



Colwyn Bay Waterfront Project Phase 2b Environmental Statement

Volume 2: Technical Appendices
Technical Appendix 16 - Transport, Traffic and
Access

September 2021

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Colwyn Bay Waterfront Project Phase 2b Environmental Statement

Volume 2: Technical Appendices
Technical Appendix 16 - Transport, Traffic and
Access

September 2021

Issue and Revision Record

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1 Introduction

Mott MacDonald has been commissioned by Conwy County Borough Council (CCBC) to provide support for a planning application for Phase 2b of the Colwyn Bay Waterfront (hereafter “the Scheme”) to deliver improvements to the sea defences in the area. The Scheme will result in a redistribution of traffic in the area, along with temporary disruption during the construction period. In support of the planning application, a wide-ranging Environmental Statement has been produced, which includes a chapter on transport. This Transport Statement has been commissioned to act as a supporting document to demonstrate the likely impacts of the scheme during construction and operation on the transport network in the surrounding area.

1.1 Study area

The study area comprises the existing seawall and adjacent sand and shingle of the Colwyn Bay to Rhôs-on-Sea beach along with the adjacent pedestrian promenade, Promenade/West Promenade/Rhôs Promenade and the central area of the grassed slope, Cayley Embankment, with Cayley Promenade highway to the west.

The study area for this Transport Statement is shown in Figure 1.1 below.

Figure 1.1: Study area extent



Source: Mott MacDonald

1.2 Report contents

The report contains:

- Baseline transport network

- Scheme proposal
- Review and analysis of traffic count data
- Construction impacts
- Operational impacts, and
- A review of relevant planning policy
- Conclusions

2 Baseline transport network

2.1 Highway

The Scheme is located to the northwest of Colwyn Bay town centre. The A55 North Wales Expressway is located around 250m south of the scheme location. The nearest junction on the A55 is Junction 20, around 500m from the scheme location. The A55 is a dual carriageway which gives access to much of the North Wales coastline towards Holyhead and Bangor to the west and Chester to the east.

West Promenade runs along the coast between Colwyn Bay town centre and Rhôs-on-Sea. It is a two-way 30mph single carriageway road, with on-street parking along the majority of its length. Within the study area, West Promenade currently also operates to a 7.5t weight restriction.

Cayley Promenade is the first street inland from West Promenade. This road also operates two-way with a 30mph speed limit, and all junctions are priority controlled.

2.1.1 Car parking

On Cayley Promenade, there is unrestricted parallel parking along both sides of the road, although from site visits in May 2021, it appears that cars predominantly park on the seaward side of the road. There is space for approximately 95 vehicles on this side of Cayley Promenade.

Figure 2.1: Echelon parking on West Promenade



Source: Mott MacDonald

On West Promenade, there is echelon parking for 128 cars on the seaward side of the road. On the inland side, there is space for around 91 cars to park in parallel to the road. There are approximately a further 23 car parking spaces on the northern section of West Promenade, known as Rhôs Promenade, north of the junction with Cayley Promenade. This parking is again unrestricted.

2.2 Public Transport

2.2.1 Rail

The nearest rail station, Colwyn Bay, is a 15-minute walk from the southern end of West Promenade. It offers local, regional, and national services operated by Transport for Wales and Avanti West Coast to Holyhead, Chester, Cardiff Central, Crewe, Manchester Piccadilly/Airport, Shrewsbury, Birmingham International and London Euston¹.

2.2.2 Bus

The nearest bus stop is on St George's Road, where the following services stop:

- 12 – every 15 minutes on weekdays between Rhyl and Llandudno
- 14 and 15 – combined frequency of once per hour on weekdays, between Llysfaen and Conwy Rail Station

The three services, all of which are operated by Arriva, use a small section of Cayley Promenade, at the northern end of Whitehall Road to West Promenade in both directions, as shown in Figure 2.2.

Figure 2.2: Routes of bus services 12, 14 and 15



¹ National Rail Enquiries

Source: Arriva (<https://www.arrivabus.co.uk/wales>)

2.3 Active Modes

Presently, there is a shared walking and cycling route along West Promenade, on the seaward side, separate from the highway. This is part of National Cycle Network Route 5, a largely traffic free route which runs along much of the North Wales coast.

Cayley Promenade has footways on both sides of the road, and whilst there are no dedicated cycling facilities, the quiet nature of the road makes it a suitable route for cycling also. Figure 2.3 and Figure 2.4 show the shared use space on West Promenade.

Figure 2.3: Shared pedestrian and cycle space on West Promenade



Source: Mott MacDonald

Figure 2.4: Shared pedestrian and cycle space on West Promenade



Source: Mott MacDonald

2.4 Road safety

Between 1 January 2018 and 31 May 2021, there were a number of collisions in the study area:

- 6 slight
- 2 severe
- 0 fatal².

Of these accidents, one slight injury resulted to a cyclist. The remainder appear to be motorised vehicle occupants.

There were no clusters of accidents, suggesting existing road safety is not a significant concern within the study area.

² Source: Conwy County Borough Council

3 Proposed Scheme

3.1 Scheme Opportunity

The Scheme proposed to undertake beach recharge works which will provide improved flood protection against the sea. As part of this, the opportunity is being taken to extensively remodel the promenade area along West Promenade to provide significant improvements for walking and cycling.

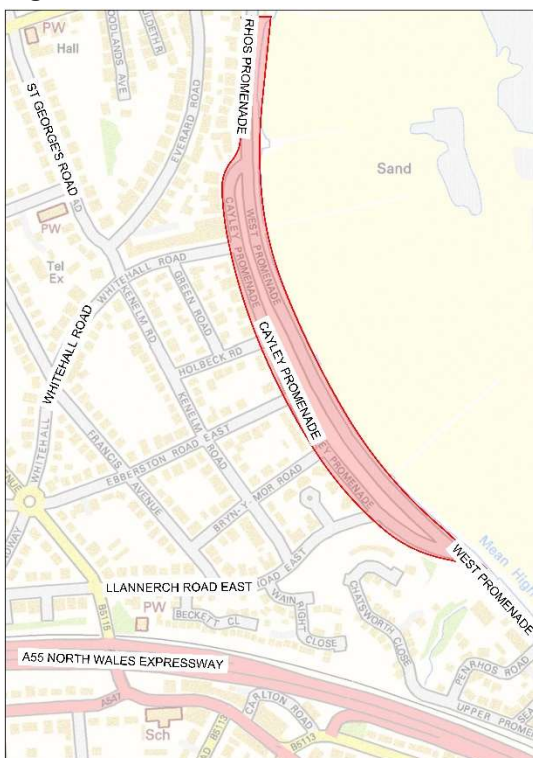
The scheme will also compliment with sea defence works already completed in other Phases of the Colwyn Bay Waterfront project to the south, which also included enhanced walking and cycling provision.

In combination, the schemes will provide a high-quality leisure and recreation facility for the local and wider area.

3.2 Scheme Details

The figure below highlights the extent of Colwyn Bay Phase 2b sea defence scheme. The scheme extends for about one-kilometre southwards from Rhôs-on-Sea along West Promenade and includes (as discussed below) one street inland – Cayley Promenade.

Figure 3.1: Scheme location



Source: Mott MacDonald

In terms of transport and movement, key elements of the scheme are as follows:

3.2.1 West Promenade

BCA Landscape scheme masterplan is provided in Appendix A.

From this drawing it can be seen that West Promenade will be the focus for the sea defence masterplan.

Between Rhôs-on-Sea and Cayley Promenade, the proposal are for:

- Parallel on-street parking retained on the seaward side of Rhôs Promenade to Cayley Promenade;
- New perpendicular parking at the northern extents of the scheme near Combermere Gardens in Rhôs-on-Sea;
- Seaward side promenade upgraded to provide a delineated shared use footway/cycleway and pedestrian walkway;
- Upgraded directional and information signage; and,
- Cycle parking.

Between the extents of Cayley Promenade along West Promenade, the proposal are for:

- Realignment of the Cayley Promenade / West Promenade junction so that Cayley Promenade becomes the priority movement;
- West Promenade to be one-way southbound between the extents of Cayley Promenade;
- Over the same extent, reduce the speed limit to 20mph;
- Retain the 7.5t weight restriction;
- As per the existing arrangement, echelon car parking on the seaward side of West Promenade and parallel on the non-seaward side;
- Introduction of pay-and-display parking to help ensure turnover of car parking spaces;
- Defined disabled parking spaces;
- Provision of a limited number of motorhome spaces and electric vehicle charging spaces;
- Enhanced east / west pedestrian crossing facilities;
- Seaward side promenade upgraded to provide a delineated shared use footway/cycleway and pedestrian walkway;
- Upgraded directional and information signage;
- Cycle parking;
- Speed management measures along West Promenade;
- Enhanced street lighting and landscaping; and,
- Realignment of the southern Cayley Promenade / West Promenade junction so that Cayley Promenade is the priority movement.

To the south of these proposals, the scheme will coordinate and merge with the already completed sea defence / promenade improvement works.

As a result of the above proposals, changes will result to how traffic will move through this local area. This is explored in more detail later in this report, but key changes will be:

- Northbound traffic will need to reassign via Cayley Promenade as a result of West Promenade being made one-way southbound;
- The combination of the reduction in speed limit on West Promenade, the realignment of Cayley Promenade junctions; and the speed reduction measures along West Promenade will likely result in the greater majority of southbound traffic also reassigning via Cayley Promenade. West Promenade is therefore expected to be predominantly local access only to the seafront parking.

3.2.2 Cayley Promenade

Highway proposals are provided in Appendix A.

As a result of the proposals described above for West Promenade, complimentary proposals have also been developed for Cayley Promenade. The primary measures proposed are as follows:

- Realignment of Cayley Promenade / Whitehall Road so that Cayley Promenade becomes the priority movement;
- Parallel on-street parking maintained and formalised on the seaward side of Cayley Promenade;
- Waiting restrictions along the west side of Cayley Promenade to help accommodate vehicle flows;
- Improved north / south road crossing facilities for pedestrians with the installation of dropped crossings and tactile paving where necessary; and
- Improved east / west road crossing facilities for pedestrians at key locations with the introduction of kerb buildouts, dropped crossings and tactile paving.

4 Traffic count data

4.1 Introduction

A series of traffic counts were commissioned by CCBC and undertaken in support of this transport statement to understand the existing utilisation of the junctions and the levels of traffic through them. Junction turning counts were completed from 07:00 – 19:00 on Thursday 13 May and Saturday 15 May at the following junctions (see Figure 4.1 for locations):

- Junction A: Rhôs Promenade / West Promenade
- Junction B: Cayley Promenade / Whitehall Road
- Junction C: Llannerch Road East / Cayley Promenade
- Junction D: Cayley Promenade / West Promenade

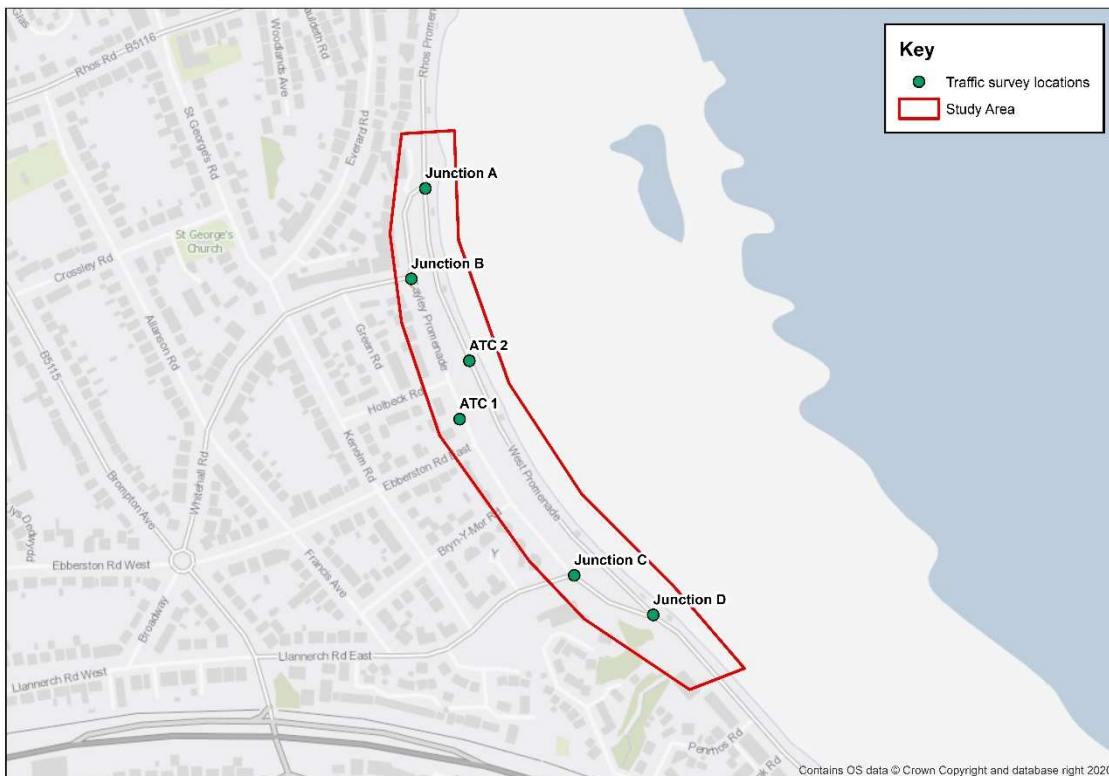
The video footage captured for the junction turning counts can also be used to review pedestrians and cyclists' movements on West Promenade and Cayley Promenade if required.

