



SECTION THREE



COMMERCIAL, SURFACE TRANSPORT

Rotherhithe to Canary Wharf River Crossing –
Engineering and Architectural Services
Consultant

SECTION THREE The Scope

Call Off Contract under the PSF 91313 Professional Services
Framework

Multidisciplinary Services

Project Reference Number: **tfl_scp_001144_co011**

Framework Reference Number: **PSF 91313**

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1. PURPOSE OF THE SERVICES

Transport for London (The Employer) is investigating the provision a new pedestrian and cycling crossing of the River Thames between Rotherhithe and Canary Wharf. The new river crossing is intended to improve cross-river connectivity. The crossing will provide pedestrian and cycle links to improve access to jobs, facilitate business activity, support housing development, enhance the resilience of the transport network and encourage more sustainable travel.

1.1 Background

1.1.1. The Mayor has asked the Employer to develop a crossing as a priority due to the following:

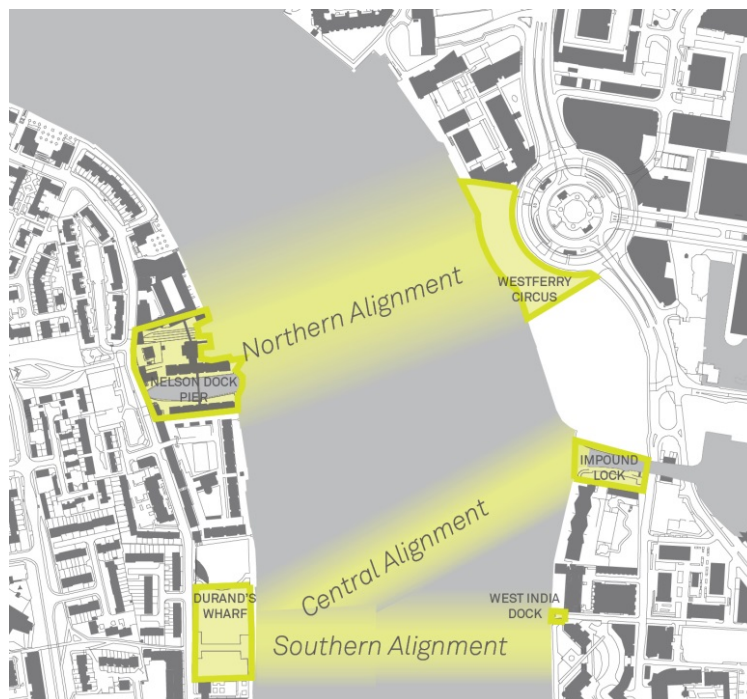
- a. Both the Isle of Dogs and Canada Water on the Rotherhithe peninsula are designated as Opportunity Areas where significant housing and employment growth is anticipated in the coming years.
- b. Significant cycling growth has taken place in central and inner London.
- c. Central to the Mayor's Healthy Streets London vision is to encourage walking and cycling with safer and more appealing routes to create a better city for all Londoners¹. Improvements to cycling access and capacity are required if continued growth is to be supported, particularly for employees living in south London, for whom the options for crossing the Thames onto the Isle of Dogs (to access Canary Wharf) are limited.
- d. The section of the Jubilee line between Canada Water and Canary Wharf is increasingly crowded during peak hours, however, there are no convenient alternative options for travelling at surface level due to the position of these growth areas on peninsulas of the Thames. This current congestion is forecast to remain even subsequent to the opening of the Elizabeth line (Crossrail). Improving the accessibility of the Rotherhithe peninsula for walking and cycling would provide existing and future residents of the area with an alternative active travel option.

1.1.2. This project is one of a number of proposed new river crossings for London which are intended to improve cross-river connectivity in London.

1.1.3. below shows the crossing alignments between the two growth zones of Canary Wharf and Canada Water. The area on the Rotherhithe peninsula is an area which has a Public Transport Accessibility Level (PTAL) of 1 (extremely poor).

¹ Mayor's Transport Strategy. Draft for public consultation. June 2017

Figure 1-1 Proposed Rotherhithe to Canary Wharf river crossing alignments being consulted on



- 1.1.4. In October 2016, the Mayor made a key commitment in his election manifesto to back the building of a bridge linking Rotherhithe and Canary Wharf. Following this the Mayor formally requested The Employer to make progress in developing a river crossing.
- 1.1.5. Following the announcement, the Employer has reviewed the work lead by the charity, Sustrans, and carried out its own independent assessment, including an options assessment looking at the location and type of crossing.
- 1.1.6. The Employer is currently consulting on its option assessment. The consultation opened on 8 November 2017 and completes on 8 January 2018.
- 1.1.7. Whilst the Employer has not made a final decision on the crossing type yet, so far a navigable bridge is the Employer's preferred option. The Employer will be making a decision on the type of crossing in Spring 2018. This commission is in relation to a navigable bridge crossing to ensure that if this option is selected it can commence in a timely manner to achieve the Employer's programme.
- 1.1.8. In the instance of a bridge option the Employer would apply for a Transport and Works Act Order (TWAO) to obtain the principal consents and powers required for constructing and operating a bridge crossing.



1.2 Employer's Objectives

- a) To connect the two Opportunity Areas of Canada Water and the Isle of Dogs
- b) To improve connectivity from the Rotherhithe peninsula, particularly the area beyond the walking catchment of Canada Water Station
- c) To encourage more people to walk and cycle in the area
- d) To provide additional capacity and routes for cyclists as an alternative option to existing crossings in the area
- e) To produce a well-designed and convenient link which achieves value for money and is fundable
- f) To provide an alternative link to the Jubilee line between Canada water and Canary Wharf



2. SPECIFICATION AND DESCRIPTION OF THE SERVICES

2.1 General Requirement

2.1.1 Transport for London (the Employer) is seeking the services of a multi-disciplinary team (The Consultant) to provide Engineering, Architectural, Urban Design, Landscaping and other services to deliver a new crossing from Canary Wharf to Rotherhithe.

2.1.2 The primary aims of the commission are to:

- a. Provide engineering, architectural and other multi-disciplinary design services to produce a single option design for a TWAO application up to and including the appropriate RIBA stage (Section 2.8 gives an indicative RIBA stage for each deliverable to be clarified by the Employer during the commission)²
- b. Provide engineering, architectural and other multi-disciplinary services to support a TWAO application and provide other Planning support as required
- c. Producing information and documentation for the TWAO application and other support as specified by the Employer
- d. Provide support in producing documentation for a future Design and Build (D&B) contract

2.1.3. Whilst feasibility studies continue to be undertaken by the Employer and the public consultation remains ongoing; for the purposes of this commission the crossing type should be assumed to be a navigable (moveable) bridge.

2.1.4. The commission is split into six sub-categories of work. Details of what is covered in each sub-category can be found in Sections 2.2- 2.7. The sub-categories are:

- a. EA1- Management of the Services
- b. EA2 - TWAO requirements
- c. EA3 - Design Requirements
- d. EA4 - Stakeholders and engagement
- e. EA5 - Design and Build contract support
- f. EA6 – Cost Estimating Support

Section 2.8 gives the minimum deliverables under each sub-category.

2 TfL is currently undertaking its own analysis to determine any decisions which might be made on any specific parameters to be fixed as part of our 'single preferred option' at this stage. This will consider a number of factors, such as the outcomes of the recent public consultation. This may include a decision on a specific site/location on which to focus further study but is unlikely to include any detailed bridge design decisions, such as the structural form. Any decisions and supporting information will be shared with the successful tenderer who will be expected to critically review our work and decisions, and support TfL in developing the proposals to a level suitable for TWAO application.



- 2.1.5 The Employer requires support to the appropriate RIBA stage for producing a single design option for a TWAO application.

2.2 EA1- Management of the Services

- 2.2.1 The Consultant shall provide a Project Manager responsible for all aspects of this commission.
- 2.2.2 In addition to the Project Manager, the Consultant shall also provide a core team consisting of the persons listed in Section 2.2.22 who shall be responsible for the day to day aspects of this multi-disciplinary commission. They will have significant and relevant engineering and architectural experience to support a complex and challenging project of this type.
- 2.2.3 The Consultant's core team will be embedded within the Employers' project team – the leaders of the work streams highlighted in the project organisation structure Section 3.2. They shall liaise and work with other members of the project team as necessary and/or as directed by the Employer to facilitate the delivery of the project and commission. It is expected that the Consultant's core team will co-locate to the project office currently based in Southwark for at least 2-3 days per week to ensure close co-ordination with the project team and the delivery of the Engineering and Architectural work streams.
- 2.2.4 In collaboration with the Employer, the Consultant shall work on all stages of the project to ensure efficient working in line with the Employer's requirements. The Employer shall be fully and directly engaged in the day-to-day implementation of commission related tasks.
- 2.2.5 In collaboration with the Employer, the Consultant will develop a Design Management Plan to ensure compliance and proper co-ordination with the Employer's internal governance and project management methodology (TfL Pathway) and the scope of this work. The Design Management Plan shall set out the programme, key outputs, milestone deliverables and the means of co-ordinating all specialists involved throughout the commission.
- 2.2.6 The Design Management Plan shall identify how the various interfaces with the other work packages, including but not limited to those described in section 3.3 will be managed. The Design Management Plan shall also detail the process by which all Engineering and Architectural work will be identified, planned and managed and how the outputs will be checked and authorised before handover to the Employer. The Design Management Plan should outline how the structure of the commission might adapt and evolve as the project progresses.
- 2.2.7 In addition, the Design Management Plan should include details on project quality. This shall encapsulate all areas of the Consultant's commission. Project quality should describe the activities, standards, tools and processes necessary to ensure that the level of quality is delivered consistently throughout the commission. For example, it shall set out quality expectations, describe the standards that will apply, describe document control and change control procedures for full quality assurance.



- 2.2.8 The Consultant shall produce detailed plans to accompany technical reports and is therefore expected to have Geographical Information Systems (GIS) and Computer Aided Design (CAD) systems capability, as well as an understanding of data sources, and be able to deploy these to the project benefit.
- 2.2.9 The Employer shall review and comment on drafts of the reports to be produced to enable them to comment and agree on them prior to finalisation. The Consultant should allow for the Employer to have a three week review period of all documentation. Reports are to be submitted through 'ASITE' unless otherwise agreed with the Employer.
- 2.2.10 The format of all reports and the breakdown structure for all data shall be agreed with the Employer prior to production.
- 2.2.11 The Employer anticipates that the Consultant will be able to make available their proposed project team at any time to support the general workload set out above. Any alternate staff in addition to those proposed in tender submissions will need to be approved in advance of placement on the contract. Other approved specialist services may be drawn upon for discrete areas of technical work
- 2.2.12 The Consultant will assist the Employer in following the Employer's project management methodology (Pathway) that is mandated for all the Employer's projects.

