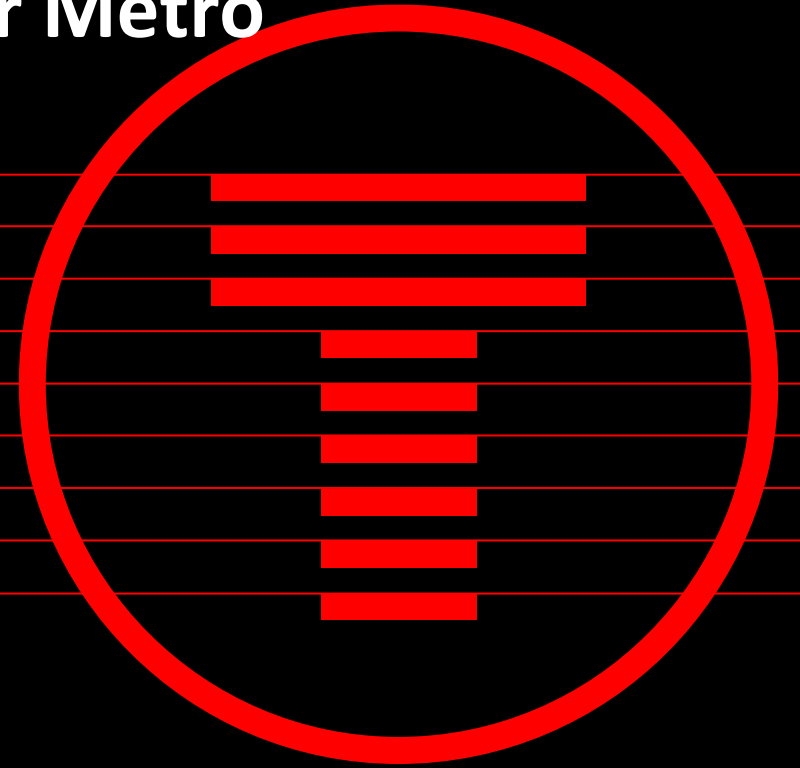


# The Craidd Alliance

## Transforming The Core Valley Lines to Deliver Metro

Construction Excellence Wales



July 2023

## Agenda: CEW Visit – Switch & Crossing at Taff's Well

- Introduction
- Cat Griffith-Williams, CEW
- Karl Gilmore, TfW
- Alasdair Macdonald, Balfour Beatty
- Site walk – Taff's Well Depot and S&C



## What is Core Valley Line Transformation?

- The CVL Transformation is a Welsh Government programme to improve transport in South-East Wales, providing faster, more frequent and higher quality services.
- £1bn has been secured as part of the City Deal, with contributions from multiple local authorities, Welsh and UK Governments and European Regional Development Funding, to upgrade the infrastructure in order to deliver a metro style service level throughout the CVL.
- The CVL Transformation programme will ensure:
  - We put passengers' key priorities foremost;
  - Focus on improving passenger experiences by reducing journey times, enhancing public spaces and increasing service frequency.



## Challenges faced

- 6 month delay in asset transfer from Network Rail
- 2 significant flooding events coupled with some other biblical rain events
- BREXIT
- Global Pandemic COVID 19
- War – Ukraine Conflict
- Global economic insecurity



# Craidd Alliance

The Craidd Alliance is a partnership between 5 organisations, built on international standards of collaboration; whose vision is to transform the Core Valley Lines to build the South Wales Metro.