Automatic traffic counts (ATC) were undertaken during May 2021 (see Figure 4.1 for locations):

- ATC 1: Mid-way on Cayley Promenade
- ATC 2: Mid-way on West Promenade.

Counts on Cayley Promenade were completed in the week commencing 10th May 2021 and counts on West Promenade were for 7 days from 19th May, due to technical problems with equipment initially at West Promenade.

Figure 4.1: Traffic survey locations



Source: Mott MacDonald

All traffic count data was collected during school term time.

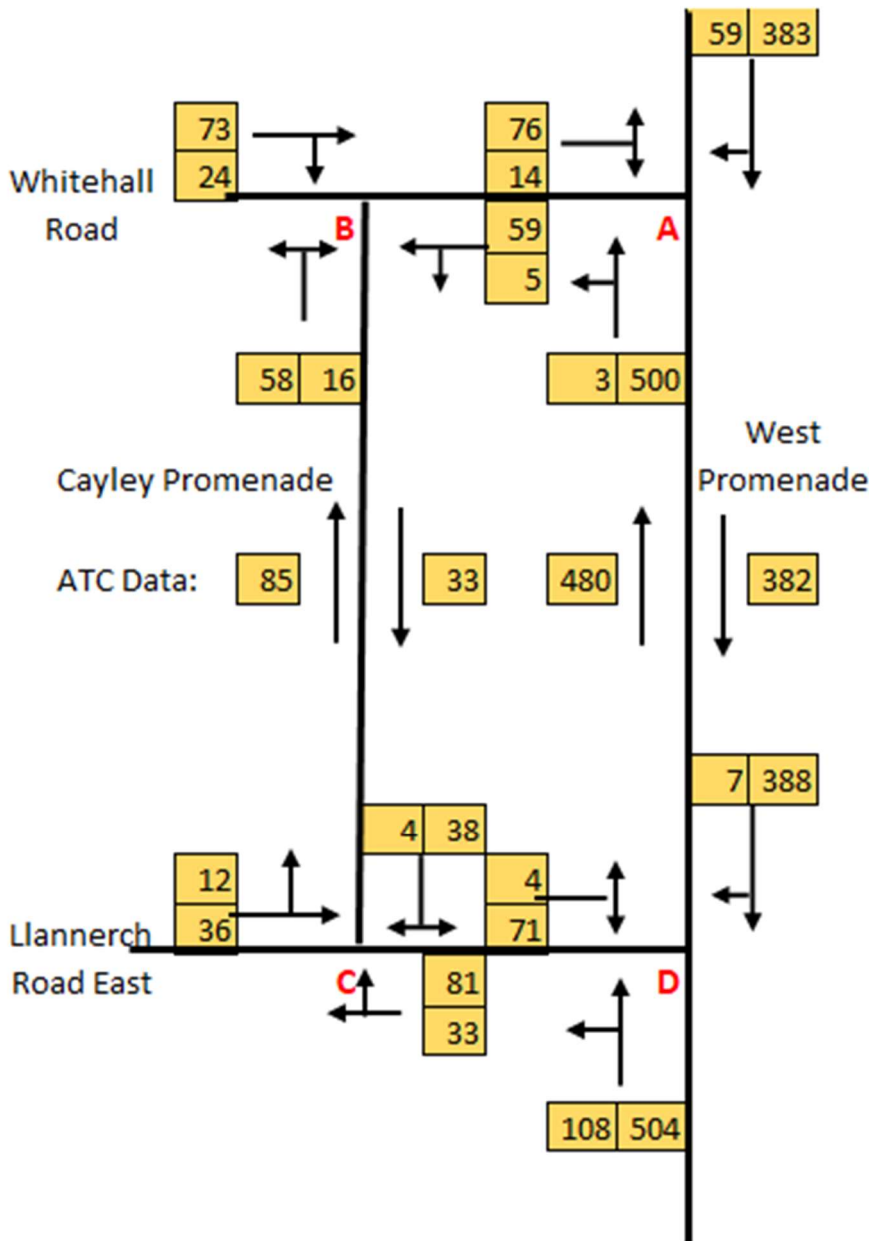
4.1.1 Network flows

The following three charts show the flows along the highway links and through the four junctions at the peak periods on weekdays and weekend days, to provide an overview of how traffic moves through the area. The red letters refer to the junctions, as labelled above in Figure 4.1.

4.1.1.1 Weekday AM Peak (08:00-09:00)

Figure 4.2 shows the baseline traffic flows along the links and through the junctions within the study area at 08:00-09:00, which is the busiest hour on a weekday morning.

Figure 4.2: Traffic flows on a weekday, 08:00-09:00

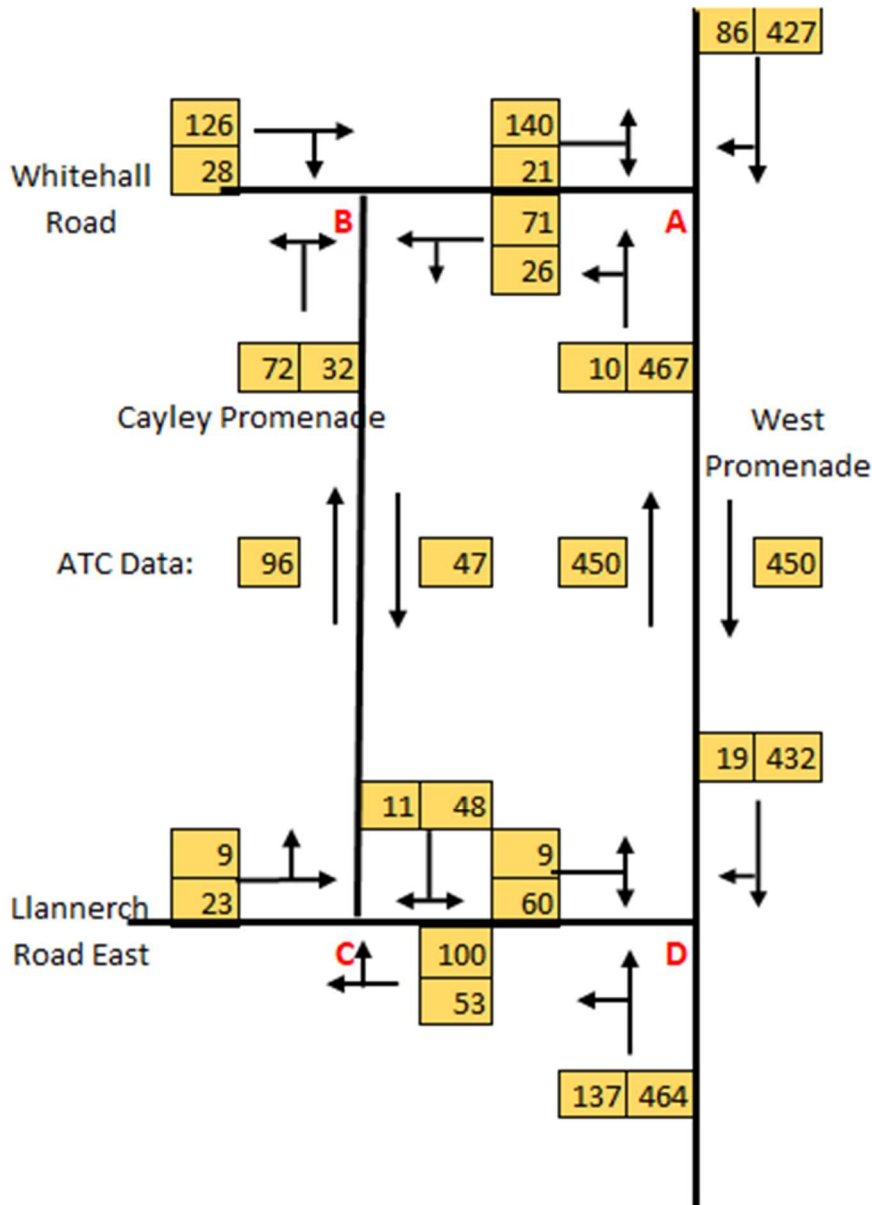


Source: Traffic Surveys / Mott MacDonald

4.1.1.2 Weekday PM Peak (15:00-16:00)

The peak afternoon period on a weekday is 15:00-16:00. The flows along the highway links and through the junctions during this hour are shown in Figure 4.3.

Figure 4.3: Traffic flows on a weekday, 15:00-16:00

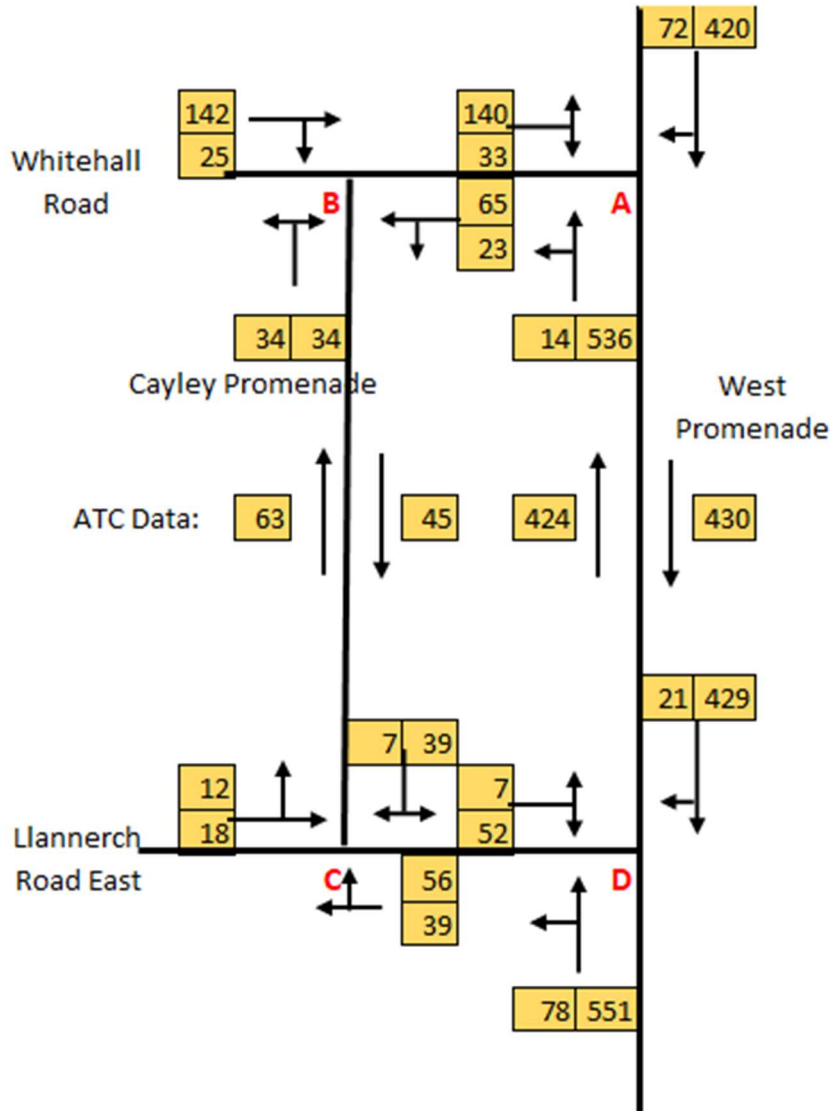


Source: Traffic Surveys / Mott MacDonald

4.1.1.3 Weekend Peak (13:00-14:00)

The peak period on a weekend day is 13:00-14:00. The flows along each of the highway links and junction are shown in Figure 4.4.

