



CAS-03463-R2W9C2 - Kronospan Low Carbon CHP Facility

Supporting Document 5

Transport Statement

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DNS4-005



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CONTENTS

1.0	INTRODUCTION	1
1.1	Purpose of this Report	1
1.2	Background.....	1
1.3	Pre-Application Advice and Environmental Impact Assessment Scoping	1
1.4	Report Structure	4
2.0	EXISTING CONDITIONS.....	5
2.1	Existing Kronospan Facility	5
2.2	Wider Context	6
2.3	Highway Network	8
2.4	Baseline Traffic Data.....	11
2.5	Weighbridge Data Analysis	14
2.6	Public Rights of Way (PRoW)	15
2.7	Highway Safety	15
2.8	Sustainable Transport Connections	17
3.0	CURRENT AND HISTORIC OPERATIONAL TRENDS.....	22
3.1	Overview.....	22
3.2	Current Operational Trends	22
3.3	Historic Operational Trends	22
4.0	THE PROPOSED DEVELOPMENT.....	24
4.1	Overview.....	24
4.2	Feedstock	24
4.3	Operating Hours	27
4.4	Site Access Arrangements.....	27
5.0	CONSTRUCTION	29
5.1	Introduction	29
5.2	Construction Phasing and Traffic Impact.....	29
5.3	Construction Traffic Management Plan	29
5.4	Construction Vehicle Types	30
5.5	Construction Compound	30
6.0	TRAFFIC GENERATION.....	31
6.1	Introduction	31
6.2	HGV Traffic Generation	31
6.3	Staff Movements	31
7.0	TRAFFIC IMPACT	32
7.1	Overview.....	32
7.2	Assessment Methodology	32
7.3	Link Flow Assessment	33



7.4	Assessment Scenarios	34
7.5	Development Traffic Distribution	35
7.6	Link Flow Impact Assessment Results: Local Road Network	35
8.0	TRANSPORT IMPLEMENTATION STRATEGY.....	37
8.2	Existing Measures.....	37
8.3	Proposed Measures.....	38
9.0	SUMMARY AND CONCLUSIONS.....	39

TABLES

Table 2.1 – Observed 12hr Profile of HGV Movements to/from Existing Kronospan Facility	13
Table 2.2 – Total Traffic Generation at Existing Kronospan Facility (Weighbridge Data Analysis).....	14
Table 2.3 – Average Payload by Material Type (Tonnes).....	14
Table 2.4 – Summary of Local Bus Services.....	20
Table 2.5 - Local Rail Services from Chirk Rail Station	21
Table 4.1 – Proposed Feedstock Configuration (existing on-site processes)	24
Table 7.1 – Operational Phase Impact - Total Vehicles (Two-Way)	35
Table 7.2 – Operational Phase Impact - HGVs (Two-Way).....	35
Table 7.3 – Operational Phase Impact - Total Vehicles (Two-Way)	36
Table 7.4 – Operational Phase Impact - HGVs (Two-Way).....	36

APPENDICES

Appendix A – Traffic Flow Diagrams

Appendix B – Routing Map and Driver Leaflet



1.0 INTRODUCTION

1.1 Purpose of this Report

- 1.1.1 This Transport Statement (TS) has been prepared to inform Planning and Environment Decisions Wales (PEDW), the Local Planning Authority (LPA) and Local Highway Authority (LHA) of the highways and transport related implications of the Proposed Development. The LPA and LHA in this context is Wrexham County Borough Council (WCBC).
- 1.1.2 A detailed description of the Proposed Development is provided at **ES Chapter 4.0 (Description of the Proposed Development)**. A summary description of the Proposed Development, focusing on the aspects which are directly relevant to this TS is provided at Chapter 4 of this TS.

1.2 Background

- 1.2.1 The Applicant has been operating for 55 years (manufacturing for 52 years) at its site in Chirk, Wales. It is the world's leading manufacturer of wood-based panels using advanced technology and has pioneered many of the industry's key advances.
- 1.2.2 The products produced have a wide application across the flooring, furniture, and refurbishment industries. The primary products manufactured by the Applicant at the existing Kronospan Facility are Medium Density Fireboard (MDF) and Particleboard (PB), from which several secondary products are produced such as laminate flooring, worktops and melamine faced boards.
- 1.2.3 The existing Kronospan Facility is a major local employer within WCBC, employing over 600 staff, of which 90% live within 10 miles. It is estimated that the existing Kronospan Facility also provides indirect employment to 6,000 people in industries relating to the manufacturing and supply chains associated with the existing site operations.

1.3 Pre-Application Advice and Environmental Impact Assessment Scoping

Pre-Application Advice

- 1.3.1 Early engagement has been undertaken with PEDW to ascertain a without prejudice view of the initial Proposed Development (including its principle, adherence to



national planning policy, and proposed assessment) via a formal request for pre-application advice submitted to PEDW on 22 May 2024.

- 1.3.2 Formal pre-application advice was issued by PEDW on 19 June 2024. Of relevance to transport, it was suggested that the proximity principle, as described in Planning Policy Wales (PPW) and Technical Advice Note 21: Waste (TAN 21) is considered. In particular the *“overall balance of the relative difference in the number of vehicular trips where currently waste is exported from the site to the potential future situation where on-site waste will be converted to energy, taking into account some waste material will be imported.”*

EIA Scoping

- 1.3.3 In accordance with Regulation 14 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (The EIA Regulations), a formal request for a Scoping Direction was submitted to Planning and Environment Decisions Wales (PEDW) on 30 May 2024 and was accompanied by a Scoping Report (**Appendix 1C**) which set out the proposed EIA scope of the Proposed Development.
- 1.3.4 The Scoping Report included an assessment of transport matters associated with the Proposed Development in EIA terms and concluded that for both the construction and operational phases, the total vehicles and total Heavy Goods Vehicle (HGV) movements associated with the Proposed Development would be below the thresholds set out in the Institute of Environmental Management and Assessment (IEMA) guidance document, ‘Environmental Assessment of Traffic and Movement’ (July 2023) (‘IEMA Guidance’) such that this element can be scoped out of the subsequent EIA process at the planning application stage.
- 1.3.5 The Scoping Report did however also include a suggested scope of other, non-EIA documentation that would support the Development of National Significance (DNS) application. This included a Transport Assessment broadly comprising the following elements:
- Review of existing site context, local highway network, road safety conditions and presentation of baseline traffic data.

- Details of construction impacts, including phasing, trip generation during construction, construction traffic impact, construction traffic management plan, abnormal load strategy, and details of construction vehicles.
- Forecast trip generation during both construction and operational phases using a first principles' approach, expressed as both annual and daily traffic flows.
- Detailed highways analysis to include details of the necessary assessment time periods, future year traffic growth assumptions, details of committed development traffic, trip generation and assignment on following links (subject to agreement with Local Highway Authority):
 - Link 1 - B5070 Holyhead Road (North of Existing Site Access).
 - Link 2 - B5070 Holyhead Road (North of Old Black Park Road).
 - Link 3 - A5 (West of Whitehurst Roundabout).
 - Link 4 - A5 (East of Whitehurst Roundabout).
 - Link 5 - A483 (North of Halton Roundabout).
 - Link 6 - A483 (South of Halton Roundabout).
- Presentation of a single link flow analysis of the Proposed Development traffic distribution, considering a single access point.
- Operational analysis of the access junction (one junction).
- A 'Transport Implementation Strategy' (Travel Plan) section, as per Technical Advice Note 18: Transport (TAN18) requirements.

1.3.6 A formal Scoping Direction (**Appendix 1D**) was issued by PEDW on 31 July 2024 which confirmed that the Proposed Development would fall under Schedule 1, Part 10 of the EIA Regulations (and would therefore require EIA) and provided PEDW's opinion regarding the proposed EIA scope of the Proposed Development.

1.3.7 WCBC stated in their consultation response (in the Scoping Direction) that the application should be accompanied by a Transport Assessment detailing anticipated traffic generation arising from the Proposed Development (outside of the scope of the Environmental Statement (ES)). PEDW agreed with this approach noting that should the Transport Assessment identify significant effects, then the topic of traffic and transport should be scoped into the ES. Welsh Government Highways provided information regarding the Transport Assessment scope in their consultation response.



Subsequent Proposed Development Design Changes

- 1.3.8 The Scoping Report (based on the initial design) set out that between 48% and 61% of the feedstock for the Proposed Development would be generated on-site. The design has since been revised such that at least 88.8% of the feedstock would be generated on-site.
- 1.3.9 As such, the projected trip generation associated with the operation of the Proposed Development has now significantly reduced from that envisaged at the EIA Scoping stage and comprises a net increase of just seven HGV loads per day (i.e. 14 two-way) (previously 23 HGV loads per day, 46 two-way).
- 1.3.10 This equates to an increase of approximately one two-way HGV movements during the peak hours. Given this negligible increase in traffic, a Transport Statement (TS) has been prepared, herewith, not least since this increase in traffic does not warrant detailed junction capacity modelling of the road network.

1.4 Report Structure

- 1.4.1 The structure of this TS is as follows:
- **Chapter 2** describes the existing conditions at and close to the Site, including the Site location, local highway network, baseline traffic data, highway safety, and accessibility.
 - **Chapter 3** describes the existing Kronospan operations, including information regarding its current operation and committed developments.
 - **Chapter 4** provides a description of the Proposed Development.
 - **Chapter 5** sets out matters relating to the construction phase of the Proposed Development.
 - **Chapter 6** presents forecast traffic generation figures associated with the Proposed Development.
 - **Chapter 7** provides an assessment of the anticipated traffic impact of the Proposed Development on the local highway network.
 - **Chapter 8** sets out the Transport Implementation Strategy.
 - **Chapter 9** summarises the report with a series of conclusions.

2.0 EXISTING CONDITIONS

2.1 Existing Kronospan Facility

- 2.1.1 The entirety of the existing Kronospan Facility covers an area of approximately 40 hectares (ha), with approximately 14ha of this developed with industrial buildings and plant. Several industrial process facilities are in the western half of the existing Kronospan Facility which are used to process, sort and dry the raw wood materials used in the manufacture of MDF and PB. These include several tall structures, including stacks, that emit abated process emissions to the atmosphere. The tallest structures within the existing Kronospan Facility are the biomass plant stack which is 70m in height, the SEKA wet electrostatic precipitator (WESP) filter which has a stack height of 65.5m and stack width of approximately 5m, the MDF cyclones (57m high), and the dryer exhaust stack at the WESP Chip Dryer (50m high).
- 2.1.2 Several process buildings are in the northern half of the existing Kronospan Facility including: a sawmill, formalin plant and the secondary product manufacturing facility (*Kronoplus*) which produces laminate flooring and worktops.
- 2.1.3 The development of the existing Kronospan Facility is ongoing, reflecting changes in industrial processes and in market conditions. Planning permission has been granted for the following developments which are either recently completed, under construction, or planned to be constructed in the near future:
- An OSB facility (granted 14 August 2019 under appeal reference APP/H6955/A/19/3227571) at the western extent of the existing Kronospan Facility; the OSB facility is currently under construction.
 - A new warehouse building (granted 13 April 2022 under planning reference P/2021/0725) in the north-east part of the existing Kronospan Facility, which will deliver 15,029sqm of floorspace (GEA). This planning permission also includes a new sprinkler tank between the northern extent of Kronoplus and the existing Kronospan Facility's northern boundary.
 - An extension to the existing main warehouse building to create a covered loading yard and storage area to facilitate site operations (granted 04 July 2022 under planning reference P/2022/0336).