Cynghrair Craidd, yn gweddnewid Llinellau Craidd y Cymoedd i adeiladu Metro De Cymru  
The Craidd alliance, transforming the Core Valleys Lines to build Metro



# CVL Programme Complexity

## Infrastructure Programme Complexity

Item	Quantity
Discipline Packages	15
Individual Projects	45
Programmed Tasks	c.47,000
Design – Construction Interface Points	c.2,500
Design Integration Milestones	c.1,500
Construction Integration Milestones	c.1,400

## Construction Volumes

Disc.	Item	Qty	Disc.	Item	Qty
Track	Re-Double	11	Civils	Footbridge	12
	Lower	12		Overbridge	2
	Remodel	3		Platform Mods	15
OLE	STK	c.170k m	Signalling	Parapets	52
	Founds	c.3,500		Signals	357
	Masts	c.3,000		Points	71
	SPS	c.9,000		Track Circuits	558
	Wire Runs	c.675		AWS	174
Stations	New	2		TPWS	226
	Upgrade	68		Fibre Cable	c.200k m



# Scope of works

## Track:

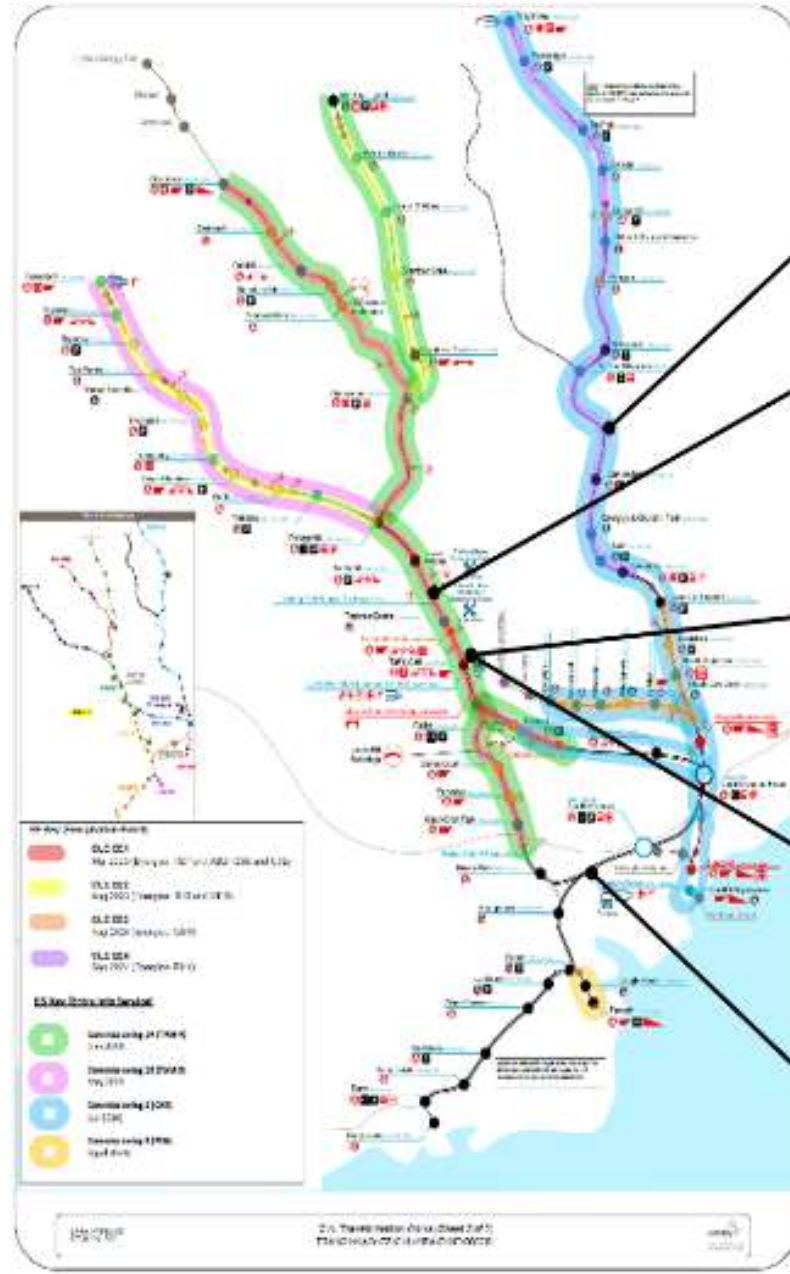
- Multiple locations where track is re-doubled
- Areas where the track will be lowered
- Major works at Queen Street junction
- Line speed improvements

## Smart Electrification:

- Permanently Earthed Section(PES) technology.
- New Bi-mode 'tram-train' style Metro Vehicles with battery-running capability and mainline 'Tri-Mode', capable of 25kV, battery and diesel operation.

