

New Stations Assessment

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Station proposals reviewed:

Cockett

Ely Mill / Victoria Park

Llanwern

Newport Road/ Rover Way

Landore

St Clears

Deeside Industrial Park/ Northern Gateway

North Wrexham

South Wrexham

Llangefni

Carno

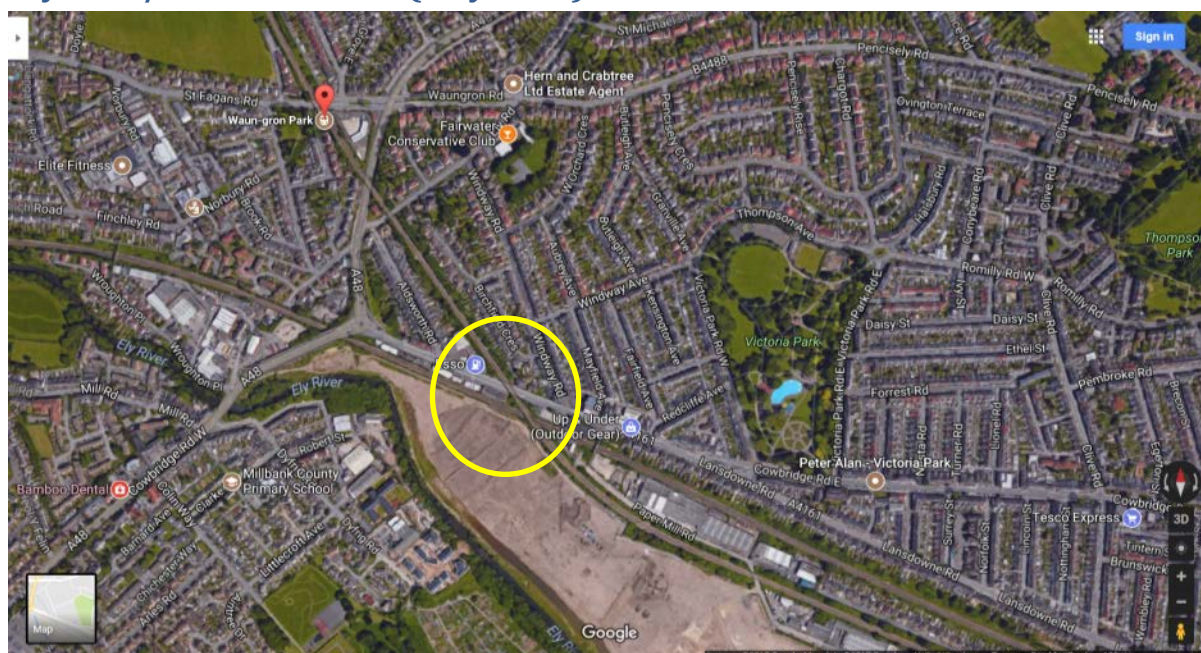
St Mellons/ Cardiff Parkway

Cockett



Location & quantum of services	- Between Swansea and Gowerton. - Currently 1tph (ATW).
Benefits of new station	- Potential to reduce road congestion/journeys. - Area currently not served by rail. - Depending on solution – access to the station could ramp off existing road bridge A4216.
Operational considerations	- Potential capacity issue due to nature of stopping and non-stopping services, linespeed, gradient and curvature of route. - Timetable study would be required to evaluate impact on stopping services at new station.
Affordability considerations	- Cost to build station due to being in a cutting and houses both sides of the logical location (intersection of A4216) - if to serve residential area. - If to serve park & ride, potential suitable location to east of Cockett tunnel. - Significant gradient identified between 214m 66ch to 216m 36ch. Further assessment of gradient may be required to comply with engineering standards. - Line is curved. - Potential passenger abstraction from Gowerton – is there a potential to better develop Gowerton to service market requirements? - Road access and parking likely to be constrained to west of Cockett Tunnel.
Type of service proposed to call at station	Assume local services if not to impact longer distance JT.
Length of trains/platform	Maximum 6 x 23 metres.
Markets served	Commuting markets – Swansea to Cardiff and Carmarthen.

