



Cyngor Castell-nedd Port Talbot
Neath Port Talbot Council



Llywodraeth Cymru
Welsh Government

A Global Centre of Rail Excellence in Wales

Planning, design and access statement

March 2021



Contents

	Page	
1	Introduction	1
1.1	Planning Design and Access Statement Overview	1
1.2	The Statement	1
2	Proposed Development Context	3
2.1	Overview of the Proposed Development Context	3
2.2	Summary of the Proposed Development	3
2.3	Consenting Strategy	5
2.4	Planning History	6
2.5	Site Delivery	7
2.6	Need for Development	7
3	The Site	13
3.1	Overview of the Site	13
3.2	Site Suitability	13
3.3	Site Context	15
3.4	Socio-Economic Context	25
4	Pre-application and Public Consultation	27
4.1	Overview of Pre-application and Consultation	27
4.2	Stage 1 – Project Briefing/Early Engagement	27
4.3	Stage 2 – Statutory Pre-application Consultation	27
5	Proposed Development	29
5.1	Proposed Development Overview	29
5.2	Design Development	33
5.3	Parameters	34
5.4	Indicative Design Details	36
5.5	Access Statement	39
5.6	Plans and Documents for the Outline Planning Application	42
6	Policy Analysis and Strategic Context	43
6.1	Policy Analysis and Strategic Context Overview	43
6.2	Local Policy	43
6.3	National Policy	45
7	Planning Assessment	57
7.1	Planning Assessment Overview	57
7.2	Principle of Development	57
7.3	Landscape	62
7.4	Biodiversity	65

7.5	Hydrology	67
7.6	Ground Conditions	67
7.7	Cultural Heritage	68
7.8	Traffic and Transport	69
7.9	Residential Amenity	71
7.10	Welsh Language	73
7.11	Energy	75
8	Conclusion	77

Tables

Table 1:	GCRE proposed works by phase
Table 2:	GCRE Organisational Benefits
Table 3:	Sensitive Environmental Features surrounding Site
Table 4:	GCRE Summary of Proposed Development
Table 5:	Proposed Development Parameters – Buildings and Structures

Figures

Figure 1	Site Location Plan
Figure 2	Nant Helen Strategic Connectivity
Figure 3	Nant Helen Local Connectivity (strategic road network shown in blue and green, and rail network in black).
Figure 4	Settlement Context Surrounding the Site
Figure 5	Key Gradients – Visual Influence
Figure 6	Common Land Boundary
Figure 7	Public Right of Way Network surrounding Site
Figure 8	Designated Heritage Assets
Figure 9	Image from public drop-in session held in 2019
Figure 10	Illustrative Masterplan
Figure 11	Site Opportunities and Constraints Analysis
Figure 12	Landscape Mitigation Proposals
Figure 13	Proposed Site Access
Figure 14	Well-being of Future Generations Act – Well-being Goals and Ways of Working
Figure 15	Regional Strategic Diagram, South West Wales, Future Wales: the national plan 2040

Appendices

Appendix A

Site Photos

Appendix B

Indicative Design Images

1 Introduction

1.1 Planning Design and Access Statement Overview

This Planning, Design and Access Statement (PDAS) has been prepared by Ove Arup and Partners Limited (Arup) on behalf of Welsh Government in support of a cross boundary outline planning application (with all matters reserved) for the development of a Global Centre of Rail Excellence (GCRE) at the site of Nant Helen Surface Mine and the Onllwyn Washery and Distribution Centre in Onllwyn,

GCRE would be a rail testing complex, designed to allow operators to test rail technology (both rolling stock and infrastructure). Alongside the rail testing capability, it is also intended that GCRE would be a state-of-the-art research and development facility for the railway industry. GCRE would comprise a number of elements of infrastructure, new buildings and ancillary works all of which are described further within this PDAS.

The proposed development site, the Nant Helen Surface Mine and Onllwyn Washery and Distribution Centre, crosses two local authority boundaries: Neath Port Talbot County Borough Council and Powys County Council. As such 2 no. outline planning applications have been submitted to each authority comprising of the same information, including technical documents such as the Environmental Statement.

The site of the proposed development is more than 1 hectare in area and constitutes major development as defined within the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended). Subsequently, the planning application has been scoped to accord with the requirements associated with major development as prescribed by the regulations.

1.2 The Statement

This PDAS sets out the context for the planning application and assesses the proposed development against relevant policies and material planning considerations in order to justify the grant of consent. The remainder of the PDAS is ordered as follows:

- Chapter 2 (Proposed Development Context) provides an introduction and overview of the outline planning application and the relevant planning history.
- Chapter 3 (The Site) describes the site location, relevant designations, and the overall site context.
- Chapter 4 (Pre-application and Public Consultation) summarises the engagement undertaken throughout the preparation of the planning application.

- Chapter 5 (Proposed Development) provides a detailed description of the proposed development.
- Chapter 6 (Policy Analysis and Strategic Context) outlines the relevant planning policies associated with the planning application and summarises other strategic drivers of relevance.
- Chapter 7 (Planning Assessment) provides the planning assessment within the context of key drivers, relevant policies and material planning considerations.
- Chapter 8 (Conclusion) summarises the findings of the Statement and provides a justification as to why the grant of planning permission should be found to be acceptable in this case.

This PDAS should be read alongside the other relevant principle documents submitted in support of the outline planning application including:

- Environmental Statement (ES) and the Non-Technical Summary (NTS);
- Pre-application Consultation Report; and
- Transport Assessment.

2 Proposed Development Context

2.1 Overview of the Proposed Development Context

The Welsh Government is applying for outline planning consent with all matters reserved, to develop a Global Centre of Rail Excellence, to be known as GCRE.

GCRE aims to meet several objectives which would address the issues and needs of the UK rail industry. These can be summarised as follows:

- Deliver a UK-based modern and comprehensive rail testing facility to provide the capacity and capabilities for rigorous testing of rolling stock, infrastructure and integrated systems from prototype to implementation.
- Act as a catalyst for the creation of a rail technology hub in Wales, providing a flexible, open-market platform for leading Research & Development (R&D) activity that drives innovation.
- Provide opportunities to work with industry to support skills development through high-quality employment in fair, secure and sustainable jobs that contribute to reducing regional inequality and promoting regeneration in Wales.
- Develop and test rail sector principles, standards and specifications which improve the UK's competitive strengths as a world leader in achieving carbon neutrality, contributing to an overall decrease in carbon emissions across the rail industry.

Beyond the industry objectives, there are other drivers of change or desirable outcomes that play directly into either the site or the local context, as follows:

- A transformational impact on the heads of valleys by regenerating the post-coal landscape and creating new socio-economic opportunities.
- To develop education and training opportunities in partnership with Universities and higher education institutions.
- Opportunities to enhance the interpretation and understanding of the historic environment around the site, and the transport heritage aspects of the mining context of the site and beyond.

GCRE would consist of a number of different elements of works and these are summarised in more detail in section 2.2 below.

2.2 Summary of the Proposed Development

GCRE would extend across land within both the Powys County Council (PCC) administrative boundary and the Neath Port Talbot County Borough Council (NPTCBC) administrative boundary, as shown on Figure 1 below.

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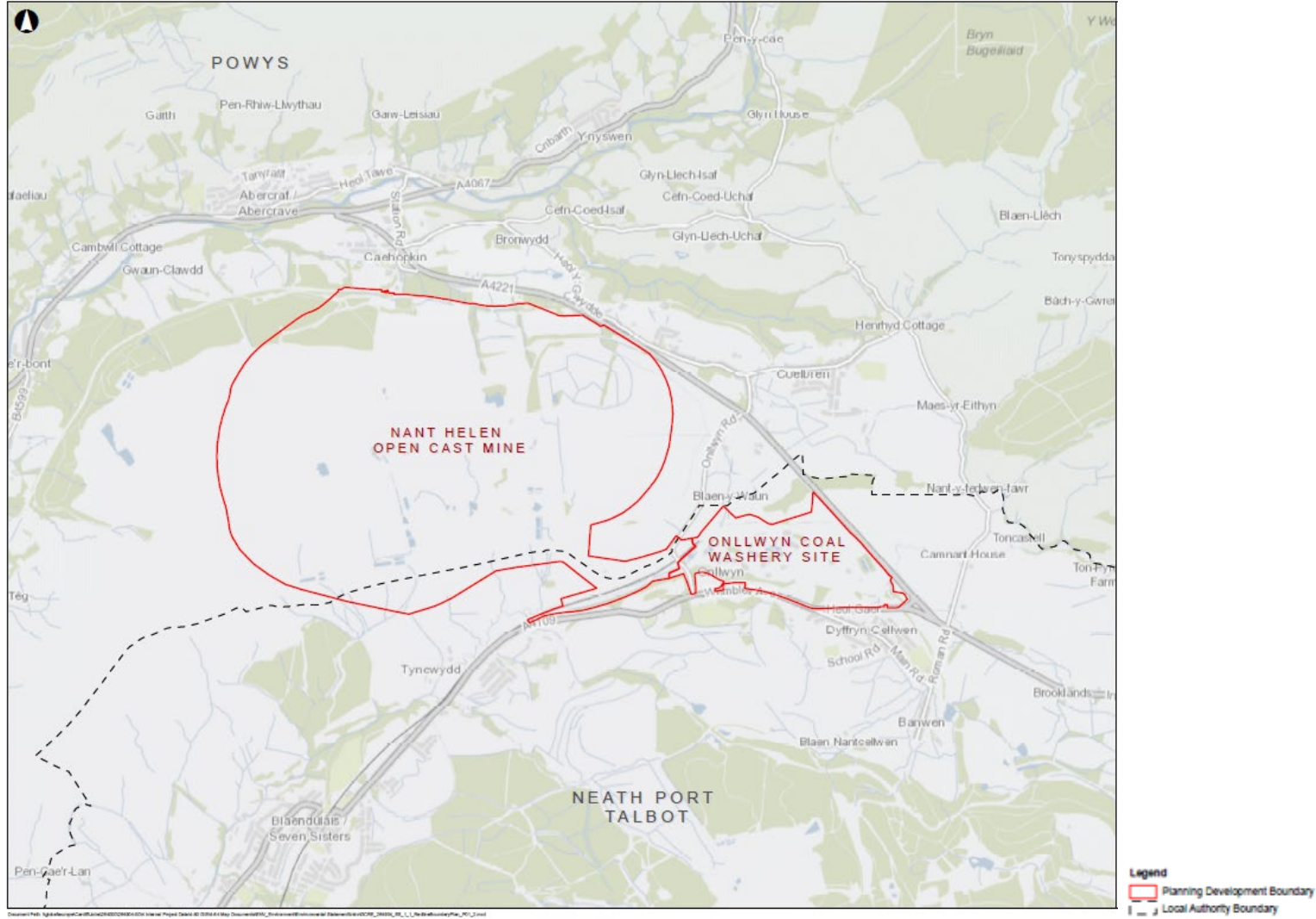


Figure 1 Site Location Plan

It is anticipated that GCRE would be delivered over 3 no. development phases comprising of different core works. The main components of GCRE are summarised in Table 1 below, alongside the proposed delivery phase.

Table 1: GCRE proposed works by phase

Phase	Overview	Elements of Proposed Development
1	The opening of the 4.5km test track, largely for testing infrastructure and some stabling facilities, in 2023.	<ul style="list-style-type: none"> • High tonnage infrastructure – 4.5km test track with 25kV overhead line electrification. • 2 no. platforms and station building to south of infrastructure test track. • 12 full length stabling roads. • 1 shunters cabin. • Temporary staff facilities (to be upgraded at phase 2).
2	The addition of the 6.9km test track primarily for testing rolling stock in 2024.	<ul style="list-style-type: none"> • 6.9km rolling stock test track with 25kV overhead line electrification. • 12 full length stabling roads. • Rolling stock maintenance sheds and access roads. • Carriage wash. • Permanent staff facilities including overnight accommodation. • Upgrade of all points to electric points. • Central control building– (panel from which all train movements are controlled. Points are changed electronically). • Infrastructure testing R&D facility.
3	The addition of expanded stabling facilities and research facilities in 2025.	<ul style="list-style-type: none"> • Rolling stock R&D / education facility. • Stationary testing facilities and associated laboratories. • Rolling stock maintenance facility. • 10 ‘through’ sidings.

Each of the abovementioned elements will be described in more detail in section 5 of this PDAS in order to provide further details and context.

2.3 Consenting Strategy

As noted above, GCRE would extend across two local authority boundaries. Procedures for dealing with cross boundary development are set out within the Town and Country Planning (Fees for Applications, Deemed Applications and Site Visits) (Wales) Regulations 2015 (as amended). These Regulations advise that planning applications should be submitted in each jurisdiction and determined by each local planning authority concerned.

As such, 2 no. outline planning applications are to be submitted in relation to GCRE, 1 no. application will be submitted to NPTCBC and 1 no. to PCC. The

applications will consist of the same technical documents including the Environmental Statement (ES) and associated assessments.

Throughout the development of GCRE, including at pre-application stage, both Local Planning Authorities (LPA) have worked together and have agreed to continue to do so as the application is submitted to ensure a consistent consenting process for the overall GCRE project.

Previous planning applications for development at the site (as discussed further in section 2.4) were subject to Environmental Impact Assessment (EIA). Under the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017, the development has been deemed as requiring EIA, the scope of which was agreed by both PCC and NPTCBC through a joint Scoping response dated November 2019, which is available to view in Volume II, Appendix 2A of the ES.

2.4 Planning History

The Nant Helen Surface Mine and the Onllwyn Washery Distribution Centre site have been subject to a number of planning applications relating to the existing coalmine operations. Coaling operations are set to come to an end in 2021 and works associated with the site's final restoration by Celtic Energy (the current landowner) received planning permission in June 2020 under a 'section 73' planning application (PCC reference: 19/1899/REM).

In addition to the section 73 application, in April 2020, Celtic Energy submitted two planning applications reference 20/0738/FUL (Powys) and P/2020/0362 (Neath Port Talbot) for a complementary earthworks scheme at the Nant Helen Surface Mine site. This was intended to sit alongside the restoration strategy and the application sought permission for the implementation of a comprehensive, flexible and adaptable landform across the entire site that could support a wide range of future uses, including GCRE (this application).

These applications were approved by each respective LPA in July 2020 and allow for the establishment of the earthworks formation and associated drainage and landscaping for two of the key components of the rail testing facility, namely the high speed and infrastructure test track loops and rail line connections, providing a foundation for GCRE. The earthworks applications were granted subject to several planning conditions, and further detail as to where these interface with the current outline planning application is provided within this report and within the accompanying ES.

This third application has been developed to relate to and sit within the context of the extant applications. It is recognised that there are areas of necessary environmental mitigation required for GCRE which would fall outside the redline boundary of this current application, however are within the redline boundary of the consented restoration proposals. Conversations are ongoing with the current landowner, Celtic Energy, around the delivery of these works.

In accordance with Planning Policy Wales and relevant test on previously developed land, the restoration condition attached to the original mining consent

means that the Nant Helen Surface mine site, through remediation would not be considered previously developed and would in fact revert to a greenfield site. Conversely, the Onllwyn Washery and Distribution Centre was not included as part of these previous applications and this area of the site is therefore considered to be previously developed, brownfield land. This should be taken into consideration when reading the planning assessment presented in Chapter 7 of this PDAS.

2.5 Site Delivery

It should be noted that GCRE is intrinsically linked to the previous earthworks' consents (20/0738/FUL and P/2020/0362) in terms of site delivery and should GCRE gain permission, the earthworks would be designed in detail to accommodate the facility. Should consent be granted, the earthworks delivery programme would align with the requirements of GCRE such that the on completion of the earthworks, work would begin on GCRE straight away, or with a short gap in construction activities.

At this stage in project development, it is therefore anticipated that works would begin on the earthworks in late 2021/ early 2022 (following discharge of necessary planning conditions). The duration of these works is estimated to be in the region of 12 months, with work on the GCRE then estimated to start in late 2022 / early 2023.

2.6 Need for Development

The UK does not possess anything approaching such a high-quality facility as that proposed at GCRE. Both public and private sector organisations frequently use test facilities in Europe and the United States of America (USA), supporting jobs and building competing expertise in other countries. Moreover, these other facilities are often owned and operated by a single commercial entity, which stifles access to testing and innovation.

With projects such as High Speed 2 (HS2), CrossRail2, Northern Powerhouse Rail and the Cardiff Valleys transformation approaching, together with the soon to be time-expired status of the majority of the UK's signalling infrastructure (in itself an estimated £35 bn renewals programme from 2025), the need for safe and efficient testing to drive performance and cost-efficiency in the UK has never been greater. Operational independence and full open-market access are critical to allow competition and innovation to flourish.

GCRE is considered to address a number of specific industry issues, as well as offering wider socio-economic opportunities, as follows:

- Supporting UK train manufacturers and encouraging the establishment of further UK manufacturing facilities and testing capacity.
- Supporting the development of a UK digital railway industry by providing high quality and safe testing facilities for digital signalling, train control and asset management technologies.

- Delivering high-tonnage endurance testing of railway infrastructure particularly track and structures; such a facility will enable infrastructure to be rapidly tested and verified and would be unique in Europe, potentially attracting customers from around the world – Network Rail has a strong and confirmed interest in this element.
- Removing risk from the introduction of new trains and other assets by allowing them to be thoroughly tested prior to deployment. This would avoid the need for new trains being tested on the national network or rushed into service before all performance risks had been dealt with (note issues with new inter-city trains; certain electrification assets; and projects such as Crossrail). With infrastructure and rolling stock testing in a single location, more robust systems integration testing can be conducted.
- Tackling ever-rising costs across the rail sector by allowing new technologies to be effectively tested and commissioned rather than committing them to operations before they are fully developed.
- Generating high quality employment and economic opportunities for communities in South West Wales.
- Providing further opportunities for sustainable technologies associated with the rail sector (electric, battery, links to sustainable generation).

Extensive soft market testing has been carried out throughout the GCRE’s development in order to inform the design to ensure it would meet industry needs and expectations. It has been found that GCRE offers potential benefits and opportunities to a number of organisations as summarised in Table 2 below.

Table 2: GCRE Organisational Benefits

Organisation	Proposed Development Benefits
Local and National Government	
Local Authorities	Creation of jobs and wealth in Neath Port Talbot and Powys would drive economic growth and an associated increase in rates revenues. Local companies could benefit from spill-over effects.
Welsh Government	The creation of jobs and wealth, and growth in inward investment, would drive economic growth and contribute to prosperity in Wales.
UK Government - Department for Business, Energy & Industrial Strategy (BEIS)	GCRE would contribute to delivering the UK’s Industrial Strategy by catalysing technology development, accelerating the rail industry’s contribution to exports by opening new markets, and helping to book the commercialisation of innovation.
UK Rail Research and Innovation Network (UKRRIN) / Research Organisations	Productivity gains would be delivered through the improved capacity to innovate, especially at higher Technology Readiness Levels (TRLs).

Organisation	Proposed Development Benefits
HM Treasury	The new jobs and local economic impacts would increase tax revenues. Industry-wide productivity improvements would improve the cost-effectiveness of public investment in rail projects. Innovation can reduce costs and increase passenger revenues, reducing the cost to the Treasury of running the railways.
Office for Road and Rail (ORR)	GCRE would deliver improved cost efficiency and competitiveness in the rail industry and would allow the ORR to better evaluate Network Rail’s performance.
End-Users and Local Organisations	
Passengers	Better testing would reduce delays (removing the need to test on the live railway and increasing the likelihood of finding and solving errors at the testing phase before entering into passenger service). Innovation would contribute to extra capacity and other passenger benefits being rolled out.
Colleges and Higher Education	GCRE would offer opportunities for applied teaching, upskilling the workforce and tackle labour challenges in the rail industry by attracting young people to the industry.
Rail Industry Organisations	
Transport for Wales (TfW) Rail Limited	GCRE would be a unique facility in close reach of TfW, this would result in the generation of operational cost savings.
Network Rail	The ability to test in a purpose-built facility would generate cost savings and productivity growth. Innovation would be converted into operational improvements much more quickly than can happen at present. Increased competition in the rail supply chain would lower costs.
UK Government - Department for Transport (DfT)	Productivity improvements would reduce the cost of building, operating and maintaining the railways. The faster commercialisation of innovation would enhance network capacity and improve the passenger experience sooner. Innovations developed at GCRE would allow the rail industry to contribute to the ambitious net zero carbon targets.
Train Operating Companies	Enhanced capacity, greater reliability and improved attractiveness of rail travel will lead to higher passenger revenues. Improved ability to commercialise innovation would help reduce operating costs.

