Appendix S – King Edward Memorial Park Foreshore

S.1 Introduction

S.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 sites to intercept the North East Storm Relief CSO.

Type of site

S.1.2 We need a worksite to connect the local combined sewer overflow (CSO), known as the North East Storm Relief CSO, to the main tunnel. To enable the connection to be made, the site needs to be as close as possible to the line of the existing sewers.

Site selection process

S.1.3 All potential worksites have been identified in accordance with our Site selection methodology (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.

S.1.4 A plan showing all the sites considered for the interception of the North East Storm Relief CSO and how they progressed during the site selection process can be found in Annex S.1.

Preferred site for phase one and phase two consultation

S.1.5 The table below identifies our preferred site at phase one and phase two consultation to intercept the North East Storm Relief CSO. Section S.2 of this appendix provides the details of how we identified our preferred phase one site. Sections S.3 to S.5 provide details of how we developed our preferred site for phase two consultation.

<table>
<thead>
<tr>
<th>Phase one consultation site:</th>
<th>King Edward Memorial Park foreshore</th>
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<td>Phase two consultation site:</td>
<td>King Edward Memorial Park foreshore</td>
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S.2 Site selection up to phase one consultation

Assessment of the long list sites

S.2.1 The long list of potential sites to intercept the North East Storm Relief CSO was created by conducting a desktop survey of the land in the vicinity of the existing sewer.
S.2.2 In total, 14 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.

S.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 this CSO. 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.

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<tr>
<th>Site ID</th>
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<tbody>
<tr>
<td>C29XA</td>
<td>King Edward Memorial Park Foreshore</td>
<td><strong>Recommendation:</strong> To draft shortlist</td>
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<tr>
<td>C29XB</td>
<td>King Edward Memorial Park</td>
<td><strong>Recommendation:</strong> To draft shortlist</td>
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</tbody>
</table>
| C29XC   | Shadwell Sailing Club, Shadwell Pierhead | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is too narrow and restrictive. Also the engineering connection to the sewer is long and difficult. |
| C29XD   | Peartree Lane and private gardens of residential flats | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is too narrow and restrictive. Also the engineering connection to the sewer is long and difficult. |
| C29XE   | Allotments on Cable Street/Harding Street | **Recommendation:** Not to draft shortlist  
**Rationale:** The engineering connection to the sewer is long and difficult. |
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| C29XF   | St Paul's Church and grounds, The Highway                                                | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is very restrictive and has poor access. Also, the engineering connection to the sewer is long and difficult. |
| C29XG   | Gordon House grounds and car park off Glamis Road                                         | **Recommendation:** To draft shortlist                                                       |
| C29XH   | Adventure playground and allotments off Glamis Rd                                         | **Recommendation:** To draft shortlist                                                       |
| C29XJ   | Grounds/gardens of flats on Elf Row                                                      | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is too narrow and restrictive. Also the engineering connection to the sewer is long and difficult. |
| C29XK   | The Highway (road adj to King Edward Memorial Park)                                      | **Recommendation:** Not to draft shortlist  
**Rationale:** The site would have very restrictive working conditions due to it being a main arterial route. |
| C29XM   | Car parking and games areas on Martineau Street.                                         | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is too narrow and restrictive. |
| C29XN   | Oyster Row (residential street and on plot car park spaces/gardens)                      | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is too narrow and restrictive. |
| C29XP   | School playground                                                                       | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is beyond the search distance from the river. |
| C29XQ   | Allotments and playground off Ronald Road and car park behind flats on Davonport Street  | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is too narrow and restrictive. Also the engineering connection to the sewer is long and difficult. |
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.

S.2.4 Of the 14 sites identified, four were assessed as potentially suitable and passed to the draft short list, while ten sites were eliminated as being unsuitable.

**Assessment of draft short list sites**

S.2.5 The four draft short list sites identified for further assessment at the next stage were:

- C29XA: King Edward Memorial Park foreshore
- C29XB: King Edward Memorial Park
- C29XG: Gordon House grounds and car park off Glamis Road
- C29XH: Adventure playground and allotments off Glamis Road.

S.2.6 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.

S.2.7 Prior to phase one consultation and in accordance with the SSM, we consulted with each of the London boroughs 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.

S.2.8 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.