- The erection of a new building to form engineering stores, a dedicated apprentice workshop, an access track around the new structure and ancillary works (granted 07 November 2022 under planning reference P/2022/0615).
- The erection of two raw material silos, extension to the existing chip preparation building, and the erection of three silos and associated works (granted 09 January 2023 under planning reference P/2022/0765).
- A proposed new access road (North Access Road), lorry park, weighbridge, 132kV substation and associated infrastructure on land immediately north of the existing Kronospan Facility. Planning permission granted under WCBC planning reference P/2022/1080, subject to confirmation of legal agreements.

2.2 Wider Context

- 2.2.1 Chirk is a small town off the A5 and just north of the England-Wales border (within Wales). The residential areas of the town mostly lie east of the B5070, with the existing Kronospan Facility to the west of this road. On the western side of the B5070, to the south-east of the existing Kronospan Facility is an area of greenspace comprising a private sports club (immediately south of the Kronospan car park) and Chirk Recreation Ground. Chirk town centre lies south-east of the existing Kronospan Facility and includes various commercial and community buildings and areas of public open space. The wider area is rural.
- 2.2.2 The western perimeter of the existing Kronospan Facility is formed by the Shrewsbury to Chester railway. Further west, the land rises towards the foothills of the Welsh mountains. The Llangollen Canal forms part of the Pontcysyllte Aqueduct and Canal World Heritage Site (WHS). In addition to recognised heritage value, the canal corridor is an important recreational route; water is also abstracted from the canal for use in the Applicant's manufacturing process.
- 2.2.3 The eastern perimeter of the existing Kronospan Facility is formed by Holyhead Road (B5070). An earth bund, planted with trees, has been developed along the eastern perimeter of the existing Kronospan Facility to reduce the visibility of Kronospan operations from neighbouring properties on Holyhead Road (B5070). An undulating agricultural landscape extends east of Chirk. The A5 corridor runs north-south in what is almost a straight line along the eastern edge of a ridge approximately 1km east of the existing Kronospan Facility. The Brynkinallt estate (Registered Park and

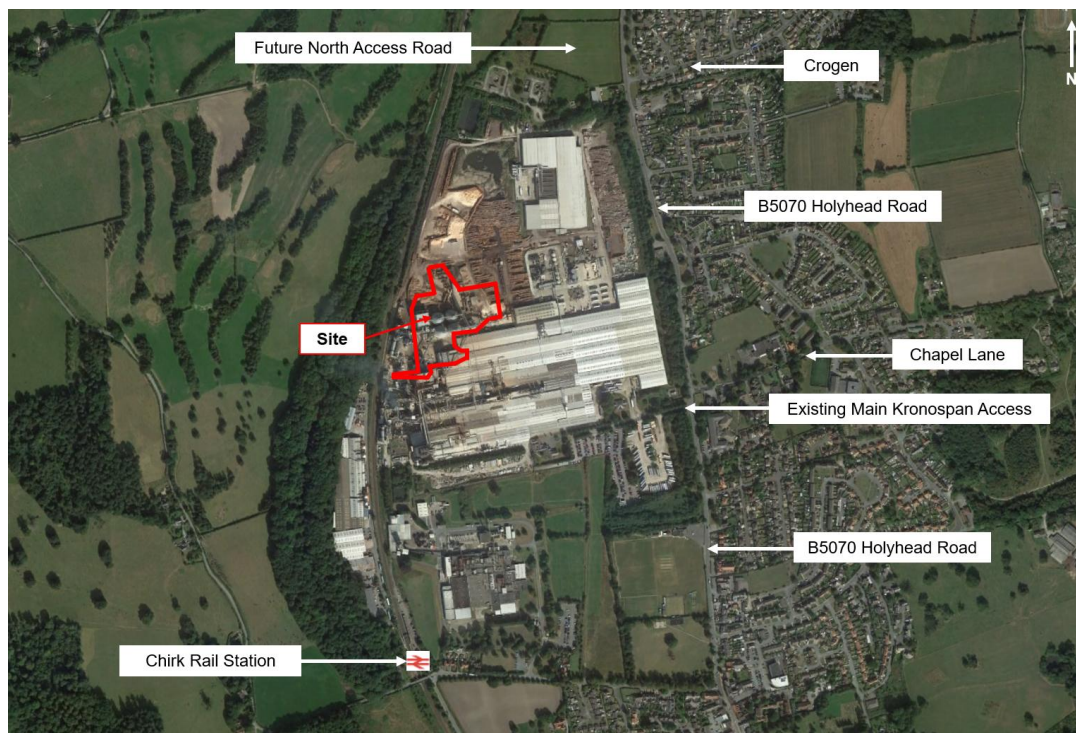


Garden) is bisected by the road. The wholly separate Brynkinallt Park lies west of the road, at the eastern edge of Chirk, on reclaimed colliery land.

2.2.4 To the immediate south of the existing Kronospan Facility is the Mondelez International factory, the Chirk AAA sports ground and the Chirk recreational ground. Further south, the steep sided valley of the River Ceiriog cuts through the surrounding hills 1.8km to the south of the existing Kronospan Facility. Parts of the valley slopes are well wooded. The Llangollen Canal crosses the valley via the Chirk Aqueduct, which forms part of the WHS. The Ceiriog Trail recreational route runs along the southern lip of the valley.

2.2.5 The Site is at the western part of the existing Kronospan Facility, approximately 1.5km to the north of Chirk Town Centre. The location of the Site in the context of the existing Kronospan Facility and local area is shown at **Inset 2.1**.

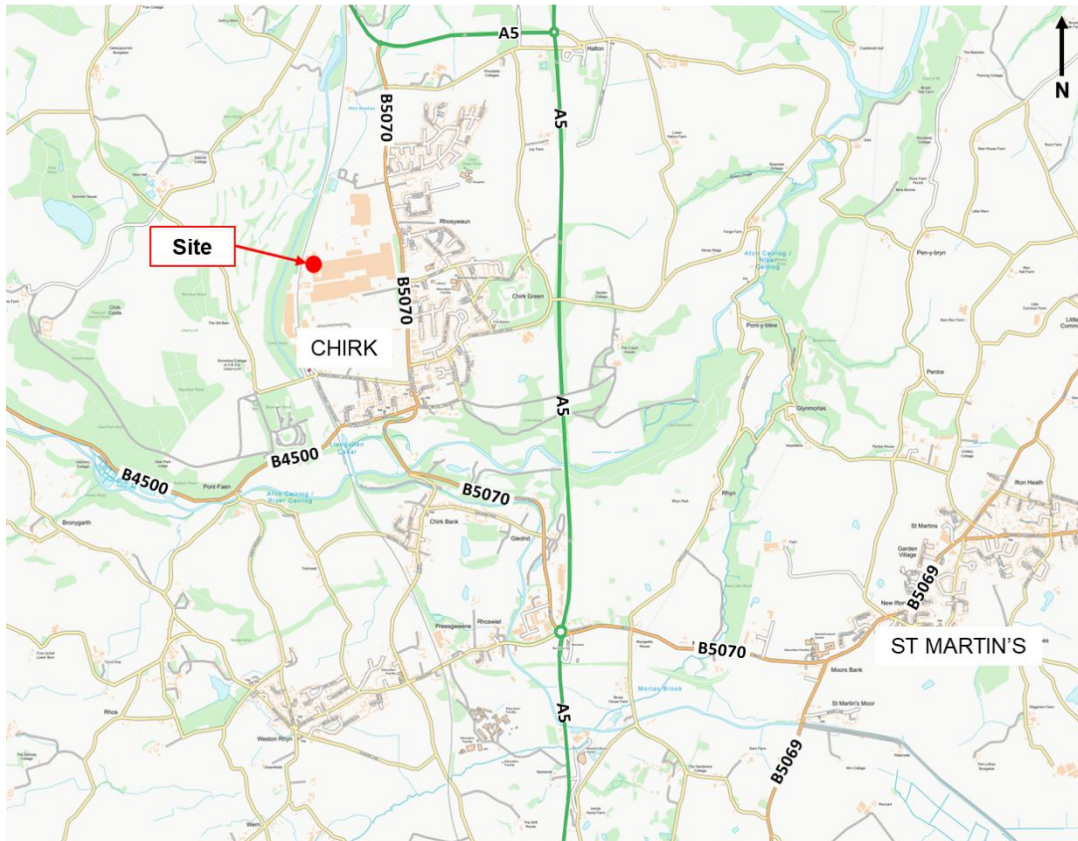
Inset 2.1 – Site Location (Local Context)



2.3 Highway Network

- 2.3.1 The location of the Site in relation to the wider highway network is shown on **Inset 2.2** with a description of key local and strategic roads provided further below.

Inset 2.2 – Location of Site Relative to Wider Highway Network



Holyhead Road (B5070)

- 2.3.2 The existing Kronospan Facility is to the west of Holyhead Road (B5070). This road operates in a general north-south alignment as a two-way, single carriageway road and accommodates a footway on its eastern side, with parts of the road also accommodating a footway on its western side. Locally to the Site, the road is lit and is subject to a speed limit of 30mph, although this increases to 50mph to the north on approach to the A5. Some parts of the route incorporate on-carriageway advisory cycle lanes.
- 2.3.3 The B5070 connects to the A5 approximately 1.5km to the north of the existing Kronospan Facility via a 3-arm priority roundabout junction known as 'Whitehurst Roundabout'. Approximately 1km to the east of this roundabout, the A5 connects to

the A483 by way of a 4-arm priority roundabout junction known as 'Halton Roundabout'.

- 2.3.4 To the south of the existing Kronospan Facility, the B5070 leads to the A5 at the 'Gledrid Roundabout' via Chirk town centre, although use of this route by goods vehicles in excess of 17T weight is prohibited by way of signed restrictions.

