Kronospan 132kV Cable Installation

Framework Construction Environmental Management Plan

Prepared for

Kronospan

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1.0 INTRODUCTION

1.1 The Proposed Development

Introduction

1.1.1 A summary description of the Proposed Development is provided below. A full description of the Proposed Development is provided at **Section 3.0** of the Planning Statement.

1.1.2 The Proposed Development is the installation of two 132kV circuits and two fibre cables between the existing Legacy to Oswestry 132kV wood pole overhead line and the consented Kronospan 132kV substation.

1.1.3 The proposed cables would be installed via open trench, unless otherwise stated (see 'Special Engineering Difficulties' below).

1.1.4 The two 132kV circuits require a separation distance of 450mm, which is a separation distance of 650mm between the centre point of each cable duct. The two fibre ducts require a separation distance of 5m to adhere to SPEN requirements.

Cable Routes Overview

1.1.5 Three core cable routes have been identified by Kronospan as the most viable highway routes which would enable the separation distances described above to be implemented; these cable routes are summarised as follows:

- (Red) Cable Route 1 (approximately 4.4km long) – 132kV single circuit cables and one fibre cable.
- (Green) Cable Route 2 (approximately 4.8km long) – 132kV single circuit cables.
- (Orange) Fibre Cable Route (approximately 3.3km long) – one fibre cable.

1.1.6 Apart from the immediate approach to make separate connections to the existing Legacy to Oswestry 132kV overhead line, both the Red and Green Cable Routes (Cable Routes 1 and 2) would be in the same cable trench predominately installed beneath the road/track at the southern extent of the Study Area.

1.1.7 The Orange Fibre Cable Route would be in a separate trench predominately installed beneath the road/track at the northern extent of the Study Area.

1.1.8 The fibre cable (to be installed in (Red) Cable Route 1 and the (Orange) Fibre Cable Route are required to ensure the 132kV cables can be monitored (to ensure the protection of system conditions and enable periodic testing).

1.1.9 The proposed cable routes are shown on the **Planning Application Drawings Route** (Route Planning – Key Plan Drawing (EDES-1249-101-002A-P01) and (Route Planning (EDES-1249-101-002-P01-Sheets 1-19).

Special Engineering Difficulties

1.1.10 Several areas of constraint (Special Engineering Difficulty (SED)) have been identified and associated mitigation, summarised below:

- SED 1 (Gas main on the B5070)
  - The tracing of service and trial holes has been undertaken; Wales and West Utilities to be contacted prior to the commencement of excavation.
- SED 2 (Chirk Bypass)
  - **Installation using Horizontal Directional Drilling (HDD)** as an alternative to open trenching has been confirmed as viable and is the intended installation method.
- SED 3 (Gas main on Pont y Blew)
  - The tracing of service and trial holes has been undertaken; Wales and West Utilities to be contacted prior to the commencement of excavation.
- SED 4 (Tunnel on Brynkinalt Estate)
  - The tunnel is the former pathway from Brynkinalt Hall through to the Walled Garden on the north side of the road; the tunnel is not listed but is considered by WCBC to be a curtilage listed structure to the Grade II* listed Brynkinalt Hall. Any works that impact the tunnel would likely require Listed Building Consent.
  - **Installation using HDD** as an alternative to open trenching has been confirmed as viable and is the intended installation method.
- SED 5 (Gas main on Pont y Blew)
  - The tracing of service and trial holes has been undertaken; Wales and West Utilities to be contacted prior to the commencement of excavation.
- SED 6 (Culvert on Pont y Blew)

- **Installation using HDD** as an alternative to open trenching has been confirmed as viable and is the intended installation method.

- SED 7 (Culvert on Old Black Park Road)
  - Trial holes have been undertaken to ascertain if there is sufficient depth for trenched installation. Kronospan has confirmed that there is sufficient depth at this location and trenched installation is the assumed installation method.

1.2 Purpose of the Framework Construction Environmental Management Plan

1.2.1 This Framework CEMP has been prepared by Kronospan Limited (Kronospan) and presents the approach and application of environmental management and mitigation for the construction of the Proposed Development. The Framework CEMP aims to ensure that adverse effects from the construction phase of the Proposed Development, on the environment and the local communities, are minimised as far as practicable. The Framework CEMP does not describe mitigation measures relating to the operation of the Proposed Development.

1.2.2 The Framework CEMP has been prepared in accordance with the construction management and mitigation measures identified in the planning application documents, notably the Planning Statement and the supporting Technical Appendices.

1.2.3 The construction works will be undertaken in accordance with the following guidance documents:

- GPP1: Understanding your environmental responsibilities – good environmental practice (Natural Resources Wales (NRW), 2021).
- GPP2: Above ground oil storage tanks (NRW, 2021).
- GPP3: Use and design of oil separators in surface water drainage systems (NRW, 2022).
- GPP5: Works and maintenance in or near water (NRW, 2018).
- GPP6: Working at construction and demolition sites (NRW, 2013).
- GPP8: Safe storage and disposal of used oils (NRW, 2021).
- GPP21: Pollution incident response planning (NRW, 2021).
- GPP 22: Dealing with spills (NRW, 2018).

- C532: Control of water pollution from construction sites (CIRIA, 2001).
- C741: Environmental good practice on Site (CIRIA, 2023).

1.3 Objectives

1.3.1 The objectives of the Framework CEMP are to:

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

1.4 Supporting Appendices

1.4.1 This Framework CEMP should be read in tandem with the following documents/information (which the PC is advised to include as part of the overarching CEMP document set):

- Planning Statement.
- Technical Appendix 1: Historic Environment Assessment (HEA).
- Technical Appendix 2: Arboricultural Impact Assessment (AIA).
- Technical Appendix 3: Arboricultural Method Statement (AMS).
- Technical Appendix 4: Ecological Impact Assessment (EcIA).
- Technical Appendix 5: Green Infrastructure Statement (GIS).
- Technical Appendix 6: Landscape and Visual Appraisal (LVA).
- Technical Appendix 7: Highways Technical Note (HTN).
- Technical Appendix 8: Trial Hole Information.
- Technical Appendix 9: Ground Investigation Report.

1.5 Management Plans to be Provided by the Appointed PC

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

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

Management Plan	Description
Environmental Management System	Details the framework for management of the environment (detailed further at **Section 1.6** of this Framework CEMP).
Pollution Incident Control Plan (PICP)	Identifies how the risk of pollution due to construction works, materials and extreme weather events will be controlled and identifies the remedial actions in the event of an incident (detailed further at **Section 1.9** of this Framework CEMP).
Construction Phase Safety, Health, Environment and Quality Plan (SHEQ Plan)	Details relevant safety, health and environmental information relating to all construction activities (detailed further at **Section 2.2** of this Framework CEMP).
Construction Method Statements	Detailed construction method statements will be developed for the key construction phases e.g. site preparation and development of site compound, earthworks, foundations, and main construction works. The method statements will outline the key construction processes, identify potential environmental and health and safety risks and define appropriate mitigation measures.
Site Waste Management Plan (SWMP)	Identifies site-specific measures for the collection, segregation, treatment and disposal of waste (outline

Management Plan	Description
	approach to site waste management is provided at **Section 2.7** of this Framework CEMP).
Unexpected Contamination Protocol	Provides the protocol to deal with any unexpected contamination during the construction works (detailed further at **Section 1.9** and **Section 3.2** of this Framework CEMP).
Drainage Management Plan (DMP)	Identifies all known risks to the water environment and appropriate measures to manage flood risk and prevent pollution during construction (detailed further at **Section 3.3** of this Framework CEMP).

1.6 Conformance with Corporate and Project Environmental Management Systems

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

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

- Environmental responsibilities.
- Identifying environmental aspects.
- Setting and achieving environmental objectives and targets.
- Controlling environmental impact.
- Meeting the conditions of environmental consents and the environmental permit.
- Preparing and responding to environmental emergencies and incidents.

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

1.7 Community Engagement and Public Information

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

1.7.2 The PC will ensure the details of any complaints that are received are recorded/logged and appropriately managed. Complaints will be investigated, and appropriate action will be taken (including the implementation of revised or additional mitigation measures to resolve issues identified). All complaint logs and corrective action reports will be made available for inspection within five days of receiving a request to review such information. The investigation procedure is detailed at **Section 1.9** of this Framework CEMP.

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

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

1.8 Inspections

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

- Fencing.
- Waste storage facilities.

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

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

- The daily and weekly inspections will also include the following:
- Review of the daily risk assessment forms.
- Ensure that faults and defects are identified and rectified.
- Provide data for performance monitoring.

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

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

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

1.9 Incident Procedure

Pollution Incident Control Plan (PICP)

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

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

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

Incident Response

1.9.3 All incidents associated with the construction of the Proposed Development, including environmental incidents and non-conformance with the Framework CEMP, will be reported and investigated using the PICP (unless stated differently in other Management Plans referenced at **Table 1.1** above).

1.9.4 The following procedure will be followed in the event of an incident and will be detailed further in the PICP:

- Works will stop.
- The Environmental Manager and SHESQ Manager will be contacted.

- The size of the incident will be assessed.
    - If the incident is controllable by staff on Site, remedial action will be taken immediately in accordance with the PICP.
    - If the incident cannot be controlled by the staff on Site, emergency assistance will be sought.
- The appropriate enforcing authority will be contacted and informed, including:
    - NRW for incidents affecting rivers, groundwater and major emissions to atmosphere.
    - The local sewerage undertaker for incidents affecting sewers.
    - The Local Authority Environmental Health Department for incidents that could affect the public.
- The Senior Project Manager and SHEQ Manager will instigate an investigation into the occurrence of the incident.
- The findings will be sent to the appropriate enforcing authority where necessary.
- An action plan will be prepared to determine why the incident occurred and whether any modifications to working practices are required to prevent a recurrence. If necessary, the Framework CEMP and SHEQ Plan will be updated (and any other plans as appropriate) and all workers will be notified.

1.10 Structure of the Framework CEMP

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

- **Section 2 (General Site Operations)** – describes the general principles that will be adopted on the construction site. The general principles cover the following elements:
    - Health and Safety.
    - Construction Hours.
    - Construction Site Layout and Appearance.
    - Fencing and Other Means of Enclosure.
    - Lighting.
    - Waste Management.
    - Security.
    - Welfare.
    - Pest Control.

- **Section 3 (Environmental Management and Construction Principles)** – describes the mitigation and management measures that will be adopted during the construction of the Proposed Development. The mitigation and management measures will be implemented to reduce risk with respect the following environmental aspects:
    - Geology, Soils and Contamination.
    - The Water Environment.
    - Air Quality and Odour.
    - Noise and Vibration.
    - Historic Environment.
    - Arboriculture.
    - Biodiversity.
    - Landscape and Views.
    - Traffic and Highways.

2.0 GENERAL SITE OPERATIONS

2.1 Objective

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

2.2 Health and Safety

Overview

2.2.1 Kronospan is committed to ensuring the health and safety of persons working on its projects and the general public, as such, the construction of the Proposed Development will be undertaken in accordance with the Construction (Design and Management) Regulations 2015.

2.2.2 The PC will prepare a SHEQ Plan prior to construction works commencing. The SHEQ Plan will ensure that adequate arrangements and welfare facilities are in place to cover:

- The safety of construction staff.
- The safety of all other people working at or visiting the construction site.
- The protection of the public in the vicinity of the construction site.
- Compliance with the Construction (Design and Management) Regulations 2015 and associated Health and Safety Executive (HSE) guidance documents.
- Emergency procedures defined and adopted.
- Appropriate training and information provided to personnel.

