

Natural Resources Wales
**Stephenson Street Flood
Alleviation Scheme**
Transport Statement

274580-ARP-XX-XX-RP-PL-0001

Issue 2 | 11 March 2021

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 274580-00

Ove Arup & Partners Ltd
63 St Thomas Street
Bristol BS1 6JZ
United Kingdom
www.arup.com

ARUP

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1 Introduction

Ove Arup and Partners Limited (Arup) has been commissioned by Natural Resources Wales (NRW) to finalise the outline design for the proposed Stephenson Street Flood Alleviation Scheme, and to prepare a planning application for its implementation.

The aim of the scheme is to reduce flood risk from the River Usk on the Spytty area of Newport. The scheme has been designed to withstand a 1 in 200 year flood event, allowing for predicted sea level rise caused by climate change up to 2069.

The scheme comprises construction of 1.7km of new flood defences (bund, sheet pile wall and reinforced concrete wall), 450m of new highway and a floodgate. Figure 1 shows the indicative locations of the proposed flood defences and the reduction in 1:200yr flood extent in 2069 provided by the proposed scheme.

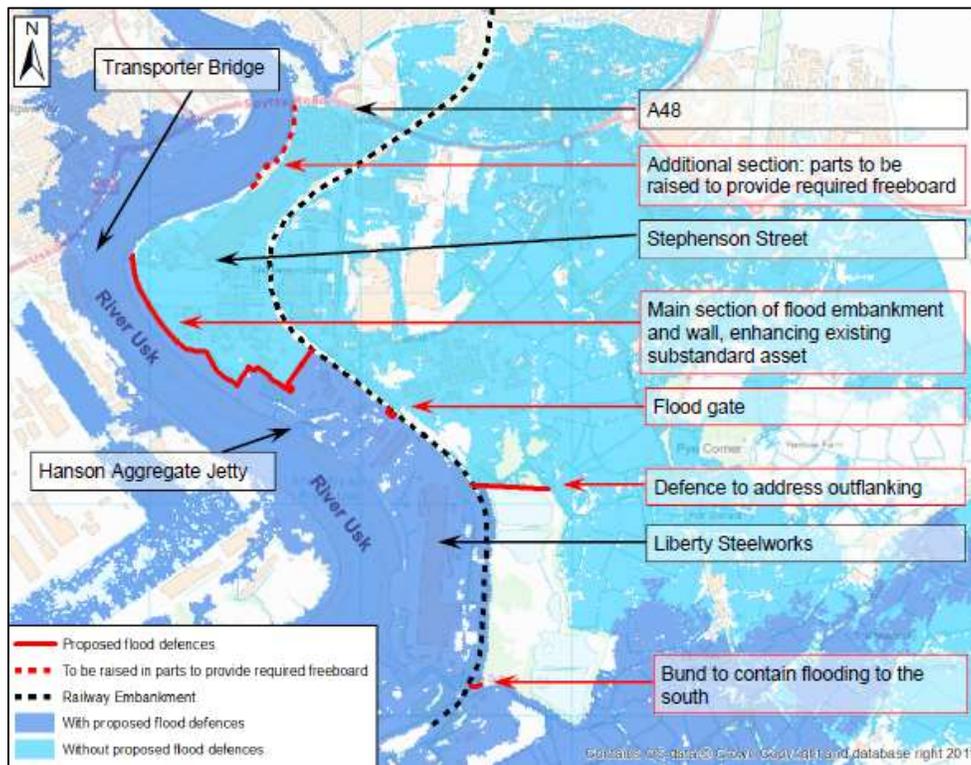
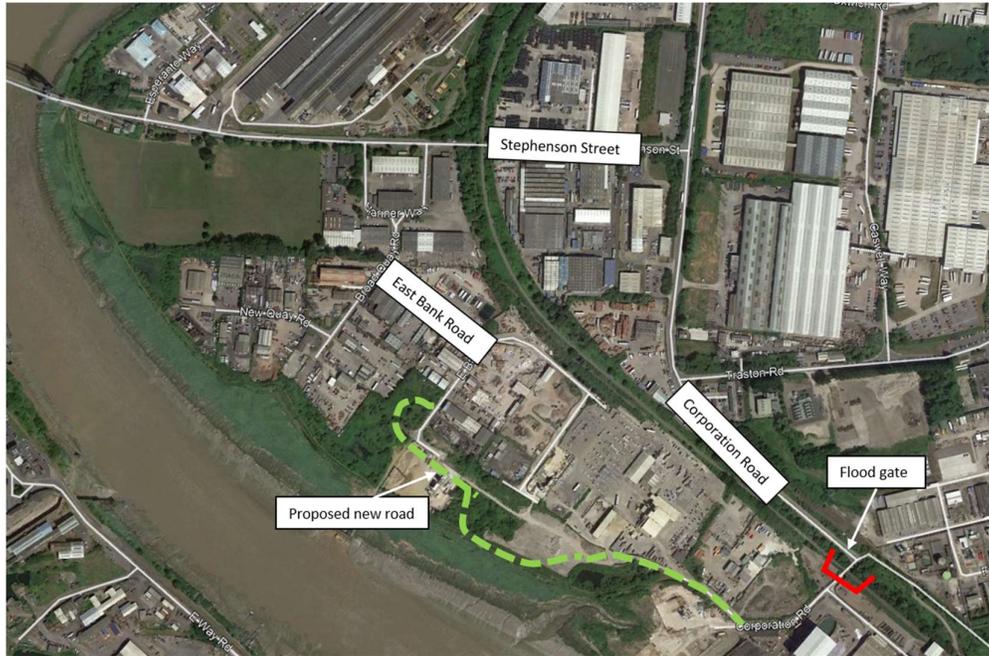


Figure 1 Indicative location of proposed flood defences and the 1:200yr flood extent in 2069, with and without proposed flood defences¹

¹ Source: <https://ymgyngghori.cyfoethnaturiol.cymru/communications-cyfathrebu/stephenson-street-flood-scheme/> accessed 17 November 2020

The proposed arrangement for the Stephenson Street Flood Alleviation Scheme, in the context of the local highway network, is shown below in Figure 2.

Figure 2: Proposed Road and Flood Gate



In order to retain access to properties currently accessed from Corporation Road during periods when the flood gate is closed, a proposed new road link which connects Corporation Road with East Bank Road will be constructed.

This Transport Statement (TS) has been prepared to support the planning application. The purpose of this TS is to consider the traffic and highways implications of the planned scheme within the vicinity of the site, and demonstrate compliance with relevant national, regional and local policy.

1.1 Summary of development proposals

Figure 2 shows the location of the proposed floodgate and the alignment of the proposed new highway, which will provide an alternative access route to properties within the industrial area in the event that the floodgate is closed.

In connecting Corporation Road with East Bank Road the proposed new road passes through privately owned land and as such NRW have entered into discussions with landowners. The proposed road will be designed to adoptable standards, including provision for a pedestrian footway, in pursuance of adoption by Newport City Council.

As an additional flood mitigation measure, the existing flood bund currently lining the River Usk will be raised and widened, resulting in the realignment of the Wales Coastal Path which runs south of the industrial site from the Newport Transporter Bridge.

Further details of the scheme are presented in Section 4.

1.2 Transport Statement Scoping

Arup engaged NCC's in pre-application discussions, following which, the scope of the TS was agreed with the Highways Officer on 18th February 2020. A copy of the Transport Scoping Note can be found in .

The remainder of the TS has been structured as follows:

- Section 2 – Policy Context
- Section 3 – Baseline Conditions
- Section 4 – Scheme Proposals
- Section 5 – Scheme Impacts
- Section 6 – Supporting Documentation
- Section 7 – Conclusions

2 Policy Context

2.1 Planning Policy Wales: Edition 10

Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. The primary objective of PPW 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.

Chapter 3 (Strategic and Spatial Choices) highlights five key aspects of good design as summarised in Figure 3. It states that good design should encompass the relationship between all elements of the natural built environment and between people and places. It also emphasises that the management of such places are a fundamental to creating sustainable communities.



Figure 3 Five aspects of good design (PPW 10)

The environmental sustainability aspect focuses particularly on a flexible approach to design, stating that the adaptability of site treatment is an appropriate way of contributing to resilient development. In a similar manner, addressing environmental risks can make a positive contribution to environmental protection and improvement.

The proposed floodgate will help achieve this goal by helping to mitigate flood risk and help protect those living and working within the vicinity of the site.

Chapter 4 (Active and Social Places) discusses components of placemaking required to create well-connected and cohesive communities, of which transport is recognised as a key component. It states that people should have access to jobs

and services through more efficient and sustainable journeys, by walking, cycling and public transport.

The proposed scheme seeks to achieve this goal by the inclusion of pedestrian and cycling infrastructure along the proposed new road. This will create a more cohesive active travel network in and around the site as well as provide better integration with the wider strategic cycling network. In the event of a flood, the new road will ensure access to local properties along the riverfront is maintained.

Chapter 6 (Distinctive and Natural Places) provides planning guidance on water and flood risk. It emphasises that as a consequence of climate change, flooding risks need to be acceptably and responsibly managed, particularly in areas with existing coastal developments where active interventions are needed. It states that new or improved flood defences in coastal and/or riverside locations should be carefully planned, ensuring all potential environmental effects, both on and offshore, and relevant Shoreline Management Plan policies are considered.

The flood defence works as part of the proposed scheme aims to protect the local properties whilst minimising the environmental and ecological impact on the surrounding area.

