



KRONOSPAN, CHIRK

**NORTH ACCESS ROAD INTO THE KRONOSPAN FACILITY,
LORRY PARK, WEIGHBRIDGES AND WEIGHBRIDGE
BUILDING, WEIGHBRIDGE CAR PARK AND FACILITIES
BLOCK, ROUNDWOOD STORAGE AREAS, 132KV
SUBSTATION, AND ANCILLARY WORKS**

**ENVIRONMENTAL STATEMENT CHAPTER 5.0 – LANDSCAPE AND
VISUAL EFFECTS**

REV A - JULY 2023



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5.0 LANDSCAPE AND VISUAL EFFECTS

5.1 Introduction

Introduction

- 5.1.1 This chapter of the Environmental Statement (ES), along with the accompanying Figures and Appendices, comprises the Landscape and Visual Impact Assessment (LVIA) of the Proposed Development. The LVIA addresses the potential landscape and visual effects of the Proposed Development during construction and operation and follows best practice guidance set out in *Guidelines for Landscape and Visual Impact Assessment*¹, hereafter referred to as the GLVIA.
- 5.1.2 A description of the Proposed Development is provided in **ES Chapter 4.0 (Description of the Proposed Development)**.
- 5.1.3 Landscape and visual effects are separate, although closely related and interlinked issues.
- 5.1.4 Landscape effects are caused by physical changes to the landscape, which may result in changes to the distinctive character of that landscape and how it is perceived.
- 5.1.5 Visual effects are changes to what can be seen by people as a result of what is proposed. A visual assessment assesses the change in visual amenity undergone by people (either individually or in groups) that would arise from any change in the nature of views experienced.
- 5.1.6 In accordance with the guidance set out in the GLVIA, the LVIA adopts an approach proportionate to the likely significant effects of the Proposed Development. The conclusions of the LVIA have been determined via use of professional judgement, set within a structured assessment framework, and supported by reasoned justification.
- 5.1.7 The LVIA aims to establish the following:
- A clear understanding of the Site and its context, in respect of the physical and perceived landscape and in respect of views and visual amenity.

¹ Landscape Institute and Institute for Environmental Management and Assessment, 3rd edition 2013. *Guidelines for Landscape and Visual Impact Assessment*. Abingdon: Routledge.

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- An understanding of the Proposed Development in terms of how this would relate to the existing landscape and views.
 - An identification of the likely significant effects of the Proposed Development upon the landscape and upon views, throughout the life-cycle of the Proposed Development.
 - Potential for mitigation to reduce / eliminate any potential adverse effect on the landscape or views arising as a result of the Proposed Development.
 - A conclusion as to the residual likely significant landscape and visual effects of the Proposed Development.

5.1.8 The process follows a standard approach, namely:

- The establishment of the baseline conditions, against which the effects of the Proposed Development will be assessed;
- The determination of the nature of the receptor likely to be affected, i.e. its sensitivity;
- The prediction of the nature of the effect likely to occur, i.e. the magnitude of change; and
- An assessment of whether a likely significant landscape and visual effect would be experienced by any receptor, by considering the predicted magnitude of change together with the sensitivity of the receptor, taking into account any proposed mitigation measures.

5.1.9 Further details regarding the specific methodologies of assessment and determination of significance are included in **Appendix 5.1**. The LVIA has been informed by both desk and field-based studies.

5.1.10 It should be noted that the landscape (including the context in which views are experienced) is dynamic, i.e. it is affected by social, economic, technological and climatic changes, all of which can influence patterns of land use, land cover and land management. As such, the baseline context for the LVIA is not static.

5.1.11 For the avoidance of any doubt, the LVIA does not consider effects on the setting of heritage assets. Such effects, whilst in cases occurring upon receptors that may also be relevant to LVIA (for example a listed building that is accessible to the public) deal with different environmental effects, using different methodologies. An assessment of effects upon cultural heritage is set out in **ES Chapter 6.0 (Historic Environment)**.

Competence

- 5.1.12 The LVIA was undertaken by a Chartered Member of the Landscape Institute (CMLI) with approximately sixteen years' post qualification experience in the landscape and visual impact assessment of major infrastructure projects. The LVIA was directed and reviewed by a second CMLI with over twenty-five years' similar experience. Both have been involved with a range of different development proposals at the Kronospan Facility over a period of more than ten years.

5.2 Planning Policy, Legislation and Guidance

National Planning Policy

- 5.2.1 Full details of relevant national planning policies are set out in the Planning Statement. Relevant documents include:

- *Planning Policy Wales* (PPW)²;
- *Technical Advice Note 12 Design* (TAN 12)³.

- 5.2.2 PPW sets out the land use planning policies of the Welsh Government. Of particular relevance to the LVIA include:

- Paragraphs 3.3 to 3.18, which address principles of good design;
- Section 6.3 which addresses landscape related matters (including the presence of national and local landscape designations);
- Section 6.8 which addresses potential issues related to the lighting of development

- 5.2.3 TAN 12 does not include specific policies, but rather sets out advice as to how good design can be facilitated through the planning system.

Local Planning Policy

- 5.2.4 Full details of relevant local planning policies are set out in the Planning Statement. Relevant documents include:

- *Wrexham Unitary Development Plan* (the UDP)⁴;

² Welsh Government, 2021. *Planning Policy Wales*, edition 11.

³ Welsh Government, 2016. *Technical Advice Note 12 Design*.

⁴ Wrexham County Borough Council, adopted 2005. *Wrexham Unitary Development Plan 1996-2011*

- *Supplementary Planning Guidance Note: Clwydian and Dee Valley Area of Outstanding Natural Beauty* (the AONB SPG)⁵;
- *Planning for Dark Night Skies* (the Dark Skies SPG)⁶
- *Emerging Wrexham Local Development Plan 2018-2033* (composite version deposit plan published 2018, and currently undergoing Examination in Public) (the emerging LDP).

5.2.5 The UDP sets out both planning policies that are applicable within the Wrexham County Borough Council (WCBC) area. Policies of relevance to the LVIA include:

- PS2, relating to the protection of landscape/ townscape character.
- GDP1, requiring the best use of design techniques.
- EC4, relating to hedgerows, trees and woodlands.
- EC5, relating to Special Landscape Areas.

5.2.6 The AONB SPG provides guidance relating to development that may affect the Clwydian Range and Dee Valley AONB, including how the special qualities of the designation relate to the planning process.

5.2.7 The Dark Skies SPG is concerned with issues related to light pollution within the Clwydian Range and Dee Valley AONB and the aspiration that the AONB can be formally recognised as a ‘dark sky community’. It includes guidance regarding the contents of lighting assessments, and best practice in the design of new lighting schemes.

5.2.8 The emerging LDP will ultimately replace the UDP. Draft policies of relevance to the LVIA include:

- SP15: Natural Environment, which relates to the protection of the Clwydian Range and Dee Valley AONB, and of natural features in general;
- DM1: Development Management Considerations, requiring proposals to accord with local character, and to have regard to the amenity of nearby properties;
- NE3 Trees, Hedgerows and Woodlands, relating to these features;

⁵ Denbighshire County Council, Flintshire County Council, Wrexham County Borough Council, and Clwydian Range and Dee Valley AONB, 2018. *Supplementary Planning Guidance Note Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB)*

⁶ Denbighshire County Council, Flintshire County Council, Wrexham County Borough Council, Clwydian Range and Dee Valley AONB, and Cadwyn Clwyd, 2021. *Planning for Dark Night Skies. Supplementary Planning Guidance for lighting in the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty*

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- NE4: Area of Outstanding Natural Beauty, relating to development affecting the designation and its setting;

Legislation and Guidance

Statutory Landscape Designations

- 5.2.9 The Clwydian Range and Dee Valley AONB is located approximately 300m west of the Kronospan Facility at the closest point (and approximately 450m from the Proposed Development). AONBs are a statutory designation, first designated under the auspices of the National Parks and Access to the Countryside Act 1949. The primary purpose of an AONB, as set out in the Countryside and Rights of Way Act 2000, is to “*conserve and enhance the natural beauty*”.

European Landscape Convention

- 5.2.10 The UK Government is a signatory of the European Landscape Convention (ELC), which became binding in March 2007. The Convention is aimed at the protection, management and planning of all landscapes and raising awareness of the value of a living landscape. It relates chiefly to public bodies and to the policies, plans and programmes produced by these.
- 5.2.11 The LVIA is a development specific process which accords with Article 6C. The LVIA is informed by extant Landscape Character Assessment studies (described in Section 3 below), which more directly relate to the provisions of Article 6C.

5.3 Assessment Methodology

Consultation

Pre-Application 1

- 5.3.1 A request for pre-application advice (dated 02 November 2021) was submitted by the Applicant to WCBC for the development of a new private road leading from Holyhead Road to the existing Kronospan facility.
- 5.3.2 With respect to landscape and visual matters, the first pre-application response from WCBC (reference ENQ/2020/0044, dated 07 January 2022) confirmed that an LVIA was required in support of the planning application. Concerns were raised regarding the intrusion of urban development into the rural landscape surrounding Chirk, and that associated tree loss would potentially exacerbate effects upon the rural

landscape. Potential impacts upon the Pontcysyllte Aqueduct and Canal World Heritage Site (WHS) and upon the Clwydian Range and Dee Valley AONB were also raised.

- 5.3.3 The LVIA is concerned with the landscape and visual effects of the Proposed Development (i.e. development introduced into a presently undeveloped Site north of Chirk). Effects upon the landscape fabric of the Site, including trees, are assessed under a specific heading. The implications of the Proposed Development upon the AONB are discussed in the LVIA. Effects on the WHS are discussed in **ES Chapter 6.0 (Historic Environment)**, and the presence of the WHS as an important landscape feature is recognised in the conclusions made in the LVIA.

Pre-Application 2

- 5.3.4 A subsequent request for pre-application advice (dated 02 November 2021) was submitted by the Applicant to Wrexham County Borough Council for several development proposals to develop and improve the existing industrial facility at Kronospan Limited, Holyhead Road, Chirk. The development proposals subject to the pre-application advice request included the Proposed Development plus other development proposals that have either had planning applications submitted or granted. Further details of the other development proposals (aside from the Proposed Development) are provided in the Planning Statement and **ES Chapter 1.0 (Introduction)**.
- 5.3.5 With respect to landscape and visual matters, the second pre-application response from WCBC (reference ENQ/2021/0315, dated 07 January 2022) reiterated that an LVIA was required in support of the planning application. The presence of the local Special Landscape Area (SLA) designation extending of the Site of the Proposed Development was highlighted. Concerns were raised that the Proposed Development would have significant adverse effects upon the rural landscape surrounding Chirk and upon the setting of the WHS and the AONB, and that such effects could not be adequately mitigated against by landscaping.
- 5.3.6 The implications of the Proposed Development for the SLA and AONB designations are addressed as part of the LVIA. Effects on the WHS are discussed in **ES Chapter 6.0 (Historic Environment)**, and the presence of the WHS as an important landscape feature is recognised in the conclusions made in the LVIA. The effectiveness of the landscape design in reducing potential adverse landscape and visual effects is demonstrated within the LVIA.

Statutory Pre-Application Consultation

- 5.3.7 The Town and Country Planning (Development Management Procedure) (Wales) Amendment Order 2016 (DMPO 2016) requires the Applicant to consult the public and statutory consultees prior to submitting a planning application for major development. The consultation period was between 14 October 2022 and 11 November 2022 with an extended period until 18 November 2022 agreed with Natural Resources Wales (NRW).
- 5.3.8 A series of responses from consultees including Cadw, the Canal and River Trust (CRT), Chirk Town Council (CTC), the National Trust (NT) and NRW received in November 2022 identified issues relating to landscape and visual matters, as set out in **Table 5.1** below. Full consultee responses (and how each has been addressed) is provided in the Pre-Application Consultation (PAC) Report.