## Vehicle Maintenance Facilities:

- New Taff's Well Depot
- New Signalling Control Centre
- Upgraded Depots & Stabling Points



# Scope of works

## Civils:

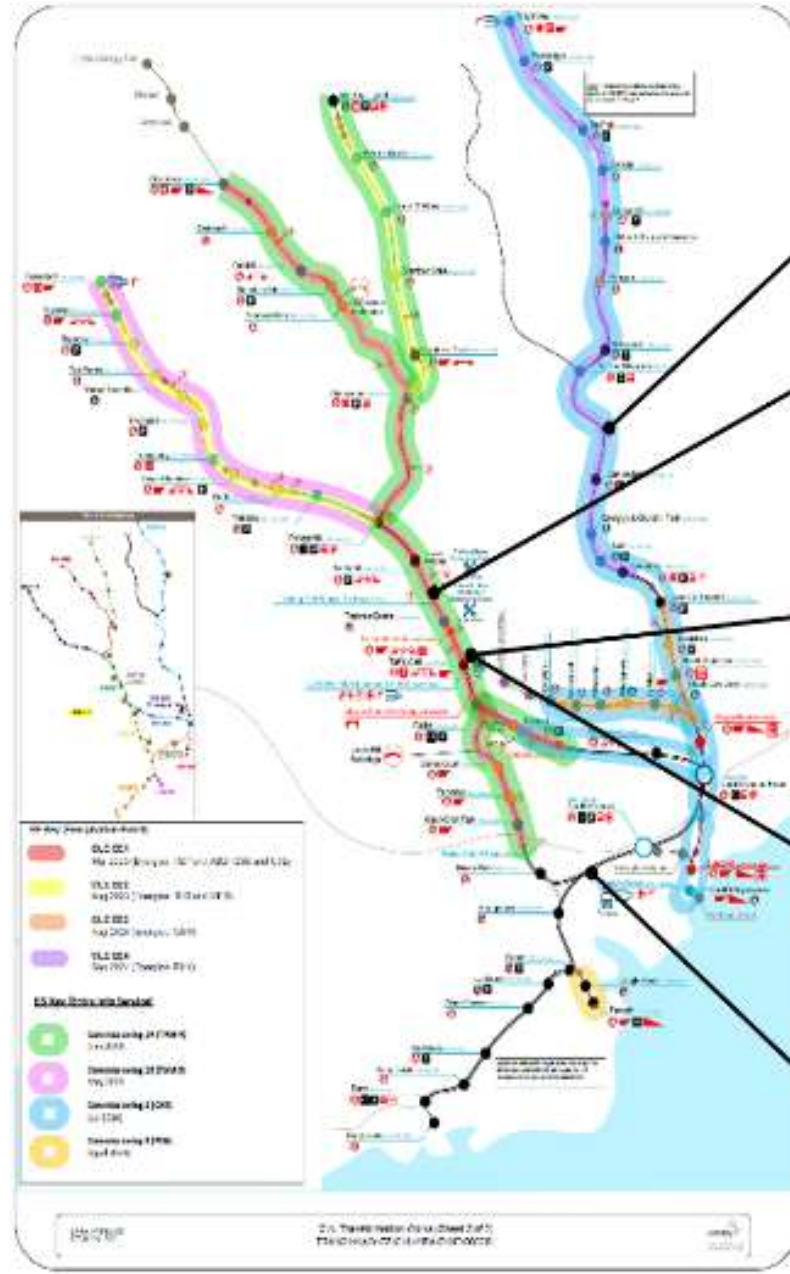
- New station footbridges
- New road over rail bridges
- Raising some existing bridges
- Reduction in 'high risk' level crossings

## Station Improvements:

- New stations & platforms
- Work at all stations to improve facilities

## Electrical Power

- A new High Voltage traction power supply network, to power our enhanced railway





# Largest Most Complex Rail Project in Wales

The Core Valley Lines is a £1.5bn investment in the future of Wales – the biggest most complex rail project since the railway was first introduced.