Ely Mill / Victoria Park (City Line)



Location & quantum of services	- On City Line – between Waun-Gron Park and Ninian Park. - Currently 2tph (ATW).
Benefits of new station	- New housing and other social infrastructure. - Growth identified in this area in Welsh Route Study. Line of route identified to deliver growth into Cardiff.
Operational considerations	- No particular impact identified at this stage, apart from impacting turn around times at Radyr. - Further work would be required around capacity and timetabling including agreement on assumptions of future service specification to be tested.
Affordability considerations	- Proximity to existing station - potential JT dis-benefit Vs new passenger journeys (abstraction from other stations). - There is not sufficient seating capacity on existing services, with further high growth forecast along this route. - Abstraction from existing bus services. - Site location would need to be optimised around existing gradients. - Significant gradient between 1m 57ch to 2m 20ch. Further assessment of gradient may be required to comply with engineering standards. - Potential significant earthworks and construction - because the railway is on an embankment and the railway would need to be built up. Accessibility considerations would need to be made if station was raised. - Road access and parking would need to be identified as part of housing and infrastructure development – thus avoiding rail users parking in residential areas. - Early decision on station location relative to housing development plans is essential.
Type of service proposed to call at station	Existing city line services. Potential for skip stop services.
Length of trains/platform	Capability for 4 x 23 metres, or longest train specified in next franchise.
Markets served	New housing and other social infrastructure.

Llanwern (on freight reception roads)



Location & quantum of services	- On freight reception roads between Newport and Severn Tunnel Junction (STJ). - Not NR infrastructure – currently TATA steelworks. - Currently 0.5-1 tph (ATW), 1tph (XC) & 4tph (GWR).
Benefits of new station and strategic context.	- Serves new housing development. - Good location for M4 park & ride. - Potential new station recognised in Welsh Route Study. Requirement to upgrade linespeed recognised as choice for funders and to deliver future growth between Cardiff and Bristol. - Desire to close Bishton crossing and ability to leverage section 106 funding. - Significant growth has been forecast on this corridor.
Operational considerations	- Journey time penalty for passenger services operating on relief lines between STJ and Newport. - Assume platforms for Up and Down routes, if not bi-directional signalling and timetable constraints. - Potential timetable conflicts (e.g. crossing down relief at either end of Bishton and access to Up Gloucester at Severn Tunnel Junction). - Signal spacing over-braked for passenger services. - Evaluation would be required of signalling requirements to facilitate new station. - Work required around capacity and timetabling including agreement on assumptions of future service specification would need to be tested. High growth has been forecast on this route and there is not sufficient seating capacity on existing services.
Affordability considerations	- Line would need to be re-signalled to passenger standards. - Freight train connection agreement and firm operating rights need consideration. - Commercial considerations for freight and TATA. - Only significant gradient is between 154m 46ch to 154m 72ch. Further assessment of gradient may be required to comply with engineering standards. - Location is flat therefore accessibility is not considered difficult to achieve. However one side is rail locked which would require DDI compliant solutions to access Up platform. - Borders site of special scientific interest.
Type of service proposed to call at station	Assume Cardiff to Cheltenham ATW service as only service in Wales & Borders franchise. Cardiff to Bristol services are likely to offer better solution to serve location.
Length of trains/platform	To cater for maximum requirement relative to purpose of station.
Markets served	New housing development and park & ride.

Newport Road / Rover Way (SWML)



Location & quantum of services	- Between Cardiff Central and Newport. - Currently 3 tph (ATW), 4 tph (GWR), 1 tph (XC).
Benefits of new station and strategic context.	- Area poorly served by rail. - Congested road networks. - New stations between Cardiff Central and Newport identified in the Welsh Route Study, drive the requirement for upgrade of relief lines.
Operational considerations	- If fast line platforms are proposed this will have an impact on capacity between Cardiff and Newport, and would require a re-work of CASR. - If relief line platforms are proposed, there would be a journey time penalty for those services for running services on the relief lines. - Further work would be required around capacity and timetabling including agreement on assumptions of future service specification to be tested.
Affordability considerations	- Difficulty in locating a station with suitable access given rail network layout east of Rover Way Bridge e.g. freight sidings. - Track slewing likely required. Potential re-configuration of new crossovers and new signalling, and re-location of planned electrical equipment. - Only significant gradient is between 168m 21ch to 168m 52ch. Further assessment of gradient may be required to comply with engineering standards. - Road access and parking would be difficult due to land availability/industrial areas. This would potentially be a pedestrian station however lack of parking could have impact on other businesses.
Type of service proposed to call at station	- Potential ATW services: - Ebbw Vale which will impact the Ebbw Vale infrastructure solution (3 mile Vs 7 mile loop): services already full and JT poor. - North and West services (JT penalty, high revenue and potential conflicting crossing moves (fast line to slow line). - Cheltenham services (JT penalty due to need to operate on relief lines). - Potentially best served by additional Cardiff to Bristol services.
Length of trains/platform	Maximum 6 x 23 metres.
Markets served	Commuting to Cardiff.