Table 5.1: Summary of Statutory Pre-Application Consultation Responses

Consultee	Summary of Response	How Response has been addressed in the ES (or elsewhere in the planning submission)
Cadw	Lighting impacts upon Chirk Castle RPG and upon the World Heritage Site need to be considered.	<p>The Lighting Assessment at Planning Statement Appendix D has been revised to specifically consider effects on these two heritage assets.</p> <p>The assessment of night-time landscape and visual effects set out in Section 5.6 has been revised to specifically address effects on these assets.</p> <p>ES Chapter 6.0 (Historic Environment) has been revised to ensure potential night-time effects upon setting are assessed.</p>
CRT	Any trees planted close to the Llangollen Canal may require some sort of root guard.	<p>Any protective measures required would be set out in detailed landscape proposals which would be the subject of a planning condition. The Applicant does not envisage any issues in providing root guards/barriers should these prove necessary.</p> <p>No change to the Illustrative Landscape Masterplan (Figure 4.3a) is required.</p>
CRT	Requested Woodland Management Plan to cover area within CRT ownership along the Llangollen Canal	<p>The Applicant is happy to provide such a document as part of a Unilateral Undertaking which would be drawn up in consultation with the CRT should planning permission be granted.</p> <p>The suggested scope is set out in Section 5.8.</p>
CRT	Requested Landscape and Ecology Management Plan/ Tree Management	<p>The Applicant is happy to provide such a document as part of a planning condition or a</p>

Consultee	Summary of Response	How Response has been addressed in the ES (or elsewhere in the planning submission)
	Plan (or similar) to set out long-term management of proposed on-site planting close to the Llangollen Canal	Section 106 Agreement (s106) should planning permission be granted. The suggested scope of landscape-related elements of the s106 are set out in Section 5.8 .
CTC	Requested visual material to illustrate how the proposed bund would appear from the Lodgevale residential area	Illustrative Landscape Cross-Sections 01 and 02 (Figure 4.4a) illustrate how the bund would appear in section from properties at Wern (at the edge of Lodgevale). The photomontages from Viewpoint C (Figures 5.3a i-xii) illustrate the change in view from the same location. Illustrative Landscape Cross-Section 03 (Figure 4.4a) has been extended eastwards to illustrate how the bund would appear from properties further east (on Offa/ Linden Avenue).
NT	Lighting impacts from Chirk Castle need to be considered	See response to Cadw above.
NT	Further information regarding design evolution requested, with specific mention of planting with the proposed lorry park	Further detail regarding design evolution has been added to ES Chapter 3.0 (Alternatives) and to the Design and Access Statement .
NRW	Requested that the effects of the Proposed Development in relation to the tranquillity of the Clwydian Range and Dee Valley AONB be specifically identified	Further detail regarding the effects of the Proposed Development upon the AONB has been added to Section 5.6 . Specific consideration to effects on tranquillity is provided.
NRW	Requested that additional off-site planting should be developed to minimise adverse views from the AONB	Off-site landscape enhancement measures within the Kronospan landholding are illustrated on Figure 4.3b and described in ES Chapter 4.0 (Description of the Proposed Development) and in Section 5.8 . Further off-site enhancements on third party land will be identified in consultation with landowners.

Other Engagement with Stakeholders

- 5.3.9 Ongoing consultation has been undertaken with relevant stakeholders as required to ensure that key issues were identified and discussed prior to the completion of the EIA. A summary of the stakeholder responses and how they have been addressed are provided in **Table 5.2** below.

Table 5.2: Summary of Other Stakeholder Engagement

Consultee	Date	Summary of Response	How Response has been addressed in the ES
NT	March 2022	Requested three viewpoints be included in the LVIA, all at locations within the Chirk Castle estate (including from the roof of the Castle)	The requested viewpoints have been included in the LVIA
NT	June 2022	Requested that summer photography from each viewpoint should also be shot	The requested viewpoints have been included in the LVIA
NT, CRT and Cadw	October – November 2022	Identified the need for off-site landscape enhancements, to be guaranteed through s106	Off-site enhancements within the Kronospan landholding have been identified and are illustrated on Figure 4.3b Further off-site enhancements on third party land will be identified in consultation with landowners. Details of all enhancements including long-term management proposals will be included in the s106 (or Unilateral Undertaking).

Post-Submission Statutory Consultation Responses

Overview

- 5.3.10 During the statutory post-submission consultation stage undertaken by WCBC, several consultation responses have been received by WCBC and subsequently issued to the Applicant for further consideration and comment.
- 5.3.11 All consultation responses have been collated together and submitted via separate cover to WCBC – they details how account has been taken of each response (including points of further clarification, where the Proposed Development design was amended, or further information provided in the planning application documents).

Alternatives

- 5.3.12 Some of the consultation responses received were with respect to further consideration of alternatives to minimise impact on the surrounding landscape and historic environment; the most notable of which were provided by Cadw.

5.3.13 The Applicant and Cadw held a meeting on 20 April 2023 to discuss alternatives in greater detail. The discussion included further clarification of the key design parameters considered (of the various components) during the development of the Proposed Development and the desire to achieve, on balance, a proposal that has the least environmental impact, with particular regard given to consideration of the historic environment, the landscape and visual impacts, local amenity (noise, vibration and air quality), and impacts on the local highway network. A summary of the key discussion parameters discussed with Cadw is provided in **ES Chapter 3.0 (Alternatives)**.

5.3.14 The discussion continued to understand the extent to which it would be possible to amend the design of the Proposed Development to reduce impacts on the historic environment (without creating additional environmental impacts elsewhere e.g. noise and vibration, landscape), with a particular focus on reducing/removing the extent of new development located towards the northern extent of the red line boundary. An outline sketch of an alternative Proposed Development layout was produced to address this objective which Cadw later agreed would likely assist with reducing the impact of the Proposed Development on the historic environment. This sketch was subsequently looked at in greater detail by the Applicant to develop a workable alternative layout for subsequent formal submission to WCBC. The key changes implemented during the development of the alternative layout are discussed in more detail at **ES Chapter 3.0 (Alternatives)** but are summarised below.

- Weighbridges, weighbridge building, and weighbridge car park moved approximately 20m to the south.
- Lorry park footprint reduced by approximately 50% (previously 91 HGV spaces, now 45 HGV spaces) and moved further south.
- Area at the northern extent of the Proposed Development Site now vacated by the reduced lorry park is proposed as further wildflower grassland.
- Roundwood storage areas reduced in size (around 21% collectively) to accommodate the above.
- Additional land on the western boundary of the western roundwood storage proposed for new woodland planting.
- The bund along the eastern boundary of the Site amended to a height of approximately 4m adjacent to the proposed lorry park, and to a height of approximately 7m north of the proposed lorry park (when measured from the adjacent internal platform/road level of the Proposed Development) to provide

appropriate noise mitigation for the residential receptors at Offa/Wern. This would provide similar residual noise effects (not significant) to the original (and now superseded) Proposed Development layout.

- The 5m high acoustic screen along the eastern boundary of the lorry park extended further south to also run adjacent the weighbridge car park area.

Formal Submission of Amended Planning Drawings and EIA Regulation 24

- 5.3.15 The finalisation of the alternative Proposed Development layout represents a clear change to the original planning application made to WCBC. Therefore, several of the original planning documents have been revised and formally submitted to WCBC for further consideration (and formal consultation). This includes an updated ES in accordance with Regulation 24 of the EIA Regulations, including this chapter.

Study Area

- 5.3.16 The study area for the LVIA has been determined based upon the assessor's prior knowledge of the Kronospan Facility and its surroundings, and previous experience of similar developments elsewhere. It is considered that, given the industrial context of the Site, there would be little scope for significant effects to extend over a wide area. To confirm this, the LVIA considers effects up to approximately 2km from the Proposed Development.

Scope of Assessment

- 5.3.17 The LVIA considers effects upon the physical landscape fabric of the Site itself, upon the character of the surrounding landscape, and upon views. Effects are assessed in relation to the construction of the Proposed Development, as well as the effects of the Proposed Development once operational. Consideration is given to the night-time landscape and visual effects of the Proposed Development that would arise from proposed lighting. The implications of the Proposed Development in relation to the purposes and qualities of statutory and non-statutory landscape designations are set out. The cumulative landscape and visual effects of the Proposed Development with other consented and proposed development schemes are assessed. Mitigation measures are identified, including measures embedded into the design of the Proposed Development, which would reduce or eliminate potentially adverse landscape and visual effects. Additional measures to enhance the landscape are also identified.

Impact Assessment Methodology

- 5.3.18 As noted in **Section 5.1** of this chapter, this LVIA has followed a methodology which has been developed using the published good practice guidelines set out in the GLVIA. The detailed methodology followed in undertaking the LVIA is set out in **Appendix 5.1**.
- 5.3.19 The LVIA also follows the Landscape Institute's guidance regarding the production of visualisations⁷. The methodology followed in the production of visualisation material is set out in **Appendix 5.2**.

Assessment of Significance/Assessment Criteria

- 5.3.20 Not all landscape and visual effects arising as a result of a particular proposal will be significant. Furthermore, where likely significant environmental effects are predicted, this does not automatically mean that such effects are unacceptable. The acceptability of landscape and visual effects is a matter to be weighed in the planning balance alongside other factors. What is important is that the likely environmental effects of any proposal are transparently assessed and described in order that the relevant determining authority can bring a balanced and well-informed judgement to bear as part of the decision-making process.
- 5.3.21 The judgement in relation to this LVIA is that a greater than 'moderate' level of effect is more likely to be significant. This is because such an effect would generally result from larger magnitudes of change on higher sensitivity receptors. This does not preclude a 'moderate' effect or lower being significant, or a greater than 'moderate' effect not being significant. The judgement made will depend on the specific circumstances being considered. Refer to **Appendix 5.1** for further details.

⁷ Landscape Institute, 2019. *Visual Representation of Development Proposals. Technical Guidance Note 06/19*

Assessment Assumptions and Limitations

- 5.3.22 Viewpoint photography used in the LVIA was taken in January, March and July 2022 and reflects the vegetation cover present at this time of year. As such, the assessment of visual effects has been undertaken on a worst-case basis that does not reflect the presence of deciduous foliage during the summer months.

5.4 Baseline Environment

Data Collection

- 5.4.1 Baseline data for the LVIA has been gathered by both desk and field-based surveys. These have included review of extant landscape character assessment studies (see below) and field visits to gain an understanding of the landscape and visual context of the Site.