Strategic Highway Network (A5 & A483)

- 2.3.5 Both the A5 and A483 constitute part of the Strategic Road Network (SRN) in North Wales as managed by the North and Mid-Wales Trunk Road Authority (NMWTRA) on behalf of the Welsh Government (WG).
- 2.3.6 The A5 links Llangollen in the west to the M54 (and ultimately the M6) in the West Midlands via Shrewsbury. The route converges with the A483 at Halton Roundabout, before then diverging in a southeast direction at Mile End Roundabout, Oswestry. The A483 constitutes a north – south strategic link between Chester and the western termination of the M4 at Llanelli.
- 2.3.7 Halton Roundabout (A5/A483) has undergone several recent upgrades by NMWTRA and is subject to a programme of continual review and upgrade where required. The Halton Roundabout is currently characterised by two lanes at each approach. Street lighting is present at regular intervals around the roundabout.
- 2.3.8 The A5 then joins the B5070 Holyhead Road via a priority compact roundabout. At this location the A5 forms a two-way strategic route. Lighting columns are present at regular intervals on either side of the road. The A5 is subject to the national speed limit at this location.
- 2.3.9 The combined A5/A483 form part of the Trans-European Network (TEN) between Holyhead and Felixstowe, facilitating wider freight movement by road from Ireland to the Benelux countries via the UK strategic highway network. The A483 is also defined as 'Core' to the Strategic Network in North Wales by the NMWTRA. Both routes can be defined predominantly as Single 2 (S2) in the vicinity of the Site, encompassing a one metre hard strip; however, there are short sections of 2+1 alignment on the A483. Principal junctions are predominantly accessed via roundabouts with no minor road access to the A483 or the Chirk Bypass sections of the A5.



Old Black Park Road

- 2.3.10 Old Black Park Road provides a route between the Afon Bradley Farm and Chirk Retail Park to the east. The road is rural in nature, has no footway provision and is unlit. The carriageway is approximately 4.25m in width, increasing to approximately 4.75m further to the east.

Crogen

- 2.3.11 Crogen is a residential road situated approximately 670m to the north of the existing Kronospan Facility access. The route provides access to a small network of residential cul-de-sacs to the east of the Site. Crogen is accessed via a priority junction where it intersects with the B5070. It is approximately 7.0m in width, there are footways of approximately 2.0m width on either side of the carriageway. Street lighting is at regular intervals on either side of the carriageway, the road is subject to a 30mph speed limit and this is re-enforced by the incidence of speed bump traffic calming measures.

Chapel Lane

- 2.3.12 Chapel Lane is approximately 30m north and opposite the existing Kronospan Facility access and provides access to several residential areas within Chirk. Chapel Lane is an unclassified road, providing for two-way traffic and a single lane in each direction. The road is subject to a 20mph limit for its entire length. Traffic calming measures in the form of speed bumps are also in place for its entire length. The route is lit with lighting columns being provided at regular intervals along the road.

Kronospan Access Arrangements

- 2.3.13 The existing main access to the Kronospan Facility is via a simple priority T-junction with Holyhead Road (B5070) approximately 30m south of the B5070/Chapel Lane junction. Signage is in place at the junction which directs HGVs exiting the Kronospan Facility to travel northwards to reach the A5, and also advises of the restrictions to goods vehicles (in excess of 17T weight) that is in-place further south.
- 2.3.14 The minor arm of the junction (i.e. the existing Kronospan Facility access road) is subject to a 20mph speed limit and accommodates a separate pedestrian footpath and gated entrance on the northern side of the road, segregated from the carriageway by way of a wide grass verge.



- 2.3.15 Planning permission has been granted (WCBC planning reference P/2022/1080) subject to confirmation of legal agreements for a new access road (North Access Road), lorry park, weighbridge, 132kV substation and associated infrastructure on land immediately north of the existing Kronospan Facility. Once constructed, the North Access Road would be used as the main access to the existing Kronospan Facility and the operation phase of the Proposed Development.
- 2.3.16 Once the North Access Road is constructed, the current access to the existing Kronospan Facility would no longer be used for the access and egress of HGVs, except in exceptional circumstances.
- 2.3.17 Existing railhead and sidings within the existing Kronospan Facility are used to import timber for the manufacturing process (as well as import via HGV). Improved railway siding facilities have been constructed to enable an increased volume of timber to be imported by rail.

2.4 Baseline Traffic Data

- 2.4.1 To establish existing traffic conditions on the local highway network, Manual Classified Turning Count (MCC) surveys were undertaken at the following key network locations:
- B5070 Holyhead Road/Farm Access/Old Black Park Road junction;
 - B5070 Holyhead Road/A5 Roundabout (Whitehurst Roundabout); and
 - A5/A483 Roundabout (Halton Roundabout).
- 2.4.2 The above surveys were collected during a neutral weekday (Tuesday 08 March 2022) during both the AM (0700-100 hours) and PM (1600-1900 hours) peak periods.
- 2.4.3 An additional MCC was conducted at the existing Kronospan Facility access over a period of seven days (from Tuesday 08 March 2022 to Monday 14 March 2022 inclusive), covering 12 hours per day (0700 – 1900 hours).
- 2.4.4 Automatic Traffic Counter (ATC) data was also collected over a seven-day period between 08 and 15 March 2022 at the following locations:
- north of the B5070 Holyhead Road/Farm Access/Old Black Park Road junction; and



- south of the B5070 Holyhead Road/Farm Access/Old Black Park Road junction.

2.4.5 Reference to the recorded peak hour traffic data identifies that, at the existing Kronospan Facility access junction with the B5070 Holyhead Road, traffic flows on the mainline carriageway stand at c.700 two-way movements during the AM peak period, whilst during the PM peak flows are higher at c.800 two-way movements.

2.4.6 Flows are marginally higher to the north of the existing Kronospan Facility access, as would be expected given the routing restrictions on HGV movements to the south. Over the course of the 12-hour core daytime period (0700-1900 hours) two-way movements stand at c.9,900.

A5/B5070 Whitehurst Roundabout

2.4.7 Traffic flows on the A5, as recorded at its junction with the B5070, identify broadly similar traffic levels to those reviewed above for the B5070 near the existing Kronospan Facility access - i.e. two-way flows of c.700 in the AM period and c.1,000 in the PM period. In terms of direction of travel, eastbound flows are marginally higher than westbound flows on the A5, although any difference is fairly limited.

A5/A483 Halton Roundabout

2.4.8 With regard to traffic levels at the A5/A483 Halton Roundabout junction, two-way movements on the A483/A5 north-south corridor are c.2,000 during the AM and PM peak periods.

2.4.9 It should be noted that the A5/A483 Halton Roundabout junction is observed to operate under variable capacity conditions, in particular during the traditional peak hours. Indeed, the junction is the subject of ongoing monitoring by WG/NMWTRA and their framework highway consultants, with several improvements having been made over the years. This ongoing monitoring seeks to identify any new operational issues, review the effectiveness of any improvement measures that have been implemented, as well as identify opportunities for further improvements to be made in the future.



Existing Kronospan Facility Movements

- 2.4.10 A review of the existing Kronospan Facility access junction identifies that, over the course of the 12-hour daytime period, up to 266 HGVs were recorded as exiting towards the north, with a further 10 exiting towards the south. In terms of total traffic over this period, a total of 771 vehicles were recorded leaving the access junction, of which 78% travelled north on the B5070. Incoming movements are noted as being broadly similar, with 674 total vehicles turning into the access (78% from the north), of which 254 comprise HGVs from the north and 10 from the south.
- 2.4.11 During the AM and PM peak periods two-way vehicle movements on the existing Kronospan Facility access road were noted as 83 and 256 respectively, of which 48 and 28 respectively were HGVs. Through further review of the count data, it has been possible to identify a profile of HGV traffic movements to and from the existing Kronospan Facility across a 12-hour period. **Table 2.1** below identifies this profile of HGV movements:

Table 2.1 – Observed 12hr Profile of HGV Movements to/from Existing Kronospan Facility

Hour	Arrivals		Departures		Total
07:00-08:00	10.19%	27	10.51%	29	56
08:00-09:00	7.55%	20	10.14%	28	48
09:00-10:00	6.79%	18	5.07%	14	32
10:00-11:00	11.70%	31	9.42%	26	57
11:00-12:00	9.43%	25	10.14%	28	53
12:00-13:00	9.43%	25	6.52%	18	43
13:00-14:00	10.57%	28	9.42%	26	54
14:00-15:00	8.68%	23	9.78%	27	50
15:00-16:00	11.70%	31	7.97%	22	53
16:00-17:00	8.30%	22	9.78%	27	49
17:00-18:00	2.26%	6	7.97%	22	28
18:00-19:00	3.40%	9	3.26%	9	18
08:00-09:00	7.55%	20	10.14%	28	48
17:00-18:00	2.26%	6	7.97%	22	28
12hrs	100.00%	265	100.00%	276	541

- 2.4.12 Review of the HGV profile data in **Table 2.1** above outlines that most HGV movements are fairly evenly distributed across the daytime period between 0700 and 1900 hours. Maximum HGV movements occur between 1000 and 1100 hours, when up to 57 two-way movements were recorded.
- 2.4.13 Two-way HGV movements during the identified network AM and PM peak hours total 48 and 28 respectively, while over the course of the 12-hour daytime period (0700-1900 hours) 541 two-way movements were recorded.

2.5 Weighbridge Data Analysis

- 2.5.1 The existing Kronospan Facility includes a weighbridge at the main entrance where all goods delivery vehicles are required to login/report upon entering.
- 2.5.2 The Applicant has provided comprehensive weighbridge data for the period between 01 April 2021 and 28 March 2022. Analysis of the weighbridge data identifies peak delivery times of imports and exports, the daily arrivals and departures in total and of each material type and average payloads.
- 2.5.3 The following table summarises the total traffic generation identified from the weighbridge data analysis. The total traffic generation comprises timber and chemical inbound movements and sawmill and board outbound movements (*on the busiest average day, a Wednesday*):

Table 2.2 – Total Traffic Generation at Existing Kronospan Facility (Weighbridge Data Analysis)

	AM (07:00 to 08:00)	PM (14:00 to 15:00)	Daily
Arrivals	28	24	355
Departures	28	24	355
2-Way	55	48	710

- 2.5.4 The peak hours for the operation of the existing Kronospan Facility were identified as 0700 – 0800 hours and 1400 – 1500 hours.
- 2.5.5 The following table presents the average vehicle payload weight associated to vehicles delivering each material type.

Table 2.3 – Average Payload by Material Type (Tonnes)

Material	Average HGV Weight (T)
Inbound	
Timber	21.2
Chemicals	No weight recorded
Outbound	
Sawmill	24.5
Boards	25.1

2.6 Public Rights of Way (PRoW)

- 2.6.1 There are no Public Rights of Way (PRoW) that operate through, or in the vicinity of the Site or the wider existing Kronospan Facility. The nearest PRoW is 'CHI/42', a public footpath approximately 500m south-east of the Site at Chirk AAA Sports and Social Club.

