



CAS-03463-R2W9C2 - Kronospan Low Carbon CHP Facility

Supporting Document 3

Framework Construction Environmental Management Plan

Prepared for



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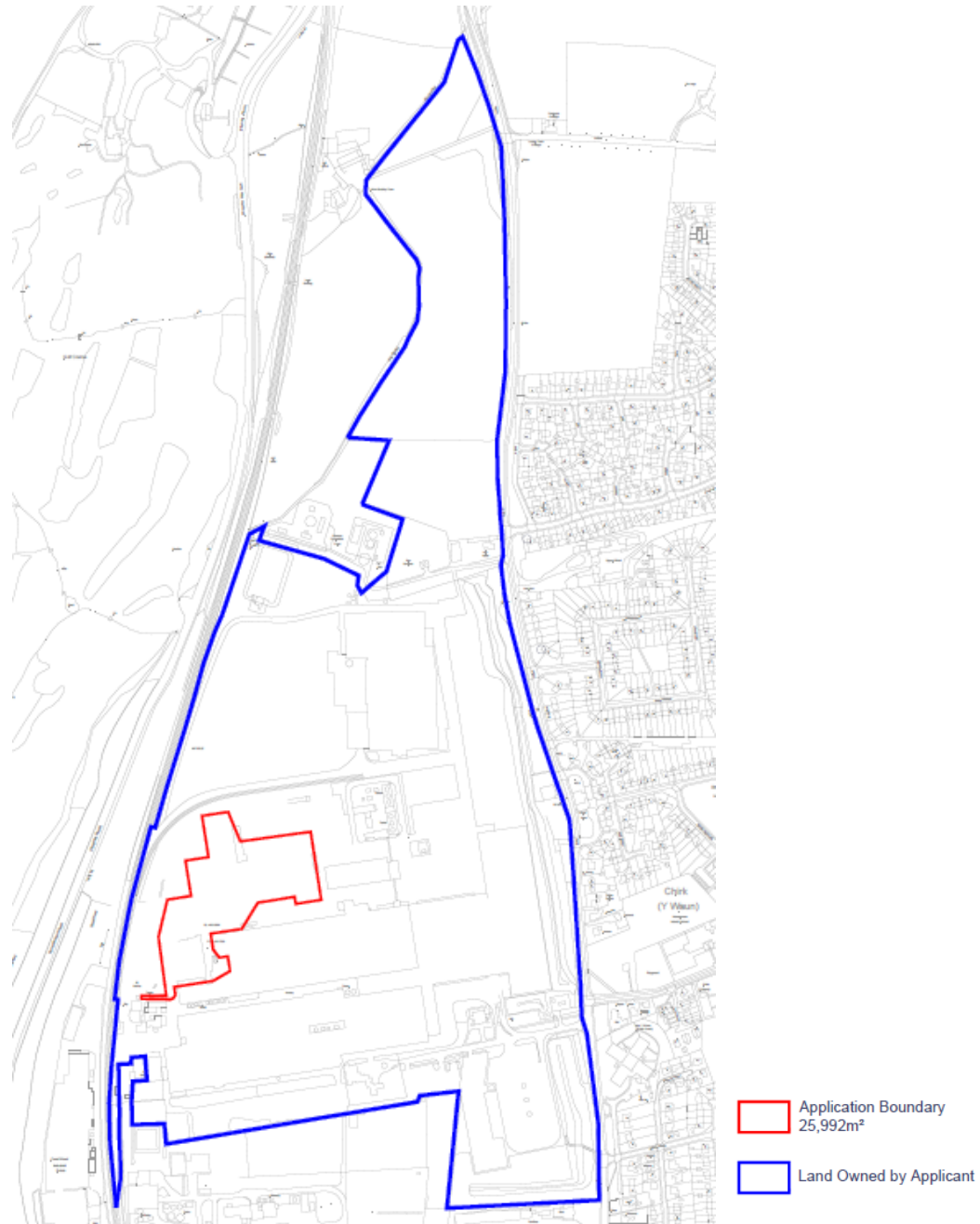
1.0 INTRODUCTION

1.1 The Proposed Development

- 1.1.1 The Proposed Development is a Low Carbon Combined Heat and Power (CHP) Facility with the capacity to generate up to 40 megawatts (MW) of renewable electricity and 125 MW of renewable thermal energy for use in the existing manufacturing processes and associated infrastructure ('the Proposed Development') at the existing Kronospan Facility, Chirk, Wrexham, North Wales, LL14 5NT.
- 1.1.2 The proposed Low Carbon CHP Facility would process up to 293,000 tonnes per annum (TPA) of waste wood and forestry residues as feedstock for the existing Kronospan Facility.
- 1.1.3 Based on the likely availability of feedstock that can be generated on-site (based on an average taken from the calendar years 2021, 2022, and 2023), the proposed (on-site) feedstock configuration for the proposed Low Carbon CHP Facility would be as follows:
- Existing on-site process residues currently sold off-site – 76,991 TPA.
 - Diverted fuel from the existing K7 Biomass Plant - 74,667 TPA.
 - Other on-site process residues – 108,455 TPA.
 - **Total feedstock generated on-site = 260,113 TPA.**
- 1.1.4 There would be a 'remainder' of 32,887 TPA of biomass feedstock required; this is based on attaining the maximum throughput of the proposed Low Carbon CHP Facility of 293,000 TPA.
- 1.1.5 The feedstock 'remainder' would be made up as follows:
- 50% (16,444 TPA) - **The import of forestry brash** for direct use in the proposed Low Carbon CHP Facility.
 - 25% (8,222 TPA) - **The import of Grade C waste wood*** for direct use in the proposed Low Carbon CHP Facility.
 - 25% (8,222 TPA) - **Increased on-site production** that would generate further on-site process residues for direct use in the proposed Low Carbon CHP Facility.

1.1.6 The location of the Proposed Development Site is shown at **Inset 1.1** below.

Inset 1.1 – Location of the Proposed Development



1.1.7 Further details of the Proposed Development are provided at **ES Chapter 4.0 (Description of the Proposed Development)**.

