



Clyde Waterfront Renfrew Riverside & Glasgow Airport Investment Area

Scoping Update

February 2017

(Front cover images courtesy of 5plus Architects)



Issue	Date	Reason for Issue	Prepared		Checked		Approved	
PO1.0	13.12.16	Draft for Approval	AG	13.12.16	RMcL	22.12.16		
PO1.1	11.01.17	Draft reviewed and updated.	RMcL	11.01.17	HC	18.01.17	CC	06.02.17

CWRR & GAIA City Deals: Scoping Report Update Note
 Doc Number: 117086-SWECO-EGN-00-SP-EN-00001

Sweco
 Spectrum House
 2 Powderhall Road
 Edinburgh
 EH7 4GB

+44 (0)131 550 6300
info@sweco.co.uk
www.sweco.co.uk

© Sweco 2016. This document is a Sweco confidential document; it may not be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, photocopying, recording or otherwise disclosed in whole or in part to any third party without our express prior written consent. It should be used by you and the permitted discloses for the purpose for which it has been submitted and for no other.

Registered Office: Sweco UK Limited, Grove House, Mansion Gate Drive, Leeds, LS7 4DN. Company Registration No 028883

Contents

Contents	2
1. Introduction	3
2. Project Changes	4
3. Summary of Development Proposals	16
4. How to Respond to this Note	17

List of Figures

Figure 2.1 – GAIA Development Proposals

Figure 2.2 - GAIA Gateway

Figure 2.3 – Proposed location of GAIA Drainage

Figure 2.4 – Wright Street Bridge

Figure 2.5 – Indicative Cross Section for Wright Street Bridge

Figure 2.6 – CWRR Proposals

Figure 2.7 – CWRR Bridge crossing location

Figure 2.8 – Dock Street to Yoker Station Cycleway

Figure 2.9 – Layby Berthing Location

1. Introduction

1.1 Purpose of this Scoping Update Note

This report is an update to the information that was provided in the Environmental Impact Assessment (EIA) Scoping Reports that were submitted for the Clyde Waterfront and Renfrew Riverside (CWRR) and Glasgow Airport Investment Area (GAIA) City Deal Renfrewshire projects in September 2016.

Those reports explained the need for the City Deal projects, presented the design of each project and included a draft construction methodology and can be viewed here (<http://www.renfrewshire.gov.uk/citydealeia>).

Since the original Scoping Reports were submitted, there has been a number of changes to the proposed projects and this Scoping Update Note has been prepared to provide consultees with information on these. This note also provides consultees with an opportunity to review their original scoping response in light of these changes and amend their previous comments on the proposed methodologies and scope of the EIA if they consider that this is required.

This document sets out:

- Key changes to the design of the CWRR and GAIA City Deal Projects;
- Any changes to the proposed assessment methodologies as a result of the updated design; and
- Information on how consultees can send further representations to the City Deal team.

1.2 Structure of this note

The remainder of this Scoping Update Note is structured as follows:

- **Section 2: Project changes** provides a description of the design changes which have occurred to both projects since the Scoping Report was submitted and any changes to our proposed scope or assessment as a result of the design changes. There is also some further information provided on the proposed construction methodologies that has been developed with the design.
- **Section 3: Summary of Development Proposals** setting out the final development proposals after the changes set out in Section 2.
- **Section 4: How to respond to this note** which sets out how you can provide an additional or updated scoping response. This section also provides a short commentary on the expected timescales for delivery of the project.

2. Project Changes

The changes for each project are set out below. These have come about as a result of design development since the scoping stage and are presented to provide consultees with a complete overview of the anticipated outline designs of each project.

2.1 GAIA

There are three key design changes to the GAIA project since the submission of the original Scoping Report. These are summarised below and further details presented in Sections 2.1.1 to 2.1.3 including a commentary on implications for the EIA.

- Gateway link, at the southern end of the GAIA scheme has been removed from the project;
- Three outfalls have been included to supply drainage for the cycleway at Inchinnan; and
- The Wright Street bridge design has progressed and there are now two piers which would be located in the White Cart River.

An updated redline boundary plan of the proposed GAIA project is provided in Figure 2.1.