Baseline Conditions

The Site and its Surroundings

- 5.4.2 The Site of the Proposed Development (the Site) would be located to the north of the existing Kronospan Facility, in a presently undeveloped area on the western side of the B5070 Holyhead Road, north-west of Chirk. Refer to **Figure 1.1** and **Figures 5.1a-d** for location.
- 5.4.3 Boundaries are defined by hedgerows to the east, south and west, with a denser belt of tree cover at the northern and north-eastern boundary. The B5070 is immediately east of the boundary vegetation, the existing Kronospan Facility immediately to the south, the Afon Bradley (a small watercourse) immediately to the west, and a private access leading from the B5070 to Afon Bradley Farm is immediately to the north.
- 5.4.4 The Site is currently in agricultural use and is associated with Afon Bradley Farm (itself under the control of Kronospan). The farm buildings are north-west of the Site and include a farmhouse and a series of associated outbuildings. A field gate in the boundary with the private access to the north allows access/ egress. The landform falls from east to west, with a change in level of approximately 10m between the eastern and western boundaries.
- 5.4.5 To the east, the Site abuts the B5070. The boundary with the highway is defined by a clipped hedgerow between 1.5m and 2m in height, which largely screens ground

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- level views. To the east of the road, a series of two-storey residential properties at the edge of Chirk face the south-eastern part of the Site boundary.
- 5.4.6 A single two-storey property at Bryn Hyfryd is located on the western side of the road, immediately south of the Site. A two-storey building to the west of Bryn Hyfryd is used by Kronospan as accommodation for visitors to the Facility.
- 5.4.7 The north-eastern part of the Site faces a field on the eastern side of the road (which is under the control of Kronospan). A dense belt of mature tree cover is located in the north-east corner of the Site.
- 5.4.8 A minor road (Old Black Park Road) runs east from the B5070 to the north-east of the Site. Two semi-detached properties at Lodge Farm Cottage and Parkgate Cottage are located on this road, approximately 45m east of the B5070.
- 5.4.9 Beyond the Afon Bradley, west of the Site, are other farm fields under the control of Kronospan. The western edge of these fields is defined by the railway that runs south from Wrexham. The railway runs on an embankment and is hence at a higher elevation than the adjacent land to both the east and west. West of the railway is the Llangollen Canal.
- 5.4.10 The Kronospan Facility covers an area of approximately 41.2 hectares at the western edge of Chirk. It is a well-established industrial facility in operation since the 1970s, and which includes several large industrial process buildings (some with emissions stacks), storage areas for raw materials, warehouse buildings, offices and car parking. Some of the existing structures are large in scale and height. The tallest structures on site are the CHP emissions stack (70m), the WESP stack (65.5m), the MDF cyclones (57m), and the dryer exhaust stack at the WESP Chip Dryer (50m). Emission plumes from these stacks are often clearly visible from the surrounding area.
- 5.4.11 Chirk is a small town located 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 Kronospan Facility to the west of this road. On the western side of the B5070, to the south-east of the Kronospan Facility is an area of greenspace comprising a private sports club (immediately south of the Kronospan car park) and Chirk Recreation Ground. The larger structures within the Kronospan Facility are visible from the recreation ground, but other structures are very well screened from view by intervening vegetation cover. Chirk town centre lies south-east of the Kronospan

Facility and includes various commercial and community buildings and areas of public open space.

- 5.4.12 The wider area is rural. The landform falls steeply, from the hills to the west towards the much lower-lying Shropshire Plain to the east. Local variations in topography are evident, with a marked rise to a ridge east of the town.
- 5.4.13 To the west of the Kronospan Facility, 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. Beyond the canal, settlement is sparse and land cover comprises a mixture of pasture and small woodlands. Chirk Castle and its associated grounds (Grade 1 registered) are a notable feature within the landscape. The Castle is owned by the National Trust and is a well-known and well-frequented visitor destination. The Offa's Dyke Path National Trail runs in a broadly north-south direction further to the west, with views available east over the lower ground. Much of this area falls within the boundary of the Clwydian Range and Dee Valley AONB (as referenced in **Section 5.2** above and discussed in greater detail below).
- 5.4.14 To the north, the land undulates before falling into the steep valley of the River Dee some 1.6km north of the Site. The canal (WHS) runs due north before turning westwards along the southern lip of the valley. The northern side of the valley is urbanised, with a string of contiguous small villages at Cefn.
- 5.4.15 To the east, 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 Site. 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.
- 5.4.16 The steep sided valley of the River Ceiriog cuts through the surrounding hills 1.8km to the south of the 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.

Statutory Landscape Designations

- 5.4.17 As stated in **Section 5.1** above, the Clwydian Range and Dee Valley AONB is located approximately 450m west of the Site at the closest point (refer to **Figures 5.1a-d** for location). The Chirk Castle estate is located within the AONB.
- 5.4.18 The special qualities of the AONB are set out in the *Management Plan 2014-2019*⁸ as follows:
- Tranquillity.
 - Remoteness and Wildness, Space and Freedom.
 - Heather Moorland and Rolling ridges.
 - Broadleaved woodlands and veteran trees.
 - River Valleys and the River Dee.
 - Limestone grasslands, cliffs and screes.
 - Historic Settlement and Archaeology.
 - Industrial Features and the World Heritage Site.
 - Historic Defence Features.
 - Small historic features.
 - Traditional boundaries.
 - Iconic Visitor and Cultural Attractions.
 - The Offa's Dyke National Trail and Promoted Routes.
 - The Built Environment.
 - People and Communities

Local Landscape Designations

- 5.4.19 The Site lies within the non-statutory local-level Special Landscape Area (SLA) designation. This designation is protected by a policy in the *Unitary Development Plan*. Refer to **Figures 5.1a-d** for location.
- 5.4.20 UDP Policy EC5 states that:

“Within Special Landscape Areas, priority will be given to the conservation and enhancement of the landscape. Development, other than for agriculture, small-scale farm-based and other rural enterprises, and essential operational development by utility service providers, will be strictly controlled. Development will be required to

⁸ Clwydian Range and Dee Valley Area of Outstanding Natural Beauty, undated. *Management Plan 2014-2019*.

conform to a high standard of design and landscaping and special attention will be paid to minimising its visual impact from both nearby and distant viewpoints.”

- 5.4.21 It should be recognised that the emerging LDP that will ultimately replace the UDP revises the SLA boundaries within Wrexham, and these revised boundaries exclude the Site. The boundary revision process is underpinned by a supporting document, namely the *Special Landscape Areas Study*⁹, and has been undertaken to comply with the requirements of *Planning Policy Wales* to:

*“...identify which features, characteristics or qualities require extra protection, and explain how the policy of designation will achieve this protection...”*¹⁰

- 5.4.22 As such, it can be concluded that the landscape of the Site does not have any such features, characteristics or qualities that require extra protection, and that this is demonstrated by the findings of the *Special Landscape Areas Study*.

Heritage Assets

- 5.4.23 There are a range of heritage assets within the Study Area. Further details of these, and an assessment of effects upon their setting is provided in **ES Chapter 6.0 (Historic Environment)**. Some of these assets have an inherent landscape component, and where relevant their presence is reflected in the judgements made in the LVIA. Of particular relevance are the Pontcysyllte Aqueduct and Canal WHS and the Chirk Castle Registered Park and Garden (RPG). The location of these two features (including the essential setting of the WHS), and of other RPGs is illustrated on **Figures 5.1a-d**.

Landscape Character Assessment and Related Studies

- 5.4.24 LANDMAP is the formally adopted methodology for landscape assessment in Wales and, as such, forms the baseline for this assessment. The *Wrexham LANDMAP Supplementary Planning Guidance*¹¹ (adopted 2007) subdivides the Borough into a series of four broad landscape types and twenty-seven geographically distinct landscape character areas (LCA).
- 5.4.25 The Proposed Development would be located within the Rural/Urban Villages landscape type and within LCA 7a: Chirk. The land in the western part of the Study

⁹ TACP, 2017. *Special Landscape Areas Study*. Wrexham County Borough Council

¹⁰ Welsh Government, 2021. *Planning Policy Wales*, edition 11. Paragraph 6.3.12

¹¹ Wrexham County Borough Council, adopted 2007. *Wrexham LANDMAP Supplementary Planning Guidance*

Area is located within the Uplands landscape type and within LCA 5a: Chirk Estate to Froncysyllte. Extracts from the Wrexham LANDMAP SPG, detailing these LCAs, are included as **Appendix 5.4**. The influence and visual dominance of industrial structures upon LCA 7a is specifically noted in the SPG.

- 5.4.26 Management guidance for both LCAs highlights the need to mitigate the impact of industry via strategic landscaping. In relation to the Proposed Development, a condition was attached to several planning consents for development at Kronospan which required the preparation of a landscape strategy to mitigate the visual effects of the Kronospan Facility from public viewpoints. As such, the Applicant submitted a landscape strategy for the area surrounding the Kronospan Facility to WCBC in 2017. The landscape strategy was approved in 2019, and planting has subsequently been carried out within land owned by Kronospan. This planting is beginning to become effective in screening views, including views towards the Site (see **Section 5.6** below). Further similar planting is required by several more recent (i.e. post 2019) planning consents.

Zone of Theoretical Visibility

- 5.4.27 Zone of Theoretical Visibility (ZTV) mapping has been used to identify the extent of the visibility of the Proposed Development. **Appendix 5.2** provides details of the methodology followed in producing the ZTVs.
- 5.4.28 Three separate ZTVs have been produced, reflecting the following:
- theoretical visibility of lorries on the proposed New Access Road and in the proposed Lorry Park, at a height of 4.5m;
 - theoretical visibility of structures at the proposed 132kV Substation, at a height of 6m; and
 - theoretical visibility of the proposed Weighbridge Building, at a height of 9m.
- 5.4.29 The ZTVs are presented on **Figures 5.1b-d**. A series of marker points representing the different features are shown on the Figures, and visibility was modelled from each of these points.
- 5.4.30 In relation to the Lorry ZTV, which is presented on **Figure 5.1b**, as lorries would be present across much of the Site. The visibility of different parts of the Site may therefore vary from the surrounding area. As such, colour banding is used to

differentiate between locations where more, or fewer lorries (based on the marker points) would be visible.

- 5.4.31 For the Substation ZTV (**Figure 5.1c**) and the Weighbridge Building ZTV (**Figure 5.1d**), a single colour is used to represent theoretical visibility. The substation structures would all be located in close proximity to one another. And the weighbridge building is a single feature. As such, there are no locations where more or fewer features would be visible.
- 5.4.32 The ZTVs were produced using a commercial 2m Photogrammetric Digital Surface Model (DSM) available from Bluesky International. This is derived from aerial photography and does take account of screening features. This gives a realistic picture of the visibility of the Proposed Development, but does treat vegetation as a solid feature, when in reality views can sometimes be available through leaves and branches especially in winter. This can be seen by reference to Viewpoint L (**Figure 5.2i**), where no visibility is predicted by the ZTV, but where in fact the Proposed Development would be visible through gaps between tree trunks. In contrast, visibility is predicted from Viewpoint E (omitted from the LVIA – refer to **Appendix 5.3**), whereas in reality the hedgerow adjacent to the Viewpoint would wholly screen views towards the Site.

Viewpoints

- 5.4.33 The team responsible for the preparation of the LVIA have, as stated in **Section 5.1**, been involved with a range of different development proposals at the Kronospan Facility over a period of more than ten years. Part of this previous work included the identification of a set of viewpoint locations (agreed with WCBC), which provide a full and representative coverage of locations and receptor types within the Study Area. Views of the Proposed Development would not be available from all of these locations.
- 5.4.34 As part of field work relating to the Proposed Development, and also through consultation with the National Trust (as discussed in **Section 5.3**) further viewpoint locations relevant to the current proposal were identified.
- 5.4.35 **Appendix 5.3** provides a list of all the viewpoint locations considered for inclusion in the LVIA, together with details of which viewpoints have ultimately been included. Where viewpoint locations have been omitted, a reason for this is set out in the Appendix.

- 5.4.36 **Figures 5.2a-s** include photography from each of the nineteen viewpoints included in the LVIA. Each Figure has been prepared in accordance with current best practice guidance¹², and a detailed methodology describing how they have been produced is included in **Appendix 5.2**. Winter baseline photography is provided for each Viewpoint and is annotated where deemed appropriate to highlight key features.
- 5.4.37 Summer baseline photography is also provided on **Figures 5.2a-s** for viewpoints where there would be notable changes in views toward the Site as a result of seasonal change in vegetation cover, or from locations in Chirk Castle where people are more likely to be present during the summer months. At Viewpoint Z, only summer photography is provided, as this Viewpoint was only identified following a site visit in July 2022. The summer photograph from Viewpoint K was taken from a slightly different location (approx. 30m further south) than the equivalent winter photograph, to avoid dense vegetation at the original winter location.
- 5.4.38 Photomontages and wireframes illustrating how the Proposed Development would appear are presented on **Figures 5.3a-e**. Photomontages have been prepared from Viewpoints C, U, V and W, and a wireframe visualisation has been prepared from Viewpoint T, to illustrate the change in view that would occur from sensitive locations within the Chirk Castle Estate, along the Llangollen Canal, and on the B5070 adjacent to residential properties at the edge of Chirk.
- 5.4.39 The viewpoints included in the LVIA are set out in **Table 5.3** below, and locations are illustrated on **Figures 5.1a-d**.