1.2 Purpose of the Framework Construction Environmental Management Plan

- 1.2.1 This Framework Construction Environmental Management Plan (CEMP) has been prepared by Kronospan Limited (Kronospan) and presents the approach and application of environmental management and mitigation for the construction of the Proposed Development. This Framework CEMP aims to ensure that adverse effects from the construction phase of the Proposed Development, on the environment and the local communities, are minimised as far as practicable. This Framework CEMP does not describe mitigation measures relating to the operation of the Proposed Development.
- 1.2.2 This Framework CEMP has been prepared in accordance with the construction management and mitigation measures identified in the DNS application documents, notably the Environmental Statement (ES) (DNS5 at Volume 1) and the relevant Supporting Documents (not required to be prepared under the Environmental Impact Assessment (EIA) regulations) (DNS4).
- 1.2.3 The construction works will be undertaken in accordance with the following guidance documents:
- GPP1: Understanding your environmental responsibilities – good environmental practice (NRW, 2021).
 - GPP2: Above ground oil storage tanks (NRW, 2021).
 - GPP3: Use and design of oil separators in surface water drainage systems (NRW, 2022).
 - GPP5: Works and maintenance in or near water (NRW, 2018).
 - GPP6: Working at construction and demolition sites (NRW, 2013).
 - GPP8: Safe storage and disposal of used oils (NRW, 2021).
 - GPP21: Pollution incident response planning (NRW, 2021).
 - GPP 22: Dealing with spills (NRW, 2018).
 - C532: Control of water pollution from construction sites (CIRIA, 2001).
 - C741: Environmental good practice on Site (CIRIA, 2023).

1.3 Objectives

1.3.1 The objectives of the Framework CEMP are to:

- Provide a mechanism for ensuring the delivery of mitigation measures to reduce environmental effects identified in the planning application documents.
- Provide an outline of the content that will be supplied in the additional plans to be provided upon the appointment of the Principal Contractor (PC) (**Table 1.1**).
- Ensure compliance with legislation and identify where it will be necessary to obtain authorisation from relevant statutory bodies.
- Provide a framework for compliance auditing and inspection to ensure the agreed environmental aims are being met.
- Ensure a prompt response to any non-compliance with legislative and planning permission requirements, including reporting, remediation and any additional mitigation measures required to prevent a recurrence.

1.4 Management Plans to be Provided by the Appointed Principal Contractor

1.4.1 **Table 1.1** below sets out the detailed management plans that will be produced by the PC once appointed. The detailed management plans will be consistent with the information contained within this Framework CEMP; this will allow both this Framework CEMP and the future detailed management plans to be effectively implemented in tandem with each other over the duration of the construction phase of the Proposed Development.

Table 1.1 – Detailed Management Plans to be Prepared by the Appointed Principal Contractor

Management Plan	Description
Environmental Management System	Details the framework for management of the environment (detailed further at Section 1.5 of this Framework CEMP).
Pollution Incident Control Plan (PICP)	Identifies how the risk of pollution due to construction works, materials and extreme weather events will be controlled and identifies the remedial actions in the event of an incident (detailed further at Section 1.8 of this Framework CEMP).

Management Plan	Description
Construction Phase Safety, Health, Environment and Quality Plan (SHEQ Plan)	Details relevant safety, health and environmental information relating to all construction activities (detailed further at Section 2.2 of this Framework CEMP).
Construction Method Statements	Detailed construction method statements will be developed for the key construction phases e.g. site preparation and development of site compound, earthworks, foundations, and main construction works. The method statements will outline the key construction processes, identify potential environmental and health and safety risks and define appropriate mitigation measures.
Site Waste Management Plan (SWMP)	Identifies site-specific measures for the collection, segregation, treatment and disposal of waste (outline approach to site waste management is provided at Section 2.7 of this Framework CEMP).
Unexpected Contamination Protocol	Provides the protocol to deal with any unexpected contamination during the construction works (detailed further at Section 3.5 of this Framework CEMP).

1.5 Conformance with Corporate and Project Environmental Management Systems

1.5.1 Kronospan's Environment, Health and Safety (EHS) department is responsible for its Environmental Management System (EMS) which is certified to ISO14001. The suitable control of activities in an emergency also falls under the responsibility of Kronospan's EHS department (via its EMS).

1.5.2 Kronospan's EMS sets out the overall processes for:

- Environmental responsibilities.
- Identifying environmental aspects.
- Setting and achieving environmental objectives and targets.
- Controlling environmental impact.

- Meeting the conditions of environmental consents and the environmental permit.
- Preparing and responding to environmental emergencies and incidents.

1.5.3 Once appointed, the PC will prepare its own project-specific EMS in accordance with Kronospan's EMS prior to the commencement of construction. The PC's EMS will detail their framework for managing the environment; Kronospan will approve the PC's EMS prior to the commencement of construction.

1.6 Community Engagement and Public Information

1.6.1 A 24-hour free telephone project helpline will be established and be managed by the PC. The website of the PC will also contain up to date information about the key stages and progress of the project. The project helpline and website information will be visible on boards placed around the perimeter of the construction site in appropriate locations where they would be visible to the public. The telephone number and website details will be provided to Wrexham County Borough Council (WCBC) and Natural Resources Wales (NRW).

1.6.2 The PC will ensure the details of any complaints that are received are recorded/logged and appropriately managed. Complaints will be investigated, and appropriate action will be taken (including the implementation of revised or additional mitigation measures to resolve issues identified). All complaint logs and corrective action reports will be made available for inspection within five days of receiving a request to review such information. The investigation procedure is detailed at **Section 1.8** of this Framework CEMP.

1.6.3 In addition to the project telephone helpline and the website, complaints from an external party may also be received via several other sources, for example, via written correspondence or incidental contact with construction workers.

1.6.4 Where a person from the local community local makes a complaint, it will be passed initially to the PC who will then liaise with the other members of the project team (as appropriate) to investigate the complaint. Appropriate action will be taken by the project team.



1.7 Inspections

1.7.1 The PC will undertake twice daily inspections, which will include monitoring conformance with the Framework CEMP. Daily assessment forms will be completed during the daily checks. Checks on equipment will be undertaken to reduce the risk of incidents occurring (for example oil leaks). As a minimum the following equipment will be inspected:

- Fencing.
- Waste storage facilities.
- Oil separators.
- Chemical and fuel storage facilities.
- Bund integrity.
- Foul water storage facilities.
- Silt traps.
- Drainage ditches and watercourses.
- Storage vessels (including pumps, gauges, pipework and hoses).
- Secondary containment (for example, secondary skins for oil tanks and drip trays).
- Spill response materials.
- Equipment with potential to leak oils and other liquids, for example, compressors and transformers.