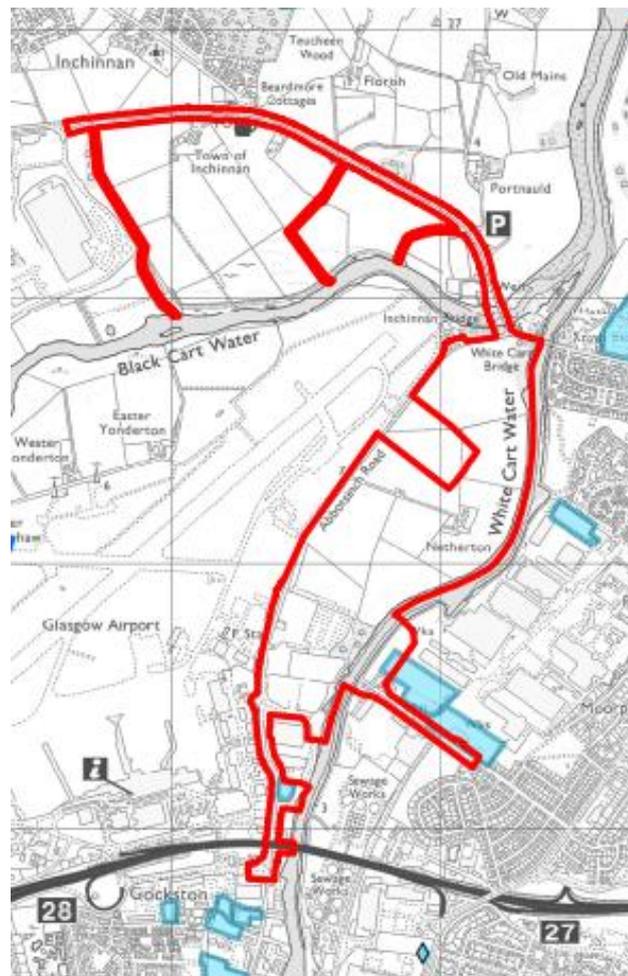


Figure 2.1 – GAIA

2.1.1 Removal of Gateway

Due to funding restrictions, the previous Gateway element of the GAIA project (including the proposed road bridge crossing of the White Cart Water in the Paisley Harbour area and connecting roads) has been removed completely from the project. Figure 2.2 shows the removed Gateway element.

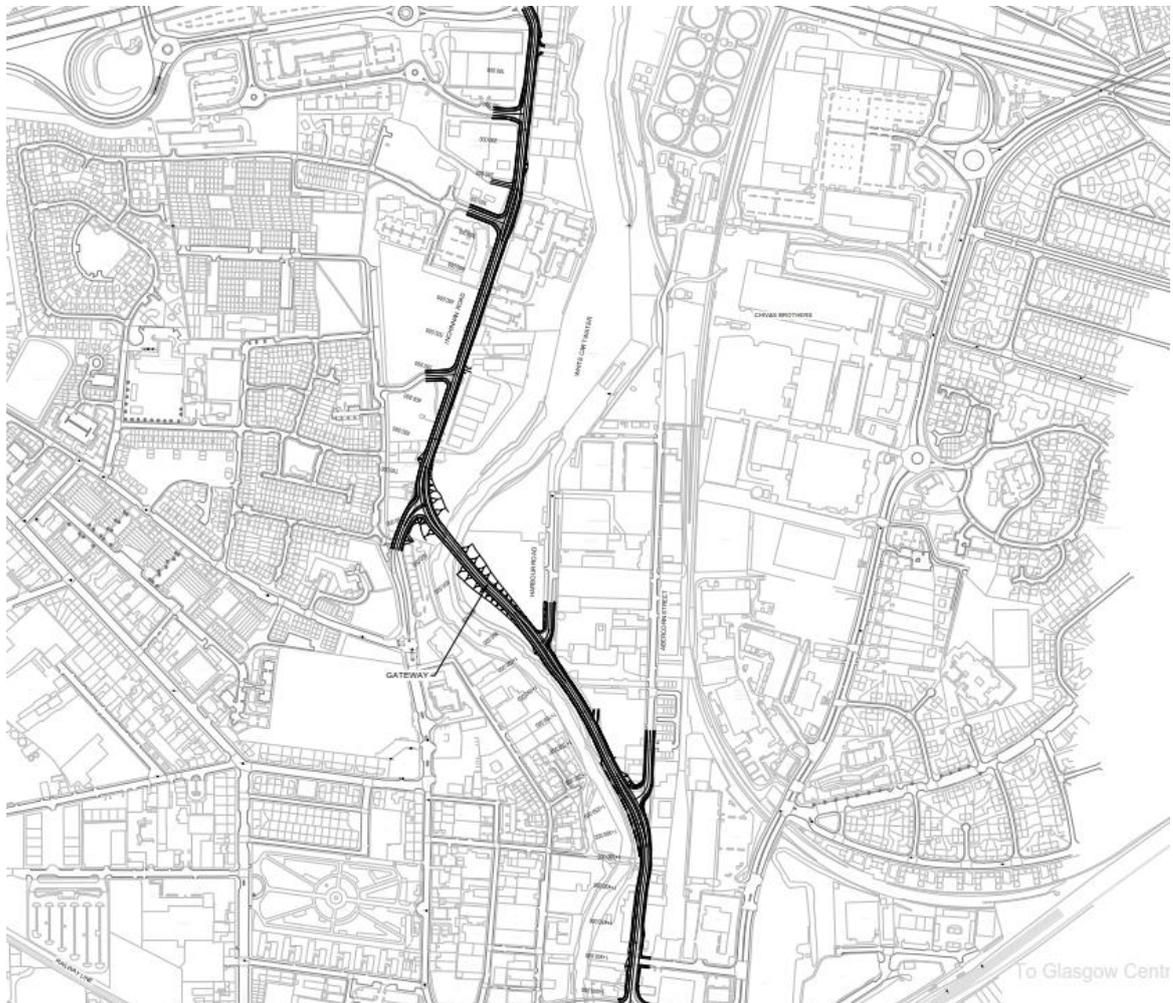


Figure 2.2 – GAIA Gateway (now removed)

With regards to changes to the proposed environmental assessments, any reference to Gateway will be removed in the EIA and is not being assessed in the individual assessments or as part of the cumulative assessment.

Traffic flows predicted from the traffic model associated with the former Gateway element of the project have also been removed and will not be considered as part of the traffic, air quality or noise assessments. Overall, no changes are proposed to the assessment methodology of traffic related environmental impacts set out in the GAIA Scoping Report.