Table 5.3: Viewpoints included in the LVIA

Viewpoint	British National Grid Co-ordinates	Viewpoint Details
B: Offa's Dyke Path near Fron Isaf	327302, 339844	<i>Representative</i> of views from the National Trail, north-west of the site
C: N edge of Chirk	328921, 339165	<i>Representative</i> of views available to residents and road users at the edge of Chirk
F: B5070 north of Chirk	328869, 339668	<i>Representative</i> of the views available from the road leading into Chirk
G: Offa's Dyke Path west of Bronygarth	325714, 336544	<i>Representative</i> of views from the National Trail, south-west of the site
H: Chirk Castle	327158, 338969	<i>Specific</i> view from the garden terrace at the Castle

¹² Landscape Institute, 2019. *Visual Representation of Development Proposals. Technical Guidance Note 06/19*

Viewpoint	British National Grid Co-ordinates	Viewpoint Details
I: New Hall	327559, 338814	<i>Representative</i> of views from the adjacent road network and nearby property, and also from the entrance to Chirk Castle
J: Canal towpath near marina	328604, 339624	<i>Representative</i> of views available to canal and towpath users (including those at the marina)
K: Canal towpath north-west of site	328520, 338945	<i>Illustrative</i> of the degree to which views from the canal corridor are screened
L: Chirk Castle driveway	327234, 338569	<i>Representative</i> of views available to visitors on their way to the Castle itself.
M: Canal towpath north of site	328562, 339101	<i>Illustrative</i> of the degree to which views from the canal corridor are screened
N: Canal towpath north of site	328564, 339152	<i>Illustrative</i> of the degree to which views from the canal corridor are screened
Q: New Hall South Lodge (Chirk Castle Entrance)	327507, 338782	<i>Specific</i> view from the entrance to Chirk Castle, adjacent to the listed lodge building
T: Canal towpath near marina	328555, 339461	<i>Specific</i> view towards the Site through a break in the vegetation cover east of the canal
U: Chirk Castle entrance	326900, 338130	<i>Specific</i> view from outside the main entrance to Chirk Castle (the castle itself, and not the wider estate)
V: Chirk Castle roof	326864, 338121	<i>Specific</i> view from the roof of Chirk Castle
W: Footpath, Chirk Castle	327284, 338262	<i>Specific</i> view from the permissive path that runs through the Chirk Castle Estate
X: Minor road north of Chirk Castle	326821, 339365	<i>Representative</i> of views available to road users and to users of the Offa's Dyke Path National Trail (which crosses the road at this point)
Y: B5070, junction with minor road north of Site	328918, 339495	<i>Specific</i> view adjacent to the location of the proposed new roundabout
Z: Public footpath east of Chirk	329719, 339295	<i>Representative</i> of views available to walkers

5.4.40 Viewpoints fall into three categories, as set out in the GLVIA:

- Representative viewpoints (which represent the experience of different types of receptors in the vicinity).
- Specific viewpoints (a particular view, for example a well-known beauty spot).
- Illustrative viewpoints (which illustrate a particular effect/issue, which may include limited/lack of visibility).

5.4.41 It should be noted that the viewpoint itself is not the receptor; rather it is the people that would be experiencing the view from the viewpoint. Receptors in the vicinity of the Site that are likely to experience views of the Proposed Development include:

- Local residents.
- Users of public rights of way and other routes/land with public access.
- Visitors to Chirk Castle.
- Road and rail users.

Future Baseline

5.4.42 In the absence of the Proposed Development, it is assumed that the Site would remain in its present agricultural use.

5.4.43 Additionally, it seems reasonable to assume that, irrespective of the presence/absence of the Proposed Development, that there would be some degree of change within the Kronospan Facility as buildings are upgraded or replaced to accommodate new industrial processes, or are otherwise refurbished, and new items of plant are introduced to the Site, reflecting changes in technology or working practices.

5.5 Development Design and Impact Avoidance Measures

Introduction

5.5.1 The following sets out aspects of the Proposed Development that have been designed at the outset or through the earlier development/design stages to avoid or minimise the potential for significant effects. Any additional mitigation required to address the initial environmental effects of the Proposed Development is described in **Section 5.8**, along with any enhancement measures.

Construction

5.5.2 A project-specific Construction Environmental Management Plan (CEMP) would be implemented (refer to **ES Chapter 4.0 Description of the Proposed Development**) for further details). The CEMP would govern construction activities.

5.5.3 Items to be addressed by the CEMP that pertain to landscape and visual effects are likely to include:

-
- Measures to ensure the successful retention of existing vegetation (for example use of protective fencing).
 - Measures taken to limit the effects of temporary construction lighting.

Operation

5.5.4 A series of measures have been embedded into the design of the Proposed Development to reduce or eliminate potentially adverse landscape and visual effects. These measures include:

- An overall net increase in tree cover as a result of proposed native woodland planting.
- An overall net increase in the length of hedgerows within the Site through new native planting.
- Creation of new areas of species-rich grassland to enhance biodiversity and to provide visual interest in grassed areas.
- Incorporation of new wetland vegetation within proposed attenuation basins to enhance biodiversity interest.
- Enclosure of the developed site through new planting and the bund along the eastern perimeter to reduce visual effects and the sense of intrusion in the countryside.
- New native planting adjacent to the Llangollen Canal, to link with other similar planting already implemented as part of the Kronospan Landscape Strategy, and to screen views from the canal and towpath.
- Use of new planting to break up views from Chirk Castle, where full screening would not be possible due to differences in elevation and the aspect of the Site landform.
- Avoidance of planting the perimeter bund opposite residential areas on Wern (east of the B5070) to avoid restricting the views across to the western hills from these properties
- Implementation of a lighting scheme designed in accordance with current best practice to minimise light spillage outside of the Site.

5.5.5 The Illustrative Landscape Masterplan for the Proposed Development is presented on **Figure 4.3a**, and cross-sections through the Proposed Development are presented on **Figures 4.4a-d**.

5.6 Assessment of Potential Effects

Potential Effects during Construction

Introduction

- 5.6.1 Refer to **ES Chapter 4.0 (Description of the Proposed Development)** for a description of the construction stage of the Proposed Development. Construction would be managed in accordance with a CEMP as noted above.
- 5.6.2 Construction sites feature distinctive elements that are likely to draw attention, including temporary signage and fencing, and site operatives wearing high-visibility clothing. Construction also, by necessity, requires the use of suitable vehicles and other plant, some of which would potentially be readily apparent by virtue of their colour, form and movement.
- 5.6.3 It is anticipated that construction would occur between Quarter 2 2024 and Quarter 3 2027. An indicative programme is set out in **ES Chapter 4.0 (Description of the Proposed Development)**. The duration of construction activities for key individual components is set out below:
- Site clearance and earthworks: Six months;
 - North access road: Six months;
 - Lorry park: Nine months;
 - Highways works: Nine months;
 - Weighbridge building: Nine months;
 - Roundwood storage areas: Three months;
 - Weighbridge car park; Three months;
 - 132kV substation: Twenty-seven months.
- 5.6.4 There would be overlap between some of these activities, and the majority of construction works, (i.e. from the start of site clearance to the completion of the roundwood storage areas and weighbridge car park) would last for approximately fifteen months in total.
- 5.6.5 Construction of the proposed 132kV substation would take place after all the other elements are built and in operation.

Construction Stage Landscape Effects

- 5.6.6 The temporary contractor's compound would be located on an area of existing hardstanding at Afon Bradley Farm, and access to the Site would be from this area. As such, no additional vegetation loss would be required over and above the clearance of vegetation within the development footprint (see discussion of *Operational Effects* below), and there would be no effects upon landscape fabric specifically related to construction activities.
- 5.6.7 With regards to landscape character, construction would introduce a range of features that contrasts with the underlying character and which may draw attention by virtue of their appearance. Construction activity at the Kronospan Facility is familiar locally, but the Proposed Development would be located north of the existing developed Facility. Additionally, temporary works including carriageway closures and signal managed traffic would be required on the B5070 whilst the road is realigned and the new roundabout is built. There would be temporary adverse change in character occurring as a result of construction, and this would result in locally significant effects within the Site for approximately fifteen months whilst the majority of works in the Site are carried out. Significant effects would be experienced along the corridor of the B5070 to the east and north-east, during the nine-month period when the highway works would take place.

Construction Stage Visual Effects

- 5.6.8 Views of construction activity would be visible from similar locations to those where the Proposed Development would be visible once operational. As such, the ZTVs shown on **Figures 5.1b-d** give a reasonable indication of the likely extent of construction visibility.
- 5.6.9 The movement of vehicles into and out of the temporary contractor's compound, and the presence of storage areas and site offices/ welfare facilities would be visible from Afon Bradley Farm. View of activities within the Site itself would be well screened by the mature tree cover (including conifers) immediately south-east of the property. Visual effects resulting from the presence of the compound would be significant for the duration of the construction period.
- 5.6.10 The clearest views of construction activities would be from the B5070 north-east of the Site, where highway works would occur, and where vegetation removal would open up views into the rest of the Site prior to the construction of the new earthworks.

Effects on road users would be significant following site clearance and whilst highway works are ongoing. These effects would be experienced for approximately twelve months.

- 5.6.11 Views of roundabout construction and of vehicles queuing as part of traffic management measures would be available from end windows at Lodge Farm Cottage and in oblique views from front windows at Lodge Farm Cottage and Parkgate Cottage. This is likely to result in significant visual effects for the nine-month period during which highway works are ongoing.
- 5.6.12 From further south along the B5070 and from properties located along this road, including from Bryn Hyfryd on the western side of the road, views of construction activities would also be available over retained boundary vegetation. Temporary 3m noise attenuation fencing would be provided along the boundary (the fencing around Bryn Hyfryd would be retained on a permanent basis). The construction of the earth bund along the eastern edge of the Site would be conspicuous, and the movement of larger items of plant beyond this would also be visible from some locations. Effects would be significant for the fifteen-month period during which the majority of construction works would take place.
- 5.6.13 Elsewhere, construction activities whilst sometimes visible would be a relatively minor background presence which would vary in intensity across the construction period as a whole. Where there would be some change in view as a result of construction, the effects of this would not be significant.

Construction Stage Night-time Landscape and Visual Effects

- 5.6.14 Lighting would be required to ensure the health, safety and welfare of those on Site during poor light conditions, and in particular at the beginning and end of the working day in winter. This may require both fixed lighting columns and mobile task lighting. In some instances, lighting may be required for work on elevated structures, including crane mounted lighting. Some use of low-level lighting for security purposes may be required through the night.
- 5.6.15 Night-time landscape and visual effects during the construction phase would be limited and would not be significant. Lighting is already present at the Kronospan Facility, in Chirk and along the B5070. Lighting would not generally be present outside of normal working hours, other than low-level security lighting, and the CEMP would include measures to minimise any effects on amenity.