Organisation	Proposed Development Benefits
Rolling stock leasing companies (ROSCOs) ¹	Innovation and faster testing would increase productivity and reduce financial risk.
Train Manufacturers	Local testing capacity would reduce the time and cost of testing new rolling stock (e.g. by not having to transport vehicles abroad). Reliability of brand-new stock would be improved to match aerospace and automotive sectors. Problems with new rolling stock are more likely to be detected during a thorough testing process – this is less costly to fix than problems occurring when already in passenger service
Infrastructure Manufacturers	A streamlined process and additional capacity for testing their products would enable manufacturers to demonstrate reliability and acquire certification. Innovative ideas would be commercialised sooner.
Freight Operating Companies	Journey time improvements and enhanced capacity could generate extra revenues and mode shift in the freight industry. Innovation would accelerate the shift from diesel to sustainable traction.
Rail Safety and Standards Board	Railway safety standards could improve through new technologies that facilitate automation. The increased innovation and shortened development times would deliver productivity benefits.

In addition to the above, at the time of writing, the UK is currently going through a health and economic crisis as a result of to the global Covid-19 pandemic. It is still too early to predict the medium and long-term economic effects of the global pandemic however short-term impacts are already being felt.

At the start of the first lockdown in March 2020, ONS data report that 27% of the UK workforce were furloughed under the UK Government’s Coronavirus Job Retention Scheme². Forecasters predict that the pandemic will lead to an economic recession as a result of UK GDP falling and economic contraction on a global scale³.

As noted above, the medium-long term effects of the pandemic remain to be seen, however the latest ONS data (released January 2021) shows a rising unemployment rate at a UK level (estimated at 5% over the period of September-November 2020). In addition, there has been an increasing claimant count level

¹ i.e. Companies which own and lease railway carriages/engines to operating companies such as TFW.

² ONS (2020)
<https://www.ons.gov.uk/businessindustryandtrade/business/businessservices/bulletins/coronavirusandtheeconomicimpactsontheuk/5november2020>

³ ONS (2020)
<https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/articles/coronavirusandtheeffectsonukgdp/2020-05-06>

(i.e. those receiving Universal Credit) which is estimated to have increased by 113.2% since March 2020⁴. As well as the Coronavirus Job Retention Scheme, the UK government has announced a series of economic packages to mitigate the impacts to businesses and individuals. There will also be significant costs to the National Health Service (NHS) and for the overall pandemic response.

The number of rail passenger journeys have steeply declined, with skeleton services in place for key workers and essential journeys, leading to lost revenue. On Monday 23rd March 2020, the Government announced a key decision specific to the rail sector: it would temporarily suspend rail franchise agreements to avoid franchisees from collapsing because of the fall in demand due to Covid-19. For the following six months, train operators were able to transfer “all revenue and cost risk” to the UK Government and be paid a small sum as a management fee to carry on operating rail services. Transport for Wales (TfW) has also put in place interim financial arrangements for Wales. In September 2020, the UK Government announced that these arrangements would end in favour of new measures known as ‘Emergency Recovery Measures Agreements’ (ERMAs)⁵ to run until March 2022.

The significant costs of the pandemic will no doubt be a burden on public finances. This means that going forward there will be an increasing need to deliver maximum efficiency and cost efficiency in the rail sector as we emerge from the national crisis and set a course for the future. Infrastructure spending will also be needed to kick-start the economy and ensure long-term economic recovery. In addition, the rail sector will need to innovate to accommodate changes in customer and operator user needs as a result of the pandemic, such as adapting to a future ‘low contact economy’.

GCRE is well placed to provide a solution for both of these issues, through its focus on infrastructure (including digital infrastructure), innovation and transport delivery efficiency, and its potential contribution to supporting transport, mobility and the economic benefits which come from connectivity. It can be an immediate and positive response to the inevitable recession in Wales and in the UK, providing a short-term benefit, while developing an asset that will deliver positive outputs and outcomes over the longer-term.

In addition, GCRE is anticipated to have a positive socio-economic impact on a local scale for communities surrounding the site, and this is explored in further detail in Chapter 12 of the ES. It is anticipated that during construction, GCRE could create between 53 and 163 net direct jobs. During operation, it is anticipated that GCRE could create between 141 and 298 net direct and indirect jobs. In addition, GCRE would encourage learning and training opportunities for those in the local area to develop rail industry expertise.

⁴ ONS (2021)

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/uklabourmarket/january2021>

⁵ UK Government (2020) <https://www.gov.uk/government/speeches/rail-update-emergency-recovery-measures-agreements>

A planning assessment of the proposals has been provided in Chapter 7 of this PDAS and this outlines how the proposed development accords with the relevant policies of the adopted LDP and the Development Plan as a whole.

3 The Site

3.1 Overview of the Site

An outline planning application is being submitted for the development of GCRE at land at Nant Helen Surface Mine and Onllwyn Washery and Distribution Centre situated in Onllwyn. The approximate national grid reference (NGR) of the site is 281701 211217.

The proposed development site is located within the area known as the Dulais Valley and extends across the border of the Neath Port Talbot local authority area, and neighbouring Powys. In addition, the boundary of the Brecon Beacons National Park Authority is situated immediately to the north of the development site as shown on Figure 3.

The site is an operating open cast coal mine, which has been extensively worked, it therefore currently consists of overburden mounds, coal stocking areas, barrel wash and plant maintenance areas, site office facilities and a void which is currently being mined. Coaling operations at the site are set to come to an end during 2021 and works associated with the site's final restoration by Celtic Energy received planning permission in June 2020 as noted in section 2.4. It is therefore considered that if GCRE were to progress to construction, this would be on a remediated site, although any remediation works would include the complementary earthworks scheme for GCRE in line with application references 20/0738/FUL (Powys) and P/2020/0362 (Neath Port Talbot).

In addition, at the site's south west corner is the Onllwyn Washery and Distribution Centre. This area covers 58ha of the total site and is in use as a preparation and washery facility for the coal mining operation, herein this area is referred to as 'the washery'. The washery site comprises several buildings as shown on Drawing 004 (the demolition plan) submitted as part of the planning application which is also shown in Figure 1.5 of the ES. The washery site did not form part of the earthworks consents and therefore it is proposed to demolish these existing buildings as part of this outline planning application (see Chapter 5 for more information).

3.2 Site Suitability

The proposed development site, has several important advantages which determined the site's suitability as follows:

- It is large enough to accommodate the needs of the rail industry on a single site.
- It is in single ownership and there is no need to use compulsory purchase powers.
- The natural termination of existing coaling use (Celtic Energy is decommissioning the site in 2021), means it is available and a new industrial legacy can be simultaneously created.

- There is strong potential for local regeneration, and an opportunity to avoid the long-term socio-economic issues that can otherwise occur as a result of the closure of coalmines.
- Catalytic effect – there are local opportunities that the implementation of the GCRE at Nant Helen scheme might provide the impetus to investigate the feasibility of. Two examples that have been raised in consultation include passenger use of the rail connection to Onllwyn and the running of a private wire from the Maes Gwyn windfarm.
- Good access to the rail network, strategic road network and Ports (as shown on Figure 2 below) as well as local centres and associated transport links (see Figure 3).

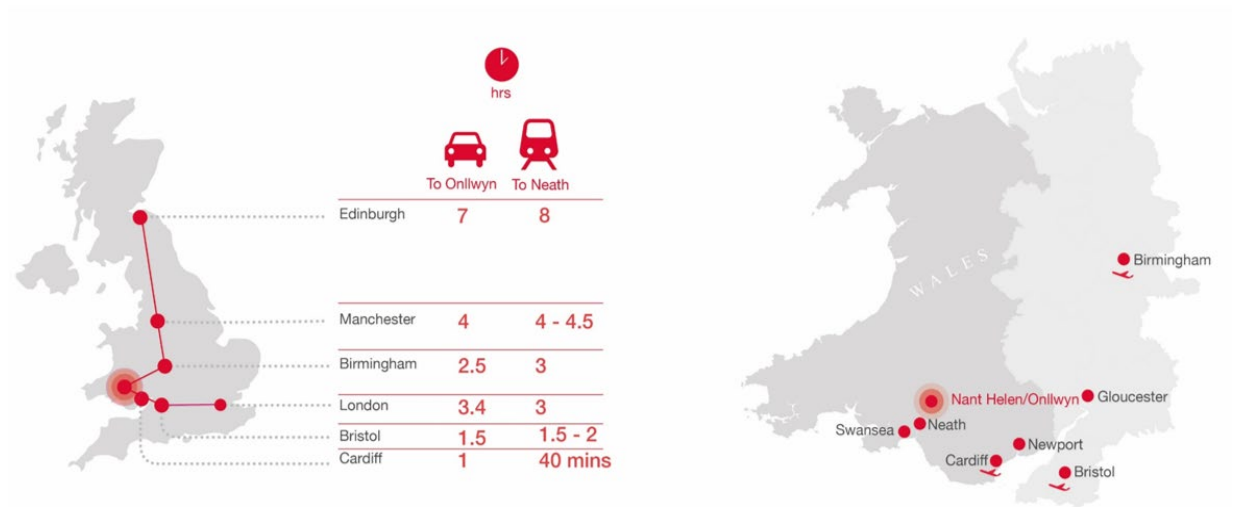


Figure 2 Nant Helen Strategic Connectivity

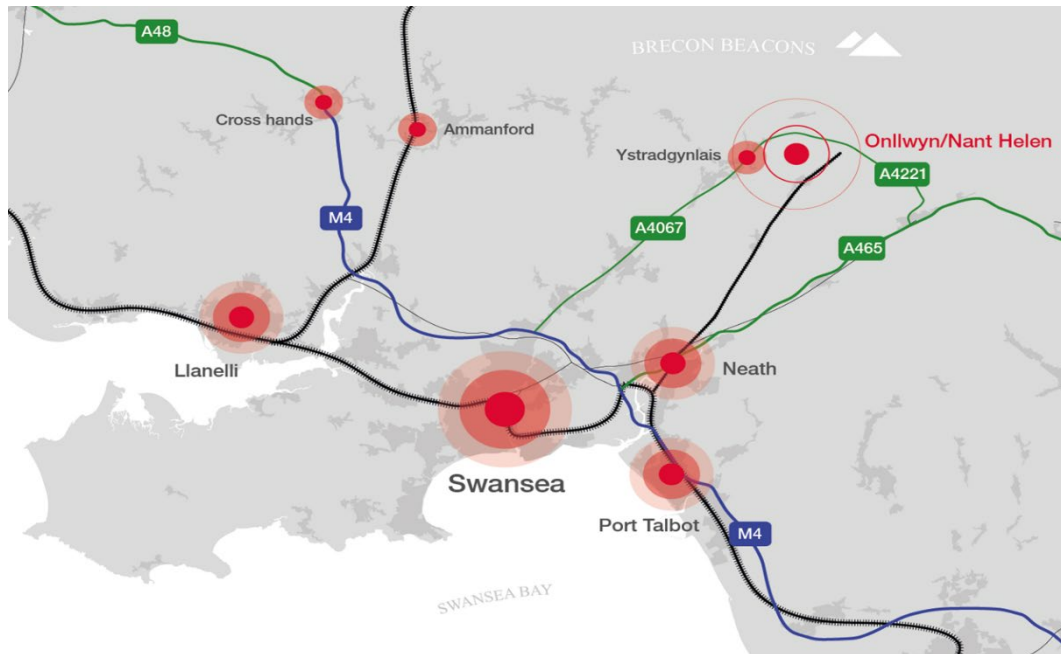


Figure 3 Nant Helen Local Connectivity (strategic road network shown in blue and green, and rail network in black).

3.3 Site Context

3.3.1 The Existing Environment

GCRE would extend across the existing Nant Helen Surface Mine and washery site with the infrastructure testing tracks located to the north of the site and proposed R&D facilities located at the southwest corner on the washery site.

The existing site is varied in character with the built form of the washery, overhead power lines, punctuating a landscape of grazing land and wetland, criss-crossed with access routes and bordered to the south by the existing rail freight line. This can be seen on the site photographs included those in Appendix A of this PDAS.

The site is surrounded by a number of small settlements including Onllwyn and Seven Sisters to the south Ystradgynlais to the west and Caehopkin, Abercrave and Coelbren to the north as shown on Figure 4 below. The site's ground levels vary between 220m and 335m AOD existing topography is such that previous mining activities have been screened from view from within these nearby settlements.

The road network surrounding the site primarily consists of A roads including the A4109 which runs to the south of the site, and the A4067 (Brecon Road) which runs largely in line with the sites eastern and northern boundaries. In addition, the washery site connects to an existing railway line, the Neath and Brecon Branch Line, which runs to the south of the site.



Figure 4 Settlement Context Surrounding the Site

A number of notable sensitive environmental features are present in the vicinity of the site as explained within the ES and presented in Table 3 below.

Table 3: Sensitive Environmental Features surrounding Site

Name	Designation	Location in relation to Proposed Development Site
Brecon Beacons	National Park	c. 96m north
Brecon Beacons	International Dark Skies Reserve	c. 96m north
Dulais Valley	Special Landscape Area (SLA)	c. 2.5km south
CH001 Tramroad	Scheduled Monument	Within redline boundary
Nant Lech	Site of Special Scientific Interest (SSSI)	c. 110m north of the site
Gors Llwyn, Onllwyn	SSSI	c. 40m east
Caeau Ton-y-Fildre	SSSI	c. 260m east
Coedydd Nedd a Mellte	Special Area of Conservation	c. 2.9km south east
Waun Ton-y-Spyddaden	SSSI	c. 2.2km north east
Rhos Hen-Glyn-Isaf	SSSI	c. 2.7km north west
Ogof Ffynnon Ddu	SSSI	c. 3.3km north east
Ogof Ffynnon Ddu - Pant Mawr	SSSI and NNR	c. 3.3km north east
Nant y Rhos	SSSI	c. 3.5km south west
Mynydd Du	SSSI	c. 3km north
Craig y Rhiwarth	SSSI	c. 4.6km north east
Dyffrynoedd Nedd a Mellte a Moel Penderyn	SSSI	c. 2.9km south east
Caeau Nant y Llechau	SSSI	c. 4.5km east
Gorsllwyn Meadows	Site of Importance for Nature Conservation (SINC)	c. 200m east
Aberhenwaun Uchaf	SINC	c. 600m south
Onllwyn Coal Washery	SINC	c. 700m east
Dyffryn Cellwen	SINC	c. 800m east
Land behind Marigold Place	SINC	c. 800m south

3.3.2 Landscape

The site itself comprises a mosaic of areas of different topography and appearance that create a complex and changing character to the site as you move across and around it as evidenced by the landscape and visual impact assessment (LVIA) and viewpoint analysis in Chapter 9 of the ES and shown on Figure 5 below. It is a landscape that exhibits both restored, former open casted areas (the locally named

‘wedding cake’ overburden mound) and the currently actively worked void. The currently active site is bordered by single and groups of dwellings that line the access roads on its periphery.

The surrounding landscape is formed by the Swansea Valley and Dulais Valley. The Brecon Beacons mountain range lies to the north and east, and elevated landform comprising the hills Mynydd Marchywel and Hirfynydd are located to the south and south-west. Built up areas within the surrounding landscape include Abercrave, Coelbren, Dyffryn Cellwen, Seven Sisters and Swansea.

The only Special Landscape Area (SLA) relevant to the study area is the Neath Port Talbot Special Landscape Area 2: Dulais Valley but there are 20 no. Landscape Character Areas (LCAs) which have been identified which could be impacted by the proposed development including the Banwen Uplands LCA, the Dulais Valley LCA and the Y Mynydd Du LCA.

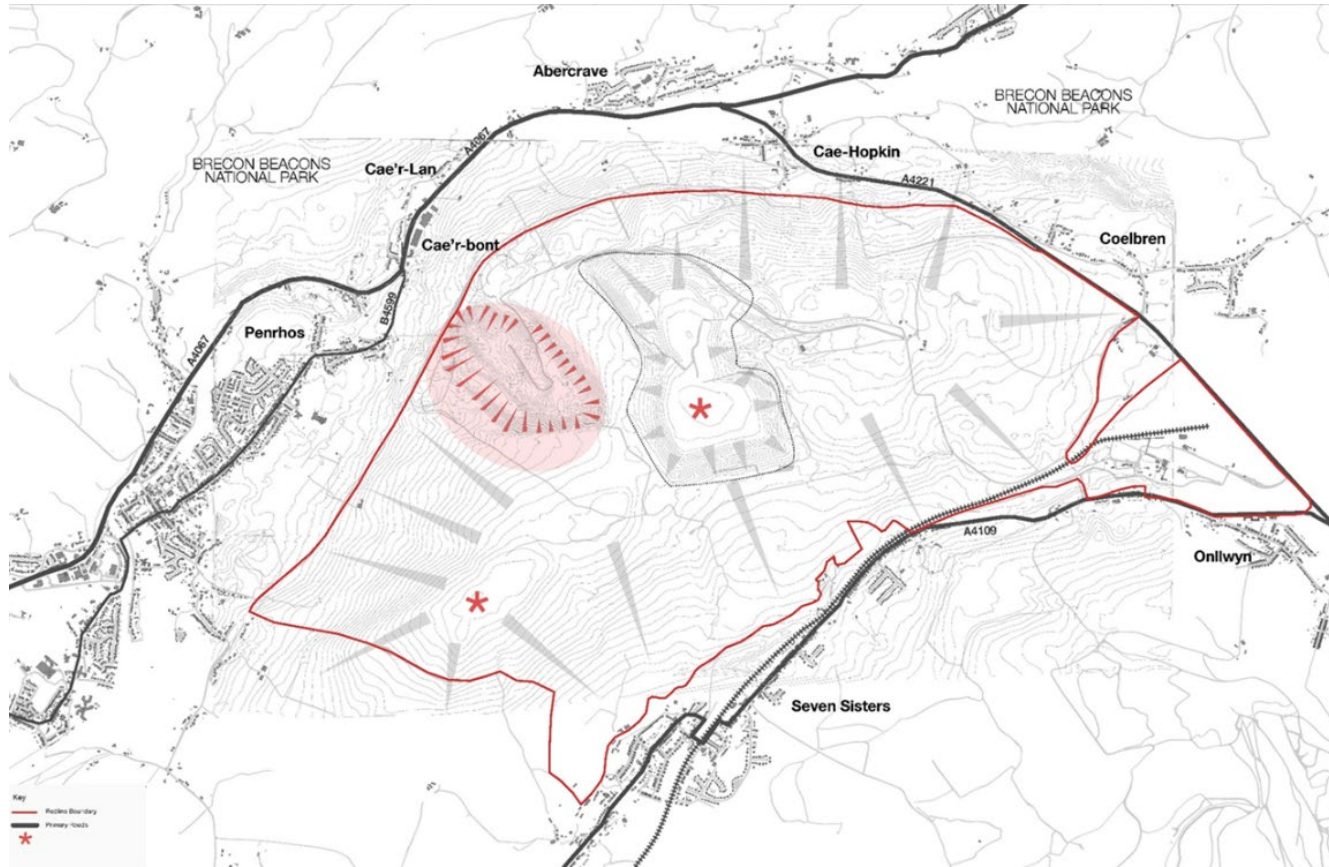


Figure 5 Key Gradients – Visual Influence

3.3.3 Access

The site is currently accessed by way of existing junctions off the A4109 Wembley Avenue with Onllwyn Road, the A4221 Celtic Energy – Nant Helen access road, and the A4221 which provides access specifically to the washery.