2.2 The Well-being of Future Generations Acts (2015)

The Well-being of Future Generations (Wales) Act (2015) requires public bodies in Wales to consider the long-term impacts of decision making and improve working with local communities to prevent persistent problems in Wales such as poverty, health inequalities and climate change. Of the seven well-being goals identified within the Act, the proposed floodgate scheme supports the following two:

- A resilient Wales that maintains and enhances a biodiverse natural environment which has the capacity to adapt to change;
- A healthier Wales in which people's physical and mental well-being is maximised and in which choices and behaviours that benefit future health are understood;

The proposed scheme contributes to the environmental resilience of the riverfront and aims to mitigate the flood risk posed to the existing developments on site. The inclusion of pedestrian and cyclist infrastructure which will integrate with the wider national cycling network, aims to contribute to the movement towards increasing active travel in Wales. The proposed road will also be designed with dropped kerbs and tactile paving at crossings such that it is appropriate and accessible for more vulnerable road users.

2.3 Active Travel Wales Act (2013)

The Active Travel (Wales) Act 2013 aims to make active travel the most attractive option for most shorter journeys. The Act requires local authorities in Wales to produce active travel maps and deliver year on year improvements in active travel

routes and facilities. It requires highways authorities in Wales to make enhancements to routes and facilities for pedestrians and cyclists in all new road schemes and to have regard to the needs of walkers and cyclists in a range of other highway authority functions.

In line with this Act, NCC prepared their 'Existing Route Maps' which identified current walking and cycling routes in Newport. NCC have subsequently prepared the Integrated Network Map which have been approved by Welsh Government. The Newport south-west Integrated Network Map (INM) map is included within which incorporates the site area.

The floodgate scheme and proposed new road adheres to this guidance as it seeks to integrate with, and where appropriate, enhance the existing walking and cycling network.

2.4 Wales Draft National Development Framework (NDF)

The NDF document sets the direction for development in Wales from 2020 to 2040. A draft version of plan was developed in August 2019 with the consultation window closing in November 2019. The plan sets out 33 policy interventions aimed at achieving eleven identified long-term outcomes for Wales.

Policy 28 focusses of the important role Newport plays in contributing to the wider regional development. It identifies Newport as a potential second focal point with the south-east Wales region that can help alleviate the increasing pressure felt by Cardiff resulting from growing population numbers and employment levels.

The plan recognises some of Newport's unique attributes including its significant proportion of brownfield sites as well as its growth in coastal communities situated along the River Usk. It states that more focus is needed at a local level on how further regeneration can be achieved; how sustainably located brownfield sites can be brought back into use; and how communities can access the homes, jobs and services they need.

The proposed scheme will play a role in improving the resilience of the site area and surrounding communities. By helping to mitigate flood risks and providing an alternative access route in the case of extreme climate events, it will be possible to help regenerate and develop the area to align with the government's future aspirations for the city.

2.5 Regional Transport Plan (RTP) for the South East Wales

'The Regional Transport Plan' was published in March 2010. The guidance is underpinned by the vision of developing a modern, accessible, integrated and sustainable transport system for South East Wales which increases opportunity, promotes prosperity for all and protects the environment. The plan seeks to

promote walking, cycling, public transport, and sustainable freight within the region by providing feasible travel alternatives.

With respect to walking and cycling, the plan seeks to rebalance the relationship between people as car drivers, pedestrians and other users of the transport system. It states that pedestrian and cyclist needs should be addressed in the planning and development of new transport schemes through the provision of appropriate infrastructure, which is safe, attractive and practical. The integration of the proposed development scheme with the strategic cycle network and the provision of a high-quality pedestrian footway aligns with this regional guidance.

In relation to the highway and the regional road network, it is recognised that whilst car traffic and lorry freight should be minimised, highway investment may be necessary and acceptable if it supports the wider objectives. These refer to the economic development, social inclusion and equality, and environmental objectives targeted through government policies. In the context of the development proposal the new road seeks not only to improve the environmental resilience of the area, but also to maintain access to businesses along the riverfront in the case of extreme climate events, thus supporting the regions broader economic goals.

2.6 Newport Local Development Plan (LDP) 2011-2026

Newport City Council adopted the Local Development Plan (NLDP) in 2016 for the period 2011-2026. The vision of the plan seeks Newport to be *a centre of regeneration that celebrates its culture and heritage, while being a focus for varied economic growth that will strengthen its contribution to the region.*

Strategic Policy 1 (SP1) of the NLDP relates to sustainability and indicates proposals will be required to make a positive contribution to sustainable development and will be assessed in their potential to achieve ten key factors. One of these includes minimising the risk of and from flood risk, sea level rise and the impact of climate change, to which the scheme proposal adheres.

This is supported by General Principle 1 (GP1) which relates to climate change and states that there is a clear requirement for developers to address the issue of flood risk and flood resilience in developments in line with Welsh government advice published in TAN 15: Development and Flood Risk (2004).

Strategic Policy T5 (SP T5) relates to walking and cycling and states that a network of safe walking and cycling routes will continue to be developed and protected with specific reference to NCR 4, 47 and 88. The former encompasses Stephenson Street and Corporation Road, both of which lie in the immediate vicinity of the site and will therefore benefit from the flood mitigation measures proposed as part of the development scheme.

In addition, SP T5 states that the walking and cycle network should contribute to the Welsh Government objectives for encouraging sustainable travel to work. Through the provision of appropriate infrastructure and integration with the existing active travel network, the development proposal will not only preserve

existing infrastructure in the case of severe flooding, but will also provide a suitable alternative means for commuters to continue travelling via sustainable modes.

2.7 Newport Local Transport Plan

The proposals should further the aspirations and objectives as set out in the Local Transport Plan. The Transport Plan considers goals for improvement to 2020 in addition to aspirations up to 2030. Some of the broad objectives of the plan pertinent to the proposed development are as follows:

1. *Quality and efficiency – to improve the quality, efficiency and reliability of the transport system; and*
2. *Land use and regeneration – to ensure development in South East Wales are accessible by sustainable transport.*

The proposed scheme supports this by providing an alternative transport route in the case of a major flood event, that facilitates active travel modes. There is an opportunity to improve the quality of this infrastructure through careful design and construction.

3 Baseline Conditions

3.1 Walking

The proposed scheme is situated within an industrial zone where vehicular access is often prioritised over pedestrian access. The local site area does however benefit from the presence of pedestrian footways on all existing roads, albeit varying in terms of width, quality and continuity. The local pedestrian network is shown below in Figure 4.

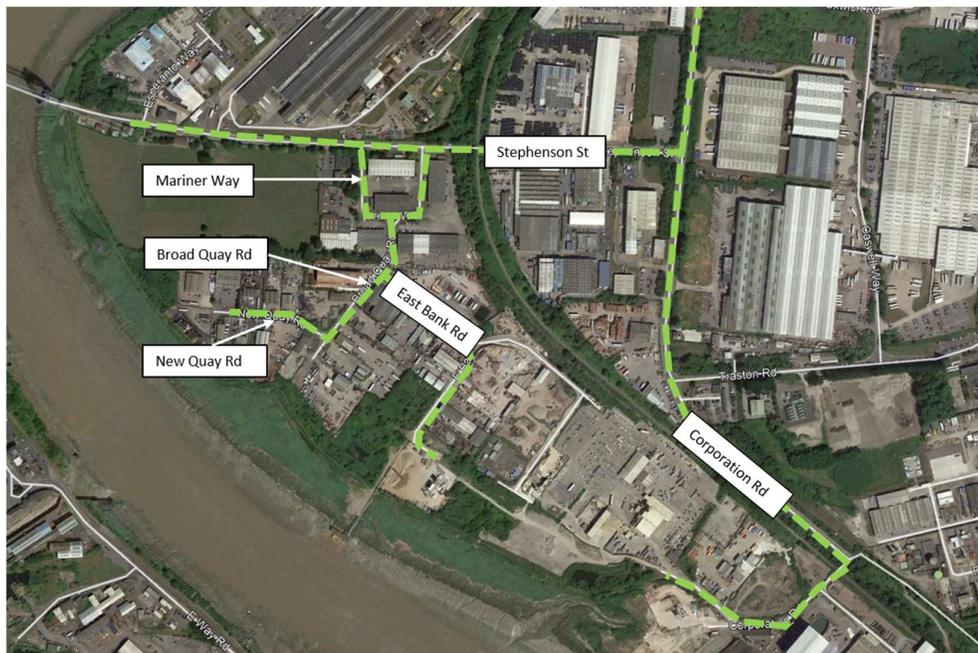


Figure 4 Existing pedestrian network

Stephenson Street is a single carriageway road with an intermittent 2.5m wide pedestrian footway along its length. At its western end it ties into the Newport Transporter Bridge, which can be crossed by foot. At its eastern end, Stephenson Street forms the minor arm of a priority junction with Corporation Road, which has no suitable pedestrian crossing facilities. There is regular street lighting along the length of the road and dropped kerbs where minor roads form junctions with Stephenson Street.

The footways along Stephenson Street connect directly with the footways along the western side of Corporation Road. Further south on Corporation Road, the footway leads directly to the site of the proposed floodgate. In the northern direction, the pedestrian footways provide access to Lysaght Village, the main residential area accessible by foot within the vicinity of the site.

At the locations where the railway passes over these main roads, the footway reduces to approximately 1m in width. This occurs twice; once midway along Stephenson Street and once near the proposed floodgate on Corporation Road, both of which present some safety issues for pedestrians.

Mariner Way, Broad Quay Road and East Bank Road all have approximately 2m wide footways on both sides of the road. On the completion of the proposed new road, there is potential to join the existing footways on East Bank Road and Corporation Road to complete the pedestrian network.

Due to the industrial nature of the site, there are regular breaks in the pedestrian footways for access junctions to properties within the site area. There are no dropped kerbs or tactile paving at these points. In terms of the site's wider accessibility, due to its location, it is unlikely people will travel to the site area by foot.

