Bridgend Replacement Local Development Plan 2018-2033

Background Paper 13:

Estimated commuter additional trips and rail infrastructure

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BRIDGEND REPLACEMENT LOCAL DEVELOPMENT PLAN (LDP) 2018-2033

BACKGROUND PAPER 13: ESTIMATED ADDITIONAL COMMUTER TRIPS AND RAIL INFRASTRUCTURE

1. Introduction

1.1 This is one in a series of three background papers on strategic transport have been produced in connection with the Bridgend Replacement LDP 2018 to 2033. This particular background paper addresses the impact of land-use development at strategic sites on rail infrastructure.

1.2 A number of strategic sites will be allocated for land-use development as part of the Bridgend Replacement Local Development Plan (LDP). As a result, it is expected that there will be a change in the origin or destination of trips when these strategic sites are developed and occupied.

1.3 This background paper provides a comprehensive review of various technical studies that have taken place since the existing LDP was adopted. It also provides an analysis of data collected by Transport for Wales (TfW) in October 2020 to assist the Replacement LDP in informing what demand can be expected on rail infrastructure as a result of the implementation of strategic development. The most pertinent studies are summarised in Section 3.

1.4 In producing the Background Paper, the following documents have also been considered for the relevant policy context: They are listed in chronological order.

<u>National Policy</u>

- One Wales: Connecting the Nation (Wales Transport Strategy, 2006);
- Wales Spatial Plan (2008);
- National Transport Plan (2010, updated 2011);
- Active Travel (Wales) Act (2013);
- Well-being of Future Generations (Wales) Act 2015;
- National Transport Finance Plan (updated 2017);
- Prosperity for all: The National Strategy, 2017;
- Prosperity for all: Economic Action Plan: 2018;
- National Development Framework (anticipated publication – 2020);
- Llwybr Newydd: the Wales Transport Strategy (2021); and,
- Planning Policy Wales (Edition 11, 2021);

<u>Regional / Local Policy</u>

- Cardiff Capital Region City Deal (CCRCD) Regeneration Plan;
- Bridgend Local Development Plan (2006-2021);
- Emerging Bridgend Local Development Plan (2018-2033);

- Bridgend Local Transport Plan (2015-2030); and,
- Bridgend Public Services Board Well-being Plan (2018–2023)

1.5 The following documents are considered relevant to the study and summarised, as follows:

- The South East Wales Transport Commission Final Recommendations (November 2020);
- The Rail Network in Wales (Mark Barry);
- The Wales Transport Strategy 2021;
- Pyle Park & Ride Feasibility Study;
- Passenger Rail Vision (Cardiff Capital Region, March 2021);
- The Maesteg Branch Feasibility Study; and,
- Strategic Transport Assessment;
- Penprysg Road Bridge Level Crossing

1.6 Within the South East Wales Final Recommendation paper, a 'Network of Alternatives' is recommended as South East Wales develops and grows, focussing on an increasing need for new sustainable transport options. The 'Network of Alternatives' is concentrated on travel through the west to east corridor, reflecting the role played by the M4 and the natural topography of the region. It is therefore a natural complement to existing plans for the South Wales Metro, which is largely focused on north to south travel between the Valleys and Cardiff. Therefore, a 'Network of Alternatives' map has been produced, made up of station, key transport corridors and services and is shown below:

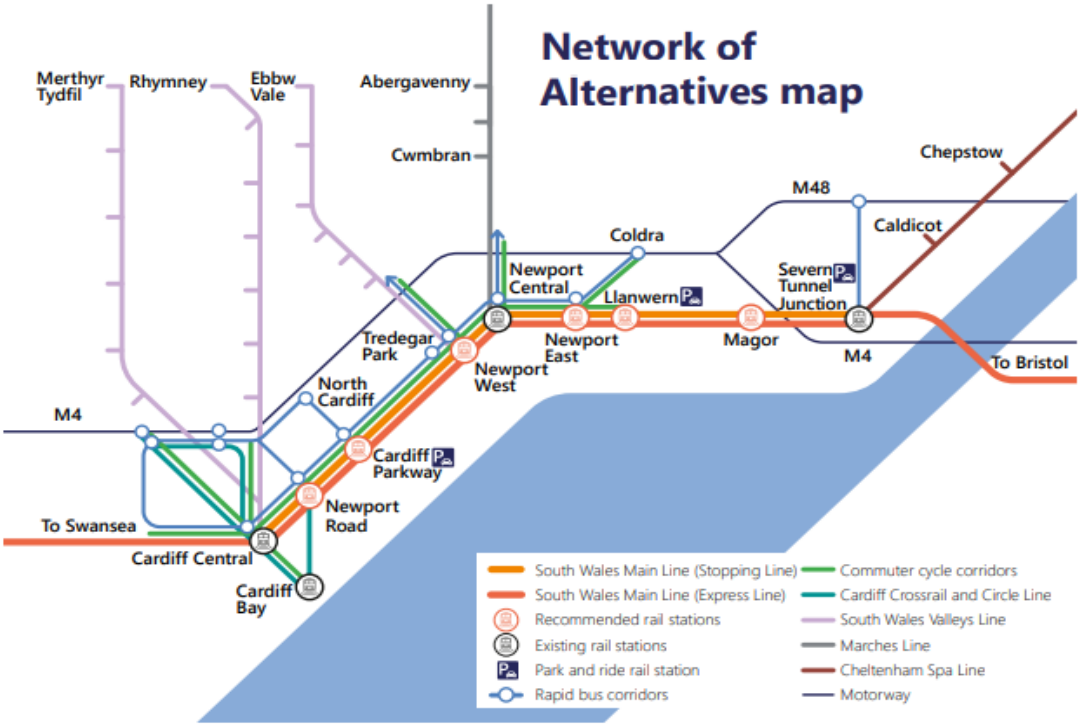

Figure 1: Network of Alternatives Map

1.7 In addition, Figure 2 shows the existing rail network within the South Wales Region:

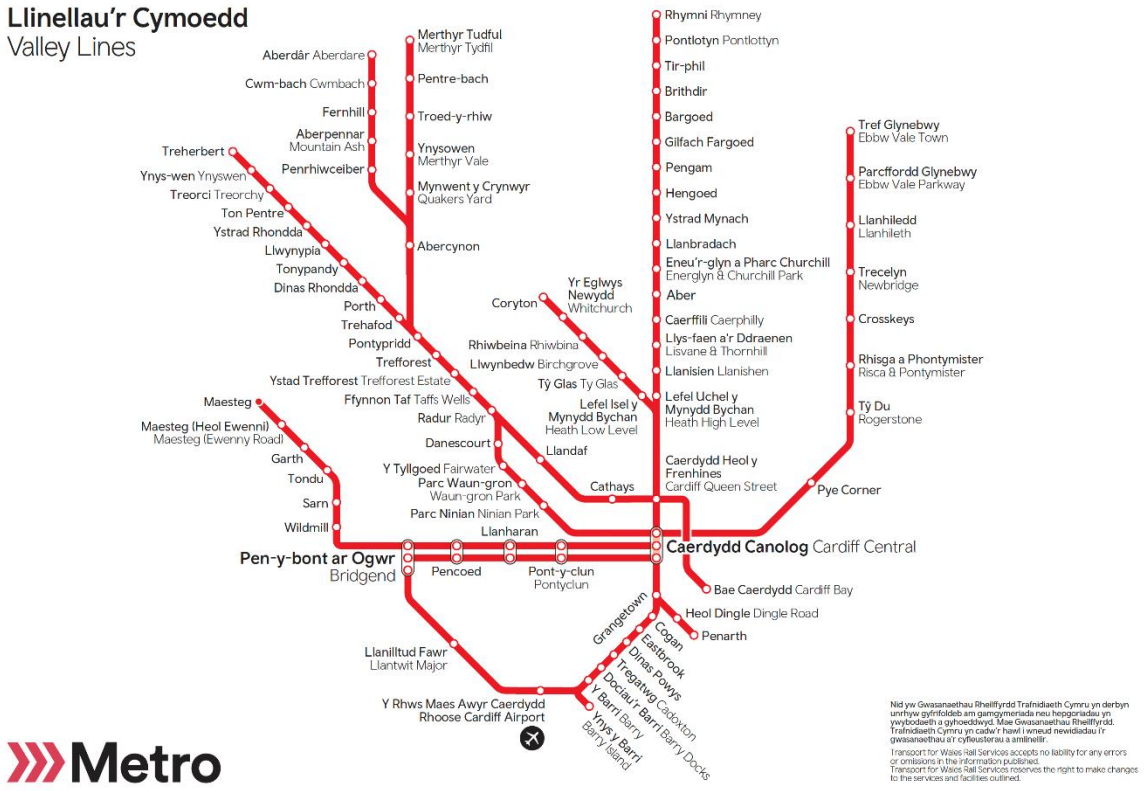

Figure 2: Rail Network Map (Source: TfW)

2. Major Influences

2.1 The inclusion and allocation of Strategic Development sites within the Replacement LDP will ultimately mean that there will be additional impact on local transport infrastructure, particularly the local highway network. The impact from additional person trips generated will vary depending on where each strategic site is located geographically, and how the existing network is operating in terms of its capacity.