Landore



Location & quantum of services	- On approach to Swansea, adjacent to Landore depot. - Currently 1.5tph (ATW) & 1tph (GWR)
Benefits of new station and strategic context.	Would serve stadium events and conferences, and local shopping centre.
Operational considerations	- Ability to stop longer distance services and requirement for 230 metre + platform length. - Ability to move event numbers is short timescale - there are timetables service implications and rolling stock capacity issues. Staffing and security levels. Special timetable required for events. - Work would be required around capacity and timetabling including agreement on assumptions of future service specification to be tested.
Affordability considerations	- Challenging location as railway is elevated. - Longer platforms would be required if serving events. - Only significant gradient between 214m 61ch to 215 5ch. Further assessment of gradient may be required to comply with engineering standards. - Line is curved. - Passenger access to proposed station difficult and likely to depend on Landore Depot future.
Type of service proposed to call at station	Mix of local ATW services as well as ATW & GWR long distance services for events.
Length of trains/platform	Minimum 230 metres 10 car IEP.
Markets served	Event and stadium users.

St Clears



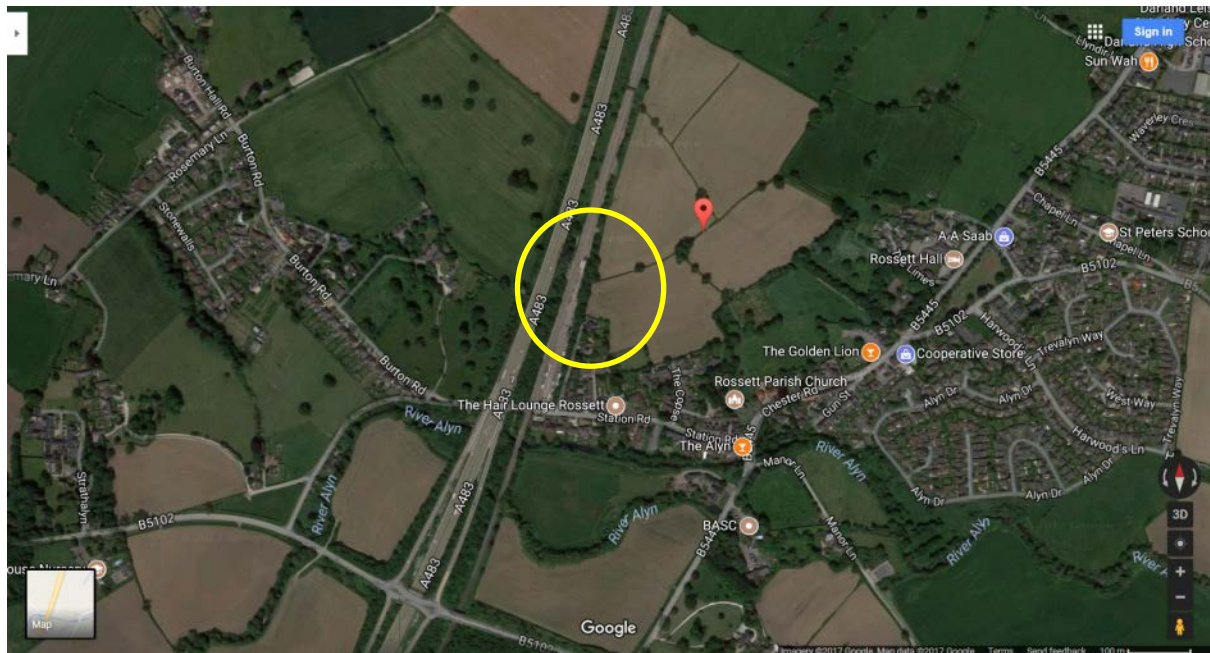
Location & quantum of services	- Between Carmarthen and Whitland. - Currently 1tph (ATW) plus 3 additional trains per day serving Fishguard Harbour (ATW)
Benefits of new station and strategic context.	- Serves local village. - Closes geographical gap in West Wales in access to rail network.
Operational considerations	Timetable study needed to evaluate impact on stopping services at new station and assessment of impact of a new station on the existing level crossing.
Affordability considerations	- Could require closure of level crossing depending on proximity to station, and alternative road access would need to be provided. - Land purchase required - old station location has been sold. - Significant gradient at location of past closed station.
Type of service proposed to call at station	South Wales to Manchester services.
Length of trains/platform	Minimum 4 x 23 metres.
Markets served	Local access to rail network.