2.2.3 The SHEQ Plan will be reviewed and approved by Kronospan prior to construction commencing. The SHEQ Plan will be managed and implemented by the SHEQ Manager throughout the construction works.

2.2.4 All staff, site visitors and delivery drivers will receive a relevant project induction to ensure they are aware of site hazards and health, safety and environmental management requirements. Site staff will be briefed daily prior to work commencing. Site-specific risk assessments will be carried out to ensure the risk strategy of the frequently changing workplace remains relevant. The PC will be required to carry

out audits and inspections throughout the construction of the Proposed Development in accordance with **Section 1.8** of this Framework CEMP.

2.2.5 Emergency contact for the public will be through the enquiries and complaints procedure as described in **Section 1.7** of this Framework CEMP.

Considerate Constructors Scheme

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

Respect the Community

2.2.7 Constructors must manage their impact on their neighbours and the public to support a positive experience by:

- Ensuring courteous and respectful language and appropriate behaviour in and around the construction activity.
- Providing a safer environment, preventing unnecessary disturbance, and reducing nuisance for the community from their activities.
- Proactively maintaining effective engagement with the community to deliver meaningful positive impacts.

Care for the Environment

2.2.8 Constructors must minimise their impact and enhance the natural environment by:

- Prioritising environmental issues to protect the natural environment and minimising negative impacts.
- Optimising the use of resources, including minimising carbon throughout the value chain.
- Engaging with the community to improve the local environment in a meaningful way.

Value the Workforce

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

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

2.3 Construction Hours and Programme

Construction Hours

2.3.1 Construction activities would generally be limited to 07:30hrs to 18:00hrs Monday to Friday and 08:00hrs to 14:00hrs on Saturday. No construction work is planned on Sundays or Bank Holidays, however, there may be occasions when construction would need to be undertaken outside of the core hours, for example, during major concrete pours or to enable the completion of an HDD operation.

2.3.2 Heavy goods vehicles (HGV) movements would not be permitted outside the hours outlined above without prior agreement from WCBC. These matters would be controlled through a Construction Traffic Management Plan (CTMP) which is expected to be a planning condition.

Construction Programme

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

2.3.4 At present, it is anticipated that construction would occur over a 50-week duration and commence in Quarter 2 2026.

Inset 2.1 – Indicative Construction Programme

Kronospan 132kV Cables – Indicative Construction Programme																
	Activity	Est. Duration (days)	Est. Const. Emplyees	Week												
				1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40	41-44	45-48	49-52
1	Pre-Start Preparation	65	20	Weeks 1 - 13												
2	Pre-Construction	45	8	Weeks 2 - 9												
3	Mobilisation	5	8			Week 13										
4	Trench Excavation	150	24				Weeks 14 - 40									
5	Joint Bay Excavation, 132kV Cable installation, Jointing, Backfill	50	30											Weeks 41 - 49		
6	Subduct & Fibre installation	30	20											Weeks 42 - 46		
7	Testing	8	6												Weeks 47-48	
8	On-Site Switchworks & Commisioning	5	6													Week 49
9	Demobilisation	5	8													Week 50

2.4 Construction Site Layout and Appearance

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

- All working areas will be kept in a clean and tidy condition.
- Smoking areas at site offices, compounds and construction sites will be equipped with containers for smoking waste and will not be located at the boundary of working areas or adjacent to neighbouring land.
- All necessary measures will be taken to minimise the risk of fire.
- Personnel will maintain a reasonable and appropriate standard of dress at all times and will not use foul language or display lewd or derogatory behaviour.
- Commitments relating to health and safety (see **Section 2.2** of this Framework CEMP).
- Commitments relating to construction hours (see **Section 2.3** of this Framework CEMP).

- Fencing and other means of enclosure will be inspected daily, repaired and repainted as necessary (see **Section 2.5** of this Framework CEMP).
- Lighting during the construction phase will be designed and implemented accordingly to minimise adverse impacts on the local community and biodiversity (see **Section 2.6** of this Framework CEMP).
- Commitments relating to the handling, storage and disposal of materials (see **Section 2.7** of this Framework CEMP).
- Appropriate measures, such as use of enclosed containers, will be employed to store waste susceptible to spreading by wind or liable to cause litter (see **Section 2.7** of this Framework CEMP).
- The construction site will be controlled in accordance with the statutory duties set out in the Management of Health and Safety at Work Act 1999 to prevent unauthorised access to the construction site (see **Section 2.8** of this Framework CEMP).
- Adequate welfare facilities will be provided for all construction staff. All toilets will be serviced and kept clean (see **Section 2.9** of this Framework CEMP).
- Pest control measures will be implemented (see **Section 2.10** of this Framework CEMP).
- Good personal hygiene will be promoted by the PC for the workforce, particularly when using site canteens or mess facilities.
- Commitments relating to geology, soils and contaminated land (see **Section 3.2** of this Framework CEMP).
- Commitments relating to the water environment (see **Section 3.3** of this Framework CEMP).
- Commitments relating to dust, odours and air pollution (see **Section 3.4** of this Framework CEMP).
- Commitments relating to noise and vibration (see **Section 3.5** of this Framework CEMP).
- Commitments relating to the historic environment (see **Section 3.6** of this Framework CEMP).
- Commitments relating to arboriculture (see **Section 3.7** of this Framework CEMP).
- Commitments relating to biodiversity (see **Section 3.8** of this Framework CEMP).

- Commitments relating to landscape and views (see **Section 3.9** of this Framework CEMP).
- Commitments relating to traffic and highways management (see **Section 3.10** of this Framework CEMP).
- Site accesses, accesses to the site compounds and roads in the vicinity of site access points/working areas and where excavations will take place will be maintained and kept clean as required (see **Section 3.4** and **Section 3.10** of this Framework CEMP).

2.4.2 The proposed compound at Afon Bradley Farm is within Flood Zone 3. Subject to the availability and suitability of space within the other identified compounds and laydown areas, the proposed compound at Afon Bradley Farm would be used for the storage of ducts and other materials that are not susceptible to damage from heavy rainfall or flooding. An assessment would be undertaken to identify the most appropriate storage locations, considering flood risk zones and ground conditions to minimise disruption, prevent damage to stored materials and avoid any potential environmental impact (such as a diesel bowser in a flood risk area).

2.4.3 An indicative layout of the main construction compounds, and working/laydown areas is provided at **Appendix A**.

2.5 Fencing and other Means of Enclosure

2.5.1 Working areas will be appropriately fenced from members of the public and to prevent animals from straying onto a working area.

2.5.2 Where construction plant/activity is in proximity to sensitive receptor boundaries (e.g. within 50m of a sensitive boundary, temporary hoarding will be installed.

2.5.3 Fencing and other means of enclosure will be inspected daily, repaired and repainted as necessary. Any temporary fencing will be removed as soon as reasonably practicable after completion of the works.

2.6 Lighting

2.6.1 Lighting during the construction phase will be designed and implemented accordingly to minimise adverse impacts on the local community and biodiversity.

2.6.2 Winter working may require task-specific lighting due to the shorter days when lighting will be required at the beginning and end of the day. Lighting will be used only when required during core working hours and will comprise lighting of work areas and access and egress using low level directional lighting.

2.6.3 Construction compounds will not be lit at night outside core working hours except for welfare and site security cabins that will include low level lighting. Motion sensor lighting will be used in areas of increased security risk.

2.6.4 The following measures will be implemented:

- Lights installed will be of the minimum brightness and/or power rating capable of performing the desired function.
- Light fittings will be used that minimise the amount of light emitted above the horizontal.
- Light fittings will be positioned correctly and directed downwards wherever practicable.
- The direction of lights will seek to avoid spillage onto neighbouring properties.
- Passive Infra-Red (PIR) controlled lights will be considered for use where appropriate as these may be more acceptable to neighbours than those which are controlled by a time switch or are on all the time.
- Unnecessary lights will be switched off.

2.6.5 See **Section 3.8** for further details of biodiversity-specific lighting measures.

2.7 Waste Management

2.7.1 Kronospan and the PC are responsible for managing waste arising from all activities to prevent pollution and to meet or exceed legal requirements.

2.7.2 The PC will prepare a SWMP and submit to Kronospan for approval; the SWMP will be in accordance with the following measures:

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

2.8 Security

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

- Use of high perimeter fencing or hoarding for site security and public safety and placed so that the pedestrian walkways along the B5070 (close to the working area for the (roundabout construction works) can be maintained or appropriately diverted.
- Use of site lighting at site perimeters, in accordance with **Section 2.6** of this Framework CEMP.
- Use of appropriately trained and qualified security guards if deemed necessary.
- Consultation with North Wales Police on security proposals with regular liaison to review security effectiveness and response to incidents.
- Immobilisation of plant out of hours, removing or securing hazardous materials from site, securing fuel storage containers and preventing unauthorised use of scaffolding.

2.9 Welfare

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

2.10 Pest Control

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

3.0 ENVIRONMENTAL MANAGEMENT AND CONSTRUCTION PRINCIPLES

3.1 Introduction

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

3.2 Geology, Soils and Contamination

Overview

3.2.1 The following measures will be implemented during the construction phase to protect geology, and hydrogeology during the construction phase.

Pollution Prevention during HDD Works

3.2.2 Precise tracking systems would be used to guide the drill bits to ensure the HDD boring activities follow the desired/correct trajectory. Drill fluid (a mixture of water and bentonite) would be used which would act as a lubricant and coolant for cutting tools; help remove drill cuttings, stabilise the borehole, and prevent blowouts by maintaining sufficient hydrostatic pressure. The unique swelling properties of bentonite would also help create a mud cake that would minimise fluid loss into the formation.

3.2.3 The drill fluid is an inert substance (European Waste Catalogue 01 05 04) widely used for HDD installations. As such, the drill fluid is environmentally benign and has been used successfully for hundreds of HDD infrastructure projects for several decades.

3.2.4 All equipment containing hazardous fluids would have double skinned fuel tanks or be parked on drip trays or 0.5mm Polyvinyl Chloride (PVC) berms to contain any fluid spills or storm water runoff. Spill kits would be carried on all plant that operates with hazardous fluids.

3.2.5 Material Data Safety Sheets, (MDSS) would be carried on site for all chemicals on site; Control of Substances Hazardous to Health, (COSHH) regulations would be complied with.

3.2.6 Development of fluid pathways between the bore hole and surface may result in the venting, or 'breakout', of drill fluid. In the event of a fluid 'breakout', the Frac Out Response Plan (**Appendix B**) would be implemented to manage the incident. 'Frac out' is when a pathway develops between the HDD borehole and the surface due to the hydraulic pressure of the borehole drill fluid exceeding the formation strength of the surrounding lithology; this is more likely to occur closer to the surface where there is less cover depth, and therefore more likely to occur during the drilling of the pilot hole entry and exit points. Once the HDD exit point has been 'punched out' at surface, the borehole pressure is relieved; as such, the risk of frac out during subsequent hole opening and pipe pulling operations.