2.2 The Strategic Transport Assessment (STA) that supports the Replacement LDP has been produced to help determine the traffic impact of committed developments and the proposed Candidate Sites on the highway network, and reports on the modelling tests used to determine the developing impact of traffic at key junctions on the highway network within the Authority. The STA has drawn conclusions and made recommendations for further analysis to inform the Replacement LDP.

2.3 Due to the allocation of Strategic Development within the Replacement LDP there is a need to assess the impact of land-use development at the strategic development sites on the existing rail network. In supporting of this, TfW have been working alongside Bridgend County Borough Council to provide existing railway capacity and future changes and improvements to the rail network, and identifying if any new infrastructure (or improvements to existing infrastructure) is required to support the proposed allocations.

2.4 To effectively analyse the impact of these developments on the capacity of the rail network, data has been based on realistic modal share targets that the council aspires to achieve. Bridgend County Borough Council aspires to a 50:50 modal split between private vehicle and Active Travel use, with future transport infrastructure investment/improvement proposals in rail and other active travel measures assisting in achieving this modal share target. The council is currently funding the expansion of a park-and-ride facility at Pyle railway station, a bus terminus at Porthcawl with a park-and-ride link between Porthcawl and Pyle as part of its capital improvement plan to address modal imbalance. In addition, proposals to develop a railway station at the Bridgend Industrial Estate to serve Brackla and its surrounding areas will help greatly to reduce dependence on the private car, remaining a long term priority. All of these will assist in meeting the modal share targets and sustainable development aspirations of the council.

2.5 For TfW to assess the impact of the promoted strategic developments on rail infrastructure, and to offer improvements or mitigation where necessary, the anticipated quantum of strategic development was provided, as follows:

Strategic Site	No. Units	Strategic Site	No. Units
Bridgend		North Cornelly/Pyle	
Island Farm	850	Land East of Pyle	1000
Parc Afon Ewenni	600	Heol Fach	255
West of Bridgend	850	Ty Draw	66
North East Brackla	160		
Pencoed		Maesteg	
Pencoed Campus	800	Pont-Rhyd-Y-Cyff	202
Ty Draw	75		
Penprysg Road	170		
Porthcawl		Regeneration Sites	
Salt Lake/Sandy Bay	1200	Maesteg Washery	135
		Ewenny Road	125

Table 1: Strategic Candidate Site Quantum of Development

2.6 Analysis undertaken by TfW and information reported in the STA suggest that, it is possible to effectively anticipate the impact these developments will likely have on rail infrastructure, so that suitable mitigation measures and improvements can be offered.

3. Technical Literature Review

South East Wales Transport Commission: final recommendations (November 2020)

3.1 This report, published by the South East Wales Transport Commission, outlines the acute congestion problem on the M4 in South East Wales, with the single biggest cause being the sheer traffic volume during peak periods, particularly movements associated with commuting. The report, therefore, recommends a 'Network of Alternatives' for a need for new sustainable transport options formed around a focus on integration, allowing for flexible journeys, reflecting on the diversity of trips that people want to make.

3.2 The 'Network of Alternatives' is therefore a natural complement to existing plans for the South Wales Metro, which is largely focused on north to south travel between the Valleys north of Cardiff and Cardiff. From a user's perspective, there should be one, single integrated network.

3.3 The report recommends the following infrastructure package, that specifically relates to rail:

- Create a new South East Wales 'rail backbone' by significantly increasing the capacity and flexibility of the South Wales Main Line; and,

- Transform access to the rail network by increasing the number of stations between Cardiff and the River Severn from three to nine.

3.4 For this to occur, along with integrating the network, encouraging people to use the network, and organising the network, the report recommends formalising a partnership of Welsh Government, Transport for Wales and local authorities.

3.5 The report highlights that if this package of measures is designed and operated effectively, it would support a meaningful and sustained modal shift from the car to public transport and active travel.

