixed levels (low and up to 26m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Dry, dusty material is transferred within sealed systems. Parts of the material preparation is contained within plant buildings.
Discharge of material into skips / dumps.	Atmospheric dispersion – low level.	Limited impact to receptors due to level of operation and layout of site– limited potential for windblown.	Visual soiling, airborne particulates.	Drop heights are minimised and strip curtains utilised as necessary. Dryer 4 ash discharge via pendulum flaps to control amount of material released.
Storage and transfer of sawdust, fines, and recycled timber in silos.	Atmospheric dispersion – high level (26m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Level indicators and 3D measuring equipment on storage silos and indicators to detect blockages. High level trip in place to stop feeding of material.
Storage and transfer of ash into storage compound.	Atmospheric dispersion – low level.	Limited impact to receptors due to level of operation and layout of site – limited potential for windblown.	Visual soiling, airborne particulates.	Drop heights minimised. Covered area for storage. Ash is wetted prior to discharge into skips and transfer to storage area.
Activation of explosion relief panels.	Atmospheric dispersion – mixed levels.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Activation switches present on explosion relief panels. Process stopped on detection to prevent further material entering the system.

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Failure of dust extraction filter boxes / blockages within / replacement of filter socks.	Atmospheric dispersion – mixed levels. Filters: B07, B08, B09, B10, B11, B12, B20, B21, B23, B24, B25, and B26.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Normal access is on the clean side of the filter for inspection / maintenance. Minimise dust release from used socks by placing them in bags once removed. Maintenance regime in place to reduce frequency of sock changes and failures with filter boxes. Pulse air failure trip that stops feed into filter box and requires Operator intervention. Blockages can initially be attempted to be cleared via controlled emptying, only if this fails is opening of physical hatches required.
Unblocking or failure of rotary valves, conveyors, chutes, screws, or blowlines.	Atmospheric dispersion – mixed levels.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Preventative maintenance in place for rotary valves, conveyors, screws and blowlines. Blockage indication installed within chutes. Pressure indication installed on blowlines. Process stopped once leak identified to make repairs. Bends are undergoing a programme of replacement with ceramic lining.
Dryer 4 – failure of WESP 21 (A32).	Atmospheric dispersion – high level (52m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Preventative maintenance schedules implemented. Cyclone abatement for particulate remains in the event of failure of the WESP.

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
PB press – failure of the wet scrubber abatement.	Atmospheric dispersion – high level (62m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Extraction ducting cleaned monthly. Faults on the abatement system alarm within the control room. LEV inspections carried out on regular basis that would detect blockages. Quarterly emissions monitoring carried out.
Roof / high level cleaning.	Atmospheric dispersion – mixed levels.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Debris is removed using water to mitigate potential for dust generation and off site release and where possible, vacuums are utilised. Cleaning schedules are implemented.

Table 6: Source-Pathway-Receptor routes –Biomass boilers

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Release of lime dust during transfer to silo.	Atmospheric dispersion – high level (10m).	Limited impact to receptors as central area – however material very buoyant and will disperse easily.	Visual soiling, airborne particulates, resident complaints.	Level probe in silo, high level alarm when at 90%. Driver in attendance during offload. Filter unit in operation for filling operation.
Release of ash into skips.	Atmospheric dispersion – low level.	Limited impact to receptors due to level of operation and layout of site– limited potential for windblown.	Visual soiling, airborne particulates.	Blowline system to deliver dry ash to wet ash conveyor to absorb moisture before discharging in to skip. Drop height into the skip is minimised.
Release of fly ash (A26 / A27).	Atmospheric dispersion – high level (30m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	K7 and K8 heat / emissions are used within the MDF dryers under normal operation. Regular maintenance and inspections of the K7 filter, K8 filter, and K8 Cyclones. Emissions are tested quarterly as part of the permit. K8 has continuous monitoring after the filter box which would highlight any issues. In an emergency, boilers would be shut down in a controlled manner. Any leaks or spillages are recorded as an environmental incidents.
Failure or unblocking of rotary valves, conveyors, chutes, screws, or blowlines	Atmospheric dispersion – mixed levels.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Preventative maintenance in place for rotary valves, conveyors, screws and blowlines. Blockage indication installed within chutes. Pressure indication installed on blowlines. Process stopped once leak identified to make repairs. Bends are undergoing a

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
				programme of replacement with ceramic lining.
Storage and handling of APC residues in flexible IBC bags.	Atmospheric dispersion – low level.	Limited impact to receptors as central area – however material very buoyant and will disperse easily.	Visual soiling, airborne particulates, resident complaints.	Bags clipped onto discharge pipework to ensure system is sealed. Level indication on the bag filling station, visible in the control room. Regular inspections of the area made by boiler operators who would detect any leakage.