Potential Effects during Operation

Effects on Landscape Fabric

- 5.6.16 The Site chiefly comprises pasture grassland. Clipped hedgerows are present along the highway boundary with the B5070, and along internal field boundaries. Mature trees are present within the hedgerow that runs immediately west of the B5070 and towards the south-west of the Site close to the existing Kronospan Facility boundary. A larger belt of woodland is located either side of the existing private means of access to Afon Bradley Farm.
- 5.6.17 Pasture grassland is commonplace both locally and nationally and could be recreated easily via new seeding. Susceptibility to change is low. It has little intrinsic value but does contribute to the wider rural character. Value is medium. Overall, sensitivity is low to medium.
- 5.6.18 Hedgerows can be replaced via new planting, which would within a relatively short period (typically three to five years) recreate the features lost. Susceptibility to change is low to medium. Hedgerows provide a sense of enclosure and structure to the landscape, and hedgerows are also important features in their own right. Value is medium to high. Overall, sensitivity is medium.
- 5.6.19 Woodland and mature trees cannot be replaced on a direct like-for-like basis in the short and medium term due to the time it takes for new planting to develop. Susceptibility to change is high. Whilst not covering an extensive area, the trees do make a limited contribution to local character and have some localised value as individual and group landscape features. Value is medium to high. Overall, susceptibility to change is high.
- 5.6.20 The Proposed Development would result in the loss of existing pasture grassland within the Site boundary, (approx. 8.44 ha), along with approximately 0.43 ha of existing woodland, approximately 750m of hedgerow, and approximately 16 no. individual trees (including hedgerow trees). As noted above, retained vegetation would be protected during construction.
- 5.6.21 The landscape proposals illustrated on **Figure 4.3a** include approximately 4.19ha of new species-rich grassland (either via new seeding or by changes to current management practices), approximately 2.2ha of new native woodland planting, approximately 1.28km of new native hedgerow, approximately 84no. new specimen trees (including hedgerow trees), and approximately 0.36ha of new wetland

vegetation in the attenuation ponds. New structures and hard surfaces would occupy approximately 4.39ha. The remainder of the Site (approximately 0.8 ha) would comprise retained tree and shrub vegetation.

- 5.6.22 All the pasture grassland within the Site would be lost to development to be replaced by new features or would be converted to species-rich grassland via changes to management practices. There would be a net loss in grassland overall, however the proposed landscaping would include new species-rich grassland which would be more diverse than the existing grassland. Change to this element of fabric would be large in magnitude. The resulting effect would be moderate and would not be significant due to the lower sensitivity of the receptor. Given the net vegetation loss that would occur, effects can only be considered adverse, but the introduction of new species-rich grassland and the management of this with biodiversity in mind would have a beneficial effect.
- 5.6.23 There would be a net increase in the length of hedgerow within the Site as a result of the Proposed Development. Change would be medium in magnitude. The resulting effect would be moderate and would not be significant. Effects would be adverse in the short-term due to the loss of existing vegetation, but in the medium and longer term, effects would be beneficial due to the overall increase in hedgerow cover.
- 5.6.24 There would be a net increase in the amount of native woodland within the Site, and a net increase in the number of specimen trees (including hedgerow trees). Change would be medium in magnitude. This would result in a moderate to major level of effect which would be significant. In the short to medium term, these effects would be adverse, due to the loss of well-established mature vegetation. However, in the medium to long term, effects would be beneficial given the overall increase in woodland cover and number of specimen trees.

Effects on Landscape Character

- 5.6.25 A detailed assessment of effects upon the character of LCA5a: Chirk Estate to Froncysyllte and LCA7a: Chirk is set out in **Appendix 5.5**.

Effects on LCA7a

- 5.6.26 The Proposed Development would be located within LCA7a. The character of LCA7a is already influenced by the presence of urban development at Chirk, including large scale industry at the Kronospan Facility. The Proposed Development

would comprise a limited urban extension at the northern edge of town, the influence of which would be limited by the underlying landform of the Site, by existing vegetation cover (notably along the Canal corridor), and by proposed new planting. The footprint of built development would be extended northwards from the existing Kronospan Facility. New buildings, other structures and storage piles would be concentrated at the southern edge of the Site, closer to existing development. There would be loss of existing woodland in the north-eastern part of the Site and localised tree loss elsewhere.

- 5.6.27 The proposed new features would be less prominent than the far larger existing industrial structures. Their presence would result in a localised sense of urbanisation at the northern edge of Chirk, which would be limited in extent and intensity by a combination of landform and existing and proposed vegetation cover. This change would be concentrated in the Site and its immediate vicinity, including along the B5070 corridor north of Chirk. Less marked and localised change would also be experienced from the ridge east of Chirk and from the area west of Chirk Marina.
- 5.6.28 Woodland recently planted by the Applicant (as part of the Kronospan Landscape Strategy) would reduce visibility as vegetation establishes (and this is already beginning to occur from some locations such as along the Canal corridor). Further new planting associated with other recent Kronospan development proposals, and with the Proposed Development would provide further screening. There would be a net gain in tree cover as a result of the proposed new planting. This planting would help to limit the visibility of the Proposed Development, in accordance with published guidelines for the LCA. In the medium and longer term, planting would enclose the majority of the developed Site, and the proposed earth bund would provide enclosure along the eastern perimeter.
- 5.6.29 Change in character would be localised and the majority of the LCA would be unaffected. Effects would be moderate adverse and would not be significant.

Effects on LCA5a

- 5.6.30 The character of LCA5a is already influenced by the presence of the Kronospan Facility within outward views to the east. The Proposed Development would be introduced to the north of the existing Kronospan Facility, increasing the visible extent of this northwards. The new features would all be relatively small in height and scale and would be far less prominent than the existing tall industrial structures. As such there would be a limited and incremental increase in the visual context of

the LCA, due to the localised change in the assemblage of features present in outward views.

- 5.6.31 Woodland recently planted by the Applicant as part of the Kronospan Landscape Strategy would reduce visibility towards the Site as vegetation establishes (and this can already be seen from some location especially during summer). Further new planting associated with other recent development proposals at Kronospan, along with the new planting proposed as part of the Proposed Development would provide further additional screening. All planting would accord with published management guidelines for the LCA.
- 5.6.32 Whilst there would be some change in outward views from more exposed parts of the LCA, including the northern and eastern edges of the Chirk Castle estate and the hillsides west of the Chirk Marina, the majority of the LCA would be wholly unaffected. The underlying characteristics of the landscape would not change appreciably from baseline. Effects would be minor adverse and would not be significant.

Visual Effects

Viewpoints

- 5.6.33 A detailed assessment of visual effects at the nineteen viewpoints included in the LVIA is set out in **Appendix 5.6**. In summary, a short-term significant visual effect would be experienced at one viewpoint. None of the viewpoints would experience significant visual effects in the medium and longer-term. At five of the viewpoints the Proposed Development would not be visible at all due to a combination of intervening landform and vegetation cover, and at four further viewpoints, the Proposed Development would only be visible in the short-term before new woodland planting would wholly screen views.
- 5.6.34 At Viewpoint Y, located on the B5070, immediately south-east of where the proposed new roundabout would be located, visual effects in the short term would be moderate to major adverse. The realignment of the B5070, the introduction of the new roundabout and the associated tree loss would be very obvious at short range, and this would result in a significant visual effect in the short-term.
- 5.6.35 At Viewpoint Y in the medium and longer-term, effects would be moderate adverse. New planting would largely recreate the existing pattern of vegetation on the western side of the road, albeit in a slightly different location. The nature of the view would be similar to the baseline view, i.e. views of a road corridor, including highways

infrastructure (e.g. signage, lighting columns etc) and traffic, enclosed on the western side by vegetation. The assemblage of features present would differ from baseline to some degree, chiefly due to the presence of the new roundabout, but the experience of people using the road would not change greatly. Effects would not be significant.

- 5.6.36 At Viewpoint F, effects would initially be moderate adverse, reducing to minor to moderate adverse in the medium and longer-term. The Viewpoint is located on the B5070 to the north of where the proposed new roundabout would be located. The Proposed Development would replace existing features located within the highway corridor with similar new features albeit in a slightly different location. Tree loss to accommodate this would be apparent in the short-term, opening up views further to the south, but in the medium and longer term proposed planting would result in the view reverting to a composition similar to but not identical to the baseline view. Effects would not be significant.
- 5.6.37 At Viewpoint W, effects would initially be moderate adverse, reducing to minor adverse in the medium and longer term. This Viewpoint is located along the permissive path that runs east from Chirk Castle. Initially, the Proposed Development would be visible towards the rear of the view, through a gap in existing tree cover. There would be an incremental increase in the relatively limited influence of development upon the view. In the medium and longer term, as proposed planting establishes and matures, this would screen some of the new features and break up views of the others. Effects would not be significant.
- 5.6.38 At Viewpoint C, effects would be minor to moderate adverse. The Viewpoint is located along the B5070 close to the eastern boundary of the Site. Whilst the Proposed Development would be introduced at close range, the new features would be largely screened from view by the retained hedgerow along the western side of the road. Only the tallest elements of the Proposed Development would be apparent above this, these being sections of the new earth bund, the top of some sections of acoustic fencing, the roof of the Weighbridge Building and lighting columns. The level of screening would increase in summer when foliage is present and as the hedgerow grows (after clipping, visibility would be similar to winter). Effects would not be significant.
- 5.6.39 At Viewpoint Z, effects would be minor to moderate adverse. The Viewpoint is located on the ridge east of Chirk and views across the northern edge of town to the

hills further west are available. The Proposed Development would be set well below the eye height of the viewer and would not intrude upon the longer views west. There would be some limited increase in the influence of built development upon the views available. Effects would not be significant.

- 5.6.40 At Viewpoints B, L, U, V and X, effects would be minor adverse. All five Viewpoints are sensitive locations with a strong recreational/ amenity interest. Viewpoint B is located along the Offa's Dyke Path National Trail. Viewpoint X is located along the same route and is also located within the Chirk Castle RPG. Viewpoint L is along the main Castle driveway (within the RPG). Viewpoint U is at the entrance to the Castle itself, and Viewpoint V is from the Castle roof. At all the Viewpoints, the Proposed Development would be a limited addition towards the rear of the view, which would be partially screened by vegetation, and which would have little influence upon the nature of the expansive views available. Effects would not be significant.
- 5.6.41 At Viewpoints I, J, Q and T, the Proposed Development would initially be visible during the winter months, with a minor adverse effect occurring, which would not be significant. Viewpoints I and Q are located at the entrance to the Chirk Castle Estate, and Viewpoints J and T are located along the Llangollen Canal towpath north-west of the Site. Initially from all four Viewpoints, the Proposed Development would be partially visible during winter through breaks in intervening vegetation cover. However, in summer, when deciduous vegetation is in leaf, this would wholly screen views. Much of this vegetation was recently planted by the Applicant (as part of the Kronospan Landscape Strategy), and as this establishes further it would provide all year-round screening from Viewpoints I, Q and J in the medium and longer term. Similar new woodland planting proposed as part of the Proposed Development would provide all year-round screening from Viewpoint T.
- 5.6.42 At Viewpoints G, H, K, M and N, the Proposed Development would be wholly screened from view by intervening features and would not be visible at all.

Pattern of Visual Effects

- 5.6.43 By reference to the ZTVs presented on **Figures 5.1b-d**, the general extent of visibility of the Proposed Development would be relatively limited. Visibility would be concentrated within the Site itself and along the adjacent corridor of the B5070 as far as the junction with the A5. There would be other patches of visibility from the minor road that runs along the ridge east of Chirk and from the footpaths that run westward

from this, from the eastern edge of the Chirk Castle estate and the adjacent minor roads, from the northern edge of the Chirk Castle estate and the land to the north (including from sections of the Offa's Dyke Path National Trail), and from the land west of the Chirk Marina (including sections of the adjacent minor road). Elsewhere, visibility would be very limited in extent.