1.7.2 Weekly inspections will be undertaken by Kronospan (together with the PC) to ensure the daily checks are being undertaken correctly.

1.7.3 The daily and weekly inspections will also include the following:

- Review of the daily risk assessment forms.
- Ensure that faults and defects are identified and rectified.
- Provide data for performance monitoring.

1.7.4 Environmental performance data will be collected and collated into the SHEQ Plan.

1.7.5 Immediate action including, if necessary 'stopping a job', will be taken should any incidents or non-conformance with the Framework CEMP be found during inspection.



1.7.6 Kronospan and/or the PC's monitoring reports will be made available to regulatory bodies on request.

1.8 Incident Procedure

Pollution Incident Control Plan (PICP)

1.8.1 The PC will develop and implement a PICP which will detail their response in the event of any incident on site. The PICP will be consistent with the relevant guidance documents listed at **Section 1.2** of this Framework CEMP, notably GPP21: Pollution incident response planning (NRW, 2021).

1.8.2 The following measures and information will be included and detailed further in the PICP to manage any incidents and limit adverse effects on the receiving environment:

- Describe the procedure to be followed in the event of an incident (in accordance with the 'Incident Response' procedure below).
- Describe the procedure for the notification of appropriate emergency services, authorities and personnel on the construction site.
- Describe the procedure for the notification of relevant statutory bodies, environmental regulatory bodies, local authorities, local water, sewer providers and other operators on the Site.
- Provide maps showing the locations of local emergency services facilities such as police stations, fire authorities, medical facilities, other relevant authorities, such as NRW and also the address and contact details for each service and authority.
- Provide contact details for the persons responsible on the construction site for pollution incident response.
- Provide contact details of a competent spill response company which can be contacted at short notice for an immediate response.
- Ensure that site drainage plans and flood risk management plans are available on site and are kept up to date.
- Ensure staff competence and awareness in implementing plans and using pollution response kit.

Incident Response

- 1.8.3 All incidents associated with the construction of the Proposed Development, including environmental incidents and non-conformance with the Framework CEMP, will be reported and investigated using the PICP (unless stated differently in other Management Plans referenced at **Table 1.1** above).
- 1.8.4 The following procedure will be followed in the event of an incident and will be detailed further in the PICP:
- Works will stop.
 - The Environmental Manager and SHESQ Manager will be contacted.
 - The size of the incident will be assessed.
 - If the incident is controllable by staff on Site, remedial action will be taken immediately in accordance with the PICP.
 - If the incident cannot be controlled by the staff on Site, emergency assistance will be sought.
 - The appropriate enforcing authority will be contacted and informed, including:
 - NRW for incidents affecting watercourses, groundwater and major emissions to atmosphere.
 - The local sewerage undertaker for incidents affecting sewers.
 - The Local Authority Environmental Health Department for incidents that could affect the public.
 - The Senior Project Manager and SHEQ Manager will instigate an investigation into the occurrence of the incident.
 - The findings will be sent to the appropriate enforcing authority where necessary.
 - An action plan will be prepared to determine why the incident occurred and whether any modifications to working practices are required to prevent a recurrence. If necessary, the Framework CEMP and SHEQ Plan will be updated (and any other plans as appropriate) and all workers will be notified.

1.9 Structure of the Framework CEMP

1.9.1 The remainder of this Framework CEMP is split into two sections as follows:

- **Section 2 (General Site Operations)** – describes the general principles that will be adopted on the construction site. The general principles cover the following elements:
 - Health and Safety.
 - Construction Hours.
 - Construction Site Layout and Appearance.
 - Fencing and Other Means of Enclosure.
 - Lighting.
 - Waste Management.
 - Security.
 - Welfare.
 - Pest Control.
- **Section 3 (Environmental Management and Construction Principles)** – describes the mitigation and management measures that will be adopted during the construction of the Proposed Development. The mitigation and management measures will be implemented to reduce risk with respect the following environmental aspects:
 - Noise and Vibration
 - Air Quality and Odour.
 - Climate Change Resilience.
 - Greenhouse Gas Emissions.
 - Geology, Hydrogeology, Hydrology and Contaminated Land.
 - The Water Environment.
 - Transport.

2.0 GENERAL SITE OPERATIONS

2.1 Objective

- 2.1.1 The objective is to construct the Proposed Development having regard to the safety and security of the public and construction staff and to mitigate the impact of general site operations.

2.2 Health and Safety

Overview

- 2.2.1 Kronospan is committed to ensuring the health and safety of persons working on its projects and the general public, as such, the construction of the Proposed Development will be undertaken in accordance with the Construction (Design and Management) Regulations 2015.
- 2.2.2 The PC will prepare a SHEQ Plan prior to construction works commencing. The SHEQ Plan will ensure that adequate arrangements and welfare facilities are in place to cover:
- The safety of construction staff.
 - The safety of all other people working at or visiting the construction site.
 - The protection of the public in the vicinity of the construction site.
 - Compliance with the Construction (Design and Management) Regulations 2015 and associated Health and Safety Executive (HSE) guidance documents.
 - Emergency procedures defined and adopted.
 - Appropriate training and information provided to personnel.
- 2.2.3 The SHEQ Plan will be reviewed and approved by Kronospan prior to construction commencing. The SHEQ Plan will be managed and implemented by the SHEQ Manager throughout the construction works.
- 2.2.4 All staff, site visitors and delivery drivers will receive a relevant project induction to ensure they are aware of site hazards and health, safety and environmental management requirements. Site staff will be briefed daily prior to work commencing. Site-specific risk assessments will be carried out to ensure the risk strategy of the frequently changing workplace remains relevant. The PC will be required to carry

out audits and inspections throughout the construction of the Proposed Development in accordance with **Section 1.7** of this Framework CEMP.

- 2.2.5 Emergency contact for the public will be through the enquiries and complaints procedure as described in **Section 1.6** of this Framework CEMP.

Considerate Constructors Scheme

- 2.2.6 Whilst the Site would not be registered with the Considerate Constructors Scheme, Kronospan would work with the PC to achieve the best practice measures under the Code of Considerate Practice summarised below.