3.2 Cycling

Stephenson Street and Corporation Road both form part of National Cycle Network (NCN) Route 4 which runs between London and St David's, connecting major UK cities including Newport. Figure 5 shows the NCN Route 4 in red, within the context of the site.

Stephenson Street has mandatory cycle lanes on both sides on the roads, whilst Corporation Road has no on-road cycle provision. There is a 200m long stretch of off-road shared space for pedestrians and cyclists located at the southern end of Corporation Road, approaching the site of the proposed floodgate. Aside from this, there are no other cycle lanes within the vicinity of the site, and there is no cycle parking provision provided within the public highway.

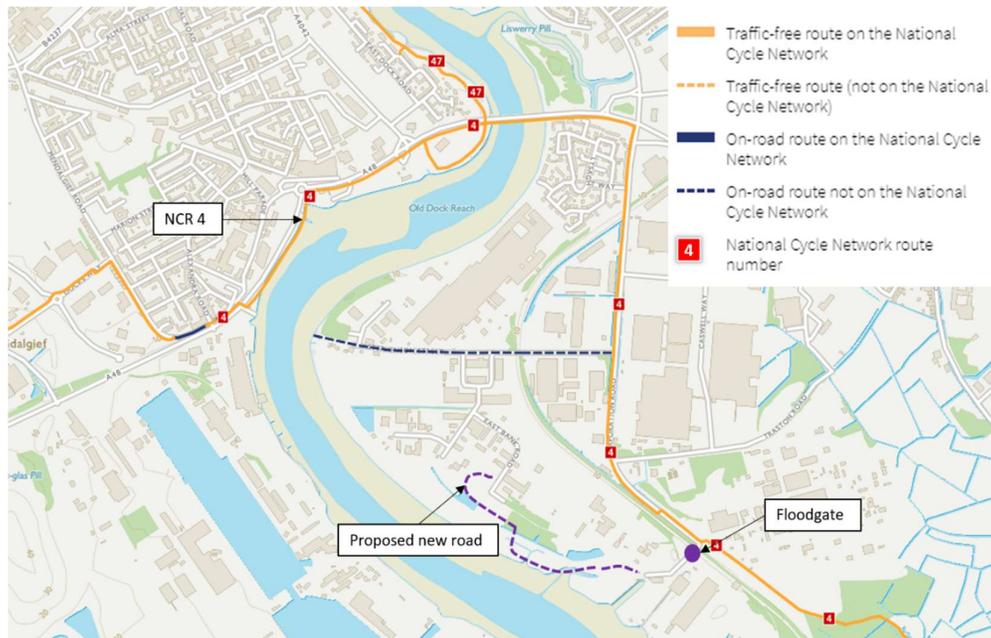


Figure 5 Sustrans extract showing National Cycle Route 4 in the context of the site

3.3 Public Rights of Way (PROW)

As shown in Figure 6, there is an existing PROW footpath which follows the riverfront along the River Usk and lies south of the industrial site. Locally, this

footpath connects the Newport Transporter Bridge to Corporation Road and then continues forming part of the wider Wales Coastal Path.

The current footpath is approximately 0.5m wide and follows the crest of the existing flood bund. It is currently located approximately 60m inland from the River Usk.



Figure 6 Existing Public Right of Way

3.4 Public Transport

Figure 7 summarises the public transport facilities in the vicinity of the proposed scheme.

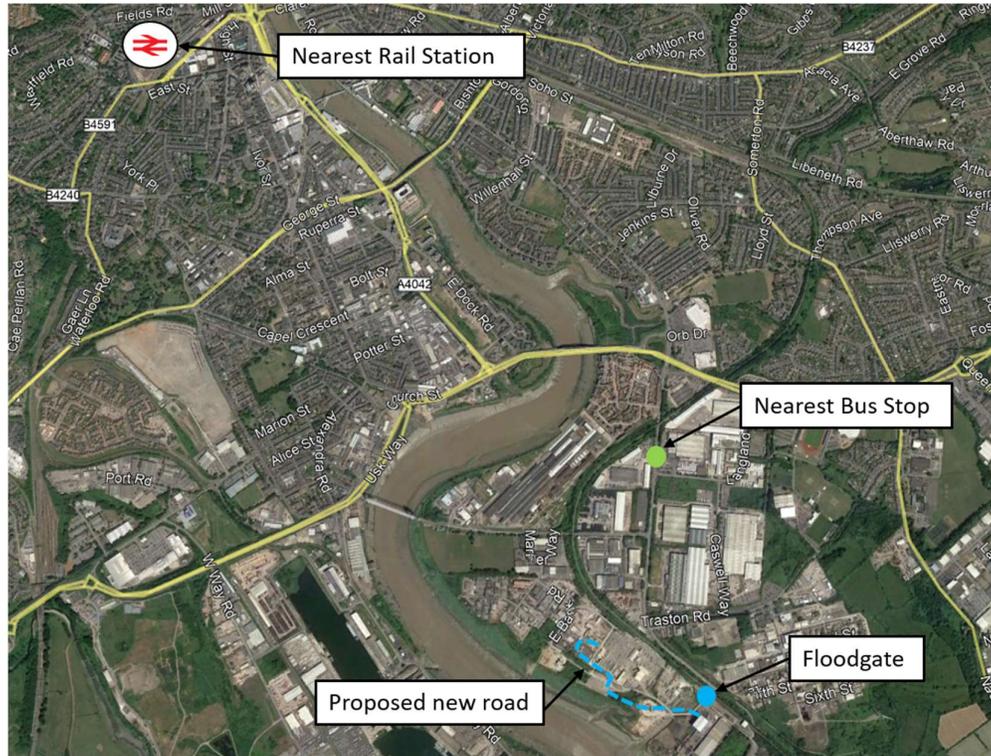


Figure 7 Public transport facilities surrounding the site

Public transport provision in the vicinity of the proposed scheme is limited, with no buses operating within 400m of the proposed floodgate or new road. The closest bus stop is at Reevseland Industrial Estate approximately 1.3km away, equating to a 16-minute walk, and is served by bus route 42 only. This service operates seven days a week, providing a half hourly service at peak times and a reduced service during evenings and weekends.

Bus route 42 is one of only three services operating between the proposed site and Newport Rail Station which is located approximately 5km away.

3.5 Vehicular Access

The local road network aligns with the pedestrian network presented in Figure 4. The proposed scheme is shown in the context of the wider strategic road network below in Figure 8.

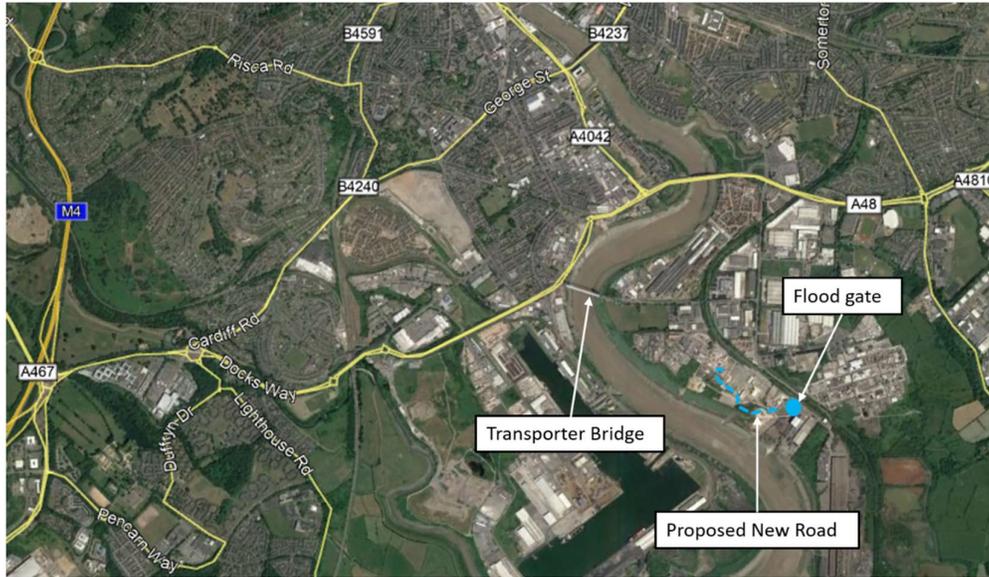


Figure 8 Scheme proposal in relation to the wider strategic road network

A description of each of the key roads is given below including their on-street parking facilities and relevance to the wider highways network.

Stephenson Street

Stephenson Street is a single carriageway road located north of the proposed scheme. To the west, it connects to the Newport Transporter Bridge which forms part of the classified highway network. A toll charge applies for those wishing to cross the bridge ranging from £0.50 to £4 per day.

Beyond the bridge, vehicles can join the Southern Distributor Road (A48) which leads directly to the M4. Alternatively, vehicles can access the local road network within the central Newport area. To the east, Stephenson Street forms a priority junction with Corporation Road. There is regular street lighting and unrestricted on-street parking along the length of Stephenson Street.

Corporation Road

Corporation Road is a single carriageway road running in a north-south direction. To the north, it connects to the A48 and provides onward access to Newport City Centre. To the south, the road provides access to a number of industrial and commercial sites, before passing underneath a rail bridge and concluding at the Marshalls Concrete site. There is regular street lighting and unrestricted on-street parking along the length of Corporation Road.

Mariner Way

Mariner Way is a one-way road connecting Stephenson Street to the main industrial area. It has unrestricted on-street parking and a single lay-by area suitable for drop-off/delivery services. There is regular street lighting throughout Mariner Way.