3.6 The report discusses the reconfiguration of the South Wales Main Line, and constructing additional new stations to provide for a much greater range of rail services to operate. Within this, upgrades to Bridgend railway station are discussed to allow increased capacity for terminating services from east of Cardiff. In addition, upgrades to the Maesteg Line, particularly the re-instatement of the Tondu passing loop, will facilitate in doubling the frequency by two trains per hour along the line.

The Rail Network in Wales: The Case for Investment – Professor Mark Barry (September 2018)

3.7 The Rail Network in Wales: The Case for Investment is a report published following the cancellation of electrification on the Great Western Main Line (GWML), in July 2017, which comprises a programme to establish the strategic and economic case for investment in Wales's rail infrastructure.

3.8 The report develops a positive case for major rail investment that addresses both the Welsh Government's economic ambitions and broader environmental and well-being objectives, in the absence of the cancellation of the electrification of the GWML to Swansea.

3.9 The analysis within the report clearly identifies the need for a programme of investment in rail infrastructure in Wales to support a stronger, inclusive and more equitable economy, delivering prosperity for all by connecting people, communities and businesses to jobs, services and markets.

3.10 On the South Wales Main Line, the report sets out a vision to support inclusive and balanced economic growth in Wales and south west England by providing faster and more frequent services through investment in the Great Western rail corridor. The report sets out a series of objectives to deliver on this vision for the South Wales Main Line, that are of relevance to Bridgend, including:

- Reducing all journey times between West Wales and London, towards targets of 30 minutes between Swansea and Cardiff;
- Increasing service frequencies between Swansea and Cardiff;
- Improve park-and-ride provision for accessing the South Wales Main Line and reduce reliance on the M4 corridor;
- Improve integration between main line rail and the wider transport network, especially in the developing South Wales;
- Maximise the potential for stations to accelerate urban regeneration and major development site delivery;
- Increase the number of trips made by public transport, focusing on commuter trips; and,
- Improve rail network efficiency to allow a lower future subsidy requirement per passenger.

3.11 The report outlines that at this stage, the most likely interventions required to begin to deliver this vision include:

- Line speed improvements from Severn Tunnel Junction to Swansea and beyond that enable the benefits of new trains to be realised (including consideration of electrification and more capacity);
- New services operating on a balanced pattern of fast and stopping services (4tph from Cardiff to London and 2ph from Swansea; 4tph Bristol Temple Meads to Cardiff and 2tph from Swansea); and,
- Potential for a new railway station at Brackla.

3.12 During consultation with Stakeholders, feedback was presented with regard to existing operational and infrastructure challenges, where Bridgend railway station was highlighted as a location where capacity constraints are currently experienced.

3.13 The report illustrates the primary commitments to 2024, including increasing services frequencies from 3tph to 4tph from Cardiff to Bridgend. In addition, an initial focus on the Cardiff-Bridgend line speed enhancement to complement work being undertaken by Network Rail for the relief lines and potential to extend the scope of work.

The Wales Transport Strategy (2021)

3.14 The Wales Transport Strategy sets out a vision for how the transport system in Wales can help deliver its priorities, to create a more prosperous, green and equal society, formed around the five ways of working as set out in the Well-being of Future Generations (Wales) Act 2015.

3.15 The Plan sets our short-term priorities and long-term ambitions, as well as nine mini-plans explaining how they'll be delivered for different transport modes and sectors.

3.16 The Strategy outlines three important factors that will be achieved. Firstly, to bring services to people to reduce the need to travel. Secondly, allowing people and goods to move more easily from door to door by sustainable transport. Thirdly, making public transport, walking and cycling more attractive and affordable for everyone.

Pyle Station Feasibility Study (March 2020)

3.17 Bridgend County Borough Council commissioned consultants to carry out an initial feasibility study for the re-location of the existing Pyle railway station eastwards, which would be a more suitable location not only in terms of increasing the size of the railway station, but also its proximity to the 'land east of Pyle' strategic candidate site, which is scheduled for allocation within the

Replacement LDP. Relocation of the station closer to this site will promote greater potential for Active Travel and travel by sustainable modes, creating 'transit oriented' development.(suggest the location on the LDP candidate site). A WelTAG Stage 1 study investigated a list of possible solutions to improve park-and-ride provision at Pyle railway station and provide wider community improvements to enable a scheme to be developed.