2.7 Highway Safety

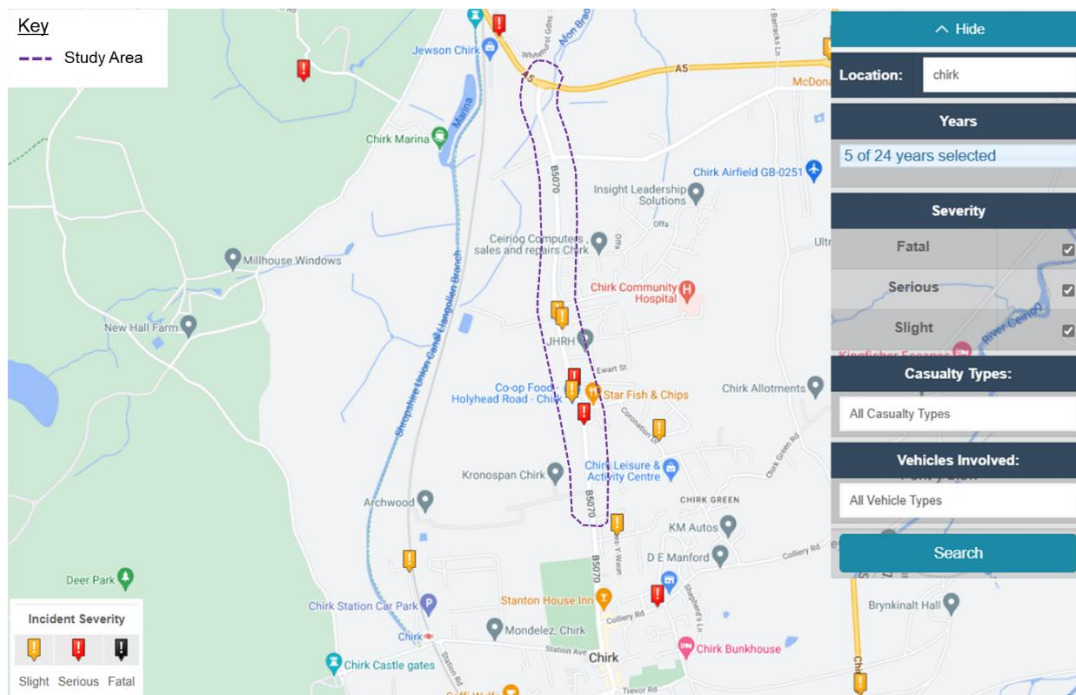
- 2.7.1 Personal Injury Accident (PIA) data for the highway network locally has been obtained from the online CrashMap resource (www.crashmap.co.uk). This provides details of all PIA events attended by the police. The data is approved by the National Statistics Authority and reported on by the Department for Transport (DfT) each year.
- 2.7.2 Data was extracted for the most recently available five-year period which is 2018 to 2022 inclusive. The location and severity of the accidents within the study area, which includes the B5070 and A5 corridors up to and including the Halton Roundabout are shown on **Inset 2.3** and **Inset 2.4** below.

B5070 Holyhead Road/Whitehurst Roundabout

- 2.7.3 PIAs along the B5070 Holyhead Road and at the Whitehurst Roundabout during the study period are shown on **Inset 2.3** following:



Inset 2.3 – 5 Year PIA Data (B5070/Whitehurst Roundabout)



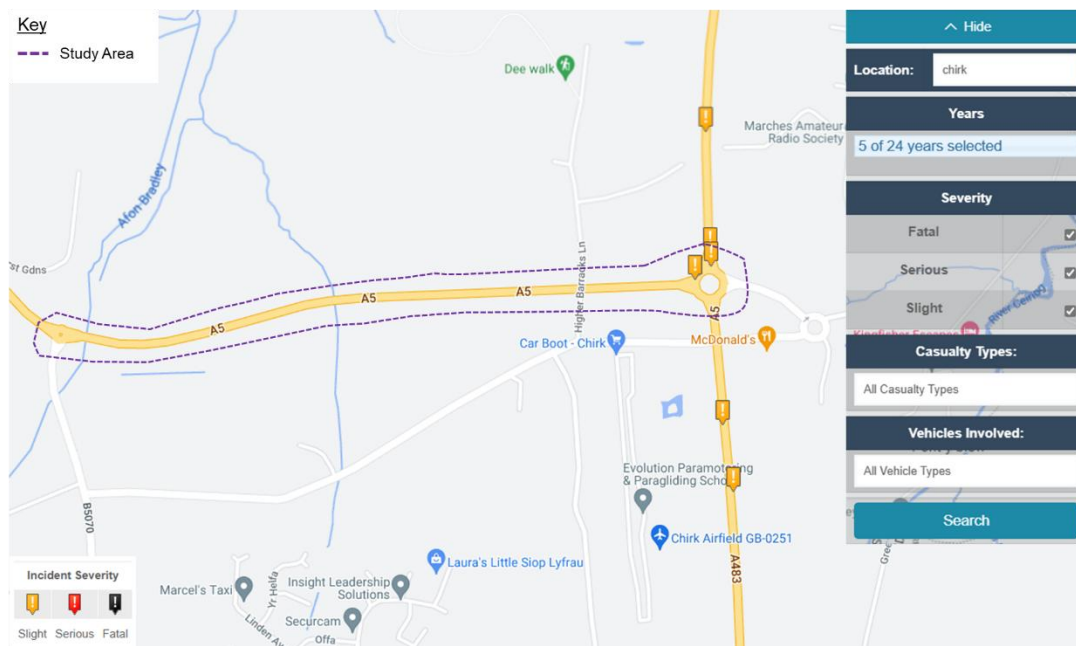
2.7.4 **Inset 2.3** shows that a total of five accidents occurred within the above study area during the assessed period, three of which resulted in 'slight' injury and two of which resulted in 'serious' injury.

2.7.5 When considered volumetrically, the five accidents recorded along the B5070 Holyhead Road equate to one accident per year on average. This is not considered to be unusually onerous, especially given that this route carries in the region of 10,000+ daily two-way trips at this location (source: Independent traffic counts).

A5/A483 Halton Roundabout

2.7.6 PIAs on the A5 east of the B5070, including the A483 Halton Roundabout during the study period are shown on **Inset 2.4** below:

Inset 2.4 – PIA Data (A5/A483 Halton Roundabout)



2.7.7 **Inset 2.4** shows that a total of three accidents occurred within the above study area during the assessed period, each of which resulted in 'slight' injury.

2.7.8 This is not considered to be unusually onerous, especially given that this route carries in the region of 19,000+ daily two-way trips at this location (Source: DfT Traffic Count Data).

2.7.9 Given the above review of accident history, which identifies no evidence of road safety issues either relating to operation of the existing Kronospan Facility, or to the use of the local highway network generally, it is concluded that there is no reason to expect that the Proposed Development would result in a material detrimental effect on local highway safety conditions.

2.7.10 Therefore, it is considered that the existing accident record does not present a material concern in the context of the Proposed Development.

2.8 Sustainable Transport Connections

2.8.1 Most of the trips associated with the Proposed Development are delivery related and are not therefore likely to be influenced or changed to other more sustainable modes of travel. Therefore, the accessibility of the Site has only been touched on lightly within this section of the TS.

- 2.8.2 Sustainable modes of transport and existing sustainable transport links can be utilised by employees and visitors to travel to/from the existing Kronospan Facility. The existing Kronospan Facility represents a well-established employer within the Chirk area and is accessible by sustainable modes for the majority of Chirk residents. This section considers access to the Site for pedestrians, cyclists and public transport users in greater detail.

Pedestrian Access

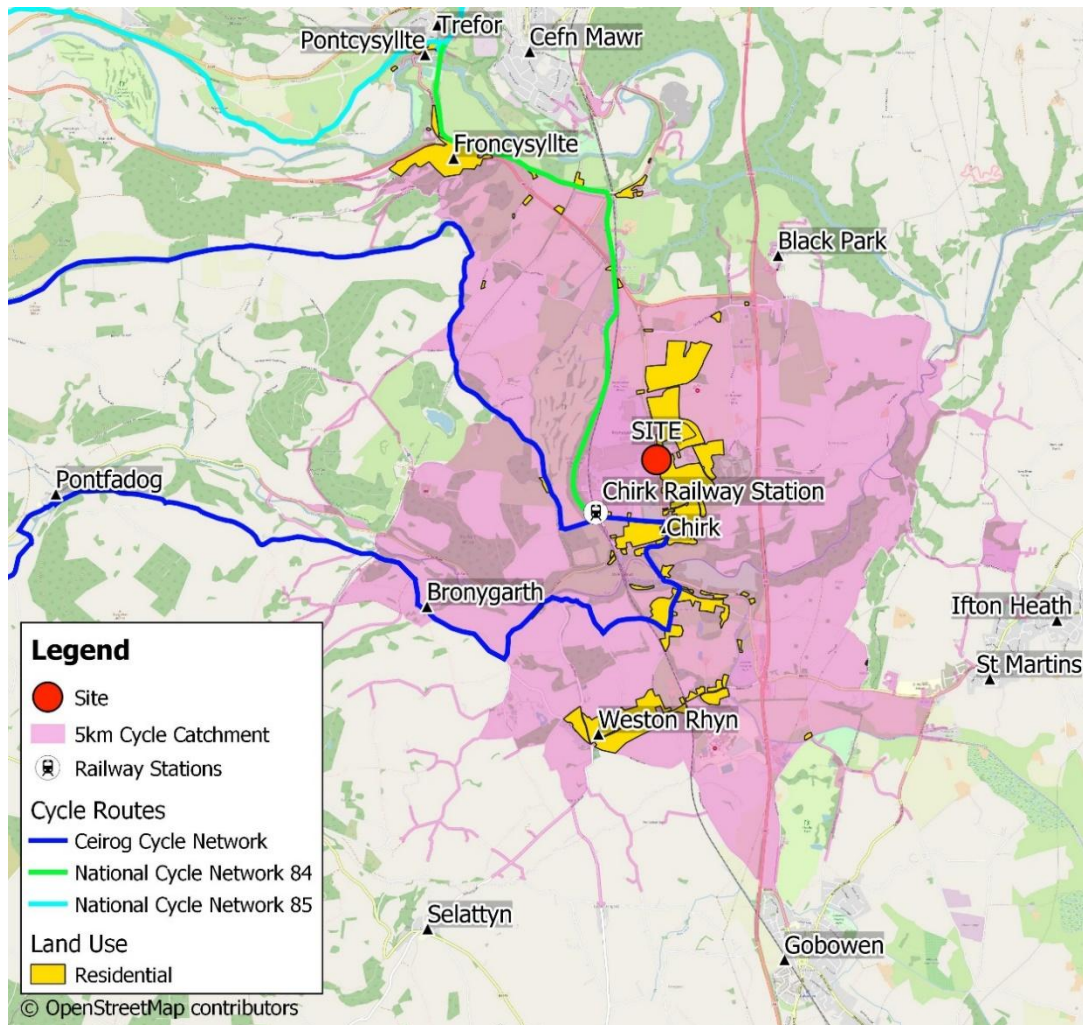
- 2.8.3 The Chartered Institution of Highways and Transportation (CIHT, formerly the IHT) in their document, 'Providing for Journeys on Foot' states that "*walking accounts for over a quarter of all journeys and four fifths of journeys of less than one mile*" (paragraph 1.12, page 11). In other words, around 80% of trips of less than one mile in length are made on foot.
- 2.8.4 The CIHT document recognises that although acceptable walking distances will vary between individuals and circumstances, for commuting, school and sight-seeing trips, a walk distance of 2km can be considered as the 'preferred maximum'.
- 2.8.5 **Inset 2.1** (earlier in this section) shows that the Site is well located in respect to existing residential areas in the Chirk area, where a number of existing and prospective future employees are likely to reside, as well as in relation to non-car transport options locally that are accessible on-foot.
- 2.8.6 The local highway network provides a safe and realistic opportunity to reach the areas contained within the 2km walking catchment via the existing high-quality pedestrian infrastructure in the form of footways, street lighting and pedestrian crossing points equipped with dropped kerbs at the key junctions surrounding the Site.