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| C29XG  | Gordon House grounds and car park off Glamis Road | **Recommendation:** Not to final shortlist  
**Rationale:**  
Engineering – There are considerable constraints from neighbouring buildings and services/infrastructure. Furthermore, there is a difficult connection to the main tunnel due to little space to accommodate a large and deep interception chamber.  
Property – Special parliamentary procedures may be needed and use of this site may therefore involve extended timescales and may result in discretionary purchase claims.  
Community – Use of this site appears likely to result in cumulative impact on sensitive receptors and could therefore affect community cohesion, health and wellbeing and equality groups. |
| C29XH  | Adventure playground and allotments off Glamis Rd | **Recommendation:** Not to final shortlist  
**Rationale:**  
Planning/Environment – Use of the site may impact on a number of designations and will result in the loss of a play area. It should also be noted there is a risk of the site not being available if residential planning permission is implemented.  
Property – The cost will rise significantly if the residential planning permission is implemented.  
Community – There will be a loss of large proportion of the playground and allotments and also an effect on residential/sensitive receptors around the site. This is likely to impact on community cohesion, health and wellbeing and equality groups. |

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.

S.2.9 Of the four sites on the draft short list, two were assessed as potentially suitable and passed to the final short list whilst two sites did not proceed to the final short list.
Assessment of the final short list sites

S.2.10 The two sites identified for inclusion on the final short list and assessment at the next stage were:

- C29XA: King Edward Memorial Park foreshore
- C29XB: King Edward Memorial Park.

S.2.11 A site suitability report (SSR) was prepared for the two sites on the final short list. These reports contained an assessment of each 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.

S.2.12 A summary of the conclusions of each discipline’s assessment from the site suitability reports is provided below:

**C29XA: King Edward Memorial Park foreshore**

S.2.13 Site C29XA is situated on the foreshore of the River Thames within the London Borough of Tower Hamlets. The site is directly south and adjacent to the King Edward Memorial Park.

S.2.14 The park is a well maintained recreational area with the Thames Path running through it. The closest residential properties are located in Free Trade Wharf, which is located to the northeast of the site.

S.2.15 **Engineering:** The site was assessed as suitable for use as a CSO site as it is relatively unrestricted in size and shape, close to the assumed main tunnel alignment and has good road access.

S.2.16 **Planning:** On balance, the site was assessed as being less suitable for use as a site to intercept this CSO. A number of designations are relevant to the site and residential dwellings are also in close proximity which would require mitigation. Access to the site is also likely to be an issue.

S.2.17 **Environment:** Overall, the site was assessed as suitable for use as a CSO site. The site was considered likely to be suitable from the perspectives of transport, archaeology, built heritage and townscape, hydrogeology and land quality. However, the site was considered less suitable from the perspective of ecology, flood risk, surface water, noise and air quality. Various mitigation measures would be required.

S.2.18 **Socio-economic and community:** The site was assessed as less suitable for use as a CSO site due to the temporary disruption to the park and Thames path, as well as construction impacts on local residences and the disruption to views across the river.

S.2.19 **Property:** The site was assessed the site as suitable for use as a CSO site as the acquisition costs are likely to be acceptable provided co-operation with the PLA is achieved.
C29XB: King Edward Memorial Park

S.2.20 Site C29XB is situated within King Edward Memorial Park, in the London Borough of Tower Hamlets. To the north of the site is the A1203 and beyond is housing. To the south of the site is the River Thames, while to the east and west residential developments.

S.2.21 The park is a well maintained recreational area with the Thames Path running through it.

S.2.22 **Engineering:** The site was assessed as *suitable* for use as a CSO interception in both the east and west of the park. It is relatively unrestricted in size and shape, close to the assumed main tunnel alignment and the site is on a TfL Road Network (TLRN).

S.2.23 **Planning:** On balance, the site is considered *less suitable* for a CSO interception in both the east and west of the park. Use of the site would result in loss of a significant amount of open space within an open space deficiency area. The site would also impact upon Wapping Hall Conservation Area, the setting of listed structures and the amenity value of properties.

S.2.24 **Environment:** Overall, the site was assessed as *suitable* for use as a CSO interception in both the east and west of the park. The site was considered likely to be *suitable* from the perspectives of transport, archaeology, hydrogeology, surface water, ecology, flood risk and land quality. However, the site was considered *less suitable* from the perspective of built heritage and townscape, noise and air quality. Various mitigation measures would be required.

S.2.25 **Socio-economic and community:** The site was assessed as *less suitable* for use as a CSO interception in both the east and west of the park. This is due to the temporary disruption to the park and Thames path, as well as construction impacts on local residences and disruption to views across the river.

S.2.26 **Property:** The site was assessed as *suitable* for use as a CSO interception in both the east and west of the park as the acquisition costs are likely to be acceptable provided co-operation with the PLA is achieved.

**Identification of the preferred site**

S.2.27 Following the completion of the SSRs, a multidisciplinary workshop was held to compare the suitability of each of the shortlisted sites based on the SSR assessments, and to make a recommendation on which site should be identified as the preferred site.