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ARTICLE

## The South Wales Metro: more than a railway – a regional accelerator?

Stuart Pearson, a construction lawyer at Cardiff-based law firm, Capital Law, outlines the plans for the South Wales Metro and discusses how it's not simply a highly anticipated infrastructure project, but a strategy to transform a region that is ready to take the next step on the national and international economic stage.



By Stuart Pearson - Capital Law

25 January 2019

No comments yet

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Business > Transport for Wales

## The hundreds of jobs being created on the railways in Wales

600 new jobs are being created as well as apprenticeships

SHARE



By [Sion Barry](#)

15:08, 3 MAY 2019

UPDATED 15:15, 3 MAY 2019

BUSINESS



Craidd

**bsi.**  

## Certificate of Registration

COLLABORATIVE BUSINESS RELATIONSHIP FRAMEWORK - ISO 44001:2017

This is to certify that **Craidd Alliance**  
Depot / Ty Trafnidiaeth  
Gwynn Road  
Trafford Industrial Estate  
Rumondoll  
CF37 5UT  
United Kingdom

Holder Certificate Number: **CBR 741339**

and operates a Collaborative Business Relationship Framework which complies with the requirements of ISO 44001:2017 for the following scope:

The management framework for those internal collaborator relationships identified and managed within the Collaborative Relationship Programme of the Craidd Alliance.

For and on behalf of BSI:   
**Matt Page, Managing Director Assurance - UK & Ireland**

Original Registration Date: 2021-11-25      Effective Date: 2021-11-25  
Latest Revision Date: 2021-11-25      Expiry Date: 2024-11-24

Page: 1 of 2

**making excellence a habit.**

# Craidd

The Craidd Alliance transforming the Core Valleys Lines to build Metro yn gweddnewid Llinellau Craidd y Cymoedd i adeiladu Metro De Cymru

At the Craidd Alliance, we know that we're at our best when we share ideas and expertise, build connections and work as a team to drive performance and strengthen relationships. This policy supports the alliances strategic objectives encompassing the values and behaviours as set out in our Cultural Charter.

**Vision**  
Deliver customer focused services through a sustainable transport network of which Wales is proud

**Mission**  
By adopting a collaborative approach with all partners, we wish to build a trusted relationship that:

- Secures the capability and capacity to deliver, which would not be available from any one organisation
- Identifies and adopts consistently best practice from past experience of market leading organisations
- Integrate multiple work packages to maximise the possible scope delivered within the available budget envelope
- Incentive all parties to support the delivery of each parties work for the success of overall project delivery (win in the game)

**Objectives**

- New standards in health, safety and environment
- Transformation for the Valley Communities
- Value for the Welsh pound through challenge
- A legacy to be proud of
- A reputation that grows business

**Behaviours**

- Safety - of myself and others is paramount
- Accountable - for my actions or lack of action
- Supportive - of the project and my colleagues
- Proactive - in my actions & communications
- Aware - of what I do and how it impacts others, the environment and our resources
- Challenging - and constructive in my approach to improving efficiency

  
Neil Gwynne  
Managing Director  
Transport for Wales

  
Simon Hudson  
Head of Core Valleys Delivery  
Arney Infrastructure Wales

  
Alexander Macdonald  
Programme Director  
Arney Beatty






  
Paul Channon  
Project Director  
Siemens

  
Tom James  
Head of  
Arney Beatty

*Neil Gwynne, Simon Hudson, Alexander Macdonald, Paul Channon, Tom James*

**Craidd** Cynghrair Craidd, yn gweddnewid Llinellau Craidd y Cymoedd i adeiladu Metro De Cymru  
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## COLLABORATIVE WORKING RELATIONSHIPS POLICY

At the Craidd Alliance, we know that we're at our best when we share ideas and expertise, build connections and work as a team to drive performance and strengthen relationships...