2.1.2 Drainage at Inchinnan

Along the proposed Inchinnan Cycleway, the redline boundary has been revised to include for possible connections into three existing outfalls to provide drainage for surface water run-off from the new cycleway. Figure 2.3 indicates the locations of these channels which would run from the proposed Inchinnan Cycleway and discharge to the Black Cart Water. The westernmost of these seeks to connect into the existing network at the eastern end of the Inchinnan Business Park. The remaining two drainage outfalls are located on existing water courses/ drainage channels which lead to, and outfall at, the Black Cart Water.

The proposed cycleway is remote from the carriageway and is required to cross two existing channels; culverts are proposed at the head of these channels which will require sizing to accommodate the existing flows and any runoff intercepted by the cycleway drainage. Any requirement for channel realignment for culvert connection is to be confirmed.

During consultation with Renfrewshire Council it has been confirmed that no treatment or attenuation is required for the proposed cycleway drainage. Any proposed system must be capable of collecting and discharging flows from the cycleway, adjacent land falling towards the cycleway and the strip created between the existing verge and the cycleway. Drainage design options currently being reviewed for Inchinnan include:

1. Connection to existing pipe drainage assets

With the exception of the existing watercourse channels there appears to be limited opportunity to utilise existing drainage assets as the current system shows:

- Gullies outfalling towards existing fields at the North and South of the cycleway;
- Gullies to a watercourse culvert under the carriageway in the middle of the cycleway near to Chalk Autos garage. In order to become a viable option the location, size and existing catchment would need to be identified; and
- Gullies connecting to the Scottish Water network opposite McGill's Bus Depot. This appears to be a combined system which goes for treatment. Scottish Water Treatment has capacity issues so unlikely to accept cycleway / earthworks drainage.

2. Infiltration

Where permeability permits flows can be discharged through soakaways or infiltration trenches. In order to prove this solution additional ground investigation is required.

3. Over the edge

Where the cycleway slopes towards the adjacent fields and neighbouring topography falls away then over the edge becomes a viable option but is dependent on conveying surface flows between the cycleway and verge without undermining the cycleway pavement construction. It may be possible to convey these flows through the cycleway by pipe or granular means.

4. Filter Drain / Shallow ditch

Filter drains or shallow ditches should be positioned to collect both cycleway runoff and surface runoff from adjacent land while ensuring that cycleway pavement is protected. It is likely that this solution would conflict with existing field drains which would need to be connected to the proposed system. The area between cycleway and verge can be drained by filter drain or ditch

longitudinally or transversely by pipe or granular means as mentioned in part iii. An outfall is required for this system and connection to the existing drainage channels.

It is expected that the optimum solution will involve a number of the options set out above and it is unlikely that one single solution can be applied throughout.

The construction of the drainage solution is anticipated to be as follows;

- Pipe outfalls to channel or watercourses will use precast concrete headwalls and installed to manufacturers instruction to reduce the required concrete works adjacent to the watercourse; and
- Ditch outfalls to channel or watercourse will be assessed for erosion control and at this stage it is anticipated that a suitable means of protection would be a pinned mat system or stone pitching.

Any future maintenance of the outfalls would be undertaken in accordance with good environmental practice during construction and with mitigation measures including adherence with relevant SEPA Pollution Prevention Guidelines.

Based upon the information provided above regarding the drainage proposals, it is predicted that the drainage solutions required for the cycleway would not result in any significant environmental effects as long as best practice was adopted during construction.

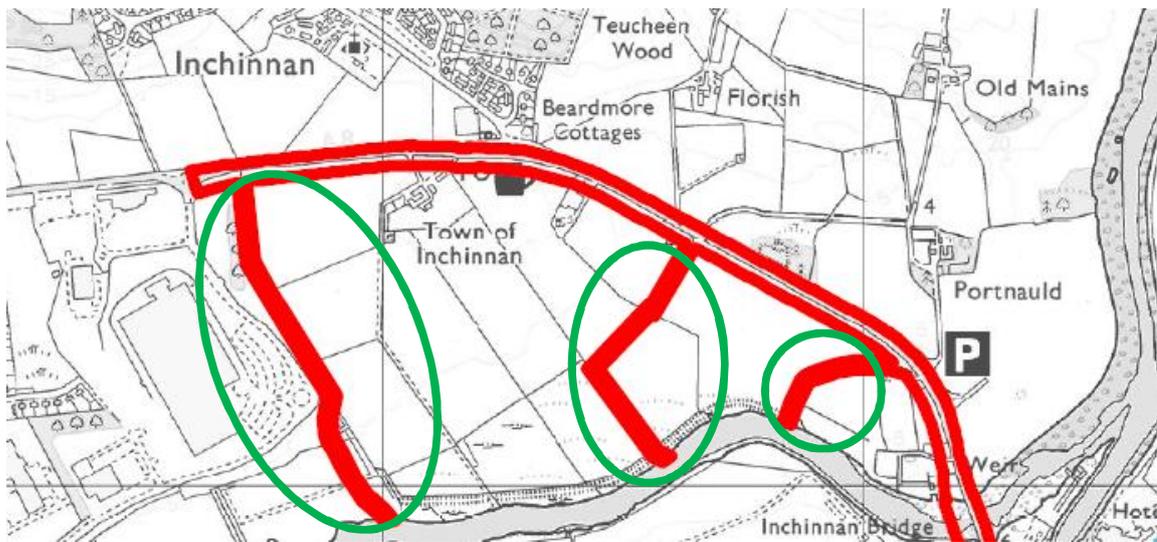


Figure 2.3 – Proposed location of GAIA Drainage (shown in green circles)

2.1.3 Wright Street Bridge

The design of the Wright Street Bridge has been progressed and will now be a 3 span structure, with two proposed piers in the White Cart. The bridge will be approximately 13m wide and with an overall length of approximately 70m and will cross the river at the point shown in Figure 2.4 below. It is anticipated that the piers will be supported on reinforced concrete piles. It is estimated that it would take approximately six months to construct this bridge, with in river works taking three months. An indicative cross section for the bridge is shown in Figure 2.5.

