Appendix Q – Blackfriars Bridge Foreshore

Q.1 Introduction

Q.1.1 This appendix sets out the site selection process that we used and our rationale for identifying our preferred phase one and phase two consultation site to intercept the Fleet Main CSO and connect to the northern Low Level Sewer No.1.

Type of site

Q.1.2 We need a worksite to connect both the local combined sewer overflow (CSO), known as the Fleet Main CSO, and the northern Low Level Sewer No.1 to divert flows to the main tunnel. To enable the connection to be made, the site needs to be as close as possible to the line of these existing sewers.

Q.1.3 By diverting the flow from the northern Low Level Sewer No.1 at this site and at Chelsea Embankment Foreshore and Blackfriars Bridge Foreshore, we would not need additional sites to intercept the following CSOs: Smith Street, Queen Street, Church Street, Grosvenor Ditch, Kings Scholars Pond, Western Pumping Station, Northumberland Street, Savoy Street, Norfolk Street and Essex Street. This thereby reduces the number of worksites we need along the northern embankment.

Site selection process

Q.1.4 All potential worksites have been identified in accordance with our Site selection methodology paper (SSM), which involved a ‘sieving’ approach, commencing with identification of all potentially suitable areas of land (excluding concentrated residential sites and World Heritage Sites) and passing these sites through increasingly detailed levels of assessment to move from a long list to a draft short list, a final short list and finally, a list of preferred sites for phase one consultation.

Q.1.5 A plan showing all the sites considered for the interception of the Fleet Main CSO and connection to the northern Low Level Sewer No.1, and how they progressed during the site selection process can be found in Annex Q.1.

Preferred site for phase one and phase two consultation

Q.1.6 The table below identifies our preferred site to intercept the Fleet Main CSO at phase one and phase two consultation. Section Q.2 provides details of how we identified our preferred phase one site. Sections Q.3 and Q.4 provide the details of why our preferred site for phase one remains our preferred site for phase two consultation.
Q.2 Site selection up to phase one consultation

Assessment of the long list sites

Q.2.1 The long list of potential sites to intercept the Fleet Main CSO, and connect the northern Low Level Sewer No.1 to divert flows to the main tunnel was created by conducting a desktop survey of the land in the vicinity of the existing sewer.

Q.2.2 In total, four sites were included on the long list. These sites were assessed having regard to the high-level considerations set out in Table 2.2 of the SSM (hereafter referred to as Table 2.2) including engineering (site size, site features, availability of jetty/wharf and access), planning and environment (heritage, landscape/townscape, open space, and ecological) and community and property (neighbouring land uses, site use, Special Land/Crown Land and acquisition costs) considerations.

Q.2.3 The table below provides a summary of the outcome of the Table 2.2 assessment in respect of the long list of sites considered for the interception of the CSO and connection to the northern Low Level Sewer No.1. Sites which were assessed as being the least constrained when considered against Table 2.2 considerations passed to the draft short list. This did not necessarily mean that these sites would ultimately be judged as suitable, but that no significant constraints were identified in relation to the high-level considerations addressed at Table 2.2. Sites that were judged to be more constrained were not recommended to be retained on the draft short list for more detailed assessment. The main rationale for the exclusion of these sites at this stage is summarised in the table below.

Table Q.1 Long list to draft short list for Fleet Main CSO and connect the northern Low Level Sewer No.1 (Table 2.2 assessment)

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site name/ description</th>
<th>Recommendation and rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>C27XA/ CLLAЕ</td>
<td>Foreshore (Blackfriars Bridge)</td>
<td>Recommendation: To draft short list</td>
</tr>
<tr>
<td>C27XB</td>
<td>Blackfriars Underpass</td>
<td>Recommendation: To draft short list</td>
</tr>
<tr>
<td>C27XC</td>
<td>Yard, Apothecary Street</td>
<td>Recommendation: To draft short list</td>
</tr>
</tbody>
</table>
Appendix Q – Blackfriars Bridge Foreshore

Phase two scheme development report
Part two: Appendices

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<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site name/description</th>
<th>Recommendation and rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>C27XD</td>
<td>Tudor Street</td>
<td><strong>Recommendation:</strong> To draft shortlist</td>
</tr>
</tbody>
</table>

NB. The Site ID and Site name/description were used as an internal mechanism to record and describe the site but may be updated if necessary.