Cycle Access

- 2.8.7 It is generally accepted that cycling provides a realistic and healthy alternative to the private car for journeys of up to 5km as a whole, or as part of a longer journey by public transport.
- 2.8.8 To assist in summarising the accessibility of the Site by cycle, an indicative 5km cycle catchment plan has been produced, as shown on **Inset 2.5**.



Inset 2.5 – 5km Cycle Catchment



- 2.8.9 **Inset 2.5** shows that the existing Kronospan Facility is within 5km cycle distance of several settlements including, Froncysyllte, Black Park, Chirk, Bronygarth and Weston Rhyn. There are therefore several residential areas within cycle distance of the Site, allowing for local employees to commute to/from work by cycle.
- 2.8.10 **Inset 2.5** also shows that there are a number of regional cycle routes in the area; the National Cycle Network (NCN) Route 84, NCN Route 85 and the Ceirog Cycle Network. These provide a combination of high quality on and off-street cycle infrastructure. The existing Kronospan Facility therefore provides for longer journeys by bicycle.

2.8.11 Furthermore, the local highway network features generally level gradients, wide carriageway widths and street lighting. The local highway network is therefore conducive to on-road cycling.

Public Transport

2.8.12 The existing Kronospan Facility is a short walk from several bus stops served by several regular bus services. There are two bus stops (in both the north and south direction) on Holyhead Road, approximately 25m north of the existing Kronospan Facility access. The bus stops include timetable information and a shelter in each direction. A bus layby is provided for the northbound stop, whereas the southbound stop is accommodated in-carriageway.

2.8.13 Guidance from the Chartered Institution of Highways and Transportation (CIHT) document, 'Guidelines for Planning for Public Transport in Development' recommends that the maximum walking distance from a new development to a bus stop should ideally be 300m, or a maximum of 400m. The nearest bus stops in this instance are therefore well within the CIHT's ideal 300m walking distance.

2.8.14 The bus services available from these bus stops are summarised in **Table 2.4**.

Table 2.4 – Summary of Local Bus Services

Service Number	Route	Typical Frequency
2	Wrexham – Bryn Offa – Rhostyllen – Rhosllanerchrugog – Johnstown – Ruabon – Acrefair – Cefn-Mawr – Chirk – Gobowen – Park Hall - Oswestry	Hourly
2A	Wrexham – Bryn Offa – Rhostyllen – Rhosllanerchrugog – Johnstown – Ruabon – Acrefair – Cefn-Mawr – Chirk – Weston Rhyn - Oswestry	Hourly
2C	Wrexham – Bryn Offa – Rhostyllen – Rhosllanerchrugog – Johnstown – Ruabon – Plas Madoc – Cefn-Mawr – Chirk – Gledrid - Oswestry	Twice a day
64	Llanarmon – Tregeiriog – Glyn Ceiriog – Dolywern – Pontfadog – Chirk – Halton – Bryn-yr-Eos – Llangollen	Every 2 hours
T12	Machynlleth – Newtown – Welshpool – Oswestry – Chirk – Wrexham	Every 2 hours
Total		3 per hour

2.8.15 **Table 2.4** shows that in total, the nearby bus stops provide approximately three services per hour, which equates to roughly one service every 20 minutes on average.

2.8.16 Chirk rail station is approximately 1.3km from the Site (circa 15 minutes on foot). It is served by a two-hourly service between Holyhead and Birmingham International, as well as a two-hourly service between Holyhead and Cardiff Central. The existing service pattern, summarised below, provides an hourly connection to the major population centres of Wrexham, Chester and Shrewsbury, as well as the local settlements of Ruabon and Gobowen.

Table 2.5 - Local Rail Services from Chirk Rail Station

Service	Operator	Route	Daytime Headway
Holyhead – Birmingham International	Arriva Wales	Bangor – Chester – Wrexham – Shrewsbury – Wolverhampton – Birmingham New Street	Two-hourly
Holyhead – Cardiff	Arriva Wales	Bangor – Chester – Wrexham – Shrewsbury – Hereford – Abergavenny	Two-hourly

Sustainable Access Summary

2.8.17 Overall, it is concluded that the Site represents a sustainable location for an employment development, being within an acceptable walk/cycle catchment of local residential areas, as well as being accessible by both bus and rail services to/from key local settlements slightly further afield. These services are anticipated to reduce the need for employees at the Site to utilise the car for commuting journeys.

3.0 CURRENT AND HISTORIC OPERATIONAL TRENDS

3.1 Overview

- 3.1.1 Details of both the current and historical operation of the existing Kronospan Facility have been established through reference to both operational data, as well as the traffic surveys undertaken at the existing access.

3.2 Current Operational Trends

- 3.2.1 Chapter 2 of this TS provides a review of the observed levels of Kronospan related traffic recorded on the day of the July 2017 traffic surveys. This review identifies a total of 276 outbound HGV movements over the course of the 12-hour period (0700 – 1900 hours) and 265 inbound movements, resulting in a total two-way flow of 541 HGV movements.
- 3.2.2 With regard to total traffic, including car/LGV movements, a total of 1,445 two-way movements were recorded over the 12-hour daytime period (674 arrivals and 771 departures).
- 3.2.3 Reference to information provided by the Applicant has identified that, during the busiest day of operations in March 2022 the number of HGV loads exiting the existing Kronospan Facility averaged 355 per day, approximately equating to 710 two-way HGV movements. It should be noted that this figure is based on weighbridge data and so is unlikely to include other HGV movements which don't pass over the weighbridge, such as those which are empty. These figures can therefore be considered comparable to those identified in the 2022 survey data for the existing access.
- 3.2.4 As detailed at Chapter 2 of this TS, planning permission has been granted for several further developments at the existing Kronospan Facility, which are either recently completed, under construction, or planned to be constructed in the near future

3.3 Historic Operational Trends

- 3.3.1 In 2012 a planning application was submitted to WCBC for the development of a biomass facility and recycled wood fibre offloading and screening facility at the Kronospan site. As part of the 2012 application, a Transport Assessment was

produced, which sought to identify the transport related effects of those development proposals.

- 3.3.2 To inform that review, traffic surveys were undertaken at the access in January 2011. In summary a total of 1,736 two-way vehicle movements were recorded at the access over the duration of the survey (553 arrivals and 493 departures), of which 690 were HGVs (320 arrivals and 370 departures).
- 3.3.3 Comparison of this historical data with that observed for current operations, suggests a broadly similar level of operation at the existing Kronospan Facility, with circa 350 HGV loads per day being recorded.
- 3.3.4 Further information provided by the Applicant, has identified that the existing Kronospan Facility has operated at a higher capacity prior to 2010. Reference to weighbridge records from 2006 identifies that circa 460 loads per day were recorded as leaving the facility. This level of HGV loads would equate to approximately 920 two-way HGV movements per day.

4.0 THE PROPOSED DEVELOPMENT

4.1 Overview

- 4.1.1 This chapter of the TS provides a summary description of the Proposed Development, focusing on the aspects which are directly relevant to the TS. A detailed description of the Proposed Development is provided at **ES Chapter 4.0 (Description of the Proposed Development)**.
- 4.1.2 The layout of the Proposed Development is shown on the drawing provided at **DNS3-003**.
- 4.1.3 The Proposed Development is a Low Carbon Combined Heat and Power (CHP) Facility and would have the capacity to generate up to 40 megawatts (MW) of electricity and 125MW of thermal energy for use in the existing manufacturing processes at the existing Kronospan Facility. The Proposed Development would be capable of processing up to 293,000 tonnes per annum (TPA) of feedstock.

4.2 Feedstock

Sourced from Existing On-Site Processes

- 4.2.1 **Table 4.1** below provides details of the CHP Facility feedstock that is proposed to be generated from existing on-site process wood residues.

Table 4.1 – Proposed Feedstock Configuration (existing on-site processes)

Type/Source	Proposed (Annual) Quantity
<u>Source A - Existing On-Site Process Residues Currently Sold Off-Site</u> On-site process residues currently sold off-site (to be diverted to the proposed CHP Facility). <ul style="list-style-type: none"> Bark from the MDF chipper and sawmill debarking process. MDF process residues. 	2021 – 83,577 TPA 2022 – 77,495 TPA 2023 – 69,990 TPA 2021-2023 Average – 76,991 TPA

Type/Source	Proposed (Annual) Quantity
<p><u>Source B – Operational Status of Existing K7 Biomass Boiler</u></p> <p>Currently processes approximately 70,000 TPA of waste biomass – sourced via unsuitable material arising from the core on-site business of board production and imported Grade C waste wood that is not suitable for board production.</p>	<p>K7 would remain in situ but be used as a back-up boiler only (for when the Proposed Development and the existing K8 boiler have their annual shutdowns) – K7 fuel would be diverted to the proposed CHP Facility</p> <p>2021 – 78,500 TPA</p> <p>2022 – 74,000 TPA</p> <p>2023 – 71,500 TPA</p> <p>2021-2023 Average – 74,667 TPA</p>
<p><u>Source C - Other On-Site Process Residues</u></p> <p>Extraction of smaller fractions of recycled timber or fines from the existing PB process. This fraction often contains the most impurities and gives the PB no structural properties. Removing it adds significant quality improvements to the PB.</p>	<p>Based on the 2021 - 2023 processing data, the following wood residue would have been created from the enhanced PB manufacturing process:</p> <p>2021 – 118,184 TPA</p> <p>2022 – 104,853 TPA</p> <p>2023 – 102,328 TPA</p> <p>2021-2023 Average – 108,455 TPA</p>
TOTAL	260,113 TPA (based on 2021-2023 average)

4.2.2 As set out in set out in **Table 4.1** above, it is proposed that 260,113 TPA of the 293,000 TPA throughput capacity would be generated by existing on-site process residues. This means that the vast majority (88.8%) of the proposed feedstock would be sourced from on-site processes.