Respect the Community

- 2.2.7 Constructors must manage their impact on their neighbours and the public to support a positive experience by:
- Ensuring courteous and respectful language and appropriate behaviour in and around the construction activity.
 - Providing a safer environment, preventing unnecessary disturbance, and reducing nuisance for the community from their activities.
 - Proactively maintaining effective engagement with the community to deliver meaningful positive impacts.

Care for the Environment

- 2.2.8 Constructors must minimise their impact and enhance the natural environment by:
- Prioritising environmental issues to protect the natural environment and minimising negative impacts.
 - Optimising the use of resources, including minimising carbon throughout the value chain.
 - Engaging with the community to improve the local environment in a meaningful way.



Value the Workforce

2.2.9 Constructors must create a supportive, inclusive, and healthy workplace by:

- Actively encouraging and supporting an inclusive and diverse workplace.
- Proactively supporting safe working, mental and physical wellbeing at work.
- Providing workplaces that are, well maintained, clean and secure from physical and biological hazards.

2.3 Construction Hours

2.3.1 The construction hours would be limited to 07.30 to 18.00 Monday to Friday and 08.00 to 14.00 Saturday, with no work on Sundays or Bank Holidays. However, there may be occasions when construction would need to be undertaken outside of the core hours, for example, during major concrete pours or the transfer of abnormal loads.

2.3.2 An indicative construction programme is provided at **Inset 2.1** below. The programme is dependent on PC preferences, availability of plant, machinery and materials and matters which in some cases are unable to be reasonably foreseen. As such, the construction programme is indicative and could be subject to change. Any notable deviations from the indicative construction programme below will be communicated with WCBC.



Inset 2.1 – Indicative Construction Programme

Activity	Est. Duration (Days)	Est. Constr. Employees	2027				2028				2029			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Relocation of Existing Assets	90	20												
Civil and Piling works	180	20												
Construction - Silencer/Stack	45	5												
Construction - Water Treatment/Effluent Pit/Ammonia Tank/Lime Silo	60	20												
Construction - NOx Catalyst	45	10												
Construction - Turbine Building	90	25												
Construction - ID Fan	45	2												
Construction - Bag Filter	45	15												
Construction - ACC	45	10												
Construction - Boiler Building/Service Building/Ash Pit	180	25												
Crane - Liebherr 1450 - 8.1 (450t capacity)														
Commissioning														

2.4 Construction Site Layout and Appearance

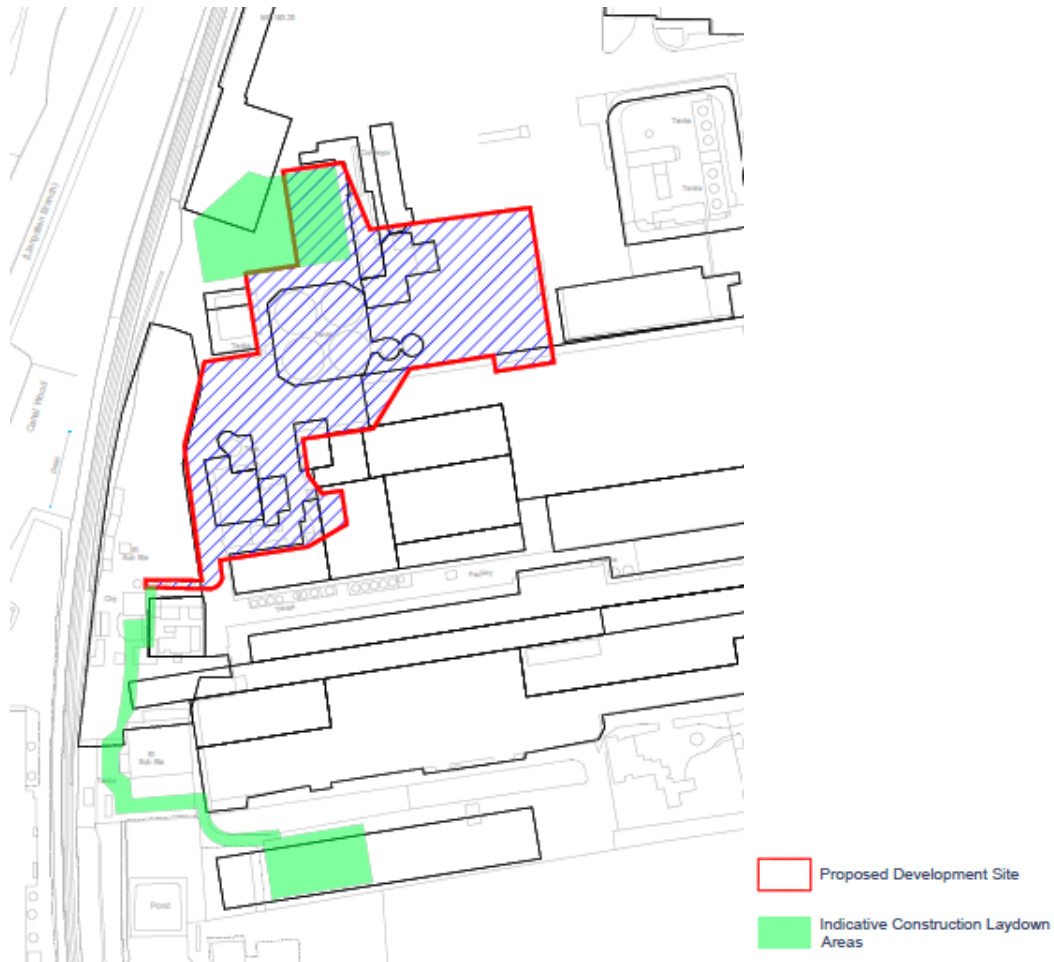
2.4.1 The layout, appearance and operation of the construction site, site offices and compound will be detailed prior to construction commencing and will comply with the commitments in this Framework CEMP. In particular, the layout, appearance and operation of the construction site, site offices and compounds will be managed as follows:

- All working areas will be kept in a clean and tidy condition.
- Smoking areas at site offices, compounds and construction sites will be equipped with containers for smoking waste and will not be located at the boundary of working areas or adjacent to neighbouring land.
- All necessary measures will be taken to minimise the risk of fire.
- Personnel will maintain a reasonable and appropriate standard of dress at all times and will not use foul language or display lewd or derogatory behaviour.