3.2.7 The key aspects of the Frac Out Response Plan are as follows:

Prevention

- Drill fluid density, viscosity, and solids content is continuously monitored by the Drill Fluids Operator
- The Driller will continuously monitor the drill fluid pressure, volumes, viscosity, and densities of mud being pumped through the borehole. Any increase in pump pressure will be investigated immediately to prevent the risk of pressure build up in the borehole.
- The Fluids Technician will monitor active fluid tank volumes and account for any unexpected changes. The amount of fluid being taken by the additional hole volume drilled will be calculated.
- The borehole will be reamed on a regular basis to keep the annulus clear.
- Rates of penetration and circulated cuttings volumes will be monitored to ensure that drilled cuttings are being flushed from the borehole and are not building up creating pressure restrictions. Annular fluid velocity will be kept below Critical Velocity to prevent eddying and subsequent erosion caused by turbulent flow.
- When drilling clay-based formations, inhibitors may be used to prevent the absorption of water and subsequent swelling and sloughing of the formations.

Containment

- A Frac-Watch programme will be operated at all times whilst circulating, particularly when drilling past potential pathways.
- Prior to drilling, potential frac out pathways will be identified and contingency plans put in place

- Sandbags/hay bales will be available to control drill fluid at surface.
- An excavator will be available to dig a pit to contain fluid.
- Tractor and tanker or vacuum trucks will be available to transfer drill fluid from the containment point back to the recycling system.
- Where frac out occurs in watercourses, a 2inch pump will be available to directly pump from the centre of the plume onto vegetative land, a minimum of 50m from the works.
- If frac out occurs in a riverbed, pressure relief bores may have to be drilled on the riverbank. (Before any works around the watercourse can take place, this would be agreed with NRW).
- If drilling is being undertaken in contaminated land, frac out may subsequently be contaminated.
- If the fluid loss is onto the carriageway, the local highway authority would be contacted immediately.
- In the event that frac out is experienced, the drill rig will immediately shut off the pumps and the drilling assembly will be pulled off bottom to reduce borehole pressures.

Control

- The freshwater based, bentonite suspension, drill fluid systems are, essentially, low viscosity grouts. In most cases, the fracture pathways will quickly seal up.
- Frac out is likely to indicate that the bore hole requires reaming to reduce the pressure required to return drill fluid to surface. A wiper trip may be sufficient to prevent further frac out.
- Various Lost Circulation Material (LCM) drill fluid additives are available to seal fractures in the formation.
- As a worst-case scenario, cement may be forced into the bore to seal up the pathways. The cement plug can subsequently be drilled out or side-tracked.

Report

- Should frac out occur, once the appropriate measures have been taken as above to contain and control, the frac out will be reported to the site supervisor or manager within 30 minutes of occurrence or being detected. Photographs will be taken prior to and after the containment and clean-up operation.

Protocol to Deal with Unexpected Contamination

3.2.8 **Section 1.9** of this Framework CEMP provides details of the incident procedure. A document setting out the protocol to deal with any unexpected contamination during the construction works will be developed (post-consent) by the PC and will include the following:

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

Groundwater Management Practices during HDD Works

3.2.9 The requirement for water comprises an initial volume to enable the mixing of drill fluid (approximately 16m^3). After this, the requirement for water for drilling is limited to the volume of hole drilled.

3.2.10 Water required for drilling operations would be sourced from either tankers, hydrants or nearby watercourses. If sourcing water from nearby watercourses, the allowed limit would not be exceeded for extraction (20m^3 per day as per NRW specification). If more is required, an abstraction license would be applied for.

3.2.11 See **Section 3.3** for further details regarding abstraction.

Appropriate Stand-Offs to Existing Utilities

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

Pollution Incident Control Plan (PICP)

3.2.13 As set out at **Section 1.9** of this Framework CEMP, a PICP will be produced prior to any demolition and groundworks activities commencing and will be reviewed and updated regularly by the PC. Training will be provided to site workers as part of the induction process and will be updated as necessary. In the unlikely event of any incident, the Site Manager will be notified and will work to coordinate remedial actions.

Dust Suppression Protocol

3.2.14 Dust suppression measures will be implemented during dry and windy conditions. See **Section 3.4** of this Framework CEMP for further details.

Good Housekeeping Procedures

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

Equipment and Spill Kits

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

Provision and Maintenance of Silt Traps

3.2.17 Silt traps will be provided and well maintained to protect existing surface water drains (and similar) within the vicinity of nearby surface watercourses. Further details about clean water discharge are provided at **Section 3.3**.

Confined Space Entry Protocol

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

Provision of Suitable Personal Protective Equipment (PPE)

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

Construction Method Statements

3.2.20 As set out in **Section 1.5 (Table 1.1)** of this Framework CEMP, detailed construction method statements will be developed for the key construction phases. The method statements will outline the key construction processes, identify potential environmental and health and safety risks and define appropriate mitigation measures.

Waste Management

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

3.3 The Water Environment

Drainage Management Plan

3.3.1 The PC will prepare a DMP which will determine potential risks in relation to the water environment and identify appropriate control measures to avoid or reduce the risks. The DMP will be consistent with the relevant guidance documents listed at **Section 1.2** of this Framework CEMP.

3.3.2 Examples of the mitigation measures that will be implemented to reduce the risk to the water environment are described below.

Surface Water Discharge

3.3.3 Construction activities may adversely affect the quality of surface water or ground water because of contaminated runoff from, or spillages on the construction site. Control and mitigation measures to be implemented to prevent pollution include:

- Dewatering of all excavations to be subject to a permit and/or land drainage consent from NRW as appropriate; the process will be proactively managed to meet at least the permit conditions.
- No silty water to be pumped directly into any watercourse but to be allowed to settle out (for example, in settlement lagoons) or filtered (for example, using straw bales to filter out coarse particles) prior to discharge, in accordance with permit conditions.
- Where settlement or filtering is not practicable or effective, alternative disposal options will be considered for example, discharge onto a grassed or vegetated area (with consent from the landowner and following NRW consultation as appropriate).
- If clean water is discharged into a watercourse, a baffle will be fitted to the discharge point to prevent disturbance of the watercourse bed.
- Watercourses will be protected from contaminated surface water run-off by using French drains, cut off ditches, grips, silt fences or bunds round the edge of watercourses. Numerous small, passive mitigation measures will be installed in preference to one large treatment system to prevent large-scale water build-up, using Sustainable Drainage Systems (SuDS) principles.
- Existing and new surface water drains will be kept clear of silt or weed build-up.

- Roads and hard surfaces will be kept clean, to prevent a build-up of mud and sediment that could contaminate surface water.
- Implementation of a monitoring schedule to ensure that measures taken to protect watercourses are effective.

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

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

Other Discharges

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

- Washing of equipment using detergent is carried out at commercial facilities only.
- Washing of vehicles and equipment without the use of detergent is only carried out at either commercial facilities, or at purpose-built wash stations where the water is contained for controlled disposal.
- All foul effluent will be contained.
- The foul effluent container will be subject to daily inspection and a maintenance and emptying schedule as recommended by the manufacturer. The effluent will be removed by tanker and disposed of at a licensed facility.

Disposal of Accumulated Rainfall/Surface Water

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

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

Permitted Discharges

3.3.8 Discharges, other than uncontaminated surface water run-off, will require a permit from NRW (for discharges to controlled waters, including rivers, other watercourses and soakaways) or the local sewerage undertaker (for discharges to sewer). Foul water from welfare facilities is likely to be stored in a septic tank and disposed off-site at an appropriate licenced facility (via a licenced carrier).

3.3.9 Such discharges may also require land drainage consent from the relevant IDB. Discharges will not be made without prior consent from NRW, IDB or sewerage undertaker, as appropriate. To ensure discharges are appropriately authorised, the following measures will be followed:

- Consult with the appropriate consenting body before any discharge is expected to be required from the site and obtain a permit, or where a permit is not required, obtain written confirmation that one is not required.

- Ensure that any permitted discharge is sampled and analysed at the frequency specified in the permit to ensure compliance and that monitoring results are kept. More frequent analysis may be required if analytical results indicate that limits are being approached or exceeded.
- Ensure that the consenting body is advised if results indicate that limits are being exceeded and report the occurrence as an incident in accordance with **Section 1.9** of this Framework CEMP. The PC will take immediate steps to rectify the situation, check receiving water for pollution resulting from exceedance, and carry out any remediation works necessary.

Abstraction Licences

3.3.10 Where water is required from a potable water supply or natural resource, an Abstraction Licence will be obtained from the local water company or NRW, as appropriate. It will be ensured that:

- Any necessary Abstraction Licences are obtained, or other sources of water are provided in cases where an Abstraction Licence is not granted.
- Abstraction Licence conditions are complied with.
- Volumes of water abstracted are recorded.
- A permit is obtained to discharge abstracted water to ground or via a sewer, soakaway or watercourse on completion of hydrostatic testing.

Flooding

3.3.11 Close to the proposed connection points at the existing Legacy to Oswestry 132kV overhead line, a very small part of Cable Routes 1 and 2 are in Flood Zone B of the NRW Development Advice Map. There are also sporadic parts of all cable routes that are in Flood Zones 2 and 3 of the NRW Flood Map for Planning.

3.3.12 See **Section 2.4** above for further details of the proposed approach to the use of Afon Bradley Farm as a temporary construction compound given its location within Flood Zone 3.

3.3.13 The Applicant and/or PC will sign up to receive NRW flood warnings as a precautionary measure; the main risk in the event of a flood is to construction personnel who would be safely evacuated from Site if required.

3.4 Air Quality and Odour

Construction Dust

Potential Dust Sources

3.4.1 Fugitive dust emissions arising from Site activities may result in:

- The soiling of dust surfaces,
- Visible dust plumes,
- Locally elevated PM10 concentrations.

3.4.2 The principal potential sources of airborne dust arising from the Proposed Development are:

- Earthworks/excavation.
- Loading and tipping.
- Site haulage.
- Road haulage.
- Materials handling, including soils and building materials.
- Windblow across stripped areas.
- Windblow across stockpiles of construction materials.
- Concrete batching.

3.4.3 Site preparation and trench excavation would involve initial soil strip and trench excavtion activities. Significant quantities of dust may be raised during these operations if appropriate mitigation options are not adopted.

3.4.4 Loading and tipping of potentially dusty materials such as road base and other aggregates may create visible dust emissions although these will be short lived.

3.4.5 Site haulage is typically the principal potential dust source on construction sites due to the physical disturbance of particles by vehicle movements over bare soil or loose surfaces. The potential impact is increased over longer distances when speeds tend to be greater, and more effort is required to maintain a smooth damp running surface. The haul distances at the application Site may range up to a maximum of about 600m. Over such distances, and in the absence of appropriate mitigation, significant quantities of dust may be raised.

3.4.6 Dust may also be raised by road haulage due to spillage or windblow from unsheeted loads and due to the adherence of mud and soil to the wheels and underbodies of vehicles leaving the Site. This may subsequently be deposited as track-out on roads in the vicinity of the Site, and on drying, be raised as dust by the passage of vehicles. In the event of road vehicles travelling across unsurfaced and muddy ground, track-out may occur.

3.4.7 The handling of soils, construction materials, and aggregates can be a potentially significant dust source, particularly under dry conditions.

3.4.8 It is generally accepted that winds blowing at more than 5 m/s across loose fine materials can lead to airborne dust emissions. Winds of 5 m/s or greater blow in the UK for about one third of the time annually, decreasing slightly in summer months. Windblown dust from areas of bare soil and materials stockpiles could therefore arise for prolonged periods.

3.4.9 Plant emissions are generally not a significant source of dust except where large numbers of plant are present close to boundaries and then only if not operating in accordance with current emissions standards or emitting black smoke.