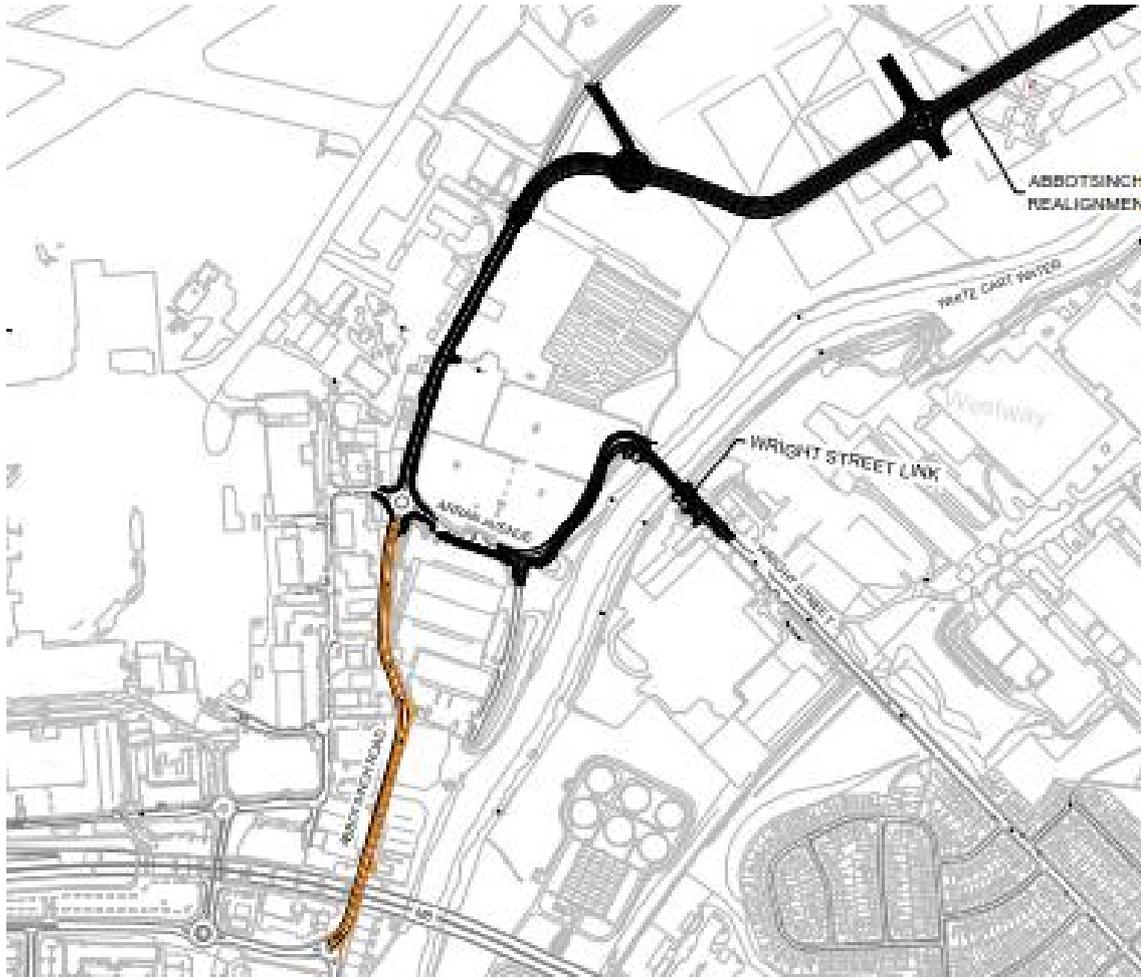


Figure 2.4 – Wright Street Bridge

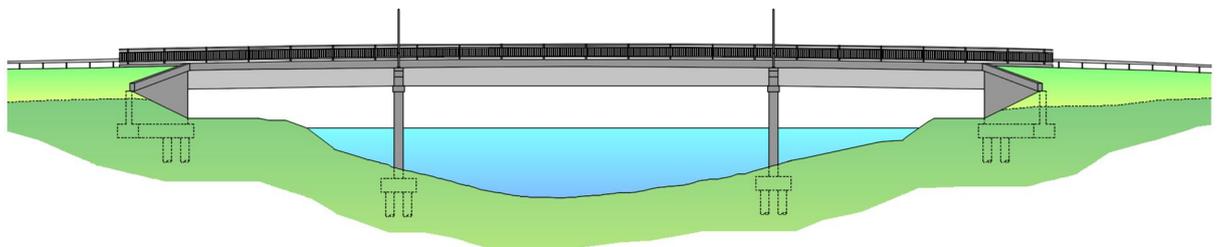


Figure 2.5 – Indicative Cross Section for Wright Street Bridge

One potential method to install the piers would be to install sheet piled cofferdams around the location of the piers, de-water, install a pile platform within the cofferdam and then build up the structures in these contained environments.