- Fencing and other means of enclosure will be inspected daily, repaired and repainted as necessary (see **Section 2.5** of this Framework CEMP).
- Lighting will be designed and implemented accordingly to minimise adverse impacts on the local community and biodiversity (see **Section 2.6** of this Framework CEMP).
- Commitments relating to the handling, storage and disposal of waste materials (see **Section 2.7** of this Framework CEMP).
- Appropriate measures, such as use of enclosed containers, will be employed to store waste susceptible to spreading by wind or liable to cause litter (see **Section 2.7** of this Framework CEMP).
- The construction site will be controlled in accordance with the statutory duties set out in the Management of Health and Safety at Work Act 1999 to prevent unauthorised access to the construction site (see **Section 2.8** of this Framework CEMP).
- Adequate welfare facilities will be provided for all construction staff. All toilets will be serviced and kept clean (see **Section 2.9** of this Framework CEMP).
- Good personal hygiene will be promoted by the PC for the workforce, particularly when using site canteens or mess facilities.
- Appropriate pest control measures will be implemented (see **Section 2.10** of this Framework CEMP).
- Commitments relating to noise and vibration (see **Section 3.2** of this Framework CEMP).
- Commitments relating to dust, odours and air pollution (see **Section 3.3** of this Framework CEMP).
- Commitments relating to climate change resilience and greenhouse gas emissions (see **Section 3.4** of this Framework CEMP).
- Commitments relating to geology, hydrogeology, hydrology and contaminated land (see **Section 3.5** of this Framework CEMP).
- Commitments relating to the water environment (see **Section 3.6** of this Framework CEMP).
- Commitments relating to transport (see **Section 3.7** of this Framework CEMP).

- 2.4.2 An indicative arrangement of the proposed construction compounds and working areas is provided at **Inset 2.2** below.

Inset 2.2 – Indicative Construction Compound Areas



2.5 Fencing and other Means of Enclosure

- 2.5.1 Working areas will be appropriately fenced from members of the public and to prevent animals from straying onto a working area.
- 2.5.2 Where construction plant/activity is in proximity to sensitive receptor boundaries (e.g. within 50m of a sensitive boundary, temporary hoarding will be installed.
- 2.5.3 Fencing and other means of enclosure will be inspected daily, repaired and repainted as necessary. Any temporary fencing will be removed as soon as reasonably practicable after completion of the works.

2.6 Lighting

- 2.6.1 Lighting during the construction phase will be designed and implemented accordingly to minimise adverse impacts on the local community and biodiversity.
- 2.6.2 Winter working may require task-specific lighting due to the shorter days when lighting will be required at the beginning and end of the day. Lighting will be used only when required during core working hours and will comprise lighting of work areas and access and egress using low level directional lighting.
- 2.6.3 The construction compounds will not be lit at night outside core working hours except for welfare and site security cabins that will include low level lighting. Motion sensor lighting will be used in areas of increased security risk.
- 2.6.4 The following measures will be implemented:
- Lights installed will be of the minimum brightness and/or power rating capable of performing the desired function.
 - Light fittings will be used that minimise the amount of light emitted above the horizontal.
 - Light fittings will be positioned correctly and directed downwards wherever practicable.
 - The direction of lights will seek to avoid spillage onto neighbouring properties.
 - Passive Infra-Red (PIR) controlled lights will be considered for use where appropriate as these may be more acceptable to neighbours than those which are controlled by a time switch or are on all the time.
 - Unnecessary lights will be switched off.

2.7 Waste Management

- 2.7.1 Kronospan and the PC are responsible for managing waste arising from all activities to prevent pollution and to meet or exceed legal requirements.
- 2.7.2 The PC will prepare a SWMP and submit to Kronospan for approval; the SWMP will be in accordance with the following measures:
- The consumption of raw materials and waste shall be minimised, through sound design and good practice in sustainable procurement.



- Where waste is generated, different waste streams will be presented for collection separately in accordance with the Waste Separation Requirements (Wales) Regulations 2023.
- Waste materials will be stored securely on site to prevent their escape and protect them against vandalism, vermin or outside interference.
- Storage and disposal of used oils will be in accordance with GPP8: Safe storage and disposal of used oils (NRW, 2021).
- Hazardous waste (e.g. paints, solvents, sealants) will be segregated on site to avoid contaminating other material and waste streams.
- Storage of waste on site will either be:
 - within the scope of, and comply with, the requirements of one or more of the activities specified as exempt from Waste Management Licensing; or
 - carried out under an environmental permit issue by NRW.
- Waste management activities on sites operating under an environmental permit will be managed by a nominated technically competent manager.
- All waste disposal contractors carrying waste and all sites receiving waste will be authorised to do so.
- Disposal of all waste will be accompanied by the relevant statutory transfer documentation that adequately describes the waste.
- Quantities of waste generated will be recorded and monitored. Records will be kept for a minimum of three years.
- All employees and contractors will have a Duty of Care under the Waste (England and Wales) Regulations 2011 when controlling the carriage and disposal of waste to ensure it is handled in a responsible manner.
- All staff and contractors working on the Proposed Development will be informed of the measures to correctly separate and store waste prior to disposal.



2.8 Security

2.8.1 The construction site will be controlled in accordance with the statutory duties set out in the Management of Health and Safety at Work Act 1999 to prevent unauthorised access to the construction site. The PC will undertake a site-specific assessment of the security and trespass risks, and appropriate control measures will be identified and implemented. The control measures are likely to include:

- Use of high perimeter fencing or hoarding for site security and public safety as required.
- Use of site lighting at site perimeters, in accordance with **Section 2.6** of this Framework CEMP.
- Use of appropriately trained and qualified security guards if deemed necessary.
- Consultation with North Wales Police on security proposals with regular liaison to review security effectiveness and response to incidents.
- Immobilisation of plant out of hours, removing or securing hazardous materials from site, securing fuel storage containers and preventing unauthorised use of scaffolding.

2.9 Welfare

2.9.1 No living accommodation will be permitted on the construction site. Onsite welfare facilities will be provided for all site workers and visitors. Welfare facilities will be kept clean and tidy, in accordance with **Section 2.4** of this Framework CEMP.