Q.2.4 Full details are provided in the Table 2.2 assessment tables and accompanying plans.

Q.2.5 Of the four sites identified, all four were assessed as potentially suitable and passed to the draft short list and no sites were eliminated as being unsuitable.

**Assessment of draft short list sites**

Q.2.6 The four draft short list sites identified for further assessment at the next stage were:

- C27XA/CLLAE: Foreshore (Blackfriars Bridge)
- C27XB: Blackfriars Underpass
- C27XC: Yard, Apothecary Street
- C27XD: Tudor Street.

Q.2.7 These sites were further assessed by the engineering, planning, environment, community and property disciplines, having regard to the considerations set out in Table 2.3 of the SSM (hereafter referred to as Table 2.3). This stage of the process built on the information gathered and assessment undertaken at long list stage but focussed on more detailed local considerations.

Q.2.8 At this stage, we also consulted with each of the directly affected London local authorities and pan-London stakeholders, such as the Environment Agency and English Heritage, to seek their views on the suitability of sites for the short list.

Q.2.9 The table below summarises the outcome of the Table 2.3 assessment of the draft short list of sites. Sites which were assessed as being the least constrained when considered against Table 2.3 considerations were retained on the short list to pass to the next stage of assessment. This did not necessarily mean that a site would ultimately be judged as suitable, but that no significant constraints were identified in relation to the considerations addressed at Table 2.3. Sites that were judged to be more constrained were not recommended to be retained on the short list for more detailed assessment. The main rationale for the exclusion of these sites at this stage is summarised below.
Table Q.2 Draft short list to final short list for Fleet Main CSO and connect the northern Low Level Sewer No.1 (Table 2.3 assessment)

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site name/description</th>
<th>Recommendation and rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>C27XA/CLLAEE</td>
<td>Foreshore (Blackfriars Bridge)</td>
<td>Recommendation: Retain on short list</td>
</tr>
<tr>
<td>C27XB</td>
<td>Blackfriars Underpass</td>
<td>Recommendation: Not to shortlist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rationale:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Engineering – Site is narrow and proximity to Blackfriars Bridge makes working conditions difficult.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Planning/Environment – Major disruption to a TLRN route, underpass and other key transport links.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Community – Impact upon the Thames Path.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Property – Major disruption to strategic highway, TfL likely to oppose so special acquisition procedures likely to be required which could delay programme.</td>
</tr>
<tr>
<td>C27XC</td>
<td>Yard, Apothecary Street</td>
<td>Recommendation: Not to shortlist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rationale:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Engineering – Site is narrow and constrained by Thameslink which would make working difficult.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Community – Impact on sensitive receptors.</td>
</tr>
<tr>
<td>C27XD</td>
<td>Tudor Street</td>
<td>Recommendation: Not to shortlist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rationale:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Engineering – Very small site. Site constrained and difficult to use.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Planning/Environment – Disruption to highway network and unlikely that significant use of New Bridge Street would be allowed.</td>
</tr>
</tbody>
</table>

NB. The Site ID and Site name/description were used as an internal mechanism to record and describe the site but may be updated if necessary.

Q.2.10 Full details are provided in the Table 2.3 assessment tables and accompanying plans.

Q.2.11 Of the four sites on the draft short list, one was assessed as potentially suitable and passed to the final short list, while three sites did not proceed to the final short list.
Assessment of the final short list sites

Q.2.12 The one site identified for inclusion on the final short list and assessment at the next stage was:

- C27XA/CLLAE: (Blackfriars Bridge) Foreshore.

Q.2.13 A site suitability report (SSR) was prepared for the final shortlisted site. This report contained an assessment of the site’s suitability, having regard to engineering, planning, environment, community and property considerations. At this stage in the process, sites were assessed in isolation without comparison to other sites or regard to tunnelling strategy. Sites were evaluated by each discipline, using technical knowledge and professional judgement as appropriate, and assessed as either suitable, less suitable or not suitable from that discipline’s perspective.