S.2.28 From the two shortlisted sites, **King Edward Memorial Park foreshore (C29XA) was identified as the preferred site** for a number of reasons which are summarised below:

- On balance, King Edward Memorial Park is considered less suitable than the foreshore for construction of a deep shaft requiring a large site area, due to the likely impacts on the community through loss of the majority of the park during the construction period and a resultant conflict with identified planning policy.
• The disadvantages of constructing in the foreshore, including increased cost and environmental impact on the river, are considered to be outweighed by the loss of amenity to users of the park from a large construction site area. Vehicular access to either the foreshore or the park site would require new or improved access routes from either Glamis Road or The Highway. A foreshore site would be less likely to lead to conflict with relevant planning policy.

S.3 Review of site selection following phase one consultation

Phase one consultation responses

S.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.

S.3.2 The main issues and concerns raised during phase one consultation in relation to the King Edward Memorial Park Foreshore site included:

• question the need for development within a park and foreshore of River Thames
• impacts on River Thames from construction in foreshore (loss of storage volume and foreshore habitats, changes in currents and scour, navigational and safety concerns)
• loss of a valuable, multifunctional green space (to provide the access road)
• impact on residential amenity
• impact of closure of the Thames Path
• design of permanent proposals for the site.

S.3.3 The main comments received in support of the preferred site included:

• understand the reasons for this site being selected, including that the choice of site is dictated by the location of the North East Storm Relief CSO
• site is acceptable as long as impacts on the Shadwell Outdoor Activity Centre (SOAC) and other river users are minimised
• site affects fewer people and reduces disturbance (than the park alternative)
• site is acceptable as long as land-take within the park is minimised and suitable site access is identified.

S.3.4 Full details of the consultation responses relating to this site are provided in the Report on phase one consultation.

Back-check process

S.3.5 Since phase one consultation began, concerns have been raised about encroachment into the foreshore of the River Thames at this location, due to impact on river flow and navigation. We have investigated opportunities
to minimise this, while balancing this with the desire to minimise the temporary loss of open space within the park.

S.3.6 As a result of these factors, and having regard to the feedback received during phase one consultation, including that from the Environment Agency, Port of London Authority (PLA) London Borough of Tower Hamlets and SaveKEMP, we began a ‘back-check’ (as outlined in the Site selection methodology paper) to review our selection of King Edward Memorial Park Foreshore. This included an investigation to see if there were any feasible land-based sites to intercept the existing local CSO.

**Assessment of the back-check long list**

S.3.7 The original long list sites for North East Storm Relief CSO contained 14 sites (see Table S.1). These sites were reviewed along with any new sites identified in the back-checking exercise (ie, a reassessment to establish if there is any change of circumstances or new information has emerged).

S.3.8 All sites on the original long list were put on the back-check long list for this CSO. In addition, the following new site was added to the back-check long list:


S.3.9 It should be noted that consideration was also given to other alternative sites suggested by consultees. However, there were no other sites identified that were located within feasible distance to intercept this CSO.

S.3.10 The back-check long list sites were assessed against the engineering, planning, environment, community and property considerations set out in Table 2.2.

S.3.11 The table below summarises the outcome of the ‘back-check’ assessment of the back-check long list of sites. Sites which were assessed as being the least constrained when considered against Table 2.2 considerations passed to the next phase of assessment. 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 passed to the back-check draft short list for more detailed assessment. The main rationale for the exclusion of these sites at this stage is summarised in the table.

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</table>
| C29XC   | Shadwell Sailing Club, Shadwell Pierhead                                                | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is too narrow and restrictive. Furthermore, there is a long and difficult connection between the drop shaft and Interception Chamber |
| C29XD   | Peartree Lane and private gardens of residential flats                                  | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is too narrow and restrictive. Furthermore, there is a long and difficult connection between the drop shaft and interception chamber. |
| C29XE   | Allotments on Cable Street/Harding Street                                                | **Recommendation:** Not to draft shortlist  
**Rationale:** There is a long and difficult connection between the drop shaft and interception chamber. |
| C29XF   | St Paul's Church and grounds, The Highway                                               | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is very restrictive and with poor access. Furthermore, there is a long and difficult connection between the drop shaft and interception chamber. |
| C29XG   | Gordon House grounds and car park off Glamis Road                                        | **Recommendation:** To draft shortlist                                                        |
| C29XH   | Adventure playground and allotments off Glamis Rd                                         | **Recommendation:** To draft shortlist                                                        |
| C29XJ   | Grounds/gardens of flats on Elf Row                                                     | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is very restrictive. Furthermore, there is a long and difficult connection between the drop shaft and interception chamber. |
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| C29XK  | The Highway (road adj to King Edward Memorial Park)                                      | **Recommendation:** Not to draft shortlist  
**Rationale:** The site would have very restrictive working conditions. Furthermore, there is likely to be huge disruption to traffic and permission from TfL is unlikely. |
| C29XM  | Car parking and games areas on Martineau Street                                         | **Recommendation:** To draft shortlist                                                      |
| C29XN  | Oyster Row (residential street and on plot car park spaces/gardens)                     | **Recommendation:** To draft shortlist                                                      |
| C29XP  | School playground                                                                       | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is an existing school playground and will therefore impact on amenity. |
| C29XQ  | Allotments and playground off Ronald Road and car park behind flats on Davonport Street | **Recommendation:** Not to draft shortlist  
**Rationale:** The site is very narrow and restrictive. Furthermore, there is a long and difficult connection between the drop shaft and interception chamber. |
| C29XR  | Council Depot, Sutton Street                                                            | **Recommendation:** To draft shortlist                                                      |