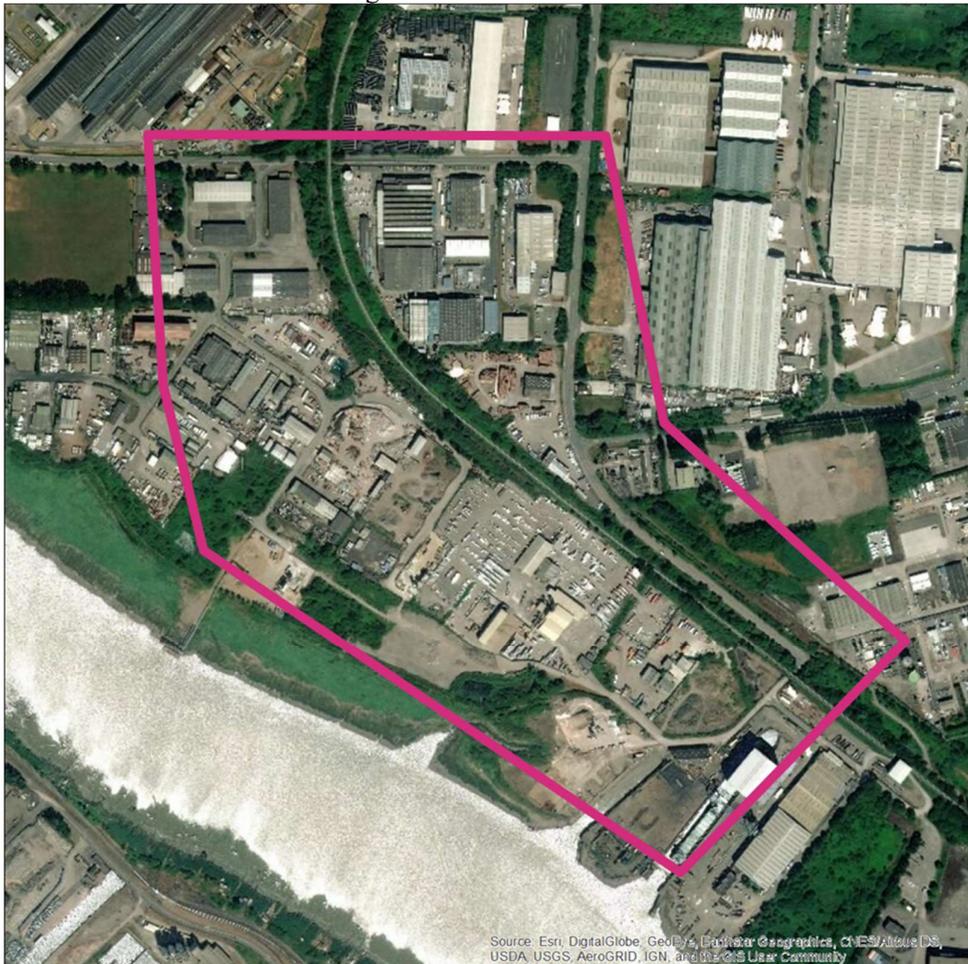
East Bank Road / Broad Quay Road / New Quay Road

These are two-way roads which provide access to the individual properties in the vicinity of the scheme and are sufficiently wide to accommodate large delivery vehicles. There is unrestricted on-street parking along these roads and regular street lighting.

3.6 Existing Safety Record

Personal injury accident records for the most recently available five-year period has been obtained for the local highway network from CrashMap. Records have been reviewed to determine any existing trends or patterns of accidents. The extent of the road network that is likely to experience changes in traffic movements is shown in Figure 9. Accidents that occurred within the cordon presented in Figure 9 are analysed in more detail below.

Figure 9: Accident Cordon



A summary of collisions by year and severity are presented in Table 1 below. There has been a total of two collisions recorded in the past five years, one of which was serious and the other slight. Neither collision resulted in fatalities.

Table 1 Personal Injury Accident Records around site (2015 – 2019)

Year	Serious	Slight	Total Recorded Incidents for the Year
2017	0	1	1
2018	1	0	1
Total	1	1	2

The serious injury involved a heavy goods vehicle turning right into Mariner Way, which collided with a cyclist proceeding normally along Stephenson Street. There is a clearly marked cycle lane on Stephenson Street and no obvious issues with visibility, and as such this was determined to be a case of driver error.

In summary the available accident data suggests that collisions are rare, and there does not appear to be any patterns or trends to their occurrence. Given the proposed development is not expected to result in a significant increase in traffic, it is unlikely to lead to an increase in traffic accidents.

3.7 Significant Committed developments

A significant committed development is a development proposal which has planning consent but, which has not yet been built, and has been deemed impactful enough as to require its own TA. Developments that have not been provided with TAs, or which have not been given consent, cannot be incorporated within the scope of this TS. Arup has reviewed data taken from the Newport Planning Portal and has not identified any significant committed developments in the vicinity of the proposed scheme. During Arup's engagement with Newport City Council Highways Officers on the Scope of this Transport Statement, no significant committed developments were identified by the local highways authority.

4 Scheme Proposals

4.1 Design and Access

The proposed new road will be a 7.3m wide single carriageway designed to DMRB standards. As shown in Figure 10, the proposed new road will adjoin the existing highway at two locations; the western extent of East Bank Road and the southern extent of Corporation Road, as indicated by the red dots. It should be noted that Corporation Road, to the south of its crossing with the railway line, is an unadopted road.

The mid-section of the proposed road will be provided with a 2m wide footway along its southern edge. Cycle lanes were not considered necessary to incorporate as part of the new road since there are no cycle lanes on adjacent roads and there is a low cycle traffic frequency.

For similar reasons, it is expected that double yellow lines will not be necessary to restrict on-street parking due to the location of the scheme, however this will be discussed with NCC in due course. Street lighting, drop kerbs and tactile paving will be provided to improve user safety, particularly for more vulnerable road users. The proposed highway will allow for the access and manoeuvring of HGV's which will likely use the new road to travel between sites currently operated by Marshalls and by Hansons. Further details of the proposed alignment of the new road can be found in .

The proposed floodgate will lie south of the rail embankment along Corporation Road and will be installed on an area of proposed raised ground. The floodgate will be operated via a sliding mechanism such that it can be closed by a single operator from one side of the gate.

Upon closure of the gate, access to the properties south of the floodgate and Corporation Road will instead be accessed via the proposed new road. When the floodgate is lifted, either Corporation Road or the proposed new road can be used to access to these properties.



Figure 10 Proposed road showing connection points with existing highway (red dots)

4.2 Public Right of Way (PROW)

As part of the wider flood defence scheme, the existing flood bund will be raised and widened by approximately 1m and 2.5m respectively, and in doing so, this will cause the existing coastal path to be diverted inland. Full details of the proposed PROW realignment can be found in .

The PROW will be diverted along the crest of the proposed bund, forming a 3m wide footpath suitable for both pedestrians and cyclists. Access points to the PROW will be retained, with the crest aligning with the existing coastal path at its northern and southern end.

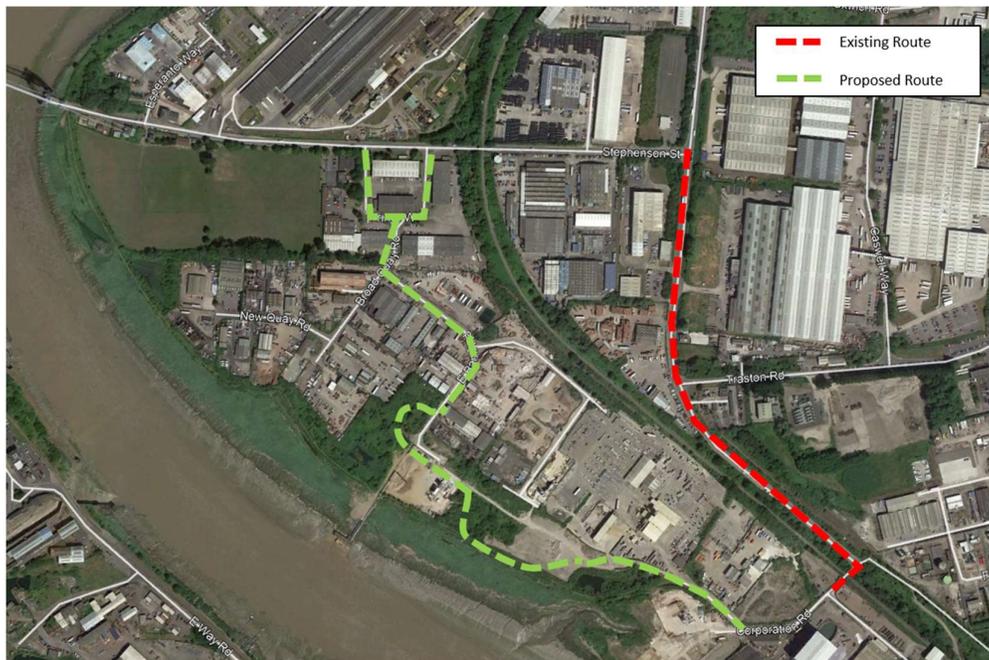
An application for a Diversion Order has being made to NCC to allow for the slight adjustment in alignment of the Wales Coast Path. A decision will be made on this following appropriate consultation in line with official NCC procedures.

5 Scheme Impacts

5.1 Traffic Reassignment and Impact

During periods when the flood gate is closed ahead of a forecast flood event, traffic which currently accesses the properties on Corporation Road to the south of the railway line will instead access these properties from the proposed new road, as indicated in Figure 11. This reassignment requires that traffic routes toward the proposed new road from Stephenson Street and Mariner Way, instead of from the section of Corporation Road which is east of the railway line.