Table 7: Source-Pathway-Receptor routes –Finishing lines / T&G

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Sanding and cutting of boards.	Atmospheric dispersion – sanding / cutting operations take place within plant buildings.	Limited impact to receptors due to location of operations.	Visual soiling, airborne particulates.	All saws / sanders are fitted with extraction which are subjected to LEV extraction testing on a regular basis. Pressure trending is monitored by skilled operators to detect blockages.
Activation of explosion relief panels.	Atmospheric dispersion – roof level (16m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Activation switches present on explosion relief panels. Process stopped on detection to prevent further material entering the system.
Failure of dust extraction filter boxes / blockages within / replacement of filter socks.	Atmospheric dispersion – roof level (16m). Filters: B01, B02, B13, B14, B15.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Normal access is on the clean side of the filter for inspection / maintenance. Minimise dust release from used socks by placing them in bags once removed. Maintenance regime in place to reduce frequency of sock changes and failures with filter boxes. Pulse air failure trip that stops feed into filter box and requires Operator intervention. Blockages can initially be attempted to be cleared via controlled emptying, only if this fails is opening of physical hatches required.
Roof cleaning.	Atmospheric dispersion – roof level (11m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Debris is removed using water to mitigate potential for dust generation and off site release and where possible, vacuums are utilised.

Table 8: Source-Pathway-Receptor routes –MDF

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Storage and transfer of wood chips in silos.	Atmospheric dispersion – mixed levels (33m at highest).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Level indication on silos with high level trip Enclosed conveying systems Brushes and scrapers on return belts to de-dust wood chip material.
Transfer and processing of wood fibres.	Atmospheric dispersion – mixed levels.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Sealed system preventative maintenance cleaned monthly to prevent build up
Discharge of material into dumps.	Atmospheric dispersion – low level.	Limited impact to receptors due to level of operation and layout of site– limited potential for windblown.	Visual soiling, airborne particulates.	Dumps are enclosed where possible. Drop heights are minimised.
Dryers – failure of MDF 1 / MDF 2 cyclones (A29 and A30).	Atmospheric dispersion – high level (58m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	All drier emissions pass through the cyclones which cause the heavier particles to drop out whilst venting the clean gas to atmosphere. Emissions from the Cyclones are monitored quarterly subject to permit Preventative maintenance on rotary valves, seals etc. to ensure good operations cyclones
Activation of explosion relief panels.	Atmospheric dispersion – mixed levels.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Activation switches present on explosion relief panels. Process stopped on detection to prevent further material entering the system.

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Failure of dust extraction filter boxes / blockages within / replacement of filter socks.	Atmospheric dispersion – roof level (14m). Filters: B03, B04, B05, and B06.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Normal access is on the clean side of the filter for inspection / maintenance. Minimise dust release from used socks by placing them in bags once removed. Maintenance regime in place to reduce frequency of sock changes and failures with filter boxes. Pulse air failure trip that requires Operator intervention. Blockages can initially be attempted to be cleared via controlled emptying, only if this fails is opening of physical hatches required.
Unblocking or failure of rotary valves, conveyors, chutes, screws, or blowlines.	Atmospheric dispersion – mixed levels.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Preventative maintenance in place for rotary valves, conveyors, screws and blowlines. Blockage indication installed within chutes. Pressure indication installed on blowlines. Process stopped once leak identified to make repairs.
MDF 1 / MDF 2 presses – failure of the wet scrubber abatement.	Atmospheric dispersion – high level (62m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Extraction ducting cleaned monthly. Faults on the abatement system alarm within the control room. LEV inspections carried out on regular basis that would detect blockages. Quarterly emissions monitoring carried out.
Roof / high level cleaning.	Atmospheric dispersion – high level (58m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Debris is removed using water to mitigate potential for dust generation and off site

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
				release and where possible, vacuums are utilised. Material is bagged to prevent escape. Cleaning schedules are implemented.

Table 9: Source-Pathway-Receptor routes –Melamine Facing

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Sanding and cutting of boards.	Atmospheric dispersion – sanding / cutting operations take place within plant buildings.	Limited impact to receptors due to location of operations.	Visual soiling, airborne particulates.	All saws / sanders are fitted with extraction which are subjected to LEV extraction testing on a regular basis. Pressure trending is monitored by skilled operators to detect blockages.
Activation of explosion relief panels.	Atmospheric dispersion – roof level (16m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Activation switches present on explosion relief panels. Process stopped on detection to prevent further material entering the system.
Failure of dust extraction filter boxes / blockages within / replacement of filter socks.	Atmospheric dispersion – roof level (20m). Filters: B16, B17, B18, B19.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Normal access is on the clean side of the filter for inspection / maintenance. Minimise dust release from used socks by placing them in bags once removed. Maintenance regime in place to reduce frequency of sock changes and failures with filter boxes. Pulse air failure trip that stops feed into filter box and requires Operator intervention. Blockages can initially be attempted to be cleared via controlled emptying, only if this fails is opening of physical hatches required.
Roof cleaning.	Atmospheric dispersion – roof level (11m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Debris is removed using water to mitigate potential for dust generation and off site release and where possible, vacuums are utilised.