In addition, there is an existing rail connection serving the site, located at the southern site boundary. This existing connection links to the Neath & Brecon branch line (herein referred to as the branch line) which extends down the valley before joining the South Wales mainline railway near Neath. The existing line currently accommodates approximately 1 no. train movement a day and also includes several crossing points connecting settlements or private dwellings along the line.

3.3.4 Common Land and Public Rights of Way

A total of 115.7 hectares (ha) within the development boundary is designated Common Land known as Mynydd-y-Drum, as shown on Figure 6 below.

In addition, there are several public rights of way (PRoW), including bridleways, which cross the site as shown on Figure 7, as well as the National Cycle Network (NCN) route 43, part of which runs parallel with the site's northern boundary.

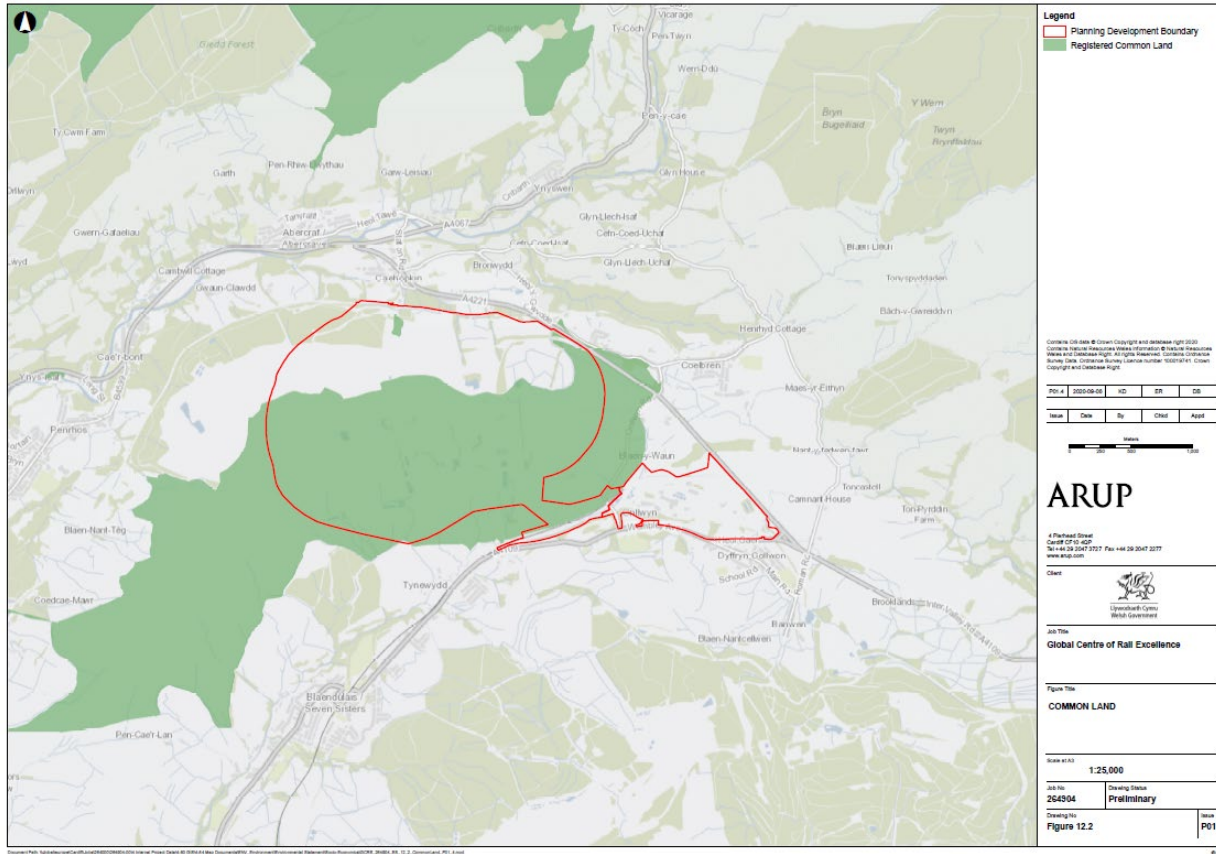


Figure 6 Common Land Boundary

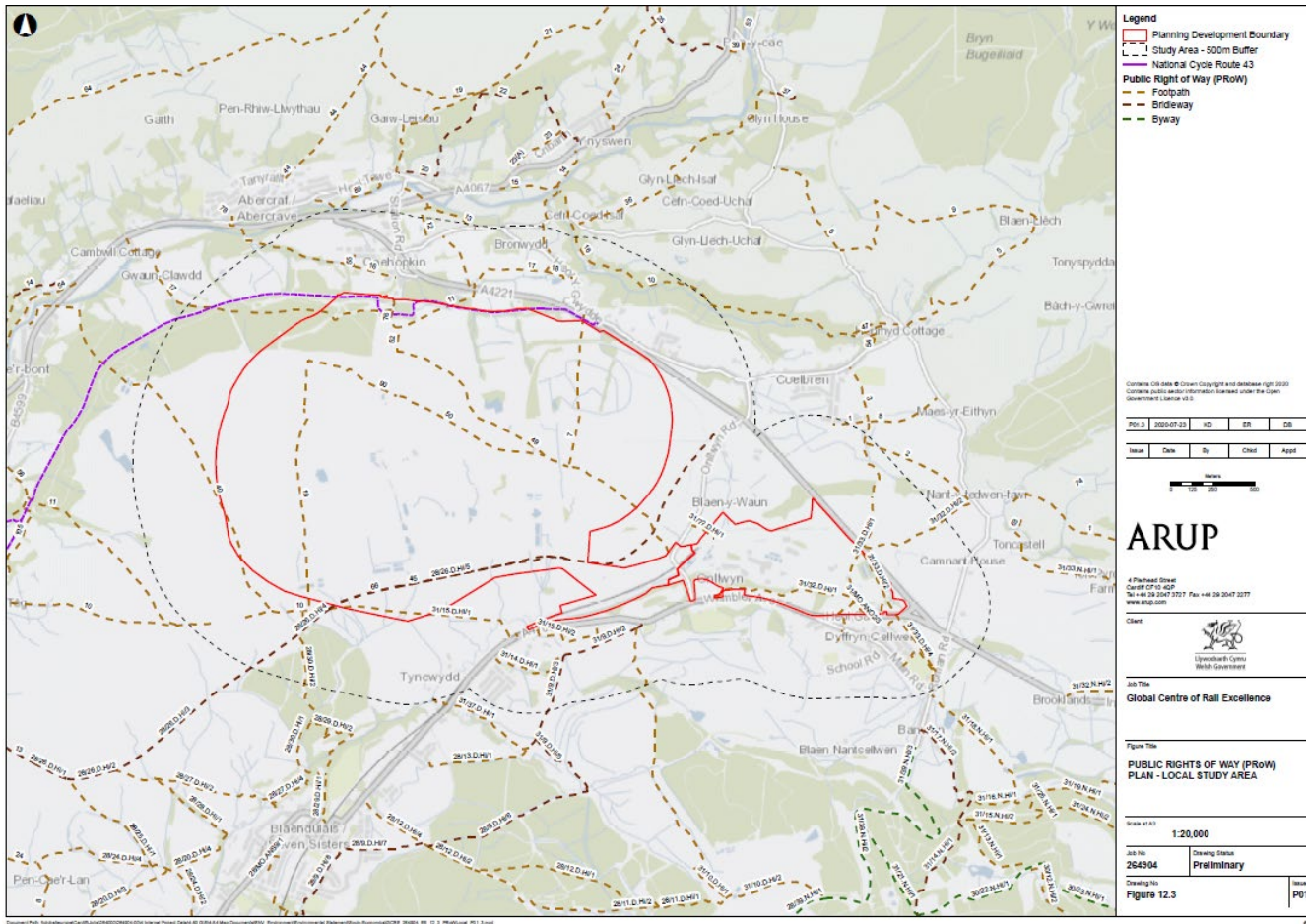


Figure 7 Public Right of Way Network surrounding Site

3.3.5 Cultural Heritage and Archaeology

There are a number of scheduled ancient monuments (SAM) within the vicinity of the site, as well as listed buildings located within surrounding settlements as shown on Figure 8 below.

There is only one SAM within the redline boundary of the site. As shown on Figure 8, this SAM (Cadw reference: CH001) is a linear feature and is a historic scheduled tramroad. The tramroad is located towards the southern part of the site and runs along the southern boundary, outside the site towards Ystradgynlais in the west.

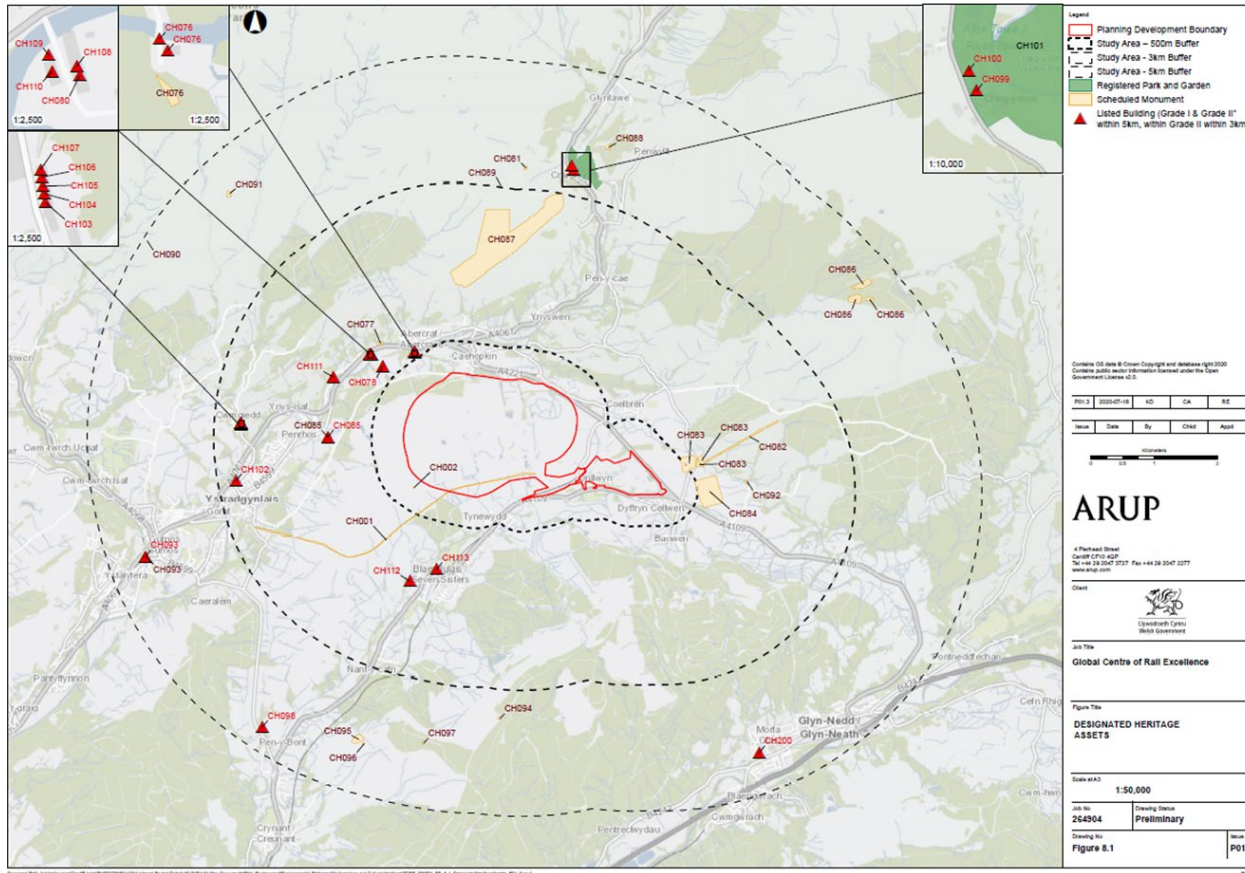


Figure 8 Designated Heritage Assets

3.3.6 Ground Conditions and Hydrology

The boundary of the site sits at approximately 250m AOD with the land generally rising inwards towards the centre of the site. The main portion of the site sits at around 295m AOD. The washery sits lower than the main portion of the site at roughly 230m AOD. The site has been extensively worked through opencast coal mining operations since c.1946 with opencast activities still ongoing within the Nant Helen Surface Mine site. As a result of these activities, the topography of the site has been constantly altered over the last century.

There are no statutory designations specifically of geological interest present within the proposed site boundary.

Three Geological Landscape Areas are present within the study area, these have been identified through review of Natural Resources Wales LANDMAP. The three Geological Landscape Areas and their value include:

- Ystradgynlais – Upland valley slope (Outstanding)
- Seven Sisters – Upland plateau (Moderate)
- Banwen – Mountain and Upland Valley (High).

In terms of flood risk, data from Natural Resources Wales (NRW) shows that all of the site is within Flood Zone A which is defined as areas ‘considered to be at little or no risk of fluvial or tidal/coastal flooding’. There is a very small area of Flood Zone C2 in the south-east corner of the washery site associated with a stream.

3.4 Socio-Economic Context

In terms of the local socio-economic context, this varies within the areas surrounding the site. Generally, Powys performs better in terms of economic indicators than Neath Port Talbot, which tends to not perform as well compared to Powys, Wales and Great Britain.

Neath Port Talbot’s Gross Value Added (GVA) per head of £19,117 and Powys’ figure of £17,026 are considerably lower than Wales’ £20,738 and Great Britain’s £28,912⁶. Residence-based gross weekly earnings in Neath Port Talbot and Powys are also significantly lower at £534.00 and £519.40 respectively. This falls significantly below the Wales figure of £542.70 and the UK average of £585.50.

The Welsh Index of Multiple Deprivation (WIMD) 2019 indicates that the South Wales Valleys, in which GCRE will be located, is an area with very high levels of deprivation. Notwithstanding that, the three LSOAs in which the site lies are in the 60- 80% most deprived and 40-60% most deprived, respectively, performing comparatively well within the South Wales Valleys context. The three locations show similar results in general, apart from one LSOA which ranks in the 20% most deprived for ‘Access to Services’.

⁶ StatsWales (2019) <https://statswales.gov.wales/Catalogue/Business-Economy-and-Labour-Market/Regional-Accounts/Gross-Value-Added-GDP/gvaperhead-by-area-year>

The residents of the two local authorities present different levels of educational attainment. Data gathered between January and December 2019 show that Neath Port Talbot performs comparatively poorly, as only 28.6% of residents in the local authority have obtained National Vocational Qualifications (NVQ) Level 4 and above. This compares to 38.3% in Powys, 36.3% in Wales and 40.3% in the Great Britain. Meanwhile, 10.8% of Neath Port Talbot residents have no qualifications, compared to just 7.4% in Powys, 8.5% in Wales and 7.7% in Great Britain⁷.

⁷ ONS (2020) Annual Population Survey

4 Pre-application and Public Consultation

4.1 Overview of Pre-application and Consultation

The Welsh Government has taken a proactive approach to consultation, developing a comprehensive engagement programme both with statutory consultees, key stakeholders and through engagement with the public and local communities surrounding the site.

A thorough, two stage engagement/consultation programme was delivered over the following dates:

Stage 1: Project briefing/early engagement (2 July – 17 October 2019)

Stage 2: Statutory pre-application consultation (17 Sept – 14 October 2020)

Further information on each of the consultation stages is summarised below and included within the Pre-application Consultation (PAC) report submitted as part of the application.

4.2 Stage 1 – Project Briefing/Early Engagement

During the Stage 1 consultation, a number of engagement activities were carried out including project briefings with Welsh Ministers, local authorities and Community Councils, stakeholder and community letters, and public drop-in sessions with local communities surrounding the site. In addition, a project webpage⁸ was set up to provide updates on the proposed development and the emerging design.

Over 450 people participated in the early engagement on proposals for a Global Centre of Rail Excellence and 72 responses were received (by questionnaire, email or phone). The summary of responses is available to view on the Welsh Government's webpage for a Global Centre of Rail Excellence in Wales⁹ and further information as to how these responses informed the outline design of the proposed development is included within the PAC report.

4.3 Stage 2 – Statutory Pre-application Consultation

In accordance with the Planning (Wales) Act 2015, a statutory pre-application consultation on GCRE was carried out between 17 September to 14 October 2020. Given the Covid-19 pandemic, the pre-application consultation was held online in line with the Planning Applications (Temporary Modifications and Disapplication) (Wales) (Coronavirus) Order 2020. Activities carried out as part of the statutory PAC process included the following:

- Erection of site notices around the site informing local people of the consultation.

⁸ <https://gov.wales/global-centre-of-rail-excellence>

⁹ <https://gov.wales/sites/default/files/consultations/2020-09/global-centre-of-rail-excellence-summary-of-responses.pdf>

- Notification to specialist consultees.
- Notification to community consultees, residents, and neighbouring landowners.
- Updates to project webpages.
- Response forms.
- Advertising and media/social medias releases.
- Briefings/meetings – virtual briefing meetings were held with local members at both local authorities and Tawe Uchaf Community Council just prior to the PAC launch.

Overall, twelve specialist consultees responded to the statutory pre-application consultation. The comments made and the scheme's response can be viewed within the PAC report. A total of 63 responses were received during the PAC period from community consultees, residents and neighbouring landowners. The comments made and the response of the proposed development can also be viewed within the PAC.

The responses to both stages of consultation largely relate to the economic benefits of the proposed development and environmental issues in relation to noise, traffic, vibration, light and air quality which have been addressed through revisions to the proposed development in response to the comments received. This is set out in more detail within the PAC report.



Figure 9 Image from public drop-in session held in 2019

5 Proposed Development

5.1 Proposed Development Overview

As noted in section 2.2 above, GCRE is proposed to comprise a number of different elements of development. For clarity, each element has been summarised within the table below, alongside a brief description. As described in section 3.1, there are two areas of the site, the main Nant Helen Open Cast Site and the Washery area to the southeast and this is shown on the Illustrative Masterplan which is included in Figure 10 below.

As noted earlier, it is proposed that the above development would be constructed on a phased basis as presented in Table 1.

Table 4: GCRE Summary of Proposed Development

Proposed Development	Description
Nant Helen open cast site	
Rolling Stock Test Track	One loop of 6.9km length, has the primary function of performance testing of diesel, electric and hydrogen trains (there is space for a second track should there be a future market demand; however, this is not included as part of the outline application). An overhead 25kV AC traction power system included as part of the current application, with scope for additional DC 3rd / 4th rail system inclusion if required at a later date. Once operational, trains would be able to travel at speeds of up to 110mph.
High tonnage infrastructure test track	The high tonnage infrastructure test track, comprised of a single 4.5km loop, has the primary function of testing rail infrastructure under high axle loads. It is envisaged that a single heavily loaded freight train will occupy the loop permanently. Once operational, the trains used for infrastructure testing would be able to travel at a line speed of 40mph.
Overhead Line Electrification (OLE) System	Both test tracks would be supported by an OLE system. This would form of a series of cantilever structures at approximately 40m intervals around each the test track, most likely with piled or shallow pad foundations, the latter being a mitigation for the settlement expected as part of the track corridor earthworks.
2 no. platforms and associated station building	The test track includes a dual platform station environment, typical of the UK rail network, for the testing of train – platform interfaces. The platforms will have sufficient length to serve 230m trains and will likely take the form of modular, pre-cast concrete units constructed off-site.
New junction to existing branch line	Both test tracks will connect to the existing branch line and washery area via a bi-directional delta junction. It is anticipated most rolling stock would access the facility via the Neath & Brecon Branch Line and Swansea Burrows Sidings beyond, although some trains may be transported to site via road.
Washery Site	
Multi- storey signalling control centre Building	The 2-storey control building would manage all the testing activities. A central point control system would be used for the control of the upgraded points which would allow for control via video display units. Multiple lineside cabinets would be required

Proposed Development	Description
	(this is currently assumed to be one, per set of points and would be confirmed as part of detailed design).
Temporary Staff Facilities	Staff facilities at Phase 1 would be temporary in nature and would be one storey, modular style buildings. They would accommodate provide male and female accessible toilets, typical mess facilities (running hot water, fridge, microwave), a fully ventilated PPE storage room, and male and female changing rooms.
Permanent Multi-storey Staff Block with mess and overnight stay facilities	At Phase 2, the abovementioned temporary staff facilities would be replaced with permanent lay-down and mess facilities which would include overnight accommodation provision for ten staff (including those using the testing facilities). Accessible toilet and wash facilities would be provided.
Infrastructure Testing Research and Development Facility	During Phase 1, the research and development centre would provide opportunities for research and development, conferencing, exhibition space, teaching and general staff facilities. During Phase 2 this building is to be relocated. The final building to be constructed during Phase 3 would be upgraded, resulting in a larger scale building which would continue to provide research and development facilities. Staff parking would be provided at this location at a quantum which would meet local parking requirements.
4 no. rolling-stock maintenance sheds	<p>4-road rolling stock maintenance shed for trains undergoing testing at the facility. The two storey sheds would be divided into two “roads” with mirrored facilities. The 250m-long roads would allow for the servicing and maintenance of most rolling stock currently operating on the UK Rail Network and would include:</p> <ul style="list-style-type: none"> • Facility for changing wheelsets/underframe components • A single pitted road to allow underframe inspections • Jacking equipment on all remaining shed roads • CET provisions for all rolling stock - diesel, water and compressed air supplies • Multiple LV power supplies – 100V, 240V, etc • Multiple 23m raised access gantries to provide full roof access • 5-10 tonne crane on at least one road • Vehicle weighing facilities, software testing facilities, fire testing and emissions testing all within static testing area • Rolling stock decommissioning siding to be accessible by a static crane, together with a 1 car shed for covered cleaning • Maintenance facility for trains undergoing testing at the facility. • Full roof and underframe access. Heavy jacks for lifting trains.
Decommissioning Facility	A decommissioning shed of one storey used for contaminant and asbestos removal of old train carriages once the basic internal furniture has been removed by heavy machinery.
Warm and cold storage sidings	These would be sets of uncovered storage roads for the medium-long term storage of train fleets and would have a storage capacity for approximately 400 vehicles. These would be provided with connections to shore supply units located incrementally along sidings with shore supplies supported by lineside equipment and substations.