Mitigation

Overview

3.4.10 Mitigation measures will be implemented to ensure effective control of dust and odour emissions from the construction works. The measures to be employed are industry best practices and are proven, well established, techniques to mitigate nuisance dust and odour emissions, as detailed in guidance issued by the Institute of Air Quality Management (IAQM).

Standard Good Practice

3.4.11 Standard good practices that will be undertaken include:

- Grading and maintenance of unsurfaced routes.
- Setting an appropriate site speed limit.
- Maintenance of equipment and plant to ensure its efficient operation. Should any emissions of dark smoke occur (except during start up) then the relevant machinery will be stopped immediately and any problem rectified before being used.
- Engines and exhaust systems will be regularly serviced according to manufacturer's recommendations and maintained to meet statutory limits/opacity tests.
- No vehicles or plant will be left idling unnecessarily.
- Use of an approved mechanical road sweeper to clean the highways of mud or debris that is deposited by site vehicles within the vicinity of the site. The sweeper will be available whenever required and will be properly used and maintained.
- Mobile bowsers will be deployed on site to damp down areas where there is potential for fugitive dust to be raised during dry and windy conditions.
- A suitable supply of clean water for dust suppression purposes will be maintained, under all climatic conditions, throughout the construction works. This will avoid the re-circulation of fine material.
- Use of windbreak netting as required.
- Bonfires will be forbidden on site.
- Wheel wash facilities will be provided as required.
- Should winds carry visible dust towards the Site boundaries, the operations giving rise to the dust in that part of the site will be modified or suspended until more suitable conditions pertain, or until effective dust control measures are implemented.
- Effective staff training in respect of the causes and prevention of dust to ensure standards of housekeeping to minimise trackout and windblown dust.

Material Handling

3.4.12 Other mitigation/management measures (relating to material handling) that will be undertaken throughout the works include:

- Minimisation of material drop heights during tipping and loading.
- Material stockpiles will be damped down during dry and windy periods as necessary.
- Heights of material stockpiles will be restricted to mitigate airborne dust potential and securely sheeted where required.
- Skips will be enclosed or covered.
- HGVs will be covered where windblown loss of material is likely and closed tankers will be used for transporting fine powdery materials.
- Even loading of vehicles to avoid spillages.
- Materials delivered to site will be left wrapped until needed.
- All excess or waste material will be stored and safely removed from site according to appropriate legislation. Waste will not be stored long term on site and the burning of waste materials will be prohibited.

Inspection and Monitoring

3.4.13 The site will be regularly inspected for spillages and wet handling methods for cleaning up spillages such as cement powder will be used.

3.4.14 The daily site log will be used to record any dust or odour complaints received by the site management. The daily site log will also be used to record any notable dust events that occur on site and any measures adopted to mitigate these events.

3.4.15 During the period when dust emissions are likely to be at their highest i.e. during the groundworks stage, daily site inspections of working areas and observations of work activities will be carried out by the Environmental Site Supervisor, to include:

- Logging of any observed visible dust during work activities.
- Recording of weather conditions and wind direction.
- Recording of any other local activities that could give rise to dust or odour complaints e.g. harvesting of crops, other construction works.

- Daily logged inspection of on-site areas, particularly surfaces (e.g. vehicles, any surfaces and vegetation) close to the boundary for deposited dust.
- Cleanliness of surfaced haul routes.
- General perceived effectiveness of mitigation.

3.4.16 Where visible dust is observed, or conditions likely to increase the risk of dust generation, for example prolonged dry weather conditions, mitigation may be increased e.g. use of mobile sprinklers.

3.4.17 Any complaints received will be recorded along with mitigation measures proposed to resolve issues identified.

3.5 Noise and Vibration

3.5.1 In accordance with NS5228-1: 2009+A1 (2014) (Code of Practice for Noise and Vibration Control on Construction and Open Sites), the following mitigation measures will be implemented:

- The construction delivery hours proposed would be generally limited to 07.30 to 18.00hrs Monday to Friday and 08.00 to 14.00hrs Saturday, with no work on Sundays or Bank Holidays. However, there may be occasions when construction would need to be undertaken outside of the core hours, for example, during major concrete pours or the transfer of abnormal loads.
- Avoid unnecessary plant operation and revving of plant or vehicles.
- Sensible routeing of the construction plant to avoid the nearest residential properties (where practicable) - see **Section 3.5** of this Framework CEMP.
- Where practicable, locate plant away from nearest sensitive receptors or in locations which provide good screening in the direction of sensitive receptors.
- Use of broadband noise reverse alarms (where practicable) on mobile plant.
- Regular maintenance of plant and equipment.
- Use of local screening where plant is in proximity to sensitive receptor boundaries (e.g. within 50m of a sensitive boundary) using temporary hoarding.
- No vibration mitigation measures would be required as the levels of vibration during construction is unlikely to be significant.

3.6 Historic Environment

Introduction

3.6.1 The following safeguarding measures will be implemented to ensure avoidance of any physical impacts during construction works. See the HEA at **Planning Statement Technical Appendix 1** for further details.

Signage and Toolbox Talk

3.6.2 Use of signage and on-site toolbox talk outlining the heritage value of the following historic assets:

- Grade II listed Telford Milestone.
- Grade II Registered Park and Garden at Brynkinalt (walled kitchen garden tunnel).

Archaeological Watching Brief

Holyhead Road, Colliery Road and the western end of Old Black Park Road

3.6.3 This relates to the possibility of the course of a Roman road crossing the route, the potential for evidence for the medieval and later settlement at Chirk, the potential for evidence for Telford's road and the potential for sidings and infrastructure associated with the former collieries at Brynkinalt and Old Black Park Road (Assets A3, A5, A22, A27 and A101). In these areas, an archaeological watching brief during below ground works for the cable trench within the highway would provide a record of any identified archaeology that is proportionate to the asset's heritage value and the predicted level of effect.

Grade II Registered Park and Garden at Brynkinalt

3.6.4 This relates to the possibility of archaeological evidence for the former layout of the parkland and any associated activity from the later medieval and early post medieval period. Within the HDD pit to the east of the A5 and cable route between the HDD and along Green Lane within the Registered Park and Garden, an archaeological watching brief during below ground works would provide a record of any identified

archaeology that is proportionate to the asset's heritage value and the predicted level of effect.

Cable Installation in Fields at the Eastern Extent of the Routes

3.6.5 These areas have low potential for prehistoric activity (as evidenced by the potential ring ditches and enclosure (Assets A1.1, 1.2 and 2) and medieval activity associated with the nearby records for a former grange and manor of Valle Crucis abbey (Asset A12). An archaeological watching brief during below ground works for the cable trench within the fields would provide a record of any identified archaeology that is proportionate to the asset's heritage value and the predicted level of effect.

Summary

3.6.6 The above proposed archaeological mitigation would be consistent with TAN 24 at paragraph 4.14 which sets out that *"An archaeological watching brief may be agreed as part of the WSI [written scheme of investigation] or be the subject of a planning condition that would require such work to be carried out while the development is underway. The applicant's responsibilities are not finally discharged until the results are analysed and published and the archive has been deposited."*

3.6.7 Further consultation would be undertaken with Heneb (the Archaeological Trust for Wales) to agree a suitable and proportionate programme of archaeological mitigation, which would be set out in a WSI, as required by TAN 24.

3.7 Arboriculture

Arboricultural Method Statement

3.7.1 Following on from the AIA (provided in full at **Planning Statement Technical Appendix 2**), the AMS sets out the where arboricultural management is required, along with a schedule of supervision to ensure trees are managed properly during the construction works.

3.7.2 The main body of the AMS provides the following:

- General tree welfare.
- General precautions.
- Specific tree management tasks and detailed method.

3.7.3 The AMS contains the following appendices:

- A - Tree Protection, Retention and Removal Plan.
- B – Tree Data Schedule with Recommendations.
- C – Tree Protection Specifications.
- D – Schedule of Arboricultural Supervision and Monitoring.

3.7.4 The AMS is provided in full at **Planning Statement Technical Appendix 3**. The measures set out in the AMS will be implemented and monitored as part of this Framework CEMP; as such, the AMS forms part of this Framework CEMP and is provided in full at **Appendix C** of this document. A summary of the AMS measures is set out below.

3.7.5 At present, none of the trees are planned to be pruned or removed to facilitate the Proposed Development. However, if there is impact on trees following the excavations within the Root Protection Areas (which will be recorded during the supervision and monitoring works), a mitigation strategy will be prepared which may include the planting of new trees depending on the severity of the impact. Any new trees will be planted at a ratio of 3:1.

3.7.6 Arboricultural supervision works will be required whilst excavating the cable trench near trees, within highway extents. The location details for these works and where supervision is required, is illustrated on the Tree Protection Plan. The full details are presented in the AMS, with a schedule of arboricultural supervision, by a qualified arboriculturist.

3.7.7 If any tree removal work or pruning work is prescribed, following monitoring and supervision or excavations within Root Protection Areas, they will be undertaken by competent and qualified arborists, working to best practice BS3998:2010.

3.7.8 Tree protection, as set out in the Tree Protection Plan at Appendix A of the AMS, will be installed before any other works associated, including other enabling works and earthworks and before any plant equipment, welfare, storage, or compounds are set up on site. The tree protection will be checked monthly by an Arboricultural Consultant to ensure it is maintained in good order throughout the project duration.

3.7.9 Movement of machinery, storage of materials, welfare areas or any other storage or activity including access and egress and temporary haul routes to remove or deliver equipment and HDD equipment will not occur within the tree protection areas and follow designated haul roots. Trackway will be used on soft ground where possible and a 30m x 30m compound will be installed to the east of the A483 as illustrated on the Tree Protection, Retention & Removal Plan.

3.7.10 Any damage arising to any retained tree will initiate an appropriate tree monitoring and management strategy, to be agreed with the WCBC Tree Officer before implementation.

Re-Survey Requirements

3.7.11 Trees are living dynamic organisms, and their condition can change quickly, therefore the AIA is only valid for 12 months following the report date (05 November 2025). A follow up tree survey will be undertaken beyond 12 months to re-assess the condition of the trees, which informs the retention categories in BS5837:2012, unless work has already progressed.

3.8 Biodiversity

Introduction

3.8.1 The following mitigation measures will be implemented during the construction phase to minimise biodiversity effects. See the EcIA at **Planning Statement Technical Appendix 4** for further details.

General

3.8.2 See **Section 3.2** and **Section 3.3** for general pollution prevention measures with respect the ground and water environments; the implementation of such measures will avoid direct and indirect biodiversity impacts.

Hedgerow

3.8.3 Hedgerow loss will be minimised throughout the works. Where practicable, the cable working corridor will be reduced in width when crossing hedgerows to minimise loss.

3.8.4 The section of species-rich hedgerow which will be removed along Pont Y Blew Road will be replanted with a double staggered hedgerow, using 90-120cm plants at a density of 5 plants per metre. The species mix will be 25% hawthorn, 25% blackthorn, 20% pedunculate oak, 10% hazel, 10% holly, 10% elder and provide betterment in terms of species-richness over the removed hedgerow section with additional species added if required. Planting will be undertaken between November and March, under suitable conditions.