Q.2.14 A summary of the conclusions of each discipline’s assessment from the site suitability report is provided below.

C27XA/CLLAE: Blackfriars Bridge Foreshore

Q.2.15 Site C27XA is located on the foreshore of the River Thames, adjacent to Blackfriars Bridge within the City of London. It is rectangular in shape and would be accessed by Victoria Embankment. Blackfriars Millennium Pier is located within the site. The site also takes up the northern part of the Blackfriars Underpass, although the working area would be located adjacent to it, to the west.

Q.2.16 To the north of the site, and across Victoria Embankment, are multi-storey office buildings with windows and balconies overlooking Blackfriars Bridge and the site.

Q.2.17 **Engineering:** This site was assessed as less suitable as a CSO site as it requires extensive foreshore works to intercept the very large flows from the Fleet Main CSO and northern Low Level Sewer No.1. The site is also difficult to access by road in the construction phase and is likely to require river access in both the construction and operational phases. Potential concern that the only way to transfer the flows at this location into the Thames Tunnel is to make this CSO an online shaft and to align the main tunnel accordingly. However, given that this is the only feasible site at Fleet, it represents the best option and needs to be progressed.

Q.2.18 **Planning:** On balance, the site was considered suitable for use as a CSO site. Although the site is subject to a number of direct and adjacent policy designations, it is considered that it is likely to be suitable in planning terms if appropriate mitigation can be provided. However, it is important to note that satisfactory mitigation is likely to include the suitable relocation of the Blackfriars Millennium Pier facility, as the loss of the pier is unlikely to be acceptable.

Q.2.19 **Environment:** Overall, the site was suitable as a CSO site, although mitigation would be required to enable the site to be used. Based on current information, the site was suitable from the perspective of archaeology, townscape, groundwater, air quality, noise and land quality.
Q.2.20 This site was considered **less suitable** from the perspective of transport, built heritage, surface water, flood risk and ecology. Overall, the site was considered **suitable**, subject to further investigation of whether transport, built heritage and townscape, surface water and ecology impacts can be adequately mitigated.

Q.2.21 **Socio-economic and community:** The site was assessed as **less suitable** as a CSO site as the majority of the Blackfriars Millennium Pier and the pedestrian access to the pier are likely to be temporarily lost, which may impact on commuters and tourists using the boat service. Mitigation may involve discussions around relocation of the pier or provision of alternative transport services.

Q.2.22 **Property:** The site was assessed as **less suitable** due to the combination of potentially significant costs relating to Blackfriars Pier, and the acquisition risks related to ownership of the foreshore.

**Identification of the preferred site**

Q.2.23 Following the completion of the SSR, a multidisciplinary workshop was held to consider the suitability of the shortlisted site based on the SSR assessment, and to confirm there were no other alternative sites that had been overlooked.

Q.2.24 Blackfriars Bridge Foreshore (C27XA/CLLA) was the only shortlisted site, and on balance was considered suitable for identification as the preferred site for the reasons summarised below:

- No other sites were included on the short list as they had been discounted for the reasons set out above. This site was identified as suitable from a planning and environment perspective but less suitable from an engineering, community and property perspective.
- In particular, there are challenges from an engineering perspective, due to the shape and constrained location of the site which would require careful design in order to provide a suitable solution. As the site is in the foreshore, acquisition of the site would need to take account of special ministerial/parliamentary procedures.
- From a community perspective, it would be necessary to consider mitigation measures to reduce the impact on users of the Blackfriars Millennium Pier.
- While suitable from a planning and environment perspective, it would be necessary to consider the impact on listed buildings and the conservation area, and to employ appropriate screening and mitigation.

Q.3 **Review of site following phase one consultation**

**Phase one consultation feedback**

Q.3.1 As part of the site selection methodology, all feedback received during the phase one consultation was reviewed and taken into account in the development of our scheme for phase two consultation.
Q.3.2 The main issues and concerns raised during phase one consultation in relation to the Blackfriars Bridge Foreshore site were:

- impact of construction on the foreshore
- impact on existing heritage features, including Blackfriars Bridge and views of the bridge from St Paul’s Cathedral
- permanent design of the site after construction
- temporary relocation of river passenger services and businesses based at Blackfriars Pier.