Proposed Development	Description
	2.5km of bollard lighting or floodlights and associated cabling would be provided along alternate sidings with an assumed bollard spacing of 8m (approx. 1A per bollard along 4.1km of track). The development of the warm and cold storage sidings would be spread across all 3 phases of development.
Carriage wash facility and plant room	The carriage wash facility would be available for use for the cleaning of all rolling stock having heaving moving machinery for cleaning. It would be one storey up and able to service trains up to 400m. The plant room would be up to 20m x 4m and water would be heated for cleaning.
Associated Infrastructure	
Primary Site Access	Access to the external highway network is proposed to be taken from existing junctions of the A4109 Wembley Avenue with Onllwyn Road, the A4221 Celtic Energy – Nant Helen access road, and the A4221 Washery and Distribution centre access which will be used by HGVs only.
Internal access roads	A network of new internal access roads would be provided at locations shown on the Illustrative Masterplan. These include a maintenance track around the perimeter of each of the rail testing loops.
Maintenance Tracks	Gravel vehicle maintenance tracks would be provided running in parallel with each rail.
Substations	A total of 5 no. substations would be provided. The locations of these substations have not yet been determined and would be confirmed at detailed design stage (as part of RM application).
Shunters Cabin (temporary)	During phase 1, all movements would be controlled remotely from a shunters cabin which is likely to be a portacabin with basic amenities from which the shunter will move around the facility opening/ closing hand points to enable train movements. Situated at a satellite location near sets of points to increase efficiency of train movements.
Security Measures	Security measures would include CCTV and 7,200m of 2.1m palisade fencing, approximately 2m away from track, to be located around the perimeter of the outer track and maintenance track.
Civils Works (associated with drainage)	Drainage ditches, ponds and culverts, retaining walls in the south of the site, 3 no. bridge crossings and 2 no. underpasses.
Landscaping	Landscaping would be incorporated to enhance amenity and visual screening where required in accordance with the ES. The exact landscaping strategy and design would be confirmed at RM stage.
Lighting	In addition to the security measures, referenced above, the proposed development would also include a comprehensive lighting scheme designed to protect environmentally sensitive areas of note (e.g. Dark Skies reserve). The full lighting strategy for the proposed development would be submitted at RM stage.

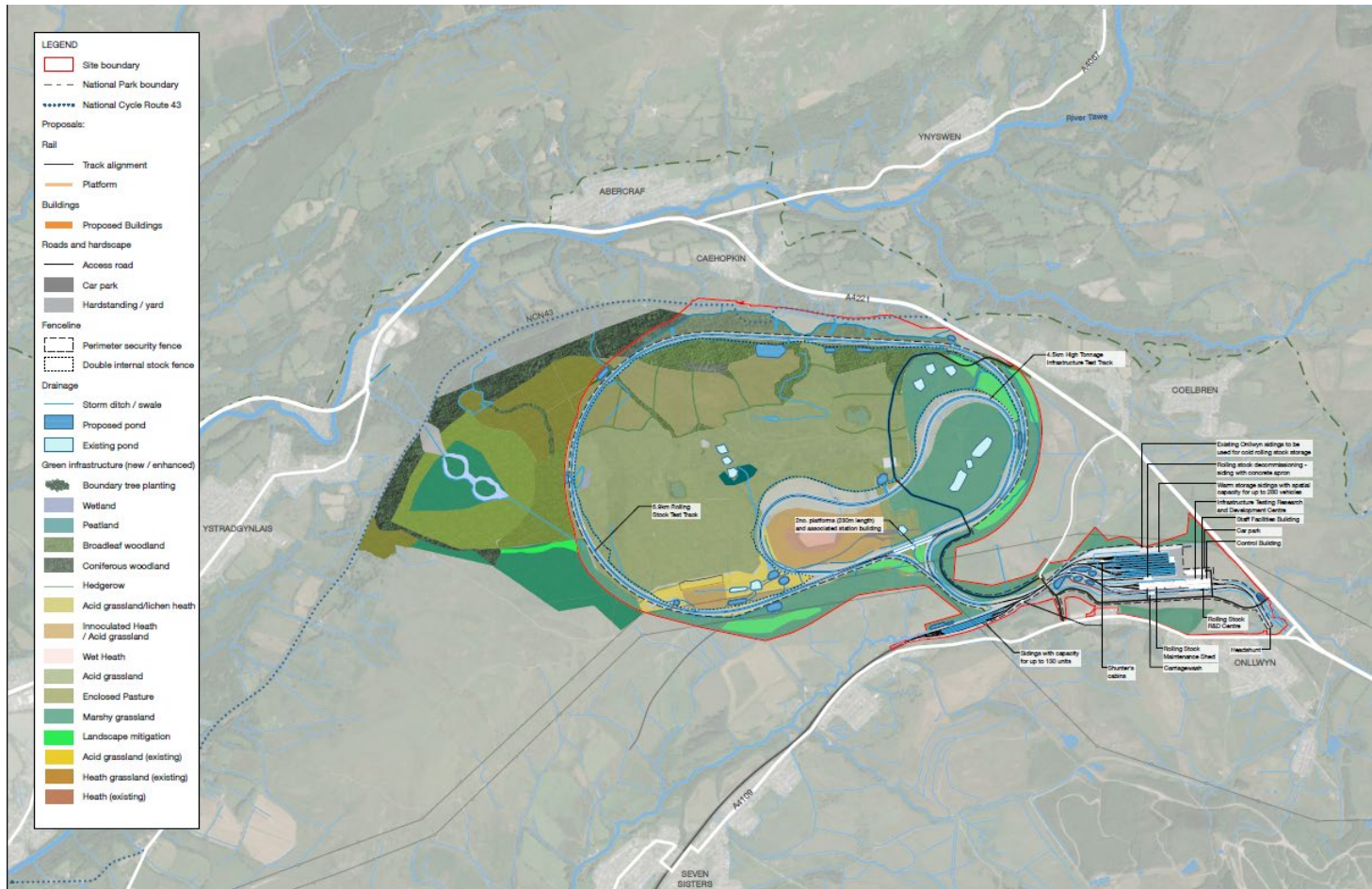


Figure 10 Illustrative Masterplan

5.2 Design Development

The evolution of the scheme and ultimately the illustrative masterplan, has been influenced and driven by a number of key constraints and considerations including:

- Surrounding context in terms of proximity to the National Park and the context of its additional accreditation as an International Dark Skies Reserve;
- Proximity of settlements and residential receptors;
- Topography and ground conditions;
- Connections to the existing railway line;
- Utilities, predominantly overhead powerlines;
- Public Rights of Way;
- Common land;
- Heritage assets of national importance;
- Rail industry consultation requests for facilities and the number and size thereof;
- Technical high speed and infrastructure testing requirement.

The spatial layout of these opportunities and constraints is shown in Figure 11 below.

The eventual track loop configuration and the component parts that form the proposals for the Washery site have been shaped by a process of rail industry and rail academic and other institutional engagement over a period of nearly 2 years. This includes engagement with the following organisations:

- Amey
- The University of Sheffield/AMRC Cymru
- Arup
- Bombardier
- CAF Rolling Stock UK Ltd.
- Cardiff University
- Deutsche Bahn
- Innovate UK
- Network Rail
- RSSB
- Serco
- Swansea University
- Trenitalia

- University of Birmingham
- University of Leeds
- University of Southampton
- University of South Wales

The above is not an exhaustive list of all that have contributed, but is a snapshot of the breadth of engagement (other than that at pre-application stage with local residents and other interested parties) that has shaped the illustrative layout and the key elements of the proposed GCRE scheme.

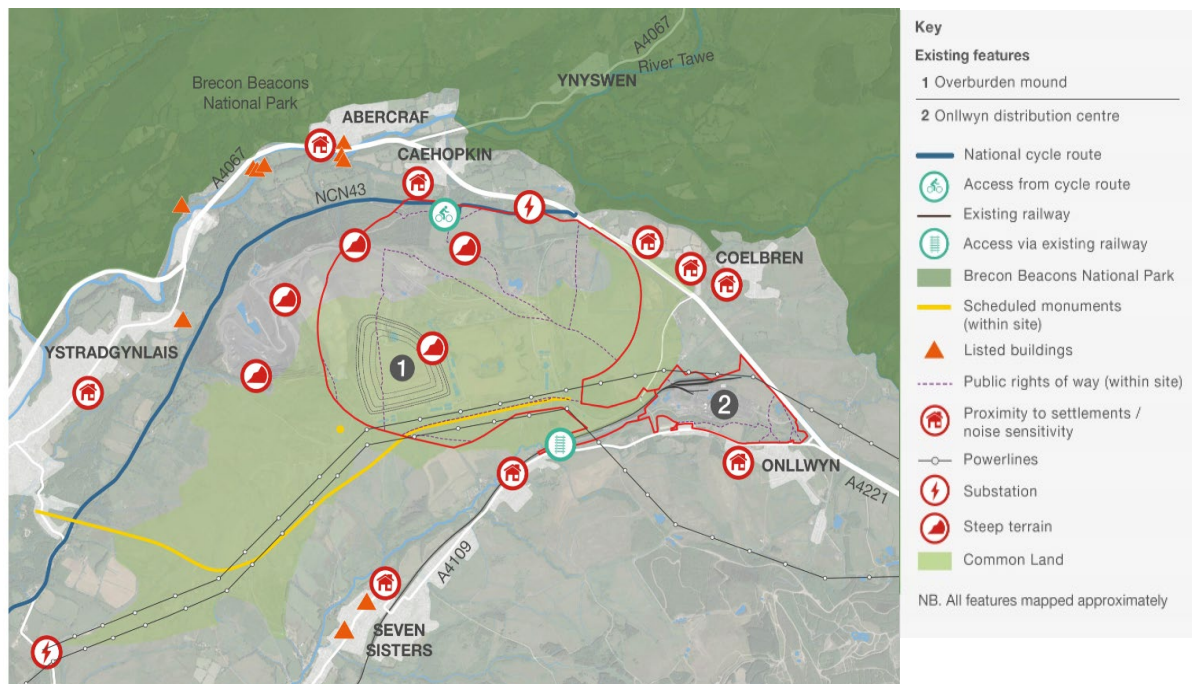


Figure 11 Site Opportunities and Constraints Analysis

In consideration of the analysis of site opportunities and constraints, and extensive engagement, the proposed development went through several design iterations for the internal and external loop variants. This is explained in more detail in Chapter 4 and Appendix 4B of the ES.

Whilst it was first proposed to include seven base loop options, through industry engagement, ‘soft market’ testing and business case development, alongside and further understanding of site and engineering requirements this was refined to present the design currently shown on the illustrative masterplan (Figure 10).

5.3 Parameters

GCRE is being applied for in outline with all matters reserved and as such this PDAS does not confirm final appearance, scale or layout at the present time. Notwithstanding this, an indicative masterplan (Drawings 003 and 003A) has been submitted as part of the application to offer an understanding of the different elements of development associated with GCRE and their indicative layout. In addition, a Parameters Plan (Drawing 002) has been submitted showing the

proposed land uses around the site and the minimum / maximum parameters for both proposed infrastructure and buildings. These parameters have formed the basis of the environmental assessment of the proposed scheme.

In summary, based on the scheme constituent parts, the overall development quantum required is for up to 20,000 sqm of rail related buildings. In terms of height, the maintenance shed would be the tallest building requiring up to 15.0 metres to ridge above final ordnance datum level. The smallest buildings would be the two shunters' cabins at 3.0m in height above final ordnance datum level.

The final design of each element of GCRE would be developed as far as possible, in line with mitigation measures recommended as part of the ES with particular reference to the Landscape and Visual Impact Assessment (LVIA) and proposed noise mitigation.

The maximum and minimum parameters of each element of GCRE are presented in Table 5 and 4 below and shown on the Parameters Plan submitted as part of the outline application.

Table 5: Proposed Development Parameters – Buildings and Structures

Building/ Structure	Floorspace (m ²)		Length (m)		Width (m)		Height (m)		Storeys	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Control Building	300	600	10	10	30	30	5	10	1	2
Staff Facilities Building (Phase 1 temporary)	75	120	15	20	5	6	5	15	1	1
Staff Facilities Building (permanent)	600	900	30	30	10	10	10	15	2	3
Infrastructure Testing R&D Centre (Phase 1)	240	480	20	20	12	12	5	10	1	2
Rolling Stock R&D Centre (Phase 3)	250	1000	25	50	10	10	5	10	1	2
Rolling Stock Maintenance Shed (& rail roads of 250m length)	500	15000	250 (2 roads only)	400 (2 roads) 250 (2 roads)	20	40	12	12	1	2 (office and storage on upper storey)
Decommissioning facility	250	350	25	35	10	10	12	12	1	1
Carriage Wash	300	350	30	35	10	10	12	12	1	1
Shunters Cabin (2 no.)	60	60 (30 per cabin)	10	10	3	3	3	3	1	1

Building/ Structure	Floorspace (m ²)		Length (m)		Width (m)		Height (m)		Storeys	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Overhead Line Equipment (OLE)	n/a	n/a	n/a	n/a	n/a	n/a	3	9	n/a	n/a
Station building	100	400	10	10	10	20	5	10	1	2
Bridges	n/a	n/a	45	95	6	12	8	12	n/a	n/a
Underpasses	n/a	n/a	35	95	5	12	5	12	n/a	n/a
Substations	n/a	n/a	20	25	5	10	2	5	n/a	n/a

5.4 Indicative Design Details

5.4.1 Appearance, Scale and Layout

In terms of appearance, whilst details cannot be confirmed until Reserved Matters stage some early information and possible building typology for GCRE have been considered.

In terms of the buildings required for rail storage and maintenance, this would naturally be more ‘industrial’ with ‘form following function’ in its scale, building typology and character. These elements of development would represent the ‘operational hub’ of GCRE with buildings akin to an industrial park, with large units, with clear internal spans.

Notwithstanding the function, there are opportunities to introduce variation in roof form, materials, colours and other façade treatments to bring variety to this part of the site, aid legibility etc. This zone will be a mix of buildings and rail roads, which due to the necessary train and other vehicular movements and other operational and safety requirements will not offer the same ability as with the more campus style office/R&D zone to introduce planting aside from around its periphery to screen and soften the zone from external receptors.

Some indicative images for what the rail storage/maintenance building could look like are included in Appendix B1. It should be noted and recognised that whilst these facilities will largely be ‘operational rail’ buildings, these will be modern facilities, primarily accommodating clean, electric trains and maintained to the highest standards.

The more business focussed part of the development, namely the R&D facilities and staff facilities would offer the opportunity to introduce a building typology more akin to that of an academic campus or business park, with buildings that have more façade variation through the use of different materials and breaking up of building mass with glazing to a greater extent than those that have a storage or maintenance role. Variation in roof form, materials, colours and other façade treatments would bring variety to this part of the site, whilst creating a defined character area and the gateway to the wider facility.

Images showing potential examples of what this element of the proposals could look like is included in Appendix B2.

5.4.2 Landscape

A potential scheme of landscape mitigation has been developed as part of the outline design for GCRE and this is shown on Figure 12 below.

Whilst a full landscape strategy would be developed at RM stage, this will be developed in accordance with the landscape mitigation proposals and principles detailed in Chapter 9 of the ES. This includes areas of landscape mitigation planting to the south of the washery, and at the site's north east and north west corners, closest to residential development in neighbouring settlements.

As noted above, it is anticipated that the R&D facilities and staff facilities located to the south of the site, at the washery, would present the most opportunity for innovative design, and this includes landscape design. It is considered that the introduction of a mix of hard and soft landscaping will soften this area, provide sustainable drainage (SuDS) and add to the quality and sense of place of this part of the development, and this would be developed further as part of detailed proposals at RM stage.

An outline landscape strategy demonstrating what further information would be included as part of the full landscape design has also been prepared and can be viewed in ES Volume II, Appendix 9F.

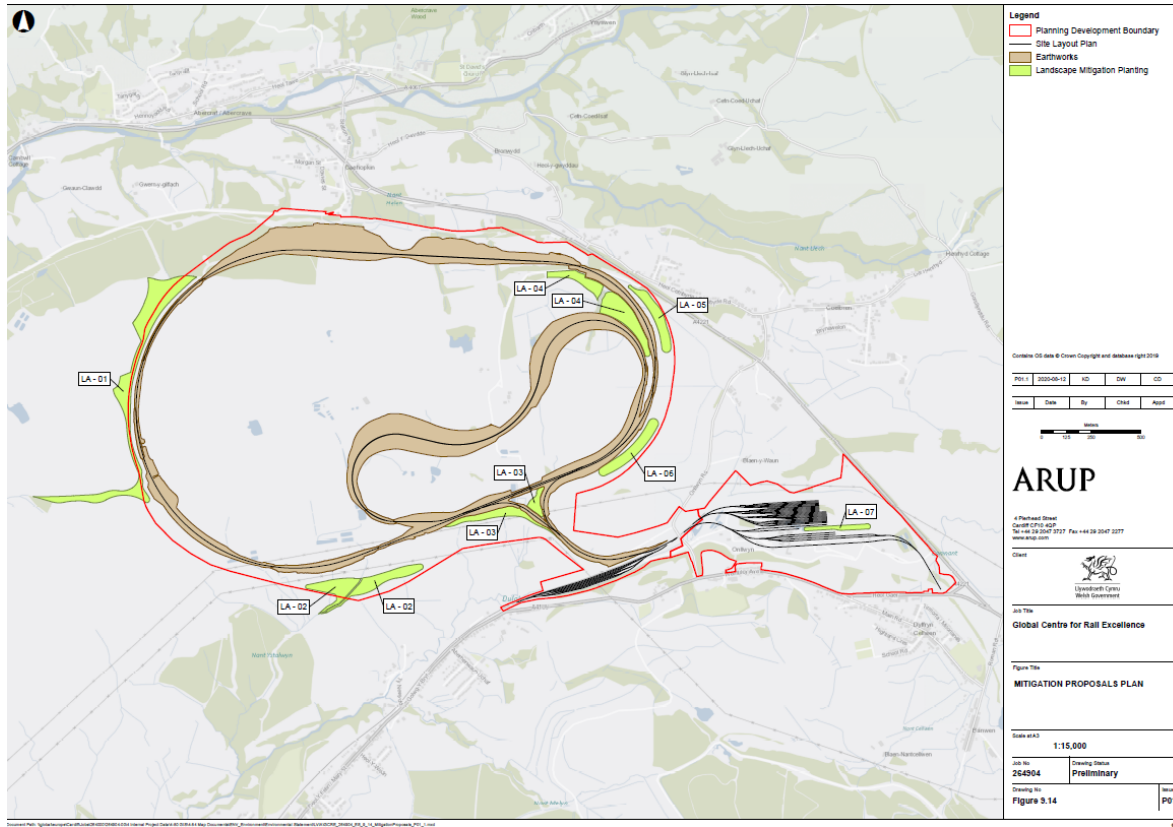


Figure 12 Landscape Mitigation Proposals

5.4.3 Drainage

A Drainage Strategy has been submitted as part of this application, contained within Appendix 11B of the ES.