3.8.5 The sections of hedgerow removed along the B50570, and Colt Lane will be replanted with a double staggered hedgerow, using 90-120cm plants at a density of 5 plants per metre. The species mix will be 30% hawthorn, 20% blackthorn, 20% hazel 20% holly and 10% elder and provide betterment in terms of species-richness over the removed hedgerow section with additional species added if required. Planting will be undertaken between November and March, under suitable conditions.

3.8.6 Hedgerow replanting locations are shown on Figures 3a-3c of the EcIA at **Planning Statement Technical Appendix 4**.

Bats

3.8.7 Surveys of potentially affected PRF-I (potential for individual/small number of bats) and PRF-M (potential for multiple bats e.g. a maternity roost) trees were undertaken during the summer breeding period; no bat roosts were identified.

3.8.8 Two winter hibernation surveys were also undertaken – one in December 2025 and the second in January 2025; no hibernation roosts were found. As no roosts were identified, there would be no restriction on the timing of works, although where practicable, works should be undertaken outside of the breeding season (May – September) in case roosts are present in future. Trees with PRF-I potential to support bats which require felling will be soft-felled under a precautionary working method statement under the supervision of a licenced ecologist.

Breeding Birds

3.8.9 Only small areas of vegetation clearance are required. Wherever possible, vegetation clearance will be undertaken outside of the breeding bird season (March

– August inclusive). If this is not possible, an inspection to check for the presence of nesting birds will be undertaken prior to clearance; if nesting birds are present, works will be delayed until breeding is complete and chicks have fledged.

Hedgehogs

3.8.10 Staged vegetation clearance to be undertaken and hedgerow and woodland searched by an ecologist prior to works. Avoid removing potential hibernation habitats between November and March.

3.8.11 Trenches will not be left open overnight; any trenches opened will be backfilled the same day or covered overnight to prevent accidental capture of hedgehogs and other mammals.

Otters

3.8.12 A pre-construction otter survey will be undertaken to ensure there are no otter holts or couches on sections of watercourse within 50m of the works.

3.8.13 If an active otter holt or lying up area is identified, a suitable exclusion zone will be clearly demarcated, at the discretion of the on-site Ecological Clerk of Works (EcoW) (50m for breeding holts and 30m for non-breeding holts or active otter couches). Guidance will then be sought from the ECoW on how to proceed with works in the affected area and on the requirement to obtain a development derogation licence.

3.8.14 During construction, any earthworks left open overnight shall be profiled such that at least one side of the excavation is sloped at a 45-degree angle or less to provide a means of escape for any animals accidentally captured. If this is not possible, a large plank or wooden beam shall be placed at the ends of the excavation at a shallow angle to allow any animals to escape.

3.8.15 Any new or modified external lighting will be designed to avoid direct illumination of the habitats including the River Ceiriog to the east of Pont Y Blew Road. If lighting is required, a sensitive lighting strategy will be implemented during construction to avoid disturbance should otters be present. Measures to be considered include the following:

- Directional lighting with full cut-off lanterns to minimise upward and outward light spill.
- Limiting light column height (e.g. max. 8m) and spacing columns to reduce overlap.
- Use of shields, baffles, and timers/sensors to reduce unnecessary illumination where avoidance is impossible.

Trees

3.8.16 See **Section 3.7** above for further details regarding tree management and mitigation.

3.9 Landscape and Views

3.9.1 Items to be addressed by the Framework CEMP that pertain to landscape and visual effects include:

- Measures to minimise arboricultural and biodiversity (vegetation) impacts (see **Section 3.7** and **Section 3.8** respectively of this Framework CEMP).
- Measures taken to limit the effects of temporary construction lighting (see **Section 2.6** of this Framework CEMP).

3.10 Traffic and Highways

Introduction

3.10.1 To ensure safe and efficient construction of the Proposed Development, a series of mitigation and traffic management measures will be implemented in accordance with Chapter 8 of the Traffic Signs Manual, Safety at Street Works and Road Works (Red Book), and local highway authority requirements. The measures are designed to minimise disruption to road users, protect public safety, and maintain access for residents and businesses throughout the construction period.

3.10.2 See the HTN at **Planning Statement Technical Appendix 7** for further details.

Construction Phasing and Access

3.10.3 The cable installation will be undertaken in a phased manner, with sequential working sections typically ranging between 250m and 500m in length. This approach would limit the extent of road occupation at any one time, thereby reducing traffic disruption.

3.10.4 Where carriageway widths are constrained, temporary single-lane shuttle working under two-way signal control will be employed. Temporary speed restrictions and advance warning signage will be installed in accordance with approved traffic management drawings. Vehicular and pedestrian access to all properties and businesses will be maintained at all times.

Temporary Traffic Management

3.10.5 Temporary traffic management (TTM) arrangements will be implemented to manage the safe movement of vehicles, pedestrians, and cyclists through or around the working areas.

3.10.6 TTM will include the use of temporary traffic signals, lane closures, signed diversion routes, and advance warning signs. All arrangements will be established by accredited operatives and subject to daily inspections. Any alterations or maintenance of TTM layouts will be conducted under controlled conditions to ensure continued compliance with safety standards.

Construction Traffic and Site Access

3.10.7 Designated site access points will be established along the route to serve construction compounds and laydown areas. Access locations will be designed with appropriate visibility splays and constructed to prevent the deposition of mud or debris on the highway network.

3.10.8 A construction traffic routing plan will be implemented to ensure HGVs avoid unsuitable roads and sensitive locations such as schools or residential areas. Swept path analyses have been undertaken to confirm that construction vehicles can safely enter and exit each compound in forward gear.

3.10.9 Vehicle movements will be managed by trained banksmen where visibility is restricted.

Compounds and Laydown Areas

3.10.10 Construction compounds will be positioned at suitable intervals along the route to support efficient logistics. Each compound will provide secure storage, welfare facilities, and off-road parking for operatives to prevent congestion on local roads. Internal segregation of plant, vehicles, and pedestrians will be maintained through marked routes and barriers. Appropriate surface water drainage, dust suppression, and noise mitigation measures will be incorporated as required.

Environmental and Community Mitigation

3.10.11 To minimise the environmental and community impacts of the works:

- Working hours will generally be restricted to 07:30–18:00 Monday to Friday and 08:00–14:00 on Saturdays.
- Dust generation will be controlled through the use of water suppression and regular road sweeping (see **Section 3.4** of this Framework CEMP).
- Noise mitigation measures will be employed, including the use of acoustic barriers where appropriate (see **Section 3.5** of this Framework CEMP).
- Ecological protection measures, such as exclusion zones and toolbox talks, will be implemented where works are in proximity to sensitive habitats.
- Residents, businesses, and stakeholders will be notified in advance of upcoming works through letters, on-site signage, and public information updates.

Monitoring and Compliance

3.10.12 All temporary traffic management installations will be subject to regular inspection by competent personnel to ensure compliance with approved plans and safety standards. A record of inspections, incidents, and corrective actions will be maintained.

3.10.13 The contractor will coordinate with the local highway authority, emergency services, and other utility providers to minimise cumulative impacts and ensure network resilience throughout the construction period.

Management of Public Rights of Way Crossing the Highway

3.10.14 Public Rights of Way (PROWs) intersecting the cable route and adjoining the highway network will be managed to ensure public safety and maintenance of accessibility through the construction period. The works will be undertaken in accordance with the Highways Act 1980, Rights of Way Act 200, and relevant local authority guidance on the temporary management and diversion of PROWs.

General Approach

3.10.15 The overarching principle will be to maintain public access along all PROWs wherever practicable, ensuring that routes remain open and safe for use by pedestrians, cyclists and equestrians. Where temporary closures or diversions are unavoidable, appropriate legal orders will be obtained from the LHA, and advance notification will be provided to all affected stakeholders.

Construction Interface with PROWs

3.10.16 Where PROWs cross or run adjacent to the construction corridor or associated highway works, the following control measures will be implemented:

- **Physical separation**: Temporary fencing, barriers, or pedestrian guardrails will be installed to segregate the working area from the PROW and protect users from construction activities and moving vehicles.
- **Surface and access maintenance**: PROW surfaces will be kept in a safe and usable condition at all times. Temporary surfacing or ramps will be provided where excavation or cable trenching intersects the route.
- **Clear signage**: Advance warning and directional signage will be installed at access points and along affected routes, advising users of construction activities, temporary diversions, or alternative access arrangements.
- **Crossing management**: Where PROWs cross active working areas or haul routes, crossing points will be established and managed by trained site marshals. Temporary pedestrian crossings, tactile paving, or visibility measures will be introduced where necessary to ensure safe passage.

Temporary Closures and Diversions

3.10.17 In instances where maintaining access across a PROW is not feasible due to safety or engineering constraints, a Temporary Traffic Regulation Order (TTRO) or Temporary Public Path Order (TPPO) will be applied for in advance.

- Diversion routes will be clearly signposted, accessible, and designed to minimise additional travel distance.
- The duration of closures will be kept to the minimum period required to complete the works safely.
- The reinstatement of the original PROW alignment will be undertaken promptly following completion of works, restoring the surface and any boundary features (e.g., gates, stiles, or fencing) to their original or improved condition.

Stakeholder Engagement

3.10.18 The contractor will maintain regular communication with the local Rights of Way Officer, parish councils, and user groups (e.g., Ramblers Association, British Horse Society) to ensure that proposed management measures are appropriate and clearly understood.

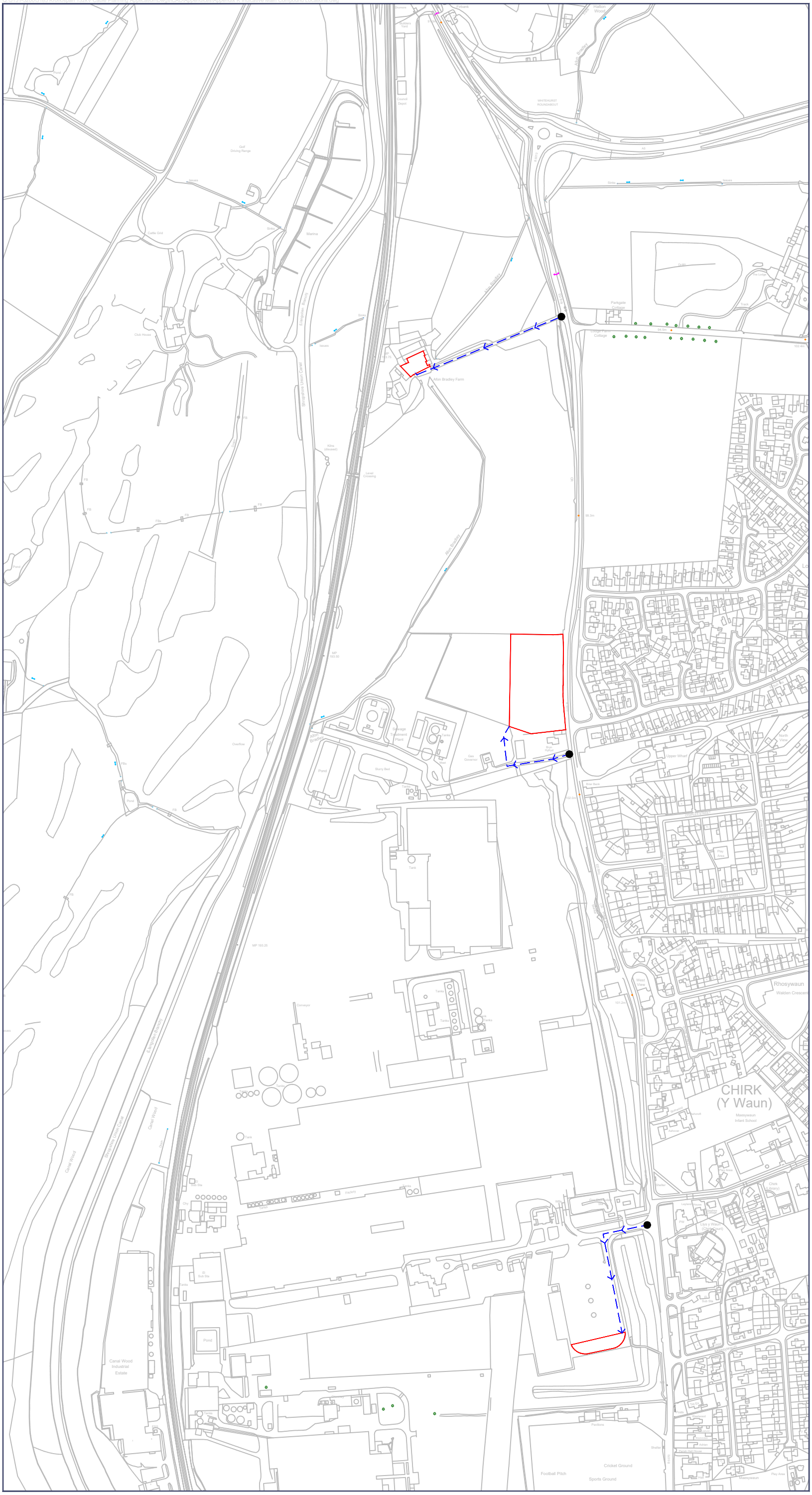
3.10.19 Advance notification of works affecting PROWs will be issued through on-site notices, letters to nearby properties, and updates on the local authority's website, where applicable.