Risk and Value

- 2.2.13 As part of this commission, the Consultant shall ensure that risks and issues associated with the work are identified and a risk register and issues log are created and managed throughout the work period.
- 2.2.14 The risk register and issues log shall be submitted to the Employer's Engineering Lead to enable inclusion in the Employer's project files. A risk and issues management strategy has been developed by the project team. The Consultant shall provide updates to the Employer on a four weekly basis of any changes to the priority of risks.
- 2.2.15 The services to be provided with regard to risk and value for the project are as follows:
 - a. The Consultant is to provide the technical input for project risk reviews organised by The Employer
 - b. The Consultant will maintain a Design Assumptions Register - the assumptions within should clearly link back to their sensitivity on achieving specific project objectives
 - c. Project Risk Workshops are to be attended by all Design Leads
 - d. The Consultant will produce and maintain a design issues log to manage and mitigate design risks



- e. A Risk, Issue and Opportunity record is to be maintained and be accessible to The Employer. This register will be discussed weekly (or as specified by the Employer) at a date set by the Project Manager
- f. Value Engineering and Value Management proposals are to be notified to The Employer upon identification
- g. Delivery of a Value Engineering Report. The Consultant shall be proactive in ensuring that the design represents value for money to The Employer and this will include, inter alia, on-going Value Engineering and whole life asset costing. The Consultant needs to demonstrate where Value Engineering opportunities have been acted upon and realised, and their value

Meetings

2.2.18 The following meetings (and associated preparations) are envisaged for this commission:

- Presentations/ Meetings with The Employer
- Stakeholder briefings/ workshops
- Value Engineering workshops
- Project Risk Workshops
- Engineering Safety Management (ESM)/ CDM Workshops
- Presentations to the Canary Wharf Group (CWG)
- Design Reviews - full and part scheme
- Ad-hoc meetings as part of the design development
- Presentations to the Design Review Group (and responses to issues raised)
- Technical meetings with the Engineering Lead
- Design Progress Meetings with the Employer Delivery Group and its supporting consultants
- Other meetings required in carrying out the duties of Principal Designer

Cost Control

2.2.19 The Consultant shall provide periodic fee forecast based on accepted programme and detailed as per sub-categories in Section 2.1.4 showing the level of staff utilisation against these categories and the associated fee forecast.

2.2.20 The Consultant shall provide a periodic cost report to the Employer (in an agreed format) which will assist the Employer in tracking the total Price for Services Provided to Date, agreed and unconfirmed compensation events, the estimated forecast for the Total Price for Services at the Completion of the whole of the services. The cost report also shall detail an explanation of the changes made between the reporting periods.

2.2.21 The Consultant shall submit time sheet records (in an agreed format) at an agreed interval with the Employer. These time sheet records should clearly record against each named person or people and their specific tasks in the Consultants programme against the deliverables in the Master Information Delivery Plan (MIDP)



2.2.22 The Consultants key people are defined as a minimum (the Consultant may add to this list):

- Project Manager
- Design Manager
- Stakeholder Manager
- Principal Structural Bridge Engineer
- Principal Bridge Architect
- Principal Landscape Architect
- Principal Mechanical and Electrical Lead
- Principal Geotechnical Engineer
- Principal Urban Designer
- Estimator
- Design Expert Witness

2.3 EA2 –Planning requirements

2.3.1 It should be assumed for the purposes of this scope that the consents route to obtain the principal powers and consents required to construct and operate the crossing would be through a Transport and Works Act Order (TWAO).

2.3.2 The TWAO is likely to encompass the following (not exhaustive):

- a. Deemed Planning Consent
- b. Protective Provisions for the following statutory bodies: The Local Planning Authorities, Marine Management Organisation, Port of London Authority and the Environment Agency.
- c. Compulsory Purchase Powers
- d. Public Rights of Way (Thames Path)
- e. Highways Consents- LB Southwark and LB Tower Hamlets
- f. Byelaws
- g. Heritage Consents (if applicable)

2.3.3 The following consents and licences fall outside of the TWAO:

- a. Protected species licences - Natural England
- b. Advertisement consent

The Employer will manage the TWAO application submission. However, the Consultant will have a fundamental role in the preparation of the TWAO application and providing technical advice and potentially amending the design post-submission to address objections. The Consultant will be required to provide technical support and information from appointment to the closure of TWAO examination and possibly beyond for the discharge of planning conditions.



- 2.3.4 The Consultant will be required to produce plans, drawings and documents for the TWAO application, including but not limited to:
- a. Location plan(s)
 - b. Works Plans and Cross Sections. These will show Limits of Deviation (LoD) etc.
 - c. Land Plan(s). Different plans may be needed for different levels and will show limits of land (and/or subsoil) to be acquired permanently or used temporarily i.e. Limits of Land to be Acquired or Used (LLAU) and land required for protective works.
 - d. Planning drawings, including details of location/alignment & function for all different levels, sections and elevations details (incl. materials) for all above ground works if applicable
 - e. Landscaping Strategy
 - f. Operational Management Plan
 - g. Architectural images and plans requested by key stakeholders
- 2.3.5 The Consultant will also be required to provide input into a number of documents, including but not limited to:
- a. The Code of Construction Practice (a code of practice to monitor, control and manage construction impacts of or on construction sites)
 - b. The Design and Access Statement (presents the design and accessibility proposals for the scheme, sets out how the design has evolved and what has informed the design)
 - c. Equalities Impact Assessment (report detailing likely equalities impact of the project)
 - d. Energy statement (outlines the energy strategy proposed for the scheme and shows achievable energy and carbon dioxide emissions savings associated with the scheme)
- 2.3.6 Following submission of the TWAO application, the Consultant would be required to provide resources and any additional documents required by stakeholders or the Planning Inspector to address issues throughout the TWAO process.
- 2.3.7 It is currently assumed that a public inquiry would be required as part of the TWAO process. The Consultant is required to provide expert witnesses on issues related to this commission for the TWAO inquiry. This would include producing statements of case, proofs of evidence and providing evidence at the inquiry.
- 2.3.8 On instruction by the Employer, and within 28 days, the Consultant shall provide a TWAO Manager responsible for supporting the Employer's Consents Manager in the day to day management of the TWAO. On instruction, the Consultant shall be asked to provide a CV and day rate for the proposed TWAO Manager. The CV(s) will be reviewed by the Employer. The Employer reserves the right to reject any individuals proposed and the Consultant may be asked to submit further CVs.



The TWAO Manager shall be embedded and will play a significant role within the Employer's project team and in the delivery of the TWAO. The TWAO Manager shall work collaboratively with the Employer's project team to ensure that the TWAO submission and requirements drive the engineering, design and environmental programme. The TWAO Manager will co-locate at the project office in Southwark, London, to ensure integration actively with the Employer's project team and attend weekly project meetings.

The TWAO Manager shall work with the Employer to co-ordinate the TWAO submission. There will be different authors for each submission document and the TWAO Manager shall efficiently identify and support the management of the complex interdependency between these documents, ensuring a compliant application comes together on programme.

The TWAO Manager shall work closely with the Employer to manage objections made by stakeholders that may develop to statutory or non-statutory objections at the TWAO Inquiry.

The Consultant ensures that all engagement with statutory bodies is robustly planned and properly recorded with actions fed back to the project team.

2.4 EA3- Design Requirements

Engineering – including Construction and Operations

- 2.4.1 The Consultant will take the single preferred option through the Concept Design into Developed Design with the ambition to improve upon and refine the existing design from the feasibility study (to be produced by the Employer early in 2018). In order to create certainty around the Concept Design and /or engage with stakeholders the Consultant shall develop Technical Designs where appropriate (as referred to in 2.1.5 above). The Deliverables (Section 2.8) gives an indicative level of design maturity for each deliverable. The Consultant shall be guided by the Employer during the course of the contract.
- 2.4.2 The Consultant is to validate the information provided by the Employer for the single option at the commencement of this commission; the Consultant should allow adequate time and resource in their programme to achieve the project programme milestones.
- 2.4.3 The Consultant is to carry out further optioneering work on the single option as agreed with the Employer to ensure the design achieves the project objectives.
- 2.4.4 The Consultant shall work with the Employer's separately appointed constructability contractor to ensure that the design solution is buildable, maintainable and operable.
- 2.4.5 The Consultant will be expected to carry out a constructability review of the preferred single option confirming the design is capable of construction and outlining the most efficient and cost effective construction methodology. Future maintenance is an essential consideration in designing the construction methodology;
- 2.4.6 As part of the Consultant's constructability review, the Consultant (and any of it's respective sub-consultant) shall liaise and cooperate with the Employer and the Employer's own appointed constructability contractor. The constructability contractor will be responsible for producing the Constructability Review Report with input from the Consultant.



- 2.4.7 The Consultant is to develop the design in sufficient detail to support the Transport and Works Act Order (TWAO) application
- 2.4.8 The Consultant is to ensure the single preferred option design is sufficiently developed with renderings in the open and closed position and in different light and weather conditions to consult with the public.
- 2.4.9 The Consultant will be responsible for ensuring that the utilities & drainage surveys up to level C4 have been completed, a BIM compliant 3D combined services model has been produced and any necessary diversions have been identified or planned out and included in the design.
- 2.4.10 The Consultant shall provide a BIM Execution Plan in response to the Employer's Information Requirements document (Volume 1 Call-off Contract Documentation) within 4 weeks of the starting date.
- 2.4.11 The Consultant is to assist the Employer in any subsequent negotiations with the utilities organisations.
- 2.4.12 The Consultant is to establish the technical requirements for the crossing.
- 2.4.13 The Consultant will be required to schedule topographical surveys including levels to be carried out in order to execute the design. The Employer's own survey department will commission the surveys.
- 2.4.14 The Consultant is to provide other engineering and architectural services as required to support the project.
- 2.4.15 Where items for the works are to be specified by the Consultant these shall qualify for the Enhanced Capital Allowance Scheme for Energy-Saving Technologies (<https://www.gov.uk/government/publications/enhanced-capital-allowance-scheme-for-energy-saving-technologies>), where practicable.
- 2.4.16 The Consultant is expected to produce a value engineered, cost effective (whole of life), that maximises benefits and minimises impacts on staff and customers scheme, affordable to The Employer
- 2.4.17 The Consultant is to ensure the requirements of all key stakeholders are taken into account in the design (e.g. Port of London Authority, Environment Agency, London Underground Limited) Sponsor, Operator and Maintainer et al)
- 2.4.18 The Consultant is to ensure sufficient information on Limits of Deviation (LoD) are created in preparation for the TWAO/Consents process – it is essential that this includes all land that will be needed for the works (including land required temporarily) but excludes land that will not be required.



- 2.4.19 The Consultant is to demonstrate an integrated process of technical design (structural, civil, architectural, mechanical, electrical, power, urban realm) including for structural and environmental considerations.
- 2.4.20 The Consultant is responsible for delivering a Services / Systems design, which can be integrated into a single Control Room.
- 2.4.21 The Consultant will design an integrated power solution and include opportunities for power regeneration within the operating mechanism.

Architecture and Urban Design

- 2.4.22 The Employer requires specialist urban design, landscape and architecture services to support the further development of the plans for the Scheme and associated cycle/pedestrian links. This support includes but is not limited to the preparation of specific deliverables and supporting documentation, attendance at meetings and design review sessions.
- 2.4.23 The team will need to validate the preferred option produced as part of the feasibility work and submit the programme for how the validation process will be structured including a schedule of proposed or required changes to the scope. The validation process shall include a finalised scope plan, clearly indicating the extent of the project, including clearly setting out the boundaries of landings and relevant approaches.
- 2.4.24 The Consultant shall ensure that the bridge design and urban realm design, including connections, is progressed in accordance with the project design vision and principles which can be found in Appendix A of this document. The overarching ambition for the link, which is set out in the vision document, is to:

“...create a piece of high quality civic design that ties the walking and cycling network together on both sides of the river: enabling, promoting and celebrating active travel in line with the Mayors Healthy Streets Vision”
- 2.4.25 The project can be considered as three main elements – the bridge structure, the landings on either side of the river and the approaches/connections.