Remainder

- 4.2.3 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 – see **Table 4.1**), there would be a ‘remainder’ of 32,887 TPA of biomass feedstock required; this is based on attaining the maximum throughput of the Proposed Development of 293,000 TPA.
- 4.2.4 The feedstock ‘remainder’ would be made up as follows:
- 50% (16,444 TPA) - **The import of forestry brash** for direct use in the proposed CHP Facility.
 - 25% (8,222 TPA) - **The import of Grade C waste wood*** for direct use in the proposed CHP Facility.
 - 25% (8,222 TPA) - **Increased on-site production** that would generate further on-site process residues for direct use in the proposed CHP Facility.
- 4.2.5 *Grade C wood is a mix of waste wood, including panel products and wood treated with preservatives. Whilst not suitable for traditional recycling, it can be used in biomass fuel applications.
- 4.2.6 **ES Appendix 4A** provides an overview of the calculations undertaken with respect to the feedstock quantities described above. **ES Appendix 4A** also provides details of the associated transport impact (tonnes and number of loads) to provide a net figure for transport movements; the net figure factors in transport ‘savings,’ for example existing transport movements to and from site (associated with residues that are currently sold off-site) which would no longer be required due to retaining material on-site for CHP feedstock.

Delivery, Storage and Handling

- 4.2.7 As described above, approximately 88.8% of the feedstock would be generated on-site; the remainder would be imported via HGV which would access the Proposed Development Site using the North Access Road to be constructed north of the Proposed Development. After weighing (using the new weighbridges proposed as part of the North Access Road planning application), the HGVs would proceed on the internal road network towards the Proposed Development Site. After unloading, the HGVs would then exit the Proposed Development Site in a similar (but reverse)



manner to the means of access, through the new weighbridges and back onto Holyhead Road (B5070) via the North Access Road.

- 4.2.8 The feedstock would be unloaded into dedicated screening facilities which would remove materials in the feedstock unsuitable for combustion (such as metals). The screened feedstock would then be transported to storage facilities via overhead conveyor systems. The feedstock would then be transferred to the proposed boiler building via an overhead conveyer system.
- 4.2.9 The proposed CHP Facility feedstock generated on-site originates from existing screening processes and would be conveyed to the same (proposed) dedicated screening facilities (as required) and storage facilities as set out above (for the imported feedstock).

4.3 Operating Hours

- 4.3.1 It is proposed that the CHP Facility would operate on a 24-hour basis. The feedstock would be brought to Site primarily between 0700 and 1900 hours, seven days a week, including Bank Holidays but excluding Christmas Day, Boxing Day and New Years Day. Deliveries outside of those hours would be infrequent.

4.4 Site Access Arrangements

- 4.4.1 Once constructed, the North Access Road (WCBC planning reference P/2022/1080) would be used as the main access to the existing Kronospan Facility and the operation phase of the Proposed Development. Once the North Access Road is constructed, the current access would no longer be used for the access and egress by HGVs except in exceptional circumstances. During the construction phase of the Proposed Development, the existing T-junction access off Holyhead Road (B5070) would be used.
- 4.4.2 It should be noted that for the purpose of robustness, the traffic assessments within this TS assume that no Proposed Development traffic would utilise the North Access Road.
- 4.4.3 Whilst the North Access Road would be used as the main access to the existing Kronospan Facility and to the Proposed Development Site, for robustness it is assumed that all traffic would route via the existing Kronospan Facility access – i.e. the T-junction with Holyhead Road (B5070) – to account for potential effects along

the sections of the B5070 immediately north of the existing Kronospan Facility access.

5.0 CONSTRUCTION

5.1 Introduction

5.1.1 This chapter outlines matters relating to the construction phase of the Proposed Development.

5.2 Construction Phasing and Traffic Impact

5.2.1 Details relating to construction phasing and associated classified traffic generation and impact during each phase will be detailed within a Construction Traffic Management Plan (CTMP). The requirement for a CTMP is expected to be secured via planning condition.

5.2.2 It is however anticipated that the level of construction phase traffic will be lower than that of the operational phase and as such the associated impacts will be less than has been assessed in this TS, notwithstanding that construction traffic is temporary in any event.

5.3 Construction Traffic Management Plan

5.3.1 To manage disturbances to the local community during the construction period, a CTMP will be prepared to ensure that suitable mitigation measures are adopted to manage any adverse effects of construction.

5.3.2 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;
- 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; and
- construction dust management.

5.3.3 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.

5.3.4 Other measures could include:

- Trimming of foliage to maximise visibility splays; and
- Introducing a signage strategy to warn drivers.

5.3.5 The above measures represent an initial suggestion of measures that could be implemented. The exact nature and requirement for the CTMP could be agreed via a suitably worded planning condition.

5.4 Construction Vehicle Types

5.4.1 The type of vehicles to be used in the construction of the Proposed Development, including expected level of vehicle movement and frequencies by each vehicle type, will be set out within the CTMP.

5.4.2 No hazardous or abnormal loads are anticipated to be required, however should it become apparent that such loads are necessary, the relevant procedures will be followed, and necessary approvals obtained as required.

5.5 Construction Compound

5.5.1 The CTMP will set out the confirmed details of the proposed construction compound. The existing Kronospan Facility HGV and car parking area at the southern extent of the existing Kronospan Facility would be used as a temporary construction compound area for the Proposed Development. An indicative drawing showing the extent of the proposed temporary construction compound is shown at **ES Figure 4.1**.

5.5.2 It is expected that the existing Kronospan Facility would be able to remain fully operational, with no adverse effects on the access and egress of HGVs and cars during the construction phase; this has been proven for previous developments (including major planning applications) within the existing Kronospan Facility.



6.0 TRAFFIC GENERATION

6.1 Introduction

6.1.1 This chapter of the TS forecasts the net trip-generating potential of the Proposed Development.

6.2 HGV Traffic Generation

6.2.1 The net level of traffic that is projected to be generated by the Proposed Development during the construction and operational phases is set out below.

- Operation: Seven HGVs per operational day (i.e. 14 two-way per operational day); and
- Construction: No greater than during operational phase.

6.2.2 The above operational figures are informed by way of information provided by the Applicant in respect to the annual net fuel requirements, the waste wood capacity of each vehicle (20T) and the number of operational days per year (333 no.) associated with the Proposed Development. Further detail is provided at **ES Appendix 4A**.

6.2.3 Feedstock would be brought to the Site 24 hours a day, seven days a week; however for the purposes of robustness in establishing peak hourly traffic generation for this TS, it has been assumed that the above daily traffic flows are distributed over a shorter, 12-hour daytime period only.

6.2.4 On this basis, it is anticipated that the Proposed Development would generate approximately one HGV trip (two two-way trips) during each of the traditional highway network peak hours (0800-0900 hours and 1700-1800 hours), equating to one additional HGV movement every 60 minutes on average. This is not a significant level of traffic.

6.3 Staff Movements

6.3.1 It is anticipated that only a small number of staff will be required to operate the Proposed Development and would likely comprise existing staff members at the existing Kronospan Facility. The trip generation associated with staff movements to and from the Proposed Development would therefore be negligible.



7.0 TRAFFIC IMPACT

7.1 Overview

- 7.1.1 This chapter of the TS considers the likely traffic impact of the Proposed Development on the local and wider highway network.

7.2 Assessment Methodology

- 7.2.1 Given the negligible increase in traffic associated with the Proposed Development as set out at Chapter 6 of this TS (i.e. two additional two-way movements per hour), the impact of the Proposed Development in terms of the operation of local junctions would not be discernible. Furthermore, the change in traffic on the assessed links as a consequence of the Proposed Development (as shown later in this chapter) does not suggest that any off-site junction capacity assessments are warranted.

- 7.2.2 The IEMA Guidance suggests that more detailed analysis of highway impact and/or capacity may be required where traffic to/from the development exceeds 10% of existing two-way traffic on the adjoining highway.

- 7.2.3 Paragraph 2.18 of the IEMA Guidance states:

“It is generally accepted that accuracies greater than 10% are not achievable. It should also be noted that the day-to-day variation of traffic on a road is frequently at least + or -10%. At a basic level, it should therefore be assumed that projected changes in traffic of less than 10% create no discernible environmental impact.”

- 7.2.4 March 2007 Welsh Government Guidance TAN18 Annex E (paragraph E4) provides further advice in respect of likely material increases in traffic levels, specifically occasions under which additional capacity analysis might be required for developments affecting the Welsh Strategic Road Network. TAN18 guidance states:

“When assessing whether or not to consult the Assembly...local planning authorities must give full consideration to the effects of a development’s traffic would have at a junction, particularly in respect of the additional turning movements created. As a broad guide the Assembly Government would regard an increase in turning movements in the order of 5% as material in most cases, that is, a 5% increase of traffic using any link of the junction. Where the capacity of the junction is, or is near



to, being exceeded, a smaller percentage increase on a link would normally be material.”

7.2.5 It is therefore concluded that a 5% change in total traffic levels represents a reasonable threshold above which, further assessment of sections of the highway network in capacity terms may be required. It should be recognised, however, that a simple percentage impact test can represent a crude tool, hence its removal from assessment guidance outlined within the 2007 DfT document, ‘Guidance on Transport Assessment’, which applied until recently in England.

7.2.6 In the context of routes which currently operate with relatively low levels of background flow, a very small level of predicted development traffic can give rise to the calculation of a significant percentage change value, even though the combined background and development traffic would still be substantially below link capacity thresholds.

7.3 Link Flow Assessment

7.3.1 The study area for the purposes of the link flow assessments is set out below:

- Link 1 - B5070 Holyhead Road (North of Existing Site Access).
- Link 2 - B5070 Holyhead Road (North of Old Black Park Road).
- Link 3 - A5 (West of Whitehurst Roundabout).
- Link 4 - A5 (East of Whitehurst Roundabout).
- Link 5 - A483 (North of Halton Roundabout).
- Link 6 - A483 (South of Halton Roundabout).

7.3.2 As set out previously, the assessment assumes that no Proposed Development traffic would utilise the North Access Road. Whilst the North Access Road would be used as the main access to the existing Kronospan Facility and to the Proposed Development Site (during operation), for robustness it is assumed for the link flow assessment that all traffic would route via the existing Kronospan Facility access – i.e. the T-junction with Holyhead Road (B5070) – to account for potential effects along the sections of the B5070 immediately north of the existing Kronospan Facility access.