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.

S.3.12 Full details are provided in back-check Table 2.2 assessment tables and accompanying plans.

S.3.13 Of the 15 back-check long list sites, seven were assessed as potentially suitable and passed to the back-check draft short list. Eight sites were eliminated as being unsuitable.

**Assessment of the back-check draft short list sites**

S.3.14 The seven back-check draft shortlisted sites were then 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.

S.3.15 The table below summarises the outcome of the ‘back-check’ 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 back-check 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 back-check short list for more detailed assessment.

S.3.16 The main rationale for the exclusion of these sites at this stage is summarised below.

**Table S.4 Draft short list to final short list for the interception of the North East Storm Relief CSO (Table 2.3 assessment)**

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| C29XG   | Gordon House grounds and car park off Glamis Road | **Recommendation:** Not to final shortlist  
**Rationale:**  
- Engineering – There are considerable constraints on site features. Furthermore, there is a difficult connection to the sewer due to little space to accommodate a large and deep interception chamber.  
- Property – Special parliamentary procedures may be needed as the land is local authority owned. This may involve extended timescales and may result in discretionary purchase claims due to loss of car parking.  
- Community – Cumulative impact on sensitive receptors, so is likely to have impact on community cohesion, health and wellbeing and equality groups. |
| C29XH   | Adventure playground and allotments off Glamis Rd | **Recommendation:** Not to final shortlist  
**Rationale:**  
- Engineering – There are considerable constraints from site features and connection feasibility. There are also constraints on access. |
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|         | Car parking and games areas on Martineau Street. | **Recommendation:** Not to final shortlist  
**Rationale:**  
- Engineering – There will be a long connection tunnel needed. Furthermore, there will be constraints on access due to narrow residential roads.  
- Planning/Environment – There is likely to be impact on residential receptors in close proximity. Furthermore, there are likely to be constraints associated with transport.  
- Property – The site is likely to include special land. The acquisition may require a special parliamentary procedure with potential delay. The site also takes away parking and amenity land from adjacent residential flats.  
- Community – There is potential impacts on community cohesion, health and wellbeing and equalities groups. The site is also surrounded by residential development. |
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| C29XN  | Oyster Row (residential street and on plot car park spaces/gardens) | **Recommendation:** Not to final shortlist  
**Rationale:**  
- Engineering – A long connection tunnel needed. Furthermore, there are constraints on access due to narrow residential roads.  
- Planning/Environment – There is likely to be an impact on residential receptors in close proximity and transport constraints.  
- Property – The site is likely to include special land. Acquisition of this may require special parliamentary procedure with potential delay. This takes away parking and amenity land from adjacent residential flats.  
- Community – There are potential impacts on community cohesion, health and wellbeing and equalities groups. The site is also surrounded by residential development. |
| C29XR  | Council Depot, Sutton Street | **Recommendation:** Not to final shortlist  
**Rationale:**  
- Engineering – There are considerable constraints on site features. Furthermore, there is a difficult connection to the sewer due to little space to accommodate a large and deep interception chamber.  
- Property – Special parliamentary procedures may be needed as the land is local authority owned. This may involve extended timescales and may result in discretionary purchase claims due to loss of car parking.  
- Community – Cumulative impact on sensitive receptors, so is likely to have impact on community cohesion, health and wellbeing and equality groups. |
S.3.17 Full details are provided in back-check Table 2.3 assessment tables and accompanying plans.

S.3.18 Of the seven sites on the back-check draft short list, two were assessed as potentially suitable and passed to the final short list, while five sites were not shortlisted.