The proposed crossing is not materially different in design from that previously assumed at scoping with the exception of the requirement for piers to be located in the watercourse. During the Wright Street bridge design process, a variety of bridge types (multispan and single span) were investigated. The preferred option was found to be the bridge with the two in river piers. This option provided a suitable tie in with Wright Street, ensured that road levels could be maintained for access to existing businesses and also provided significant cost savings when compared with the single span options.

The impacts of this change will be assessed primarily in the water quality and flood risk and the ecology sections of the EIA and will take account of committed mitigation to ensure that in-river works are undertaken with minimal impact on the watercourse's morphology, hydrology, amenity and aquatic ecology.

At this stage, with mitigation, it is not predicted that the new design for the crossing will result in significant adverse effects on environmental receptors. The crossing is not located close to existing residential properties and with the implementation of appropriate good practice during construction it is not predicted that any piling works would have significant noise and vibration effects.

It is understood that there is concerns over potential impacts upon diadromous fish during bridge construction particularly during the migratory season and at time where there could be low water. Appropriate mitigation will be described within the ES that will aim to minimise and reduce any potential impacts, with particular attention given to construction works phasing.

It should also be noted that whilst the Wright Street Bridge will require piers within the watercourse, the previous GAIA proposals for a new bridge crossing of the White Cart Water in the Gateway section of the project (slightly further upstream from Wright Street) have now been removed (see Section 2.1.1). This will reduce the potential for any cumulative effects of new structures on the watercourse.

2.2 CWRR

There are five key design changes to the CWRR project since the submission of the original Scoping Report. These are summarised below and further details presented in Sections 2.2.1 to 2.2.5 including a commentary on implications for the EIA:

- Clyde crossing;
- Yoker Burn culvert realignment;
- Cycleway from Dock Street to Yoker Train Station via Glasgow Road;
- Layby berthing structure; and
- Additional drainage outfalls.

A revised plan showing the overall infrastructure proposals for the CWRR project is presented in Figure 2.6.

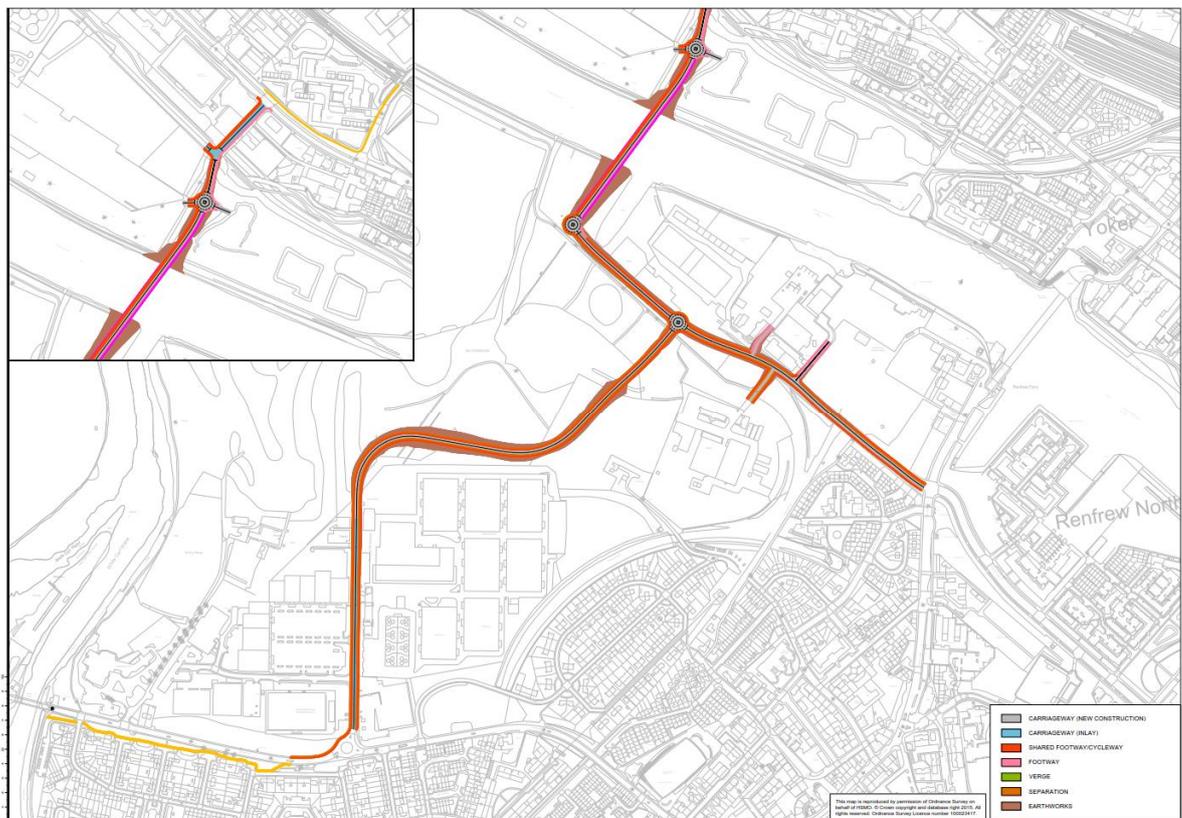


Figure 2.6 – CWRR Proposals

2.2.1 Clyde crossing

The River Clyde Bridge crossing alignment has been selected and it will be constructed in the location shown on the plan in Figure 2.7.