The Bridge

- 2.4.26 The consultant team will be required to provide an exceptional design for the preferred option for a pedestrian and cycle bridge connection which makes a positive contribution to the river environment and provides a safe, convenient, enjoyable and attractive link for both sets of users.
- 2.4.27 The architects will need to work closely with the engineers (and other service providers) to produce a design to the appropriate RIBA stage as stated in Section 2.8 and the Consultant shall submit a deliverables schedule of what is required in order to meet this stage in addition to specific Employer’s requirements within this Scope.



2.4.28 As part of the design, the consultant team will need to provide:

- a. The typology of the bridge, although the feasibility work suggests it will either be a swing or lifting bridge depending on the exact alignment/location, taking into account any PLA requirements and consents
- b. Size/scale/massing: height of bridge elements above mean high water springs (MHWS), including any towers associated with the bridge support or linked to the operating structure, width and length of the crossing with any associated development (e.g. operational building)
- c. Layout: deck configuration, layout with details of how the two modes of use will be accommodated and the structural landing points. The bridge design must comply with the requirements of the Disability Discrimination Act 1993 and shall be fitted with fully compliant lifts, ramps and or stairs
- d. An elegant and attractive design for the bridge itself, the lifts, stairs, ramps and connections of the bridge with the landing point(s). This should include, but should not be limited to, the structural loading calculations and spans
- e. Operating mechanism: detail of the operating bridge, mechanisms, and energy sources. Details of emergency evacuation will also be needed
- f. Appearance: External built appearance of the entire structure including the architectural design, materials/finishes, lighting, protection etc.
- g. Bridge utilities that will be required

The Landings

2.4.29 The landings are a key element of the bridge design and on both sides of the river will need to be incorporated into an existing urban context, reinforcing the existing sense of place and identity or creating an event where this is lacking.

2.4.30 For the preferred option, the consultant team will need to:

- a. Identify the area required for the landing zone, giving due regard to the immediate context whether that is an existing built environment or landscaped area. The land take for the required works should also be identified, including the work sites. It should be noted that the ownership of these areas may vary and any subsequent variation will be the responsibility of the Consultant.
- b. Carefully consider any heritage or other constraints for the landing, including trees, privacy impacts and the general impact of structure on the immediate area. The presumption will always be to preserve mature trees where possible.
- c. The optimum way to spring from/ land on the landing zone, resulting in a minimum of disturbance to the immediate context, including, where possible, avoiding the removal of existing trees.



- d. Consider and design the step free access from the bridge approaches on both sides of the river.
 - e. design the public realm within the immediate vicinity of the landing point, with careful consideration of the access arrangements to/from the bridge structure for pedestrians and cyclists, avoiding points of conflict or mitigating these where they may occur, and the links to the existing network.
- 2.4.31 The designs should include landscape proposals with an appropriate palette of high quality materials, tree planting, lighting and appropriate street furniture.
- 2.4.32 Given the opening nature of the bridge, the designer will need to consider an appropriately sized holding area for cyclists in the event of an opening at a busy time and integrate this seamlessly into the public realm near the landing point.
- 2.4.33 There may be an opportunity for some retail associated with this provision. The Consultant shall ensure that any retail spaces are designed in accordance with The Employer's retail design standards and that suitable and sufficient services such as power, water and drainage are included.

The Approaches

- 2.4.34 The Consultant team will need to consider the wider connectivity of the bridge and landing zones to the network of streets and spaces within the wider context of the bridge. The extent of these areas beyond the river crossing landing points may be influenced by the landing design itself and a number of options may need to be developed for the urban realm in terms of the extent of connections for onward journeys needed and scale and design of these connections. This should form part of the feasibility validation.
- 2.4.35 The Employer will provide a high level study illustrating the wider connections to the landings zone but the detail of those connections will need to be produced by the Consultant, having due regard to relevant guidance relating to the public realm including Streetscape Guidance (2015), the London Cycle Design Standards (2014), SuDS in London: A Guide (2016) and the Healthy Streets Guidance (2017).
- 2.4.36 The overarching objective of the urban design, landscape and architecture work stream is to develop the design for the above elements of the scheme to support a future Transport & Works Act Order (TWAo) application. Design development shall take into account all new infrastructure required by the scheme including the landing points, any other changes to the pedestrian links and the surrounding urban realm.
- 2.4.37 The work will culminate in the production of a Design and Access Statement, which will form part of the body of evidence for a future TWAo submission. Photo-realistic visualisations will be required for this document and to inform public consultation on the scheme and these viewpoints should be proposed by the consultants, and agreed with the Employer and submitted as part of the bid.
- 2.4.38 The Consultant shall consider the following requirements



- a. Within the designs and visualisations developed, relevant scheme design, streetscape and other relevant policies must be taken into account. Where departure from existing policies is recommended a clear justification must be provided and sufficient documentation to satisfy legal requirements
- b. The designs must have regard to the existing areas' character, heritage and sense of place
- c. The Consultant should identify opportunities to improve the landscape at each location, creating safe, convenient, accessible and attractive spaces which contribute positively to the area
- d. The public realm at each location shall be designed to become more active and vibrant as a result of substantially higher footfall/ cycle usage. This must also improve the quality interchange between transport modes and onward travel
- e. The Consultant shall also produce design boards and/or scale models (if required) to demonstrate the impacts of the proposals to stakeholders. Ongoing engagement with the project team and other stakeholders will continue to be required as part of Expert Witness Task
- f. A detailed plan of the urban realm shall be developed in co-ordination with local development frameworks and the requirements of the Local Authorities.

Environment

- 2.4.39 The Consultant is expected to work collaboratively with the Employer and with other consultants as listed in Section 3.3 to identify necessary design detail and information to support the Environment work stream. The Consultant will subsequently provide these details to meet the programme.
- 2.4.40 The Consultant will support the Environment work stream Consultant to develop design related mitigations to environmental impacts.
- 2.4.41 The Consultant is expected to develop the design in accordance with the Project Specific Sustainability Strategy which is currently being developed and provide input into the Sustainable Design Considerations Log.
- 2.4.42 The Consultant shall support the development of the following documents
- a. Environmental Statement
 - b. Code of Construction Practice
 - c. CEEQUAL Assessment (including all recent updates in Version 5)
 - d. Sustainability assessment
 - e. Equalities Impact Assessment
 - f. Energy statement



Transport Planning

- 2.4.43 The Consultant shall design a scheme that ensures the access routes are fully designed to provide safe access of sufficient capacity
- 2.4.44 The Employer has the following requirements with regard to Transport Planning:
- a) The Consultant is to ensure there is close working between the design and transport teams to make sure that there is sufficient transport capacity, for example, sufficient width on the bridge, stairs and ramps, number and size of lifts etc.
 - b) The landing points are critical to the off-site tie-ins. There will need to be some design work of the land around the landing points (i.e. beyond the bridge ramp itself, to ensure that access routes to/from it are safe and of sufficient capacity). Some of this could be public highway, some other public land (e.g. parks) and some is private (e.g. Thames Path, hotel land, and Canary Wharf Estate) depending on the single preferred option. The designers will need either to have the ability to undertake these works, or to work with other designers, to ensure that these designs work seamlessly together.
- 2.4.45 The above design elements will need to be completed for The Employer to model any changes proposed, which will need to be reported in an outline Transport Assessment at next public consultation. The Consultant will need to establish the lead-in times for this work from the Town Planning Support and adjust their design programme accordingly.

Town Planning

- 2.4.46 The Employer will manage the TWAO submission and any other consent submissions. However, the Consultant will work closely with the Employer to understand the town planning issues that would influence the design and respond accordingly. The Consultant will, as far as possible, produce a design that meets all relevant national, regional and local planning policy, although the Employer will be responsible for identifying the relevant planning policy.

Land and Property

- 2.4.47 The Consultant will identify the land requirements to construct and operate the crossing, including (but not limited to) permanent and temporary land requirements, restrictive covenants and utility diversions. The Consultant will support the Employer to prepare documentation and plans related to compulsory acquisition.
- 2.4.48 It is likely that the Consultant will be required to support the Employer from a design perspective by providing plans and supporting meetings.

2.5 EA4 –Stakeholder and Engagement

- 2.5.1 The Employer will manage stakeholder engagement and stakeholder communications. The Employer has a stakeholder engagement strategy and communications plan. The



Consultant shall provide technical support to the Employer at most regular stakeholder meetings to support “buy in” to the project.

- 2.5.2 The Consultant will assist the wider project in the compilation and active management of the Project Stakeholder Management Plan and ensure all relevant statutory and non-statutory bodies have been identified. The Employer shall ensure that the Consultant is informed prior to any stakeholder meetings to enable them to attend if deemed appropriate. Where the Consultant attends they will be required to minute all meetings with external stakeholders.
- 2.5.3 To minimise risk of objection through the TWAO application the Consultant should support the Employer in addressing design related stakeholder comments prior to application submission and during the TWAO process. The Consultant shall have the ability to liaise effectively with appropriate representatives from key stakeholders such as Local Authorities, the Department for Transport, Port of London Authority, Historic England, the Environment Agency, Natural England, Marine Management Organisation and other bodies as required.
- 2.5.4 The Employer’s communications team have a matrix/database of stakeholders that will be used to determine key meetings. The Employer will inform the Consultant of any required attendance. The Consultant should allow for attendance at key stakeholder meetings on an ad hoc basis of four per month.
- 2.5.5 The Consultant shall provide input into the development of the overall project consultation strategy and ensure appropriate resources are available to support this strategy through to submission of the application for powers. The consultation strategy is managed by the Employer’s Communications Lead.
- 2.5.6 The Consultant shall allow for various consultation exercises with both ‘prescribed’ and ‘non-prescribed’ bodies (as defined in the appropriate Environmental Impact Assessment Regulations). The current project timetable details a minimum of two ‘public’ consultation exercises (although this is subject to change) and the Consultant shall provide input into them and others as appropriate. This could include producing plans, images or providing resources to attend events.
- 2.5.7 It is imperative that all engagement with statutory bodies is robustly planned, properly recorded with actions fed back into the project team. Any subsequent actions shall be documented by the Consultant for review by the Employer.

2.6 EA5- Design and Build Contract Support

- 2.6.1 The Consultant must ensure the design sufficiently developed to set the performance requirements for a Design & Build contract (including architectural design).
- 2.6.2 The Consultant is to provide the technical performance requirements for the Design & Build tender stage for the river crossing. The development of the performance requirements should focus on de-risking and refining aspects of the design; the following are given as examples;



- a. Openable bridge providing clear access to the requirements agreed with the Port of London Authority through evidence and risk based negotiation – The Employer to agree with the support of the Consultant.
- b. Openable bridge that can be parked at a fail-safe position so as to remain open to river traffic in the event of mechanical/hydraulic failure
- c. Approaches and means to allow access to the bridge for pedestrians, cyclists and persons of reduced mobility (PRM), including waiting areas
- d. Requirements for the build phase of the project
- e. Bridge operation and maintenance requirements
- f. Reliability, availability and maintainability performance requirements
- g. Systems integration – integration of new systems into the Employer's control network and the Port of London control centre

The above list is not exhaustive.

2.6.3 The Consultant will support the development of key documentation for the Design and Build contract and ongoing support through the design and build phase.

2.6.4 The Employer will procure the Category 3 checker independently and the Consultant will co-operate with the Category 3 checker.