**Review of phase one shortlisted sites**

S.3.19 Despite our back-check of the long list of sites for the interception of the North East Storm Relief CSO, our final short list remains the same as for phase one.

S.3.20 In recognising the concerns that have been raised about encroachment into the foreshore of the River Thames and navigational issues, we have investigated opportunities to minimise this, while balancing this with the desire to minimise the temporary loss of open space within the park. Consequently, for both sites, we have investigated alternative site configurations.

S.3.21 A site suitability report (SSR) was prepared to assess both sites with amended site configurations. A summary of the conclusions is provided below:

**C29XA: King Edward Memorial Park foreshore**

S.3.22 We altered our proposals in order to reduce the size of the construction site in the foreshore compared with our proposals at phase one consultation. Office and welfare buildings would now be located in the depot and hardstanding areas in the western part of the park (C29XB). Our proposed temporary construction access has moved from the eastern edge of the park, off The Highway, to Glamis Road. After the construction works are completed, this access would remain.

**Engineering:** The site was assessed as suitable for use as a CSO site. It is relatively unrestricted in size and shape, is close to the assumed main tunnel alignment and has good road access. However, a cofferdam would be required to provide the working platform and due to the configuration of the existing outfall, a large connection chamber would be required.

**Planning:** On balance, the site is considered less suitable as a CSO site. The reduction of the worksite in the foreshore (made possible by the provision of a supporting worksite in the western portion of the park) means that impacts upon the Site of Nature Conservation Interest (SNCI) and flood risk policies are reduced. However, use of the site will result in the temporary loss of some sport and recreation facilities and a temporary loss of part of the public open space within a deficiency area. In the longer term, however, the foreshore extension will provide a permanent extension to the publicly accessible open space in the park and improvements to the Thames Path. The foreshore site and support facilities in the park are in close proximity to residential dwellings and are likely to require mitigation in order to protect the amenity of local residents.

**Environment:** Overall, the site was assessed as suitable for use as a CSO site. The site was considered likely to be suitable from the
perspective of transport, archaeology, built heritage and townscape, hydrogeology and land quality. However, the site was considered **less suitable** from the perspective of ecology, flood risk, surface water, air quality and noise. However, compared to the original layout, flood risk, aquatic ecology and surface water impacts are reduced. Various mitigation measures would be required.

S.3.26 **Socio-economic and community:** The site was assessed as **less suitable** for use as a CSO site as this is likely to impact on residents of Free Trade Wharf, particularly those that live in properties which face and overlook the proposed worksite. The works will also impact on users of the park in a number of ways, including construction impacts and loss of recreational sports pitches through construction facilities being located here. There will also be impacts on users of the Thames Path and the Shadwell Centre may be disrupted, particularly if their access is compromised.

S.3.27 **Property:** The site was assessed the site as **less suitable** for use as a CSO site. Site acquisition costs are likely to be acceptable if assessed on a diminution in value basis or on the basis of providing temporary replacement land and use of the site will not displace any businesses or other occupiers. However, the site impacts on public open space and if acquisition cannot be agreed and replacement land cannot be provided, the order may need to pass through a special parliamentary procedure.

C29XB: **King Edward Memorial Park**

S.3.28 The assessment considers the following site configurations:

- A small CSO site to the east of the park
- A small CSO site to the north of the park
- A small CSO site to the west of the park
- A large CSO site to the west of the park.

S.3.29 The existing road access to the CSO interception location and paved path would be off Glamis Road, which would need upgrading.

S.3.30 **Engineering:** This site is **suitable** as a CSO site under all site configurations because it is a large open and generally flat area. Reasonable road access to the site can be provided for transportation of spoil and materials as this site has no river access. There is no requirement for significant demolition. However, the east and northern configurations are likely to have traffic management issues associated with the proximity of the access to The Highway.

S.3.31 **Planning:** On balance, the site is considered **less suitable** for all small CSO site configurations as this would result in a loss of open space within a deficiency area which the council has identified as in need of improvements, and some impacts upon the recreational amenity value of the park. The site is also likely to negatively impact upon the character of the Wapping Wall Conservation Area and the setting of the listed structures, as well as amenity of adjacent residential properties. These potential impacts are likely to be difficult to mitigate. The extent of the lost
facilities (particularly the whole of the multipurpose sports pitches) associated with the larger site could also be difficult to mitigate.

S.3.32 The site is also considered **less suitable** for a large CSO site for the same reasons as detailed above, but impacts are more likely to be significant.