Deeside Industrial Park / Northern Gateway (Wrexham - Bidston)



Location & quantum of services	• Service on Wrexham-Bidston line between Hawarden Bridge and Neston. • Currently 1tph (ATW).
Benefits of new station and strategic context.	• Provides park & ride facility for access into enterprise zone. Improved rail access to serve Deeside. • Removal of traffic from congested road network. • Consistent with the Welsh Route Study CP6 choice for funders to improve access to Deeside Enterprise Zone.
Operational considerations	• Performance challenge on the route (but ability to skip stop if frequency enhanced). Does this replace or augment Hawarden Bridge? • Further work required to align with franchise requirements and build on existing high level studies to understand JT and capacity issues (particularly interface with freight).
Affordability considerations	• Working with authorities and WG to assess and route capacity interventions which would better support new station proposal. • Is upgrade of Hawarden Bridge an option? • Infrastructure interventions are required to support improved JT and all day frequency of service. Existing services unlikely to be able to stop at an additional station without interventions. • Parking required to support park & ride station. Provision for enterprise zone linked buses.
Type of service proposed to call at station	• Wrexham - Bidston services.
Length of trains/platform	• Minimum 4 x 23 metres.
Markets served	• Deeside enterprise zone and commuting to Wrexham/Merseyside.

North Wrexham



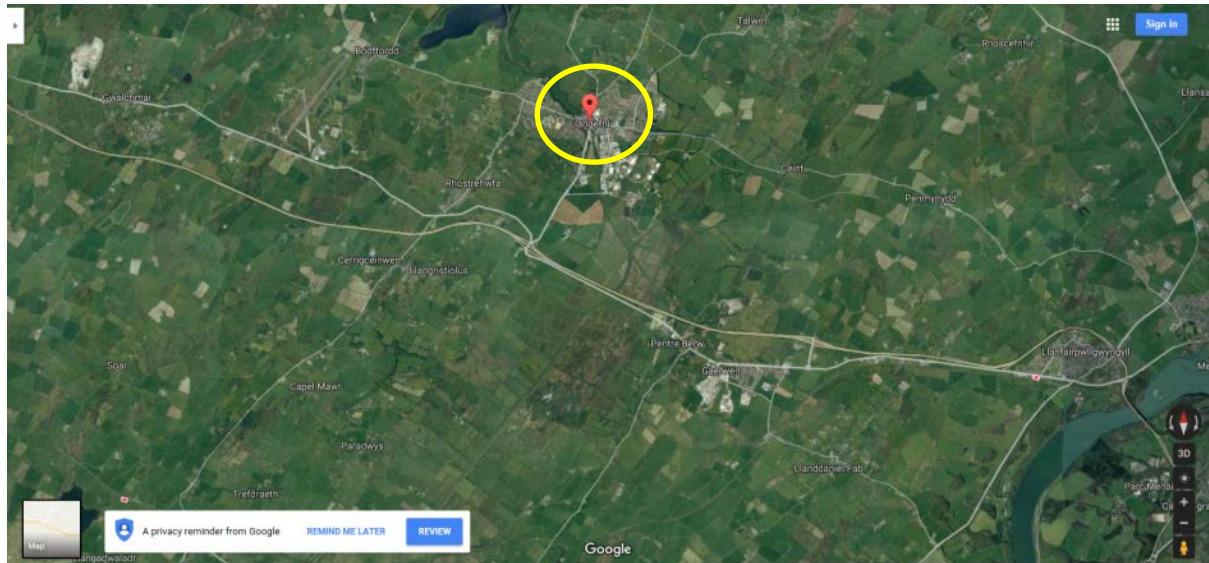
Location & quantum of services	- Between Wrexham and Chester. - Currently 1tph (ATW).
Benefits of new station and strategic context.	- Serves local village. - Could provide park and ride access to employment in Wrexham, Chester and Liverpool. - Good access to A483, land seems available for car parking
Operational considerations	- Capacity challenge on the route due to remaining single line section. - Timetable study required to evaluate impact on stopping services at new station and assessment of impact of station on existing level crossing.
Affordability considerations	- Need to consider nearby level crossing. - Significant gradient at proposed station location. Further assessment of gradient may be required to comply with engineering standards.
Type of service proposed to call at station	Wrexham-Chester services.
Length of trains/platform	6 x 23 metres.
Markets served	Employment in Chester, Wrexham and Liverpool.