3.18 The objective of the study was to assess the feasibility of relocating Pyle station approximately 500m eastwards to better serve the communities of Pyle and North Cornelly and provide enhanced platform and park-and-ride facilities for Porthcawl.

3.19 Three potentially viable options were identified to relocate the station, all of which were identified with potentially significant issues. All three options share similar platform arrangements and locations utilise a bridge with lifts to provide access, with the main difference being the access arrangements and location of the car park.

- Option 1a – Involves the station vehicular access and car park located to the north of the railway accessed from Village Farm Road, utilises existing highway infrastructure.

- Option 1b – Also locates the main access and car park to the north of the railway but with new highway access from Heol Mostyn, and looks to address the issues with Option 1a by providing a new, more direct access for both pedestrians and vehicles.

- Option 2 – Positions the main station highway access and car park to the south of Option 1 utilising what is believed to be railway land used as maintenance access.

3.20 Overall, the study demonstrated that relocating the station to the east is technically feasible, although each options has risks presented with its deliverability. The station relocation option is a relatively high cost and medium term delivery project with a timescale of approximately 5 years. The overall demand at the new location was calculated to be similar to the existing station for the same level of train service, and improving existing service frequencies would help drive greater passenger demand at Pyle station as a shot-medium term aspiration for all options.

3.21 As the main difference between the relocated station and the existing station is the highway access and parking, the main alternative to the relocation options

would be to improve highway access and the size of the car park to the existing station site, which would offer better value for money as it would avoid the substantial costs and disruption of constructing a new station.

Maesteg Branch Feasibility Study – Phase A (July 2019)

3.22 Mott MacDonald were commissioned by Transport for Wales (TfW) to undertake a WelTAG compliant appraisal to identify options to improve public transport provision in the Llynfi Valley corridor between Maesteg and Bridgend.

3.23 The existing Maesteg Branch Line comprises a single-track line with five intermediate stations between Bridgend and Maesteg. An existing passing loop is present to the north of Tondu Station which has been the subject of two separate studies for potential upgrade.

3.24 TfW are seeking to improve public transport services between Bridgend and Maesteg, with particular focus on the existing heavy rail corridor. The Maesteg Branch Line forms part of the South Wales Metro.

3.25 The Strategic Case provided a narrative of existing underlying economic, social, cultural and environmental issues in relation to transport which informed the definition of 9 study objectives. The Transport Case presented an appraisal of the feasibility of each option, including an initial consideration of the scope of infrastructure works needed.

3.26 Four short-listed option packages comprising frequency improvements on the branch line using either heavy rail of tram-line vehicles were identified for detailed analysis at WelTAG Stage 2. These options comprise both additional ‘through’ services to Cardiff and ‘shuttle’ services between Maesteg and Bridgend.

3.27 The appraisal against objectives presented in the Transport Case favoured heavy rail options relative to tram-train based on assumptions related to operating speeds on the SWML for through services. Given the high-level of the appraisal at WelTAG Stage 1, these constraints have not been considered in sufficient detail and it is therefore proposed to consider both heavy rail and tram-train options in greater detail at WelTAG Stage 2.

3.28 The study proposed to take forward four option packages comprising different levels of heavy rail/tram-train provision to WelTAG Stage 2, each complimented by a transport hub package, drawing on existing bus services.

Passenger Rail Vision – Cardiff Capital Region (March 2021)

3.29 The Cardiff Capital Region is working to bring forward ambitious plans for the development and expansion of its public transport network, with this report

focussing on strategic passenger rail priorities, setting out the primary schemes to be developed over the next 10-15 years. This will augment the £740m upgrade of the core valley lines through faster, more frequent and electrified services.

3.30 The paper calculated that benefits of over £4 billion could be secured for the region over the next 30 years by combining traditional transport user's benefits and the potential wider economic benefits enabled by the Metro.

3.31 The key feature of the CCR vision is a high quality, integrated grid of public transport services (rail and bus) that presents a single joined up network to the passenger. This will include re-designed bus networks integrated with new metro rail services planned as part of the next phase of Metro by 2023/2024.