2.7 EA6- Cost Estimating Support

2.7.1 The Consultant is to provide estimating support to the Rotherhithe to Canary Wharf Crossing project, under the direction of the Employers Estimator for the project. This is to include:-

- a. Preparing a detailed estimate for the works, based upon the outline/ reference design
- b. Development of and information gathering for the detailed estimate based upon the outline/ reference design during the preparation of the design
- c. Provision of costings to support option selection/refinement
- d. Provision of life cycle cost for the proposed works, including gathering input from others, including asset managers and experts within the Employer's organisation and externally
- e. General estimating support to the project as required and instructed by the Employer.

2.7.2 The Consultant shall carry out work in accordance with the specification as set out in Section 4 and in accordance with the requirements of the Employer's Estimator.



2.8 Deliverables

These are an indication of the Deliverables under this commission but this is not a definitive list.

EA1	Deliverable	Definition	Responsibility	Anticipated RIBA stage
EA1.1	Programme and Tasks	Sets out all activities against dates in MS Project format	The Consultant	Partial Stage 4
EA1.2	Risk Register, Issues Log and Hazard Logs	Captures all risks, issues and hazards associated with the scheme to allow these to be managed and mitigated.	The Employer- The Consultant will be required to provide input.	Partial Stage 4
EA2	Deliverable	Definition	Responsibility	
EA2.1	Provide support to the planning Consultant on the production of design and access statement for TWAO submission	Provide support to the planning Consultants work streams on the production of design and access statement for TWAO submission	The Consultant	Partial Stage 4
EA2.2	Support in agreeing legal agreements with interested parties	It is commonplace with a TWAO process for the applicant to enter into legal agreements to resolve objections and other issues – for example, S106 agreements and Land and Works Agreements. Often these require additional design work to resolve the issue.	The Consultant	Partial Stage 4
EA2.3	Plans required for TWAO (suggested but not limited to)	Location and key plan for the scheme.	The Consultant	To end of Stage 3
EA2.4	Works Plans & Sections. Will show Limits of Deviation (LoD) etc.	Plans- horizontal sections. Sections- vertical slice, showing limits of deviation (LOD) etc.	The Consultant	Partial Stage 4
EA2.5	Land plan(s).	Different plans may be needed for different levels and will show limits of land (and/ or subsoil) to be acquired permanently or used temporarily i.e. Limits of Land to be Acquired or Used (LLAU) and land required for protective works.	The Consultant	Partial Stage 4



EA2.6	Traffic Regulation plans	Maps of a scale not smaller than 1:2500 on which the path, way or track concerned, and, in the case of a diversion, the new path, way or track, is clearly delineated.	The Consultant	To end of Stage 3
EA2.7	Planning direction plans for approval and/or information	Plans- Details of location/alignment & function for all different levels; Sections; Elevations details (incl. materials) for all above ground work if applicable.	The Consultant	Partial Stage 4
EA2.8	Landscaping Strategy	Provides the strategic landscape context and vision of the scheme, description of any specific areas of landscaping interest and how they will be treated during construction and operation of the scheme. Covers topics ranging from woodlands and grasslands to trees and hedgerows.	The Consultant	Partial Stage 4
EA2.9	Operational Management Plan	Report for the TWAO outlining how the crossing will be operated and maintained. Information to be drawn from the approved operational and maintenance concept reports.	The Consultant	Partial Stage 4
EA3	Deliverable	Definition	Responsibility	
EA3.1	Operational Concept Report	An approved concept for the operational processes, organisation and roles of the crossing to be prepared. The purpose of this is to provide a complete and detailed description of how the final crossing will be operated. This will be used to support the detailed design, whole life cost projections, training needs analysis, training manuals and 'train the trainer' service for operators.	The Consultant	Partial Stage 4
EA3.2	Constructability Report	Report on the review of constructability of the single option design and the provisions to be made for future maintenance.	The Consultant	Partial Stage 4



EA3.3	Maintenance Concept Report	An approved Maintenance Concept for the maintenance processes, organisation and roles of the crossing. The purpose of this design is to provide a complete and detailed description of how the final crossing will be maintained. This will be used to support the detailed design, whole life cost projections, training needs analysis, training manuals and 'train the trainer' service for maintainers. This maintenance concept will be used to support the development of maintenance service specifications.	The Consultant	Partial Stage 4
EA3.4	Capacity analysis report	The Transport Planning Consultant shall provide the successful Consultant with demand modelling outputs. The successful Consultant will produce a report that reviews the projections for demand and demonstrates how the final design will perform in terms of journey times and queuing under a range of scenarios.	The Consultant	To end of Stage 3
EA3.5	Reliability report	A report of a review of the design and its component systems to project the level of technical failures that require an emergency or corrective response.	The Consultant	To end of Stage 3
EA3.6	Air navigation risk assessment	To be undertaken by the CAA and facilitated by the Consultant to an agreed process.	The Consultant	To end of Stage 3
EA3.7	Wind modelling and loading assessment	To be undertaken by the Consultant including wind tunnel testing of the bridge profile.	The Consultant	To end of Stage 3
EA3.8	Construction and Logistics Management Plan	A plan consisting of sequencing and duration of the final scheme including risk reporting, environmental impact, temporary and permanent land	The Consultant	Partial Stage 4



		requirements.		
EA3.9	Impact assessments of the proposed design and construction methodology on adjacent structures	To provide assessment of risk associated to existing adjacent structures and mitigation measures to be employed to bring these to a tolerable limit.	The Consultant	To end of Stage 3
EA3.10	User safety analysis report	A report that reviews the safety performance of similar crossings, the requirements for the crossing and the risks to crossing users, rivers users, crossing staff and third parties to demonstrate that risks will be as low as reasonably practicable.	The Consultant	To end of Stage 3
EA3.11	Crime and disorder study	A study to identify requirements for the design to mitigate the impacts of crime and disorder on the users and operators of the crossing and the resilience of the crossing.	The Consultant	To end of Stage 3
EA3.12	Cyber security study	To identify requirements for the final design based upon The Employer and Centre for the Protection of National Infrastructure standards and guidance.	The Consultant	To end of Stage 3
EA3.13	Final AIPs for the single option	Developed Structural and Electrical and Mechanical AIPs for the single design option.	The Consultant	Partial Stage 4
EA3.14	Provide design support throughout	Provide design support throughout the commission and in work streams as required.	The Consultant	Partial Stage 4
EA3.15	Provide resources to support discussions with land owners on design matters.	Provide resources/plans to support discussions with land owners on design matters.	The Consultant	Partial Stage 4
EA4	Deliverable	Definition	Responsibility	
EA4.1	Provide resources to support stakeholder	Provide resources to support stakeholder meetings on design matters.	The Consultant	To end of



	meetings on design matters			Stage 3
EA4.2	Support meetings with community and or key stakeholders on the proposed design	Support meetings with community and or key stakeholders on the proposed design.	The Consultant	Partial Stage 4
EA5	Deliverable	Definition	Responsibility	
EA5.1	Produce employers works information for Design & Build tender	Provide support to The Employer in producing documentation for a future Design and Build (D&B) contract.	The Consultant	Partial Stage 4
EA6	Deliverable	Definition	Responsibility	
EA6.1	Estimate Report	Report detailing the whole life cost of all the elements of the scheme over 120 year lifecycle including construction, land, operation, maintenance and renewals (refer to Section 4).	The Consultant	To end of Stage 3



3. EXISTING INFORMATION

3.1. Work Undertaken to Date

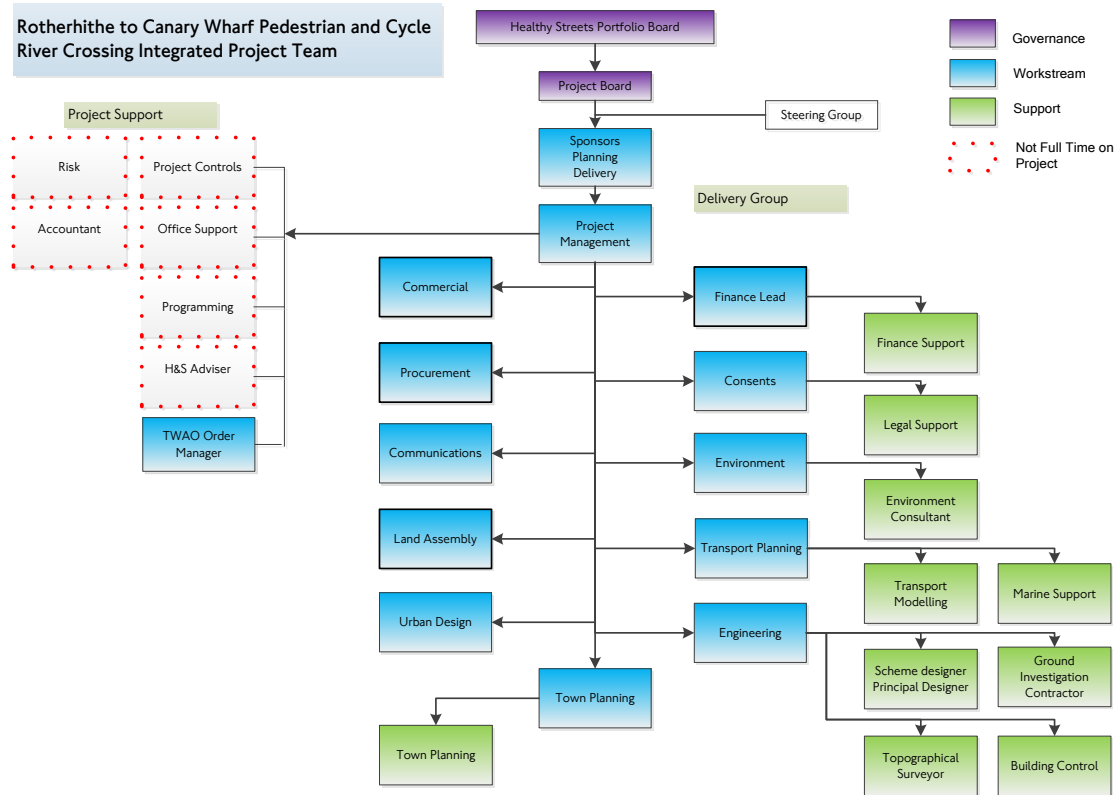
- 3.1.1 The concept of a river crossing in this area first emerged around a decade ago, under plans to develop Greenways for the 2012 Olympic and Paralympic Games. Work previously led by Sustrans resulted in a series of feasibility studies.
- 3.1.2 The work lead by Sustrans has been reviewed by the Employer for background, but the Employer has undertaken its own feasibility studies and reached its own independent conclusions regarding the need for a crossing in this area and the options for delivery.
- 3.1.3 Due to the proposed location of the Crossing, the bridge structure will tend to be an opening bridge as the River Thames is navigable at this point and cannot restrict access further up the Thames to St Katherine's Dock and the Pool of London; this impacts on the design and the Consultant will need to carry out further work to determine the design parameters for the Crossing.
- 3.1.4 Negotiations and approvals from the Port of London Authority will be required for the Crossing. This includes approval of how the Crossing is operated to allow boats and ships through. The period and number of openings per day could have an impact on the usage (and is subject to further work by The Employer to identify the optimal requirements for the design).
- 3.1.5 The Employer has employed Arcadis (engaged in quarter 1, 2017) to undertake initial optioneering work in order to afford the Employer a greater understanding of the constraints in this location for a cycle and pedestrian crossing via a bridge and the various bridge forms that would satisfy the constraints. This work has helped to inform the current public consultation. Further work by Arcadis in conjunction with the results of the public consultation will allow the Employer to reach a decision on the single preferred option by Spring 2018. This commission will build on this earlier work.
- 3.1.6 The Rotherhithe to Canary Wharf Crossing Bridge Options Study by Arcadis (November 2017) including Appendices is provided and referenced in Annex A to this document. This excludes documents or statements which contain anything the Employer deems to be commercially sensitive or for which the Employer does not own the copyright/has other licencing issues. The Study with Appendices (Annex A) and all other documents referenced in Annex B to E are for context and do not indicate any decisions on a final solution for the project. This work is subject to further evaluation by the Employer to determine a single preferred design option. This will consider multiple other factors including TfL's own assurance, stakeholder requirements and the outcomes of the current public consultation.