Figure 4.4: Traffic flows on a weekend, 13:00-14:00



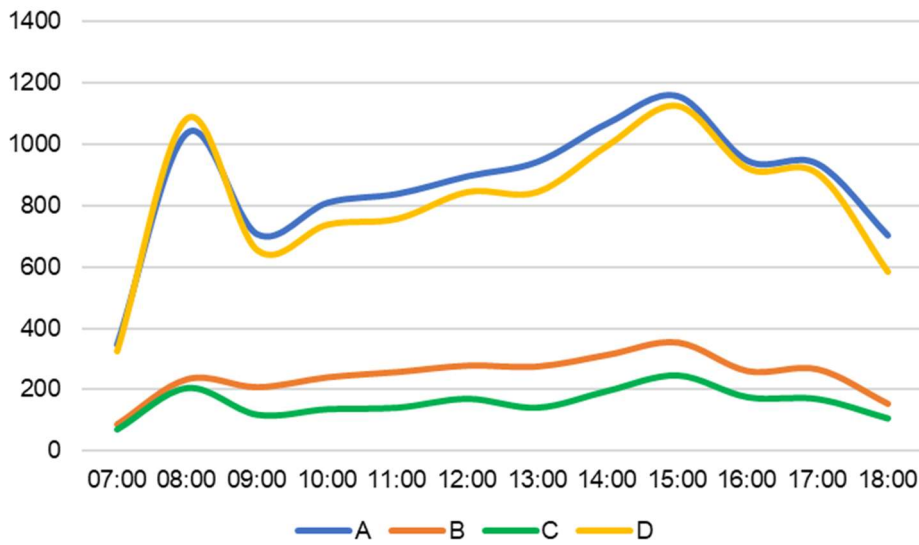
Source: Traffic Surveys / Mott MacDonald

In all three of the peak periods (weekday AM, weekday PM and weekend), it is clear that the dominant vehicular movements in the network are north and south along West Promenade, while movements along Cayley Promenade are around 85% lower. This reflects the priority of the junctions and desire lines, with West Promenade having the right of way along its entirety.

4.2 Junction turning count results

Further details on the classified turning counts collected in May 2021 are presented in this section.

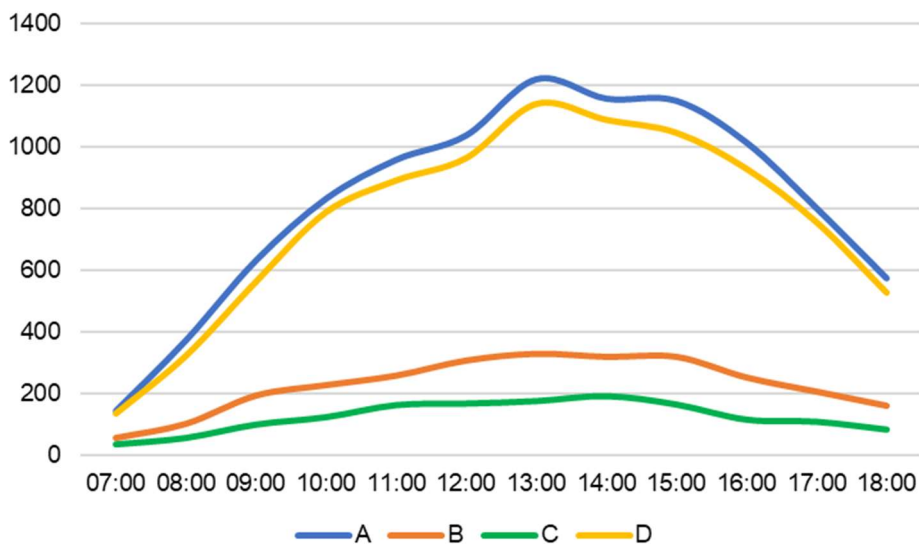
Figure 4.5: Vehicles through junctions by hour of day (weekday)



Source: CCBC Traffic Surveys

Figure 4.3 shows that Junctions A and D (Rhôs Promenade / West Promenade and Cayley Promenade / West Promenade) are the two busiest junctions on a weekday with two clear peaks of traffic flows – one in the morning peak period (08:00-09:00) and in the afternoon (14:00-16:00). Junctions B and C (Cayley Promenade / Whitehall Road and Llannerch Road East / Cayley Promenade) see a steadier flow of traffic through them throughout the day, with no distinguishable peak period.

Figure 4.6: Vehicles through junctions by hour of day (Saturday)



Source: CCBC Traffic Surveys

Figure 4.4 illustrates that on a Saturday, junctions A and D (Rhôs Promenade / West Promenade and Cayley Promenade / West Promenade) are again the busiest two, with a steady rise in traffic flow through the morning, reaching a peak around 13:00-15:00 with about 1200 vehicles per hour, before falling away again. Junctions B and C (Cayley Promenade /

Whitehall Road and Llannerch Road East / Cayley Promenade) follow a similar pattern, but with a much flatter profile of traffic flows.

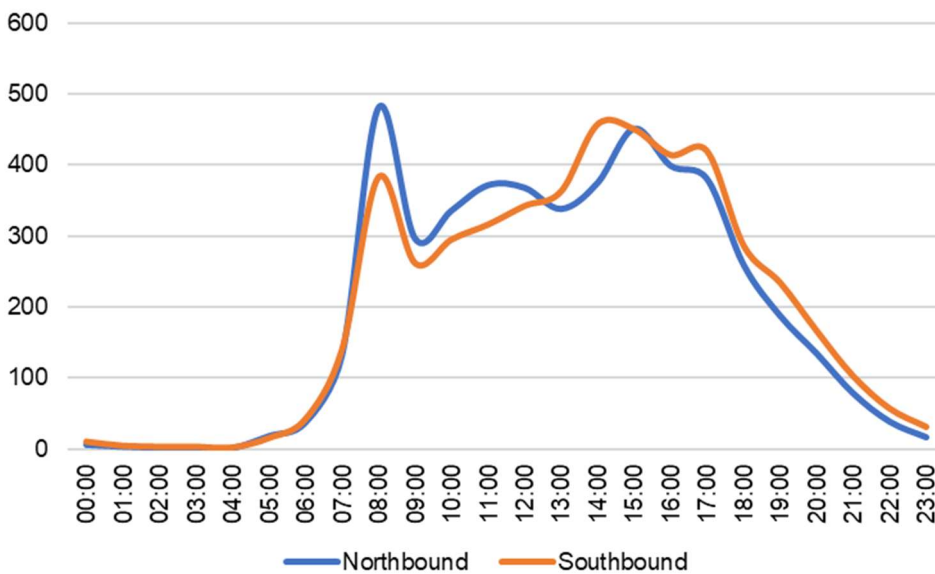
4.3 Automatic traffic count results

Week-long automatic traffic counts were undertaken, one on West Promenade and one on Cayley Promenade, to understand the current flows along each of these roads. The Cayley Promenade count was undertaken between Monday 10th May and Sunday 16th May. Due to an error with the equipment, the West Promenade had to be repeated during the week commencing 19th May. This section provides further detail on the profile of these flows by hour of day and day of week, for each of the two roads.

4.3.1 Site 1 – West Promenade

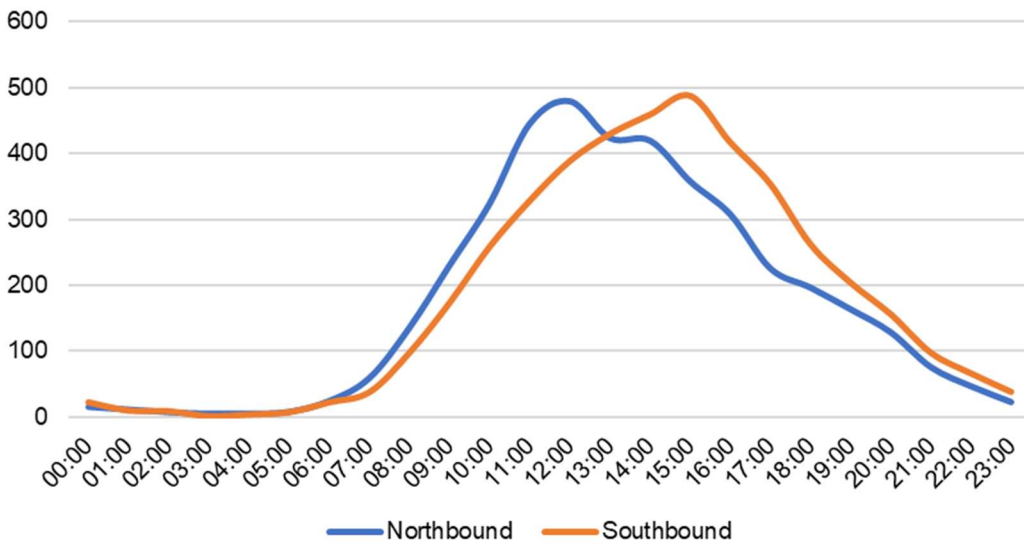
The traffic count data for West Promenade, the more easterly of the two roads surveyed, is shown in the following charts.

Figure 4.7: Average traffic flow by hour on West Promenade (weekday)



Traffic flows northbound and southbound on West Promenade follow a similar pattern on a weekday, with peaks around 08:00-09:00 and 14:00-16:00. In the morning peak, flows reach a maximum of 480 vehicles per hour in the northbound direction and 382 southbound. In the afternoon, the peak flow northbound is 450 vehicles at 15:00-16:00, and 457 vehicles southbound at 14:00-15:00. These appear to coincide with school start and end times, indicating school traffic may be largely responsible for these peaks.

Figure 4.8: Average traffic flow by hour on West Promenade (weekend)

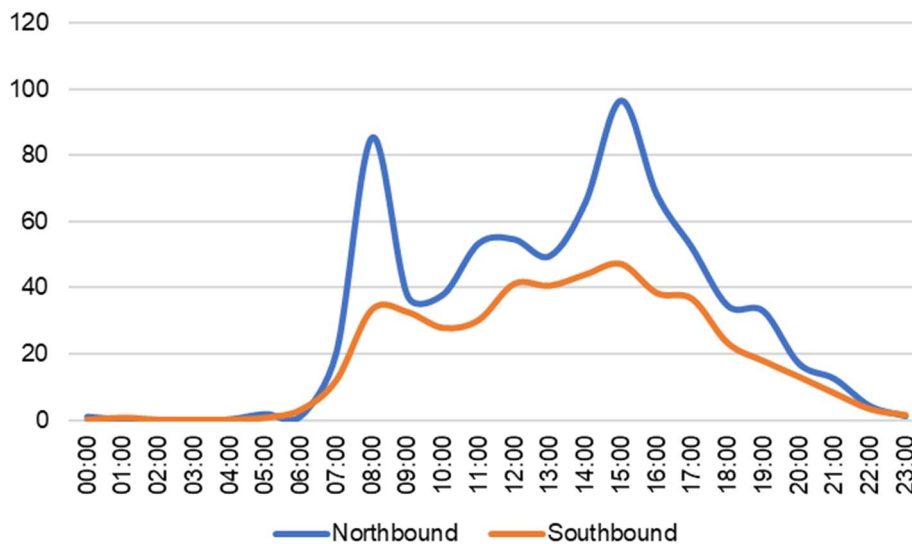


On a weekend day, Figure 4.8 shows a steady rise in traffic through the morning, reaching a peak in the northbound direction at 12:00-13:00 with 480 vehicles, and at 15:00-16:00 in the southbound direction with 488 vehicles. Flows then steadily decrease through the afternoon.