S.3.33 **Environment:** Overall, the site was assessed as **suitable** for a CSO interception under all site configurations. The site was considered likely to be **suitable** from the perspective of transport, archaeology, water resources (groundwater and surface water), ecology, flood risk and land quality. However, the site was considered **less suitable** from the perspectives of built heritage, townscape, air quality and noise. Various mitigation measures would be required.

S.3.34 **Socio-economic and community:** The site was assessed as **not suitable** as a large CSO site. The degree of impact on the use of the park for sports activities and for other uses of the open space is likely to be difficult to mitigate. The connection culvert would further disrupt the remainder of the park. There are also likely to be impacts on surrounding residential properties and the Shadwell Basin Outdoor Activity Centre. The small western CSO site is likely to have the same impacts although because of the size of the works, this recommendation is **less suitable**.

S.3.35 The small eastern CSO site is considered **less suitable** from a community impacts perspective, due to potential impacts on the wildlife area and on surrounding residential areas.

S.3.36 The small northern CSO site is **less suitable** from a community impacts perspective, due to the potential cumulative impacts likely to occur. Users of King Edward Memorial Park appear likely to be impacted by the temporary loss of part of the park and disruption to surrounding areas. Those living to the north and east of King Edward Memorial park are likely to face a level of noise and other forms of disruption from works on site.

S.3.37 **Property:** Each site option at this site is considered as **less suitable**, as although acquisition costs are expected to be acceptable, each option is subject to acquisition risk due to the probable status of the site as special land. The risk is greater in respect of the large CSO site option, due to the significantly greater impact on the park during the construction phase.

**Main tunnel intermediate sites**

S.3.38 Under the CSO interception option assessed through the back-check for the King Edward Memorial Park site, we would also require a main tunnel reception/intermediate site to connect the CSO to the main tunnel. This would also need to be constructed on the route of the main tunnel but in order to reduce foreshore encroachment, it will be necessary for the main tunnel alignment to move inland.

S.3.39 We reviewed all potential main tunnel reception/intermediate sites identified through our site selection process at phase one in order to investigate a credible tunnelling strategy. Five potential sites were identified:

- S020T: Shadwell Basin
• S024T with S025T: Heckford Street Industrial Estate
• S036T: Limehouse Basin
• S026T: Cemex and Studio sites
• S121T: Cable Street – suggested new site.

S.3.40 These sites were assessed having regard to the considerations set out in Table 2.2 and Table 2.3 of the SSM. The results of these assessments for all four sites are shown in Table S.3 below.

Table S.5 Long list main tunnel intermediate sites considered to facilitate the connection of the North East Storm Relief CSO to the main tunnel

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Site name/description</th>
<th>Recommendation and rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>S020T</td>
<td>Shadwell Basin</td>
<td>Recommendation: To shortlist</td>
</tr>
<tr>
<td>S024T with S025T</td>
<td>Heckford Street</td>
<td>Recommendation: To shortlist</td>
</tr>
<tr>
<td>S036T</td>
<td>Limehouse Basin</td>
<td>Recommendation: To shortlist</td>
</tr>
<tr>
<td>S026T with S121T</td>
<td>Cemex and Studio sites/Cable Street</td>
<td>Recommendation: Not to shortlist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rationale:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Planning/Environment – There are likely to be cumulative impacts on heritage and employment policy designations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Property – There are difficult and complex property issues due to multiple owners and occupants. This is likely to result in significant cost and also increased risk of site not being available if planning permission is granted for development.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Community – There are likely to be impacts on a large number of small businesses on site which will impact upon the local economy. There will be an associated disproportionate impact on equality groups and impacts on numerous and concentrated sensitive receptors around the site.</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.

S.3.41 Of the five sites identified, three were assessed as potentially suitable and passed to the short list. Two were eliminated as being unsuitable.
Site suitability reports (SSR) were prepared to assess the three sites. A summary of the conclusions is provided below.

**S020T: Shadwell Basin, Garnet Street**

Site S020T, is located in Wapping, in the London Borough of Tower Hamlets. The site is irregular in shape and accessible by Newlands Quay, Maynards Quay, and Wapping Wall. The surrounding area is predominantly residential, with all buildings orientated to overlook the basin.

- **Engineering:** This site was considered **less suitable** for a main tunnel reception/intermediate site because of the requirements for enabling and reinstatement works prior to and following construction. Furthermore, the site does not have good vehicular access.

- **Planning:** This site was considered **not suitable** for use as a main tunnel reception/intermediate site. There are a series of planning designations applicable to the site and it is unlikely that mitigation measures will balance out the potential cumulative adverse impacts of the proposed construction works on this site.