At the commencement of the commission the Employer will provide further information on the single option evaluation exercise and any decisions made by the Employer on a single preferred option. The Consultant is to validate the information for technical adequacy of the single option in order to progress the design to concept design stage.



3.2 Organisational Structure

Figure 1-2 Organisational structure for the project illustrating the Employers Team in relation to the Support Teams



3.3 Related Commissions

3.3.1 The following work streams have already been commissioned separately from this work. The Consultant shall work collaboratively with the Employer and other consultants to integrate work streams and understand the issues that will influence a successful design suitable to support a TWAO application.

Initial Technical Scoping

3.3.2 The Employer is currently working with Arcadis on the initial technical scoping for the project. The technical scoping consultant is providing the following:

- Establishing constraints
- Technical scoping
- Preparing the performance requirements

This work is expected to run until February 2018.

Land and property

3.3.3 The land and property commission will be delivered by the Employer from internal resources supplied separately to this commission.

3.3.4 The Consultant will be required to support the Employer from a design perspective by providing plans and supporting meetings.



Legal Support

3.3.5 Bircham Dyson Bell and K&L Gates have been appointed as external legal advisers on the project, advising on all legal aspects including (without limitation) Planning, Environment, Land, Procurement, Construction, and Commercial matters.

Environment

3.3.6 The environment work stream is not part of this commission. Mott MacDonald has been procured to:

- a. To provide environmental and sustainability support in the development of the design of the Rotherhithe to Canary Wharf Crossing
- b. To undertake the Environmental Impact Assessment process
- c. To support the project team to support the submission of consent application and associated licences

Further Commissions

3.3.7 The following work streams will be commissioned separately from this work. The Consultant shall work collaboratively with the Employer and other consultants to integrate work streams and understand the issues that will influence a successful design suitable to support a TWAO application.

Town Planning

3.3.8 The town planning work stream is being led by the Employer and is not part of this commission. External support is being procured separately from this commission to supplement the Employer's team and provide additional expertise.

Transport Planning

3.3.9 The transport planning commission will be procured separately to this commission. The primary aims of the commission are:

- a. To carry out local modelling in form of the specific junction and/or microsimulation modelling.
- b. To prepare a Transport Assessment and associated documents to support the powers application.
- c. To provide Transport Planning advice in the development of the design of the Rotherhithe to Canary Wharf crossing.

Marine

3.3.10 A marine support consultant will be procured separately to this commission to:

- a. Provide and analyse vessel tracking data
- b. Provide Navigational Risk Assessments for the pier locations and bridge type
- c. Lead on the approvals process with the Port of London Authority



3.3.11 The Consultant will be required to support the marine consultant and work with the marine consultant to establish the final river constraints (bridge deck height above high water spring tide, location of piers, operating parameters and approvals)

Ground Investigation

3.3.12 A Ground Investigation contractor will be procured separately by the Employer to carry out ground investigations along the route of the single preferred option.

3.3.13 The Consultant will be required to:

- a. Schedule all geotechnical and geo-environmental laboratory tests on receipt of the draft engineering logs
- b. Provide qualified geotechnical and geo-environmental resource to the project

Building Control

3.3.14 A building control consultant will be procured separately by the Employer.

Constructability

3.3.14 A constructability consultant will be procured separately by the Employer.



4. SPECIFICATION AND STANDARDS

Standards

- 4.1 The Consultant is to use their reasonable knowledge and experience of bridge construction, engineering, architecture, highways, mechanical, electrical, urban realm and other multi disciplinary services bearing in mind the nature, scale, location and other considerations associated with this structure for the specifications and standards required.

Cost Estimate Specification

4.2 Purpose

- 4.2.1 The Consultant is to produce estimates for the works forming the Rotherhithe to Canary Wharf crossing including all temporary and permanent works costs, Employer costs, land and legal fees, licence fees, charges, statutory costs, compensations and the like. The outline/reference design estimate is to include:
- a. An estimate and estimate summary in the format set out within the Employers' Estimate Template, a copy will be supplied by the Employer at the start of the Commission;
 - b. A supporting detailed bill of quantities;
 - c. An estimate report;
 - d. All supporting information necessary to demonstrate the derivation of the estimate, including take-off sheets, quotations, assumptions and the like;
 - e. Presenting the estimate to the Employer, including preparing any presentation material to enable the estimate, its basis and its preparation to be fully understood and evaluated.

4.3 Summary Estimate

- a. The estimate is to be prepared using the Employers' Estimate Template, a copy will be supplied by the Employer at the start of the Commission;
- b. The estimate should be set out in accordance with the Employers' Cost Feedback Structure; a copy will be supplied by the Employer at the start of the Commission.

4.4 Bill of Quantities

- 4.4.1 The Consultant is to prepare a full Bill of Quantities for the works at a level appropriate to the level of design information available. The following describes requirements for the bill:
- a. The bill should be measured and presented in a manner consistent with the Cost Feedback Structure and the Estimate Template. (Note: the estimate template may be subject to change. Prior to populating the template, the Consultant should check with the Employer to ensure that the latest version of the template is used);
 - b. It should utilise a recognised method of measurement (e.g. MCHW for highways or CESMM4 for civil/structural engineering works) for detailed measurements where



insufficient detail is available within the Cost Feedback Structure. However, all detailed measurement should fit within the overall cost feedback structure and all items forming each high level cost feedback structure item should be clearly identifiable;

- c. Each item should have a cost breakdown/ method of measurement code representing its classification within the method of measurement;
- d. It should incorporate all elements required for the works whether shown within the design information or not. The design team shall be consulted during the preparation of the bill of quantities to ensure that the full extent of works is understood;
- e. It should be fully quantified and reflect the requirements of the project. Where necessary, the Consultant shall engage with appropriate specialists to properly interpret all the data available and ensure that quantities accurately reflect the works required.

4.4.2 Measurement used to prepare the bill of quantities should always use the most accurate available information. Where marked dimensions are not provided on drawings, electronic measurements from a BIM model or directly from CAD should be used wherever these are available.

4.4.3 A clear audit trail should be provided of the production of all measurement including the transfer from the measurement to the summary of the quantities in the bill of quantities. A quality assurance check should be carried out to demonstrate that the measurement has been cross checked by an independent checker (see also section 4.7, below).

4.5 Source Information

4.5.1 The information upon which the estimate is based should be appropriate to the Employers' Pathway stage for which the estimate is being prepared (Stage 3 for the principal estimate being sought via this specification).

4.5.2 As a minimum, the Consultant should ensure it has all of the "core" products required for the Pathway stage (EA3 Deliverables), in order to inform the estimate. The Consultant should work with other members of its design team and other members of the wider project team to obtain this information.

4.5.3 In the event that the Consultant uses its best efforts to obtain the correct information but that elements of the information remain unavailable, due account of the level of information available should be taken in the preparation of the estimate and, in particular, in the assessment of risk and estimating uncertainty. The level of information available should be stated within the estimate report and any concerns or advice regarding the suitability of the estimate for the proposed Employers' Pathway stage should also be stated.

4.6 Estimating

4. Consultant is to provide an estimate for the works based upon the bill of quantities. The estimate is to:



- a. Have a base date of as agreed with the Employer;
 - b. Reflect accurate current prices, based upon;
 - c. Quotations and other advice from contractors, subcontractors and other industry specialists;
 - d. Known, accurate, industry data;
 - e. Outturn costs of comparable projects;
 - f. Any other information which may more accurately inform current pricing.
- 4.6.2 The prices shall take account of prevailing market and economic conditions. Where it is anticipated that plant, materials or other resources will be obtained from outside the United Kingdom, this shall include taking account of appropriate currency exchange rates.
- 4.6.3 The estimate is to include all direct and indirect construction costs and all Employers' costs including design and other consultancy costs, all project management costs, all compensation payments and statutory undertakers' costs, appropriate allowance for risk, contingency and uncertainty and any other costs needed to deliver the works.

4.7 Risk

- 4.7.1 A robust allowance for risk and uncertainty shall be included within the estimate and shall be appropriate to the level of information available to inform the estimate. The risk and uncertainty allowance is to be prepared in consultation with Employers' risk managers and shall follow appropriate guidance from them.

4.8 Life Cycle Cost

- 4.8.1 In addition to the capital cost estimate, the Consultant is to prepare a Life Cycle Cost assessment for the scheme.
- 4.8.2 The Life Cycle Cost assessment should assume a lifespan of 120 years for the asset. The assessment should include all capital and subsequent costs including operation, maintenance and renewals of all elements of the scheme.
- 4.8.3 The Consultant shall ensure that appropriate input is provided by asset managers and other key stakeholders within the Employers' organisation and shall co-ordinate this activity.

4.9 Estimate Report

- 4.9.1 The estimate is to be accompanied by a report that should fully explain the background to the estimate, its context and the methodology used in its creation. As a minimum it shall include:
- a. Details of the scheme being delivered
 - b. A summary of the estimate (in the form set out in the Employers' Estimate Template)



- c. A comparison between the current cost estimate and the previous cost estimate for the proposed option under the main construction elements on an elemental basis and commentary on the source of these changes
- d. Details of all drawings, specifications, reports and other documents used in the preparation of the estimate
- e. Details of all estimator's allowances made in the estimate, the reason for which each allowance has been made and the rationale for the quantum of each allowance
- f. A full list of all assumptions made in the preparation of the estimate, qualifications to the estimate and exclusions from the estimate
- g. Analysis of the estimate including details of key repeatable work items and proportions of the overall cost represented by each cost category
- h. Details of the source of cost data for the items (e.g. previous projects, known rates, quotations, etc.)
- i. Benchmarking of the estimate against previous similar projects and against known rates for various work types and repeatable work items
- j. Estimate of the Life Cycle Cost for the scheme, in accordance with section 4.8, above, and details of how this has been calculated

4.10 Personnel

- 4.10.1 Personnel involved in the preparation of the estimate will be appropriately experienced and qualified for the work being undertaken. The Consultant will provide copies of proposed estimators' CV's to the Employer for agreement prior to their working on the project.

4.11 Quality Assurance

- 4.11.1 Before the estimate is issued to the Employer, a Quality Assurance (QA) by full internal review should be carried out by the Consultant. The QA process should be made visible, once completed and it should include the estimate being signed by the reviewers noted below.
- 4.11.2 The estimate is to be checked to ensure it is free from arithmetic errors (including formula errors in spreadsheets) and that quantity measures are correct.
- 4.11.3 The estimate shall be reviewed by a senior member of the Consultant staff (experienced in the type of work to be reviewed) who needs to be satisfied the estimate has been prepared and checked by suitably skilled staff. Final review and sign-off will be provided by a minimum of two directors.
- 4.11.4 The reviewers' signatures shall be taken to indicate that they believe the estimate to be accurately measured, appropriately priced and therefore represents a realistic assessment of the most likely project cost and that the product is thoroughly auditable.