This policy supports the alliances strategic objectives encompassing the values and behaviours as set out in our Cultural Charter. Our approach to collaborative working relationships enables us to work with partners to achieve the following objectives:

- New standards in health, safety and sustainability
- Transformation for the Valley Communities
- Value for the Welsh pound through challenge
- A legacy to be proud of
- A reputation that grows business


This document applies to the Core Valley Lines (CVL) Transformation project and the collaborative working relationship agreement with our partners Transport for Wales, Arney Infrastructure Wales, Balfour Beatty, Siemens, and Arney Griffiths. All partners having been assessed in line with the Craidd Alliance partner selection criteria and all parties commit to following the principles of ISO 44001.

**Determinants of success**  
We will assess our success at implementing collaborative principles by measuring these key areas:

- Clear policy and objectives
- Leadership competencies and behaviours
- An effective Relationship Management Plan
- Sharing of best practice and knowledge
- Selecting partners who can work with us in a collaborative manner
- Appropriate project-based processes, organisation and governance to enable effective working, including performance measurement and continuous improvement
- A joint approach to opportunity and risk management, and innovation
- A Risk Management Team able to maintain behaviour, trust and deal with the challenge of sustaining the ethos and focus throughout the life cycle of the relationship

**Governance**  
The Transport for Wales Programme Director is responsible for ensuring that the policies, processes, culture and behaviours required are established and maintained, and reviewing collaborative working performance, and ensuring we continually improve.

This Policy will be reviewed annually and will be brought to the attention of employees and interested parties.

**AUTHORISATION**  
  
**Carl Gwynne**  
Rail Infrastructure Director, Transport for Wales  
June 2021

# Craidd Alliance

Balfour Beatty, in partnership with Transport for Wales, Siemens Mobility, Alun Griffiths Contractors Ltd and Amey Infrastructure Wales, known as the **Craidd Alliance** have secured an international accreditation, for collaboration **ISO44001**, whilst working on the Core Valley Lines Transformation Project; a major part of the South Wales Metro project to improve and renew existing assets across the region. This is a £1.5bn economic development project, to enable more frequent services, more capacity, better customer experience and greener new trains. The railway in Wales and the Borders plays a critical role in connecting people, businesses, and communities to support both regional and national economic growth.