2.9.2 Construction compound cabins would be single storey only.

2.10 Pest Control

2.10.1 The risk of infestation by pests or vermin will be reduced by implementing appropriate storage and regular collection of putrescible waste. If infestation is found, removal and prevention measures will be implemented promptly. Any pest infestation of the construction site will be notified to WCBC as soon as is practicable.



3.0 ENVIRONMENTAL MANAGEMENT AND CONSTRUCTION PRINCIPLES

3.1 Introduction

- 3.1.1 This section of the Framework CEMP described the management and mitigation measures that will be implemented to minimise adverse effects during the construction of the Proposed Development.

3.2 Noise and Vibration

- 3.2.1 In accordance with BS5228, BPM would be employed to control the noise and vibration generation during construction. Mitigation measures that would be implemented during construction are as follows:

- Restriction of construction hours to non-sensitive times of day would normally form part of the planning consent conditions. The construction delivery hours proposed would be generally limited to 07.30 to 18.00hrs Monday to Friday and 08.00 to 14.00hrs Saturday. No work on Sundays or Bank Holidays, however there may be occasions when construction would need to be undertaken outside of the core hours, for example, during major concrete pours or the transfer of abnormal loads.
- Avoid unnecessary plant operation and revving of plant or vehicles.
- Sensible routing of the construction plant to avoid the nearest residential properties (where practicable). See also **Section 3.7** of this Framework CEMP.
- Use of non-percussive piling (e.g. CFA or hydraulic piling) where practicable.
- Where necessary, monitoring of site noise levels at noise sensitive receptors.
- Where practicable, locate plant away from nearest sensitive receptors or in locations which provide good screening in the direction of sensitive receptors.
- Use of broadband noise reverse alarms (where practicable) on mobile plant.
- Regular maintenance of plant and equipment.
- Inform local residents of the works being undertaken and provide a complaints procedure for local residents to enable them to contact the Site should any issues arise in terms of noise.
- Contact local residents prior to construction works commencing advising of anticipated duration and a contact number to advise of any issues/concerns.

3.3 Air Quality and Odour

3.3.1 The following best practice measures, which have been identified to minimise dust for a 'low risk' site, will be implemented during the construction period:

Communications:

- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Display the head or regional office contact information.

Site Management:

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the local authority when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the logbook.

Monitoring:

- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

Preparing and Maintaining the Site:

- Plan site layout so that machinery and dust causing activities are away from receptors, as far as is possible.
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- Avoid site runoff of water or mud.



Operating Vehicles/Machinery and Sustainable Travel:

- Ensure all vehicles switch off engines when stationary - no idling vehicles.
- Avoid the use of diesel or petrol-powered generators and use mains electricity or battery powered equipment where practicable.

Operations:

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.

Waste Management:

- Avoid bonfires and burning of waste materials.

Demolition Measures:

- Ensure effective water suppression is used during demolition operations. Handheld sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.
- Avoid explosive blasting, using appropriate manual or mechanical alternatives.
- Bag and remove any biological debris or damp down such material before demolition.

3.4 Climate Change

3.4.1 Measures to avoid or minimise the potential for significant climate change effects are summarised below.

Climate Change Resilience

- Weather conditions will be monitored.
- RAMS will be used. RAMS are important health and safety document that are completed to identify the steps to be undertaken to carry out a specific activity or task in a safe manner such as manual handling and inspection of the boiler).
- Construction workers will all have the correct personal protective equipment (PPE), be trained in Site health and safety and be informed about protecting themselves from extreme weather conditions.
- Construction materials would be covered when stored.
- Pro-active planning will be undertaken to account for the possibility of extreme weather events, including the use of extreme weather alert systems.
- Health and safety plans developed for construction activities will be required to account for potential climate change impacts on workers, such as flooding and heatwaves.
- The materials used just construction will be resilient to expected climatic extremes with British Standards applicable for most materials to ensure that extreme climatic conditions are accounted for.

Greenhouse Gas Emissions

- The proposed Low Carbon CHP Facility will employ good industry practice measures such as optimising the use of resources and minimising carbon throughout the value chain.
- Vehicles will be switched off when not in use and construction vehicles will be checked to ensure they conform to current UK emissions standards.
- Regular planned maintenance of the construction plant and machinery will be carried out to optimise efficiency.
- The proposed Low Carbon CHP Facility will be designed and constructed in such a way as to minimise the creation of waste and maximise the use of alternative

materials with lower embodied carbon, such as locally sourced products and materials with a higher recycled content where feasible.

- Suitable infrastructure and resources already available within the existing Kronospan Facility would be reused where possible to minimise the use of natural resources and unnecessary materials.
- Recyclability would be increased by segregating construction waste to be re-used and recycled where reasonably practicable.

3.5 Geology, Hydrogeology, Hydrology, and Contaminated Land

- 3.5.1 The following measures will be implemented during the construction phase to protect geology, hydrogeology, and hydrology from the impacts of contaminated land.

Protocol to Deal with Unexpected Contamination

- 3.5.2 **Section 1.8** of this Framework CEMP provides details of the incident procedure. A document setting out the protocol to deal with any unexpected contamination during the construction works will be developed (post-consent) by the PC and will include the following:

- A step-by-step procedure to follow where unexpected contamination is encountered during ground disturbance works.
- Fencing and signage to segregate area of concern and prevent unauthorised entry.
- Decontamination procedures of any impacted plant and equipment.
- Details of site personnel to manage unexpected contamination on Site.
- Details of NRW and WCBC and environmental consultant to contact upon encountering unexpected contamination.
- Record keeping procedure (descriptions, photographs, plans, de etc).
- The required remediation and validation measures to be adopted upon encountering unexpected contamination will vary depending upon the nature of the contamination and form (i.e. liquid, solid, gaseous) and where it is found.
 - The form of remediation and validation will be agreed with regulatory authorities prior to implementation.

Groundwater Management Practices

- 3.5.3 During the construction stage, groundwater management practices will be adopted where groundwater is encountered (which is anticipated from around 4.0m below ground level (bgl)). Dewatering practices may include a series of cut-off trenches and pumping employing best engineering practices. Up to 20m³/day groundwater may be abstracted for up to 28 days under a temporary licence, but for extended periods/or larger daily volume extraction, a water abstraction licence will be required and obtained from NRW.