Figure 2.7 – CWRR Bridge Crossing Location

Confirmation of the alignment of the bridge crossing does not change any of the information or proposed approach to assessment presented in the CWRR Scoping Report.

2.2.2 Yoker Burn culvert realignment

The proposed approach road to the north of the new bridge over the River Clyde will cross over the top of an existing masonry arch culvert, which conveys the lower part of the Yoker Burn to its confluence with the River Clyde. To try and minimise the impact to the culvert, whilst allowing the road embankment to be built over it, a number of options have been considered.

The preferred solution is to assess the culvert and implement a “do nothing” approach where it can be confirmed through calculation that the existing culvert can resist the applied additional loads from the road and embankment above. Where this is not possible, the top of the culvert will be exposed by supported excavations and a mass concrete saddle will be installed directly on top of the existing culvert to increase capacity. The strengthened culvert will then be backfilled and construction will take place above.

As a minimum, the final 50m of the Yoker Burn as it approaches the River Clyde however, will have to be diverted, as the culvert clashes with the foundations of the proposed Clyde Crossing Bridge. At this stage it is anticipated that the culvert will be realigned directly to the ease of the current alignment with a new reinforced concrete box (with a similar cross sectional flow area to the existing culvert) being the preferred structure for the realigned section of the burn.

The new section of culvert will be constructed within a de-watered supported excavation. Precast concrete sections will be lifted in to place and backfilled with a new concrete headwall at the north bank of the River Clyde completing the culvert. The existing culvert will remain in place until the new section is tied into it. At this point the burn will have to temporarily over-pump until the watertight connection between the old and new sections of culvert is complete. This is expected to take less than two weeks. Overall, construction of the protection and realignment, is expected to take approximately three months.

The requirement for the strengthening and realignment of the culvert does not materially change the information presented in the CWRR Scoping Report. The proposals are to ensure that the realignment will provide a 'like for like' solution to the one that is currently there, therefore having very minimal impact following construction.

2.2.3 Cycleway from Dock Street to Yoker Train Station via Glasgow Road

The development proposals now include for cyclist provision to be continued from the junction of Dock Street and Glasgow Road to Yoker train station. On carriageway or on verge facilitates will be provided along the north side of Glasgow Road and the west side of Mill Road and will be terminated prior to the existing road bridge over the railway.

The works to create this cycleway will be minimal and are not predicted to result in any potential significant environmental impacts, therefore there is no suggested change to the environmental assessment and methodology that was set out in the previous Scoping Request.

2.2.4 Layby berthing structure

The bridge over the River Clyde will be an opening bridge to allow larger ships to continue to safely navigate up and down the Clyde once it is in place. Due to their size, vessels greater than 105m in length are unable to turn within the navigable channel of the Clyde. Therefore, if a vessel greater than 105m has committed to the channel from Greenock and the new Clyde Crossing is unable to open due to mechanical failure or other unforeseen circumstances then there is currently no safe place for them to stop. To provide a suitable location for these vessels, discussions have taken place with the Harbour Authority to identify where a berthing structure could be constructed, that would allow a vessel to safely dock until the bridge can be opened again.

The development proposals for CWRR therefore now include for a layby berthing structure. This is anticipated to take the form of up to eight piled concrete 'dolphins'¹ that will be situated directly adjacent to the navigational channel. There will be continuous fendering out of the water connecting the dolphins and associated connecting walkways and gantries to provide access to moored vessels from the adjacent Rothesay Dock. The proposed location (option B – Rothesay Dock) of the layby berthing is provided below in Figure 2.8.

¹ A dolphin is a man-made structure which is constructed in the sea bed and extends above the water level to provide a fixed structure which provides a berth or mooring point remote from an existing harbour / dock

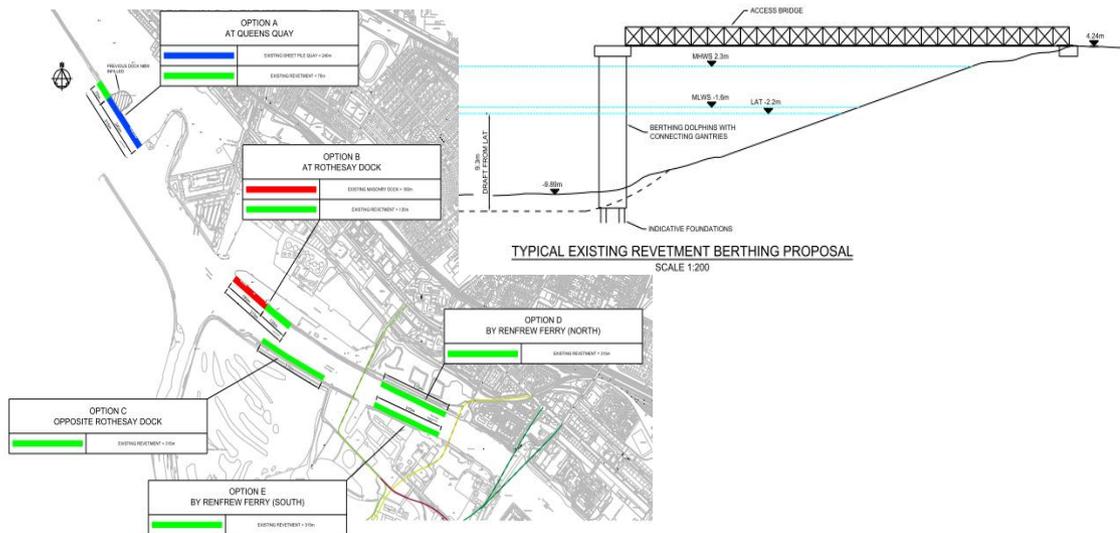


Figure 2.8 – Layby Berthing Location

It is anticipated that it will take approximately three to six months to construct the layby berth.