4.3.2 Site 2 – Cayley Promenade

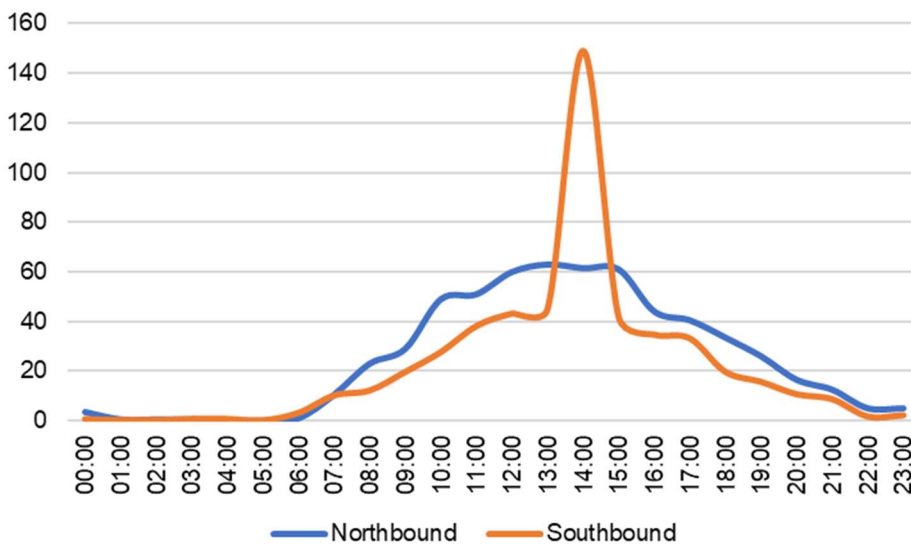
The following charts show the traffic count data for Cayley Promenade.

Figure 4.9: Average traffic flow by hour on Cayley Promenade (weekday)



The northbound direction shows two clear peak periods, with 85 vehicles between 08:00 and 09:00, and 96 vehicles between 15:00 and 16:00. The timings of these indicate the usage of the road by school traffic. The southbound direction shows a smoother profile, with some small peaks associated with school traffic, but not as large as northbound.

Figure 4.10: Average traffic flow by hour on Cayley Promenade (weekend)



The weekend data shows a steady profile, with traffic flows in the northbound direction rising through the morning to a peak in the early afternoon before declining again. The southbound flows also show a steady rise through the morning, but sudden large peak occurred at 14:00. This was caused by the closure of West/Rhôs Promenade for around one hour, and traffic was diverted onto Cayley Promenade. With the exception of that hour due to the diversion, the highest combined number of vehicles on Cayley Promenade in any hour was 108 at 13:00-14:00.

Whilst the 14:00 period on a weekend distorts the data, it does indicate the impact of a one-way closure, albeit for different reasons, on traffic flow on Cayley Promenade. It should be noted that due to the data being collected on different weeks, there was no corresponding drop on West Promenade (as shown in Figure 4.8). However, assuming that traffic volumes comparable over time, it would have been expected to see around 460 vehicles wanting to travel southbound along West Promenade in the hour period, and thus be diverted on to Cayley Promenade. However, the actual increase in traffic on Cayley Promenade was around 100 vehicles, suggesting other vehicles made decisions to alter their route rather than travel along Cayley Promenade.

It is not known what the cause of the closure was, nor what diversion signage was in operation during the closure, nor how much of the hour West Promenade was closed for. But it does suggest that even on a short-term basis, vehicles may have chosen to use a different route instead of Cayley Promenade, and this could suggest that if there was a long term one-way system in operation, that vehicles would choose to alter their route, entirely avoiding West Promenade and Cayley Promenade.

4.4 Vehicle speed data

The automatic traffic counters collected data on vehicle speeds along the two roads. The table below shows the average speed by day and by direction. The posted speed limit for both roads is 30mph.

Table 4.1 Average Speed (mph)

Road		Northbound	Southbound
Cayley Promenade	Weekday	25.5	24.6
	Weekend	24.5	23.9
West Promenade	Weekday	27.8	28.0
	Weekend	27.0	26.7

Table 4.1 shows that traffic speeds are around 2-3mph higher on West Promenade than Cayley Promenade. Additionally, traffic speeds are marginally higher on a weekday than weekend day.

5 Construction Impacts

This section assesses the potential impacts of the construction period traffic on the local transport network. At this stage, a contractor for the scheme has not been appointed, and therefore the below is a preliminary outline methodology and is subject to amendment, consent and construction stage contractor methodology and risk assessments.

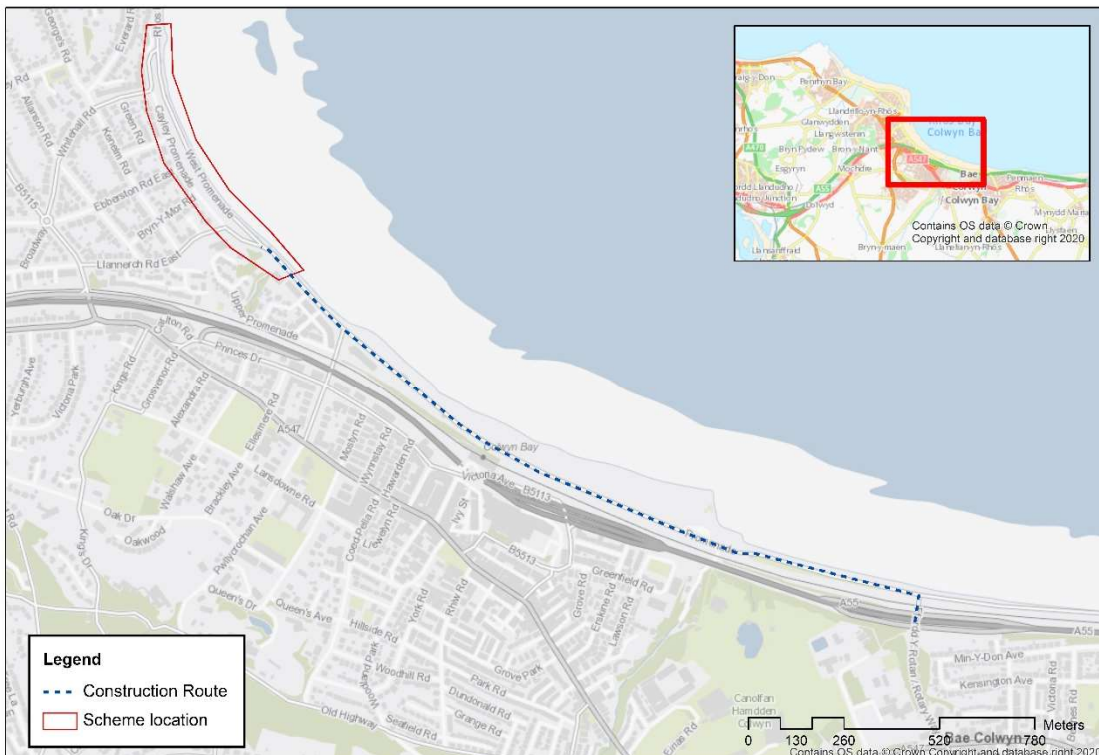
5.1 Construction plan

A large proportion of the materials required for the beach recharge works will be transported to the site by the sea, which will not impact on the local transport network. In terms of programme, construction is expected to commence by March 2022 in line with the requirements of CRMP funding. Construction is expected to last for 14 months, and will be delivered in one phase, potentially divided into three sub-phases.

5.2 Construction vehicle routes

Figure 5.1 shows the planned route for construction vehicles to take to access the site. Vehicles will leave the A55 at Junction 22, and travel north-westwards along Promenade to the site. The exit route will be the reverse of this route.

Figure 5.1: Primary construction vehicle route



Source: CCBC

There is a weight limit of 7.5 tonnes on the West Promenade which will limit the size of the vehicles used for deliveries, unless agreed with the local highway authority.

5.3 Baseline traffic flows

Figure 5.2 shows the baseline annual average daily flows (AADFs) on key roads in the vicinity of the scheme site.

Figure 5.2: Locations of traffic count sites



Source: Mott MacDonald

Table 5.2 below shows the 24-hour weekday flows for each of the sites numbered in Figure 5.2. These figures are taken from a combination of the recent automatic traffic counts and junctions turning counts undertaken for this scheme, along with Department for Transport’s AADF data, but all refer to 24-hour weekday flows.

Table 5.1 24 Hour vehicle flows

Reference ID	Road Name	Direction	Weekday 24-hour flow
1	West Promenade (middle section)	Northbound	4715
		Southbound	4786
2	Cayley Promenade (northern section)	Northbound	1588
		Southbound	1054
3	Whitehall Road	Eastbound	1544
		Westbound	1307
4	Cayley Promenade (middle section)	Northbound	730
		Southbound	455
5	Llanerch Road East	Eastbound	432
		Westbound	539
6	Cayley Promenade (southern section)	Northbound	1154
		Southbound	690

Reference ID	Road Name	Direction	Weekday 24-hour flow
7	West Promenade (southern section)	Northbound	5745
		Southbound	5170
8	Rhôs Promenade	Northbound	6083
		Southbound	5489
9	Marine Road	Northbound	2688
		Southbound	2219
10	A55 Expressway	Eastbound	24674
		Westbound	27091

Source: Traffic surveys and Department for Transport AADF data

The figures show that West Promenade accommodates a vehicle flow of 9,000-11,000 vehicles on a typical weekday, while the A55, as a major trunk road through the area, is by far the busiest, with around 50,000 vehicles travelling along it on a typical day.

5.4 Estimated construction traffic

5.4.1 Deliveries

Details provided through early contractor engagement and the design team indicate the estimated deliveries over the course of the construction period. These are shown in Table 5.2. Where there is more than one delivery, a flat profile has been assumed over the duration of that item's delivery period. Weeks are assumed to be weekdays only, therefore there are five days in a week.

Table 5.2 Estimated construction deliveries

Construction Phase	Action	Plant/vehicle	No. weeks of deliveries	Total number of deliveries	Max No. Deliveries/day	
Pipeline construction	Compound setup	HGV, Hiabs	1	10	2-3	
	Plant deliveries	HGV	0.5	6-10	3-5	
	Pipeline deliveries	HGV/Low loaders	2	60-100	6-10	
	Pipeline construction	Welding equipment	6	1	1	
	Flotation of pipeline	360 tracked excavator	0.2	4-6	4-6	
			Tugs – 3-5 tugs	0.2	3-5	2-3
	Compound demob	HGV, Hiabs	1	10	2-3	
Beach recharge	Compound setup	HGV, Hiabs	2	20	2	
	Pipeline deliveries	HGV	1	20-40	4-8	
	Plant deliveries	HGV	0.5	6-10	3-5	
	Recharge	360 tracked excavator x 2	0.2	2	2	
			Dozer x 2	0.2	2	2
			Wheel Loader x 2	0.2	2	2
			Large hopper dredger	0.2	1	1
			Tug	0.2	1	1
	Survey Launch	0.2	1	1		
	Tugs, Cutting Crew, Wheel	2	80-140	8-14		

Construction Phase	Action	Plant/vehicle	No. weeks of deliveries	Total number of deliveries	Max No. Deliveries/day
	Deconstruction of pipeline	Loaders/Excavators for stockpiling			
		HGVs/Low Loaders	2	80-140	8-14
	Compound demob	HGV, Hiabs	2	20	2

Given that the beach recharge phase will follow the completion of the pipeline construction (i.e. they cannot coincide), it would appear that the maximum number of vehicles likely to be travelling to and from the construction site on any day is around 28 vehicles in each direction, if the two elements of the deconstruction of pipeline were delivered simultaneously. It is anticipated that the worst-case total number of HGV trips to and from the site is expected to be approximately no more than 2 per hour at the busiest periods, equating to 1 arrival and 1 departure every 15 minutes. However, for the majority of the construction programme HGV numbers are anticipated to be less frequent than this.

There is the potential for an approximately 2-week period during pipeline deconstruction when deliveries may increase to 4/hour depending on which activities coincide.