- 5.6.44 The property at Afon Bradley Farm to the north-west of the Site benefits from a belt of dense mature tree cover immediately to its south-east, which includes coniferous trees (refer to **Appendix 5.7**). This vegetation would be unaffected by the Proposed Development and continue to provide very effective screening of views. There may be limited visibility of the Proposed Development through gaps between branches, but this would result in very limited change in view at worst. Visual effects experienced by residents would not be significant.
- 5.6.45 From locations within Chirk, views of the Proposed Development would generally be well screened by a combination of existing development at the Kronospan Facility, existing vegetation at the perimeter of the Kronospan Facility and at the Site boundary, and by the juxtaposition of buildings within the town itself. From properties at the north-western edge of town, along Wern, Offa and Linden Avenue, views from first floor windows into the developed Site are likely to be available. The cross-sections shown on **Figure 4.4a** include a line of sight from first floor windows, and this demonstrates to what degree the new features are likely to be visible. The proposed earth bund at the eastern boundary of the Site would provide initial screening, and the proposed specimen tree planting at the foot of the bund would further break up views. To preserve views from the properties to the western hills, the tree planting would not provide a continuous screen, but rather would allow framed views westwards, which would inevitably include elements associated with the Proposed Development. Short-term significant effects would be likely to be experienced from some properties, but these would reduce to non-significant levels as tree planting establishes in the medium term.
- 5.6.46 From Bryn Hyfryd immediately south of the Site on the western side of the B5070, ground floor views would be screened by the evergreen hedge on the northern boundary of the property (refer to **Appendix 5.7**), with further screening provided by a proposed 3m high noise attenuation fence. From first floor windows clear views over these screening features would be available of the eastern roundwood storage area and of the new perimeter earth bund. Specimen tree planting west of the bund and in proposed hedgerows further west would also be clearly visible, and this would

filter views of other proposed new elements. Visual effects upon residents would be likely to be significant.

- 5.6.47 From along the B5070, as one travels into and out of town, the changes to the road alignment would be obvious, but ultimately would not differ greatly from baseline other than via the presence of the new roundabout. The features present along the road would include road markings, signage and lighting, and these are features typical of any highway corridor within or close to an urban area. Vegetation loss would initially change the context of views available to road users, but this would be largely replaced by similar planting in the medium and longer term.
- 5.6.48 From Lodge Farm Cottage and Parkgate Cottage located on Old Black Park Road, close to the new roundabout, the tree loss required to build the roundabout would be apparent initially. The new bund would restrict views into the Site and as proposed planting on this new landform establishes this would provide further screening of views. Views would be available from end windows at Lodge Farm Cottage, and obliquely from the front windows of both properties. Main views from front windows would remain looking due south across the adjacent fields and would be unaffected by the proposed changes. Rear views would be due north across fields and would be similarly unaffected. Whilst obvious change would occur, this would be unlikely to result in significant visual effects upon residents at the properties.
- 5.6.49 From the ridge east of Chirk, the majority of views from the minor road that runs along the crest of the ridge would be screened by the roadside hedgerow, with only very occasional intermittent visibility through field gates. From the footpaths which run downhill towards Chirk from the minor road, some of the new elements associated with the Proposed Development would be visible above the retained roadside hedgerow. Many of the proposed changes would be located below the level of the B5070 corridor and would be screened by existing landform and by the new earth bund. The degree to which the view would change would decrease as one walks westwards along the footpaths and travels downhill. Views across the valley to the hills further west would be unaffected.
- 5.6.50 Visibility from within the Chirk Castle Estate and from the hillsides further to the north would be concentrated toward the eastern and northern edges, where relatively exposed east facing hillsides afford long views out across the lower-lying landscape. These views already include the existing Kronospan Facility and other urban development at Chirk. Many of these areas are not locations where public access is

promoted or are which are wholly inaccessible to the public. The Proposed Development would be visible from public rights of way, other routes with public access and from the road network. It would be a minor presence towards the rear of the view and would not result in any change of note to the nature of the long-range expansive vistas available. From the eastern edge of the Estate (in the vicinity of the main entrance), recent planting implemented by the Applicant (as part of the Kronospan Landscape Strategy) would screen summer views initially and would screen views all year round in the medium and longer term.

- 5.6.51 From the more well frequented locations at Chirk Castle, views of the Proposed Development would be available from the northern and north-eastern edge of the Castle including the pathways around the entrance and the roof. The new features would be well screened by intervening vegetation and where visible would be a minor background feature. Views would also be available from a short section of the permissive path that runs east from the Castle, and from this area proposed planting would provide some partial screening of views in the medium and longer-term. The amenity of visitors to the Castle would be unaffected by the limited changes in view that would occur.
- 5.6.52 From the Llangollen Canal corridor, there would be very little visibility of the Proposed Development. Occasional glimpsed views would be available in winter from locations east of the Marina. The equivalent summer views would be wholly screened by vegetation. Recent planting implemented by the Applicant (as part of the Kronospan Landscape Strategy) and new planting proposed as part of the Proposed Development would provide all year-round screening once this has established. Elsewhere along the Canal corridor, existing vegetation, the railway embankment and the canal cutting would screen views.

Night-time Landscape and Visual Effects

- 5.6.53 Light sources in the vicinity of the Site include operational and security lighting at the existing Kronospan Facility to the south, and street lighting along the B5070 to the east and north-east. Further street lighting is present alongside roads in Chirk to the south-east, and at Chirk Marina on the western side of the Llangollen Canal. Passing traffic also generates intermittent light. The Lighting Assessment (**Planning Statement Appendix D**) that forms part of the planning submission confirms that the Site (and the adjacent stretch of the Llangollen Canal) is located within Environmental Zone E2, defined as “*sparsely inhabited rural areas, villages, or*

relatively dark outer suburban locations". The AONB, including Chirk Castle RPG is located within Environmental Zone E1, defined as "*relatively uninhabited rural areas, National Parks, Areas of Outstanding Natural Beauty, IDA buffer zones etc*".

- 5.6.54 As described in **ES Chapter 4.0 (Description of the Proposed Development)** and in the Lighting Assessment (**Planning Statement Appendix D**), once commissioned, the Proposed Development would be operational on a continuous 24-hour, 7 day per week basis (i.e. the same as for the existing Kronospan Facility), albeit deliveries and most staff movements would take place during the normal working day (07:00 – 19:00). As such, there would be a need for lighting to ensure a safe working environment for operatives during the hours of darkness. It is likely that security lighting would also be required. Street lighting would also be required along the proposed north access road and at the proposed lorry park.
- 5.6.55 The measures that would be incorporated into the lighting design are described in **ES Chapter 4.0 (Description of the Proposed Development)** and in the Lighting Assessment (**Planning Statement Appendix D**). Lighting would be designed and specified to accord with current industry standards and best practice guidance. The aim would be to minimise the spill of obtrusive light beyond the development area. The Lighting Assessment confirms that the lighting of the Proposed Development would be compliant with criteria published by the Institute of Lighting Professionals (ILP) for Environmental Zones E1 and E2. The Lighting Assessment also confirms that the lighting of the Proposed Development would also be compliant with criteria for Environmental Zone E0 (defined as "*Astronomical Observable dark skies, UNESCO starlight reserves, IDA dark sky places*"), and as such would accord with the aspiration that the AONB can be formally recognised as a 'dark sky community' (see **Section 5.2**).
- 5.6.56 As daylight hours are shorter during the winter months, the proposed lighting would be in use for a greater proportion of the day, and at times when larger numbers of people are likely to be outside to experience views towards the Site (i.e., going to and from work). As such, the night-time effects of the Proposed Development are more likely to be experienced during the winter.
- 5.6.57 The proposed new lighting columns would be visible above the proposed perimeter landform and vegetation cover from some locations. The effects of lighting would be experienced chiefly by users of the B5070 to the east of the Site, and these effects would all be experienced in the context of the existing road lighting and of lighting

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- generated by passing traffic. Residents in the properties close to the road would also potentially experience the effects of lighting, but these people are likely to be inside with curtains drawn at times when the lighting would be in use, and hence the duration of any perceived change would be very limited.
- 5.6.58 Users of the Llangollen Canal would also potentially experience the effects of lighting, however these people are unlikely to be on the canal during times when lighting would be in use (other than anyone in a houseboat, where again curtains are likely to be drawn). Views of lighting would be filtered through intervening tree cover and would be experienced in the context of existing lighting at Chirk Marina. Any perceived change in the night-time environment would be very limited in scale and extent.
- 5.6.59 The location of the Proposed Development is such that there would be limited opportunities for views into the developed Site itself, due to the proposed changes to the landform of the Site, the introduction of new planting along the southern and south-western perimeters, the introduction of noise attenuation barriers which would prevent views of surfaces from many locations and due to the presence of existing vegetation in the surrounding area. As such, illuminance of hard surfaces such as roads and parking areas is not expected to be apparent from many locations beyond the Site itself and its immediate surroundings.
- 5.6.60 From more elevated locations to the west of the Site, within the Chirk Castle Estate, and the Clwydian Range and Dee Valley AONB the areas of new hard surfaces would in theory be visible. However, given the distance from the Proposed Development, the filtering of views by existing vegetation and the limited background change that would occur as a result of the introduction of the new features, illuminance of these is not expected to be apparent. In addition, it is unlikely that visitors to Chirk Castle or to the AONB would be present at times when the proposed lighting would be in use and hence the potential for people to experience any change would be very limited. Road users within the AONB at night-time are likely to be focused on the road ahead rather than with wider views across the surrounding landscape, and this would reduce the degree to which they are likely to be aware of any increase in lighting levels at the Site.
- 5.6.61 The use of modern full cut off luminaires (where the light source is fully enclosed rather than visible) would ensure that the increased levels of lighting as a result of the Proposed Development would result in only a limited change from baseline. Light

shining down from luminaires is not apparent until it hits a surface and so, with the exception of weather conditions such as rain or fog where water droplets are illuminated and make a cone of light evident, direct light sources at height would not be prominent. The nature of the night-time landscape, and views across it would continue to be one where the presence of lighting is familiar.

- 5.6.62 The generation of light would increase locally as a result of the Proposed Development. However, this increase would be minimised by the implementation of a sensitively designed lighting scheme and would occur within an area at the urban fringe where lighting is already present. Change in lighting levels would be limited. As such, the presence of the Proposed Development would not materially alter the night-time environment, and night-time landscape and visual effects would not be significant.

Effects on Landscape Designations

AONB

- 5.6.63 The Clwydian Range and Dee Valley AONB was extended in 2011 to cover the area west of the Kronospan Facility, and the Kronospan Facility was present when this extension took place. The presence of large-scale industrial structures at Kronospan or of other urban development at Chirk did not preclude the inclusion of land a short distance west of the Site within the AONB.
- 5.6.64 The Proposed Development would not be located within the AONB but would be visible in outward views from some locations within the designation (refer to **Figures 5.1b-d**). Ten of the twenty viewpoints included in the LVIA are located within the AONB or at the boundary. None of these viewpoints would experience significant visual effects (and the Proposed Development would not be visible from two viewpoints). The new features would be limited additions, located towards the rear of the view, and their presence would not result in any notable change in the nature of the views available looking out across what is a predominantly agricultural landscape.
- 5.6.65 The Proposed Development would not result in any visual intrusion of note in views towards the AONB from locations outside the designation. The landform of the Site itself, the retention of boundary vegetation and the proposed earthworks would restrict visibility from the east. Where visible, the Proposed Development would be

set below the line of direct views across to the more elevated landscape of the AONB (refer to Viewpoints C and Z).

- 5.6.66 The character of the landscape within the AONB would not experience significant effects as a result of the Proposed Development. The presence of development in outwards views is an established part of the visual context of the landscape, and this would not appreciably change as a result of the Proposed Development. Other characteristics of the AONB landscape would be wholly unaffected.
- 5.6.67 The lighting of the Proposed Development would not have any implications for the aspirations for the AONB to become a 'dark sky community'. As noted above, the lighting of the Proposed Development would accord with ILP criteria for Environmental Zone E0, i.e. for 'dark sky' areas. Any increase in light levels would be incremental, and there would little or no obtrusive light spillage outside of the Site boundary.
- 5.6.68 **Table 5.4** below provides an appraisal of how the Proposed Development would perform against each of the special qualities of the AONB (as set out in **Section 5.4**).