The layby berth will require to be of a suitable draught to accommodate the largest ships that may use it. The maximum length allowable of vessels navigating the Clyde is 240m, the beam 30-35m, and the draught up to 9.4m. Therefore, a capital dredge (in addition to the annual maintenance dredge that is currently undertaken to maintain the river navigation channel) will be required to deepen the river in the locality of the alternative layby berth. This capital dredge volume will be in the order of approximately 30,000m³ of material. It should be noted that this capital dredge is in an area which is already subject to an annual maintenance dredge to maintain the v-shaped navigation channel at its current depth.

At this stage it is understood that the layby berth construction and operation would not require a Marine Licence but that the capital dredging requirements to service the berth and increase the draft, will require a licence.

A ground investigation is underway to gather samples of the river sediment in the area of the proposed layby berth which in turn will allow a chemical analysis of the sediment to be completed. The sampling is in accordance with Marine Scotland guidance and the results of the chemical analysis will determine the quality of the sediment, inform the assessment of potential effects of its mobilisation during dredging on water quality and inform future planning of how the material can be disposed of.

Mitigation of the proposals may include measures to minimise disturbance to the river bed during piling works through the use of enclosed temporary structures such as cofferdams which would contain the mobilisation of sediments and other materials. All construction works will be undertaken in accordance with relevant environment good construction practice and pollution prevention guidelines. Mitigation will also include measures to allow for suspension of noisy activities such as piling in the event that marine mammals are sighted in the vicinity of the works by the Environmental Clerk of Works (ECoW).

Dredging of the layby berth would be undertaken by suitable methods and where possible methods will be deployed which would reduce the extent of sediment mobilisation e.g. suction dredging.

The location and method of disposal for the dredging arisings will be determined once full results from the chemical analysis of samples has been interrogated.

Particular consideration will also be given to phasing of the in-river works (construction and dredging) to avoid key ecological seasons including the migratory season for diadromous fish. Consultation with Marine Scotland has identified that migrating salmon and sea trout are particularly susceptible to additional stress during periods of lower flows and higher river temperatures in summer. To avoid this impact, it is proposed that the construction of the berthing structure and its capital dredge would not be undertaken during the mid to late summer period to avoid this impact. This is predicted to reduce the potential for impacts on fish associated with temporary disturbance and mobilisation of river bed sediment.

The environmental impacts of the proposed layby berth structure and the additional dredging will be considered within the EIA specifically in the Geology & Soils, Water Quality, Drainage and Flood Risk and Ecology chapters. The assessment of effects of the construction of the berthing structure will include an assessment of the potential effects on water quality from construction and dredging resulting from short term sediment mobilisation and taking account of the results of the sediment analysis.

Taking account of the above mitigation and the relatively small additional dredge requirement, and assuming that the GI does not identify any elevated pollutant levels in river sediment for the dredged area, the assessment will be based on a professional-judgement led approach in line with that set out in the Scoping Report for the rest of the project as significant post-mitigation environmental effects are not predicted. Feedback from consultees on mitigation and best practice for dredging will be taken into account in the assessment and specification of appropriate mitigation commitments.

2.2.5 Additional drainage outfalls

The Renfrew Northern Development Road drainage proposals are based upon an outfall solution that will provide the required capacity for discharge of surface water run-off from the new road. Five additional outfalls will be required as shown in Figure 2.9 below. These outfalls will be constructed using a standard pipe, trench and headwall construction methodology