Q.3.3 The main comments received in support of the preferred site included that the proposals for the site after construction will enhance the existing riverfront and views from either side of the site.

Q.3.4 More detail on the consultation responses relating to this site and our response to the comments received are provided in the Report on phase one consultation.

Q.3.5 Having taken all comments received during the phase one consultation into account, we still consider Blackfriars Bridge Foreshore (C27XA/CLLAE) as the most appropriate site because it is the only possible location from which we can intercept the Fleet Main CSO. We do not believe there are any suitable alternative land-based sites. We recognise the concerns that have been raised, particularly with regard to local built heritage, and we will take this and other concerns into account when developing the project further, including measures that can be put in place to minimise any potential impacts.

Q.4 Site development

Q.4.1 Following the selection of Blackfriars Bridge Foreshore (C27XA/CLLAE) as our preferred site, further feedback from stakeholders and ongoing scheme development work have contributed to a number of refinements to the site.

Engagement with stakeholders

Q.4.2 Engagement with stakeholders has been ongoing and has continued beyond the phase one consultation period. This has resulted in continual development of our proposals to take on board the comments made by stakeholders.

Q.4.3 In particular, we have continually engaged through regular meetings and workshops with officers from the City of London, Transport for London, Port of London Authority, the Environment Agency and English Heritage with respect to developing the design and construction of our works, mitigating our impacts on the river and the scope of our environmental assessments. To ensure our design process is transparent, we undertook a series of design reviews, hosted and chaired by the Design Council CABE (formerly the Commission for Architecture and the Built Environment). The reviews for the proposed site at Blackfriars Bridge foreshore were observed by the City of London and our pan-London stakeholders.
Q.4.4 In addition, we are engaging with affected businesses and property owners in order to mitigate the project’s impact on their interests.

**Construction layout**

Q.4.5 In response to stakeholder engagement, phase one consultation responses and scheme development, the construction layout of the site has been altered to minimise impact on the local community and environment, and is guided by operational and functional requirements. Particular factors at this site that have influenced the layout are as follows:

- Since our phase one consultation, we have increased the drop shaft in size from approximately 20m to 24m in internal diameter as a result of further physical modelling of the shaft.
- Part of the site would be constructed on piles to minimise the effects on river ecology compared to other construction options.
- The layout of the site has been designed to reduce effects on the navigation of the River Thames.
- The connection to the northern Low Level Sewer No.1 has moved to beneath the existing Blackfriars Bridge ramp to minimise the effects on existing utilities running within the Victoria Embankment (A3211).

Q.4.6 Further information on the construction logistics and the site layouts for the construction and operational phases can be found in the *Blackfriars Bridge Foreshore site information paper.*

**Design**

Q.4.7 Since phase one consultation, we have also progressed the design for the permanent use and look of the Blackfriars Foreshore site, taking into account comments made at our phase one consultation and the ongoing engagement with the City of London, Environment Agency, English Heritage and other technical consultees.

Q.4.8 Full details of design development for the Blackfriars Foreshore site are provided in the *Design development report.*

**Q.5 Phase two consultation**

Q.5.1 A final preferred site workshop was held in summer 2011 to verify the choice of preferred sites and to consider any outcomes of further engagement and scheme development. The conclusion reached was that Blackfriars Bridge Foreshore will remain the preferred site for the interception of the Fleet Main CSO and the northern Low Level Sewer No.1 to the main tunnel.

Q.5.2 Phase two consultation will provide an opportunity for the public to comment on our revised arrangement of works at Blackfriars and revised preferred scheme for the whole project, before we publicise our proposed application.
This is a working draft plan which has been produced for the purpose of phase two consultation on the Thames Tunnel project. The information shown on the plan is illustrative of what will be required for the purpose of constructing and operating the Thames Tunnel project. The information shown on the plan may change as a result of Thames Water’s consideration of the responses received to phase two consultation and any further design development that is carried out.