4.12 Sign-off

4.12.1 Following completion of the consultant's own QA processes, the estimate should be signed-off by appropriate members of the Employers' project team, including the Project Manager, the lead commercial manager, the estimator, the estimating manager and the sponsor, in accordance with the Employers' Pathway procedures and estimating guidance.

4.13 Communication

4.13.1 The Consultant will provide updates on the progress on the production of the cost estimate at intervals of no more than one week.

4.14 Option Costings and Ad-hoc Advice

4.14.1 As part of the scope, the Consultant is required to prepare costings to inform option refinement and may also be requested to provide other estimating support to the project. Unless specifically requested, neither an estimate report nor a presentation will be required to describe these costings. They should also be undertaken to a level of detail that reflects the level of information available and timescales required for completion. However, the same principles of using the best available data shall apply to these ad-hoc exercises as to the detailed outline/reference design estimate and these shall also be checked and their quality assured to a similar standard.



5 CONSTRAINTS ON HOW THE CONSULTANT IS TO PROVIDE THE SERVICES

5.6 Quality

5.6.1 Quality Management System

5.6.1.1 The Consultant will establish a quality management system for all parts of this commission.

5.6.2 *Quality Policy Statement and Quality Plan*

5.6.2.1 The Consultant will provide a Quality Policy Statement and Quality Plan for this commission.

5.7 Health and Safety Requirements

5.7.1 Upon completion of the Engineering and Architectural Services Contract” the current appointed Principal Designer will discharge their duty of Principal Designer in line with Regulation 11 under the Construction Design Management Regulations 2015, to the newly appointed Design and Build contractor for the ‘Rotherhithe to Canary Wharf Project.

5.7.2 The Consultant warrants to the Employer that it is fully aware of the provisions of Regulation 11 ("Duties of Principal designers") of the CDM Regulations 2015 and that it possesses the skills, knowledge and experience and level of resources to meet (and shall meet) the requirements of Regulation11.

5.7.3 At the start of this commission, formal roles/appointments under CDM will be formally defined and agreed with the Project Manager, Employer and the Employer’s HSE team for confirmation of all CDM/HSE documentation that the Consultant will deliver as part of this commission.

5.7.4 The Consultant complies with the CDM Regulations 2015 and at all times co-operates, so far as is reasonably practicable, with all parties having health and safety responsibilities on this Project or in respect of the Works for the effective discharge of those responsibilities.

5.7.5 The Consultant uses all reasonable skill, care and diligence to comply with his obligations and duties as a Principal Designer as defined and specified in the CDM Regulations 2015.

5.7.6 The Consultant notifies its personnel and the Employer of any health and safety hazards that exist or that may arise in connection with providing the Services of which the Consultant is aware or ought reasonably to be aware.

5.7.7 The Consultant undertakes that all its personnel and those of its Sub-consultants comply with all of the Employer’s policies and standards that are relevant to providing the Services, including those relating to occupational health and safety, security, business ethics, work place harassment, drugs and alcohol and illegal substances and any other office based or on site regulations specified by the Employer for personnel working at TfL.



6 TIMING, PROGRAMME AND COMPLETION

6.1 Programme

The current programme is illustrated below:

- Consultant Award Mar 2018
- Concept Design May 2018
- Final Consultation August 2018
- TWAO Consent Application May 2019
- Order Public Inquiry Nov 2019
- TWAO Decision Sept 2020

6.2 Dates for the programme milestones are to be determined by the overall project strategy, which is currently being finalised. It should also be noted that the programme dates may be subject to change at any point during the project lifecycle.

6.3 Information to be shown on the Programme

6.3.1 In collaboration with the Employer, the Consultant will develop a programme for the engineering and architectural work streams that is consistent with, and supports, the main project programme. The programme shall be reported in MS Project format and completed in sufficient detail to allow the Employer to establish progress and risk before work commences.

6.4 Format of the Programme

6.4.1 The Consultant shall identify in the programme when the proposed commencement and duration of individual tasks (i.e. baseline studies, all surveys, evidence gathering etc.) The programme shall identify key interfaces with other project areas. The Consultant shall report progress of the programme on a 4 week period or on a period to be agreed with the Employer. Early identification of programme slippage shall be communicated to the Employer as soon as it is identified and before any slippage occurs. This shall be recorded through the TfL contract management administration system: 'ASITE'.

6.4.2 The Consultant shall work collaboratively with the project team to ensure that the Engineering and Architectural work stream dovetails with all aspects of the environmental programme. The programme shall include consideration of the potential time-lag from engineering freeze dates to co-ordinate the preparation of supporting information required for the TWAO application.



7 OTHER INFORMATION REQUIRED BY THE CONDITIONS OF CONTRACT

7.1 Form of Documentation for Retention

7.1.1 All 3D, 4D and other electronically held data in connection with this contract is to be held by the Consultant for 7 years following the completion of the project.

7.2 Rights to Material

7.2.1 *Employer's Use of Material*

The Employer may use the material provided by the Consultant for the following purposes:

- Design
- Construction
- Future maintenance, repair and renewal
- Public exhibitions
- Stakeholder engagement
- Future procurement
- Training

7.2.2 *The Consultant's Use of Material*

7.2.3 The Consultant may not use the material prepared for this contract for any other purposes unless prior agreement from the Employer is given.

7.3 Transfer of Rights

7.3.1 The Consultant grants a royalty free 'non-exclusive' licence to the Employer to use the material prepared by the consultant for the purpose of publicity, construction, operation, maintenance, reinstatement and repair, of the Rotherhithe to Canary Wharf River Crossing project.

7.4 Parent Company Guarantee

The Employer reserves the right to request a Parent Company Guarantee from the Consultant.. If required, this will be as per the Call off Conditions of Contract.



APPENDIX A - VISION AND PRINCIPLES

TfL Design Vision & Design Principles

Date: 28 June 2017

Version: Revision 1

This document will be revised to take on board additional design work, appreciation of constraints and stakeholder engagement as the project progresses.

1. Design Vision

The Design Vision sets the ambition for how urban design, public realm design and architecture will define the Scheme's eventual form and the experience of using the bridge. It sits within the Sponsor's Requirements for the project.

The extent to which the design vision is achieved will contribute directly to the success of the consents process, the quality of the user experience and the impact on local people. All urban design, public realm and architecture design work should contribute to achieving this design vision while maintaining value for money.

Design Vision

The ambition is to create a piece of high quality piece of civic design that ties the walking and cycle networks together on both sides of the river; enabling, promoting and celebrating active travel in line with the Mayor's Healthy Streets Vision.

The bridge will be an elegant, coherent and memorable addition to the cityscape when viewed from the riverside, the water and elevated locations such as tall buildings and aircraft; as well as from the crossing itself. It will also enable visitors and residents to enjoy new and spectacular views of the city skyline from the bridge.

The landings and associated connections will be sensitively integrated into the existing local context and streetscape in a way that enhances the full range of existing properties and businesses; and public and private space.

As a piece of public realm, the design will reinforce the existing sense of place and identity, linking existing neighbourhoods and centres and unlocking the growth and liveability potential of the area.

The bridge will be an enjoyable, safe and comfortable new route and experience for all, and in turn enable and promote the enjoyment of the public realm.

The crossing will expertly link the two sides of the river; and together with a set of complementary measures completed separately, will integrate with the local and strategic active travel networks. The result will be a walking and cycling that is more attractive for all users and all trips in this area, including links with public transport networks.



2. The Design Principles

The Design Principles sit below the Design Vision, articulating how the Vision should be achieved.

Aim of the design principles

Provide a consistent, agreed and supported design direction for the urban design, architecture and public realm elements of the project.

Objectives of the design principles

- Ensure stakeholder support for the approach to urban design, architecture and public realm in a way that directly affects the outcome of the consents process
- Ensure that the delivered Scheme is of high quality, has the intended impact on walking and cycling in the area and is delivered to Healthy Streets principles

The principles, should steer the design team, generate support and demonstrate commitment to the design approach. To achieve this they must evolve through the process to incorporate stakeholder aspirations and respond to constraints while maintaining consistency with the design vision.

As a result, there will be different versions of the design principles to:

1. Steer the RIBA stage 2 design
2. Engage with stakeholders and the public
3. Feed into the Invitation to Tender for the Design and Build Contractor
4. Steer into the RIBA stage 3 design
5. The consents application

The initial design principles have been developed by considering best practice, TfL guidance and policy and discussions with TfL's functional specialists. Subsequent versions will incorporate appropriate stakeholder aspirations and requirements of the consenting authority. They will also take into account any additional constraints identified as a result of further design work.

The design principles are not a brief or set of requirements, but a commitment to follow a certain design direction that aims to achieve Scheme Objectives, stakeholder aspirations and best practise design in the most effective way.



A. SPAN ARCHITECTURE / STRUCTURE

1. Main span

These principles guide the approach to the height, massing, type and visual appearance of the main span of the crossing.

Wording from design vision:

The bridge will be an elegant, coherent and memorable addition to the cityscape when viewed from the riverside, the water and elevated locations such as tall buildings and aircraft; as well as from the crossing itself. It will also enable visitors and residents to enjoy new and spectacular views of the city skyline from the bridge.

	Title	Text
1.1	Height	The full height of the structure, in all modes of operation, should be determined by the engineering and shipping requirements and the need to limit the overall impact on townscape and visual amenity. Where possible the tallest elements should be located to limit their impact on sensitive uses such as the views from people's homes.
1.2	Deck Height	The height of the deck, while needing to be acceptable to the Port of London Authority in terms of shipping impacts, should be determined by the need to minimise the length and impact of the span and landings and provide as direct and convenient a walking and cycling connection as possible.
1.3	Massing	The design of the structure should protect the sense of openness of the river; avoid creating significant areas of shade in the public realm and other existing uses. Particular consideration should be given to the impact of the mass on existing sensitive uses and the ecology of the river.
1.4	Architectural style	The architecture of the structure including its dynamic form should be simple, elegant and coherent and adapt to the specific context at each of the landings.
1.5	Structures in the intertidal zone	The design of supporting columns should include careful consideration of the intertidal zone so that the structure has a coherent aesthetic.
1.6	Appearance at night	The appearance of the crossing at night should be an integral part of the design and should carefully balance the need for a positive appearance after dark with the impact on residents and marine life.



B. LANDINGS

2. Townscape and development

These principles guide how the landings of the crossing should integrate with the existing townscape context, residents and businesses.

Wording from design vision:

The landings and associated connections will be sensitively integrated into the existing local context and streetscape in a way that enhances the full range of existing properties and businesses; and public and private space.

	Title	Text
2.1	Integration with existing townscape	The landings must integrate appropriately with the context and enhance rather than compete with adjacent existing and committed development.
2.2	Relationship with existing developments and uses	The design of the landings should fully take into account existing uses and privacy, in particular limiting overlooking of the internal and external private spaces of adjacent developments.
2.3	Relationship to future developments and uses	The design of the landings should consider future development opportunities. Where possible they should be developed collaboratively with the promoters of such developments to ensure that objectives of the Scheme are optimized. This could involve a phased, temporary or adaptable approach to the landing and onward connections if such an approach leads to enhanced walking and cycling connections.