Table 10: Source-Pathway-Receptor routes –Resin

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Urea offload during the movement and storage of material	Atmospheric dispersion – low level.	All receptors	Visual soiling, airborne particulates, resident complaints	Training and procedure. Housekeeping procedures and dust extraction on tipping pit and silo.
Melamine offloading and storage	Atmospheric dispersion – storage area within plant building.	All receptors	Visual soiling, airborne particulates, resident complaints	Stored in warehouse out of wind.
Process dust release	Atmospheric dispersion – roof level (15m).	All receptors	Visual soiling, airborne particulates, resident complaints	All fumes from reactor vented via the wet scrubber system. Faults on the scrubber system alarm in the control room.

Table 11: Source-Pathway-Receptor routes –Sawmill

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Movement of sawmill wood chips and wood dust.	Atmospheric dispersion	All receptors	Visual soiling, airborne particulates, resident complaints	Low risk of release to air due to high moisture and density. Conveyor heights restrict stack height to 6m. The storage area has a north and east wall to prevent wind blow. Gravity conveyors.
Process of round wood	Atmospheric dispersion	All receptors	Visual soiling, airborne particulates, resident complaints	All doors kept closed.

Table 12: Source-Pathway-Receptor routes –Kronoplus

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Cutting of boards.	Atmospheric dispersion - cutting operations take place within plant buildings.	Limited impact to receptors as contained within buildings – limited potential for windblown.	Visual soiling, airborne particulates, resident complaints	All saws / sanders are fitted with extraction which are subjected to LEV extraction testing on a regular basis. New clean air monitors installed in exhaust system. When dust is detected, showing that the filter socks have failed, the entire extraction system goes into automatic shutdown to mitigate any releases.
Activation of explosion relief panels.	Atmospheric dispersion – roof level (13m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Activation switches present on explosion relief panels. Process stopped on detection to prevent further material entering the system.
Failure of dust extraction filter boxes / blockages within / replacement of filter socks.	Atmospheric dispersion – roof level (13m). Filters: B27, B28, B29, B30, and B31.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Normal access is on the clean side of the filter for inspection / maintenance. Minimise dust release from used socks by placing them in bags once removed. Maintenance regime in place to reduce frequency of sock changes and failures with filter boxes. Pulse air failure trip that requires Operator intervention. Blockages can initially be attempted to be cleared via controlled emptying, only if this fails is opening of physical hatches required. New clean air monitors installed in exhaust system. When dust is detected, showing that the filter socks have failed, the entire

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
				extraction system goes into automatic shutdown to mitigate any releases.
Discharge of material into trailers.	Atmospheric dispersion – roof level (13m)	All receptors	Visual soiling, airborne particulates, resident complaints	Extraction system switched off when lines are being changed from normal line to trailers.
Unblocking or failure of rotary valves,, chutes, screws, or blowlines.	Atmospheric dispersion – roof level (10m).	All receptors.	Visual soiling, airborne particulates, resident complaints.	Preventative maintenance in place for rotary valves, conveyors, screws and blowlines. Blockage indication installed within chutes. Pressure indication installed on blowlines. Process stopped once leak identified to make repairs.
Dust handling systems - potential for dust or smoke from fires.	Atmospheric dispersion – mixed levels.	All receptors.	Visual soiling, airborne particulates, resident complaints.	Preventative maintenance in place to prevent fires due to friction (e.g. failed bearings / belt tracking) or degradation of equipment. Regular housekeeping inspections. Automatic spark detection and extinguishing systems in place within dust handling systems. Manual fire suppression systems also installed.

4.2.3 General measures

Table 13: General measures that used on site to control dust/particulates and other emissions