South Wrexham



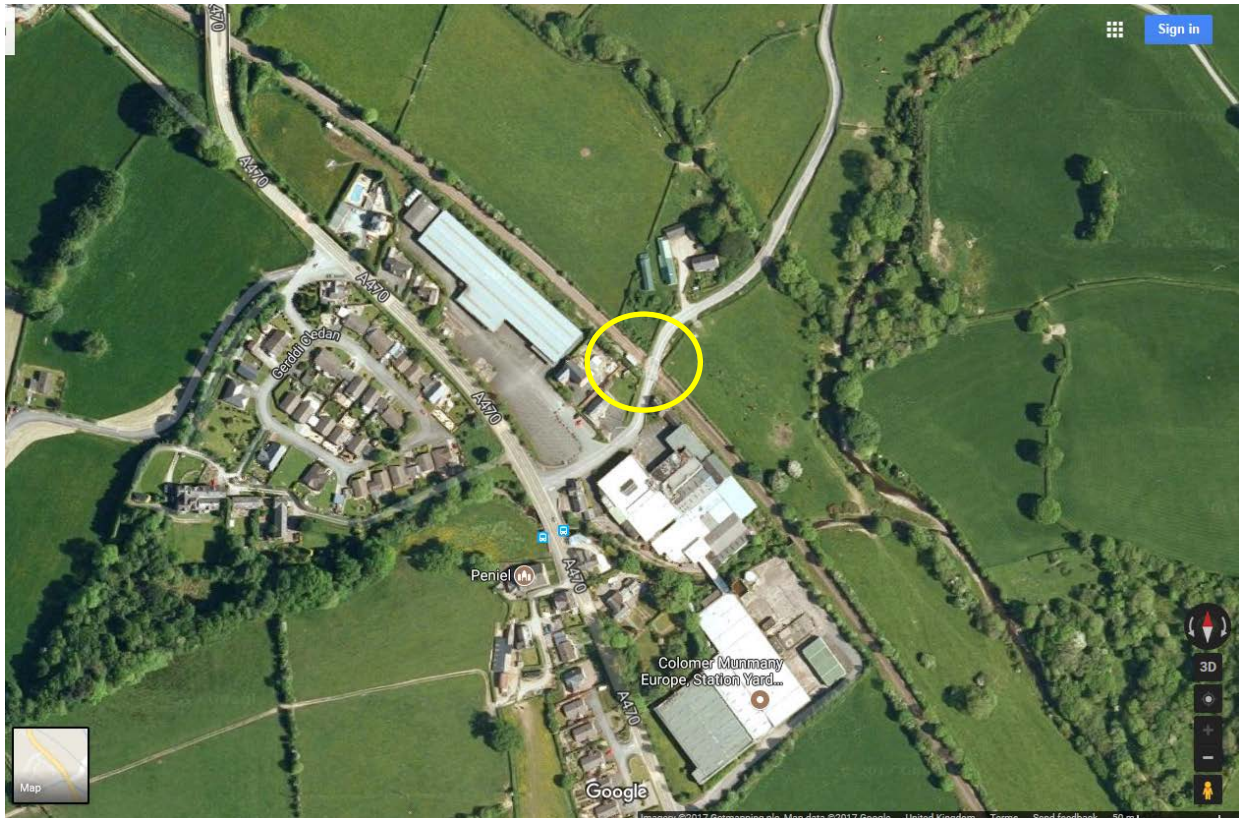
Location & quantum of services	- Between Ruabon and Chirk. - Currently 1tph (ATW).
Benefits of new station and strategic context.	Serves local communities in Cefn Mawr and Rhosmedre.
Operational considerations	- Capacity challenge on the route due to remaining single line section. - Timetable study would be required to evaluate impact on stopping services at new station.
Affordability considerations	- Significant gradient at proposed station location. Further assessment of gradient may be required to comply with engineering standards. - Location is on a curved line. - Proposed station location is in a cutting. - Potential abstraction from Ruabon & Chirk – due to proximity. - Limited space either side for ramped footbridge - several over-bridges in area of proposed station location - could look at possibility of providing access from one of these. - Limited space for car parking - would need to be considered if the station was to serve further neighbouring communities.
Type of service proposed to call at station	Existing Cardiff/Birmingham Intl to Holyhead service.
Length of trains/platform	6 x 23 metres.
Markets served	Access to employment in Wrexham.