Monitoring and Compliance

3.10.20 All temporary management measures will be subject to routine inspection by the Site Manager or Traffic Safety and Control Officer to ensure that fencing, signage, and surface conditions remain safe and effective. Any issues raised by the public or stakeholders will be recorded and addressed promptly through the site's incident reporting process.

Appendix A – Main Construction Compounds and Working/Laydown Areas

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Project

Kronospan 132kV Cables

Figure Number

Appendix A

Figure Title

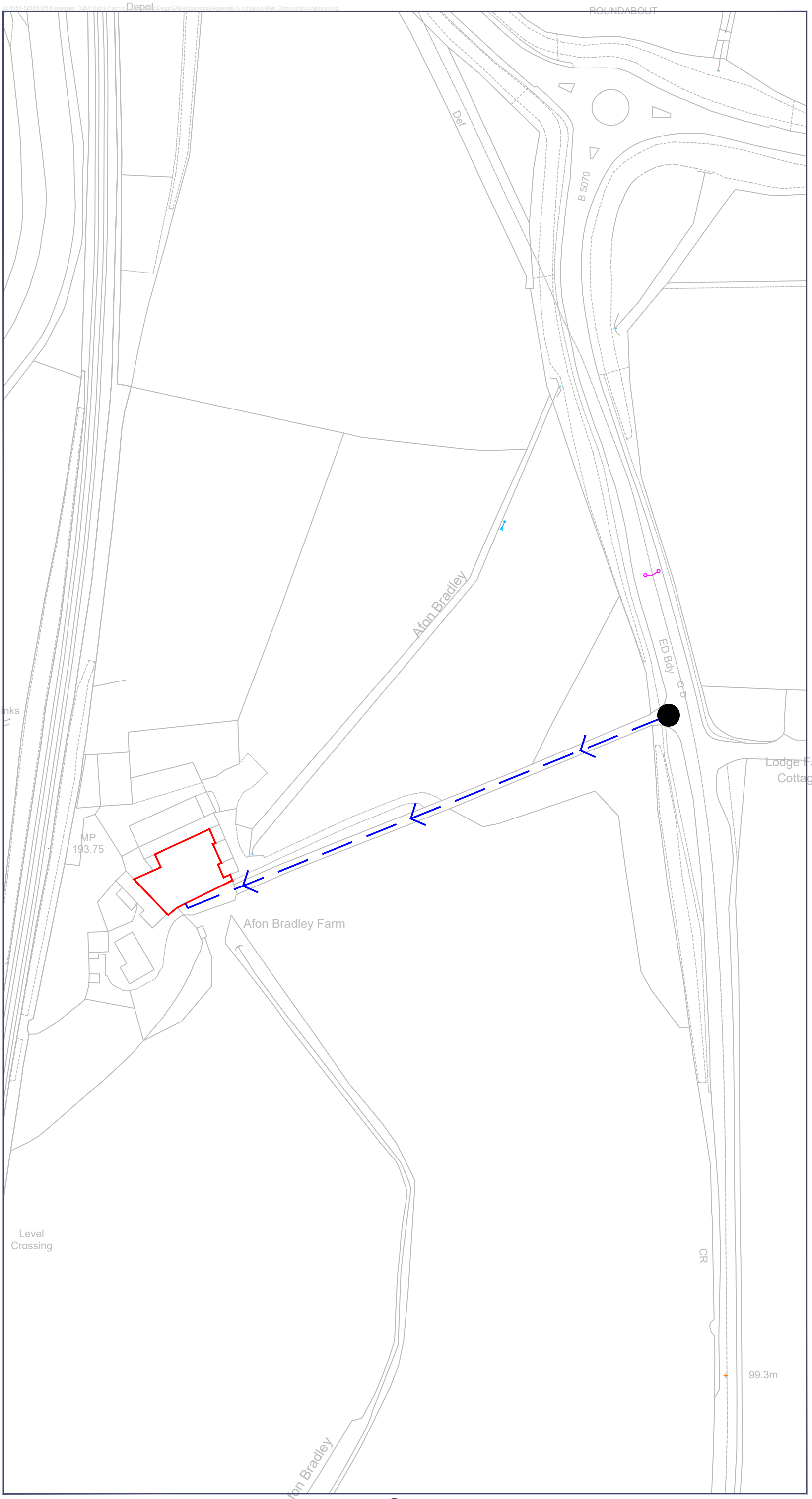
Main Construction Compound Locations

Scale

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Date

November 2025



Indicative Compound Boundary

Route to Site Entrance

Access Point from Public Highway

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Project

Kronospan 132kV Cables

Figure Number

Appendix A

Figure Title

Main Construction Compound 1 - Afon Bradley Farm

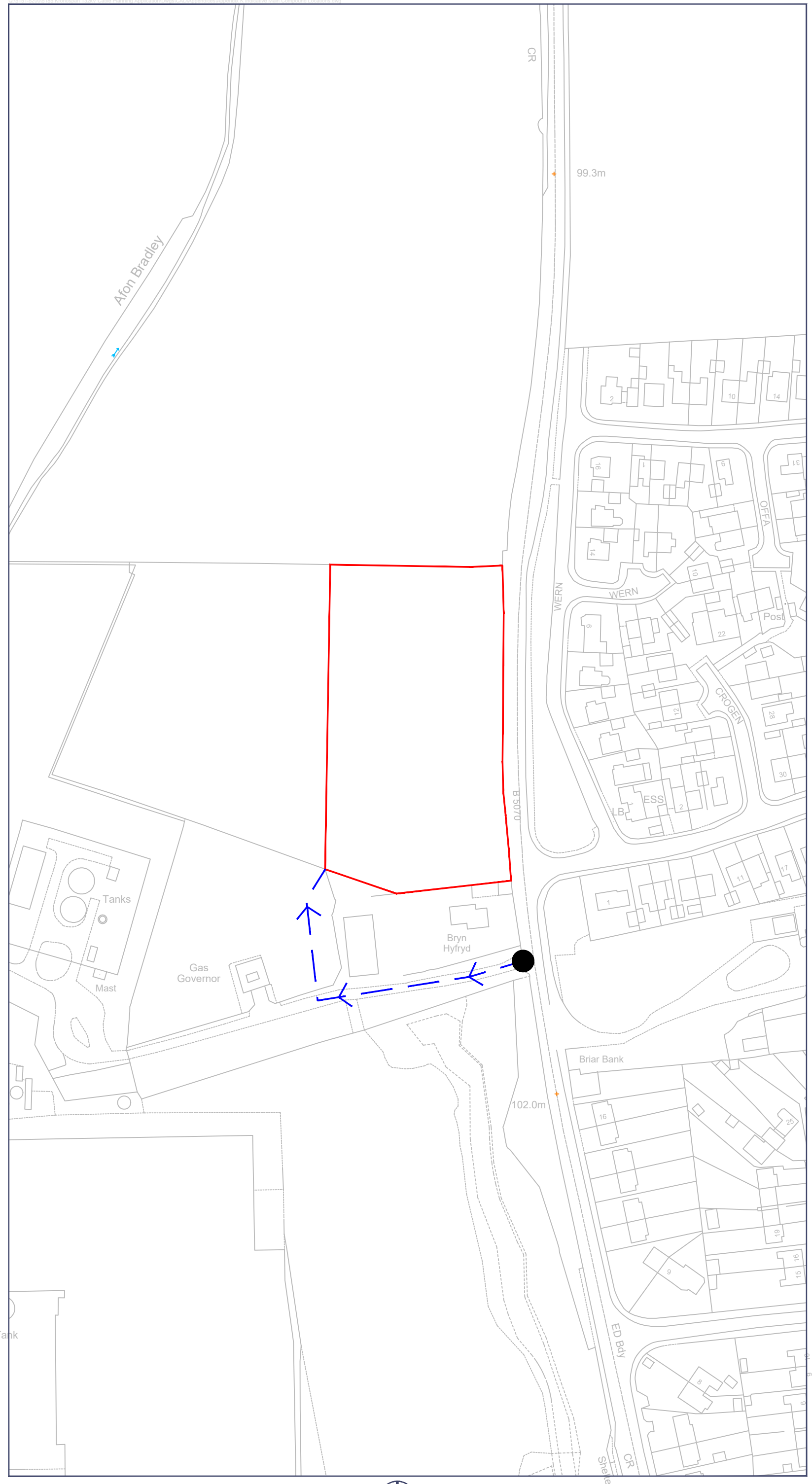
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Date

November 2025

Q:\5151-5200\5185 Kronospan 132kV Cable Planning Application\Dwgs\CAD\Appendices\Appendix K Indicative Main Compound Locations.dwg



