



Coleg y Cymoedd

Supporting Skills in Rail

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Presentation Aim

- Outline how Coleg y Cymoedd can support skills development
- Working with us to support future skills needs – Rail Centre of Excellence
- Apprenticeship Frameworks and Upskilling
- Establish how Coleg y Cymoedd can support employers

Supporting Skills Needs

- Access to various funding streams
 - Apprenticeships
 - Upskilling@work
 - Bespoke Programmes
- Development of new qualifications and frameworks
- Full time Rail Programme
- Rail Centre of Excellence
- Curriculum Boards



Qualification Offer

- Rail Engineering (Track) Level 2 - 3
- Rail Engineering Overhead Line Construction Level 2-3
- Signalling Level 2
- Construction Trades Level 2 - 3
- Civil Engineering Level 3 - 5
- Electrical and Mechanical Engineering Level 3 - 5
- Leadership and Management Level 2 – 7
- Customer Service / Administration Level 2 - 4



Industry Training

Electrification (OLE)

- Appointed Person / Nominated person / OLEC 1 / 2 / ROCS installation and maintenance (Rigid Overhead Catenary System)

Portable Plant (Small tools):

- Rail Saw / Rail Drill / Sleeper Drill / Hedge cutter / Brush Cutter / Hand Trolleys/Iron Man / Impact Wrench / Disc Cutter / Abrasive Wheels.

Workplace Safety Critical Assessments:

- Individual Working Alone (IWA)
- Controller of Site Safety (COSS)
- Possession Controller (PC)
- Engineering Supervisor (ES)
- Safe System of Work Planner (SSOWP)

Industry Training

Safety Critical Training:

- Personal Track Safety/ Lookout / Site Warden / Individual Working Alone / Controller of Site Safety / Protection Controller / Possession Support / Engineering Supervisor / Level Crossing Attendant / Points Operator.

Permanent Way Engineering

- Track induction / Permanent Way Maintenance / S&C Maintenance / Passing Trains over Broken and distorted Rail / Track Geometry / Handback Engineer / Track Geometry Supervisor / Critical Rail Temperatures / Hot Weather Precautions / Rail Stressing.

Apprenticeship Delivery Model

- Learners will be required to attend college on day release or block release to complete Technical Certificate and ESWs

This is developed around the need of the employer

- NVQ Diploma, delivered and assessed in the workplace by occupational competent assessors
- Additional Qualifications – Small Tools, PTS, Track Induction, Olec 1

Apprenticeships

- Apprenticeships are becoming more and more recognised as a pathway to **Higher Education** and importantly **high end jobs**.
- Apprenticeships have become the preferred method of recruitment allowing organisations to manage “**Aging Work Force**” and secure the next generation of **Experienced** and **Qualified** employees.
- Developing future workforce

Upskilling@work

- ESF part funded programme, supporting those already employed in the industry
- Upskilling workforce e.g. Track maintenance – Electrification
- Developing future workforce



Rail Centre of Excellence





Coleg y Cymoedd

Future strategic opportunity for the college's
National Centre of Excellence for Rail Training (NCERT)

Summary Report | November 2018

Yn: Newyddys Ffôn a Chyhoeddi, Cardiff, 22.10.18



A collaboration, stable and responsive business partnership that will inspire, train and support a diverse range of apprentices and rail workers allowing them to follow long term, high-value and dynamic career pathways in the rail industry

Companies that we engaged with:

Acorn	Great Western Railway
Alan Griffiths Rail	Kwik-A-Way
Ang	Laird
Ben Nutall	M and G Berry Consulting
CAF	McGinley
Cardiff Capital Region Employment & Skills Board	National Skills Academy for Rail (NSAR)
CECA	National Training Federation Wales
Centrosat	Network Rail
City and Guilds	Pullman Rail
EAL	SPL Powerlines UK
EEF	Transport for Wales
FamerPlay	TSO
G.O.S Tool & Engineering Services	TSSA
Genymede	TOM Plant
	Welsh Government



Karen Phillips, Principal Designate (Principal January 2018)

It is important to acknowledge the pioneering work done by the outgoing principal, Judith Evans, who has successfully led the development of the college's rail engineering capabilities to date, including the opening of NCERT in 2015 and raising its profile amongst political and industry stakeholders.

We are excited about taking NCERT on to the next level and see the vision as:

A collaborative, visible and responsive business partnership that will inspire, train and support a diverse range of apprentices and rail workers allowing them to follow long term, high value and dynamic career pathways in the rail industry

We want to act promptly to embed new skills and qualifications in the training offer of the college and upgrade our infrastructure and equipment to facilitate it, but this could require more than a two year lead-in time. So there is no time to waste if we want to provide the right skills, in the right place and at the right time so that Wales can successfully deliver its exciting pipeline of railway projects and mark itself out as a global player in rail.