New storm drainage infrastructure would be required to serve GCRE, however the general principle for the Nant Helen site is to retain all storm drainage features associated with the Nant Helen Complementary Earthworks drainage strategy where possible, and either amend or relocate to suit the GCRE requirements. A SABs Pre-application has been submitted to the local authority for the Nant Helen Complementary Earthworks drainage strategy and is currently under consideration.

The proposed road and rail maintenance facility, which was not included as part of the Nant Helen Complementary Earthworks drainage strategy, would require a new storm drainage provision with sustainable solutions, examples include swales, ditches and attenuation ponds. The measures taken are described in more detail within the drainage strategy as submitted, which can be viewed in ES Volume II, Appendix 11B.

5.4.4 Demolition

As noted above, the proposed development would include the demolition of several existing buildings located on the washery site. The proposed demolition can be viewed on Drawing 004 submitted as part of the outline planning application.

5.5 Access Statement

5.5.1 Vehicular Site Access

This application is being applied for in outline, with all matters reserved, including access. As such the detailed access design has not yet been developed and would be confirmed at RM stage.

In broad terms, it is proposed to utilise existing access from the external highway network at three locations around the site as follows:

- The existing junction of the A4109 Wembley Avenue with Onllwyn Road.
- The existing A4221 Celtic Energy – Nant Helen access road, and
- The existing A4221 Washery and Distribution centre access.

These access points would also be utilised during construction of the proposed development as well as operation and are shown on Figure 13 below.

The development will provide a car park within the site boundary of a capacity determined by applying local parking standards to the nature and location of the development. The exact detail of this would be provided at RM stage.

Further information in relation to access for vehicles and anticipated vehicular movements to and from the site can be found within the Transport Assessment (TA) submitted as part of this application.

5.5.2 Rail Movements

It is anticipated that deliveries to site during construction would be made by a mixture of road and rail movements. Similarly, it is anticipated that during operation, there would be a maximum of 1 train per day transported up the branch line onto the sidings for storage (from outside the facility). This is likely to be 10-12 cars long (250m-300m long) travelling 15-30mph.

There may be a requirement to upgrade level crossings to allow for increased branch line usage in the future, but this will only be required if more trains than existing utilise the branch line. At present, as mentioned above, it is anticipated that there would be a maximum of 1 train movement per day into the site from the branch line which is not an increase on current frequency. Should this increase in the future, the level crossings would need to be upgraded, in line with Network Rail requirements.

5.5.3 Lighting

A variety of lighting will be proposed to aid site safety, operational and security requirements and general orientation. Lighting will also facilitate winter and any working outside of daylight hours. A detailed lighting design scheme has not yet been prepared and would be developed and submitted at RM stage, once the final layout and end uses at the site are known and confirmed. Notwithstanding this, some indicative images of potential options for site lighting have been included in Appendix B3.

Given the proximity to the National Park and its International Dark Skies Reserve accreditation, it will be important to restrict external lighting to the minimum necessary and use directional low lux lighting. This is detailed further in section 7.3 below and as mentioned, would be considered in detail at RM stage.

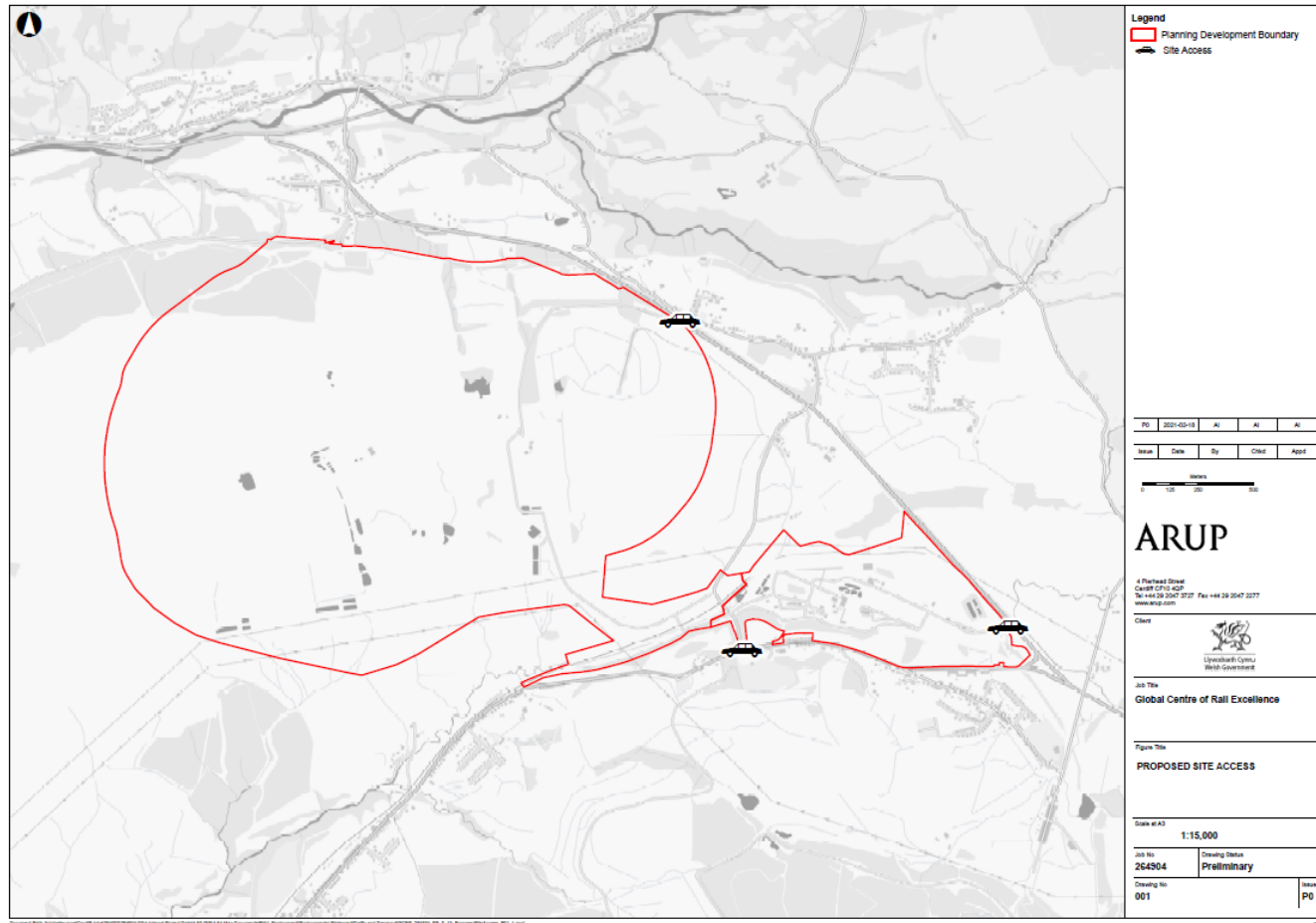


Figure 13 Proposed Site Access

5.5.4 Post Consent

Should GCRE proceed to be operational, it is anticipated that the proposed development could create between 141 (during phase 1) and 298 (phase 3) net direct and net indirect permanent jobs. These are jobs which are considered to be new to the local economy.

Many of these jobs will be high skilled, and it is anticipated that not all will come from the immediate local community in the short term due to new capabilities being required. Notwithstanding this, there will be a number of required roles e.g. site and facilities management, security, rail infrastructure maintenance, train maintenance and hospitality which could be filled from the wider study area. There is also the potential for additional academic jobs to be created alongside the main project.

It should also be noted that GCRE would operate on a 24/7 basis and the effects of this on the amenity of surrounding communities has been assessed in detail throughout the ES and is summarised further within Chapter 7 of this PDAS.

5.6 Plans and Documents for the Outline Planning Application

Application Plans

- 001 – Site Location Plan
- 004- Demolition Plan

Parameter Plan

- 002 - Parameters Plan

Indicative Plans

- 003A - Indicative Masterplan
- 003B – Indicative Masterplan - Washery Proposals
- 005 – Typical Sections and Key Plan (for information only).

6 Policy Analysis and Strategic Context

6.1 Policy Analysis and Strategic Context Overview

This Chapter sets out the national, regional and local planning policy applicable to the proposed development. Where relevant, it also summarises rail sector-specific strategies and frameworks which inform the need for the proposed development in this case.

It should also be noted that the rail sector is not wholly devolved to the Welsh Government and as such, this Chapter draws on UK Government policy and strategic plans where relevant.

6.2 Local Policy

The Development Plan

Section 70(2) of the Town and Country Planning Act 1990 and Section 38(6) of the Planning and Compulsory Purchase Act 2004 require that ‘planning applications are to be determined in accordance with the Development Plan unless material considerations indicate otherwise.’

The ‘Development Plan’ is defined by Section 38(3) of the Planning and Compulsory Purchase Act 2004 as ‘the regional spatial strategy for the region in which the area is situated (if there is one) and the development plan documents (taken as a whole) which have been adopted or approved in relation to that area.’

Given the proposed development’s cross-border nature, the Development Plans of relevance are as follows:

- The Powys Local Development Plan (2011-2026), adopted in April 2018.
- The Neath Port Talbot Local Development Plan (2011-2026), adopted in January 2016.

Each Local Development Plan (LDP) comprises a Written Statement, and a Proposals Map for each respective local authority. The Proposals Maps set the land use strategy for the area, through safeguarding existing areas for continued use or allocating new land for development.

The key policies of relevance to GCRE from both LDP Written Statements are considered to be the following:

The Powys Local Development Plan:

- SP7 - Safeguarding of Strategic Resources and Assets
- DM2 – The Natural Environment
- DM4 – Landscape
- DM6 – Flood Prevention Measures and Land Drainage
- DM7 – Dark Skies and External Lighting
- DM8 – Minerals Safeguarding

- DM9 – Existing Mineral Workings
- DM10 – Contaminated and Unstable Land
- DM13 – Design and Resources
- DM14 – Air Quality Management

The Neath Port Talbot Local Development Plan:

- SP1 – Climate Change
- SP2 – Health
- SP3 – Sustainable Communities
- SP4 – Infrastructure
- SP6 – Development in the Valleys Strategy Area
- SP11 – Employment Growth
- SP14 – The Countryside and the Undeveloped Coast
- SP15 – Biodiversity and Geodiversity
- SP16 – Environmental Protection
- SP17 – Minerals
- SP19 – Waste Management
- SP20 – Transport Network
- SP21 – Built Environment & Historic Heritage
- SC1 – Settlement Limits
- I1 – Infrastructure Requirements
- EC5 – Employment Uses in the Valleys
- TO4 – Walking and Cycling Routes
- EN2 – Special Landscape Areas
- EN6 – Important Biodiversity and Geodiversity Sites
- EN7 – Important Natural Features
- EN8 – Pollution and Land Stability
- M1 – Development in Mineral Safeguarding Areas
- M3 – Development in Mineral Buffer Zones
- RE2 – Renewable and Low Carbon Energy in New Development
- W3 – Waste Management in New Development
- TR1 – Transport Proposals
- TR2 – Design and Access of New Development
- TR3 – Safeguarding of Disused Railway Infrastructure
- TR4 – Safeguarding Freight Facilities
- BE1 – Design

The way in which the proposed development responds to each of the abovementioned policies is presented as part of the planning appraisal in Chapter 7 on a topic-by-topic basis.

Supplementary Planning Guidance

The abovementioned local planning policies are supported by supplementary planning guidance (SPG). The following SPG are considered to be relevant to the proposed development. The way in which they have been considered in the development of GCRE is presented in the planning assessment in Chapter 7.

Neath Port Talbot

- SPG: Planning Obligations
- SPG: Landscape and Seascape
- SPG: Biodiversity and Geodiversity
- SPG: Pollution
- SPG: Design
- SPG: The Historic Environment

Powys

- Biodiversity and Geodiversity SPG
- Landscape SPG
- Planning Obligations SPG

6.3 National Policy

In addition to local planning policy, there is a host of documents published at a UK Government level and a Welsh Government level which are considered to be material planning considerations for the determination of this outline planning application, and these are summarised below.

6.3.1 UK Government Policy and Rail-sector specific strategies

National Infrastructure Strategy

The National Infrastructure Strategy¹⁰ was published by the UK Government in November 2020. It sets out the governments ambition to deliver an infrastructure revolution and rooted in the National Infrastructure Commission’s advice.

The strategy sets out how the UK government will:

- Boost growth and productivity across the whole of the UK, levelling up and strengthening the Union: through investment in rural areas, towns and cities, from major national projects to local priorities.
- Put the UK on the path to meeting its net zero emissions target by 2050: continuing to decarbonise the UK’s power, heat and transport networks – which together account for over two-thirds of UK emissions - and take steps to adapt to the risks posed by climate change;
- Support private investment through this Strategy, and the Energy White Paper, which are aimed at providing investors with clarity over the government’s plans, so they can look to the UK with confidence and help deliver the upgrades and projects needed across the country; and

¹⁰ HM Treasury (2020)

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938539/NIS_Report_Web_Accessible.pdf

- Accelerate and improve delivery, ‘project speed’, by transforming the way infrastructure projects are delivered in the UK. This will be achieved through wide-ranging reforms from speeding up the planning system, to improving the way projects are chosen, procured and delivered, and greater use of cutting-edge construction technology.

The Strategy also outlines that where policy sits with the devolved administrations, Scotland, Wales and Northern Ireland will receive commensurate funding through the Barnett formula¹¹. It confirms that transport in Wales is largely devolved with the exception of rail and aviation.

The Strategy sets out how the UK Government aims to use infrastructure to unite and level up the UK. To do this, it proposes to deliver major investment across the country and prioritise those areas which have received less support previously. The strategy outlines the following key priorities which are relevant:

- Levelling Up Fund which will invest in a range of high value local projects including bypasses and other local road schemes, train station upgrades and more.
- Existing and ongoing investment is being made across through City and Growth Deals, including the Swansea Bay City Deal and Mid Wales Growth Deal.

UK Government Industrial Strategy

In November 2017 the UK Government published its Industrial Strategy White Paper¹². The strategy sets out how the UK Government seeks to boost skills, employment and infrastructure development. The White Paper is organised around five key foundations including: ideas, people, infrastructure, business environment and places.

The strategy sets out ‘sector deals’ which are described as ‘partnerships between government and industry aiming to increase sector productivity.’

The Rail Sector Deal aims to deliver improvements in three core areas: the passenger experience, the economy and the rail industry supply chain. These improvements will be based upon five key commitments:

- Ideas: promoting R&D and ensuring innovation can take place in all kinds of companies.
- People: introducing new skills and improving upskilling efforts.
- Infrastructure: focusing on the roll-out and improvement of digital infrastructure.

¹¹ See <https://www.instituteforgovernment.org.uk/explainers/barnett-formula>

¹² UK Government (2017)

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664563/industrial-strategy-white-paper-web-ready-version.pdf

- Business Environment: creating the right conditions for investment in the UK rail industry.
- Places: supporting communities and opening up opportunities to all.

Decarbonising Transport: setting the challenge (Department for Transport, 2020)

Decarbonising Transport: setting the challenge¹³ was published by the UK Government in 2020. It sets out a plan to accelerate the decarbonisation of the UK's transport system in order to meet the target of Net Zero emissions by 2050.

In relation to rail, the report sets out the need for further electrification of the railway and the take up of new technology such as hydrogen. In terms of freight, the report also sets out the UK Government's intention to work with industry to understand how they can make transporting freight by rail a more attractive opportunity.

Williams Rail Review

The Williams Rail Review¹⁴ was established in September 2018 to analyse the UK railways operating model and organisational structure. A number of evidence papers on different topics have been published to date, whilst a final report was originally due in Autumn 2019.

As indicated by the review's Terms of Reference (ToR), its purpose is to make recommendations on the potential organisational and commercial frameworks which would help the UK Government deliver its vision of a world-class railway.

6.3.2 Welsh Government Policy and Legislation

Well-being of Future Generations Act

Enacted in 2015, the Well-being of Future Generations (Wales) Act 2015¹⁵ (the Well-being Act) is focused on improving the social, economic, environmental and cultural well-being of Wales with an overarching aim of creating a Wales we all want to live in, now and in the future. The Act puts in place seven well-being goals as shown in Figure 14 below.

The Well-being Act places a duty on public bodies in Wales and those listed in the Act to work to improve the economic, social, environmental and cultural well-being of Wales. To help do this they must set and publish well-being objectives and think more about the long term, work better with people and communities and each other, look to prevent problems and take a more joined-up approach.

¹³ Department for Transport (2020)

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/932122/decarbonising-transport-setting-the-challenge.pdf

¹⁴ UK Government (2019) <https://www.gov.uk/government/collections/the-williams-rail-review>

¹⁵ Legislation.gov.uk (2015) <https://www.legislation.gov.uk/anaw/2015/2/contents/enacted>



Figure 14 Well-being of Future Generations Act – Well-being Goals and Ways of Working

Taking Wales Forward 2016-21

Taking Wales Forward 2016 -2021¹⁶ is the latest Programme for Government and sets out how the Welsh Government will deliver more and better jobs through a stronger, fairer economy, improve and reform its public services, and build a united, connected and sustainable Wales.

It emphasises that the UK withdrawal from the European Union creates some uncertainty and challenges, but the Welsh Government’s mandate is clear: The Welsh Government’s relentless focus will be on driving improvement in the economy and public services.

Taking Wales Forward states that ‘we will foster the conditions needed to allow businesses to thrive and to create and retain high quality jobs in Wales’. Alongside this, significant investment will be made in transport infrastructure, recognising the importance of connecting people with jobs, housing and leisure.

Prosperity for all: Economic Action Plan

The Economic Action Plan¹⁷ takes the key commitments presented in Taking Wales Forward and places them in a long-term context and sets out how they fit with the work of the wider Welsh public service to lay the foundations for achieving prosperity for all. The main objective of the Strategy is to help and support everyone to live healthy, prosperous and rewarding lives.

¹⁶ Welsh Government (2016) <https://gov.wales/sites/default/files/publications/2017-08/taking-wales-forward.pdf>

¹⁷ Welsh Government (2017) <https://gov.wales/sites/default/files/publications/2019-02/prosperity-for-all-economic-action-plan.pdf>

The National Strategy explains how although Wales as a whole has grown strongly out of recession, there are areas of the country which have not seen the full benefits of growth. This has left some communities struggling to prosper and feeling isolated from other parts of Wales. Government has a key role in stimulating economic growth in areas of greatest need.

The four key themes of Prosperity for All are: ‘prosperous and secure’, ‘healthy and active’, ‘ambitious and learning’ and ‘united and connected’. ‘Healthy and active’ is a core theme of this study as the study aims to improve active travel connectivity primarily. The key aims of the Strategy relevant to this study are:

- a) All parts of Wales to benefit from economic growth and a fairer distribution of wealth and opportunity.
- b) Wales to benefit from the opportunities arising from the shift from a fossil fuel to a low-carbon based economy and or this transition to support a transformation in our prosperity, health and well-being.
- c) To help more people to gain as much as they can from learning and work. The Plan states that this is possible when people are supported to develop the resilience, skills, enthusiasm and creativity they will need to adapt to the changing world of work.
- d) To create a prosperous and fair society where businesses and public services are constantly looking to create new products services and ways of helping people to get what they need and want.
- e) To build a connected infrastructure that supports growth and investment.
- f) To enhance the profile, reputation and influence of Wales, to develop and maintain relationships around the world to help promote Wales and support business growth, to co-operate in the sharing of information and best practice and to strengthen the Welsh economy.
- g) Taking a strategic approach to development and planning investment in line with the Well-being Act to inform investments and deliver infrastructure projects which help maximise the benefits for current and future generations.