Foundation Works Risk Assessment (FWRA)

- 3.5.4 A FWRA will be produced at the detailed design stage (post-consent) to ensure the appropriate methods/techniques to reduce the generation of soil arisings and the likelihood of contaminant remobilisation. This will be supported by further investigation of potential contamination within soils and perched groundwater at the locations of proposed ground disturbance.
- 3.5.5 Materials specification for piling and laying of other foundations and site services will be determined at the detailed design to mitigate against risks to property presented from the chemically aggressive below ground environment and settlement from ground instability. Further detailed geotechnical investigation and assessment will be undertaken to inform the detailed design which will focus on proposed areas of piling and ground disturbance to determine land instability, potential for settlement of foundation and presence of an aggressive chemical environment for proposed concrete to be laid below ground or in contact with the ground surface.

Appropriate Stand-Offs to Existing Utilities

- 3.5.6 Appropriate stand-offs to existing utilities will be adhered to as required by utility owners. This may involve the application and use of vibration monitors during excavation or piling works with derivation of vibration control limits by an acoustics and vibration specialist.

Pollution Incident Control Plan (PICP)

- 3.5.7 As set out at **Section 1.8** of this Framework CEMP, a PICP will be produced prior to any demolition and groundworks activities commencing and will be reviewed and updated regularly by the PC. Training will be provided to site workers as part of the



induction process and will be updated as necessary. In the unlikely event of any incident, the Site Manager will be notified and will work to coordinate remedial actions.

Dust Suppression Protocol

- 3.5.8 Dust suppression measures will be implemented during dry and windy conditions. See **Section 3.3** of this Framework CEMP for further details.

Good Housekeeping Procedures

- 3.5.9 Good housekeeping procedures will be implemented to reduce the potential impacts of litter, dust and debris generation (see **Section 2.7** of this Framework CEMP for further details).

Equipment and Spill Kits

- 3.5.10 Appropriate equipment (including spill kits) will be provided to contain and clean up any spills to minimise the risk of pollutants entering any watercourses. Where there are instances of either fuel, oil or solvents being stored temporarily on Site, these containers will be stored within bunded areas and covered where possible, to prevent the accumulation of rainwater and to prevent accidental damage. Additional precautions would be taken during plant operations and in areas where there is storage of fuels or chemicals.

Provision and Maintenance of Silt Traps

- 3.5.11 Silt traps will be provided and well maintained to protect existing surface water drains (and similar) within the vicinity of nearby surface watercourses (the nearest watercourse is the Afon Bradley 77m to the west). Surface water run-off will be managed through the existing surface water infrastructure including the existing settlement lagoons and will discharge to the Afon Bradley. This is currently governed by the requirements of the existing Environmental Permit (ref: (ref: EPR/BW9999IG) for the existing Kronospan Facility. Monitoring of the discharges to the Afon Bradley will be undertaken as per monitoring requirements stipulated within the Environmental Permit.



Confined Space Entry Protocol

- 3.5.12 Any workers entering underground confined spaces such as below ground excavations or underground cable runs/ducts will use gas alarms and comply with confined spaces working procedures.

Ground Gas and Vapour Risk Assessment

- 3.5.13 If enclosed working spaces are constructed on ground-bearing foundations (rather than modular units), an appropriate ground gas and vapour risk assessment including monitoring programme will be undertaken to assess whether in-built design ground gas mitigation measures (ventilation and gas resistant membrane) are required).

Radon Protection Measures

- 3.5.14 Radon protection measures are required within new dwellings. However, as this is an industrial facility and the radon action level is higher (it is 300Bq/m³ as opposed to 200Bq/m³), further assessment will be undertaken by a radon specialist, if required) to determine site-specific radon protection measures.

Provision of Suitable Personal Protective Equipment (PPE)

- 3.5.15 Risks to construction works can be mitigated via use of appropriate PPE together with implementing good site housekeeping, hygiene and other good practice, site health and safety protocols.

Construction Method Statements

- 3.5.16 As set out in **Section 1.4 (Table 1.1)** of this Framework CEMP, detailed construction method statements will be developed for the key construction phases e.g. site preparation and development of site compound, earthworks, foundations, and main construction works. The method statements will outline the key construction processes, identify potential environmental and health and safety risks and define appropriate mitigation measures.

Waste Management

- 3.5.17 As per **Section 2.7** of this Framework CEMP, wastes generated from construction will be managed through the production and implementation of a site-specific SWMP that will be produced by the PC and form part of the CEMP suite of documents. Depending upon the volumes involved, coupled with an intention to reuse site-won soils/fill materials or import such materials from off-site donors, this may be managed via means of a Materials Management Plan (MMP). For soils and fill of less than 1,000 tonnes in total, it may be possible to obtain a U1 Waste Exemption from the NRW to allow material reuse.

3.6 The Water Environment

- 3.6.1 The following measures will be implemented, as required, during the construction phase to protect the water environment.

Drainage Management Plan

- 3.6.2 The PC will prepare a DMP which will determine potential risks in relation to the water environment and identify appropriate control measures to avoid or reduce the risks. The DMP will be consistent with the relevant guidance documents listed at **Section 1.2** of this Framework CEMP.
- 3.6.3 Examples of the mitigation measures that will be implemented to reduce the risk to the water environment are described below.

Surface Water Discharge

- 3.6.4 Construction activities may adversely affect the quality of surface water or ground water because of contaminated runoff from, or spillages on the construction site. Control and mitigation measures to be implemented to prevent pollution include:
- Dewatering of all excavations to be subject to a permit and/or land drainage consent from NRW as appropriate; the process will be proactively managed to meet at least the permit conditions.
 - No silty water to be pumped directly into any watercourse but to be allowed to settle out (for example, in settlement lagoons) or filtered (for example, using straw bales to filter out coarse particles) prior to discharge, in accordance with permit conditions.

- Where settlement or filtering is not practicable or effective, alternative disposal options will be considered for example, discharge onto a grassed or vegetated area (with consent from the landowner and following NRW consultation as appropriate).
- If clean water is discharged into a watercourse, a baffle will be fitted to the discharge point to prevent disturbance of the watercourse bed.
- Watercourses will be protected from contaminated surface water run-off by using French drains, cut off ditches, grips, silt fences or bunds round the edge of watercourses. Numerous small, passive mitigation measures will be installed in preference to one large treatment system to prevent large-scale water build-up, using Sustainable Drainage Systems (SuDS) principles.
- Existing and new surface water drains will be kept clear of silt or weed build-up.
- Roads and hard surfaces will be kept clean, to prevent a build-up of mud and sediment that could contaminate surface water.
- Implementation of a monitoring schedule to ensure that measures taken to protect watercourses are effective.