The roads which form the construction vehicle delivery route are:

- A55 Expressway
- Promenade
- West Promenade

The A55 has around 50,000 vehicles per day. An additional 28 vehicles per day is less than 0.1% of existing flows and therefore would have no impact on traffic flows or network operation. West Promenade's flows are currently in the region of 10,000 vehicles per day. 28 vehicles represent 0.6% of existing flows which is, again, of negligible impact. Both of these are well below the 5% increase which Welsh Government indicates would require a detailed examination on the impact, and the 30% threshold for significant impact within EIA guidelines³.

5.4.2 Construction workers

In general construction workers travelling from outside Colwyn Bay would be encouraged to access the Scheme from the A55 Expressway Junction 22. The forecast number of workers on site in each month is shown in the table below.

Table 5.3 Estimated workforce by month

Month	2022					2023									
	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M
No.	12	15	18	20	25	25	25	25	30	30	25	25	25	10	10*

Source: CCBC, 2021 * Predominantly Snagging activities

Each construction worker is expected to make no more than one arrival and one departure from the site each day, equating to a maximum of 30 additional vehicles on the highway network at any one time. However, this is very much a worst-case scenario, and actual number of vehicles is likely to be lower than this, with some workers being local and thus walking or cycling to site. There are also options for public transport with nearby train stations and bus stops. Workers may also choose to car share with other workers. Therefore, 30 additional vehicles is a reasonable worst-case scenario.

³ IEMA (1993) Guidelines for the Environmental Assessment of Road Traffic

Current peak flow traffic volumes on West Promenade are around 600 at 08:00-09:00 on a weekday, 510 at 15:00-16:00 on a weekday, and around 500 at 13:00-14:00 on a weekend. An additional 30 vehicles in these hours equates to no more than 2.7% of existing flows, indicating construction workers' vehicles are unlikely to have a noticeable impact on the highway network.

5.5 Cycle and pedestrian facilities during construction

The National Cycle Route 5 and North Wales Coastal Path long distance footpath run along seaward side of West Promenade. During the construction phase, these two facilities will not be available in their current location. Instead, they will be diverted along the footway on Cayley Promenade. The section of West Promenade between the two Cayley Promenade junctions will be closed to all traffic, meaning potential conflict between the vehicles are minimised.

5.6 Impact on public transport services

There are not expected to be any impact on either bus or rail services as a result of the Scheme's construction, due to there being no need to alter the bus routes or bus stop locations, nor any changes to rail services or impacts on rail infrastructure.

6 Operational Impact

This section reviews the impact of the Scheme on the transport network once the Scheme is completed and operational.

As explained in Section 3.2, the proposed Scheme will result in the following changes to the transport network:

- Closure of West Promenade, between the extents of Cayley Promenade, to northbound traffic. West Promenade will be narrowed to a single lane, with a 20mph speed limit, with southbound movements only permissible.
- The shared use space on the east side of West Promenade will be widened and remain as shared use for walking and cycling.
- On-street parking will be provided on both sides of West Promenade, with disabled spaces and electric vehicle charging points included.
- Cayley Promenade will become the primary route for through traffic, with the priorities of the junctions with West Promenade changed to reflect this, with the changed section West Promenade being the minority arm at the two junctions.

6.1 Highways Impact

It is not expected that the character of the traffic will change as a result of the Scheme, with no increase in the overall volume of traffic travelling through the study area. However, within the study area, there will be a redistribution of vehicles from West Promenade to Cayley Promenade, as a result of the changed primary route, the closure of West Promenade to all northbound traffic, and the reduction in the speed limit on West Promenade to 20mph. Additionally, the environment on West Promenade is expected to change from being a vehicular traffic dominated one to a pedestrian and cyclist area, with increased shared use space on the seaward side of West Promenade, narrowed carriageway and on-street parking.

Table 6.1 shows the existing flows during the weekday peak hours (AM – 08:00-09:00 and PM – 15:00-16:00), and the projected, worst-case scenario flows under Scheme operation as described above.

Table 6.1 Existing and projected weekday AM peak flows along selected links

Section of Road	Direction	Existing Weekday AM Peak Flow	Projected Weekday AM Flow	Absolute Change	% Change
Whitehall Road	East	97	97	0	0%
	West	117	117	0	0%
West Promenade (north)	North	576	576	0	0%
	South	442	442	0	0%
West Promenade (middle)	North	480	0	-480	-100%
	South	382	40	-343	-90%
West Promenade (south)	North	612	612	0	0%
	South	459	459	0	0%
Cayley Promenade (north)	North	90	599	509	566%

Section of Road	Direction	Existing Weekday AM Peak Flow	Projected Weekday AM Flow	Absolute Change	% Change
Cayley Promenade (middle)	South	64	406	342	534%
	North	85	597	512	601%
Cayley Promenade (south)	South	33	386	353	1056%
	North	114	613	499	437%
Llannerch Road East	South	75	412	337	449%
	East	48	48	0	0%
	West	37	37	0	0%

Source: Mott MacDonald

The existing and projected weekday PM peak (15:00-16:00) flows are shown in Table 6.2.

Table 6.2 Existing and projected weekday PM peak flows along selected links

Section of Road	Direction	Existing Weekday PM Flow	Projected Weekday PM Flow	Absolute Change	% Change
Whitehall Road	East	154	154	0	0%
	West	143	138	0	0%
West Promenade (north)	North	607	607	0	0%
	South	513	513	0	0%
West Promenade (middle)	North	450	0	-450	-100%
	South	450	45	-405	-90%
West Promenade (south)	North	601	601	0	0%
	South	492	492	0	0%
Cayley Promenade (north)	North	161	605	444	276%
	South	97	471	374	386%
Cayley Promenade (middle)	North	96	573	476	494%
	South	47	455	407	863%
Cayley Promenade (south)	North	153	603	450	294%
	South	69	458	389	563%
Llannerch Road East	East	32	32	0	0%
	West	64	64	0	0

Source: Mott MacDonald

The existing and projected weekend peak (13:00-14:00) flows are shown in Table 6.3.

Table 6.3 Existing and projected weekend peak flows along selected links

Section of Road	Direction	Existing Weekend Peak Flow	Projected Weekend Flow	Absolute Change	% Change
Whitehall Road	East	167	167	0	0%

Section of Road	Direction	Existing Weekend Peak Flow	Projected Weekend Flow	Absolute Change	% Change
West Promenade (north)	West	99	99	0	0%
	North	676	676	0	0%
West Promenade (middle)	South	492	492	0	0%
	North	424	0	-424	-100%
West Promenade (south)	South	430	45	-385	-89%
	North	629	629	0	0%
Cayley Promenade (north)	South	481	481	0	0%
	North	173	692	519	300%
Cayley Promenade (middle)	South	88	452	364	414%
	North	63	617	554	880%
Cayley Promenade (south)	South	45	452	407	905%
	North	95	631	536	564%
Llannerch Road East	South	59	456	397	673%
	East	30	30	0	0%
	West	46	46	0	0%

Source: Mott MacDonald

Whilst the percentage changes in traffic flows appear large on Cayley Promenade, this is partly due to the low starting point baseline flows. Overall, the volume of traffic through the network is not expected to change. The increase in traffic on Cayley Promenade is offset by the reduction in traffic on West Promenade. The Scheme is not expected to generate any additional vehicle trips on the highway network. Accordingly, with the changes to junction priorities in place at the northern and southern limits of Cayley Promenade we do not consider that the changes will have a detrimental impact to the operation of the local highway network.

6.1.1 Road Safety

The reduction to 20mph on West Promenade, with a narrowed carriageway, will create a safer environment for pedestrians and cyclists. At the same time new pedestrian crossings are proposed on Cayley Promenade. Separate Stage 1 & Stage 2 Road Safety Audits (reference 410895-MMD-00-XX-RP-D-0200 and 100374-MMD-00-XX-RP-C-0002 respectively) has been undertaken as part of the Scheme development and its findings have been incorporated into the design.

6.2 Pedestrian and cycle impact

Pedestrians and cyclists are expected to benefit from the improved shared used space on West Promenade, plus new uncontrolled crossing facilities on West Promenade and Cayley Promenade. The improved shared use space is part of National Cycle Route 5 and the North Wales Path, both of which will benefit from improved quality as a result of the Scheme. Additionally, safety will improve as a result of the slower speeds on West Promenade, with the 20mph speed limit.

Pedestrians crossing Cayley Promenade are likely to experience more of a delay than currently, due to higher traffic flows. However, flows are not expected to exceed 1,400 vehicles per hour,

which in environmental impact terms is considered the point at which pedestrians experience noticeable delay⁴ requiring mitigation.

Overall, pedestrians and cyclists should expect to experience a net benefit as a result of the scheme, with improved amenity, cycling and walking infrastructure provision, and consequently safety.

⁴ IEMA (1993) Guidelines for the Environmental Assessment of Road Traffic

7 Planning Policy

7.1 National

7.1.1 Planning Policy Wales (Edition 11)

Planning Policy Wales (Edition 11), published in 2021, is the Welsh Government's land use planning policy for Wales and should be taken into account when preparing development plans. Technical Advice Notes supplement the Policy with technical guidance. Its primary objective is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015.

Relevant paragraphs to this transport statement are as follows:

3.6 - Development proposals must address the issues of inclusivity and accessibility for all...Design measures and features should enable easy access to services by walking, cycling and public transport.

4.1.1 - The Planning system should enable people to access jobs and services through shorter, more efficient and sustainable journeys, by walking, cycling and public transport...This can be achieved by:

- *Enabling More Sustainable Travel Choices*
- *Network Management*
- *Demand Management*

4.1.4 – Land use and transport planning must be integrated...within and between different types of transport; between transport measures and land use planning; between transport measures and policies to protect and improve the environment, education, health, social inclusion and wealth creation.

4.1.9 - The Welsh Government is committed to reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport. Delivering this objective will make an important contribution to decarbonisation, improving air quality, increasing physical activity, improving the health of the nation and realising the goals of the Well-being of Future Generations Act.

4.1.11 - Development proposals must seek to maximise accessibility by walking, cycling and public transport, by prioritising the provision of appropriate on-site infrastructure and, where necessary, mitigating transport impacts through the provision of off-site measures, such as the development of active travel routes, bus priority infrastructure and financial support for public transport services.

4.1.12 - It is Welsh Government policy to require the use of a sustainable transport hierarchy in relation to new development, which prioritises walking, cycling and public transport ahead of the private motor vehicles.

4.1.16 - It is recognised that there will be other transport considerations, such as provision for service vehicles in the design of schemes, and further measures to support sustainable transport, such as the decarbonisation of public transport and multi-modal travel.

4.1.17 - Different approaches to sustainable transport will be required in different parts of Wales, particularly in rural areas, and new development will need to reflect local circumstances.

4.1.27 - The Active Travel Act (Wales) 2013 makes walking and cycling the preferred option for shorter, everyday journeys such as to and from a workplace or education establishment, or in order to access health, leisure or other services or facilities.

4.1.29 - The planning system has an important role to play in promoting and supporting the delivery of the Active Travel Act and creating the right environments and infrastructure to make it easier for people to walk and cycle, including new and improved routes and related facilities.

4.1.31 - Planning authorities must support active travel by ensuring new development is fully accessible by walking and cycling.

4.1.35 - New development must provide appropriate levels of secure, integrated, convenient and accessible cycle parking and changing facilities.

4.1.36 - The availability of public transport is an important part of ensuring a place is sustainable. It enables people to undertake medium and long journeys without being dependent on having access to a car. The planning system should facilitate this by locating development where there is, or can be, good access by public transport.

4.1.41 - The provision of electric vehicle charging points should be planned as part of the overall design of a development. Charging points must not cause an obstruction to walking or cycling, should be resistant to vandalism, and located where there is good lighting and natural surveillance.

4.1.50 - A design-led approach to the provision of car parking should be taken, which ensures an appropriate level of car parking is integrated in a way which does not dominate the development...The needs of disabled people must be recognised and adequate parking provided for them.

5.3.1 - The provision of sustainable transport infrastructure is essential in order to build prosperity, tackle the climate emergency, reduce airborne pollution and to improve the social, economic, environmental and cultural well-being of Wales. 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.