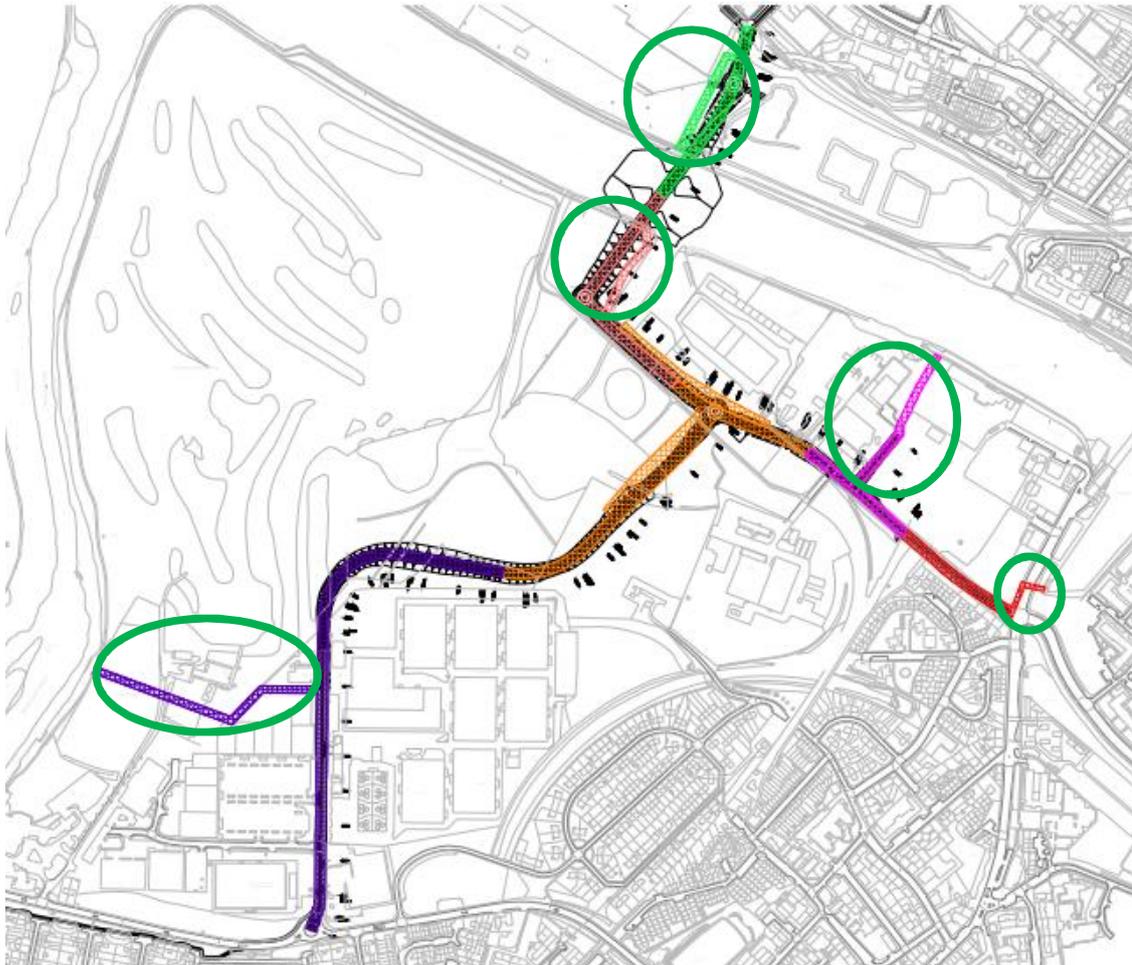


Figure 2.9 – CWRR Additional Outfalls (*locations shown in green circle*)

The drainage proposals will provide an appropriate level of treatment to surface water run-off, in accordance with accepted pollution control measures to ensure that there is no polluted water travelling directly into the receiving watercourses (the lower Cart Water and the River Clyde).

Any future maintenance of the outfalls would be undertaken in accordance with good environmental practice during construction and with mitigation measures including adherence with relevant SEPA Pollution Prevention Guidelines.

The predicted impacts of the construction and routine drainage from these outfalls will be considered within the Water Quality, Drainage and Flood Risk chapter of the Environmental Statement.

3. Summary of Development Proposals

Further to the changes set out above, for clarity, the development proposals that will form the planning applications for each project are set out below.

3.1 GAIA Development Proposals

The GAIA project proposals will now include;

- Inchinnan Cycleway, between the Inchinnan Bridge over the Black Cart Water and Inchinnan Business Park;
- Abbotsinch Road Realignment, realignment of a section of Abbotsinch Road from close to the junction with Greenock Road in the north, until Arran Avenue in the south, that will be located within Netherton Farm;
- Wright Street Crossing, a bridge over the White Cart Water linking Wright Street, the Westway Business Park and adjacent development areas on the east side of the river with Glasgow Airport on the west side; and
- Provision of a cycleway on the existing Abbotsinch Road, from Arran Avenue in the north to Sanderling Road in the south.

3.2 CWRR Development Proposals

The CWRR project proposals will now include;

- Dock Street to Yoker Train Station cycle link;
- New approach roads and associated junctions to the Clyde Crossing Bridge from Dock Street to the north and Meadowside Street to the south;
- New Clyde Crossing;
- Upgrades to Meadowside Street and junction tie ins to Ferry Road;
- Renfrew Northern Development Road, a link from the existing roundabout on the A8 Inchinnan Road/Argyll Avenue in the south to the upgraded Meadowside Street in the north; and
- Segregated cycleway along Inchinnan Road from the roundabout at Argyll Avenue to the junction with Abbotsinch Road/Greenock Road.

4. How to Respond to this Note

4.1 Feedback

This Scoping note provides consultees with details of changes to the CWRR and GAIA City Deals projects which have occurred since the Scoping Reports were submitted to the competent authorities (Renfrewshire Council, West Dunbartonshire Council, Glasgow City Council and Marine Scotland for CWRR and Renfrewshire Council for GAIA) and consultees back in September 2016.

Please provide feedback **where you feel that the information provided above has changed your previous scoping opinions**. This feedback is very useful as it will ensure that all issues or concerns are addressed as part of the ongoing EIA assessment prior to submission of the planning applications.

Please send your feedback to the following address;

citydeal@renfrewshire.gov.uk

Please ensure that you title all responses "GAIA/CWRR City Deal – Scoping Update Response".

If you have any additional baseline information, you wish to comment on the scope of the assessment or you have any other information that you think is relevant to this project please also contact the City Deal team on the email address set out above.

Consultee comments from this Scoping Update (along with the responses received to the original Scoping Request) will be summarised in the ES with a note on how they have been addressed, and they will be used to help inform the development of the design.

4.2 Next Steps

Progress is currently being made in preparing the EIAs for the CWRR and GAIA projects. The current programme is that the planning applications will be submitted in June 2017.