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Preventative measures			
Various fire procedures – no smoking on site, fire audits, fire team, heat systems and automatic sprinkler units, prevention of fires through stock rotation and log yard procedures, regular housekeeping, automatic spark detection and extinguishing systems in place within dust handling systems, all operators are aware of the procedures for raising the fire alarm / internal fire team to contain the fire.	Systems in place to prevent fires and to control fires should they occur. Prevention and control of any dust and particulates caused by fire.	Implemented at the site irrespective of dust release.	N/A – this is a continuous measure.
Enclosure within a building where possible.	This creates a solid barrier between the source of dust/particulates and receptors. This is considered to be the most effective method of control (i.e. control at source).	Implemented where possible for processes and storage, such as the RCF Tower.	N/A – this is a continuous measure.
Implementation of a speed limit for vehicles at the site, a ‘no idling’ policy, and minimisation of vehicle movements at the site.	Reducing vehicle movements and idling should reduce emissions from vehicles. Enforcement of a speed limit may reduce re-suspension of particulates by vehicle wheels.	This is implemented at the site as part of good practice. The speed limits are clearly established and signposted around the site. The no idling policy is identified in the site management system. The site layout (including internal roads) has been designed to minimise	N/A – this is a continuous measure.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
		unnecessary vehicle movements.	
Minimising drop heights	Minimising the height at which ash is handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds.	This is implemented at the site as part of good practice. For example, at the exit of conveyors from process equipment, and from loading shovels.	N/A – this is a continuous measure.
Use of enclosed conveyors	This prevents the escape of dust during transport within the site.	Sawdust and boiler fuel is transported via tubular enclosed conveyors. Blowlines are also utilised for fine particulate dusts. Other material (larger fraction sizes such as chips) are transported in covered conveyors that are not fully enclosed.	N/A – this is a continuous measure.
Good housekeeping	A consistent, regular housekeeping regime supported by management ensures the site is regularly checked and issues remedied to prevent and remove dust and particulate build up.	It can be confirmed that good housekeeping is employed at the site, with a regime set out within the documented management systems. Regular washdown of process and storage areas are undertaken, along with visual inspections by staff.	Housekeeping is undertaken in accordance with a documented regime, with additional washdown undertaken following any visual inspections which have identified a build up of dust/litter.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Sheeting/covering of vehicles	This prevents the escape of debris, dust and particulates from vehicles as they travel to/from the site.	This is a requirement for vehicles entering/exiting the site and is identified in the site management systems. Visual inspections of vehicles before they leave the site ensure that sheeting is sufficiently fitted, reducing the potential for fugitive emissions during travel.	This is a continuous requirement for vehicles entering/exiting the site. This may not apply to vehicles moving around the site.
Designated sweep off area for vehicles. Weighbridge operators will turn vehicles away from exiting site unless they are clean. On site vehicles routinely cleaned at the Garage with a jet wash and interceptor.	This removes some of the dust/dirt/particulates from vehicles.	Continuous implementation and routine cleans. Site roads are damped down during extended periods of dry weather.	Used on all heavy vehicles exiting the site.
Surfacing the site with easy-to-clean, impermeable concrete surfaces	This should reduce the amount of dust and particulate material generated at ground level by vehicles and site activities and ensure washdown and housekeeping activities are effective.	It can be confirmed that the site is surfaced in impermeable concrete hardstanding. Maintenance and cleaning procedures / regimes are defined in the site management systems.	N/A – this is a continuous measure.
Minimisation of timber storage heights and volumes on site	Minimising the height at which timber is stored and handled should reduce the distance over which debris, dust and particulates could be blown and dispersed by winds.	Maximum heights for stockpiles are clearly established and not exceeded. Walls/shields around stockpiles reduce	N/A – this is a continuous measure.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
		the potential for wind-whipping and atmospheric dispersion.	
Installation of walls/bank surrounding the site	Walls can disrupt wind flow across the site and reduce the generation of dust.	The Logyard has concrete barrier walls on the external western boundary and along the northern edge. Site buildings to the south and east provide protection. The main site has a high eastern bank with tree planting to provide visual and wind shield.	N/A – this is a continuous measure.
Use of high integrity equipment	Selection of high integrity, modern and advanced equipment can reduce the generation of particulates and dust.	High integrity equipment is installed at the Facility, with additional mitigation such as dust suppression sprays installed on processing equipment where technically/economically feasible. Regulatory controls and best-practice measures are implemented for vehicles/mobile plant to confirm they comply with	High integrity equipment has been selected by the technology provider when undertaking the detailed design of the Facility. Should it be identified during the lifetime of the Facility that equipment is no longer 'fit-for-purpose' or is otherwise resulting in significant fugitive emissions, it will be repaired or replaced as appropriate.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
		relevant emissions standards.	
Regular visual inspections	This allows for timely mitigation / remediation once build-ups of dust and litter have been identified.	Regular visual inspections are undertaken as part of documented procedures at the site. This extends to periodic inspections of site access roads and haul routes within the vicinity of the site for trackout/spillage of materials from vehicles. Inspections and subsequent actions are recorded in a log book, with mitigation measures implemented if necessary. Visual checks are also undertaken on HGVs leaving the site at the weighbridge and vehicles only allowed to leave if they are clean.	Inspections are undertaken on a periodic basis in accordance with documented procedures.
Minimising the amount of movement of ash once outside	Minimising the amount of ash movement can reduce the quantities of dust and particulates generated at the site.	Ash is directly transported from storage to transport off site.	N/A – this is a continuous measure.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Regular preventative maintenance	Regular preventative maintenance can help to maintain the integrity of plant and equipment, and as such reduce the generation of dust and particulates.	Regular preventative maintenance is undertaken for all plant and equipment (including conveyors, processing equipment, mobile plant).	Preventative maintenance is undertaken on a periodic basis in accordance with documented procedures.
Remedial measures			
On-site sweeping	Effective in managing larger debris e.g. on roads, but may re-suspend smaller particles (however this can be mitigated against using spray bars/filters etc on the sweepers).	Road sweepers are employed for site and village clean weekly and smaller sweepers are in use on site by departmental managers.	The sweepers are implemented when it has been identified (from visual inspections) that there is a build up of dust/debris/litter.
Water suppression	Damping down of site areas (using hoses) can reduce dust and particulate re-suspension and may assist in the cleaning of the site.	During periods of dry weather, site roads are damped down to reduce the potential for fugitive dust emissions.	Implemented during extended periods of dry weather.
Spill kits/cleaning equipment	The provision of easily accessible spill kits and cleaning equipment can ensure that spills are readily mitigated, hence reducing the quantity of time available for dust/particulates to be further dispersed off-site.	Equipment is readily available on site to clean any spillages (including wet cleaning methods) as soon as reasonably practicable after the event. The EMS includes procedures to follow in the event of a significant spillage.	Spill kits/cleaning equipment are available at the site at all times. The equipment is also used in the event of a spill.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Cleaning of roofs	Water bowser used on-site during dry conditions and roofs regularly inspected and cleaned to remove dust and debris.	Frequent roof cleaning to avoid build up of dust and debris.	Implemented on visual inspection or at higher frequencies to avoid build up of dust and debris.