Figure 11: Existing and Proposed routes



To estimate the frequency of this situation occurring and its potential impact on traffic, a probability assessment was first conducted to determine the likelihood of a floodgate closure coinciding with peak weekday periods.

This was calculated assuming the gate will be closed 10 times per year, based on conservative estimates from current flood models. Each flood event would require that the flood gate is closed for around 3 hours at a time, and since flood events take place as a result of rainfall and tidal conditions, there is an even distribution in terms of the likely day-of-the-week and time-of-day occurrence.

Given that the defined peak periods are understood to be between 07:00-10:00 and 16:00-19:00, a gate closure occurring anytime between 05:00-10:00 and 14:00-19:00 will overlap with at least one hour of the peak period. This means there are a total of 10 hours per day in which the floodgate closure will coincide with the

peak period. Based on these assumptions, the probability assessment was carried out as follows:

- Probability of gate closure coinciding with peak hour period = $10/24 = 0.42$
- Probability of gate closure occurring on a weekday = $5/7 = 0.71$
- Probability of gate closure coinciding with peak hour period AND occurring on a weekday = $0.42 * 0.71 = 0.30$
- Assuming the gate is closed 10 times per year, $0.3 * 10 = 3$ days per year in which the flood gate will be closed during a weekday peak hour period.

The infrequent nature of the floodgate closure coinciding with peak travel times, combined with the low volume of the traffic that the site experiences, suggests that the overall scheme is likely to have a minimal impact on the surrounding highway network, nearby properties or associated traffic. On that basis, no further assessment is required to establish the impact of the proposed scheme on junction capacities or traffic operations

5.2 Walking and Cycling

As part of the scheme proposal, there will be enhancements to the walking and cycling environment surrounding the site including:

- The creation of a new pedestrian footway along one side of the proposed new road, adjoining the existing footways on East Bank Road and Corporation Road;
- Dropped kerbs, tactile paving and appropriate gradients create safe pedestrian environment, particularly for vulnerable road users; and
- An alternative on-road cycling route connecting sections of NCR 4, and linking to the designated cycle path along Stephenson Street.

5.3 Swept Path Analysis

A swept path analysis exercise was undertaken to demonstrate the appropriateness of the proposed highway design for different vehicle classes. For areas that are trafficked by buses and HGVs, appropriate test vehicles were selected for analysis. The results of this exercise can be found in .

6 Supporting Documentation

6.1 Construction Traffic Management Plan

A Construction Traffic Management Plan (CTMP) has been developed which demonstrates in broad terms how the impact of construction traffic will be managed during the construction phase of the scheme. The CTMP reviews construction phasing, vehicle classification, the volume and timing of construction trips, operative travel behaviours / parking and compound location.

The Principal Contractor appointed to construct the scheme will have responsibility for implementing and updating the CTMP following submission of the planning application.

6.2 Road Safety Audit

A Road Safety Audit will be undertaken of the proposed scheme in compliance with guidance included within GG119, or similar appropriate guidance to be advised by Newport City Council. In the event that the Audit identifies safety issues that require amendment to the proposals, then the design team will address these issues following the process defined by GG119, and NCC will be informed of these developments.

7 Conclusion

Ove Arup and Partners Limited (Arup) has been commissioned by Natural Resources Wales to finalise the outline design for the proposed Stephenson Street Flood Alleviation Scheme. The aim of the scheme is to reduce flood risk from the River Usk on the Spytty area of Newport, by installing physical mitigation measures that protect against a 1 in 200 year flood event.

The preferred scheme option, Sub-option 2b, as detailed in the report “Stephenson Street Flood Scheme. Corporation Road – Sub-option Comparison Report (Arup, November 2019)”, comprises a flood gate across the railway overbridge at Corporation Road. In order to retain access to properties currently accessed from Corporation Road during periods when the flood gate is closed, a proposed new road link which connects Corporation Road with East Bank Road will be constructed.

The purpose of this Transport Statement was to demonstrate the schemes compliance with national, regional and local transport policy, and further to show that it poses no significant impacts on the surrounding highway network and associated traffic.

Through the provision of appropriate infrastructure and integration with the existing active travel network, the scheme proposal will enhance the pedestrian and cyclist network within the vicinity of the site and provide a suitable alternative means for commuters to continue travelling via sustainable modes in the case of a severe flood event. This aligns with the broader policy goals of achieving a more sustainable and resilient active travel network in Wales.

Furthermore, the realignment of the PROW, which is currently seeking approval from NCC, will have minimal impact on the accessibility of the existing pedestrian footpath and will not detract from the wider Wales Coastal Path.

In terms of traffic impacts, due to the infrequent nature of the floodgate closure coinciding with peak travel times, combined with the low volume of the traffic that the site experiences, the overall scheme is likely to have a minimal impact on the surrounding highway network, nearby properties or associated traffic.

Based on the information presented within this Transport Statement, it is considered that the scheme presents no significant impacts in terms of highway safety or the operational capacity of the surrounding transport network and therefore planning permission should not be withheld on transport grounds.

Appendix A

Transport Statement Scoping Note

63 St Thomas Street
Bristol BS1 6JZ
United Kingdom
www.arup.com

t +44 117 976 5432
f +44 117 976 5433

Project title Stephenson Street Flood Alleviation Scheme

Job number

24634-00

cc

File reference

Prepared by



Date

21 January 2020

Subject Transport Statement Scoping Note

1.1 Introduction

Ove Arup and Partners Limited (Arup) has been commissioned by Natural Resources Wales (NRW) to finalise the outline design for the proposed Stephenson Street Flood Alleviation Scheme. Arup were originally appointed to produce the business case justification for the flood scheme in 2016 and funding for the scheme was subsequently secured from the Welsh Government Flood and Coastal Erosion Risk Management programme

The aim of the scheme is to reduce flood risk from the River Usk on the Spytty area of Newport. The scheme has a design standard of protection of 1 in 200 annual chance of flooding with allowance of climate change to 2069.

Two options have been considered, as detailed in the report “Stephenson Street Flood Scheme. Corporation Road – Sub-option Comparison Report (Arup, November 2019)”. The preferred option, Sub-option 2b, comprises a flood gate across the railway overbridge at Corporation Road. In order to retain access to properties currently accessed from Corporation Road during periods when the flood gate is closed, a proposed new road link which connects Corporation Road with East Bank Road will be constructed. The proposed arrangement is illustrated in Figure 1.

A planning application is to be prepared for the proposed scheme, and it is anticipated that a Transport Statement would be required in relation to the application. The application is expected to be submitted in late 2020.

This Transport Statement Scoping Note describes the content that is proposed to be included within the Transport Statement.

1.2 Development proposals

The proposed Stephenson Street Flood Alleviation Scheme provides flood protection of 1 in 200 annual chance in accordance with the SMP2 and the Severn Estuary Flood Risk Management (FRM) Strategy for Newport. In addition to this, NRW’s chosen strategic FRM approach for Newport is to allow for 50 years of sea level rise (i.e. 2069).

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Figure 1 shows the location of the proposed floodgate and the alignment of the proposed new road. In connecting Corporation Road with East Bank Road the proposed new road passes through privately owned land and as such NRW will enter into discussions with landowners in due course. The proposed road will be designed to adoptable standards in pursuance of adoption by Newport City Council.

The details of the proposed road, including detailed horizontal and vertical alignment, are still to be defined. Ramps and access points will be designed to enable connection between the proposed road and the existing highway layout. It should be noted that Corporation Road, to the south of its crossing the railway line, is an unadopted road.

Further details of the scheme will be presented as part of the Transport Statement and through other documentation prepared in support of the planning application.

The Transport Statement will discuss the scheme with reference to the topics presented in the paragraphs that follow.

Figure 1: Proposed Road and Flood Gate



1.3 Policy Context

It is important to consider the proposed development in light of transport policy and guidance at both the national and local government levels. The Transport Statement will capture guidance and policy pertinent to the proposed development, such as:

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- Planning Policy Wales;
- Wales Draft National Development Framework;
- Regional Transport Plan (RTP) for South East Wales;
- Newport Local Development Plan (LDP) 2011-2026;

1.4 Existing Site Accessibility

An accessibility study of the scheme area will be prepared including the identification of pedestrian and cycle desire lines, as well as the existing infrastructure that provides for those desire lines. The study will be used to illustrate the key movement corridors within the scheme area, and describe how trip attractors along the water front are accessed via different modes of transport.

A qualitative review of the existing movement network within the scheme extents will be undertaken and provided within the TA for the below:

- pedestrian movements;
- cycle movements;
- public transport connectivity; and
- local road network and vehicular accessibility.

In addition, the Transport Statement will set out how access arrangements to existing properties and road links would change as a result of the proposed scheme.

A review will be undertaken of the impact of the scheme on the potential for travel by sustainable modes. This will include walking, cycling and travel by sustainable modes.

1.5 Existing Safety Record

Personal injury accident records for the most recently available five-year period will be obtained for the local highway network. Records will be reviewed to determine any existing trends or patterns of accidents. The extent of the road network that is likely to experience changes in traffic movements is shown in Figure 2. Accident data will be analysed for the cordons presented within Figure 2.

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Figure 2: Accident Cordon



1.6 Significant Committed developments

A significant committed development is a development proposal which has planning consent but, which has not yet been built, and has been deemed impactful enough as to require its own TA. Developments that have not been provided with TAs, or which have not been given consent, cannot be incorporated within the scope of this TA. Arup has reviewed data taken from the Newport Planning Portal and has not identified any significant committed developments in the vicinity of the proposed scheme. Newport City Highways Officers are therefore invited to provide details of any significant committed developments likely to impact on the transport network within the scheme extents and which therefore should be included within the scope of the TS. Furthermore, the proposals will need to be coordinated with other highways and transport interventions in the area.