Prosperity for all: a low carbon Wales

Prosperity for All: A Low Carbon Wales¹⁸ sets the foundations for Wales to transition to a low carbon nation and works within the context of the Environment (Wales) Act 2016 of which requires Welsh Government to reduce emissions of greenhouse gases in Wales by at least 80% by the year 2050.

This Plan identifies measures for how Welsh Government plans to meet the first carbon budget (2016-20). The Plan notes how in 2017, Welsh Government set the ambition of achieving a carbon neutral public sector by 2030 and to reduce

¹⁸ Welsh Government (2019) https://gov.wales/sites/default/files/publications/2019-06/low-carbon-delivery-plan_1.pdf

emissions from rail transport through vehicle and fuel efficiency measures. Policy 57 within the Plan also sets the goal of increasing rail travel across Wales.

Future Wales: the national plan 2040

Future Wales – the national plan 2040 published in February 2021 is the National Development Framework (NDF) for Wales. It is the replacement to the Wales Spatial Plan (2008) and sets the direction for development in Wales to 2040. It is a statutory development plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of our communities.

As set out in Chapter 3, Future Wales is outcome-led and aims to develop a Wales where people live ...

1. *and work in connected, inclusive and healthy places*
2. *in vibrant rural places with access to homes, jobs and services*
3. *in distinctive regions that tackle health and socio-economic inequality through sustainable growth*
4. *in places with a thriving Welsh Language*
5. *and work in towns and cities which are a focus and springboard for sustainable growth*
6. *in places where prosperity, innovation and culture are promoted*
7. *in places where travel is sustainable*
8. *in places with world-class digital infrastructure*
9. *in places that sustainably manage their natural resources and reduce pollution*
10. *in places with biodiverse, resilient and connected ecosystems*
11. *in places which are decarbonised and climate-resilient.*

The following Strategic and Spatial Choices policies are considered to be of relevance to the proposed development:

Policy 1 – Where Wales will grow states that *“the Welsh Government supports sustainable growth in all parts of Wales. In three National Growth Areas there will be growth in employment and housing opportunities and investment in infrastructure.”* Swansea Bay and Llanelli is included as a national growth area and more information is included under policy 28 as set out below.

Policy 3 – Supporting Urban Growth and Regeneration – Public Sector Leadership states that *‘The Welsh Government will play an active, enabling role to support the delivery of urban growth and regeneration. The Welsh Government will assemble land, invest in infrastructure and prepare sites for development. We will work with local authorities and other public sector bodies to unlock the potential of their land and support them to take an increased development role... planning authorities must take a proactive role and work in collaboration with the Welsh Government and other public sector bodies to identify the best locations for growth and regeneration, and provide certainty about how they should be developed.’*

Policy 9 – Resilient Ecological Networks and Green Infrastructure sets out that ‘to ensure the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure, the Welsh Government will work with key partners to:

Identify areas which should be safeguarded and created as ecological networks for their importance for adaptation to climate change, for habitat protection, restoration or creation, to protect species, or which provide key ecosystems services, to ensure they are not unduly compromised by future development; and

Identify opportunities where existing and potential green infrastructure could be maximised as part of placemaking, requiring the use of nature-based solutions as a key mechanism for securing sustainable growth, ecological connectivity, social equality and well-being.

... in all cases, action towards securing the maintenance and enhancement of biodiversity (to provide a net benefit) the resilience of ecosystems and green infrastructure assets must be demonstrated as part of development proposals through innovative, nature-based approaches to site planning and the design of the built environment.’

Policy 11 – National Connectivity – ‘The Welsh Government will support and invest in improving national connectivity. Our priorities are to encourage longer-distance trips to be made by public transport, while also making longer journeys possible by electric vehicles... planning authorities should support developments associated with improvements to national connectivity and, where appropriate, maximise the opportunities that arise from them.’

Policy 28 – National Growth Area – Swansea Bay and Llanelli – ‘Swansea Bay and Llanelli will be the main focus for growth and investment in the South West region. Strategic and Local Development Plans should recognise the National Growth Area as the focus for strategic economic and housing growth; essential services and facilities; advanced manufacturing; transport and digital infrastructure. The Welsh Government will work with regional bodies and local authorities to promote and enhance Swansea Bay and Llanelli’s strategic role and ensure key investment decisions support places in the National Growth Area and the wider region.’

Regional strategic diagram

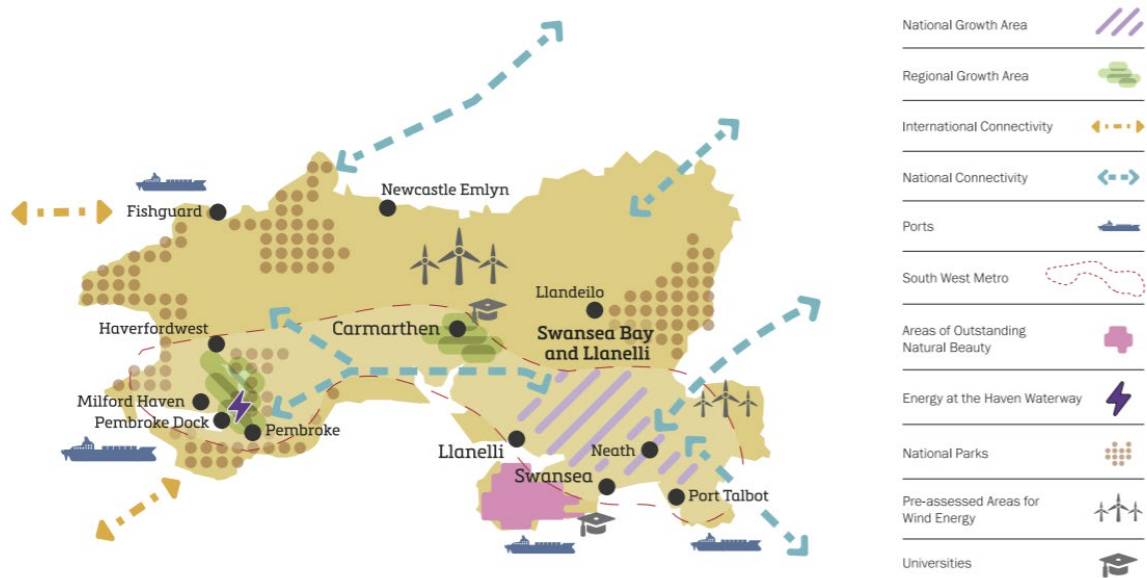


Figure 15 Regional Strategic Diagram, South West Wales, Future Wales: the national plan 2040

Planning Policy Wales Edition 11

Published in February 2021, the eleventh edition of Planning Policy Wales (PPW11)¹⁹ sets out the land use planning policies of the Welsh Government. As with the previous version of PPW (Edition 10) a key element of PPW11 is its alignment with the Well-being of Future Generations (Wales) Act 2015 (WFGA), the objectives of which represent the central thread running through the document.

PPW11 reaffirms the presumption in favour of sustainable development and defines sustainable development as “*the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the Well-being Goals*”.

PPW11 highlights the importance of proposals taking a placemaking approach, specifically, guiding proposals to take a holistic approach when planning and designing development and spaces, focusing on positive outcomes. The concept of placemaking should be considered at all levels including at a global scale through paying key consideration to climate change; and also, at a more local scale, considering the amenity impact on neighbouring properties and people.

In line with the principles of the Well-being Act, PPW11 is organised around four key themes; ‘Strategic and Spatial Choices’, ‘Active and Social Places’, ‘Productive and Enterprising Places’ and ‘Distinctive and Natural Places’. The elements of most relevance to the proposed development in this case are outlined further below. Chapter 3 ‘Strategic and Spatial Choices’ focuses on placemaking

¹⁹ Welsh Government (2018) <https://gov.wales/sites/default/files/publications/2019-02/planning-policy-wales-edition-10.pdf>

and strategic development. Paragraphs 3.3 - 3.313 of PPW11 sets out five key objectives to achieving good design: access and inclusivity; environmental sustainability; character; community safety; movement.

In terms of the provision of new infrastructure, Paragraph 6.611 states that, *“Planning authorities should, as far as possible, develop a strategic and long-term approach to infrastructure provision when preparing development plans. This means maximising the use of existing infrastructure and considering how the provision of different types of infrastructure can be co-ordinated. Planning authorities and infrastructure providers must work together closely to achieve the most sustainable outcome.”*

Chapter 4 ‘Active and Social Places’ with regards to transport, it states that people should have access to jobs and services through more efficient and sustainable journeys, by walking, cycling and public transport. It further states that *“new development should prevent problems from occurring or getting worse such as...the reliance on the private car and the generation of carbon emissions.”*

It is also noted that land use and transport planning should be integrated to minimise the need to travel, reduce dependency on the private car and enable sustainable access to employment, local services and community facilities.

Chapter 5 Productive and Enterprising Places covers the economic components of placemaking and states that *“a more Equal Wales can be achieved through promoting sufficient employment and enterprise opportunities for people to realise their potential and by recognising and building on the existing economic strengths of places to assist in delivering prosperity for all.”*

PPW11 recognises *“realise the potential of new sustainable transportation infrastructure to create new or renewed hubs of activity to support sustainable communities which capitalise on their location and the opportunities these present.”*

Paragraph 5.3.1 states that *“the provision of sustainable transport infrastructure is essential in order to build prosperity, tackle climate change, reduce airborne pollution and to improve the social, economic, environmental and cultural well-being of Wales”* and that *“the planning system should facilitate the delivery, decarbonisation and improvement of transport infrastructure in a way which reduces the need to travel, particularly by private vehicles, and facilitates and increases the use of active and sustainable transport”*.

PPW11 further sets out at paragraph 5.3.2 that *“Planning authorities should support necessary transport infrastructure improvements, where it can be demonstrated that such measures are consistent with Welsh Government policy to encourage and increase use of sustainable transport and reduce reliance on the private car for daily journeys.”*

Paragraph 3.9 sets out that *“the special characteristics of an area should be central to the design of a development. The layout, form, scale and visual appearance of a proposed development and its relationship to its surroundings are important planning considerations.”*

Cymraeg 2050: A million Welsh speakers

In March 2019, the Welsh Government published ‘Cymraeg 2050: a million Welsh speakers’ which sets out a strategy to increase the number of Welsh speakers across Wales to 1 million by the year 2050, The Strategy is arranged around three key themes:

- Increasing the number of Welsh speakers
- Increasing the use of Welsh
- Creating favourable conditions – infrastructure and context.

Llwybr Newydd – a new Wales Transport Strategy

The consultation document for Llwybr Newydd- a new Wales Transport Strategy²⁰ was published by the Welsh Government in 2020. It is a statutory document required by the Transport (Wales) Act 2006 and once adopted, will set out the strategic priorities for the development of all modes of transport across Wales, superseding the Wales Transport Strategy 2008.

The consultation document sets out the 5 no. priorities for the Strategy as follows:

- **Priority 1:** Planning for better connectivity
- **Priority 2:** Public transport services
- **Priority 3:** Safe, accessible, well maintained and managed transport infrastructure
- **Priority 4:** Making sustainable transport more attractive
- **Priority 5:** Support innovations.

The document also sets out ‘mini-plans’ related to each transport sector. In the case of rail, the Llwybr Newydd draft document sets out that *‘our vision is to achieve the passenger and freight rail services that people and businesses in Wales need, in order to better*

support our wider ambitions for the economy, communities and the environment. This should allow more of us to travel.’

Further to this is sets out the priorities for the next 5 years. In the case of rail, the Welsh Government sets out that they will commit (amongst other aims) to achieving the following:

- Provide more services, more and better trains and more stations in order to make rail services more attractive and improve customer experiences.
- Develop our public transport Metro systems to improve services and better integrate other public transport and active travel with the rail system.
- Work with the UK government to develop the rail element as part of the wider solution to congestion on the M4.

²⁰ Welsh Government (2020) <https://gov.wales/llwybr-newydd>

- Maintain and manage existing infrastructure under the control of Welsh Government, including upgrades to existing stations and improving the resilience of rail infrastructure to flooding and extreme weather.
- Continue to work with the UK Government to improve rail infrastructure across Wales including rolling out rail electrification schemes across Wales, delivering network improvements and extensions in Wales including reopening old lines and new lines of route.

The consultation on Llwybr Newydd closed in January 2021.

Building Better Places: The Planning System Delivering Resilient and Brighter Futures

Building Better Places²¹, the Covid-19 placemaking-led recovery plan, was published by the Welsh Government in July 2020. It is intended to sit alongside PPW11 and is a key consideration in both plan preparation and development management.

Building Better Places expands on the letter issued to Chief Planning Officers from Julie James (Minister for Housing and Local Government) in July 2020 which acknowledges that the economic consequences of the COVID-19 pandemic are predicted to be severe and felt across all sectors, including those in construction and the built environment. Building Better Places emphasises both the primacy of the plan led system in Wales, but also the need to have places and place-making at the heart of the recovery process. The policy agenda seeking to deliver better places and placemaking develops the principles already enshrined in PPW11. The pandemic has highlighted the importance of the need for good quality places for people to live, work and relax. Building Better Places seeks to ensure that the economic hardship owing to the pandemic does not outweigh the above principles and policies.

It is clear that an immediate supply of development land is essential if we are to build the better places envisaged by Welsh Government and lead the recovery that is desperately required. New development delivering positive social and economic outcomes as well as addressing climate change concerns needs to be happening on the ground in the short term and can't simply await the completion of the LDP review process in five years' time.

Welsh Government has recognised this issue and in respect of development management, 'Building Better Places' states '*PPW and the NDF can be used directly in the decision-making process, particularly where an LDP is silent or out-of-date on an issue. The Welsh Government will support decisions taken in this context, particularly in the short-term until an LDP is adopted*'.

The guidance includes a Welsh Government commitment to follow through on infrastructure obligations and emphasises that development management decisions should focus on creating healthy, thriving active places with a focus on a positive, sustainable future for our communities. The planning system has an

²¹ Welsh Government (2020) <https://gov.wales/sites/default/files/publications/2020-07/building-better-places-the-planning-system-delivering-resilient-and-brighter-futures.pdf>

important role in supporting healthier lifestyles and reducing inequalities. This includes both direct and indirect opportunities such as the allocation of land for health facilities, ensuring good design and barrier free development, jobs and skills among other considerations.

Technical Advice Notes

PPW11 is supported by a suite of Technical Advice Notes (TANs) which provide further guidance in relation to specific aspects of development, the following TANs are considered to be of relevance to the proposed development in this case:

- TAN 5 – Nature Conservation and Planning.
- TAN 11 – Noise.
- TAN 12 – Design.
- TAN 15 – Development and Flood Risk.
- TAN 18 – Transport.
- TAN 20 – Planning and the Welsh Language
- TAN 23 – Economic Development.
- TAN 24 – The Historic Environment.

The way in which these TAN's have been taken into consideration throughout the development of GCRE is considered further within the planning assessment in Chapter 7.

7 Planning Assessment

7.1 Planning Assessment Overview

The planning assessment presented in this Chapter takes into consideration the topic specific policies of relevance from the PCC LDP and the NPTCBC LDP and highlights how these policies have been addressed within the proposed development. In addition, it also includes relevant policy considerations in wider publications such as PPW11 as presented throughout Chapter 6.

7.2 Principle of Development

The National Infrastructure Strategy demonstrates the link between infrastructure investment and ‘levelling up’ across the UK. The Rail Sector Deal, part of the UK Government’s Industrial Strategy, sets out the commitment to investment in R&D and new infrastructure for the rail industry.

Taking Wales Forward and its associated Economic Action Plan and Low Carbon Wales Plan, sets out the Welsh Government’s approach to sustainable and equal economic growth across the country, confirming that the Welsh Government’s focus will be ‘driving improvement in the economy and public services.’

Draft Policy 3 of Future Wales: the national plan states the Welsh Government’s commitment to the delivery of urban growth and regeneration and confirms that the Welsh Government will assemble land, invest in infrastructure and prepare sites for development.

PPW11 presents the land use policies of the Welsh Government in full consideration of the Well-being Goals as presented within the Well-being Act. It makes the link that the goal for a more equal Wales can be achieved by promoting employment and enterprise opportunities and building on economic strengths.

Paragraph 2.1.2 of TAN 23 states that, ‘where economic development would cause environmental or social harm which cannot be fully mitigated, careful consideration of the economic benefits will be necessary.’

Policy SP7 of the Powys LDP states, *‘to safeguard strategic resources and assets in the County, development proposals must not have an unacceptable adverse impact on the resource or asset and its operation.’*

Policy SP3 of the Neath Port Talbot LDP sets out that inappropriate development outside of settlement limits would be resisted. Policy SP11 states that *‘existing employment uses will be supported and safeguarded and new and expanding employment developments will be encouraged.’*

The Powys LDP Proposals Map shows that the site is largely contained within the land designation for Nant Helen Surface Mine, which is a ‘Minerals: Permitted Working Area’ and ‘Minerals: Permitted Working Area Buffer Zone’. These designations are put in place to control surface coal mining operations and their interface with new development.

A proportion of the site extends beyond the existing coal mining operations into land to the north, east and south which is designated in the Proposals Map as a 'Coal Resource Safeguarding Area' & 'Sandstone Category 2 Resource Safeguarding Area'.

On the Neath Port Talbot LDP Proposals Map, a very small proportion of the site falls within land designated within the Neath Port Talbot LDP as a 'Settlement Protection Zone' which serves to protect settlements against the extent of surface coal mining operations. The Washery site is identified as a freight facility, safeguarded under Policy TR4/4. Policy TR4/4 specifically seeks to protect the rail connection and sidings.

Previously Developed Land

A core principle of achieving sustainable development is using previously developed land in preference to greenfield land. PPW11 defines previously developed land: *'which is or was occupied by a permanent structure (excluding agricultural or forestry buildings) and associated fixed surface infrastructure. The curtilage of the development is included, as are defence buildings and land used for mineral extraction and waste disposal (see note 2 below) where provision for restoration has not been made through development management procedures.'*

Note 2 states that: *'this relates to minerals and waste sites which would otherwise remain unrestored after use because the planning permission allowing them did not include a restoration condition. All other such sites will be restored to greenfield status, by the planning condition...'*

The most recent planning history for the site includes the extant permissions for the restoration (19/1899/REM) and complementary earthworks at the Nant Helen Surface Mine site (20/0738/FUL [Powys] and P/2020/0362 [Neath Port Talbot]). The purpose behind these consents is to restore and ready the Nant Helen Surface Mine for re-us.

As noted above, PPW11 confirms that mineral extraction and waste disposal sites are excluded from the definition of previously developed land where there are planning conditions that would secure its return to greenfield status. Past extents of Nant Helen Surface Mine have been restored and the approved restoration scheme means that this part of the site would not be considered as previously developed land. This has been taken as the 'baseline' for this planning application, and most crucially the ES as noted in section 2.4.

Given the extant planning permissions for restoration of the site, it is considered that the abovementioned policies M1 (Minerals: Permitted Working Area) and DM9 (Minerals: Permitted Working Area Buffer Zone) which are concerned with controlling the surface coal mining operations and interface between new development, and M2/1 (Settlement Protection Zone) which serves to protect settlements against the extent of surface coal mining operations are not relevant to this proposal given that permission has been previously been granted for the ceasing of coal mining operations. The restoration of the land and its discontinuance for coal extraction has therefore have been found to be acceptable in principle.

Similarly, although part of the site is designated as a ‘Coal Resource Safeguarding Area’, there is a presumption against the use of coal as energy within national policy and paragraph 5.10.17 of PPW11 states that ‘the safeguarding of primary coal resources is not required’, as such developing within a safeguarding area should be considered to be acceptable.