We see the priority actions to help achieve this vision as being:

- For a consultation to take place with the rail industry supply chain, including Sustainable Transport Infrastructure Delivery (STRIDE) Framework companies, on their future apprenticeship numbers, the level of qualifications and skills required, and the type of qualifications and skills, such as for Digital Railway.
- To create a roadmap:
 1. To secure new equipment, facilities and resources that can be used for training in both traditional engineering and digital and innovative technologies such as a new digital suite.
 2. To develop the appropriate set of relevant qualifications in a timely manner and securing the appropriate accreditation needed by industry.
- To design and publish the model for NCERT's business partnership with TIW, Network Rail, key rail industry suppliers and other education providers.
- To work with the Cardiff Capital Region (CCR) Employment and Skills Board to develop and plan the provision for NCERT.
- To make the business case for funding to deliver the future vision and business partnership model.

We really appreciate the wide range of stakeholder involvement that has brought us this far, and we look forward to progressing this exciting opportunity over the coming months.



New entrant
Apprenticeship, vocational qualifications



Rail worker
Updating and reskilling

LEARNERS

WALES' NATIONAL CENTRE OF EXCELLENCE FOR RAIL TRAINING

"A collaborative, visible and responsive business partnership that will inspire, train and support a diverse range of apprentices and rail workers allowing them to follow long term, high value and dynamic career pathways in the rail industry"

BUSINESS PARTNERS



Accreditation bodies



Rail supply chain



Training providers



Network Rail



Transport for Wales

BENEFITS TO LEARNERS

- Access to employment and financial empowerment
- Clear career pathway and opportunity for skills development
- Good benefits and pay
- Growing industry offering improved security of employment
- Innovative, exciting roles created through the digital revolution
- Opportunity for a global career

BENEFITS TO BUSINESS PARTNERS

- Recruits and trains suitable employees on behalf of employers
- Provides succession for an ageing workforce
- Flexible resource responsive to specific skills need of businesses
- Good attitude, work ethic and understanding of compliance and safety
- Delivers lifelong learning and further skills development
- Provides diversity of skills needed for the future

MEASURES OF SUCCESS

- A greater number of apprenticeships
- Higher level qualifications achieved (Levels 3 to 6)
- Greater diversity of qualifications (e.g. Digital Railway)
- Increase breadth of industry involvement

The landscape of major infrastructure investment

Significant investment is being made in rail infrastructure in Wales and England over the coming years, which are driving an increased need for skilled workers. There are also a number of major non-rail infrastructure projects, competing to attract and retain the same type of workforce. NCERT has a strategic opportunity as a source of supplying new entrants into this market through apprenticeships alongside upskilling and reskilling the existing workforce.

Major Welsh rail investment

- Wales and Borders franchise**
 Ebn will be invested in a new 15 year franchise between KeolisAmey and Transport for Wales. All current trains will be replaced and 95% of journeys will be made on new-build stock.
- Potential rail testing and storage facility**
 A £100m rail testing complex to work on next generation train technology is planned on the site of a mothballed opencast mine in Neath Port Talbot.
- CAF factory for assembly and testing of rail vehicles**
 Based in Catic Business Park at the Llanwrn steelworks site near Newport, the proposed plant will accommodate the production of a range of different vehicle types.
- Modernising the railway in South Wales (Network Rail)**
 Network Rail is working with the Welsh Government, DfT and other stakeholders to improve the railway across South Wales and introduce faster and more reliable trains, with the possibility of extra services.
- Cardiff and Newport Signalling Renewal (Network Rail)**
 This state-of-the-art signalling technology will allow more trains to run along the track. Modernising the railway will make it easier for people travel to their work in Cardiff, Swansea and other centres of employment in the region and potentially attract more employers to relocate in South Wales.

6. South Wales electrification (Network Rail)

The line between London and Cardiff will be electrified to introduce bi-mode trains, providing extra seats and faster services for passengers and a quieter and greener environment for in-estate neighbours.

7. Cardiff and Valleys station upgrades (Network Rail)

Network Rail has added or extended platforms at Cardiff Central, Cardiff Queen Street, Tir-Phi, Barry, Caerphilly and Pontypridd, allowing more train to run and provide room for extra carriages at peak times.

8. Potential Swansea Bay Metro

The vision for this project is to accelerate the economic growth across the Swansea Bay City Region, expanding labour market catchments, and encouraging investment by transforming the region's rail network.