1.7 Trip Generation and Traffic Reassignment

During periods when the flood gate is closed ahead of a forecasted flood event, traffic which currently accesses the properties on Corporation Road to the south of the railway line will instead access these properties from the proposed new road. This is indicated in **Error! Reference source not found..** This reassignment requires that traffic routes toward the proposed new road from

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21 January 2020

Stephenson and Mariner Way, instead of from the section of Corporation Road which is east of the railway line.

Corporation Road is the primary vehicle access to a number of industrial properties, most notably Liberty Steel and Marshalls. As such the traffic that will be affected by the proposed scheme has a high proportion of Heavy Goods Vehicles.

The purpose of the traffic impact assessment is to establish the change in traffic operations that would result from the reassignment described above.

Figure 3: Existing and Proposed routes



1.8 Impact of Traffic Reassignment

Current flood modelling estimates suggest that the flood gate would be closed between 5 – 10 times per year. Each flood event would require that the flood gate is closed for around 3 hours at a time.

Flooding events take place as a result of rainfall and tidal conditions. They therefore have an even distribution in terms of day-of-the-week and time-of-day. Assuming that the flood gates are closed 10 times per year and that each closure lasts for 3 hours, there is around a 5% chance that a flood event would coincide with a weekday AM or PM peak in any given year. This suggests that a flood event would coincide with a peak period approximately once every 20 years. This is detailed below:

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- Chance of gate being closed on a given day = 10 closures / 365 days = 2.7%
- Chance of that given day being a weekday = 2.7% * (5 / 7) = 1.95%
- In a 24hr weekday period, six of these hours are 'peak periods' i.e. 07:00-10:00 and 16:00-19:00. Therefore 25% of the 24hr period is a peak period. 1.95% * 25% = 0.489%
- 10 instances per year = 0.489% * 10 = 4.89%
- One out of every 20 years will experience a flood gate closure coinciding with a peak period.

In addition, it is considered that the volume of traffic which would be rerouted as a result of the scheme would be limited as the number of properties affected by the flood gate closure is minimal.

In summary, the impact of the traffic reassignment resulting from the closure of the floodgate is considered to be negligible, since the floodgate will be closed only infrequently and will rarely coincide with peak traffic periods. On that basis, no further assessment is required to establish the impact of the proposed scheme on junction capacities or traffic operations.

1.9 Swept Path Analysis

A swept path analysis exercise will be undertaken which demonstrates the appropriateness of the emerging designs for different vehicle classes. For areas that are trafficked by buses and HGVs, appropriate test vehicles will be selected for analysis.

1.10 Construction Traffic Management Plan

A Construction Traffic Management Plan (CTMP) will be developed which will demonstrate in broad terms how the impact of construction traffic will be managed during the construction phase of the scheme. The CTMP will review construction phasing, vehicle classification, the volume and timing of construction trips, operative travel behaviours / parking and compound location.

It is proposed that the CTMP will be prepared following submission of the planning application.

1.11 Road Safety Audit

A Road Safety Audit will be undertaken of the proposed scheme in compliance with guidance included within GG119, or similar appropriate guidance to be advised by Newport City Council.

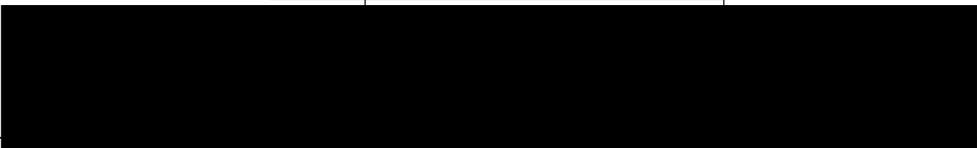
DOCUMENT CHECKING (not mandatory for File Note)

	Prepared by	Checked by	Approved by
Name			

Technical Note

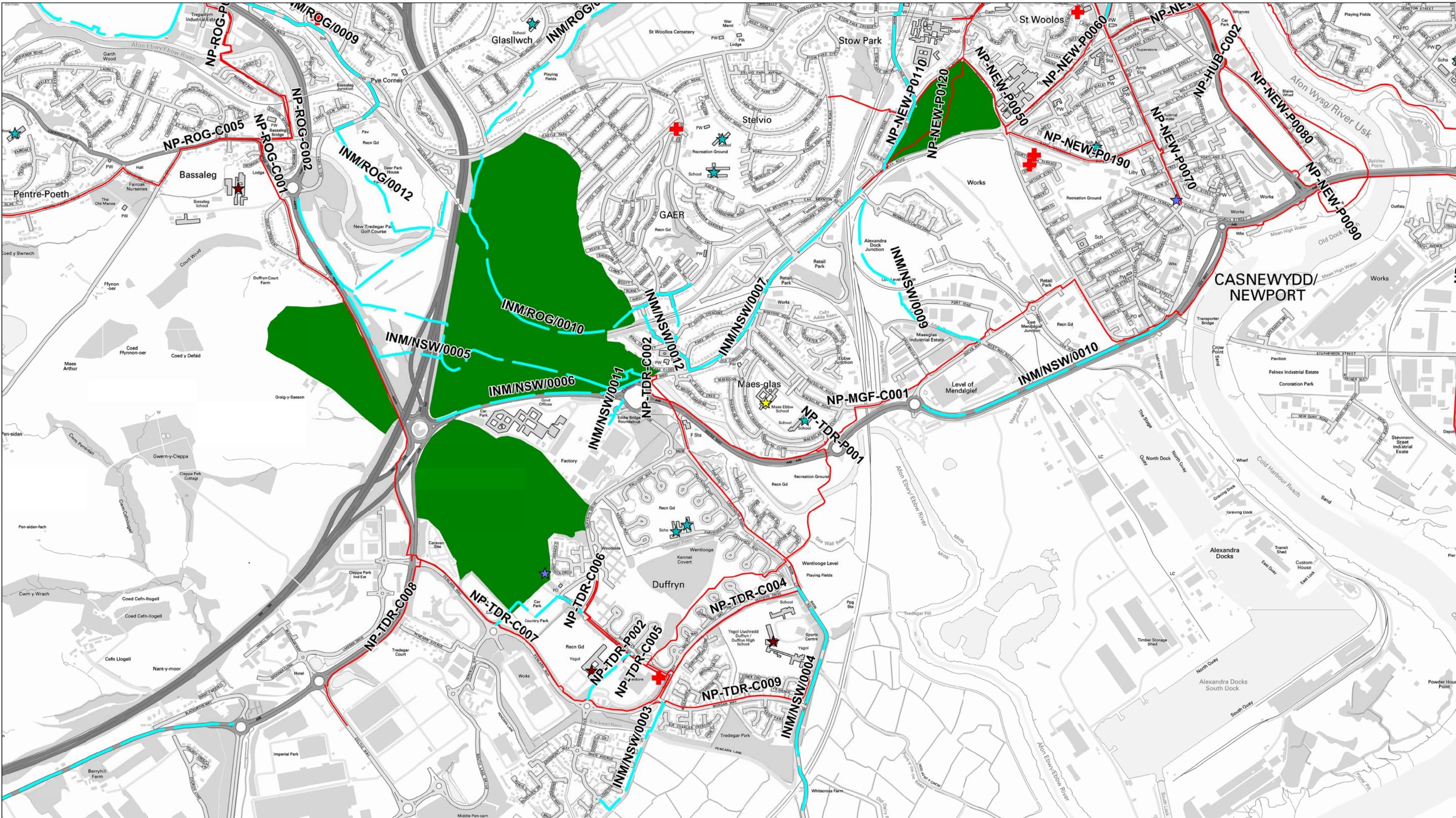
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21 January 2020

Signature 

Appendix B

Integrated Network Map for Newport



- Key**
- Existing Active Travel Routes
 - Proposed Integrated Route Network
 - + Health (GP Surgeries)
 - Leisure
 - ★ Libraries
 - Parks
 - ★ Railway/Bus Station
 - ★ Primary Schools
 - ★ Secondary Schools
 - ★ Special Schools
 - ★ Welsh Medium Schools