4.3 Other considerations

4.3.1 Water use

Kronospan ensures an adequate water supply/use of process water is provided at the Facility for effective dust/particulate matter mitigation, with recycled water used where possible. There are two mobile water cannons on site at all times which can be put into service as needed.

5 Monitoring

As explained within section 5.6, due to the low baseline concentrations of particulates, additional emissions monitoring equipment is not proposed at the Facility. Furthermore, there are no AQMAS for particulates within 5 km of the Facility.

There are a number of alternative monitoring methods which have been implemented to demonstrate compliance with the EP conditions. These include the following:

- Documented management systems;
- Visual dust monitoring;
- Weather monitoring;
- QA/QC and record keeping; and
- Reporting of data.

5.1 ISO accredited EMS

An EMS is in operation which includes a range of monitoring and recording procedures. This DMP forms part of the EMS and is reviewed and updated accordingly. The EMS includes procedures for managing external complaints. Further detail on the complaints procedures at the Facility are presented within section 6.

5.2 Visual dust monitoring

An EMS is in operation which includes a range of monitoring and recording procedures. This DMP forms part of the EMS and is reviewed and updated accordingly.

The Departmental Managers undertake visual inspections of the site on a daily basis, to monitor compliance with air quality and dust control procedures, although these are not formally recorded. Recorded environmental audits and checklists are implemented weekly. This includes, but is not limited to, the road network on-site and the off-site roads in the vicinity of the Facility. The procedure is detailed in the EMS. The EHS Manager ensures road sweepers and water bowsers are operated if required.

The frequency of visual inspections is increased when activities with a high potential to produce dust and emissions are being carried out, and during prolonged dry or windy weather conditions. Any exceptional incidents that cause dust and air quality pollutant emissions (such as spillages) are recorded in an environmental incident and near miss log, alongside any remedial actions. Remedial actions may include road sweepers being operated if required.

5.3 Weather monitoring

As detailed within section 3.3, the site management is responsible for monitoring weather forecasts to determine if long dry or windy spells are forecast – this enables the proactive application of dust control measures (for example, damping down of site roads). In the case of extreme weather conditions, or following a serious complaint, activities at the Facility may be temporarily put on hold.

5.4 QA/QC and record keeping

As detailed within section 5.2, records of monitoring are kept in accordance with procedures documented in the site EMS. Monitoring records are regularly reviewed with the aim of improving dust management measures at the site and reducing the frequency of periods of high dust levels.

5.5 Reporting of data

Reporting of data to NRW is undertaken as required in accordance with the conditions of the EP for the Facility. Any complaints received are reported to NRW in accordance with the reporting and complaints procedure for the site – refer to section 6 for further details.

Environmental incidents that impact off-site receptors are investigated and reported to the regulator in accordance with the conditions of the EP using the Part A/B form.

5.6 Existing monitoring data

In order to assist local authorities with their responsibilities under Local Air Quality Management, Defra provides modelled background concentrations of pollutants throughout the UK on a 1 km by 1 km grid. This model is based on known pollution sources and background measurements and is used by local authorities in lieu of suitable monitoring data. A summary of the available mapped background data for particulates is presented in Table 14. The mapped background concentrations are well below the relevant Air Quality Assessment Levels (AQALs).