3.32 The delivery of the CCR Rail vision will include:

- A major upgrade of the South Wales Main Line (SWML) is an early priority, to form the backbones of the region's public transport network through new stations and a mix of intercity express and local commuter services (e.g. a need for more services between Swansea and Cardiff);

- Measures to address bottlenecks on the rail network to allow more services on the Maesteg Branch;

- Introduction of further new stations, in addition to those included in the core CVL transformation, to connect more people and places to the Metro network;

- Enhanced cross valley links, using both bus and tram-trains, integrated through high quality interchanges with new north-south CVL rail service;

3.33 The CCR paper states that, currently, network constraints impact the ability to increase services on the Maesteg branch to more than 1 train per hour, and addressing these and the application of tram-train could enable local network extensions, for example operating Maesteg tram-trains south on the VoG Line enabling one or two more stations in Bridgend and perhaps a connection to the Ford site.

3.34 In terms of strategic schemes, the paper describes a longer-term opportunity to extend NW Corridor tram-train operations from Pontyclun, west toward Bridgend and potentially integrated with the Maesteg line. Some of this route could run adjacent to the current SWML and then divert via the potential major housing and mixed-use development at Llanilid.

Literature Review Summary

3.35 It is evident from the literature review that whilst capacity issues are anticipated as a result of further development within Bridgend, a number of improvements and measures are proposed to further improve the rail and active travel network to help accommodate the increase in demand that is expected.

4. Transport for Wales (TfW) Data Collection

4.1 As discussed, TfW were provided with information on the geographical location and quantum of development for the Strategic Candidate Sites promoted as part of the Replacement LDP, to help identify the level of impact the development would have on rail infrastructure.

4.2 The data was interrogated with reference to the Middle Layer Super Output Areas that are, geographically, the closest to the Strategic Site locations. Using this information, as well as journey to work to data derived from ONS Census Data, it has been possible to provide a preliminary calculation of the likely impact of the Strategic Sites on the rail network, and whether additional demand can be accommodated.

4.3 Data from Nomis and StatsWales was extracted to determine the average number of people per household and number of workless households. In this case, the data uses an average total person per household figure of **1.8883** (the average household size for persons aged 16+ within Bridgend). The data also assumes that **17.3%** of households are workless.

4.4 Using the above figures, the number of working households, as well as the average number of people working per household was calculated, which would allow this total person trip generation to be distributed over the transport network by mode, using origin/destination Census data.

4.5 A mode share target of 50% between non-sustainable and sustainable modes was applied, following discussion between TfW and BCBC (with non-sustainable modes being defined as, for example, a car and sustainable modes defined as train, bus, cycling and walking).

4.6 With an emphasis on commuter trips by rail, in particular, the tables provide a summary of the estimated additional commuters travelling by train, including their likely origin station as well as the rail direction share, for each strategic site. Each site has been grouped into its respective area as per Table 1 within Section 2.

<u>Bridgend</u>

Strategic Site	Estimated Rail Direction Share			
	Origin Station	Travelling to Bridgend/Wildmill	Travelling to Cardiff	Travelling to Swansea
Island Farm	Bridgend	0	110	10
Parc Afon Ewenni	Bridgend (from Brackla)	0	53	0
West of Bridgend	Bridgend	0	60	0
North East Brackla	Bridgend (from Brackla)	0	17	5

Table 2: Anticipated rail figures for strategic sites within Bridgend

4.7 It can be seen from the table above that the majority of new rail trips associated with the strategic sites in Bridgend will be travelling east, along the South Wales Main Line to Cardiff, with a very small proportion commuting west to Swansea.

4.8 Parc Afon Ewenni is located less than 2.5km from Bridgend town centre and railway station, and is therefore a suitable distance for active travel promotion.

4.9 The availability of capacity for rail passengers travelling towards Cardiff depends on sufficient space on both GWR and TfW services. On average, on-board capacity remains sufficient on TfW services, albeit standing room only. Depending on the specific service used, potential for knock-on issues further along the line at Pencoed, Llanharan and Pontyclun, where increased passengers from Bridgend may prevent boarding at these intermediate stations. Demand from these developments at Brackla are unlikely to generate enough demand for a new station however a case may exist in combination with other developments in the area.

4.10 Liaison with TfW has confirmed that the refurbished Class 170 trains are now in operation on the Maesteg Line. These were introduced in 2020 and increased seating capacity from 120 to 190 on each journey. It is also planned to introduce brand new trains in December 2022. These won't offer a huge amount more capacity per journey than the Class 170 trains, although they will be modern trains with more room for bikes and pushchairs. TfW also continue to explore the potential for increasing frequency on the Maesteg line, with a WelTAG Stage 2 study due to be undertaken (subject to instruction from Welsh Government) in 2021.