Table 5.4: Appraisal against the Special Qualities of the Clwydian Range and Dee Valley AONB

Special Quality	Description (from AONB Management Plan)	Appraisal of the Proposed Development
Tranquillity	Tranquillity is associated with an atmosphere of calm and stillness; peace and quiet; and with dark night skies	<p>From locations within AONB where the Proposed Development would be visible, views of either the existing Kronospan facility, traffic using the B5070 (including HGVs), or both are typically already available. Vehicles accessing Chirk Castle, including occasional coaches are also present at times. Effects upon landscape character and upon views within the AONB would not be significant.</p> <p>The Proposed Development would not result in any significant effects resulting from changes in noise levels (refer to Chapter 8.0). The noise assessment includes consideration of effects upon receptors within the AONB (properties close to the entrance and exit points to the Chirk Castle estate).</p> <p>The Proposed Development would accord with ILP criteria for 'dark sky areas' such as the AONB.</p> <p>Given the above, the introduction of the Proposed Development would not result in any changes that would materially reduce the tranquillity of the designation.</p>

Special Quality	Description (from AONB Management Plan)	Appraisal of the Proposed Development
Remoteness and Wildness, Space and Freedom	<p>Remoteness and wildness is associated with a feeling of trepidation and sometimes even danger.</p> <p>The sublime.</p> <p>Space and freedom are related to access to the landscape and the uninterrupted and extensive views from the high places within it.</p> <p>Bro and the link between communities and their landscape</p> <p>A sense of belonging and attachment to the landscape</p>	<p>Changes in view within the AONB would be relatively limited and would be experienced from locations relatively close to the boundary where these qualities are not strong and where views of development outside the AONB, including the existing Kronospan facility are already available.</p> <p>The presence of the Proposed Development would not result in any reduced sense of remoteness, wildness, space and freedom from locations where these qualities are experienced within the AONB. The relationship between people and communities and the AONB landscape would be unaffected.</p>
Heather Moorland and Rolling ridges	The dramatic moorland ridges of the central Clwydian Range, expansive Llandegla and Ruabon Moors. Llantysilio and North Berwyn	The Proposed Development would not affect these features or how people experience them
Broadleaved woodlands and veteran trees	Bishops Wood, Cwm and Wheeler Valley. Ash dominated Alyn Valley woods and the small copses of the upper Alyn and upland oak woods of the Dee Valley	The Proposed Development would not result in any loss of woodland within the AONB
Limestone grasslands, cliffs and screes	Graig Fawr, Loggerheads and Bryn Alyn – Llanarmon yn Ial and the spectacular Eglwyseg Escarpment	The Proposed Development would not affect any of these features or how people experience them
Historic Settlement and Archaeology	Historic settlement patterns and conservation areas. The diverse patterns and features in the landscape left by previous generations	The Proposed Development would not affect the historic settlement pattern or archaeological interest within the designation
River Valleys and the River Dee	The dramatic and powerful River Dee contrasted with the smaller twisting and winding River Alyn and River Wheeler	The Proposed Development would not be visible from any of the nearby river valleys, and would not affect how people experience them
Industrial Features and the World Heritage Site	Limestone quarrying and lead mining, slate quarries and associated tramways and workings – the Pontcysyllte Aqueduct and canal, Horseshoe Falls	Within the Study Area, the WHS is not readily apparent from land within the AONB. The presence of the Proposed Development would not affect any inter-relationship between land within the AONB and the WHS. Industrial features within the AONB would be unaffected.
Historic Defence Features	The dramatic chain of Iron Age Hillforts of the Clywdian Range, Castell Dinas Bran and Chirk Castle and medieval Mote and Baileys at Tome y Rhodwydd, Tome y Fadde and Glyndwr's Mount, Carrog	Limited visual change from Chirk Castle, with narrow views of the Proposed Development framed by existing vegetation, and with proposed planting acting to reduce the perceived prominence of the new features over time. The changes would have no implications for any appreciation/ understanding of the defence function of the Castle.

Special Quality	Description (from AONB Management Plan)	Appraisal of the Proposed Development
Small historic features	Often unlisted or scheduled a rich mixture of small historic features that are an important part of rich cultural layer of the landscape – wells, village pumps, boundary stones, waymarkers, milk stands and K6 telephone boxes	The Proposed Development would not affect any small historic features within the designation
Traditional boundaries	Drystone walls and hedges reflecting traditional skills and craftsmanship and often reflecting local styles	The Proposed Development would not affect any boundary features within the designation
Iconic Visitor and Cultural Attractions	Sites that have helped to shape the identity of the AONB as a visitor destination – Loggerheads, Moel Famau, Castell Dinas Bran, Valle Crucis Abbey, the Horseshoe Pass and Pontcysyllte Aqueduct and Horseshoe Falls	Limited change in view from the Llangollen Canal, from Chirk Castle and from the Offa's Dyke Path, none of which would have any influence of note upon the amenity of visitors.
The Offa's Dyke National Trail and Promoted Routes	Stretching from Prestatyn Hillside in the north to Llangollen in the south, the National Trail makes the AONB particularly accessible. The Dee Valley Way, North Berwyn Way and a network of community paths. Together with extensive areas of Access Land, the landscape of the AONB is particularly accessible	Limited change in view from a short section of the National Trail north of Chirk Castle, which would have any influence of note upon the amenity of walkers. Similarly limited change from other recreation routes within the AONB.
The Built Environment	The villages and towns, hamlets and scattered settlements	The Proposed Development would not affect the built environment within the designation
People and Communities	A rich mix of culture and strong sense of community – the facilities and services that are essential to sustaining rural life	The Proposed Development would not affect the culture of sense of community experienced by people living within the designation

5.6.69 None of the special qualities of the AONB would be affected by the presence of the Proposed Development. In particular, the tranquillity of the AONB would not be materially affected by any change in landscape character or visual change (including at night-time from proposed lighting), or changes in noise levels. Nor would the natural beauty of land within the designation boundary be affected by change resulting from the Proposed Development. The presence of urban development, industrial structures and HGV movement is a well-established presence in views looking out of the AONB from locations within the Study Area. Any additional change resulting from the Proposed Development would be incremental and would not result in any appreciable change in how people experience the landscape of the designation. As such, it can be concluded that the statutory purposes of the AONB would not be materially affected by the presence of the Proposed Development.

SLA

- 5.6.70 The Proposed Development would be located within the SLA, and its presence would result in change in land cover within the Site boundary. Existing pasture grassland and trees and hedgerows would be replaced with new structures, new hard surfaces and new landscaping.
- 5.6.71 The effects of this change would be localised. The wider character of the landscape would undergo only limited change and effects upon landscape character would not be significant (as set out above). Similarly, visual effects would also be localised. Short-term significant visual effects would occur from the B5070 corridor immediately east of the Site. Other visual effects, including from more sensitive locations within the SLA, such as along the Llangollen Canal corridor, from along the Offa's Dyke Path National Trail and from within the Chirk Castle estate would not be significant.
- 5.6.72 The Proposed Development would be well enclosed by proposed planting and by the proposed earth bund along the eastern perimeter. This would greatly restrict the influence that it would have outside of the Site boundary, including from within the remainder of the SLA. It is considered that this approach to the landscape design of the Proposed Development would accord with the wording of UDP Policy EC5, with supports the designation.
- 5.6.73 Whilst the Proposed Development would result in clear change within the Site and in its immediate vicinity, in the wider context, the landscape of the SLA would undergo little change. The Site and its surroundings do not fall within the revised SLA boundary proposed as part of the emerging LDP (refer to **Section 5.4** above).
- 5.6.74 As such it is clear that the localised change that would occur as a result of the Proposed Development would not materially affect the SLA as a whole. Given the direction of travel of emerging planning policy, it is also clear that little weight should be given to the current SLA boundary which is proposed to be revised to exclude the Site.

Heritage Assets

- 5.6.75 As noted in **Section 5.4, ES Chapter 6.0 (Historic Environment)** considers effects upon the setting of heritage assets. The Pontcysyllte Aqueduct and Canal WHS and the Chirk Castle RPG both have an important landscape component, and brief discussion of landscape and visual effects upon these two assets is set out below

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- 5.6.76 In landscape character terms, the WHS is located within LCA7a and the RPG is located within LCA5a. Neither of these LCAs would experience significant effects on their character (as set out above). The character of the WHS would remain one of a historic transport corridor that is enclosed by vegetation and in places also by landform, and where there are very few opportunities few views outwards to the east. The character of the RPG would remain one where from exposed parts of the RPG, long outwards views looking east include a cluster of urban development at Chirk, including prominent industrial structures.
- 5.6.77 The WHS would be well screened by the combination of landform and vegetation cover adjacent to the eastern boundary of the Canal corridor. There would be few locations from which views towards the Site would be available, and such views would be filtered through vegetation in winter and would be wholly screened in summer (refer to Viewpoints J and T). Recent planting implemented by the Applicant as part of the Kronospan Landscape Strategy, and further new planting proposed as part of the Proposed Development would once established wholly screen views from the Canal corridor on a year-round basis. Visual effects experienced by users of the Canal corridor would be very limited and would not be significant.
- 5.6.78 Localised views of the Proposed Development would be available from within the RPG. Narrow views from Chirk Castle itself would be available through a gap in intervening parkland tree cover (refer to Viewpoints U and V). Views would also be available from the permissive path that runs eastwards from the Castle. More extensive areas of visibility would be available from exposed areas at the eastern and northern edges of the RPG (refer to Viewpoints Q and X). In all cases the Proposed Development would be a minor presence located towards the rear of the view, and which would not result in significant visual effects. The amenity of visitors to the Castle would not change appreciably.

5.7 Inter-Relationship of Potential Effects

- 5.7.1 Change in view has potential to affect the setting of heritage assets. The relationship is not linear and a change in view does not automatically imply an equivalent effect on setting. There are many heritage assets in the vicinity of the Site, including the WHS and the Chirk Castle Estate, and effects on these are assessed in **ES Chapter 6.0 (Historic Environment)**. The landscape proposals as described in **ES Chapter 4.0 (Description of the Proposed Development)** and in **Section 5.5** of this chapter

include measures to reduce adverse visual effects from the WHS and the Chirk Castle Estate.

- 5.7.2 The landscape proposals would include new native tree and hedge planting, new species-rich grassland and new wetland vegetation. The nature conservation benefits of this are described in **ES Chapter 7.0 (Biodiversity and Nature Conservation)**.

5.8 Further Mitigation, Monitoring and Enhancement

Mitigation

- 5.8.1 No further mitigation measures are proposed over and above those identified in **Section 5.5**.
- 5.8.2 It may be possible to provide further planting to the north of the property at Bryn Hyfryd, which would provide additional screening of the Proposed Development. The feasibility of doing this would need to be confirmed as part of the detailed design of the scheme, and any planting would need to avoid interfering with the function of the proposed noise attenuation fencing adjacent to the property.

Off-Site Enhancements

- 5.8.3 In addition to the proposed mitigation measures identified in **Section 5.5**, which form part of the Proposed Development, a series of off-site landscape enhancement measures have also been identified. These are measures that are not proposed to mitigate adverse effects arising directly because of the Proposed Development, but rather are measures which will enhance the baseline condition of the landscape of the Study Area (including the visual amenity of people present within it). Off-site enhancement measures outside of the boundary of the Proposed Development are proposed on land within the wider Kronospan landholding, and on land under the control of third parties. These are described in outline in turn below.

Land under the Control of the Applicant

- 5.8.4 **Figure 4.3b** illustrates the location of proposed off-site landscape enhancements within land under the control of the Applicant (i.e. within the wider Kronospan estate). Each enhancement proposal is numbered and described in **Table 5.5** below.