It is also noted that the site is located partially within a Sandstone Category 2 Resource Safeguarding Area. Policy DM8 of the Powys LDP states that ‘*Non-mineral development proposals within Mineral Safeguarding Areas will only be permitted where it can be demonstrated by the developer that:*

- 1. The mineral resource is not of potential future value; or*
- 2. The development is of a temporary nature and can be completed and the site restored to a condition that would allow for future extraction; or*
- 3. The mineral can be extracted satisfactorily prior to the incompatible development taking place; or*
- 4. Extraction would not meet the tests of environmental acceptability or community benefit as set out in National Policy; or*
- 5. There is an over-riding need in the public interest for the development; or*
- 6. The development is householder development and / or of a very minor nature such as extensions to existing dwellings, and associated development within the curtilage of the property.’*

It is acknowledged that Sandstone is still a valuable resource, however the geometry of the previously consented earthworks is such that it is highly unlikely that the resource would be sterilised, furthermore the future transformational development that the proposal could potentially enable is considered to be in the public interest, owing to the economic benefits of the proposed development, which is discussed further below.

In light of the above, it is considered that development within the safeguarding area would be acceptable in this case, in consideration of policy DM8.

As also noted in section 2.4, the washery site has not been subject to any previous restoration consents and is occupied by existing built development. As such this area of the proposed development site, would satisfy the definition of previously developed land and the re-development of it for industrial activity should be considered acceptable in principle. In addition, the proposals would be in accordance with policy TR4/4 as they would protect the existing rail connection and sidings to the south of the washery site.

Departure from Local Development Plan

Notwithstanding the intent of the earthworks consent to ready the site for a rail and associated industrial activity use, there is not a site-specific Development Plan allocation or other policy for the GCRE, and it is thus in policy terms a departure from the Plans.

It is considered that there are material considerations associated with GCRE which justify a departure from the adopted LDPs. These considerations primarily relate to the wide-ranging socio-economic benefits which the proposed development would create. It is considered that on balance, the economic benefits

of the scheme outweigh any potential harm to the environment and the departure from the LDP in policy terms.

As noted above, national guidance set out in TAN 23 (Economic Development) should be a material consideration in the determination of this planning application. Section 2.1 of TAN 23 focuses on ‘weighing economic benefit’. It also reconfirms a central tenet of the planning system is to ‘*steer development to appropriate locations.*’

From paragraph 2.15, the TAN sets out guidance for local authorities as to how to consider the balance between economic, social and environmental issues in the determination of planning applications. TAN 23 sets out that when seeking to do this, LPAs should consider three tests as follows:

1. Alternatives
2. Jobs accommodated
3. Special Merit

These three tests have been applied to the proposed development of GCRE as follows:

1. Alternatives

TAN 23 asks: ‘If the land is not made available (the site is not allocated, or the application is refused), is it likely that the demand could be met on a site where development would cause less harm, and if so where?’

As noted in section 3.2 there were several key considerations as to why the Nant Helen Surface Mine and Onllwyn Washery site was chosen for GCRE.

Furthermore, as set out within Chapter 4 of the ES, other potentially suitable sites across South Wales were considered including at Llanwern in Newport and Saint Athan in the Vale of Glamorgan. These sites were chosen as they would have similar strategic locational benefits to the Nant Helen Surface mine and washery site in terms of their connection to the strategic rail network, road network and Ports. It is for this reason, sites across South Wales were considered.

The reasons why these potential alternative sites were ultimately discounted related to the very specific infrastructure requirements of a specialist operation such as GCRE. For example, the site in Llanwern was deemed too narrow to accommodate the large tracks required. St Athan posed major challenges in terms of its potential impact on amenity owing to its proximity to highway and residential receptors (as well as issues related to land ownership).

As noted in the introduction to this PDAS, there is no such facility as GCRE in the UK at present. The nature of such a proposal means that there are complex engineering, infrastructure and environmental requirements in order for a rail testing site to be delivered. In this case, the chosen site at Nant Helen Surface mine and washery fulfilled all necessary requirements as set out in section 3.2.

There is every possibility that without the delivery of the site in this location, such a facility could be relocated elsewhere in the UK or further afield, or operators will continue to utilise facilities overseas with the associated loss of economic benefits to those locations.

2. Jobs Accommodated

TAN 23 asks: ‘How many direct jobs will be based at the site?’

As presented earlier in this PDAS, GCRE is anticipated to create over 100 net direct and net indirect jobs from Phase 1 of the proposed development, rising to over 250 jobs by Phase 3. These roles would be in addition to the expected 53 - 163 net direct jobs created throughout the construction of the proposed development. This job creation is important in consideration of the cease of coaling operations at the Nant Helen Surface Mine in 2021 which currently support 170 jobs.

In addition, whilst TAN 23 guidance specifically references the creation of direct jobs, this does not take into consideration further indirect jobs which may be created as a result of increased visits to the local area by future employees of the site. Given its scale and longevity, the proposed development could have extensive knock-on benefits to businesses operating in settlements surrounding the site such as Ystradgynlais, Seven Sisters and Abercrave.

Furthermore, as noted in section 3.4 above, educational attainment in the study area generally falls below national averages. In addition to job creation, over the long-term GCRE presents unique opportunities for young people living in the area to develop rail industry expertise through potential partnership working with local educational institutions and academic institutions across the country. This could contribute to alleviating issues associated with the out-migration of young people in the study area, and underemployment, which is stated as a particular issue for the area within the Powys LDP.

The employment and socio-economic development benefits of the proposed development are considered to respond directly to the ambitions set out within the Welsh Government’s Economic Action Plan and policies 1 and 3 of Future Wales: the national plan 2040 which focus on growth and investment in infrastructure across Wales. It is also considered that the opportunities for local growth and economic development surrounding the site align with the well-being goal of a ‘more equal Wales’.

3. Special Merit

TAN 23 asks: ‘Would the development make any special contribution to policy objectives?’

As noted in section 2.5, there is a compelling case for the need for GCRE at a national level given the fact that no such facility exists across the UK. The strategic context presented in Chapter 6 of this PDAS demonstrates the way in

which GCRE could contribute to addressing the needs of the rail industry both in the UK and further afield. In this sense, the proposed development is considered to directly contribute to the well-being goals of a ‘prosperous Wales’ and ‘a globally responsible Wales’.

The jobs and opportunities created by GCRE in an area such as the Heads of the Valleys would contribute to the UK Government’s ‘levelling up’ agenda and the Welsh Government’s commitments set out both in their Programme for Government and planning policy (as noted above) to foster economic growth across Wales and create jobs closer to home.

At the local level, as noted above, GCRE would serve to address socio-economic objectives within the areas surrounding the site. It would create new employment and safeguard an existing employment site by filling a potential gap left by the Nant Helen mine closure. The proposed development would also have much longer-term impacts in terms of promoting educational and employment opportunities and creating potential for upskilling and further investment in the local area.

As set out in 2.5, these issues are particularly pertinent at the present time as a result of the Covid-19 pandemic and the potential short-medium and long term economic impacts arising from successive national ‘lockdowns’. This is set out in detail in the Welsh Government’s ‘Building Better Places’ Covid-19 recovery plan which sets out the importance of locally available jobs and opportunities for sustainable travel. GCRE would contribute to both of these aims.

Overall, on balance it is considered that the proposed development should be found to be acceptable in principle. Despite the proposed development representing a departure from the adopted LDP for both Neath Port Talbot and Powys, there is a compelling argument that the economic benefits of the scheme should be considered as a material consideration in granting consent for the proposed development.

Whilst there would be some residual environmental impacts as a result of the proposed development (as discussed later in this Chapter), it has been demonstrated that there are limited alternative options for the development in South Wales, the proposed development would create new employment opportunities over the medium and long term and there are special merits which warrant the grant of planning permission, not least the impact the proposed development could have on the growth and innovation of the rail sector on an international level, and the knock on benefits this would have on the UK, Welsh and local economy.

7.3 Landscape

Policy DM4 of the Powys Local Development Plan states that *‘Proposals for new development outside the Towns, Large Villages, Small Villages and Rural Settlements defined in the Settlement Hierarchy must not, individually or cumulatively, have an unacceptable adverse effect, on the valued characteristics and qualities of the Powys landscape. All proposals will need to:*

1. *Be appropriate and sensitive in terms of integration, siting, scale and design to the characteristics and qualities of the landscape including its: topography; development pattern and features; historical and ecological qualities; open views; and tranquillity; and*
2. *Have regard to LANDMAP, Registered Historic Landscapes, adjacent protected landscapes (National Parks and Areas of Outstanding Natural Beauty) and the visual amenity enjoyed by users of both Powys landscapes and adjoining areas.'*

Policy SP14 of the Neath Port Talbot Local Development Plan sets out that the countryside, including landscapes will be protected by *'the protection of the open countryside through the control of inappropriate development outside settlement limits'* and *'the designation and protection of Special Landscape Areas.'*

In line with policy DM4, a Landscape and Visual Impact Assessment (LVIA) has been carried out to inform the proposed development, and the full findings are presented within Chapter 9 of the ES.

Impact on Landscape

The LVIA has identified that during construction, there would be significant landscape effects for one of the 20 landscape character areas (LCA) identified within the study area of the LVIA; the Nant Helen Reclaimed Uplands LCA which would be affected through the introduction of construction activity to a restored landscape.

During operation of the site, it has been assessed that there would be significant landscape effects for 3 of the 20 LCAs identified, namely the Nant Helen Reclaimed Uplands LCA; Wooded Tawe Valley LCA; and Y Mynydd Du LCA.

Despite these significant effects, it is anticipated that effects to the LCA's could be mitigated through mitigation planting proposed as part of the current application, as well as the Nant Helen Complementary Earthworks Scheme. Mitigation would reduce effects on the Wooded Tawe Valley LCA and the Y Mynydd Du LCA non-significant by year 15 once planting is established.

There would be residual impacts on the Nant Helen Reclaimed Uplands LCA following mitigation planting at year 15.

Visual Impact

In terms of visual effects, viewpoints (VPs) for the assessment were selected in consultation with the Local Authority. The 18 viewpoints were the result of desktop studies and site survey work to identify receptors likely to be affected. Visual receptors include, but are not limited to, recreational users of footpaths and inhabitants of residential properties and their location can be viewed on figure 9.3 in Volume III of the ES.

Mitigation proposals are envisaged to reduce significant adverse landscape and visual effects, and they have been accounted for in the year 15 assessment when it is assumed that planting will have established.

Planting for the mitigation of operational effects was developed and areas for both visual screening and landscape integration are shown on Figure 12 below. This plan was developed in conjunction with the project ecologist to ensure that it is appropriate and meets the requirements of any secondary ecological functions.

The areas indicated in Figure 12 below, show the maximum extent of planting required in these areas and would be developed further as part of a landscape strategy submitted at RM stage to determine the exact planting specification and to ensure that all planting reflects local character as much as possible.

As set out within the ES, it should be noted that there are expected to be residual visual effects from 4 visual receptors which have not been possible to mitigate by year 15. It should be noted that these viewpoints are located on Public Rights of Way surrounding the site, and the National Cycle Network route which runs to the north of the site. Unlike residential properties, users of these receptors would likely be transient in nature, and visual impacts would therefore be temporary and fleeting in nature in terms of their impact on users.

Impact on Dark Skies

Policy DM7 of the Powys LDP states that *‘Development proposals involving external lighting will only be permitted when a lighting scheme has been provided that demonstrates that the lighting will not individually or cumulatively cause: unacceptable levels of light pollution especially in the countryside. An unacceptable adverse effect on the visibility of the night sky. A nuisance or hazard to highway users including pedestrians, and local residents. An unacceptable disturbance to protected species.’*

Policy EN8 of the Neath Port Talbot LDP states that development proposals which would expose people to unacceptable risk by reason of light pollution will not be permitted.

The Brecon Beacons National Park became an International Dark Skies Reserve in 2013 (one of only 5 in the world). The effects of lighting are controlled under the Brecon Beacons National Park Authority, Local Development Plan Policy 12 and Light Pollution & Obtrusive Lighting Supplementary Planning Guidance (March 2015) which tackles matters such as light glare, light trespass, intrusion and sky glow all of which either individually or in-combination can negatively impact the immediate and wider landscape and townscape quality. Given the proximity to the National Park, the dark skies context is an important part of the character of the immediate northern backdrop to the application site.

In consideration of this, a night-time assessment has been undertaken and is included within Appendix 9E of the ES.

The current assessment is limited due to the level of development of the lighting design, however it makes recommendations to be taken forward to detailed design at RM stage when a full lighting assessment will be produced in full consideration of the importance of the dark skies reserve and the requirements of policy DM7. At this stage of the development process, the assessment concludes that design solutions should be available at the RM stage to create a scheme which is acceptable within the Dark Skies reserve.

Overall it is considered that the impact of the proposed development on the surrounding landscape has been fully considered in line with local plan policies DM4 (Powys) and SP14 (Neath Port Talbot). The majority of landscape impacts would not be significant following the implementation of suitable mitigation. The residual impacts on the abovementioned viewpoints on PRow surrounding the site, would have to be weighed within the planning balance against the wide-ranging economic benefits of the scheme, as described in detail section 7.2.

7.4 Biodiversity

Policy DM2 of the Powys Local Development Plan states that *‘development proposals shall demonstrate how they protect, positively manage and enhance biodiversity and geodiversity interests including improving the resilience of biodiversity through the enhanced connectivity of habitats within, and beyond the site.’* It further sets out that any development proposals which would have an adverse effect on nationally protected sites, habitats or species will only be permitted in the following circumstances:

- ‘i. The proposal contributes to the protection, enhancement or positive management of the site, habitat or species; or*
- ii. There is no suitable alternative to the proposed development; and*
 - a) It can be demonstrated that the benefits from the development clearly outweigh the special interest of the site, habitat or species; and*
 - b) Appropriate compensatory measures are secured; and*
 - c) The population or range and distribution of the habitat or species will not be adversely impacted.’*

Similarly, policy EN6 of the Neath Port Talbot LDP sets out that development which would impact important biodiversity sites will only be permitted in circumstances where:

‘They conserve and where possible enhance the natural heritage importance of the site; or the development could not reasonably be located elsewhere, and the benefits of the development outweigh the natural heritage importance of the site.

Mitigation and/or compensation measures will need to be agreed where adverse effects are unavoidable.’

The key biodiversity issues considered in detail within the ecology chapter of the ES (Chapter 7) include:

- The presence of statutory and non-statutory designated sites, which could be indirectly affected during construction and on completion.
- The presence of notable habitats within the Site, which could be directly and or indirectly affected during construction and operation including from disturbance, degradation, fragmentation and loss.
- The presence of protected and or notable species, which could be directly and or indirectly affected during construction and operation including from harm, mortality, disturbance, habitat loss / degradation and fragmentation / physical barriers to species movements.

‘Notable’ species and habitats considered in the ES report include species and habitats of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales listed in response to the requirements of Section 7 of the Environment (Wales) Act 2016, in addition to any species considered to be of significance for nature conservation such species listed in red data books, the Royal Society for the Protection of Birds (RSPB) ‘Birds of Conservation Concern’ lists and or Local Biodiversity Action Plans (LBAPs).

As set out within the ES Chapter, there has been desk-based review alongside an extensive programme of field surveys to understand the biodiversity environment surrounding the site and possible mitigation and enhancement.

As with other ES Chapters, the biodiversity assessment presented in the ES has been developed on the basis of a ‘future baseline’ i.e. considers the enhanced retained habitats and newly created habitats as set out in the Nant Helen Complementary Restoration Earthworks habitat creation and enhancement plan. Notwithstanding this, it should be noted that the earthworks would be programmed to align with the requirements of GCRE such that the on completion of the earthworks, work would begin on GCRE. There would be insufficient time between the earthworks and GCRE for habitats to become established.

In summary, the habitat creation and enhancement plan agreed as part of the Nant Helen Complementary Restoration Earthworks Scheme, includes the creation of a habitat mosaic with the newly created landform, and retained adjacent habitats. Habitats will include acid grassland, enclosed pasture and broadleaved woodland, heathland, peatland-mire complex, wetland and lichen / fungi rich habitats. The diversity of habitats created will encourage the growth and establishment of increased species numbers and diversity including notable flora which occurs in the adjacent, retained habitats. Further enhancements will be facilitated through the long-term management of habitats such as conifer and broadleaved woodland, acid and marshy grassland in addition to wetland habitats.

Providing the measures as detailed in the ES are implemented prior to, during and post construction, it is considered likely that the scale of all impacts from the Project, on protected sites, and the majority of habitats and species, would be reduced sufficiently and there would be no significant residual impacts on the identified ecological receptors.

In addition, with the inclusion of enhancement measures, including installation of bird/bat boxes and additional planting (as detailed within the EMMP), it is considered likely that there would be an overall positive residual effect from the project for some habitats and species; namely marshy grasslands and wetlands, short grassland and invertebrates. It is recognised that a small area of reptile mitigation would be required outside of the redline boundary, but within the wider restoration proposals. Negotiations are ongoing with the landowner, Celtic Energy, it is the intention that this mitigation would be formed to complement restoration proposals at the site.

Overall it is considered that the proposed development would be acceptable in terms of its impact on biodiversity in accordance with policies DM2 (Powys) and EN6 (Neath Port Talbot).

7.5 Hydrology

Policy DM6 of the Powys LDP sets out that, *‘development proposals must avoid unnecessary flood risk by assessing the implications of development within areas susceptible to all types of flooding; any development that unacceptably increases risk will be refused.’*

Policy SP16 of the Neath Port Talbot LDP states that proposals should ensure that there would be *‘no significant adverse effects on water, ground or air quality and do not significantly increase pollution levels.’*

The study area includes the River Dulais, River Nant Llech, River Tawe, River Dulais and their associated tributaries. Also included are ponds, wetlands, drainage ditches, groundwater dependent ecosystems and groundwater bodies.

Once the Nant Helen Earthworks have been completed, the site will be drained by a series of drainage ditches that feed into drainage ponds before being discharged to surface water features at natural run off rates. There are no areas of the site at risk of flooding.

An outline Construction Environmental Management Plan (CEMP) has been prepared and submitted as part of this application, which sets out how the site is to be managed during construction works. Provided the measures set out in the CEMP are followed there would be no significant effects on water resources.

During operation, discharge from the individual facilities within the washery site would be managed to avoid any impacts on water resources.

In light of the information submitted as part of this application, it is considered the hydrological impact of the proposed development would be acceptable in line with policies DM6 (Powys) and SP16 (Neath Port Talbot).

7.6 Ground Conditions

Policy DM10 of the Powys LDP focuses on contaminated and unstable land, it states that development on these sites would only be permitted in circumstances where the development would not create additional problems of ground instability or contamination, and/or would not have an adverse effect on public health and safety, nature conservation, historic or archaeological interests.

Policy EN8 of the Neath Port Talbot LDP sets out that proposals which would be likely to have expose people to risk due to land instability or ground contamination would not be permitted.

The site has been subject to extensive surface and sub-surface coal mining activities over the past century and therefore, most features identified are related to coal mining.

The existing site has been extensively worked through opencast coal mining operations since c.1946 with opencast activities still ongoing within the Nant Helen Extension site. Several historical collieries have been identified along the northern and southern boundaries of the site. Additionally, various rail tracks and

tramways are shown to have crossed through and run along the boundaries of the site.

Due to the history of extensive coal mining activities it is necessary to implement mitigation measures which are set out within the outline CEMP such that human health and environmental risks are reduced to, and controlled at, levels which do not represent a risk.

Once operational, ground conditions are likely to have improved from the existing conditions and there are no adverse effects predicted and as such the proposed development would be in accordance with policies DM10 (Powys) and EN8 (Neath Port Talbot).

7.7 Cultural Heritage

Policy SP7 of the Powys LDP focuses on safeguarding strategic resources and assets including historic environment designations.