- **Environment:** Overall, the site was considered **less suitable** as a main tunnel reception/intermediate site. The site was considered **suitable** from the perspectives of archaeology and hydrogeology. However, the site was considered **less suitable** from the perspectives of transport, built heritage and townscape, ecology, flood risk, surface water, noise, air quality and land quality, and further investigation would be required as to whether impacts could all be adequately mitigated.

- **Socio-economic and community:** The use of the site as a main tunnel reception/intermediate site was considered **less suitable** from a community impacts perspective as it is likely to have a significant detrimental impact on the large number of residents living in the surrounding residential properties, and is also likely to lead to the loss or displacement of the Shadwell Basin Outdoor Activity Centre, which may be quite difficult to relocate or otherwise mitigate.

- **Property:** The site was considered **suitable** as a main tunnel reception/intermediate site, although subject to acquisition risk.

**S024T with S025T: Heckford Street Industrial Estate**

Sites S024T and S025T are both accessed from Heckford Street, which adjoins The Highway (A1203) in the London Borough of Tower Hamlets. The sites are roughly rectangular in shape and are currently occupied by commercial buildings, warehouses and offices of one to two storeys in height, with associated parking areas.

- **Engineering:** This site was considered **less suitable** as a main tunnel reception/intermediate site because the impact on third-party assets could be significant. There is a requirement for the warehouses within both sites (S024T and S025T) to be demolished to allow construction of the shaft. The site is a minimum of 100m away from the river and there are
multi-storey residential buildings and the Rotherhithe Tunnel between the site and the river.

S.3.51 **Planning:** The sites are considered *less suitable* as a main tunnel reception/intermediate site. There are a number of planning designations and policies that are applicable both on and adjacent to the Heckford Street sites. Those relating to protection of employment uses, as well as heritage and residential amenity considerations, are of most relevance to the proposed development. The Heckford Street sites are in existing employment use and fall within a local industrial location and a designation for the enhancement and protection of existing uses. The loss of employment facilities without suitable justification and replacement elsewhere in this area would be contrary to planning policy.

S.3.52 The current status of the residential redevelopment proposals is uncertain at this stage but it is understood that pre-application discussions between the applicant and the council have commenced, and a planning application can be expected in the near future. If this were the case, use of the site for the Thames Tunnel project could potentially delay the redevelopment and adjust the footprint of the site, which is available for redevelopment.

S.3.53 **Environment:** Overall, the site was considered *suitable* as a main tunnel reception/intermediate site, although mitigation will be required to enable the use of site. Based on information available at the time, the site was considered *suitable* from the perspective of transport, archaeology, built heritage, townscape, water resources, ecology and flood risk, and *less suitable* from the perspective of air quality, noise and land quality.

S.3.54 **Socio-economic and community:** This site was considered *less suitable* for a main tunnel reception/intermediate site from a community impacts perspective, due to the potential combined number of impacts likely to occur. Foremost among these is the likely loss of several commercial units on site requiring the relocation of businesses. This may impact on owners, operators and employees in terms of their livelihood. Mitigation may involve discussions around relocation and/or compensation.

S.3.55 **Property:** The site was considered *suitable* as a main tunnel reception/intermediate site. The acquisition costs are likely to be significant but acceptable and the site does not include Crown land or special land. However, if planning permission for mainly residential development of both parts of the site was granted, the assessment would change to *less suitable*. If permission was granted and implemented prior to acquisition, the assessment would change to *not suitable*.

**S036T: Limehouse Basin**

S.3.56 Site S036T is located north of Narrow Street, in the London Borough of Tower Hamlets. Limehouse Basin hosts a well-used marina with three large pontoons. The basin is accessed from the south via the River Thames, through a swing bridge and lock. The basin is surrounded on all sides by modern, high-rise flats. The flats are within a series of blocks ranging from three to twelve storeys in height, with habitable rooms and balconies overlooking the basin. In addition, there is the Cruising
Association Members Club to the east and a boat keepers’ office located to the south of the site. The DLR line runs along the northern boundary of the site behind apartments within Basin Approach.

S.3.57 Engineering: This site was considered not suitable for a main tunnel reception/intermediate site because of the requirements for extensive enabling and reinstatement works prior to and following construction. The site does not have good vehicular access and a neighbouring building may need to be demolished to create sufficient access to the site. There are residential buildings and other third-party assets in close proximity to the site.

S.3.58 Planning: This site was considered not suitable for use as a main tunnel reception/intermediate site. A series of planning designations are applicable to the site and it is unlikely that any mitigation measures would balance out the cumulative adverse effects of the proposed construction works on this site.

S.3.59 Environment: Overall, the site was considered to be less suitable as a reception/intermediate shaft site. The site was considered suitable from the perspectives of transport, archaeology and hydrogeology, and less suitable from the perspectives of built heritage, townscape, surface water, ecology, flood risk, air quality, noise and land quality.