7.4 Assessment Scenarios

- 7.4.1 Developments pass through several stages in their lifetime, during which time the volume of development traffic and its associated proportion against non-development traffic on the network will invariably change.
- 7.4.2 Given that the link flow assessment relates to proportional changes in Proposed Development traffic against background traffic on the network, the greatest percentage change will generally be when the project traffic is at the largest proportion of the total flow.
- 7.4.3 To this end, and for the purposes of robustness in this link flow assessment, the Proposed Development traffic flows have been considered against observed traffic data from the survey sources described previously (2022), given that this represents the greatest percentage change in network flows from the Proposed Development.
- 7.4.4 A second scenario is included however, which accounts for the cumulative impact of the Kronospan oriented strand board (OSB) Facility that is currently under construction. The traffic associated with the OSB Facility is based on traffic flows submitted as part of the OSB application.
- 7.4.5 In summary, the following scenarios are included in this link flow assessment:
- Scenario 1: 2022 Observed + Proposed Development.
 - Scenario 2: 2022 Observed + OSB Facility + Proposed Development.
- 7.4.6 Changes in traffic flows are considered for each of the following time periods:
- AM Peak Hour (0800-0900 hours).
 - PM Peak Hour (1700-1800 hours).
 - Annual Average Daily Traffic (AADT).
- 7.4.7 The traffic flows are presented in terms of total vehicles and in terms of HGVs. All flows are two-way (i.e. arrivals and departures combined).

7.5 Development Traffic Distribution

- 7.5.1 The Proposed Development traffic has been distributed onto the highway network on the assumption that all traffic utilises the existing Kronospan access and routes north to the A5 at the Whitehurst Roundabout via Link 1 and Link 2.
- 7.5.2 For robustness, all (100%) of the Proposed Development traffic is then all assigned along each subsequent link on the A5 and A483 – i.e. Link 3, Link 4, Link 5 and Link 6 – to account for all potential routing scenarios.

7.6 Link Flow Impact Assessment Results: Local Road Network

- 7.6.1.1 Traffic flow diagrams showing the 2022 observed traffic flows and the OSB Facility traffic on each link are included at **Appendix A**.
- 7.6.1.2 The subsequent impact in terms of additional vehicle movements from the Proposed Development and the associated percentage impact on each link is presented below.

Scenario 1

Table 7.1 – Operational Phase Impact - Total Vehicles (Two-Way)

Link Ref.	Obs. 2022 AM	Obs. 2022 PM	Obs. 2022 AADT	Dev. AM	Dev. PM	Dev. AADT	Dev. Impact AM	Dev. Impact PM	Dev. Impact AADT
Link 1	738	967	9,020	1	1	14	0.1%	0.1%	0.2%
Link 2	717	810	8,641	1	1	14	0.1%	0.1%	0.2%
Link 3	632	607	10,838	1	1	14	0.2%	0.2%	0.1%
Link 4	873	879	13,006	1	1	14	0.1%	0.1%	0.1%
Link 5	2,328	2,456	32,200	1	1	14	0.0%	0.0%	0.0%
Link 6	1,874	1,995	24,167	1	1	14	0.1%	0.1%	0.1%

Table 7.2 – Operational Phase Impact - HGVs (Two-Way)

Link Ref.	Obs. 2022 AM	Obs. 2022 PM	Obs. 2022 AADT	Dev. AM	Dev. PM	Dev. AADT	Dev. Impact AM	Dev. Impact PM	Dev. Impact AADT
Link 1	89	41	1,073	1	1	14	1.1%	2.4%	1.3%
Link 2	87	41	1,044	1	1	14	1.1%	2.4%	1.3%
Link 3	70	26	365	1	1	14	1.4%	3.7%	3.7%
Link 4	116	49	644	1	1	14	0.9%	2.0%	2.1%
Link 5	287	144	2,454	1	1	14	0.3%	0.7%	0.6%
Link 6	245	152	2,258	1	1	14	0.4%	0.7%	0.6%

Scenario 2

Table 7.3 – Operational Phase Impact - Total Vehicles (Two-Way)

Link Ref.	Obs. 2022 + OSB AM	Obs. 2022 + OSB PM	Obs. 2022 + OSB AADT	Dev. AM	Dev. PM	Dev. AADT	Dev. Impact AM	Dev. Impact PM	Dev. Impact AADT
Link 1	773	996	9,629	1	1	14	0.1%	0.1%	0.1%
Link 2	752	839	9,250	1	1	14	0.1%	0.1%	0.2%
Link 3	632	607	10,838	1	1	14	0.2%	0.2%	0.1%
Link 4	908	908	13,615	1	1	14	0.1%	0.1%	0.1%
Link 5	2,346	2,471	32,505	1	1	14	0.0%	0.0%	0.0%
Link 6	1,892	2,010	24,472	1	1	14	0.1%	0.0%	0.1%

Table 7.4 – Operational Phase Impact - HGVs (Two-Way)

Link Ref.	Obs. 2022 + OSB AM	Obs. 2022 + OSB PM	Obs. 2022 + OSB AADT	Dev. AM	Dev. PM	Dev. AADT	Dev. Impact AM	Dev. Impact PM	Dev. Impact AADT
Link 1	124	70	1,682	1	1	14	0.8%	1.4%	0.8%
Link 2	122	70	1,653	1	1	14	0.8%	1.4%	0.8%
Link 3	70	26	365	1	1	14	1.4%	3.7%	3.7%
Link 4	151	78	1,253	1	1	14	0.7%	1.3%	1.1%
Link 5	305	159	2,759	1	1	14	0.3%	0.6%	0.5%
Link 6	263	167	2,563	1	1	14	0.4%	0.6%	0.5%

- 7.6.2 On the basis of the above, it is evident that the Proposed Development impact in terms of total vehicles amounts to less than 1% in both Scenario 1 and Scenario 2 on all links and would not therefore have a discernible impact.
- 7.6.3 Such results are well below the identified 5% link impact threshold and suggest that the operation of the Proposed Development would not result in any material negative effects on either the local or strategic highway network operational performance. On this basis it is considered that the traffic impact of the Proposed Development would be negligible in nature.

8.0 TRANSPORT IMPLEMENTATION STRATEGY

- 8.1.1 This chapter provides the Transport Implementation Strategy (TIS) for the Proposed Development, in line with TAN18. This includes identifying measures for reducing travel demand associated with the Proposed Development.
- 8.1.2 Given the inherent operational requirement for some of the source material to be imported to the Site by HGV, there are minimal opportunities to achieve a modal shift associated with these trips. It is significant that travel demand mitigation associated with much of this trip generating element is already embedded within the Proposed Development through the utilisation of as much on-site source material as possible, thereby minimising the level of off-site trips required. This is detailed at Section 4.3 of this TS with the subsequent trip generation figures after accounting for these measures detailed at Section 6.2 of this TS.
- 8.1.3 In this instance therefore, a principal aim of the TIS is to minimise, or ideally eliminate, the impact associated with HGVs travelling through the village of Chirk linked to the Proposed Development.
- 8.1.4 A summary of the measures to discourage HGV drivers from travelling through the village of Chirk and from utilising the existing Kronospan Facility access (assuming and following the implementation of the North Access Road) is provided below.
- 8.1.5 Both those measures that currently exist and those that will be further implemented due to the Proposed Development will be discussed. The key benefit of the North Access Road is to ensure that HGV vehicles avoid passing through the centre of Chirk. Once constructed, this will be used as the access route for the operation phase of the Proposed Development.

8.2 Existing Measures

- 8.2.1 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. It is therefore considered that most HGVs travelling to and from the existing Kronospan Facility route via the B5070 Holyhead Road, and the A5 and A483, to the north.



8.2.2 The delivery of the North Access Road will further assist in ensuring that HGV delivery vehicles continue to comply with this routing pattern.

8.3 Proposed Measures

8.3.1 Additional mitigation measures that will be imposed to enforce the use of the North Access Road by HGVs, along with travel planning measures, include the following:

- **Management:** Communication will be had between the Applicant and Hauliers at management level and all drivers will be advised of the appropriate route/access in advance of dispatch. This will include use of the new North Access Road when completed.
- **Driver Monitoring:** Number plates of those HGVs that arrive at the existing (southern) access once the North Access Road is opened will be logged; those drivers will be issued with a leaflet (see **Appendix B**) and re-directed to the North Access Road.
- **Driver Training:** Driver induction for all those HGV drivers visiting the Site beforehand. The induction will include both a questionnaire and Health & Safety (H&S) information.
- **Driver Notification:** Maps illustrating the location of the Site and the appropriate access and associated routing strategy will be provided to all drivers (see **Appendix B**).
- **Promotion of Non-Car Transport Modes to Staff:** Those working at the Site will be encouraged to utilise non-car modes to transport wherever possible when travelling to and from the Site.
- **Dissemination of Non-Car Travel Information:** Information pertaining to local walking, cycling and public transport routes will be made available at the Site, along with details of timetables and fare information. This information will be kept up to date and relevant.
- **Car Sharing:** Those staff unable to use non-car modes will be encouraged to car share wherever possible.

9.0 SUMMARY AND CONCLUSIONS

- 9.1.1 This TS has been prepared to inform PEDW, the LPA and LHA of the highways and transport related implications of the Proposed Development. The LPA and LHA in this context is Wrexham County Borough Council (WCBC).
- 9.1.2 The Proposed Development would have the capacity to generate up to 40MW of electricity and 125MW of thermal energy for use in the existing manufacturing processes at the existing Kronospan Facility. The Proposed Development would be capable of processing approximately 293,000 Tonnes per Annum (TPA) of feedstock. To do so, it would predominately use on-site process wood residues (approximately 88.8% of the total throughput capacity); the remainder would be imported forestry brash and Grade C waste wood (for direct use in the proposed CHP Facility) and increasing on-site production to generate further on-site process wood residues for indirect use in the proposed CHP Facility. A detailed description of the Proposed Development is provided at **ES Chapter 4.0 (Description of the Proposed Development)**.
- 9.1.3 Recent accident data collected from the CrashMap resource has been analysed. There is no evidence of any underlying road safety issues that would be exacerbated by the Proposed Development.
- 9.1.4 The accessibility of the Site to sustainable transport has been assessed and it has been established that the site is within an easy walk of the large residential area of Chirk. Several local settlements (including Chirk, Pontcysllte, and Weston Rhyn) are within a reasonable cycle distance of the Site.
- 9.1.5 There are a number of bus stops locally that are served by up to 3 services per hour on weekdays and Saturdays which provide connections to Chirk Town Centre, Wrexham and Llangollen. Chirk railway station is a short walk from the Site and offers regular rail services to Birmingham, Holyhead and Cardiff, making multi-modal trips by rail/on foot a real possibility. Based on the above, it is evident that the Site is accessible by sustainable travel modes and complies with Planning Policy Wales and local policies.
- 9.1.6 The historic operation of the existing Kronospan Facility in terms of traffic generation has been well documented through both operational weighbridge data and recent planning applications. Further information provided by the Applicant has also



identified levels that the Kronospan facility has operated at during 2006, where weighbridge records identified that HGV loads were up to c900 two-way movements per day.