Scale
NTS



Newport City Council
Civic Centre, Godfrey Road,
Newport, NP20 4UR

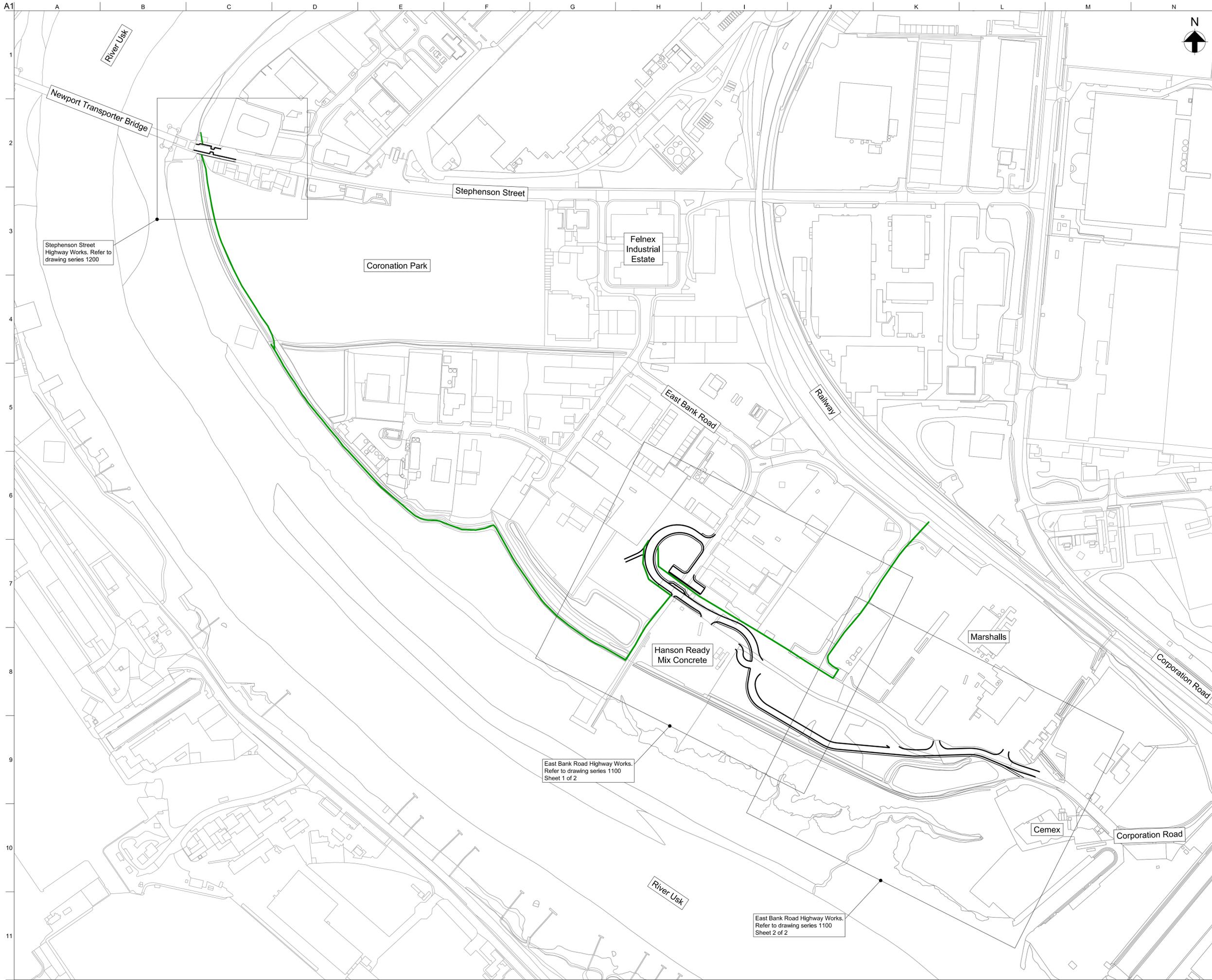


**Active Travel: Integrated Network Map
Newport South West**

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Appendix C

Proposed Highway Alignment



Legend
 Proposed Flood Defence Structure
 Alignment - See drawing
 274580-ARP-XX-XX-DR-CX-2000
 for retaining wall alignment and
 associated details

Notes

1. Do not scale from this drawing
2. All dimensions are in metres unless noted otherwise.
3. The details shown on this drawing are based on a RIBA Stage 3 design for approval, produced for a detailed planning application. The details will need to be reviewed and revised during subsequent design stages.

Stephenson Street
 Highway Works. Refer to
 drawing series 1200

East Bank Road Highway Works.
 Refer to drawing series 1100
 Sheet 1 of 2

East Bank Road Highway Works.
 Refer to drawing series 1100
 Sheet 2 of 2

I01	02/12/20	CB	DO	SW
Issued for Information				
Issue	Date	By	Chkd	Appd

ARUP
 4 Pierhead St, Capital Waterside
 Cardiff, CF10 4GP
 T +44(0)29 20473727 F +44(0)29 20472277
 www.arup.com

Client
Natural Resources Wales

Project Title
Stephenson Street

Drawing Title
Highway Key Plan

Scale at A1 1:1000 Role Civil

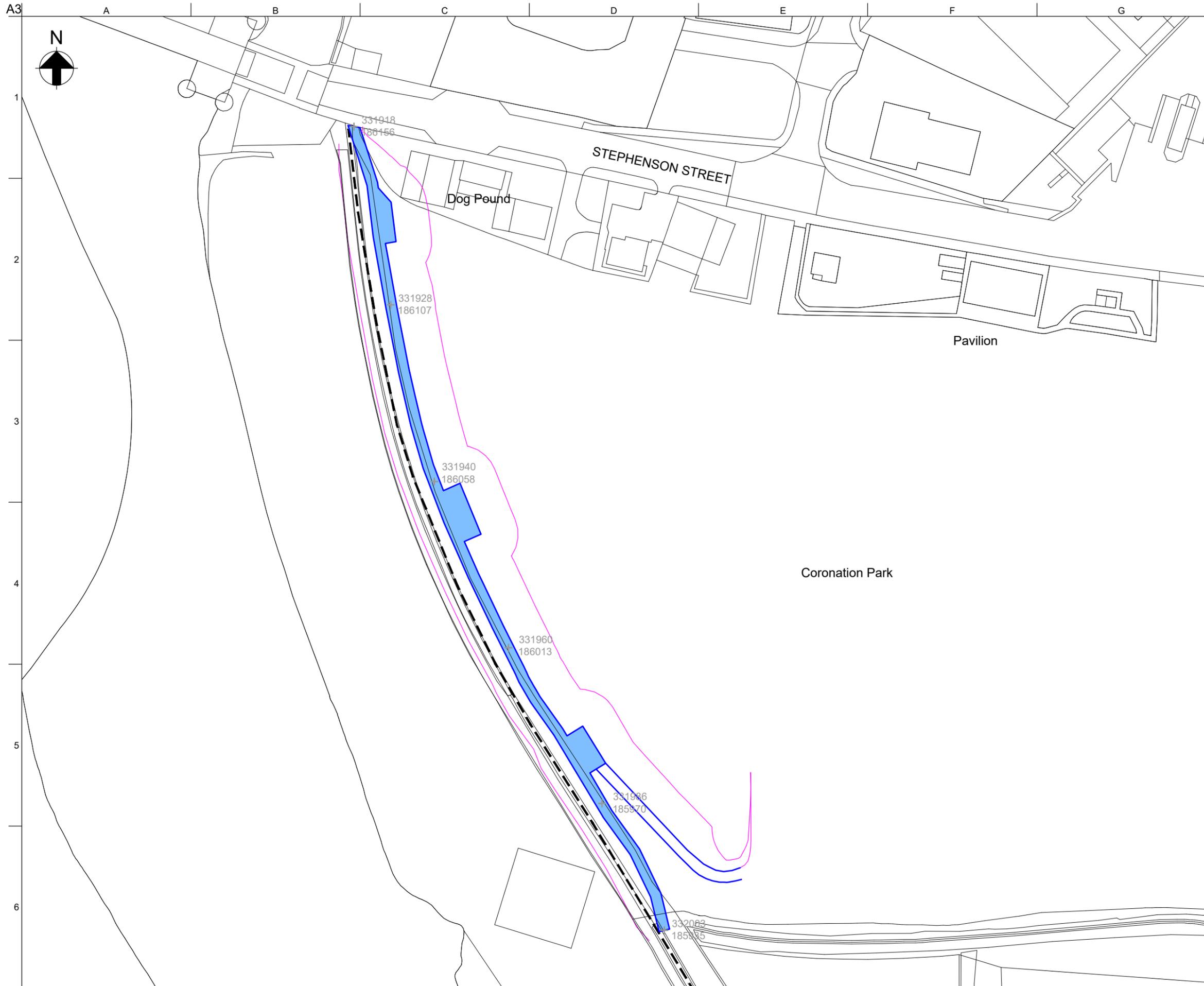
Suitability S2 - For Information

Job No **274580** Rev **I01**

Drawing No
274580-ARP-XX-XX-DR-CX-1000

Appendix D

PROW Diversion



Legend

-  Approximate location of existing footpath
-  Proposed footpath
-  Proposed flood bund