Table 14: Mapped background data

Pollutant	Annual Mean AQAL ($\mu\text{g}/\text{m}^3$)	Concentration ($\mu\text{g}/\text{m}^3$)		Dataset
		At Facility	Max within 2 km of the site	
Particulate matter (PM_{10})	40	10.94	15.39	DEFRA 2018 Dataset
Particulate matter ($\text{PM}_{2.5}$)	20	7.58	10.94	DEFRA 2018 Dataset

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This demonstrates that the background concentration in the area is low and well below the AQALs.

WCBC operate two continuous monitoring stations within Chirk:

1. Chirk, an urban industrial site, set up 22 July 2020; and
2. Chirk Community Hospital, an urban background site, set up 29 November 2021.

The location of both sites is shown on Figure 4 of Appendix A. Both sites monitor for particulates (as PM_{10} , $\text{PM}_{2.5}$ and PM_1), including temperature, humidity, wind direction and speed.

The following tables presents a summary of the particulate monitoring from these sites, noting that both sites include a contribution from the operation of the Facility.

Table 15: Local monitoring data

Pollutant	Parameter	AQAL ($\mu\text{g}/\text{m}^3$)	Concentration ($\mu\text{g}/\text{m}^3$)		
			Chirk 2021	Chirk 2022	Chirk Hospital 2022
Particulate matter (PM ₁₀)	Annual mean	40	8.3	11.4	10.4
	Max. daily mean	-	24.4	36.9	39.1
	90 th %ile of daily mean	50	13.4	18.4	16.5
Particulate matter (PM _{2.5})	Annual mean	20	2.9	4.3	5.4

This shows that background concentrations are well below the AQALs, even with the contribution from the Facility.

6 Reporting and complaints response

The measures outlined in this DMP are aimed at preventing emissions of dust and particulates to the extent where complaints may be made regarding dust and/or particulates by nearby sensitive receptors. Nevertheless, it is considered that having an established complaints procedure is an essential part of implementing a successful DMP.

As such, the EMS (see document KC/EHS/PRO/016) includes procedures for managing external complaints. This includes complaints in relation to dust and particulate emissions from the Facility. The procedures include those for the recording of the initial complaint, the approach to investigation of the possible cause, and determination of actions to prevent recurrence. This aligns with the requirements of the EP. The EHS Department and Departmental Managers are responsible for handling any complaints that are received and for logging any complaints received in the site's incident reporting system. Complaints may be received directly by the site or through the NRW Incident Communications Centre. They are also responsible for investigating potential sources of the complaints and providing detail to NRW on the outcome of the investigation and whether any remedial actions have been implemented.

Public comments, complaints and concerns could be received by email, telephone or letter, either directly to the site or via the relevant authorities (such as the Local Planning Authority or NRW). Kronospan aims to respond to complaints within 2 working days of receipt, with a maximum time of 7 days implemented to respond to a complaint. An example resident complaint form is included within Appendix B.

6.1 Engagement with the community

Kronospan hosts quarterly Kronospan Liaison Group meetings with WCBC, NRW, Chirk Town Councillors and Unite the Union. Minutes are issued following these meetings along with a summary note that can be used by Chirk Town Councillors for onward communication into the local community. These meetings are also followed by drop in sessions at the Parish Hall which are open to all.

Other contact to Kronospan should be made via the main site contact number or via NRW incident Communication Centre.

7 Summary

This DMP has been prepared to set out operational procedures to control and mitigate dust and particulate emissions from the Facility. It is to be refined and updated on an annual basis as part of periodic reviews of the documented management systems at the Facility. Reviews will serve to confirm the identification of any new sensitive receptors, sources of dust, monitoring equipment or changes to relevant procedures (such as complaints handling and reporting).

Appendices

A Plans and drawings



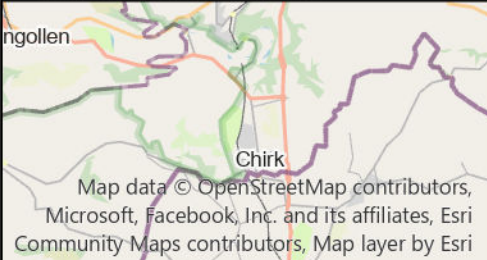
Legend

Installation Boundary

Client:	Kronospan
Site:	Chirk
Project:	2376_Kronospan_Management_Plans
Title:	