- 9.1.7 Given that much of the feedstock for the Proposed Development would be sourced on-site, the trip impact of the Proposed Development in terms of additional traffic on the local road network would be negligible. A trip generation exercise has been undertaken, which predicts a net increase of just seven HGVs per operational day (i.e. 14 two-way per operational day). Changes in staff trips would also be negligible. Construction phase traffic flows would be no greater than this operational phase.
- 9.1.8 The effect of this additional traffic on has been assessed in this TS. Feedstock would be brought to the site 24/7, however for the purposes of robustness in establishing peak hourly traffic generation for this TS, it has been assumed that the above daily traffic flows are distributed over a shorter, 12-hour daytime period only.
- 9.1.9 On this basis, it is anticipated that the Proposed Development would generate approximately one, two-way HGV trip during each of the traditional highway network peak hours (0800-0900 hours and 1700-1800 hours), equating to one additional HGV movement every 60 minutes on average. This is a negligible increase in traffic.
- 9.1.10 The percentage impact analysis of the Proposed Development on local road links demonstrate that the Proposed Development would not have a material impact. The maximum impact in terms of increases in total traffic flows on any link amounts to less than 0.5%.
- 9.1.11 Notwithstanding this, several mitigation measures have been proposed as part of the TIS to enforce HGV drivers to route north to/from the Site, including use of the new North Access Road (once completed), along with travel planning initiatives to minimise the level of vehicular trips, principally amongst staff.
- 9.1.12 Based on the review of anticipated future operational highway conditions and reference to appropriate guidelines and standards, it is concluded that the Proposed Development would not have a material impact in transport terms.

Appendix A – Traffic Flow Diagrams



Appendix B – Routing Map and Driver Leaflet





APPENDIX B – Routing Map and Driver Leaflet

Kronospan Low Carbon CHP Facility

Routing / travelling to and from site

Can we remind you all when travelling to and from site that all vehicles must turn left at the roundabout to head north towards the A5 / A483 strategic route.

Do not pass through Chirk town centre, this is a residential area with primary schools, a hospital, church, library, care home and pedestrian crossings.

This route is unsuitable for HGVs since local residents use the road and are at times transporting children to and from school and children also regularly walk in this area to and from school.

If at any time you need to use the shops, this should be done on foot and not by using your vehicle, as this does at times cause traffic obstructions / issues for local residents. The town centre is an approximately 10 minute walk from the site.

Thank you for your co-operation.

Litter

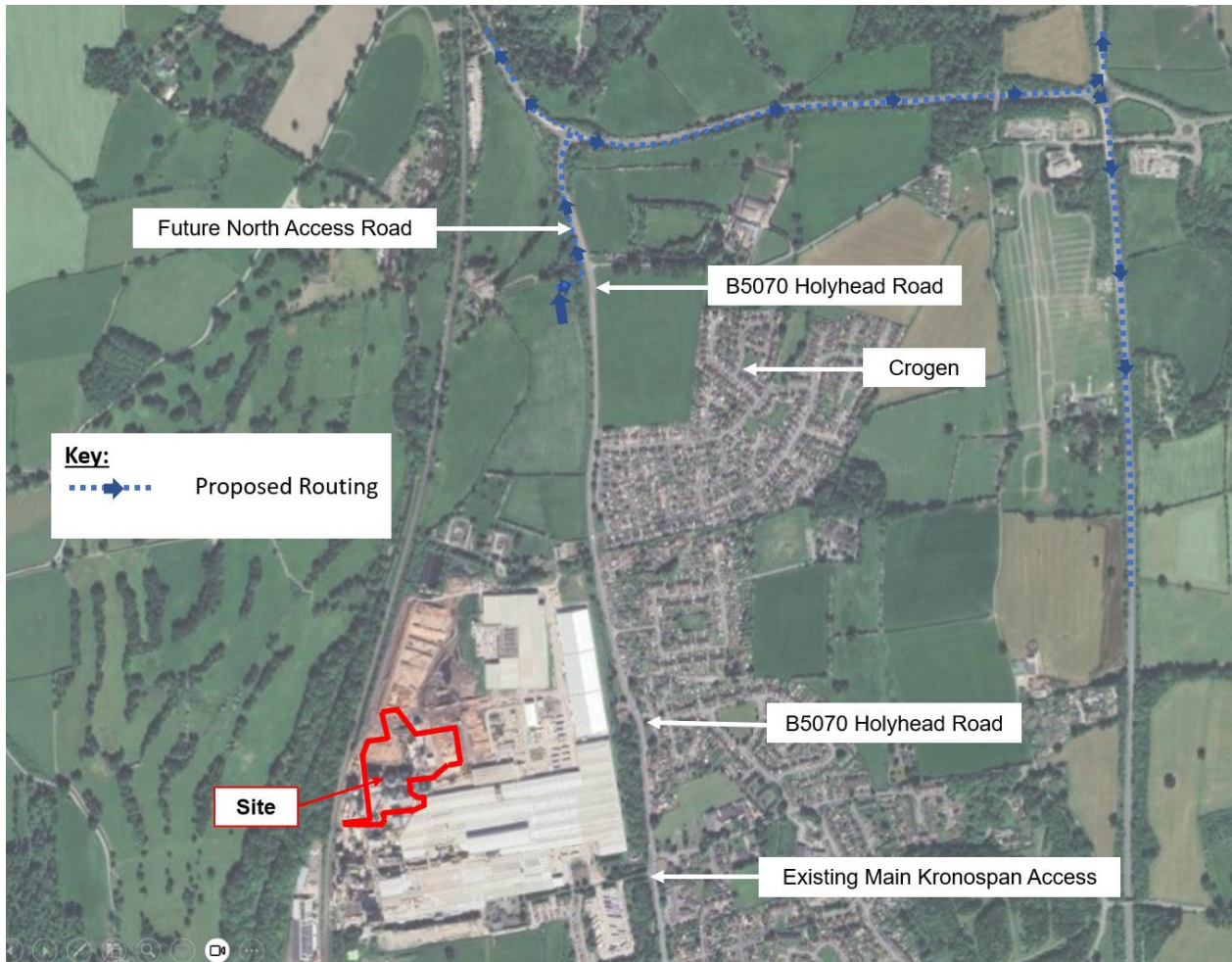
Please do not drop waste / food wrappings / debris in Chirk Town Centre or along Holyhead Road, please use the waste disposal facilities provided within the Lorry Park

It is a particular eyesore for locals and a potential environmental hazard that we can all prevent.

Site Manager: _____

Date: _____

Map illustrating the location of the new access and routing strategy



Driver – Site Rules

The following site rules must be adhered to at all times by drivers using Kronospan Lorry Park:

- Smoking is only permitted in the designated area – Ask a member of staff for details.
- No ear plugs or music devices such as iPods are to be used whilst on site.
- The use of mobile phones is not permitted when moving (including hands-free); park in a safe area and turn off engine before making or answering.
- Please adhere to the site speed limit of 10mph.
- Drinking and the taking of controlled substances is strictly forbidden.
- Children and unauthorised passengers or animals are not permitted. We do allow passengers for training purposes; ask weighbridge staff for the process to follow should the need arise.
- Wait at the STOP sign until the weighbridge is clear. Follow all directions, information signs and instructions given by site staff. If in doubt – ASK.
- Beacons / hazard lights are to be working, hard hat, safety boots; high viz clothing & seat belts must be worn. Shorts are not permitted.
- In poor weather conditions use dipped headlights.
- Drivers MUST ensure where the vehicle is likely to be left unattended for any reason that the keys are removed from the vehicle and kept on their person at all times.
- When queuing, stay in your vehicle at all times, leave a safe distance behind others and to allow safe passing of your vehicle, wait for instructions from Kronospan staff.
- Be courteous to other site users - NO overtaking.
- Keep reversing to a minimum, check for obstructions and pedestrians before starting and do not pass behind any other vehicle.
- When parking, do so within a marked bay and on Kronospan land (not along the access road or on the roundabout) or blocking traffic routes or pedestrian walkways.
- After discharging your load, please return to the lorry park.
- Any accident, incident or near misses MUST be reported to site prior to leaving. Near misses can be written on plain paper and posted in the box by the side door to the main office building.
- Please be courteous to local traffic and respect the residents leaving near the site. Failure to comply with these rules may result in exclusion from site.



Driver Site Rules Knowledge Assessment. New Driver Questionnaire.

Welcome to Kronospan, Chirk. Your safety on site is our paramount concern. You have been issued with a copy of the site rules. Please take the time to complete the following multiple-choice questionnaire and return to the weighbridge. If you are unsure about any aspect of the site rules and procedures, please ask a member of staff who will happily assist you.

Please circle the correct answer – All answers are within the site rules document that has been issued to you.

Name: _____ Company: _____

1. What is the Site speed limit?

- a. 15mph b. 25mph c. 30mph d. 10mph

2. What PPE must be worn on site at all times when you are out of your vehicle?

- a. High Viz b. Hard Hat c. Safety Boots d. All listed in answers a – b – c.

3. When must you report any accidents or incidents including damage?

- a. At the time it happens, prior to leaving site.
b. Any time as long as it is the same day.
c. On your next visit.
d. Within 48 hours.

4. The use of mobile phones is permitted when.....

- a. You are driving if using hands-free.
b. You have parked in a safe area (in the lorry park) with the engine turned off.
c. Any time as long as you are careful.
d. You are driving in any area other than the lorry park.

5. If you break down on site, you should?

- a. Get out and try and resolve the problem without notifying site staff.
b. Wait for a colleague to come and assist you.
c. Contact a site operative by sounding your horn or flashing your lights.
d. Phone a fitter or breakdown company telling them where you are.

6. After discharging your load where must you go and what must you do?

- a. Go to a safe area (lorry park) to close doors and check vehicle.
b. Drive to the weighbridge weigh out then check vehicle once you have left site.
c. Ask Site Operative to check your vehicle for you.

7. Smoking is only permitted in Designated Areas?

- a. True b. False



8. Shorts are permitted to be worn in hot weather?

- a. True b. False

Thank you for taking the time to complete the knowledge assessment.

Driver Signature: _____ Date of Completion: _____

Knowledge Assessment Score:

Checked on behalf of Kronospan by: _____ Signed: _____