5.3.4 - Great care must be taken to minimise the adverse impacts of new or improved transport infrastructure on the natural, historic and built environment and on local communities, including on public health resulting from community severance and airborne pollution.

7.1.2 Technical Advisory Note 18: Transport (2007)

Technical Advisory Note 18 (TAN 18) on transport is intended to sit alongside Planning Policy Wales and provides specific guidance on the design and integration of transport within the planning and design of new developments. Its aim is to steer development design so that it contributes to sustainable development in Wales, such as through siting developments where there is already good connectivity by sustainable transport, with good provision for pedestrians, cyclists and public transport users, so as to promote and encourage sustainable access wherever possible.

The following parts of TAN 18 are relevant to this transport, traffic and access assessment in relation to Colwyn Bay Waterfront Phase 2b project.

2.4 - The inter-relationships between land use planning and transport are complex and varied. The development of land is dependent, in part, upon transport infrastructure and services to function efficiently. By influencing the location, scale, density and mix of land uses and new

development, land use planning can help to reduce the need to travel and length of journeys, whilst making it easier for people to walk, cycle or use public transport.

3.2 - In determining an appropriate development pattern, local planning authorities should seek to maximise relative accessibility rather than ensuring everyone can travel everywhere (mobility). Where a development proposal is assessed as having relatively poor accessibility this may be sufficient grounds to refuse planning permission where this does not support the accessibility objectives set out in the development plan.

4.1 - Car parking can take up large amounts of space in developments, which decreases density and therefore can represent an inefficient use of land. It can also generate considerable additional trips if located in an area without public transport. Poor design and layout of car parking can also make it more difficult to provide effective, walking, cycling and public transport links.

4.7 - In determining maximum car parking standards for new development, considerations include:

- *Public transport accessibility and opportunities or proposals for enhancement;*
- *Targets and opportunities for walking and cycling;*
- *The availability in the general area of safe public on- and off- street parking provision;*
- *Potential for neighbouring or mixed-use developments sharing parking spaces, for example at different times of the day or week.*

5.2 - Local authorities, developers and transport providers should work together to meet the needs of all people, including those with disabilities, for equality of access by:

- *Identifying their needs in terms of parking, in particular ensuring that adequate numbers of suitably designed parking spaces are provided in appropriate locations;*
- *Ensuring that their needs are taken into account in the layout, physical conditions and interrelationship of land uses.*
- *Ensuring that transport infrastructure designed and located to be safe, accessible and functional for all.*

5.15 - Well designed and implemented traffic management measures can help to secure planning objectives in a number of ways, including:

- *Reducing community severance, noise, local air pollution and traffic accidents;*
- *Promoting safe walking, cycling and public transport;*
- *Improving the attractiveness of urban areas by helping to avoid or manage congestion;*
- *Controlling on street parking in areas of high parking demand;*
- *Promoting safer road conditions in rural areas and reducing the impact of roads on the environment whilst maintaining access for rural businesses.*

5.17 - Accommodating pedestrians, cyclists and public transport within or adjacent to business or industrial development is just as important as designing efficient arrangements for deliveries and freight movements if employees are to be encouraged to travel to work by non-car modes.

6.2 - Local authorities should promote walking as the main mode of transport for shorter trips through the use of their planning and transport powers. Consideration should be given to ways in which areas and developments can be made more attractive and safer for pedestrians through the arrangement of land uses and design policy.

6.4 - Cycling should be encouraged in a number of ways, including:

- *Securing provision of secure cycle parking and changing facilities in all major employment developments;*
- *Securing provision of cycle routes and priority measures in all major developments;*
- *Adopting minimum cycle parking standards within parking strategies - for commercial premises, these standards should include cycle parking for both employees and visitors*

7.4 - The development of safe and efficient public transport facilities where different modes of transport intersect, including cycling, is essential for the integration of transport provision.

8.12 - Development which attracts substantial movements of freight should be located away from congested inner areas and residential neighbourhoods. Wherever possible new freight facilities should be located adjacent to ports to promote modal transfer of freight.

9.2 - Developers should be required by local authorities to submit transport assessments to accompany planning applications for developments that are likely to result in significant trip generation. The precise scope and content of each TA will depend upon the scale, travel intensity and characteristics of the proposal. In general TAs should, as a minimum, provide information on the likely modal split of journeys to and from the site.

9.10 - Adverse impacts associated with transport infrastructure projects, on the natural, historic and built environment should be minimised...Transport schemes should where necessary provide mitigation measures to minimise the impacts caused by the construction and operation of transport infrastructure.

9.11 - The adverse impact of transport infrastructure on the environmental, social and economic wellbeing of the surrounding area also requires careful consideration...Over-engineered access standards should be avoided where possible.

9.19 - Planning conditions may legitimately be imposed on the grant of planning permission to secure transport measures and facilities as part of the proposed development.

7.1.3 Manual for Streets (2007);

Manual for Streets provides guidance on the design of residential and lightly-trafficked streets, so as to bring about transformation of streets from being those which are dominated by vehicles to ones which are a pleasant environment for people. Its vision is for streets to be inclusive environments which help to build the communities they serve, meet the needs of all users, are attractive with their own distinctive identity, are cost-effective to construct and maintain, and are safe.

Streets have five principal functions which all need to be considered and allowed for within the design: place, movements, access, parking and drainage, utilities and lighting. When designing new developments, Manual for Streets advises that the process involves policy review, objective setting, design, quality auditing, planning approval, implementation and monitoring. Road users should be considered in a hierarchy, with pedestrians and cyclists at the top, and general motor traffic at the bottom. Auditing of schemes should include a road safety check (although not always required)

7.2 Local

7.2.1 Conwy Local Development Plan (2007 – 2022)

The Local Development Plan (LDP) is a statutory document which acts as a single framework for the control of development and use of land within the area covered by the LDP. Among the list of priority issues for the Conwy area is a need to encourage sustainable transport.

Encouraging Sustainable Transport: “The dominant mode for journeys to work, including high outward commuting, is by car within the Plan Area. There is a need for improved sustainable transport use and transport infrastructure in Conwy through the development of an integrated transport system, sustainable accessibility in urban and rural areas, public transport provision, modal interchanges, increased cycling and walking facilities and the requirement of travel plans to reduce car dependency.”

Strategic Policy STR/1 – Sustainable Transport, Development and Accessibility:

“Development will be located so as to minimise the need to travel. Convenient access via footways, cycle infrastructure and public transport should exist or be provided where appropriate, thereby encouraging the use of these modes of travel for local journeys and reducing the need to travel by private car and improving the accessibility to services to those with poor availability of transport. The Council will endeavour to improve accessibility and seek to change travel behaviour. This will be achieved by working with or partners to....

c) promote walking and cycling throughout the Plan Area as part of an integral and highly sustainable means of transport in line with Policy DP/4 – Development Criteria. The design and construction of walking and cycling facilities and infrastructure will be improved to make walking and cycling more attractive, direct and safe in line with Policy DP/3 – Promoting Design Quality and Reducing Crime. Quality and convenient pedestrian crossings will be promoted to facilitate safe and direct movement across busy roads. Development shall contribute towards these connections and quality cycle parking where appropriate in line with STR/2.

Strategic Policy STR/3 – Mitigating Travel Impact: New developments will be required to mitigate the undesirable effects of travel such as noise, pollution, impact on amenity and health and other environmental impacts.... The Council may also require developers to submit a Transport Statement for other development proposals where there is need to understand the traffic impact of the proposal.

Strategic Policy STR/4 – Non-Motorised Travel: The Council will support increased levels of non-motorised travel, including cycle use and walking, by ensuring that travel generating developments are located and designed to facilitate and encourage short distance trips between home, work, schools and colleges, other suitable destinations and for leisure. Apart from minimising the distance between trip origins and destinations, development proposals should ensure:

a) That adequate safe and secure cycle parking is provided in accordance with the standards in Policy STR/2;

b) That detailed designs and layouts encourage cycle use and walking.

Strategic Policy STR/5 – Integrated Sustainable Transport System: In order to improve the transport system, accommodate development needs and enhance communities, the following schemes will be safeguarded and promoted as shown on the Proposals Map:

f) Wales Coastal Path Improvement Programme and the Conwy Rights of Way Improvement Plan – To improve accessibility to the coast and countryside for local communities and visitors;

g) Colwyn Bay – Improved access between the town and the seafront as part of the Colwyn Bay Masterplan and coastal defence project.

7.3 Policy alignment

The proposed scheme within this transport statement is aligned with the national and local planning and transport policy; it improves the provision of walking and cycling facilities in Colwyn Bay, thus promoting and encouraging travel by sustainable modes, whilst providing some car parking and retaining public transport options. The scheme will specifically help with

the achievement of the Conwy Local Development Plan policies relating to coastal path improvements and improving access as part of the Colwyn Bay masterplan.

8 Conclusions

This Transport Statement has been produced to accompany the Environmental Statement for the planning application for Colwyn Bay Waterfront Phase 2b project.

The scheme involves reducing the speed limit on West Promenade to 20mph road, with traffic movement permitted in the southbound direction only, and a realignment of the road layout so that Cayley Promenade becomes the priority movement. Echelon parking will be retained on the seaward side of West Promenade, and parallel parking on the inland side. Pedestrian and cycling facilities on the seaward side of West Promenade will be improved, with a delineated walkway and shared use footway/cycleway.

The proposed scheme is aligned with the national and local planning and transport policy; it improves the provision of walking and cycling facilities in Colwyn Bay, thus promoting and encouraging travel by sustainable modes, whilst providing some car parking and retaining public transport options.

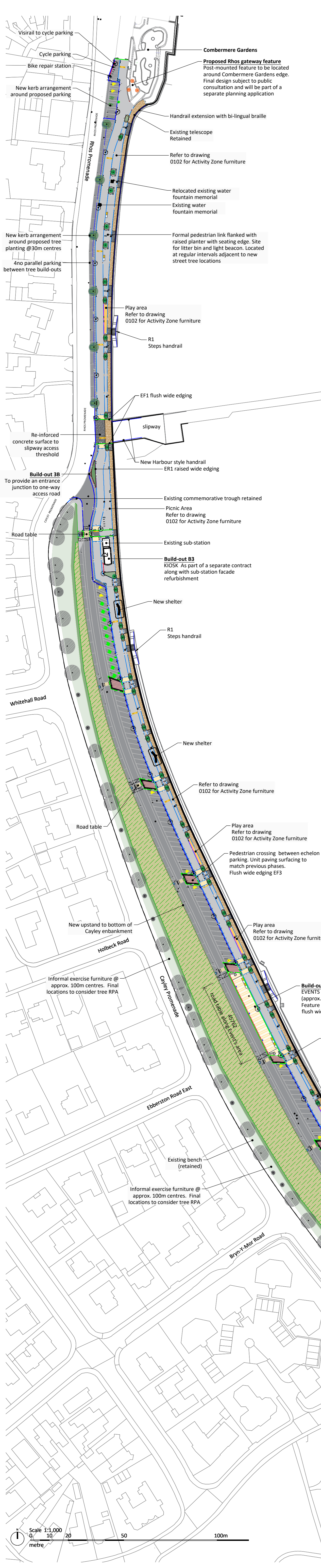
A review of the existing traffic flows and pedestrian and cycle facilities around the scheme has been completed. It is expected there will not be any additional traffic generation within the study area as a result of the Scheme's implementation during the Operational phase. There will be improved amenity and safety for pedestrians and cyclists as a result of the upgraded walking and cycling infrastructure and reduced vehicle speeds. The Scheme will result in a redistribution of traffic from West Promenade to Cayley Promenade. With the changes in traffic priority in place at the northern and southern extent of Cayley Promenade, the Scheme will not result in congestion or significant vehicle delay.

During the Construction phase, there is expected to be a small increase in traffic, due to the arrival and departure of construction workers, along with materials deliveries. The primary route for construction traffic will be via the A55 and Junction 22 and travelling westbound along Promenade and West Promenade. Based on the existing flows on the A55, and Promenade and West Promenade, the additional construction vehicles will have a negligible impact on traffic volumes and are not considered to be problematic, nor require mitigation.

Based on the analysis presented in this Transport Statement, we consider that the scheme will not have a severe impact on the surrounding transport network.