# Craidd

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**Balfour Beatty**



**SIEMENS**

## Collaboration in Practice – Enabling the Depot



# CEW Visit – Switch & Crossing at Taff's Well



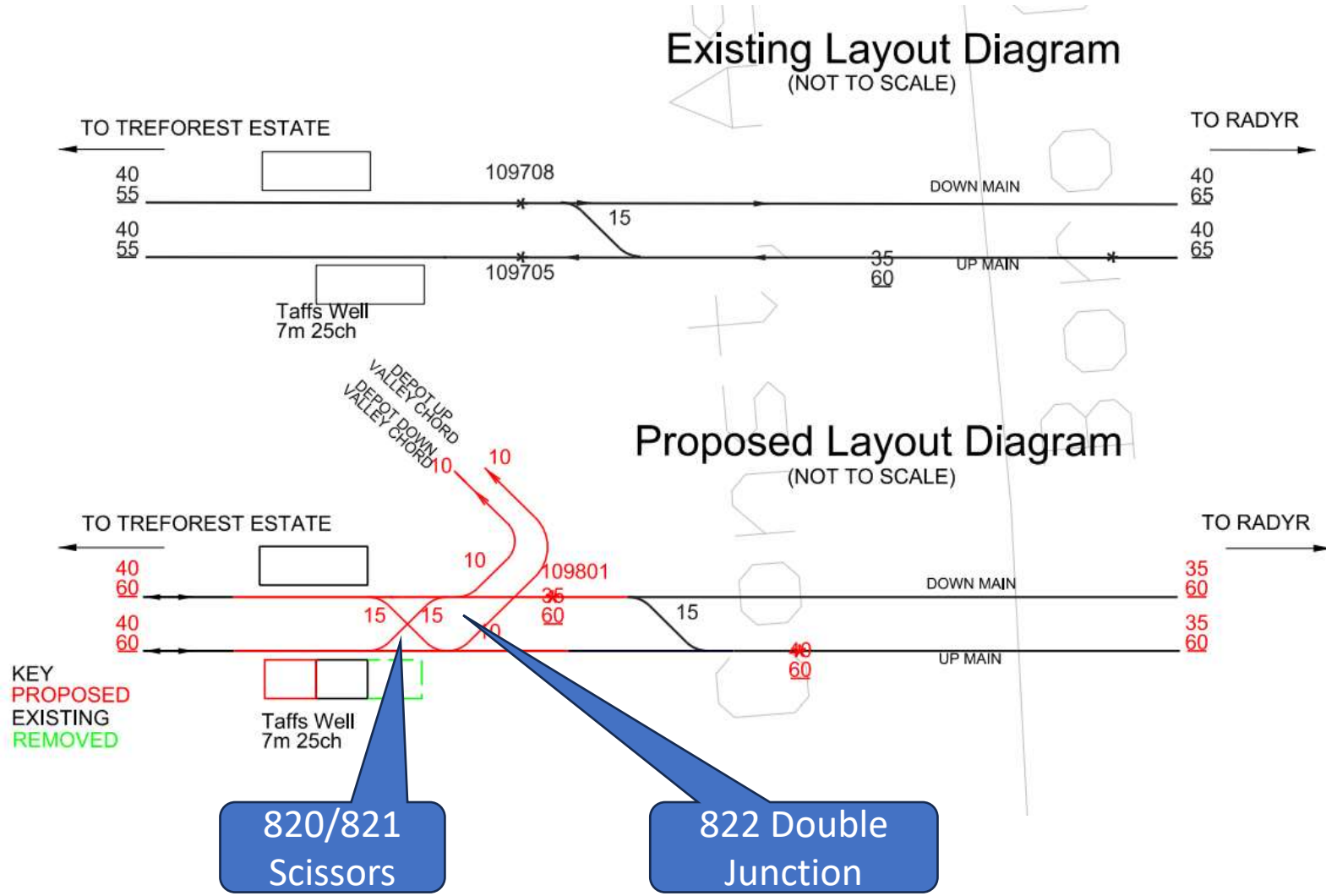
# CEW Visit – Switch & Crossing at Taff's Well