01	08/11/20	BS	EW	EW
Draft Issue				
Rev	Date	By	Chkd	Appd

ARUP

13 Fitzroy Street
 London W1T 4BQ
 Tel +44 (0)20 7636 1531 Fax +44 (0)20 7580 3924
 www.arup.com

Client
Natural Resources Wales

Project Title
Stephenson Street Flood Alleviation Scheme

Drawing Title
Proposed Footpath

Scale at A3 1:1000

Role
 Transport Planning

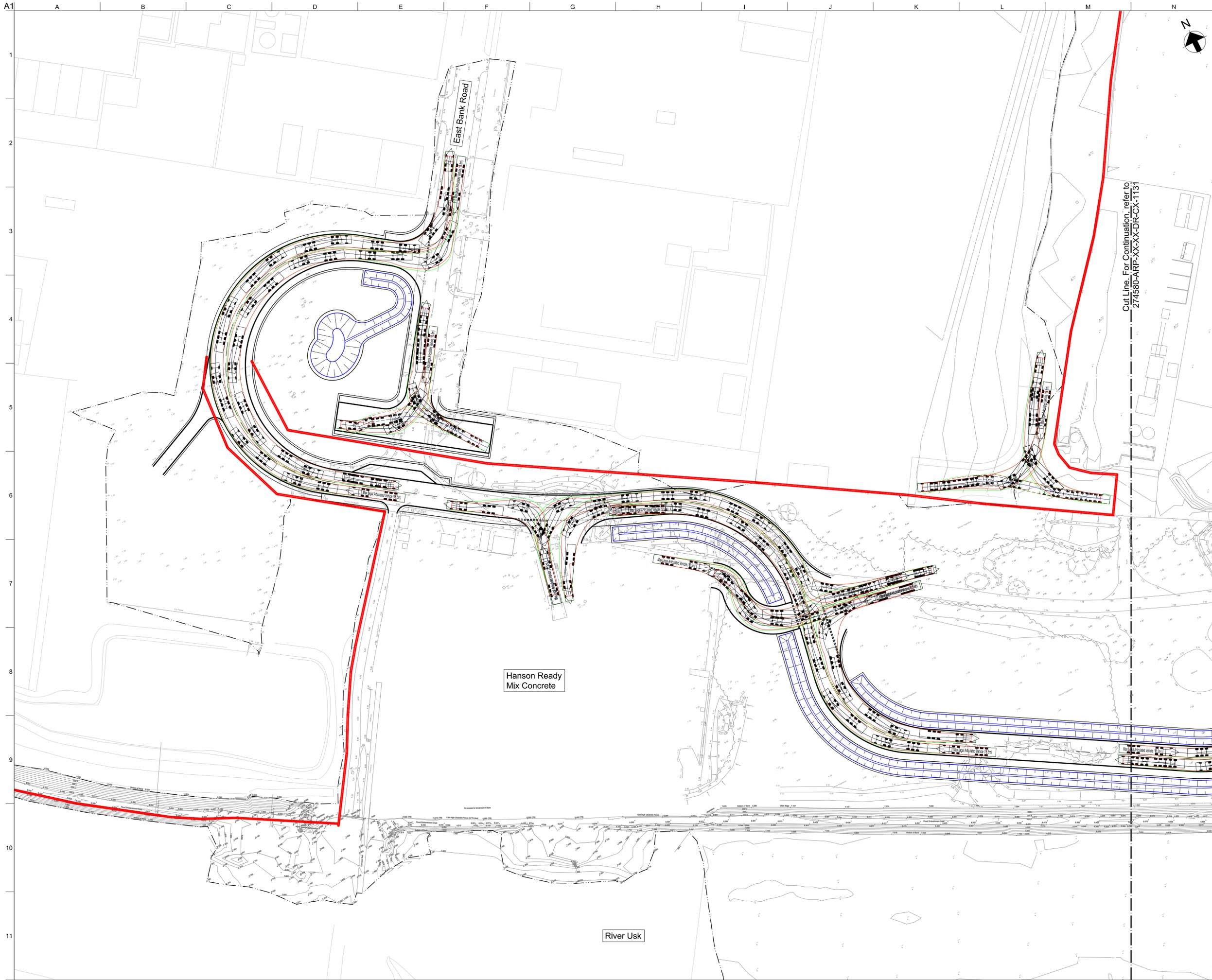
Suitability
 S0 - Work In Progress

Arup Job No 274580	Rev 01
------------------------------	------------------

Drawing No
274580-ARP-XX-XX-DR-TP-0001

Appendix E

Swept Path Analysis



Legend

- Topographical Survey Boundary
- Flood Defence Structure

Max Legal Articulated Vehicle (16.5m)
 Overall Length 16.500m
 Overall Width 2.500m
 Overall Body Height 3.632m
 Min Body Ground Clearance 0.396m
 Max Track Width 2.500m
 Lock to Lock Time 6.00s
 Curb to Curb Turning Radius 6.870m

- Notes**
- Do not scale from this drawing
 - All dimensions are in metres unless noted otherwise.
 - The details shown on this drawing are based on a RIBA Stage 3 design for approval produced for a detailed planning application. The highway design shown is for adoption by Newport City Council and subject to design approval. The details will need to be reviewed and revised during subsequent design stages.
 - The topographical survey details shown within the topographical survey boundary has been provided by Natural Resources Wales (NRW) on 05/08/2020 from a survey completed by John Vincent Surveys LTD in July 2020. The survey information outside the boundary is a combination of surveys received from NRW as part of the original tender. No responsibility can be given for the accuracy of these surveys.
 - The vehicle swept paths analysis shown are based on the movements as attributed in the vehicle tracking software. Actual vehicular movements may differ from what shown.

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Issue	Date	By	Chkd	Appd

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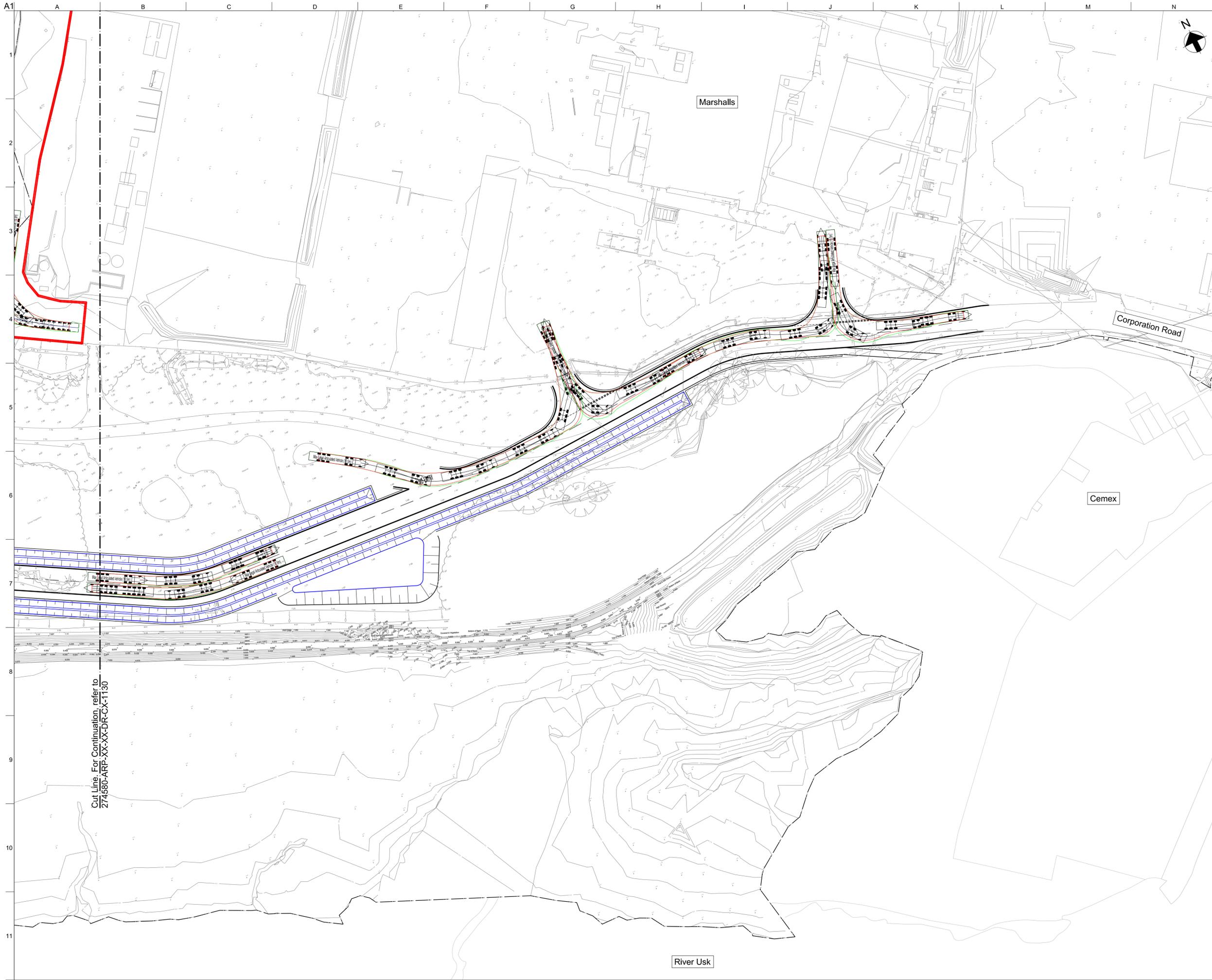
4 Pierhead St, Capital Waterside
 Cardiff, CF10 4GP
 T +44(0)29 20473727 F +44(0)29 20472277
 www.arup.com

Client
Natural Resources Wales

Project Title
Stephenson Street

Drawing Title
**East Bank Road
 Swept Path Analysis
 Sheet 1 of 2**

Scale at A1 1:500 Role Civil
 Suitability S2 - For Information
 Job No **274580** Rev **I01**
 Drawing No **274580-ARP-XX-XX-DR-CX-1130**



Legend

- Topographical Survey Boundary
- Flood Defence Structure

Max Legal Articulated Vehicle (16.5m)
 Overall Length 16.500m
 Overall Width 2.500m
 Overall Body Height 3.632m
 Min Body Ground Clearance 0.396m
 Max Track Width 2.500m
 Lock to Lock Time 6.00s
 Curb to Curb Turning Radius 6.870m

- Notes**
1. Do not scale from this drawing
 2. All dimensions are in metres unless noted otherwise.
 3. The details shown on this drawing are based on a RIBA Stage 3 design for approval produced for a detailed planning application. The highway design shown is for adoption by Newport City Council and subject to design approval. The details will need to be reviewed and revised during subsequent design stages.
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 5. The vehicle swept paths analysis shown are based on the movements as attributed in the vehicle tracking software. Actual vehicular movements may differ from what shown.

I01	02/12/20	CB	DO	SW
Issued for Information				
Issue	Date	By	Chkd	Appd

ARUP

4 Pierhead St, Capital Waterside
 Cardiff, CF10 4CP
 T +44(0)29 20473727 F +44(0)29 20472277
 www.arup.com

Client
Natural Resources Wales

Project Title
Stephenson Street

Drawing Title
East Bank Road Swept Path Analysis Sheet 2 of 2

Scale at A1 1:500 Role Civil

Suitability S2 - For Information

Job No **274580** Rev **I01**

Drawing No **274580-ARP-XX-XX-DR-CX-1131**

Cut Line. For Continuation, refer to 274580-ARP-XX-XX-DR-CX-1130