3. Landscape and public realm

These principles guide how the landings of the crossing should integrate with the existing public realm, landscape and sense of place.

Wording from design vision:

As a piece of public realm, the design will reinforce the existing sense of place and identity, linking existing neighbourhoods and centres and unlocking the growth and liveability potential of the area.

	Title	Text
3.1	Impact on existing public realm quality	The design of the landings should consider and mitigate any overshadowing or severance of existing routes, spaces or public realm.
3.2	Impact on existing the local amenity of	The design of the landings should protect or enhance the local amenity value of public spaces. Where existing



	public spaces	public spaces cannot be retained, ways to their local amenity value should be explored.
3.3	New spaces	Any new or adapted spaces should help to integrate the landings into the local landscape and streetscape. The Scheme should not create leftover, unusable, secluded, dead-end or other types of unsafe space.
3.4	Trees and landscape	The design of the landings should, where possible enable the retention, protection, enhancement and enjoyment of planting, trees and other ecological value within the scheme boundary. Any new or replacement planting and trees should be of equal or greater ecological value, visual scale, townscape and local amenity value and their maintenance should be considered as part of the design process.

C. USER EXPERIENCE

4. Deck & experience

These principles guide the approach to designing the spaces on the link and ensuring it meets the Mayor's Healthy Streets Vision.

Wording from design vision:

The bridge will be an enjoyable, safe and comfortable new route and experience for all, and in turn enable and promote the enjoyment of the public realm.

	Title	Text
4.1	General width and arrangement	The walking and cycling areas of the main span and ramps should follow best practice and London Cycle Design Standards (LCDS) as far as is practical. This should include full or partial segregation and be designed for high/very high flows according to LCDS. The aim should be for a typical minimum effective width of 3.3m for walking and 3.4m for two-way cycling. Where possible and where it is cost effective the pedestrian areas should be made wider. Any transition between widths for cyclists should be smooth.
4.2	View and rest points	In addition to areas for movement, space should be incorporated that offers users the opportunity to rest and appreciate views. At this point the space should become a clearly delineated shared space for a short section. The location should be chosen based on the point where the best views can be achieved, the positive impact the space will have on cycle speed calming and the impact on the overall structure of the bridge and



		resultant cost. If possible this should be combined with waiting areas.
4.3	Relationship between ramps, steps and lifts	The entry and exit points of every mode of vertical circulation (steps, ramps, lifts) should be within the same space or as a minimum clearly visible from one another. All modes of vertical circulation should, in general, be equally attractive to users for walkers and should include relevant accessibility measures.
4.4	Interaction between walkers and cyclists	Careful consideration needs to be given to the interaction between walkers and cyclists in all accessible parts of the crossing. The spaces should be designed to promote civilised and courteous behaviour and should be designed for a minimum pedestrian comfort level of B+. Walking and cycling spaces should be visually contrasting and separated by minimal physical separation.
4.5	Direction of movement and directness	The entry and exit points to the landings should be in the same direction as the overall orientation of the route of the crossing and provide as direct and comfortable a connection as possible
4.6	Visibility / legibility	The main onward walking and cycling connections must be clearly visible from the exit points of the crossing, generally in the direction of travel of leaving the crossing.
4.7	Waiting areas	Waiting areas should be provided for when the crossing is in its open position (if appropriate). The areas should be sized based on predicted numbers of users with an additional allowance for those attracted by the opening so as to limit the impact on existing spaces and residents and allow for future growth. The spaces should be located to minimise the disruption caused by the bridge opening and allow good views of the bridge in its dynamic form. They should include places to rest including seating. Any barrier systems should be integrated into the structure of the bridge.



D. WIDER WALKING AND CYCLING NETWORK

5. Connections

These principles guide the approach to connecting into the walking and cycling networks on both sides of the river.

Wording from design vision:

	Title	Text
5.1	Cycle connections	The Scheme should tie the landings into existing cyclable routes in a way that meets the LCDS design outcomes of safety, directness, comfort, coherence, attractiveness, adaptability and convenience. The main routes should make sufficient provision to cater for <i>high/very high</i> flows of cyclists. Where such connections fall outside of the Scheme boundary, a separate package of complementary measures will be explored by TfL. These will aim to enhance key connections within a 5 minute cycle from the landing should be developed jointly between TfL, the local highway authority and any relevant landowners.
5.2	Walking connections	The Scheme should tie the landings into existing walking routes in a way that provides direct, comfortable and safe walking connections to key destinations and satisfies Healthy Streets indicators. Where such connections fall outside of the Scheme boundary a separate package of complementary measures will be explored by TfL. These will be aimed at enhancing key connections within a 10minute walk should be developed jointly between TfL, the local highway authority and any relevant land owners.
5.3	Impact on existing routes	The landings should avoid restricting existing walking and cycling routes. Where there is an unavoidable impact, routes should be redesigned to provide appropriate walking and cycling comfort levels including an allowance for growth.
5.4	Legibility	The landings and routes to them should be visible and legible from a series of points along the main walking and cycling routes to the crossing. A signage and wayfinding strategy should be developed.



APPENDIX B – FORM OF PARENT COMPANY GUARANTEE



SCHEDULE 4B (Form of Parent Company Guarantee - Call Off Contract)

Form of Parent Company Guarantee - Call Off Contract

(Letterhead of Parent Company)

To: [insert name and address of the Employer] Date:

Dear Sir/Madam

We, [insert name of Guarantor] ("**the Guarantor**"), understand that you have agreed to enter into a Call Off Contract No [insert reference] ("**the Call Off Contract**") with [insert name of Consultant] ("**the Consultant**") in respect of [briefly describe nature of the Services/Project] on the condition that the obligations of the Consultant under the Call Off Contract be guaranteed by a Guarantor.

We are [recite the relationship of the Guarantor to the Consultant], and we warrant to you that this description of our relationship with/to the Consultant is true and accurate in all material respects.

WE HEREBY AGREE AND UNDERTAKE with you as follows:-

- (a) We unconditionally guarantee on demand:
- (i) the proper, complete and punctual performance by the Consultant of any and all its obligations, undertakings and responsibilities under the Call Off Contract and we shall forthwith make good any default there under on the part of the Consultant;
 - (ii) the due and punctual payment by the Consultant of all sums, liabilities, awards, losses, damages, costs, charges and expenses that may be or become due and payable under or arising out of the Call Off Contract in accordance with its terms or otherwise by reason or in consequence of any such default on the part of the Consultant when and as the same shall become due for performance or payment (as the case may be).
- (b) As a separate and primary obligation we unconditionally guarantee to you that in the case of default by the Consultant in making any of the payments or in performing any of the obligations, undertakings and responsibilities set out in paragraph (a) above, we shall on demand pay all sums and observe and perform any or all of such obligations, undertakings and responsibilities as if we instead of the Consultant were the primary obligor. Any payment under this Guarantee shall be made by us in pounds sterling or in any currency which may from time to time replace pounds sterling.



- (c) This Guarantee shall be a continuing security and shall remain in full force and effect until all obligations to be performed or observed by the Consultant under or arising out of the Call Off Contract have been duly and completely performed and observed and the Consultant shall have ceased to be under any actual or contingent liability to you thereunder.
- (d) Any demand or other notice made by you under this Guarantee shall be duly made if sent by first class recorded delivery post to us.
- (e) You shall be entitled to enforce this Guarantee without first notifying the Consultant of any default or taking any proceedings or demanding upon, enforcing or exhausting any right or remedy against the Consultant or any other person or taking any action to enforce any other security, bond or guarantee held by you or making or filing any claim in a bankruptcy, liquidation, administration or insolvency of the Consultant or any person.
- (f) If any sum due or purportedly due under this Guarantee is not or would not be recoverable under a guarantee for any reason whatsoever, whether or not known to you, such sum shall still be recoverable from us as a sole principal debtor upon the terms of this Guarantee.

PROVIDED THAT:

- 1. We shall be under no greater obligation or greater liability under this Guarantee than we would have been under the Call Off Contract if we had been named as the Consultant in the Call Off Contract.
- 2. Our obligations hereunder are those of primary obligor and shall remain in full force and effect and shall not be terminated, reduced, discharged or otherwise affected by:
 - (a) any alteration or variation to the terms of the Call Off Contract made by agreement between you and the Consultant (including, without limitation, any increase in the Consultant's obligations under the Call Off Contract or any alteration in the extent or nature or sequence or method or timing of the services to be carried out under the Call Off Contract) or any novation of the Call Off Contract (in whole or in part); or
 - (b) any time being given to the Consultant or any other indulgence, waiver, concession, forbearance or forgiveness to the Consultant (whether express or by conduct) or any other thing done, omitted or neglected to be done under the Call Off Contract; or



- (c) any other bond, security or guarantee now or hereafter held by you for all or any part of the obligations of the Consultant under the Call Off Contract; or
 - (d) the release or waiver of any such bond, security or guarantee referred to in paragraph 2(c) above; or
 - (e) any amalgamation, reconstruction or dissolution including, without limitation, winding-up of the Consultant; or
 - (f) the winding-up, bankruptcy, administration, receivership or insolvency of the Consultant; or
 - (g) any legal limitation, disability or incapacity relating to the Consultant or discharge by operation of law or any change in the constitution, name or style of the Consultant or any other person (whether or not known to you); or
 - (h) any total or partial invalidity in, irregularity affecting or unenforceability of any of the obligations of the Consultant under the Call Off Contract; or
 - (i) the termination or partial termination of the Call Off Contract or the cessation of any services for any reason or the making of any variation to the services in accordance with the Call Off Contract; or
 - (j) any claim or enforcement of payment from the Consultant or any other person;
 - (k) any act or omission which would not have discharged or affected the liability of a sole principal debtor instead of a guarantor or any act or omission, matter or thing which, but for this provision, might operate to exonerate, discharge, reduce or extinguish our liability under this Guarantee.
3. So long as we remain under any actual or contingent liability under this Guarantee, we shall not exercise any right of subrogation or any other right or remedy which we may have against the Consultant in respect of any payment made by or sum recovered from us pursuant to or in connection with this Guarantee or prove in any liquidation of the Consultant in competition with you for any sums or liabilities owing or incurred to us by the Consultant in respect of any such payment by or recovery from us or take or hold any security from the Consultant in respect of any liability of ours hereunder. We shall hold any monies recovered or security taken or held in breach of this provision in trust for you.



4. Except where prevented from doing so by law, we waive and agree not to enforce or claim the benefit of any and all rights we have or may from time to time have as guarantor under any applicable law which is or may be inconsistent with any of the provision of this Guarantee.
5. This Guarantee is irrevocable.
6. This Guarantee, executed and delivered as a deed, is governed by and shall be construed in accordance with the law of England and Wales. The courts of England shall have exclusive jurisdiction to settle any dispute which may arise out of or in connection with this Guarantee except that you have the right in your absolute discretion to enforce a judgment and/or to take proceedings in any other jurisdiction in which we are incorporated or in which any of our assets may be situated. You and we agree to submit to that jurisdiction.

[For non-UK resident Guarantors only:

7. For the purposes of this Guarantee we hereby appoint of (to be a London address) to accept service of process on our behalf, and service on the said at the said address shall be deemed to be good



service on us; and we hereby irrevocably agree not to revoke or terminate such appointment.]