# CEW Visit – Switch & Crossing at Taff's Well



# CEW Visit – Switch & Crossing at Taff's Well



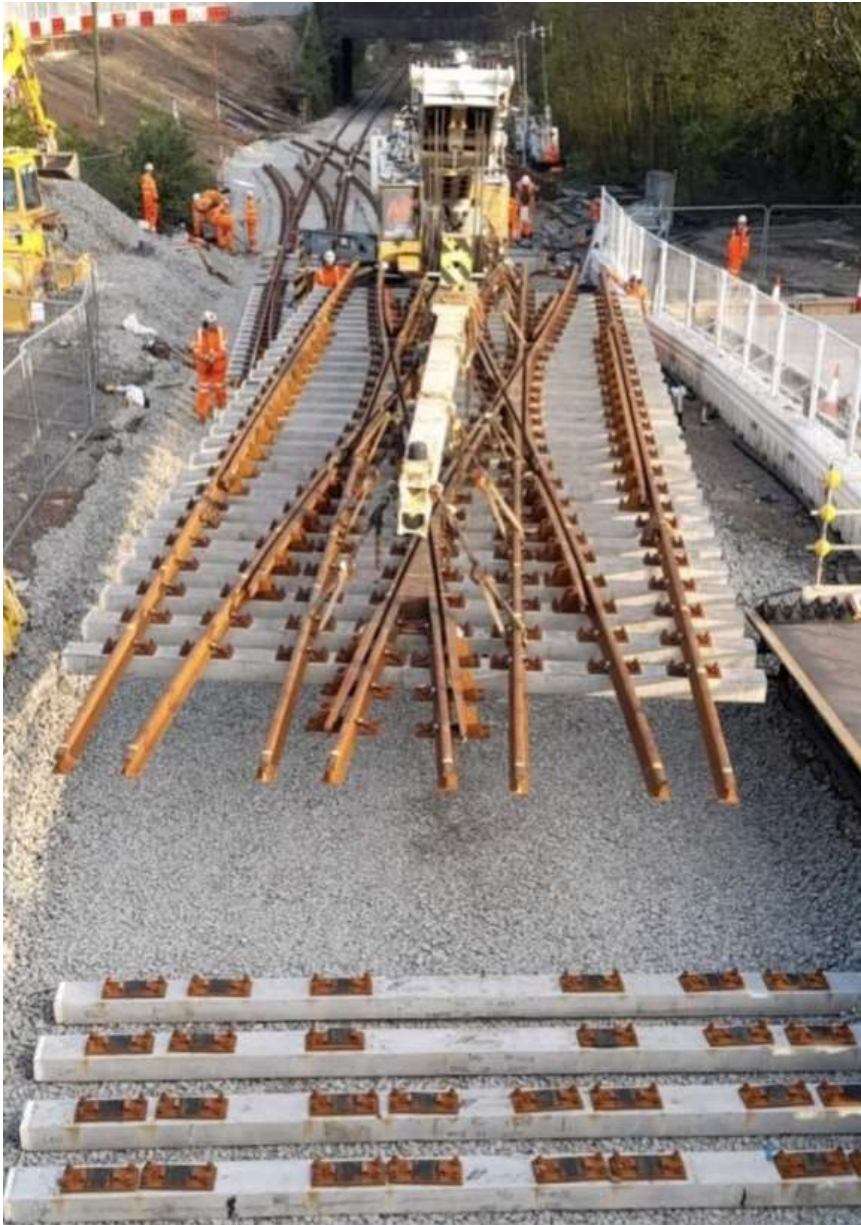
Scissors installed to provide dual routing of train from each platform and up and down lines into the depot.







## CEW Visit – Switch & Crossing at Taff's Well



- Easter Bank Holiday of 2022
- Successfully installed the double junction and crossover
- 102 hours of working time
- Use of the massive Kirow 1200 Crane
- Lifting:
  - 33 tonne scissors crossing panel
  - 35 tonne diamond crossing panel (in the photo)
- The works involved:
  - Permanent Way team who completed the install
  - Civils team to complete the enabling works to the embankment
  - Plant team to operate the Kirow Crane
  - Signalling team who diverted cables and set up the points
  - Supply chain partners who operated road rail vehicles and supplied the engineering trains with ballast, sleepers and rail

## CEW Visit – Switch & Crossing at Taff's Well



- Weighs 116 tonnes
- Has a working radius of 70m
- Can travel at up 15mph
- Lift up to 120 tonnes

# CEW Visit – Switch & Crossing at Taff's Well



# Biggest success is collaboration

- When you go out, look out for:



- The track and new substation delivered by Balfour Beatty



- The Depot and overhead lines delivered by Amey Infrastructure Wales



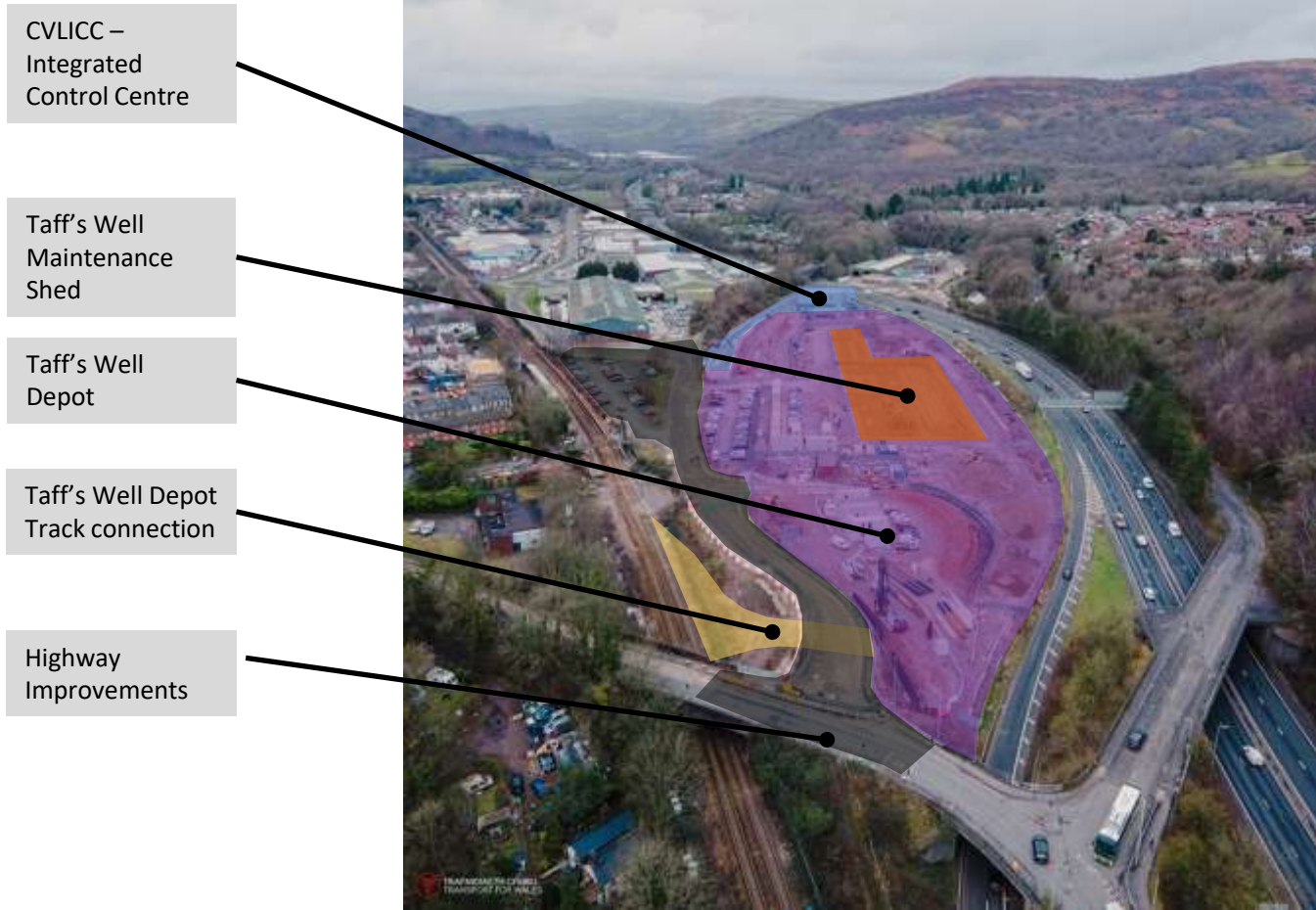
- The overbridge and platform extensions delivered by Alun Griffiths



- The Signalling and relocatable equipment building delivered by Siemens



- The de-vegetation, trough work, minor civils delivered by our SME partners



# Leaving a legacy after the project is finished

A pathway back into work for those leaving the Criminal Justice System that has garnered Welsh Government support, but more importantly that offers the opportunity to support families and benefit communities

## Building Futures – On the Right Track

- Far-reaching benefits for the long-term wellbeing of communities across Wales
- Creating fairer, more equal Wales; access to quality, well-paid sustainable jobs helps break intergenerational cycles of crime, poverty, ill-health and other inequalities
- Creating stronger safer communities; providing former prisoners with quality jobs is proven to help reduce re-offending
- Increasing diversity
- Maximising social impact for our major infrastructure projects

**Lee Waters, Deputy Minister for Climate Change,**  
launched the new scheme in Treforest



# Diolch

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**Balfour Beatty**



**SIEMENS**