A. Scheme Drawings

A.1 Drawing 100374-BCA-03-XX-DR-L-0100 BCA Landscape General Arrangement



KERBS AND EDGINGS OVERVIEW

- Various existing retain
- HB2 **PCC half battered kerb**
Size: 125 wide x 255 deep (125mm upstand TBC)
- BN **PCC Pcc bullnose kerb (0-6 upstand)**
Size: 125 wide x 150 deep
- DK **PCC Dropper kerb**
Size: 125 wide x 150 deep
- SP **PCC Splayed kerb**
Size: 125 wide x 150 deep
- EF1 **PCC wide edging - Flush**
Size: 145 wide x 145 deep (centre stone);
Colour: Silver grey
Marshall's Conservation Kerb
Exposed aggregate pcc edging
- EF2 **Flat top pin pcc kerb**
Size: 50 wide x 150 deep
250mm deep adjacent to raised planters
Refer to dwg.
- ER1 **PCC wide edging - Raised**
125mm upstand
Size: 145 wide x 255 deep;
Colour: Silver grey
Marshall's Conservation Kerb
Exposed aggregate pcc edging
Locations: Selected planting beds
- KD1 **Kerb Drain Half Battered**
See Drainage Discipline drawing for details
- KD2 **Kerb Drain Bullnose**
See Drainage Discipline drawing for details

LIGHTING

- Light columns - as per previous phases
Twin 'Kirium Pro Vision' LED luminaire on 10m tapered steel column @ approx 25m intervals. 'Kirium Pro 1' mounted at 10m (1000mm arm) to road, 'Kirium Pro 3' mounted at 6m (350mm arm) to pathway. As supplied by DW Windsor or similar approved. Lighting output to engineers's specification
- Light Beacon
Product : Silka Max;
Supplier: DW Windsor or similar approved.
4.6m overall height cylindrical luminaire with LED incased in 1.20m high glazing tube.
Finishes/colours:
Column: Extruded aluminium: DB 706 Metallic Dark Grey
LED colours: White 40%; Red 30%; Green 30%
Fixing: Root mounted

PARKING BAY TYPES

All with Highway approved thermoplastic markings and demarcations

- Standard parking bay
2.5 x 5m - perpendicular parking
- Parallel parking bay
2 x 6m.
- Echelon parking bay
2.5m wide.
- Disable parking bay
2.5 x 5m with 1.2m wide cross hatch marking
access strip along bay length
Disabled bay symbol road markings
- Electric car charger bay
As Disable bay
Approved symbol and 'EV ONLY' road markings

VEHICLE METER/CHARGER

- Product : As per MOTT Highway's specification
Fixing: Bolt fixed to concrete pad @ approx. 90mm below surface and binder courses
- Parking meter
Located at approx. 55m intervals along parking areas
- Electric car charger tower
with proprietary impact protection
Product : As per MOTT Highway's specification

EXISTING MANHOLE COVERS

Location and sizes as per Topo survey

UNIT PAVING

80mm thick unit paving from the Kellen range with natural stone aggregate top layer and recycled concrete base. Paving types, sizes and colours subject as listed below. 30mm bedding.
Mortar joints: Narrow 6mm nominal
Mortar Type 1 - Instamac 'UltraScape Flowpoint Rapid' for areas less susceptible to overtopping conditions
Mortar Type 2 - Instamac 'Ultrascape Resi-Bond' resin mortar for area in close proximity to sea wall and susceptible to overtopping conditions
Construction types and build up to Engineer's specifications

- Paving P1 - General paving** 688m²
To road side pavement and kiosk paving
Size: 200 x 600mm
Product: Lavaro
Colours: Grijs/Rood, Grijs
- Paving P2 - 300mm wide Trim** 190m²
Size: 100 x 300mm laid as soldier course, in repeated colour sequence
Product : Lavaro
Colours : wit, grijs, orange, rood, geel
- Paving P3 - Pedestrian crossing build outs** 230m²
To pedestrian links and threshold area
Size: 200 x 600mm
Product: Lavaro
Colours: Grijs/Rood, Grijs
- Paving P4 - High Quality paving Pedestrian build outs** 451m²
Various sizes sizes and finishes to create patterned paving feature. Indicative sizes:
Pattern Type 1: Herringbone
Size: 50 x 200
Finish/colour: Breccia & Liscio - Tagenta E
Pattern Type 2: stacked bond
Size: 200 x 800

HAZARD PAVING

- Mortar/bedding and sub bases as above
- Tramline hazard paving
To shared surface pedestrian crossings
2.4m wide; 4m wide typically
400 x 400 x 50thick units
30mm bedding & narrow pointed resin mortar
- Blister hazard block paving
To pedestrian road crossings
200 x 133 x 60 thick
- Directional hazard paving
Adjacent flush surface car parking

BOUND SURFACE

- Surface B1** 1671m²
In-situ concrete surface 1 - Buff finish
Re-inforced in-situ concrete surface with exposed aggregate to match in-situ concrete surface to Porth Erias and Phase 1b developments. Includes bands of contrasting colour aggregates.
- Surface B1A** 369m²
In-situ concrete surface 3 - Grey finish
As above
- Surface B2 - HRA for Pedestrian Zones**
New 20mm HRA surface course; Build-up course to MML drawings
A. Shared surface 3312m²
B. Activity Zones and links 1163m²
C. Pavement reinstatement 113m²
- Surface B3 - HRA for Vehicular Zones** 6679m²
- Surface B4 - Coloured Asphalt ULTICOLOUR HRA surface course**
A. Flush pedestrian road crossing 84m²
40mm thick **UltiColour HRA surface course**.
Colour: Natural Quartz; 10mm, PSV 57
B. Play activity areas 165m²
Planned existing road surface to required levels.
20mm thick **UltiColour HRA surface course**
Colour: Orange; 6mm; PSV 53

ARTWORK

- Health Marker - as per previous phases
3m long granite blocks @ 50m intervals, with etched and inset artwork. 3m long x 500mm wide x 100mm deep blocks. Each marker is made up of 3 sections
- Granite artwork 'Postcards' - as per previous phase
Size: 1.5m x 1m x 100mm thick max. granite with inset (supplied by specialist).
Quantity TBC by CCBC

TBC

- Surface artwork treatment to selected areas.
Product : Decomark - pre-formed thermoplastic sheets; applied to bound surfaces
Artwork design to be confirmed following further consultations
- Rhos Gateway feature
Indicative location around edge of Combermere Gardens. Final design subject to further consultation and to be submitted as a separate planning application

All dimensions to be checked on site.
Figured dimensions to be read in preference to scaled.
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Revision Description P 1 PLANNING ISSUE By On HR 26/08/2021

FURNITURE ELEMENTS - GENERAL

Raised planter edges
Raised planters composed of granite seating edge and/or 'Staple' raised metal planter edge by *logic-bespoke*. Maximum height above finished level: 450mm

- Planter Types**
- Type A: Rectangular raised planter
2 sides granite seating edge ; 2 sides metal edge
 - Type B: Rectangular raised planter
3 sides granite seating edge ; 1 sides metal edge
 - Type C: Irregular shapes
Metal edge only

VEHICLE CONTROL

- r-b **Cornwall Bollard Removable**
Manufacturer: Marshalls
Product reference: Cornwall Bollard Removable (1098mm high above ground; 1398mm high overall)
Material: Ferrocast
Fixing: Removable; To be confirmed by manufacturer;
- b **Cornwall Bollard Root Fixed**
Manufacturer: Marshalls
Product reference: Cornwall Bollard Root Fixed (750mm wide; 800mm high above ground; 1398mm high overall)
Material: Ferrocast
Fixing: Below ground installation; To be confirmed by manufacturer;

CYCLE FACILITIES

- CS **Sheffield Cycle Stand**
Manufacturer: Marshalls
Product reference: Sheffield Ferrocast Cycle Stand (750mm wide; 800mm high above ground; 1100mm high overall)
Material: Ferrocast
Fixing: Root fixed
- ▲ **Bike repair station with integrated pump**
Supplier: Turvec Solutions Ltd.
Dimensions: 440mm (w) x 300mm (d) x 1440mm (h)
Finish: Powder Coated .RAL colour TBC
Fixing: Surface mounted on baseplate

RAILINGS AND EDGE PROTECTION

- R1 **Railing Type R1**
'Harbour Style' 1.15m high, 2- rail & 3-rail system.
To replace existing steps railings and new to top of slipway
(Ferrocast) Colour: RAL 1013 Oyster White.
Supplier: Marshalls or Similar Approved
Surface fixed
Refer to drawings 100374-BCA-03-XX-DR-L-0106 Railings and Edge Protection R1 - Harbour Style
0419 Railings R1 Typical Details - Harbour Style
- R2 **Railing Type R2**
V4 pedestrian railings: 1.0m high.
Galvanised steel, powder coated finish
Fixed version (refer to Removable version along events space, to include ground sockets
Refer to drawings 100374-BCA-03-XX-DR-L-0107 Railings and Edge Protection R2 - OptiRail
0420 Railings R2 Typical Details - OptiRail
- R3 **Railing Type R3 - Play Area**
Loop Knee Rail: 600mm high, 1.5 - 2m long
50mm Ø Galvanised steel frame with 20mm Ø intermediate rail for 'play panel' fixing and support
Finish: marine grade powder coated finish

LITTER BINS

- Nexus Litter Bins
Supplier: Glasdon or similar approved
Fixing: bolt fixed to concrete pad @ 70mm below surface and binder courses
Accessories as standard:
2no moulded plastic liners
Concrete foundation fixing bolts
Silver bin symbols
Nexus stubber plate - gun metal
- Litter Bin 1 Nexus 360 Litter Bin
- Litter Bin 2 Nexus 200 Litter Bin

PARKING:

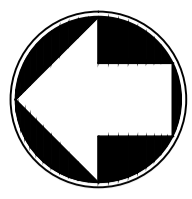
Caley Promenade	
Bottom of Caley Embankment	75no
Promenade Echelon	93no
Disabled parking	15no
Electric charger bay	15no
Rhos	
Rhos residential area	20no
Rhos-on-Sea centre [6no parking]	
Standard parking	2no
Disabled parking	2no
Electric charger bay	2no
TOTAL	224no
Disabled parking total	17no [7.6%]
EV parking total	17no [7.6%]

Refer to separate strategy drawings:
0102 - Street Furniture - Amenity
0103 - Street Furniture - Operational
0109 - Soft Landscape Strategy
0110 - Surfaces Strategy

Client	CCBC / Mott MacDonald	Scale	1:1000 @ A1	Created by	RAZAK.H	Date	July 2021
Job title	Colwyn Bay Promenade Ph 2b	Project number	100374-BCA-03-XX-DR-L	Last edited by	RAZAK.H	Issue	MO'C
Drawing title	General Arrangement	Drawing no.	0100	Checked			

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A.2 Drawings 100374-MMD-03-XX-DR-C-0101 and 100374-MMD-03-XX-DR-C-0102 General Arrangement