Policy SP21 of the Neath Port Talbot LDP sets out measures to conserve historic heritage which include:

*'1. Encouraging high quality design standards in all development proposals;
2. Protecting arterial gateways from intrusive and inappropriate development;
3. Safeguarding features of historic and cultural importance;
4. The identification of the following designated sites to enable their protection and where appropriate enhancement:*

- (a) Landscapes of Historic Interest;*
- (b) Historic Parks and Gardens;*
- (c) Conservation Areas;*
- (d) Scheduled Ancient Monuments; and*
- (e) Listed Buildings and their curtilage.'*

The main heritage feature on the application site is the tramroad at Ystradgynlais, which is designated as a scheduled monument (GM399) and is a c5km long section of Claypon's Extension to the Brecon Forest Tramroad.

The tramroad extension originally ran between the River Tawe at its western end and Coelbren in the east, although only the central section is designated, reflecting the impacts of opencast mining and residential development on the non-designated sections. The tramroad was 6.44km in length, but only c. 5km is designated as a Scheduled Monument, it should also be noted that as a linear feature, the monument extends across both the PCC and NPTCBC administrative boundary. It is considered to be a Scheduled Monument with national value.

As part of the previously consented Nant Helen Complementary Earthworks Scheme (PCC reference: 20/0738/FUL) it was proposed that a 450m section of the scheduled monument would have to be buried in order to construct of the proposed embankments, and it was acknowledged that whilst leaving the physical fabric of the monument largely intact, this would sever the final eastern stretch of the tramway with its western extent.

In recommending the previous application for approval to Committee, the Officer concluded ‘is considered that the identified major adverse effects for this application would only be outweighed in the event that Cadw is satisfied with the justification for such works (through the SMC process).’ Consequently, Condition 8 attached to the Nant Helen Complementary Earthworks planning consent states that ‘No development shall commence or be undertaken within the area identified in green on plan NPT1/PCC1 until such time as the Welsh Ministers have formally issued Scheduled Monument Consent for all works within that area affecting the Scheduled Monument known as the Tramroad at Ystradgynlais (CH001).’

A Scheduled Monument Consent application will be duly submitted by the Welsh Government in accordance with Condition 8 of permission 20/0738/FUL.

In regard to the current proposal, no further physical works to the Scheduled Monument are proposed as part of this application and for the purposes of the Heritage Impact Assessment (HIA) presented in Chapter 8 of the ES, the baseline for the proposed development has been taken to be the site post-restoration works i.e. the scheduled monument being partially buried (though still intact). This baseline has been referred to throughout the HIA as ‘the base case’.

The HIA concludes that ‘as a change from the base case, there would be no impact on the value of the scheduled tramroad (CH001).’

Notwithstanding this, it is acknowledged that there is a valuable historic transport related feature on site, with PRoW infrastructure that interfaces with it and as such there are clear opportunities to improve the interpretation and therefore understanding of this important heritage asset through the re-development of this site for a modern transport infrastructure use. Further details of how this could be best achieved would be confirmed at RM stage.

Overall, in consideration of the ‘base case’ for cultural heritage impacts and the application for Scheduled Monument Consent it is considered that the heritage impacts of the proposed development have been appropriately considered in accordance with policies SP7 and SP21.

7.8 Traffic and Transport

Policy T1 of the Powys Local Development Plan relates to travel, traffic and transport infrastructure and states that development proposals should incorporate the following:

1. *Safe and efficient flow of traffic for all transport users, including more vulnerable users, and especially those making ‘Active Travel’ journeys by walking or cycling;*
2. *Manage any impacts to the network and the local environment to acceptable levels and mitigate any adverse impacts; and,*
3. *Minimise demand for travel by private transport and encourage, promote and improve sustainable forms of travel including Active Travel opportunities in all areas.*

Policy SP10 of the Neath Port Talbot LDP sets out that measures to facilitate the movement of freight by means other than road and to support enhancements to the walking and cycling network would be support. It also sets out that development would be restricted where it would have an unacceptable impact on highway safety. Policy TR2 states that development proposals will be only be permitted when the LPA is satisfied that appropriate car parking and cycle parking has been provided, highway safety would not be compromised, a development would not generate an unacceptable level of traffic congestion and where developments are accessible by a range of travel means.

As mentioned earlier, Policy TR4 of the Neath Port Talbot LDP relates specifically to safeguarding freight facilities. Policy reference TR4/4 seeks to protect existing rail connections and sidings.

As already illustrated, a key benefit of this site for the proposed development is its overall accessibility not just by road, but importantly to rail and then to port facilities for the transportation of rolling stock to the site. The existing rail connection would be protected in accordance with policy TR4.

The TA demonstrates that a significant amount of the transport infrastructure for the local highway is already in place to deal with a large number of HGV and other associated site traffic. There is a frequent bus service providing north-south accessibility with a well-situated bus stop, a good cycling route to Swansea and many PRowS in the area.

Proposed on-site car parking will provide Ultra Low Emission Vehicle charging points in line with national policy and the exact specification of this would be confirmed at RM stage. The TA includes a Framework Travel Plan that can be taken forward and developed into an agreed document for the proposed development once an operator is confirmed.

During construction, deliveries to the site are likely to be made via a mix of road and rail vehicle movements. The effects of the traffic generated by the development on the local highway network has been assessed using traffic capacity modelling for a variety of scenarios with robust assumptions made for a worst-case scenario.

The results indicate that the local highway network can accommodate the additional traffic and that the development will not have a significant effect on the performance of the junctions within the agreed study area.

The GCRE site will also be required to implement a site wide Construction Traffic Management Plan (CTMP) and use this as a means of monitoring the transport situation during construction to ensure health and safety at the site is always in line with best practice. The existing access into the washery site from the A4221 would be the main access into/out of the site during construction with additional access off Onllywn Road (which runs north into the site from the A4109).

Deliveries to the site are likely to be made via a mix of road and rail vehicle movements. Whilst the exact split of deliveries is not known at this stage, a logical approach has been taken to generate assumptions around the split of

vehicles. It has been assumed that equipment associated with the track works (formation, ballast, sleepers, rails, clips etc.) and other rail infrastructure (overhead line equipment, switches and crossings etc.) will primarily be delivered by rail.

The temporary increase in HGVs in the busiest phase of construction would have a significant effect on severance on Onllwyn Road. There would also be effects with regards to severance, pedestrian and cycle delay, fear and intimidation, driver delay and accident and safety, although these are not considered to be significant.

The identified access routes to the project site make use of roads with limited sensitivity and it is proposed that construction traffic is monitored as part of the CTMP to review compliance.

Once GCRE is established and operational there are unlikely to be any significant adverse traffic effects. As a result, it is not thought that further mitigation measures would be required. However, it is proposed that a Travel Plan is introduced to mitigate and minimise traffic arriving to the site. This would align with the requirements of PPW11 and relevant technical guidance. As a result of these measures, no residual traffic and access effects are considered likely.

In addition to the above, the proposed development would result in changes to the PRow network surrounding the site. Notwithstanding this, the intention is to divert/re-align existing PRows and bridleways to create a new circular route around the site with the potential to create stronger links with existing heritage features. Changes to the PRow network will be subject to a separate process, led by NPTCBC and PCC.

It is considered that the proposed development has considered the transport impacts of the proposed scheme and the impact on traffic on the road and rail network and recreational routes would be acceptable in line with policies T1 (Powys) and SP10 (Neath Port Talbot). As noted in section 7.2, the proposals would be in accordance with policy TR4 by virtue of existing railway sidings being protected.

7.9 Residential Amenity

Policy DM13 of the Powys LDP states that development must have regard to the amenity of the surrounding area, local infrastructure and resources. It further states that development should be designed to minimise impact on the highway network and ensure highway safety, and that *'the amenities enjoyed by the occupants or users of nearby or proposed properties shall not be unacceptably affected by levels of noise, dust, air pollution, litter, odour, hours of operation, overlooking or any other planning matter.'*

Policy BE1 of the Neath Port Talbot LDP sets out that development proposals will be permitted where they would not have *'significant adverse impact on highway safety, the amenity of occupiers of adjacent land or the community.'* Additionally, policy EN8 states that development which poses unacceptable risk to amenity by reason of air pollution, noise pollution, water pollution, light pollution or land instability would not be permitted.

Matters that have arisen out of engagement with stakeholders have focused on highway safety, noise and air quality impacts as well as matters of flooding and stability of earthworks. The latter two have been dealt with comprehensively and to the satisfaction of all regulatory parties in the abovementioned applications for the Nant Helen Complementary Earthworks and would be subject to further consideration as part of the SAB process.

Chapter 13 of the ES presents a health and wellbeing assessment which considers how the proposed development may impact a number of health determinants, which are aspects of the environment which influence a person's health. Health determinants considered include social networks, transport and connectivity, access to open space and nature, neighbourhood quality (covering air quality, noise and visual impacts), climate change and employment. The health assessment has also considered impacts on people within the local area and along the branch line.

The health assessment identifies a significant beneficial effect during the construction period due to increased employment opportunities for local residents. No other significant adverse impacts are identified during construction or operation in relation to health and wellbeing. This is due to the range of mitigation measures that will be implemented. For example, noise barriers would be erected to reduce noise impacts for local residents, there would be extensive planting to screen visual impacts and a Public Rights of Way Mitigation Strategy would be implemented to deliver long-term improvements to the local network.

Further assessment of the noise and vibration impacts of the proposed development are presented in Chapter 10 of the ES. This concludes that with mitigation in place, such as acoustic fencing, and restrictions on the background noise levels at the washery site during evenings and at night, the impact of the proposed development on the noise environment would be acceptable.

Specifically in relation to air quality, the ES chapter examines the effects of humans and ecology associated with construction activities, including impacts from construction traffic. The air quality effects associated with traffic travelling to and from the completed development has also been examined.

Construction activities will be managed by the CEMP which will include measures to control air quality effects from construction including pollutants and dust. A CTMP would also be prepared by the contractor and used to manage vehicle movements to the site.

With implementation of the measures identified in the CEMP air quality effects from construction activities are not considered significant to humans or ecology. Furthermore during construction there would be no significant negative air quality effects in relation to construction traffic.

Once completed the proposed development is likely to have a negligible impact on air quality due to the small additional traffic associated with the proposed development and the distance between the test tracks and sensitive receptors. Overall the impact due to operation of the proposed development is predicted to be not significant.

This will be an operational site that in order to be accredited as a rail testing and validation facility, will have to demonstrate stringent health and safety protocols are in place and compliance with. Clear demarcation of space and route-finding will be important and laying out the different spaces to ensure that there are clear lines of sight will be a critical factor for both on-site staff and visitors to the facility. Waymarking/signage and fencing/barriers will be important in delineating areas that are not for general access, as well as alerting operational staff and visitors of areas of rolling stock movement, electrified tracks, among other hazards

With the nature of the site activity and the testing and storage of valuable rolling stock, security will be an important operational consideration and perimeter security fencing and surveillance/hyper-connected communication infrastructure as well as demarcation of and clear definition between live/operational rail roads and more 'public' areas will be of utmost importance.

With there being areas of retained common land for grazing and restored public rights of way around parts of the site, signage and stock proof as well as security fencing will ensure that any grazing and recreational pedestrian movement on site is safe and suitably controlled.

Lighting for operational safety is an important consideration as highlighted earlier in this document.

In summary, with suitable mitigation in place it is considered that the proposed development would respect residential amenity and would not cause unacceptable impacts in terms of noise, or any other type of pollution. This would accord with policies DM13 (Powys) and BE1 (Neath Port Talbot).

7.10 Welsh Language

Future Wales: the national plan 2040 sets out an ambition to create 'a Wales where people live in places with a thriving Welsh language.'

PPW10 sets out that the Welsh language is 'part of the social and cultural fabric' of Wales and that 'the land use planning system should take count of the conditions which are essential to the Welsh language and contribute to its use and the Welsh language goal' (of a million speakers by 2050).

TAN 20 is focused on Planning and the Welsh Language and primarily provides guidance for Local Authorities as to how the Welsh language should be considered in Plan-making. Notwithstanding this paragraph 3.1.2 states that, '*in determining individual planning applications and appeals, considerations relating to the use of the Welsh language may be taken into account so far as they are material.*'

Policy DM12 of the Powys Local Development Plan relates to development in Welsh speaking strongholds. These are identified within the Plan, and three identified strongholds: Ystradgynlais, Abercrave and Coelbren are located within proximity of the proposed development site for GCRE. The policy states that any

proposals for residential development (of 10 or more dwellings) within these locations will be subject to a Welsh Language Impact Assessment.

Policy SP22 of the Neath Port Talbot LDP relates to Welsh language. It sets out 'language sensitive areas' where the Welsh language will be safeguarded and promoted which includes the community of Crynant in the Dulais Valley. Crynant is located along the branch line, south of the main GCRE site.

The Neath Port Talbot 'Development and the Welsh Language' SPD sets out Welsh Language Sensitive Areas which include Crynant, Seven Sisters and Onllwyn within the Dulais Valley. The SPD also sets out measures which new development in this area should implement in order to support the Welsh language.

At a county level, according to 2011 census data approximately 18% of the population of Neath Port Talbot can speak, read or write Welsh. The equivalent figure for Powys stood at 21% which matches the Welsh average. At a ward level, there is a higher proportion of Welsh speakers in the area surrounding the proposed GCRE site which reflects their position within LDP policies and accompanying SPD. This includes communities such as Abercrave where 43% of the population can read, speak and write Welsh as well as 22% in Onllwyn, 26% in Seven Sisters, 44% in Ystradgynlais and 29% in the ward of Tawe-Uchaf. As a result the impact of the proposed development on the Welsh language is an important consideration.

GCRE would serve to create new employment opportunities during construction and operation in proximity to Welsh speaking strongholds, as defined by LDPs. In addition, the proposed development would create new training and education opportunities in the Dulais Valley. Both of these impacts could contribute to the retention of Welsh speaking people in this area, particularly among the younger population, helping to mitigate issues related to outward migration, thereby safeguarding the continued use and prevalence of the Welsh language.

As noted above, it is the intention that GCRE would include measures to improve the interpretation and understanding of cultural heritage assets surrounding the site. As noted by the Future Generations Commissioner for Wales, cultural heritage in Wales is very much connected to the Welsh language. Therefore, the focus on protecting culture is also considered to promote the Welsh language in accordance with Neath Port Talbot Policy SP22. This would benefit both populations working and living in the local area, as well as visitors to the area, enhancing the tourism offer.

In accordance with statutory requirements all signage and promotion in relation to the site would be bilingual and has been so to date, as evidenced with the PAC Report submitted as part of this application. In addition, in accordance with measures outlined within the Neath Port Talbot 'Development and the Welsh language' SPD, the applicant will work with the local authorities and other partner organisations to consider suitable further mitigation and support measures at detailed design stage. This could include for example, Welsh language awareness courses for future employees, Welsh Language Service courses for frontline staff and ensuring that suitable support structures would be in place for the provision of bilingual signage and announcements.

Overall it is considered that, particularly with additional support measures in place, GCRE would have a positive impact on the Welsh language, and for the reasons outlined above would serve to contribute to the Well-being Goal of creating a ‘Wales of vibrant culture and thriving Welsh language.’

7.11 Energy

Chapter 3 of PPW11 (Strategic and Spatial Choices) focuses on placemaking and strategic development. Paragraph 3.7 sets out that ‘developments should seek to maximise energy efficiency and the efficient use of other resources (including land), maximise sustainable movement, minimise the use of non-renewable resources, encourage decarbonisation and prevent the generation of waste and pollution.

UK Government announced in 2019 its commitment to become carbon neutral by 2050. More recently, in March 2020, the DfT published ‘Decarbonising Transport’, which explains Government’s strategy in developing a Transport Decarbonisation Plan (TDP) which will be published in Spring 2021.

One of the seven Well-being Goals within the Well-being Act is to create ‘a resilient Wales’, which *‘maintains and enhances a biodiverse natural environment... and the capacity to adapt to change.’*

Policy DM13 of the Powys LDP sets out that new development should demonstrate a sustainable and efficient use of resources. Policy SP1 of the Neath Port Talbot LDP relates to climate change and sets out measures to minimise its impacts including encouraging the transportation of freight by means other than road and reducing dependence on the private car.

Since the Climate Change Act was passed in 2008, great progress has been made to reduce greenhouse gas (GHG) emissions, with a reduction of 30% in the decade to 2018. However, reaching a net-zero economy by 2050 will require accelerated efforts. GHG emissions will need to be cut in many industries, including transport. In fact, the contribution of transport to GHG emissions cannot be understated – in 2017, it was the largest source of emissions in the UK. Whilst other elements have reduced their pollution levels in recent times (since 1990, industry, power and waste have reduced their GHG emissions by over 50%), emissions arising from surface transport have increased.

Given rail is one of the most carbon-efficient modes of transport, particularly for medium and long distances, it has a key role to play in the decarbonisation of the transport industry as a whole. Some of the key topics mentioned in the documents are the need for further electrification programmes, the importance of adopting new technologies and the need for investment in both rail infrastructure and rolling stock.

Green railway technologies will help in the decarbonisation of transport and achieving a net-zero economy by 2050 and as such, GCRE could help to achieve

decarbonisation in a short timescale by providing a testbed for new, low-carbon technologies, sustainable energy capture and storage and other innovations.

The concept illustrative plan (as well as the site size and other physical and locational characteristics) mean that the site has capacity for:

- A site layout which facilitates potential for on-site renewable energy production subject to detailed assessment of the feasibility and commercial viability of options;
- Buildings which integrate renewable energy generation (where possible, on a building by building basis);
- Buildings which are energy efficient across their whole lifetime, including construction and demolition;
- Managing buildings and site-wide operations in a way which minimises energy and carbon use; and
- Maximising opportunities for circular economies of waste management through the construction and the ongoing life-cycle of the site.

It is therefore considered GCRE would not only align with local policy objectives to encourage low-carbon development but also wider national policy, and strategic initiatives as well as legislation such as the Well-being Act.

8 Conclusion

An outline planning application has been submitted to both PCC and NPTCBC for the proposed development of a Global Centre for Rail Excellence at the site of Nant Helen Surface Mine and the Onllwyn Washery and Distribution Centre in Onllwyn,

The site has a positive planning history with recent approvals which allow for the restoration of the surface mine area and also complementary earthworks which would ready the site for the GCRE / future rail investment.

It is considered that the proposed development accords with national planning policy which provides a presumption in favour of sustainable development, and which forms a material planning consideration in the determination of the application.

Notwithstanding this it is recognised that the proposed development would represent a departure from each authority's respective LDP. For the reasons outlined in this PDAS, it is considered that there are material considerations, including wide ranging economic benefits, which justify the proposed departure.

The benefits of the proposed development are clear, GCRE would be a state-of-art facility, the kind of which does not currently exist elsewhere in the UK. It would not only serve to meet specific needs of the UK rail industry but also would result in transformational socio-economic impacts both at a national and local level in terms of job creation and education and training opportunities over the long term. GCRE has been developed collaboratively in consultation with industry experts, it is considered that it would be at the forefront of innovation to create a more sustainable, low-carbon rail network not only in the UK but internationally.

The Nant Helen Surface Mine and Onllwyn Washery site has been specifically chosen as the most suitable site within South Wales to accommodate such a complex development proposal, and it is considered that the proposed development demonstrates clear areas of special merit which would warrant the grant of planning permission.

Where the proposal would result in significant environmental effects, identified through the ES, appropriate mitigation measures have been recommended for implementation at RM stage in order to reduce impact and prevent significant adverse effects wherever possible. Furthermore, where some significant effects are identified during construction, these would be temporary and the Welsh Government has committed to putting in place suitable mitigation measures to reduce construction impacts, as set out within the outline CEMP as submitted.

These proposals have been developed with the involvement of the local community, ensuring that representations during consultation have been integrated into the design of the proposed development and the mitigation proposed.

Overall, a positive planning balance has been evidenced throughout this PDAS and in consideration of this it is respectfully requested that planning permission be granted accordingly.

Appendix A

Site Photos

A1 Existing Site Photographs





Appendix B

Indicative Design Images

B1 Examples of Rail Storage and Maintenance possible Building Typology



B2 Examples of R&D/lab/office possible building typology



Proposed Institute for High Speed Rail and System Integration (IHSRSI), Gateway 45, Leeds



Royal Holloway Innovation Centre



Graphene Engineering Innovation Centre, Manchester University

B3 Examples of possible site lighting