- 8. You will be entitled to assign the benefit of this Guarantee in whole or in part but we may not assign the benefit and/or delegate the burden of this Guarantee in whole or in part or enter into any transaction which would result in any of those benefits and/or burdens passing to another person.

- 9. If any provision (in whole or in part) of this Guarantee is found by any court, tribunal, administrative body or authority of competent jurisdiction to be wholly or partly illegal, invalid or unenforceable then that provision shall, to the extent required, be severed from this Guarantee and shall be ineffective, without, so far as is possible, modifying any other provision of this Guarantee and this shall not affect any other provisions of this Guarantee which shall remain in full force and effect.

Executed as a Deed and delivered the day and year written above. Executed as a Deed by)

[Parent Company]) Director
 acting by a Director and the)
 Secretary or by two Directors)
 Director/Secretary

OR

The common seal of)
 [Parent Company]) Director was
 affixed in the presence of:)
)
 Director/Secretary



ANNEX A

ARCADIS ROTHERHITHE TO CANARY WHARF CROSSING BRIDGE OPTIONS STUDY AND APPENDICES – PROVIDED ON THE ENCLOSED CD

Document Title
ST_PJ585C-ARC-BAS-ZZ-REP-ZZ-100008_Bridge Options Study redacted.pdf
Options Study Appendix Contents.pdf
Options Study Appendix A.pdf
Options Study Appendix B.pdf
Options Study Appendix C.pdf
Options Study Appendix D.pdf
Options Study Appendix E.pdf
Options Study Appendix F.pdf



ANNEX B

ARCADIS TECHNICAL MEMORANDA – PROVIDED ON THE ENCLOSED CD

Document Title
UA009683-ARC-MEM-000046 Deck arrangements_v2.pdf
UA009683-ARC-MEM-000041 Meeting with Thames Tideway.pdf
UA009683-ARC-MEM-000029 Parking.pdf
UA009683-ARC-MEM-000026 Navigation Route through the Isle of Dogs.pdf
UA009638-ARC-REP-100002 - Landings Workshop
UA009638-ARC-MEM-012 Scour Afflux.pdf
UA009638-ARC-MEM-011 Domain analysis.pdf
UA009638-ARC-MEM-010 Navigation.pdf
UA009638-ARC-MEM-00034 - Analysis of Marico Marine boat height data.pdf
UA009638-ARC-MEM-00020 Geotechnical Desk Study.pdf
UA009638-ARC-MEM-000070 User Requirements vs Navigational Clearances.pdf
UA009638-ARC-MEM-00007 Opening times.pdf
UA009638-ARC-MEM-00006 Width and Segregation for pedestrian path and cycle lane.pdf
UA009638-ARC-MEM-000053 Shortlist of combined landing sites and crossing location options.pdf
UA009638-ARC-MEM-000048 Notable examples of movable bridges of different types.pdf
UA009638-ARC-MEM-000047 - Marico Marine MAY17-JUL17 170825 (002).pdf
UA009638-ARC-MEM-000045 - Walking time review for landing sites.pdf
UA009638-ARC-MEM-000043 Tower Bridge Log Book Analysis Feb- 19 June 2017.pdf
UA009638-ARC-MEM-000042 - Snow Loading.pdf
UA009638-ARC-MEM-000037 - Site Details.docx
UA009638-ARC-MEM-000036 Span options.pdf
UA009638-ARC-MEM-000035 Mechanical Considerations.pdf
UA009638-ARC-MEM-000033 Vertical Access.pdf
UA009638-ARC-MEM-000032 - Crossing Selection Matrix.pdf
UA009638-ARC-MEM-000030 - Landing Points.pdf
UA009638-ARC-MEM-000027 Thames Vision 2035.pdf
UA009638-ARC-MEM-000024 Summary of BGS Borehole Data.pdf
UA009638-ARC-MEM-000023 - Cycle Model Delay Time Bridge Openings.pdf
UA009638-ARC-MEM-000022 - Wind Survey - Analysis.pdf
UA009638-ARC-MEM-000021 Alternative Options for long ramps.pdf
UA009638-ARC-MEM-000019_Ship impact.pdf
UA009638-ARC-MEM-000016 Bridge Typology.pdf
UA009638-ARC-MEM-000014 Number of openings.pdf
UA009638-ARC-MEM-000013- Boat Height Distribution May - July 2017.pdf
UA009638-ARC-MEM-000009- Ramp Lengths Sites.pdf
UA009638-ARC-MEM-000008 Additional Ramp Data.pdf
UA009638-ARC-MEM-000004-Headroom on existing structures
UA009638-ARC-MEM-000003-slope gradient
UA009638-ARC-MEM-000002-Headroom, gradients, opening



UA009638-ARC-MEM-000001-Travel time
UA009638-AKA-MEM-000071 Matrix Users Flow.xlsx
UA009638-AKA-MEM-000063 Initial Reduction_River.pdf
UA009638-AKA-MEM-000062 Wider Site.pdf
UA009638-AKA-MEM-000060 - Location Selection.pdf
UA009638-AKA-MEM-000050 - Logic Diagram.pdf
UA009638-ARC-MEM-000042 - Site Details -JP Morgan.docx



ANNEX C

OTHER DOCUMENTS PART 1 – PROVIDED ON THE ENCLOSED CD

Document Title
17UK1303_003_TfLSurvey_Jul-17_Issue-01.pdf
17UK1303_TFL_SurveySheet_June_01.xlsx
17UK1303_TFL_SurveySheet_May_01.xlsx
17UK1303_TfLSurvey_002_June_01.pdf
2008 Ramboll appendix C - Consultation_v2A.pdf
2008 Ramboll Appendix D - Site Constraints.pdf
2008 Ramboll Appendix E - Geological section and hydrographic chart.pdf
2008 Ramboll Appendix F - Site selection.pdf
2008 Sustrans_ThamesBridge_Demand_Forecast.pdf
2008_Sustrans.Thames.Bridge.Outline.Appraisal.pdf
2008_Sustrans.Thames.Bridge.preliminary.report.pdf
2008_Sustrans.Thames.Bridge.Tech.Feasibility.pdf
2015-05-28 LU advice re tunnel proximity.pdf
20170613 Bridge Action Group concerns.docx
20170613 Bridge Action Group.docx
20170620 TfL-Tower Bridge Knowledge Share.pdf
20170817 - IIDR DRAFT WIP.pptx
310517-03.02-R2CWEng_Inf_Gap_Analysis_20170227-AL.xlsx
BCM RCW v3.4 user demand only.xlsx
BCM RCW v3.4_For Arcadis.xlsx
Bridge Lift logs Feb-June 2017.pdf
BridgeLiftTotals 2012-2014.pdf
Consultation material 2.pdf
DS Greenland walk time to CW.pdf
DS walk time to CW.pdf
Greenwich Foot Tunnel capacity surveys v1.1.docx
Jones_Thames_Screenline_PedsCycles_All.xls
Jubilee line plan.pdf
July_Rotherhithe_CanaryWharf_Data.xlsx
MSR v.03 211216 FINAL DRAFT.docx
Option Assessment Report_Long List_JUNE UPLOAD.doc
Option Assessment Report_Short List_JUNE UPLOAD.doc
Profile and directionality (BCM v3.4).xlsx
R2CW Conflict analysis 20170222 Final.xlsx
R2CW Forum Working Group notes.xlsx
R2CW Narrative Principles.docx
R2CW Pedestrian Demand forecasting v1_0.docx
R2CW Public engagement_FINAL - Rotherhithe.pdf
R2CW Scope&Func Matrix 20170222.xlsx
R2CW Swing Bridge Concept 20160614_v2.docx
R2CW Tech Scope Func Serv Draft 2 20170227 AL comments.docx



Rotherhithe to Westferry Immersed Tube Tunnel concept - AL comments.docx
Rotherhithe_CanaryWharf_Data_MaytoJuly.xlsx
Rotherhithe-Canary Wharf Bridge Cynemon and CYPET Analysis v9.pdf
Rotherhithe-Canary Wharf Crossing Cynemon Forecast Analysis v3.docx
SOBC_v4.2.doc



ANNEX D

OTHER DOCUMENTS PART 2 – PROVIDED ON THE ENCLOSED CD

Document Title
ST_PJ585C-ARC-BAS-ZZ-REG-CE-40001 CDM Risk Register.xlsx
ST_PJ585C-ARC-BAS-ZZ-REG-CE-40002 Project Risk Register.xlsx
ST_PJ585C-ARC-BAS-ZZ-REG-ZZ-100001 - Marico Marine Log Book Analysis May and June 2017.pdf
ST_PJ585C-ARC-BAS-ZZ-REP-CE-100004 Key Assumptions Report.pdf
ST_PJ585C-ARC-BAS-ZZ-REP-CE-100005 Survey Scope and Specification.pdf
ST_PJ585C-ARC-BAS-ZZ-REP-EN-100006 Rotherhithe to Canary Wharf Crossing Environmental Review.pdf
ST_PJ585C-ARC-BAS-ZZ-REP-EN-100011 System Introduction Presentation.pdf
ST_PJ585C-ARC-BAS-ZZ-REP-ZZ-10007 - R2CW Project Execution Plan.pdf
Sustrans Thames Cycle Bridge Appendix A Business Case v004.pdf
Sustrans Thames Cycle Bridge Appendix B User Flows and Crowds v002.pdf
Sustrans Thames Cycle Bridge Appendix C Vessel Traffic Analysis v003.pdf
Sustrans Thames Cycle Bridge Appendix D Planning Policy Review v001.pdf
Sustrans Thames Cycle Bridge Appendix E HEAT Results v001.pdf
Sustrans Thames Cycle Bridge Chapter 1 Introduction v004.pdf
Sustrans Thames Cycle Bridge Chapter 2 Business Case v005.pdf
Sustrans Thames Cycle Bridge Chapter 3 Site Parameters and Constraints v002.pdf
Sustrans Thames Cycle Bridge Chapter 4 User Parameter v003.pdf
Sustrans Thames Cycle Bridge Chapter 5 Navigational Parameters and Impacts v004.pdf
Sustrans Thames Cycle Bridge Chapter 6 Operational Parameter v003.pdf
Sustrans Thames Cycle Bridge Chapter 7 PEA Report v002.pdf
Sustrans Thames Cycle Bridge Chapter 8 Outline Connectivity Assessment v003.pdf
Sustrans Thames Cycle Bridge Chapter 9 Further Work v004.pdf



**ANNEX E
INFORMATION NOT SHARED - THIS IS TO ENSURE FULL TRANSPARENCY**

Document Title	Reason withheld
UA009638-ARC-MEM-000038 - Relative Cost.pdf	Commercially sensitive
UA009638-ARC-MEM-000049 - Options Cost.pdf	Commercially sensitive
PJ585C-ARC-BAS-ZZ-REP-ZZ-100007_Rev 02 - R2CW Project Execution Plan.pdf	Commercially sensitive
_PJ585C-ARC-BAS-ZZ-REP-CE-100005 Access CDT Presentation.pdf	Copyright
UA009638-ARC-REP-100003 - Height Workshop Presentation.pdf	Commercially sensitive
UA009638-ARC-REP-100002 - Landings Workshop	Commercially sensitive
UA009638-ARC-MEM-000049 Options Cost	Commercially sensitive
UA009638-ARC-MEM-000038 Relative Cost	Commercially sensitive
Option Sketches pdf	Superseded
Lifts and Step Free Access.pptx	Superseded
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