3.6.5 Working areas will not be required to be within 9m of watercourses. If circumstances arise where this is not possible, approaches will follow guidance in GPP5: Works and maintenance in or near water (NRW, 2018).

3.6.6 Works in proximity to watercourses are subject to consenting regimes. Consent is required to ensure works do not increase flood risk, damage flood defences, or harm the environment, fisheries, or wildlife. Appropriate consents will be obtained from NRW and/or Internal Drainage Boards (IDB) under the Land Drainage Act 1991 and/or the Water Resources Act 1991 as required.

Other Discharges

3.6.7 Other effluents may be produced that need to be properly managed and controlled to prevent contamination of surface water. The PC will ensure that:

- Washing of equipment using detergent is carried out at commercial facilities only.
- Washing of vehicles and equipment without the use of detergent is only carried out at either commercial facilities, or at purpose-built wash stations where the water is contained for controlled disposal.

- All foul effluent will be contained.
- The foul effluent container will be subject to daily inspection and a maintenance and emptying schedule as recommended by the manufacturer. The effluent will be removed by tanker and disposed of at a licensed facility.

Disposal of Accumulated Rainfall/Surface Water

3.6.8 Rainwater and surface water may accumulate in several locations on site, for example in uncovered bunds and drip trays. This has the potential to become contaminated. To reduce this risk, the following measures will be included in the DMP:

- Bunds or drum pallets will be covered, where possible, to prevent the accumulation of rainwater.
- Interceptor type drip trays will be provided rather than standard drip trays (for locations where drip trays will be permanently in place) or plant nappies (for mobile plant).
- If a standard drip tray or uncovered bund is used, the PC will:
- Ensure it is regularly inspected (daily) and emptied either via tanker and disposed of immediately off site at an appropriately licensed facility (for large quantities) or to an on-site, bunded, storage facility for later off-site disposal (small quantities). The inspection frequency will increase during times of frequent rainfall.
- Check water from uncovered bunds for obvious signs of contamination (for example, visible oil and smells) in order that the correct disposal option can be identified.
- Ensure that only uncontaminated water is disposed of by draining it onto a grassed or stoned area on the site which is at least 10m from any drains. If contaminated, it will be disposed of as Hazardous Waste.
- Ensure that any oil present is absorbed using a spill kit and disposed of as Hazardous Waste.

Permitted Discharges

- 3.6.9 Discharges, other than uncontaminated surface water run-off, will require a permit from NRW (for discharges to controlled waters, including rivers, other watercourses and soakaways) or the local sewerage undertaker (for discharges to sewer). Foul water from welfare facilities is likely to be stored in a septic tank and disposed off-site at an appropriate licenced facility (via a licenced carrier).
- 3.6.10 Such discharges may also require land drainage consent from the relevant IDB. Discharges will not be made without prior consent from NRW, IDB or sewerage undertaker, as appropriate. To ensure discharges are appropriately authorised, the following measures will be followed:
- Consult with the appropriate consenting body before any discharge is expected to be required from the site and obtain a permit, or where a permit is not required, obtain written confirmation that one is not required.
 - Ensure that any permitted discharge is sampled and analysed at the frequency specified in the permit to ensure compliance and that monitoring results are kept. More frequent analysis may be required if analytical results indicate that limits are being approached or exceeded.
 - Ensure that the consenting body is advised if results indicate that limits are being exceeded and report the occurrence as an incident in accordance with **Section 1.8** of this Framework CEMP. The PC will take immediate steps to rectify the situation, check receiving water for pollution resulting from exceedance, and carry out any remediation works necessary.

Abstraction Licences

- 3.6.11 Where water is required from a potable water supply or natural resource, an Abstraction Licence will be obtained from the local water company or NRW, as appropriate. It will be ensured that:
- Any necessary Abstraction Licences are obtained, or other sources of water are provided in cases where an Abstraction Licence is not granted.
 - Abstraction Licence conditions are complied with.
 - Volumes of water abstracted are recorded.

- A permit is obtained to discharge abstracted water to ground or via a sewer, soakaway or watercourse on completion of hydrostatic testing.

3.7 Transport

Construction Traffic Management Plan

- 3.7.1 To manage disturbances to the local community during the construction period, a Construction Traffic Management Plan (CTMP) will be prepared to ensure that suitable mitigation measures are adopted to manage any adverse effects of construction traffic. The CTMP would be produced post-consent and would form part of the CEMP suite of documents.
- 3.7.2 The CTMP will include the following matters and associated details:
- Construction phasing and timescales.
 - Classified vehicle volumes by phase.
 - Restrictions on vehicle delivery hours.
 - On-site construction vehicle parking and manoeuvring arrangements.
 - Heavy Goods Vehicle (HGV) routing strategy.
 - Staff parking arrangements.
 - Management and procedures for access by abnormal loads (although none are anticipated).
 - Local signage strategy.
 - Storage of materials.
 - Construction noise management.
 - Construction dust management.
- 3.7.3 The CTMP will seek to ensure that all HGV construction-related traffic routes to and from the Site are via the strategic highway network, avoiding residential areas where possible.
- 3.7.4 Other measures could include:
- trimming of foliage to maximise visibility splays; and
 - introducing a signage strategy to warn drivers.

Routeing

- 3.7.5 A weight limit of 17.5 tonnes is currently in force to the south of the existing Kronospan Facility access between Chirk town centre and Gledrid Roundabout (with the A483), which serves to minimise heavy vehicle movements through the town centre and on less suitable sections of Holyhead Road. The weight limit restriction is signed to vehicles exiting the existing Kronospan Facility onto Holyhead Road. HGVs travelling to and from the existing Kronospan Facility during the construction phase will route via the B5070 Holyhead Road, and the A5 and A483, to the north.
- 3.7.6 The routeing plan for the construction phase is provided below at **Inset 3.1**.

Inset 3.1 – Construction Routeing