Indicative Compound Boundary

Route to Site Entrance

Access Point from Public Highway

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Figure Number

Appendix A

Figure Title

Main Construction Compound 2 - Kronospan North Access Road Phase 1 Working Area

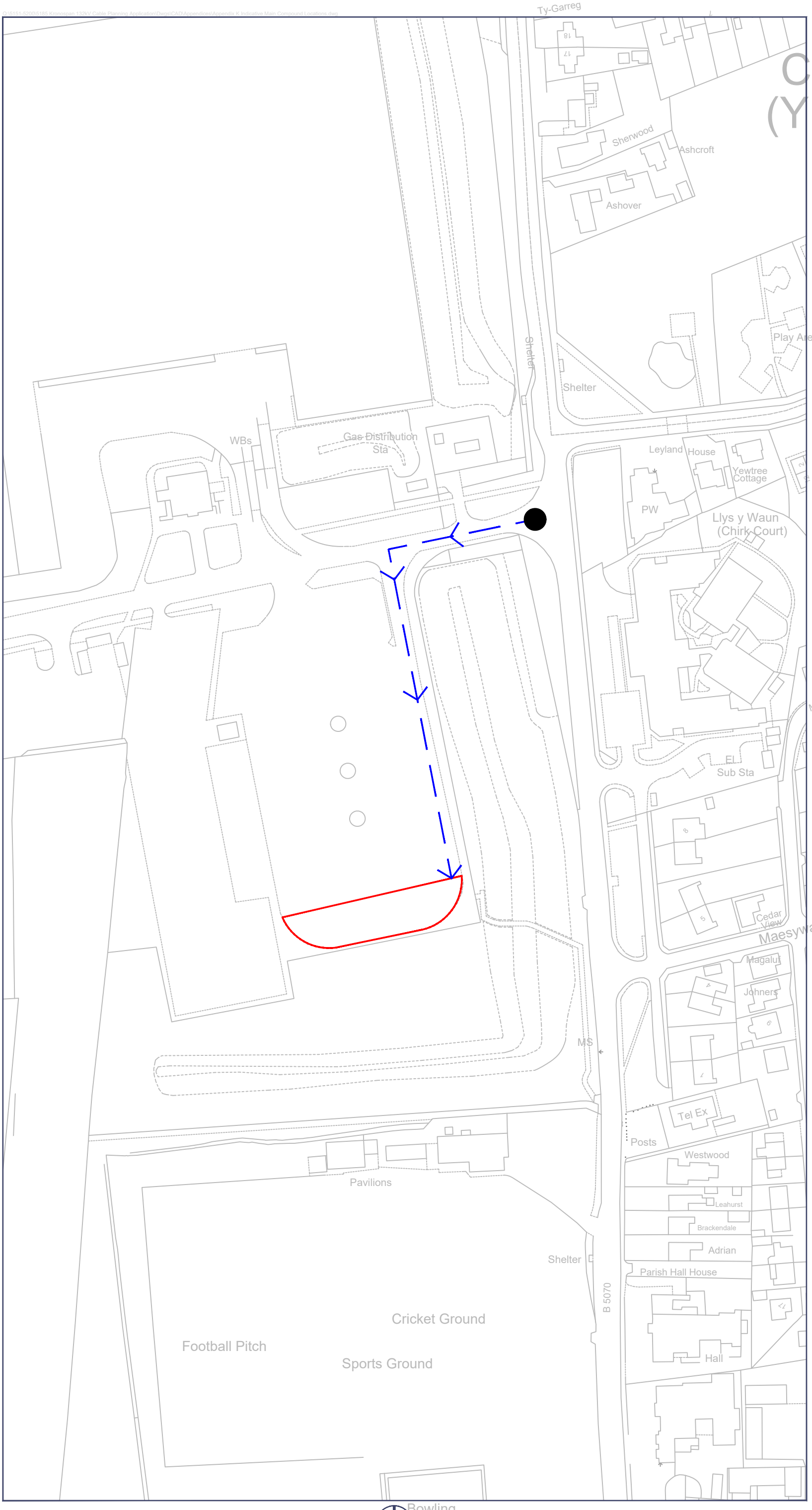
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Date

November 2025

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Project

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Figure Number

Appendix A

Figure Title

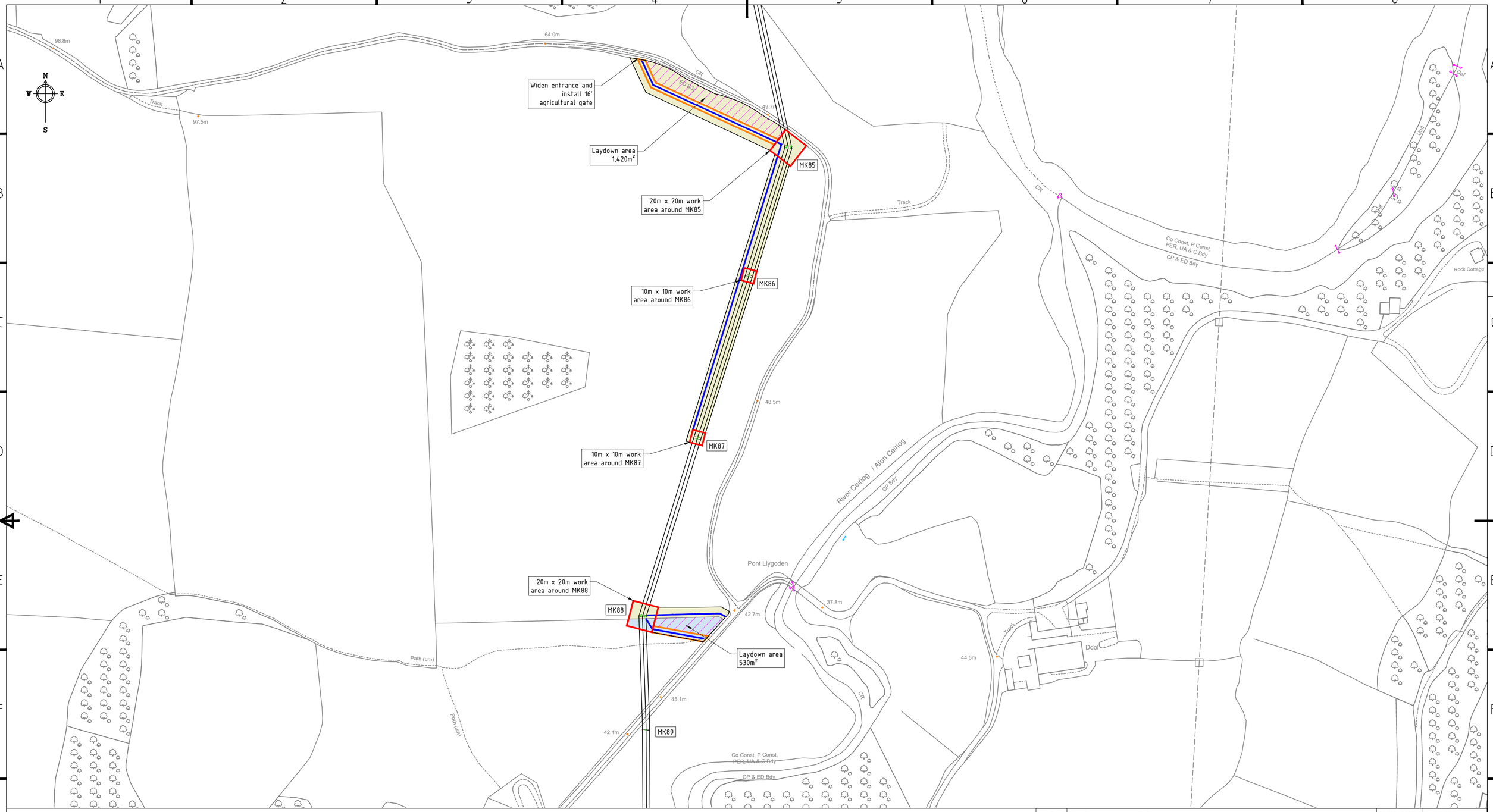
Main Construction Compound 3 - Kronospan Lorry Park

Scale

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Date

November 2025



Legend

- Vehicle access
- Temporary roadway
- Working area
- Area 1 & 2 - 6,834m², 1.69ac
- Area 3 - 905m², 0.22ac
- Laydown areas

Index	Modification	Date	Name
C	Laydown areas amended	28/05/2025	A. Hilditch
B	Laydown areas	27/05/2025	A. Hilditch
A	Field areas added	27/05/2025	A. Hilditch

KRONOSPAN STATUS
Date 28/05/2025

STATUS		WAITED COMMENTS	
By	KRONOSPAN	Deadline	YYYY-MM-DD
Date	YYYY-MM-DD	By	
By		By	
By		By	
DISTRIBUTION		WAITED APPROVAL	
Date	YYYY-MM-DD	Deadline	YYYY-MM-DD
MH	######	By	
AG		By	
GG		By	
PJ		WARNING	
CH		No working consents out / or approval within above deadlines, the drawing is intended as "APPROVED" under full responsibility of the listed commentators and / or approvers.	
CB			
CERTIFIED	Date YYYY-MM-DD		

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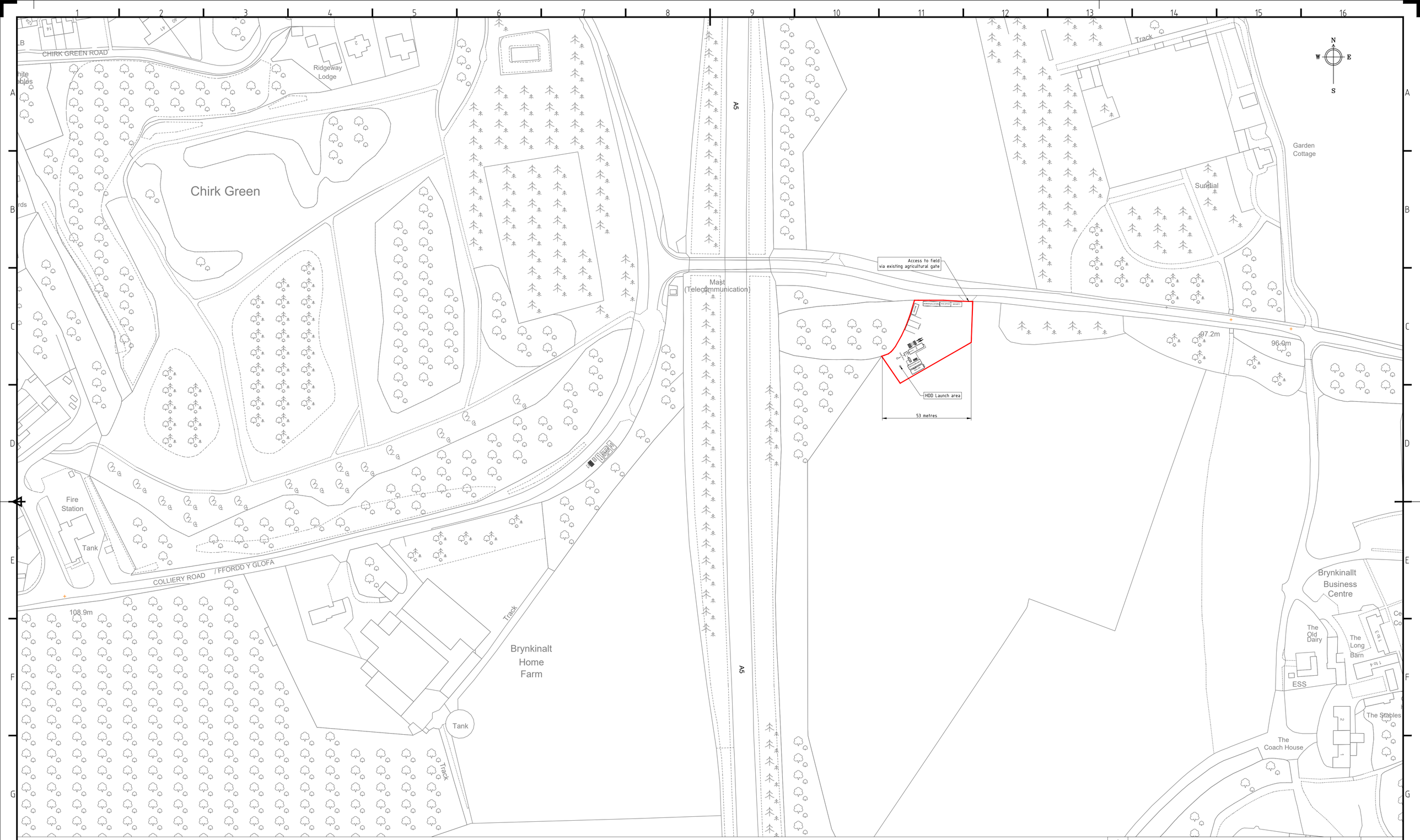
	Date	Name
Project leader	21/11/2024	M. Titcombe
Drawn	21/11/2024	A. Hilditch
Checked		