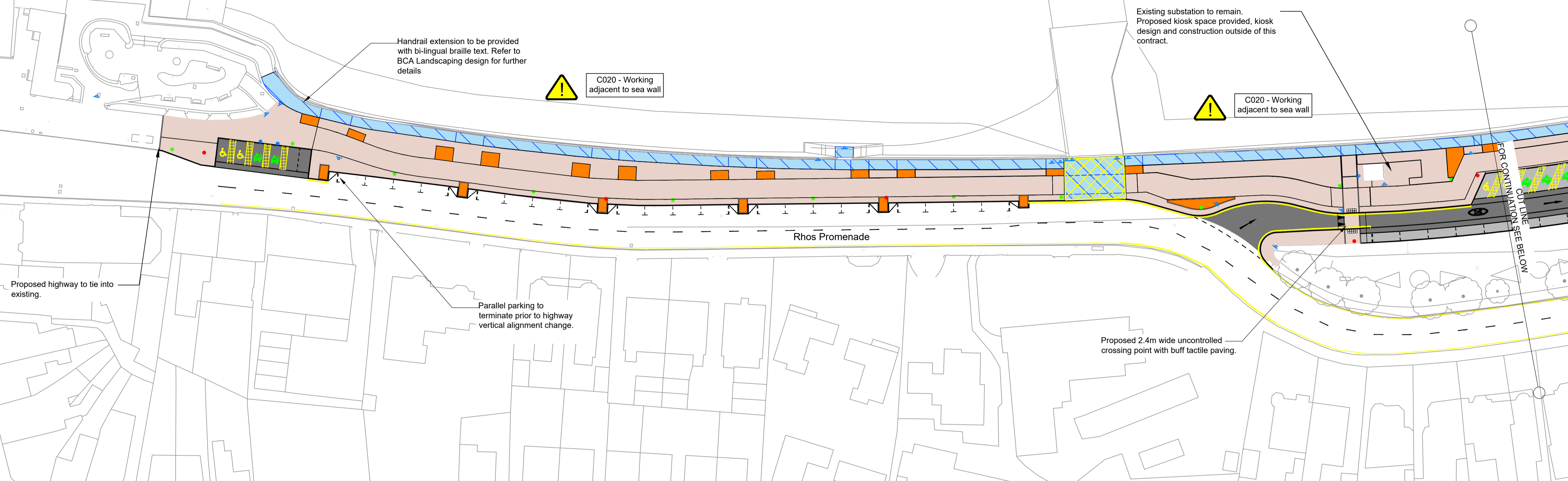


SAFETY, HEALTH AND ENVIRONMENTAL (SHE) INFORMATION BOX

Tender Design Phase
Please refer to Designer's Hazard Elimination and Management Record for details of risks associated with the works. Significant or exceptional risks are listed below:

C005	Existing carriageway / promenade bituminous surfacing material may contain coal tar, total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAH).
C007	Works in vicinity of Sub Station. Refer to Utilities Survey 51705-001-007
C019	Excavations in vicinity of live buried services. Refer to Utilities Survey 51705-001-007
C020	Working adjacent to sea wall
PO010	Existing kiosk & shelter structures could contain asbestos.

For details of steps/ ramped access to beach refer to BCA & Structural drawings. For coastal protection works refer to Coastal Engineering UK drawings



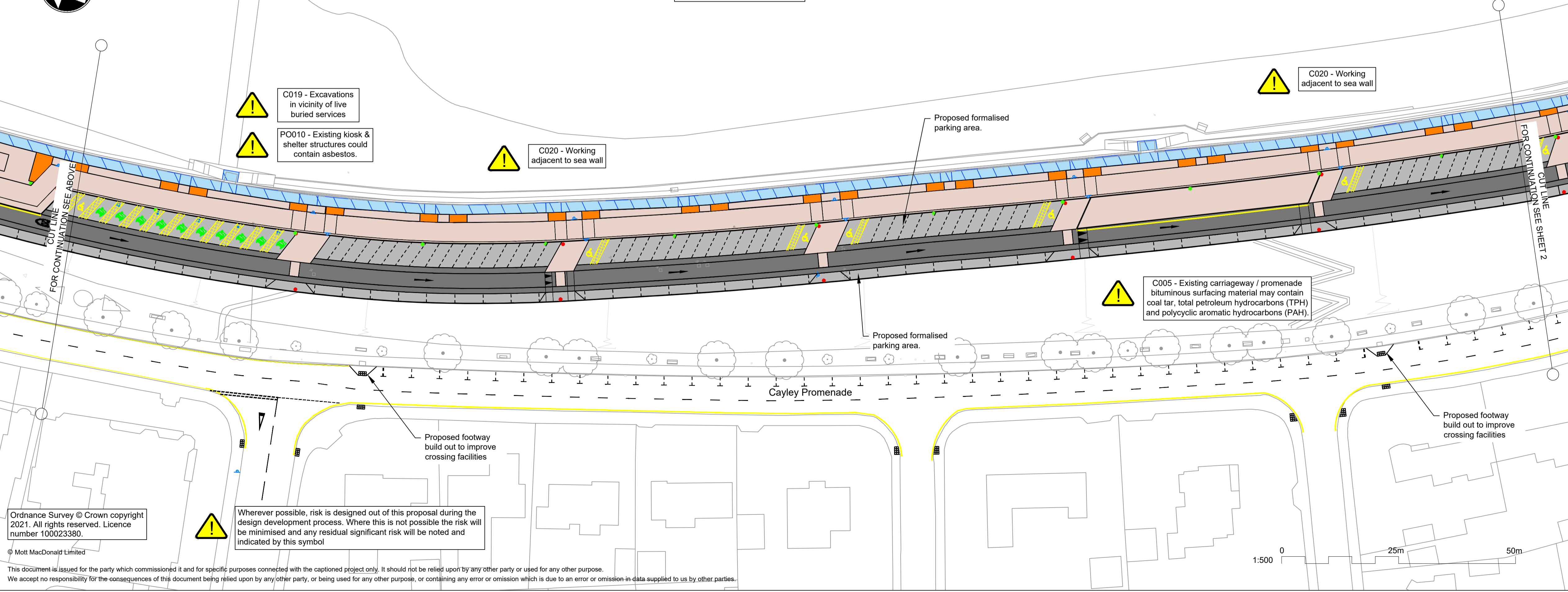
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 - Do not scale any items or information from this drawing.
 - All dimensions are shown in millimetres unless otherwise stated.
 - All levels are in metres above Ordnance Datum (AOD).
 - The topographical survey was supplied to us by Survey Operations Ltd in April 2008. Contractor to confirm levels on site before commencing construction and report any discrepancies to the Project Manager.
 - Drawing does not show full extent and location of utilities. See utility survey plans, statutory undertaker plans, and the Pre-Construction Information. Further unknown utilities may be present. Contractor to undertake survey to determine full extent of utilities present within two weeks prior to commencement of works, or ordering materials, whichever occurs first.
 - The Contractor shall ensure that all utilities are adequately protected as a result of the excavation works.
 - See promenade structures drawings for promenade slabs.
 - Edge of all street furniture and signs to be a minimum distance of 450mm from kerbline.

- Key to symbols**
- Proposed extent of highway. See series 700 drawings for details.
 - Proposed extent of parking area. See series 700 and 1100 drawings for details.
 - Proposed bituminous footway/ cycleway. See series 1100 drawings for details.
 - Proposed concrete footway. See series 1100 drawings for details.
 - Proposed landscaping. Refer to BCA drawing 100374-BCA-03-XX-DR-L-0108 for details.
 - Proposed street lighting column. Final positioning to be confirmed upon completion of lighting design.
 - Proposed parking meter.
 - Proposed electric car charging point.
 - Proposed traffic sign.

- Reference drawings**
- 100374-MMD-03-XX-DR-C-0102 - General Arrangement
 - 100374-MMD-03-XX-DR-C-0110 - Standard Details
 - 100374-MMD-03-XX-DR-C-0201/2 - Site Clearance
 - 100374-MMD-03-XX-DR-C-0301/2 - Fencing & Gates
 - 100374-MMD-03-XX-DR-C-0601/2 - Earthworks
 - 100374-MMD-03-XX-DR-C-0701/2 - Road Pavement
 - 100374-MMD-03-XX-DR-C-1101/2 - Kerbs, Footways & Paved Areas
 - 100374-MMD-03-XX-DR-C-1201/2/3 - Traffic Signs & Road Markings
 - Drainage Drawings
 - 100374-MMD-01-XX-DR-D-0510 & 0511
 - 100374-MMD-03-XX-DR-D-0501 to 0509
 - Street Lighting Drawings
 - 100374-MMD-03-XX-DR-E-1401 to 1413
 - Structural Drawings
 - 100374-MMD-03-XX-DR-S-1700 to 1710
- Refer also to BCA Landscaping design drawings 100374-BCA-03-XX-DR-L-0100



For details of steps/ ramped access to beach refer to BCA & Structural drawings. For coastal protection works refer to Coastal Engineering UK drawings



Rev	Date	Drawn	Description	Ch'k'd	App'd
P01	22/07/21	NB	Issued for Comment	MB	NH
P02	27/08/21	NB	Revised following CCBC comments	AB	---
P03	02/09/21	JF	Updated following CCBC comments	AB	NH

Status Stamp

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COUNTY BOROUGH COUNCIL

Title
**Colwyn Bay Waterfront Phase 2b
General Arrangement**

Sheet 1 of 2

Designed	N Bergeson	NB	Eng check	A.BARROWMAN	AB
Drawn	J.FINNIGAN	JF	Coordination	A.BARROWMAN	AB
Dwg check	J.FINNIGAN	JF	Approved	N.HAINES	NH
MMD Project Number	100374	Scale at A1	1:500	Security	STD
Suitability Description	Suitable for Tender				Suit. Code
Drawing Number	100374-MMD-03-XX-DR-C-0101				Revision
					P03

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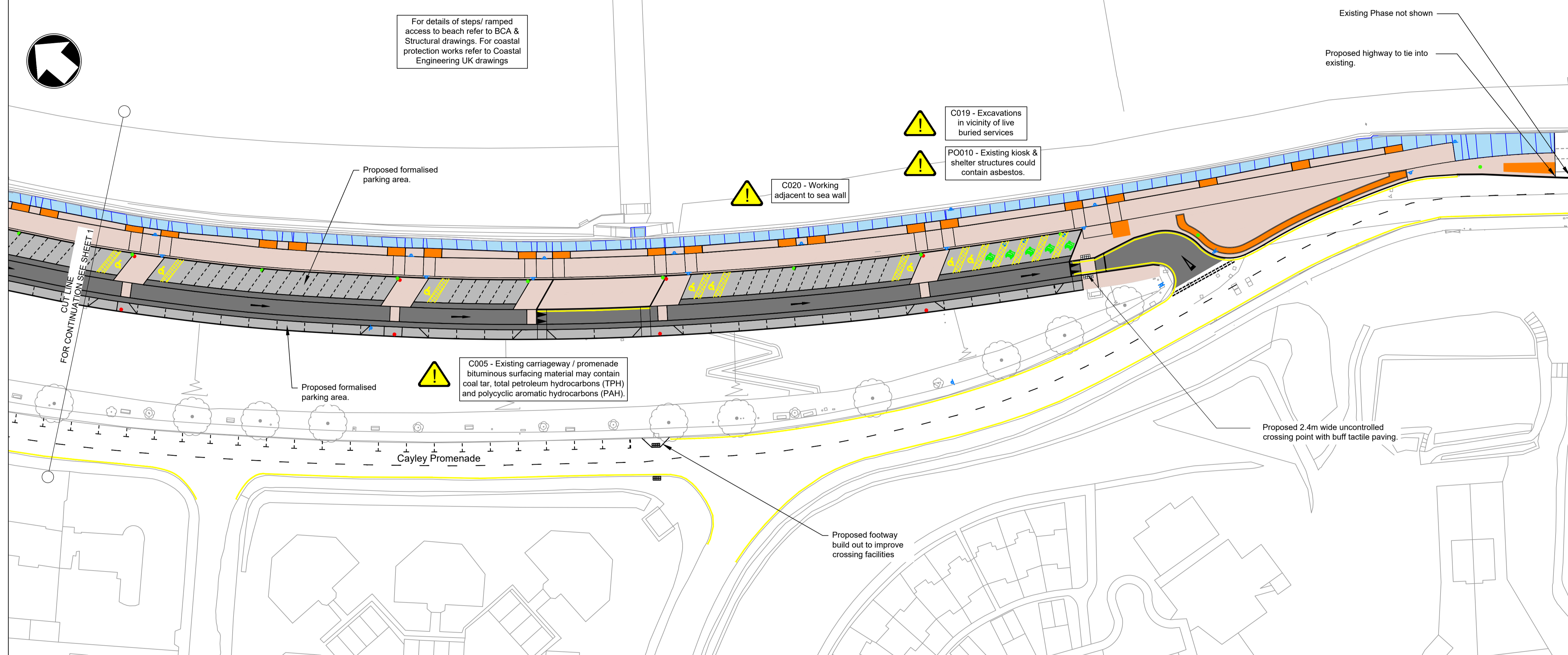
CONWY
CYNGOR BWRDEISTREF SIROL
COUNTY BOROUGH COUNCIL

Title

**Colwyn Bay Waterfront Phase 2b
General Arrangement**

Sheet 2 of 2

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					P03



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