4.11 With regard to services from Bridgend to Cardiff, considering both new and bigger rolling stock and a few additional services per day in either direction, it is aimed to provide for 300 more seats towards Cardiff in the morning peak and 350 more seats from Cardiff in the evening peak.

Porthcawl

Strategic Site	**Estimated Rail Direction Share**			
	Origin Station	Travelling to Bridgend/Wildmill	Travelling to Cardiff	Travelling to Swansea
Salt Lake/Sandy Bay	Pyle (from Porthcawl)	0	37	0

Table 3: Anticipated rail figures for strategic site within Porthcawl

4.12 It can be seen from the Table above that all rail journeys anticipated to be generated by the Strategic Site within Porthcawl are predicted to be commuter trips to Cardiff.

4.13 The site is approximately 6km from Pyle Railway Station but less than 0.5km from Porthcawl, with a bus facility at John Street

4.14 TfW conclude that there would likely be a requirement for up to 40 additional car parking spaces at Pyle station as a result of increased use from the above strategic site. It is also suggested a potential requirement to re-locate Pyle railway station closer to the A48 to allow for increased parking provision. In addition, improving public transport connectivity between Porthcawl and Pyle station may encourage more people to travel by train.

North Cornelly/Pyle

Strategic Site	Estimated Rail Direction Share			
	Origin Station	Travelling to Bridgend/Wildmill	Travelling to Cardiff	Travelling to Swansea
Land east of Pyle	Pyle	0	43	0
Heol Fach	Pyle	0	11	0
Ty Draw	Pyle	0	3	0

Table 4: Anticipated rail figures for strategic sites within North Cornelly/Pyle

4.15 It can be seen from the Table above that all rail trips anticipated to be generated by the strategic sites within North Cornelly/Pyle are predicted to commute to Cardiff.

4.16 Land east of Pyle and Heol Fach are both situated approximately 1km from Pyle railway station, with both having significant potential for active travel. In addition, Ty Draw is less than 2km away from Pyle Railway Station, meaning that all of these strategic site locations are within walking/cycling distance of Pyle railway station.

4.17 Services are currently close to their maximum seated capacity on average, with space available to stand. However, seating is likely to become available at Bridgend station as passengers alight.

Maesteg

Strategic Site	Estimated Rail Direction Share			
	Origin Station	Travelling to Bridgend/Wildmill	Travelling to Cardiff	Travelling to Swansea
Pont Rhyd-Y-Cyff	Garth	0	9	0

Table 5: Anticipated rail figures for strategic site within Maesteg

4.18 It can be seen from the table above that all rail trips anticipated to be generated by the strategic site within Maesteg are predicted to commute to Cardiff.

4.19 Pont Rhyd-y-Cyf site is approximately 1.5km from Garth railway station and would link to a proposed active travel route as part of the Llynfi Valley Community Route NCN885.

4.20 The estimated number of rail passengers anticipated to be generated by this strategic site is low. No expected changes to services would be required to support demand from these developments.

4.21 Through correspondence between BCBC and TfW, it is understood that the refurbished Class 170 trains are now in operation on the Maesteg Line. These were introduced in 2020 and increased seating capacity from 120 to 190 on each journey.

Regeneration Sites

Strategic Site	Estimated Rail Direction Share			
	Origin Station	Travelling to Bridgend/Wildmill	Travelling to Cardiff	Travelling to Swansea
Maesteg Washery	Maesteg	7	7	0
Ewenny Road	Maesteg Ewenny Road	7	6	0

Table 6: Anticipated rail figures for Regeneration Sites

4.22 It can be seen from the table above that the regeneration sites are anticipated to generate a low level of rail trips, with around 50% of passengers commuting to Bridgend and 50% of passengers commuting to Cardiff.

4.23 The former Budelpack site is less than 0.5km from the Maesteg Ewenny Road train station with significant potential for access to rail services.

4.24 The estimated number of rail passengers is low and, as such, no expected changes to services would be required to support demand from these developments.

4.25 As discussed above, there are already refurbished trains operating on the Maesteg to Cardiff line, which enabled seating capacity to be increased from 120 to 190 passengers for each journey.

Pencoed

Strategic Site	Estimated Rail Direction Share			
	Origin Station	Travelling to Bridgend/Wildmill	Travelling to Cardiff	Travelling to Swansea
Pencoed Campus	Pencoed	81	113	0
Ty Draw	Pencoed	8	11	0
Penprysg Road	Pencoed	17	24	0

Table 7: Anticipated rail figures for strategic sites within Pencoed

4.26 It can be seen from the table above that the Pencoed College campus strategic site is predicted to generate quite a few additional rail commuters that would travel to Bridgend and Cardiff.