Llangefni



Location & quantum of services	Station would be on mothballed Amlwch branch, connection to the North Wales Coast Main Line at Gaerwen Junction between LlanfairPG and Bordorgan.
Benefits of new station and strategic context.	- Serving new communities. - Are other stations proposed if line re-opening planned?
Operational considerations	- Interaction with existing and future planned services and timetabling constraints between Bangor and Gaerwen (Britannia Bridge). - Would any additional infrastructure be required at Bangor to turn services back?
Affordability considerations	- Cost of reinstating rail infrastructure (including closing LX's) and connections to North Wales Coast Main Line. - Additional rolling stock and associated operational cost. - Existing Community Rail lease of line of route. - Station location would need to be assessed.
Type of service proposed to call at station	Service specification would need to be agreed as this is a new line.
Length of trains/platform	Minimum 4 x 23 metre.
Markets served	Local community access to rail network. Tourism.

Carno



Location & quantum of services	- Between Caersws and Machynlleth on the Cambrian Line. - Currently 1tph (ATW) during peak hours.
Benefits of new station and strategic context.	- Serves local village. - Closes geographical gap on the Cambrian Main Line. - Good road access via A470
Operational considerations	- Initial analysis undertaken in 2016 suggests there would be a need for additional infrastructure in order to serve a station at Carno such as line speed improvements, partial redoubling and/or extending the existing passing loops. Previous Network Rail feedback to Welsh Government has indicated that it would be very difficult to serve two new stations on the route without significant intervention either in terms of rolling stock with better operating performance and infrastructure to support faster journey time, in view of the turn round times at Aberystwyth without severely impacting passenger train punctuality. - Further technical work would be required, alongside a timetable study to evaluate impact on stopping services at new station particularly with the commitment to deliver Bow Street station. - Evaluation would be required of impact of a new station on level crossing which is adjacent to the previous closed station location.
Affordability considerations	- Station location needs to be assessed – if previous station building is now in private ownership then another location would need to be sourced. - Additional infrastructure requirements (see above). - Potential interventions to the existing level crossing. - Assessment into any car parking requirements.
Type of service proposed to call at station	Existing Cambrian services.
Length of trains/platform	4-6 x 23m metre.
Markets served	Commuting to Shrewsbury and local access to rail network.

St Mellons/Cardiff Parkway

Location & quantum of services	- Between Cardiff Central and Newport. - Currently 3 tph (ATW), 4 tph (GWR), 1 tph (XC).
Comments	- We have already set out our support and what would need to happen as next steps in order to deliver a reliable service for passengers, as part of the application for New Stations Fund. - Work required around capacity and timetabling including agreement on assumptions of future service specification to be tested.