Table 5.5: Off-Site Landscape Enhancements within Kronospan Land

Enhancement	Purpose
1	<p>Specimen tree planting at the edge of Chirk (close to properties along Offa and Linden Avenue). The planting would not form a solid barrier to allows views west from the adjacent properties to be retained.</p> <p>The planting would soften views of the housing and the built edge of Chirk from within the Chirk Castle estate in particular, and from the wider AONB, thereby enhancing the views out from these locations</p>
2	<p>New native woodland belts to be planted within the field south of the golf course. Planting to retain open areas/ rides allowing a diverse vegetation structure to develop, including areas of grassland and woodland edge habitat.</p> <p>This would provide a general landscape enhancement via an increase of woodland cover locally, enhancing existing linkages between woodland along the canal corridor and woodland within the Chirk Castle estate. The planting and subsequent management would also enhance biodiversity.</p>
3	<p>New belt of native woodland planting to the south of the A5, extending similar planting already implemented as part of the Kronospan Landscape Strategy.</p> <p>This would provide additional screening of views of the wider Kronospan facility from the road and would reinforce existing and other proposed planting along the A5 and B5070 corridors.</p>
4	<p>Belt of new native woodland planting close to minor road junction north of Chirk Castle.</p> <p>This would reduce the visibility of the existing Kronospan facility (and potentially of the Proposed Development) from within the AONB. Similar existing planting has been undertaken as part of the Kronospan Landscape Strategy and is already beginning to provide effective screening (e.g. at the main entrance to the Chirk Castle estate).</p>
5	<p>Changes to hedgerow management along the Offa's Dyke Path National Trail and adjacent stretches of minor roads.</p> <p>This would reduce the visibility of the existing Kronospan facility (and potentially of the Proposed Development) from within the AONB. The existing hedgerows are typically clipped at a height of 1m-1.5m, and by allowing these to grow higher, outward views would be reduced appreciable (see Figure 5.2a Viewpoint B for existing views from this area).</p>

5.8.5 Additionally, heritage enhancements, described in greater detail in **ES Chapter 6.0 (Historic Environment)**, would be provided via a Conservation Management Plan and would offer enhancement measures in relation to the WHS (and its Buffer Zone) through the setting out of relevant positive management proposals on land within the Applicant's ownership. These would likely incorporate additional landscape enhancement over and above those measures set out in **Table 5.5**.

Third-party Land

5.8.6 As identified in **Section 5.3**, pre-application consultation has identified aspirations by stakeholders for further landscape enhancements within third party land. The details of any proposals would be subject to agreement with relevant landholders, and as such cannot be stated with any certainty. Based on discussions to date, the following outline landscape enhancements are proposed:

- A: Woodland Management Plan along the Llangollen Canal corridor, within CRT land ownership. This is envisaged to comprise:
 - Selective removal of old/decaying tree cover along the canal cuttings.
 - Replacement planting with new native species.
 - Management of the woodland (including any new planting) to maintain existing levels of visual screening, to enhance biodiversity, to ensure the safety of canal users, and to maintain the stability of the canal structures and earthworks.

Delivery of Landscape Proposals and Off-Site Enhancements

5.8.7 The landscape proposals that form part of the Proposed Development along with off-site landscape enhancements could be delivered via a combination of suitably worded planning conditions, and a Section 106 Agreement or Unilateral Undertaking. The various components of the proposed planting and management measures are set out below, together with an indication of the likely delivery mechanism:

- Landscape proposals within the red line boundary (i.e. part of the Proposed Development);
 - Specification, implementation, and short-term management (five-year period) via condition.
 - Long-term management (e.g. twenty-five-year period).
- Off-site enhancement proposals within the wider Kronospan landholding:
 - Specification, implementation, and short-term management (five-year period) via condition.
 - Long-term management (e.g. twenty-five-year period).
- Off-site enhancement proposals on third party land:

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- All via Section 106 Agreement, or via Unilateral Undertaking, with different schemes agreed with each landowner.

5.8.8 Therefore, it is likely that any Section 106 Agreement made with WCBC and other stakeholders, or any Unilateral Undertaking made with individual stakeholders would include the requirement to provide a series of separate documents that address the implementation and management of different elements of the proposals.

5.9 Summary of Potential Residual Effects

5.9.1 As no further mitigation measures are proposed, residual landscape and visual effects would be as stated in **Section 5.6** above.

5.10 Cumulative Effects

Cumulative Baseline

5.10.1 **ES Chapter 2.0 (EIA Methodology)** sets out those cumulative projects that have been identified on an ES wide basis. Some of these schemes are under construction and for the purposes of the LVIA these are treated as existing development which are part of the main assessment baseline (i.e. they are not cumulative schemes for LVIA purposes). This approach is wholly consistent with the good practice guidance set out in the GLVIA.

5.10.2 The following scheme benefits from planning consent but have yet to be built:

- Kronospan Covered Loading Yard.

5.10.3 The following two schemes are the subject of a valid but as yet undetermined planning application:

- Kronospan Engineering Stores.
- Kronospan Raw Materials Storage Silos and Chip Preparation Building Extension.

5.10.4 The following scheme would inevitably be submitted for consent should the Proposed Development gain planning consent (and indeed the proposed 132kV substation would require in order to operate):

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- Indicative 132kV cable route between the proposed 132kV substation and the existing Legacy/Oswestry overhead line.

5.10.5 As such, this section of the LVIA is concerned with the effects of the Proposed Development in a cumulative baseline scenario where the five schemes listed above are also present.

Cumulative Landscape and Visual Effects

5.10.6 In a scenario where the three cumulative schemes within the Kronospan Facility set out in above are present, this would incrementally increase the well-established influence of the Kronospan Facility upon the surrounding landscape and upon views.

5.10.7 The indicative 132kV cable route would be buried within a trench located within the Site itself, or within the verge and/ or carriageway of the existing road network. There would be some temporary disturbance of verge vegetation (grassland and small shrubs) to excavate part of the route of the cable. There may be temporary restrictions to public access along the roads, or temporary traffic restrictions required. The temporary effects of construction would be unremarkable and would not be experienced outside the immediate vicinity of the highway corridor. Post-construction there would be no landscape and visual effects associated with the cable route.

5.10.8 The further presence of the Proposed Development would extent the footprint of the Kronospan Facility northwards, which would result in some localised changes in character and in views as set out in **Section 5.6** above. These effects would not be intensified or otherwise change in any tangible way should the cumulative schemes set out above be present. Cumulative change in character or upon views would be negligible.

5.10.9 The cumulative effects of the Proposed Development would not materially differ from those described in **Section 5.6**. Cumulative landscape and visual effects would not be significant.

5.11 Conclusions

5.11.1 The Proposed Development would be introduced into what is presently an undeveloped area immediately north of the existing Kronospan Facility at the edge of Chirk. A series of relatively small new structures would be introduced towards the southern boundary of the Site. A new access road from the B5070 and new lorry

parking would be introduced further to the north. A new roundabout would be constructed on the B5070, and part of the existing road would be realigned to accommodate this. The developed Site would be enclosed by a combination of new planting and an earth bund along the eastern perimeter. The landscape proposals would also include new hedgerows, new species-rich grassland and new wetland vegetation. There would be an overall net gain in tree cover as a result of the Proposed Development.

- 5.11.2 During the construction period the nature, location and intensity of activities is likely to vary. A range of features are likely to be present on a temporary basis, which would contrast with their surroundings. There would be significant effects upon landscape character within the Site and along the B5070 corridor. Significant visual effects would be experienced by users of the B5070 and by residents at Lodge Farm Cottage, Parkgate Cottage. These effects would relate chiefly to highways works which are expected to last for approximately nine months. Properties along the B5070 at the edge of Chirk would also experience significant visual effects resulting from the visibility of activities within the Site for the fifteen-month period when the majority of construction activities would take place.
- 5.11.3 The Proposed Development would result in the removal of existing grassland, hedgerows and tree cover within the footprint of the proposals. There would be an initial significant adverse effect upon woodland due to the loss of existing tree cover. However, there would be an overall net gain in native woodland following the implementation of proposed new planting. As such, longer term effects would be significant and beneficial. Other changes in landscape fabric would not be significant.
- 5.11.4 Effects on landscape character would not be significant. The proposed new features that would be introduced would be less prominent than the far larger existing industrial structures. Their presence would result in a localised sense of urbanisation at the northern edge of Chirk, which would be limited in extent and intensity by a combination of landform and existing and proposed vegetation cover. Woodland recently planted by the Applicant (as part of the Kronospan Landscape Strategy) would reduce visibility as vegetation establishes (and this is already beginning to occur from some locations such as along the Canal corridor). Further new planting associated with other recent Kronospan development proposals, and with the Proposed Development would provide further screening. This planting would help

to limit the visibility of the Proposed Development, in accordance with published guidelines for the LCA.

- 5.11.5 Significant visual effects would occur at only one of the twenty Viewpoints included in the LVIA, and this effect would occur in the short-term only. This significant effect would occur from a Viewpoint on the B5070 close to the location of the proposed new roundabout, and would occur due to the changes to the highway corridor and loss of nearby tree cover. As new planting establishes, the intensity of the effects would reduce to non-significant levels.
- 5.11.6 None of the viewpoints would experience significant visual effects in the medium and longer-term. At five of the viewpoints, the Proposed Development would not be visible at all due to a combination of intervening landform and vegetation cover, and at four further viewpoints, the Proposed Development would only be visible in the short-term before new woodland planting would wholly screen views.
- 5.11.7 Short-term significant visual effects are also likely to be experienced by residents in nearby properties at the edge of Chirk. Residents at Bryn Hyfryd west of the B5070 and in properties along Wern, Offa and Linden Avenue east of the B5070 would have views of the proposed new features from first floor windows. As proposed new planting establishes, this would break up these views, and the intensity of the effects would reduce.
- 5.11.8 From Chirk Castle, views of the Proposed Development would be available from the northern and north-eastern edge of the Castle including the pathways around the entrance and the roof. The new features would be well screened by intervening vegetation and where visible would be a minor background feature. Views would also be available from a short section of the permissive path that runs east from the Castle, and from this area proposed planting would provide some partial screening of views in the medium and longer-term. The amenity of visitors to the Castle would be unaffected by the limited changes in view that would occur.
- 5.11.9 From the Llangollen Canal corridor, there would be very little visibility of the Proposed Development. Occasional glimpsed views would be available in winter from locations east of the Marina. The equivalent summer views would be wholly screened by vegetation. Recent planting implemented by the Applicant (as part of the Kronospan Landscape Strategy) and new planting proposed as part of the Proposed Development would provide all year-round screening once this has

established. Elsewhere along the Canal corridor, existing vegetation, the railway embankment and the canal cutting would screen views.

- 5.11.10 The lighting proposals for the Proposed Development would be designed in accordance with current good practice. They would ensure that any spillage of obtrusive light outside of the Site boundary would be minimised. Lighting is already present in the surrounding area and there would be only limited change from baseline. Night-time landscape and visual effects would not be significant.
- 5.11.11 The Proposed Development would be visible from some locations within the Clwydian Range and Dee Valley AONB. However, the new features would be limited additions, located towards the rear of the view, and their presence would not result in any notable change in the nature of the views available looking out across what is a predominantly agricultural landscape. The statutory purposes of the AONB would not be materially affected by the presence of the Proposed Development.
- 5.11.12 The Site is located within a local Special Landscape Area designation maintained by WCBC. The Proposed Development would be well enclosed by proposed planting and by the proposed earth bund along the eastern perimeter. This would greatly restrict the influence that it would have outside of the Site boundary, including from within the remainder of the designation. In the wider context, the landscape of the SLA would undergo little change. The Site and its surroundings do not fall within the revised SLA boundary proposed as part of the emerging LDP.
- 5.11.13 Cumulative landscape and visual effects that could occur in a scenario where other consented and proposed development schemes are also present would not be significant. The presence of other developments within the existing Kronospan Facility and of the indicative 132kV cable route would have no influence of note upon the effects of the Proposed Development.