9. North Wales Metro

The North Wales Metro aims at connecting businesses and markets, facilitating trade, exchange and travel in North Wales, with a multi-modal system, linking major settlements and employment areas with hubs located in Wrexham, Chester and Deeside.

10. Potential North Wales and South Wales mainline improvements

As part of the Railway Upgrade Plan, ageing signalling is being replaced across the route with state-of-the-art equipment to build more reliable and resilient railway, allowing more services to run in the future.

Major English rail investment

- HS2 Phase 1
- HS2 Phase 2
- Trans-Pennine electrification
- Sheffield-Rotherham Tram Train
- Crossrail Dartford
- Crossrail 2
- Solent Metro Scheme
- Digital railway East coast mainline

Major non-rail infrastructure projects

- Wylfa Nuclear Power Station
- Hinkley Point C
- Heathrow Third Runway



Digital railway

The Digital Railway represents a massive opportunity for improvement in the rail industry. This can only be met through a step change in digital skills for new entrants and existing workers within the industry.

The benefit

Network Rail defines three core improvement areas from the Digital Railway:

- More Trains
- Better Connections
- Greater Reliability

The Digital Railway can enable a step change in performance, where historic enhancements are either overly constrained or too costly.

Train specific movement analysis and communication can replace block signalling to increase the frequency of trains on the railway system.



Data analytic techniques such as machine learning with railway data can improve our understanding of the railway system, providing insights to inform future investment.

Dynamic routing algorithms can provide real-time timetable adjustments to best mitigate disruptions on the railway system.

The skills

To meet the future skills need, in excess of 200,000 workers in the UK rail industry need new skills. The modelled split for new skills is:

- Upskilling (modest training) 110,000
- Reskilling (significant training) 80,000
- New entrants (apprenticeships) 10,000

The need for new skills will span multiple areas:

- Better IT skills
- Better analytical skills
- Better communication skills
- Skills on the application of digital information to customers
- Better and more agile management and leadership skills

(Content adapted from: Developing skills for future need, National Skills Academy for Rail (INSAR), July 2018)

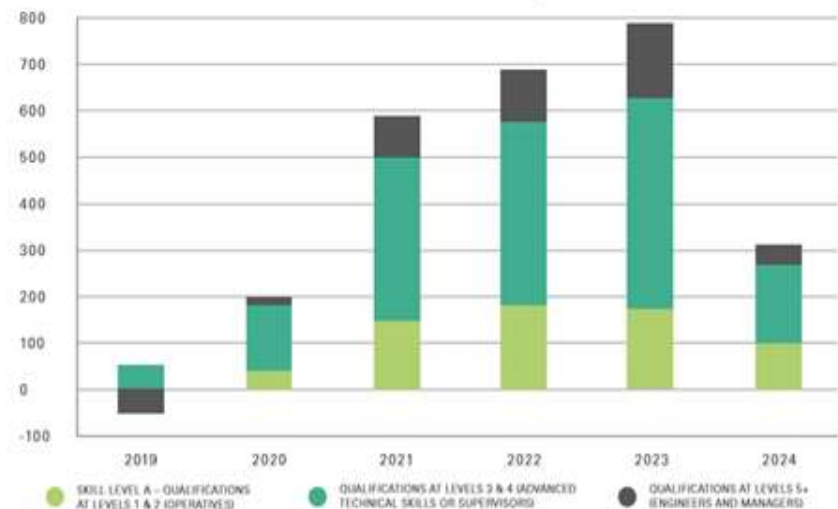
Skills gap in Wales

When considering the provision of future vocational qualifications and apprenticeships, it is important that the NCERT takes a long term view of the need. This need must be formed from the expected supply of skilled workers into the industry, and the demand from industry of those skilled workers – the skills gap.

In 2017 a Labour and Skills Analysis was produced for Transport for Wales. The analysis calculated rail demand using information on the Wales & Borders Rail Service, and South Wales Metro. Since the analysis was produced there have been further developments, including the design for the South Wales Metro – following the selection

of the Wales and Borders Rail Services operator. The analysis does reflect the best current understanding of the skills gap for rail in Wales, but it is being refreshed to address the current demand for rail skills.

The overall skills gap for rail identified in the Labour and Skills Analysis is provided below. It demonstrates a steep demand increase over the next few years, primarily driven by the South Wales Metro. It is believed that whilst there is a sharp decline in the skills gap for 2024, there would likely be continuing demand for rail skills. This demand can be seen when considering the landscape of major infrastructure investment across England and Wales.



Supporting Employers

- Access to fully funded & part funded programmes
- Recruitment and selection support
- Support setting up an apprenticeship / training programmes
- Raising awareness and promoting the sector
- Performance review meetings
- Allocated assessor “Point of Contact”





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