4.27 The Pencoed College campus site is located less than 1km from Pencoed town and railway station. The site would benefit from proposed active travel routes and an option for direct link to Glanyrafon Road over the river to avoid busy main road for HGV traffic (the A473 Penybont Road).

4.28 On average, seated capacity from Pencoed travelling towards Cardiff is fully used. Passengers further along the line at Llanharan and Pontyclun would likely have to stand and in many cases would not be able to board. Increased service frequency or higher capacity services would be required to meet the demand from these developments. Regarding westbound services from Pencoed to Bridgend, seated capacity is available on average.

4.29 Discussions between the council and TfW has confirmed that, to help mitigate against the full use of seating capacity from Pencoed travelling towards Cardiff, TfW are considering both new and bigger rolling stock, with additional services to be provided per day in each direction. It is anticipated that 300 additional seating capacity will be provided towards Cardiff in the morning peak period, and 350 additional seating capacity will be provided from Cardiff in the evening peak period.

5. Conclusion

5.1 This background paper provides a comprehensive review of various technical studies that have taken place since the existing LDP was adopted, as well as analysing data collected by Transport for Wales (TfW), in October 2020, to assist the Replacement LDP in informing what demand can be expected on rail infrastructure as a result of the implementation of strategic development.

5.2 From the information provided, the majority of rail commuters will travel to Cardiff or Bridgend (if living in areas outside of Bridgend), with very few commuters travelling west to Swansea.

5.3 The data shows that, on the South Wales Main Line, there would be sufficient on-board capacity of TfW services during peak periods, although this will likely be limited to standing room only. It is, however, important to note that, depending on the specific service used, there may be potential for knock-on issues further along the line (at Pencoed, Llanharan and Pontyclun), where an increase in anticipated commuters from Bridgend may prevent boarding at these intermediate stations. Due to the anticipated increase in commuter trips by rail, as a result of the Pencoed Campus Strategic Site, it is suggested that the frequency of services to Cardiff be increased to effectively accommodate the demand.

5.4 Liaison between BCBC and TfW has led to an understanding that bigger rolling stock and an increase in rail services per day (in each direction) from Bridgend to Cardiff is being considered, with 300 additional seats towards Cardiff in the morning peak period, and 350 additional seats from Cardiff in the evening peak anticipated to be provided. Implementation of these additional services will help alleviate and mitigate against any potential capacity issues of the rail services on this line, as a result of the development of these strategic candidate sites.

5.5 Anticipated rail generation at the North-East Brackla strategic site, as well as other sites in the vicinity, are quite low and would, therefore, be unlikely to generate enough demand for a new railway station. A case may still exist for a new station depending on any other sites that may be put forward for allocation within the replacement LDP.

5.6 The Strategic Site in Porthcawl would generate several rail commuter trips, with the closest railway station being Pyle (approximately 6km to the north). TfW note that, as a result of this, it would be beneficial to create additional parking spaces (approximately 40) at the station. It is even suggested that consideration could be given to moving the station closer to the A48 to allow for a more suitable area for parking spaces to be created. The number of parking spaces required could

be offset by improving bus services and frequencies, as well as improving Active Travel routes between Pyle and Porthcawl.

5.7 Services running from Pyle to Bridgend are currently close to seated capacity on average. However, it is likely that space will become available as passengers alight at Bridgend.

5.8 Services on the Maesteg Line are likely to be unaffected, as the anticipated trip generation associated with the strategic sites within its vicinity are predicted to be low. Therefore, no change would be required.

5.9 However, correspondence between BCBC and TfW has confirmed that the refurbished Class 170 trains are now in operation on the Maesteg to Cardiff line, which were introduced in 2020 increasing seating capacity from 120 to 190 for each journey. TfW plan on introducing brand new trains in December 2022, with particular emphasis on allowing more room for bikes and pushchairs, etc. The potential to increase frequency on the Maesteg line is being considered, with a WelTAG 2 study due to be undertaken by TfW (under instruction from Welsh Government) later this year.

5.10 Finally, it is important to note that the modal split assumed for these calculations is quite ambitious (a 50% split been sustainable and non-sustainable modes – i.e. private car) and, therefore, the increase in commuter trips by rail could be considered a worst-case scenario.