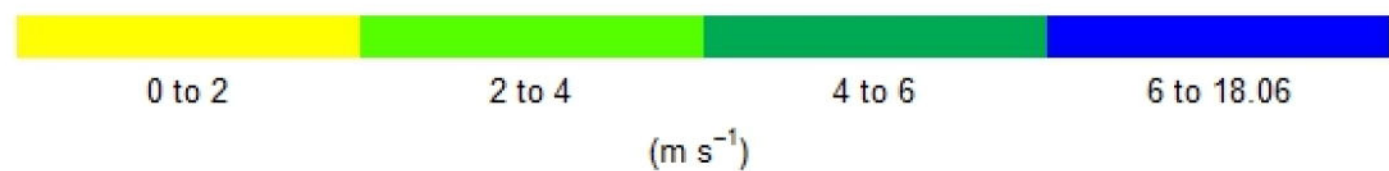
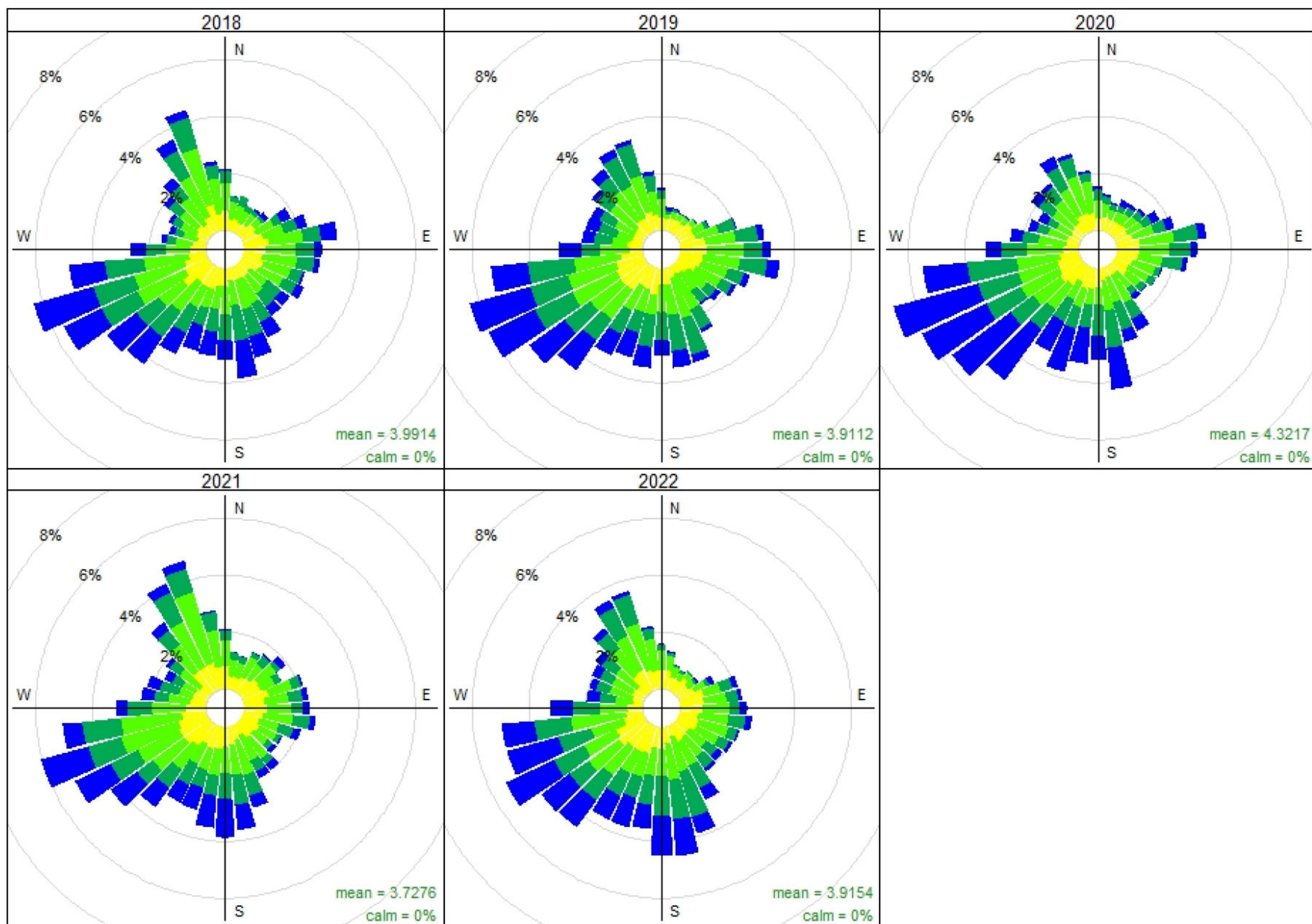
Figure 1 - Site Location

Drawn by: RSF	Date: 03/04/2023
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Frequency of counts by wind direction (%)

Title:

Figure 2 - Shawbury met data wind roses

Drawn by: RSF

Date: 03/04/2023

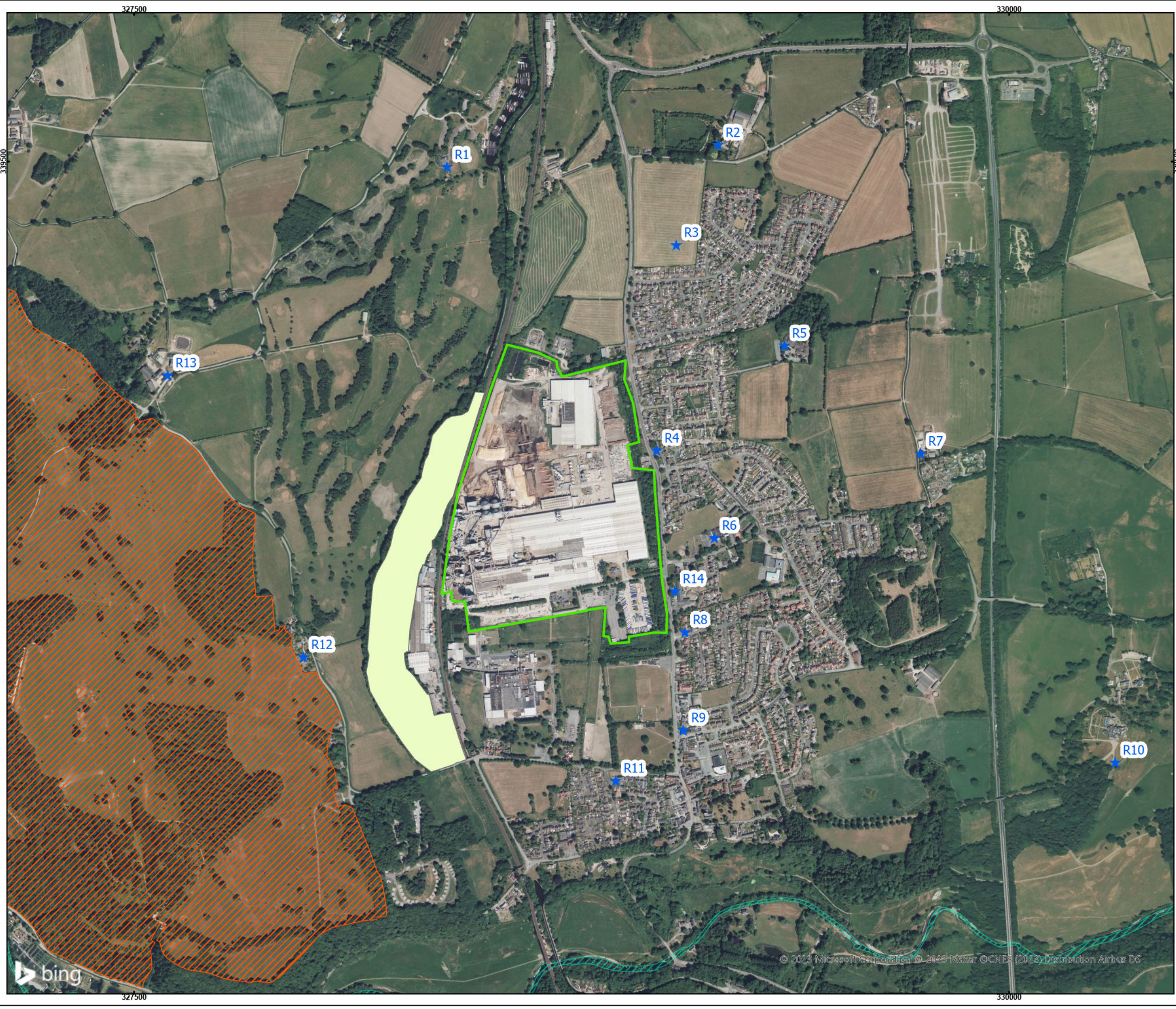
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Scale:

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Legend

- Installation Boundary
- Sensitive Receptors
- E1
- E2
- E3

Client:	Kronospan
Site:	Chirk
Project:	2376_Kronospan_Management_Plans
Title:	

Figure 3 - Sensitive Receptors (DMP)

Drawn by: RSF	Date: 03/04/2023
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Scale: 1:10,000

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Legend

-  WCBC Air Quality Monitoring Stations
-  Installation Boundary

Client:	Kronospan
Site:	Chirk
Project:	2376_Kronospan_Management_Plans
Title:	

Figure 4 - Local Monitoring Locations

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B Resident complaint form

DATE		TIME		Record fully at time of call
CALLER'S NAME		ADDRESS		
TELEPHONE		CAR REG.		
CALL TAKEN BY		INVESTIGATED BY		
WEATHER CONDITIONS				
COMPLAINT				Complete within 7 days
INVESTIGATION & CORRECTIVE ACTION (what was investigated; and what actions were taken)				
ROOT CAUSE				
PREVENTIVE ACTION (agreed process changes or management controls)				
RESPONSE TO CALLER				
DATE CLOSED		REF NO.		
Circulate immediately to: B Spruce M Jones C Barker, K Baker, C Prystaz, J Morris, C Emery, J Ewing, J Greenhalgh, D Speed, & V Smith				

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