Size: A2
Scale: 1:2000
origin
Norm: ISO
Project number
Project name

Description
132kV Grid Connection
Work areas - Connection to MK85 & MK88

Drawing number: 8000_250
Index: C
Sheet/Number: 1/2

Sub Category
Division
Process
Subprocess



Legend

Work area on private land (1,585m²)

Index	Modification	Date	Name
C			
B			
A			

KRONOSPAN STATUS
Date 06/05/2025

STATUS	DOCUMENT NUMBER
KRONOSPAN	XYYY-MM-DD
XXX-ORD-QA	
CONTRIBUTION	**QUALITY PROOF**
XYYY-MM-DD	XYYY-MM-DD
#####	
WARNING	
CERTIFIED	XYYY-MM-DD

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Project leader		
Drawn	06/05/2025	A. Hilditch
Checked		

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origin | Norm ISO

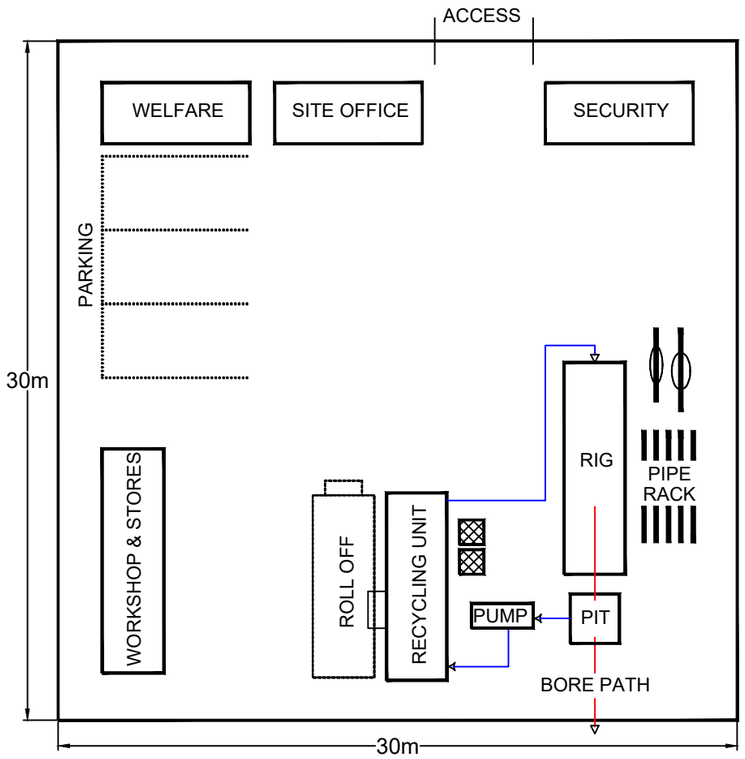
Project number | Project name

Description
132kV Grid Connection
Working areas - HDD Proposal

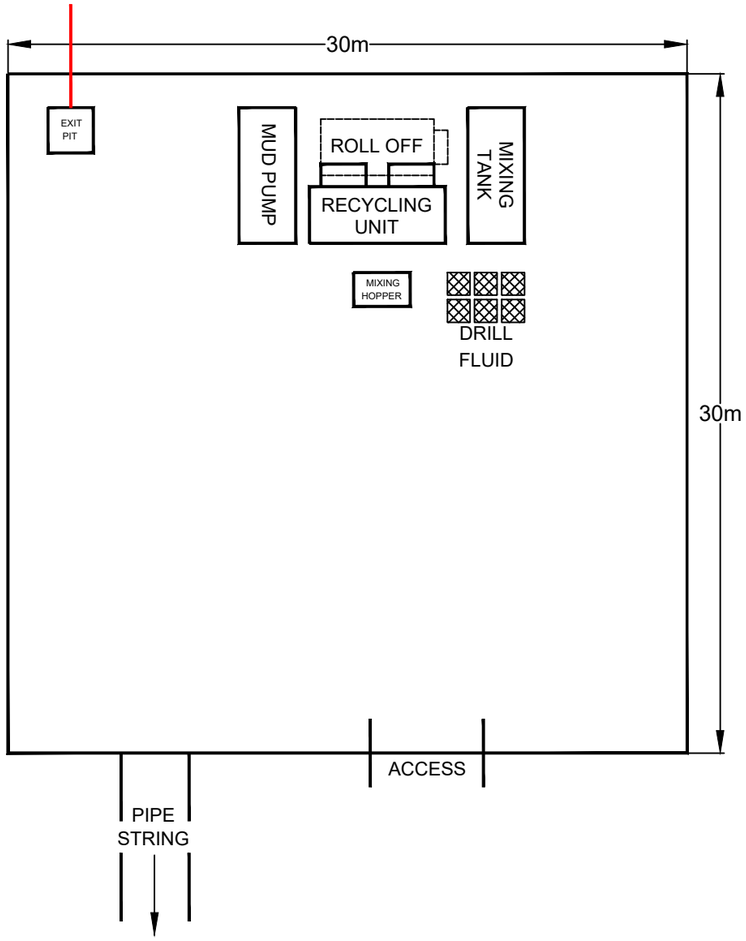
Drawing number 8000_256 | Index | Sheet/Number 1/1

Sub Category | Process
Division | Subprocess

Entry Compound Layout



Exit Compound Layout



Entry Compound Layout used to demonstrate general equipment and set up. Actual set up will vary from site to site dependant on size limitations and constraints on positioning of equipment.
Equipment may also vary site to site. Specifics to be confirmed on site for each job.

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ENTRY & EXIT COMPOUND LAYOUT

Drawing Number	Revision	Scale
PBU-COMPOUND-01	1	1:250@A3

Revision	Details	Status	Drawn By	Date	Checked	Approved
1	General Rig Layout	FC	DR	08.09.20	MG	KM

Appendix B – Frac Out Response Plan

FRAC-OUT RESPONSE PLAN

"Frac-Out" occurs when fluid pathways are developed between the bore hole and surface, due to the hydraulic pressure of drill fluid within the annulus of the bore exceeding the confining formation strength of the surrounding lithology.

Stakeholders should be reminded that Drilling Fluids are freshwater suspensions of inert clay particles. Although slippery, they are environmentally benign and in fact can be utilised to improve the water retention of poor quality soils. Control Of Substances Hazardous to Health, (COSHH), and Material Safety Data Sheets, (MSDS), are kept on site for all products involved in the drilling operation.

During the drilling of the pilot hole entry and exit curves, when the depth of cover, formation consolidation and confining strength are at a minimum, Frac-Out is most likely.

Frac-Out can also travel to surface via existing pathways, e.g. previously installed utilities, foundation piles and existing boreholes. Any Site Investigation bores sunk must be offset to the proposed drill line and sealed up on completion.

Once punch out at exit point has been achieved, the annular pressure within the bore is relieved. Frac-Out during Hole Opening and Pipe Pulling operations is therefore much less likely to occur.

There are three stages to the management of Frac-Out:

1) Prevention 2) Containment 3) Control 4) Report

Prevention

As previously noted, Frac-Out occurs when annular fluid pressures exceed formation fracture pressures. Annular fluid pressures are minimised by constant monitoring of the drilling fluid parameters.

The Drill Fluids Operator will monitor Drill Fluid density, viscosity and solids content on a regular basis, (hourly), to ensure that the fluid does not increase in viscosity, requiring additional pressure to maintain mobility.
In critical cases, viscometers will be used to measure Drill Fluid gel strength and shear strength so that Reynolds Numbers can be monitored. Filtrate can also be measured to calculate the amount of wall cake building up on the internal wall of the bore.

The Driller will monitor the Drill Fluid pressures, volumes, viscosities and densities of mud being pumped through the bore. Any increases in pump pressure will be investigated immediately to prevent the risk of pressure build up within the annulus.

The Fluids Technician will monitor active fluid tank volumes and account for any unexpected changes. The amount of fluid being taken by the additional hole volume drilled will be calculated. (The Drill Fluid is designed to allow water loss in porous formations in order to build filter cake).

The bore hole will be reamed on a regular basis to keep the annulus clear.
Rates of Penetration and circulated cuttings volumes will be monitored to ensure that drilled cuttings are being flushed from the bore and are not building up creating pressure restrictions.
Annular fluid velocity will be kept below Critical Velocity to prevent eddying and subsequent erosion caused by turbulent flow.

When drilling clay based formations, inhibitors may be used to prevent the absorption of water and subsequent swelling and sloughing of the formations.

Containment

A Frac-Watch programme will be operated at all times whilst circulating, particularly when drilling past potential pathways. Frac-Out may occur some distance from the bore path.

Prior to drilling, potential Frac-Out pathways will be identified and contingency plans put in place.

- Sand Bags/Hay Bales will be available to control drill fluid at surface.
- An excavator will be available to dig a pit to contain fluid.
- Tractor & Tanker or Vacuum trucks will be available to transfer drill fluid from the containment point back to the recycling system.
- Where frac out occurs in watercourses, a 2inch pump will be available to directly pump from the centre of the plume onto vegetative land, a minimum of 50m from the works.
- If Frac Out occurs in a riverbed, pressure relief bores may have to be drilled on the river bank. (Before any works around the watercourse can take place, this needs to be agreed with the Environmental team).
- If drilling is being undertaken in contaminated land, Frac-Out may be contaminated.
- If the fluid loss is onto the carriageway, National Highways (0300 123 5000) are to be contacted immediately or the local highway authority.

In the event that Frac-Out is experienced, the rig will **immediately** shut off the pumps and the drilling assembly will be pulled off bottom to reduce annular pressures.

Control

The freshwater based, bentonite suspension, drill fluid systems are, essentially, low viscosity grouts. In most cases, the fracture pathways will quickly seal up.
Frac-Out is likely to indicate that the bore hole requires reaming to reduce the pressure required to return drill fluid to surface. A Wiper Trip may be sufficient to prevent further Frac-Out.

Various Lost Circulation Material (LCM) drill fluid additives are available to seal fractures in the formation. These vary from locally available substances to specifically produced materials

such as mica flakes and proprietary chemical additives such as Diamond Seal™ or Micro-Fill™.

As a worst case scenario, cement may be forced into the bore to seal up the pathways. The cement plug can subsequently be drilled out or side-tracked.

It is often the case that a combination of containment and control will be required to enable economic completion of the bore.

Report

Should Frac Out occur, once the appropriate measures have been taken as above to contain and control, it MUST be reported to a PBU site supervisor or manager within 30 minutes from the time of occurrence or being detected. Photographs are to be taken prior to and after the containment and clean up operation.
Once the drill fluid has been contained and controlled it will be reported to the client as soon as is practicable by the quickest means in accordance with reporting procedure.

Appendix C – Arboricultural Method Statement (See Planning Statement Technical Appendix 3)