S.3.60 Socio-economic and community: This site was considered less suitable for use as a main tunnel reception/intermediate site, as it would appear likely to have significant impacts on the use of the basin as a marina and the surrounding dense residential development, many of which will be difficult to mitigate. Also, following the use of the site, the need to maintain permanent access and place a concrete structure in the marina will decrease the area of the basin and is likely to reduce the number of pontoons available.

S.3.61 Property: The site is considered less suitable as a main tunnel reception/intermediate site. Disadvantages include the potential classification of the site as special land, requiring ministerial procedure for acquisition, temporary and permanent disturbance to the marina operation, the potential for high discretionary purchase costs, and the possibility that residential flats might have to be acquired and demolished for the overflow culvert.

S.4 Preferred site recommendation

S.4.1 Following the completion of the back-check process, a multidisciplinary workshop was held to compare the alternatives assessed via the back-check process. This workshop took into account the findings of all the SSRs, the implications on the main tunnel drive strategy and the feedback received during the phase one consultation.

S.4.2 To identify our preferred CSO site, we needed to consider the two shortlisted CSO sites (C29XA and C29XB) and how this CSO could be connected to the main tunnel, either directly by a deep shaft in one of the two shortlisted CSO sites (C29XA and C29XB), or by a smaller shaft in one of these sites connected via a connection tunnel to one of the three
shortlisted main tunnel intermediate sites (S020T, S024T/S025T and S036T).

S.4.3 Taking into account the findings of all the SSRs, the workshop concluded that the most appropriate main tunnel reception/intermediate site was Heckford Street (S024T/S025T). The Shadwell and Limehouse Basin sites were discounted because it would be technically challenging to undertake the construction works within water basins, the sites have poor access and they are further away from the CSO. This means a longer connection tunnel would be required from one of these sites to the CSO interception in King Edward Memorial Park. All the sites considered are shown in Figure S.1.

**Figure S.1 Preferred and shortlisted sites to intercept the North East Storm Relief CSO**

Tunnelling strategy

S.4.4 Using the two shortlisted CSO sites (C29XA and C29XB) and the most appropriate main tunnel intermediate site (S024T/S025T), we considered how both CSO sites could be connected to the main tunnel. We considered two tunnelling options. The alignment of the tunnel varies between the two options due to the location of the drop shafts:

a. The main tunnel would follow the river between Zone S6 Shad and pass beneath a deep drop shaft located in the foreshore. The foreshore site (C29XA) is relatively unrestricted in size and can facilitate a shaft to connect to the main tunnel directly from the site.

b. The main tunnel alignment would move inland and pass to a deep intermediate main tunnel drop shaft at Heckford Street site (S024T/S025T). We would intercept the CSO in King Edward Memorial Park in a small CSO drop shaft which would be connected to
the main tunnel via a short connection tunnel to the drop shaft at Heckford Street site.

**Figure S.2 Tunnelling options for connection the North East Storm Relief CSO to the main tunnel**

S.4.5 On the basis of the assessments described above and professional judgement, it was agreed by all disciplines that **C29XA: King Edward Memorial Park foreshore should remain the recommended preferred site for phase two consultation for the interception of the North East Storm Relief CSO that is on the line of the main tunnel**. This meant that we believed this should be the preferred site, subject to further engagement with stakeholders and further design development to verify this conclusion prior to phase two consultation.

S.4.6 In summary, C29XA foreshore site is our preferred site due to the following reasons:

- For C29XA, only one site is needed to intercept the CSO and connect to the main tunnel, as the main tunnel runs under the River Thames, whereas the alternative would require two sites (C29XB and S024T/S025T), CSO interception in the park and a deep drop shaft at Heckford Street to connect to the main tunnel, plus drive a short connect tunnel back to the park. This also means the main tunnel would need to divert inland and require an additional connection tunnel. Both tunnels would run under numerous properties.

- Direct impact on businesses in Heckford Street will be avoided.

- It avoids the need for two sites used concurrently which, due to their proximity, would both only use road transport; putting traffic onto The Highway.
A smaller area of the foreshore is proposed for the construction worksite, with some support facilities in the western corner of the park. The smaller footprint in the river will reduce the affect on aquatic ecology and on river flows, and therefore navigation in the river. Opportunities to use the river for transportation of materials are maintained.

The proposed construction access to the foreshore site via Glamis Road is now safer because traffic will access the site via traffic lights at a signalled junction with The Highway. In addition, the new access road avoids the ‘meadow’ area and the need for a ramp to be built on the eastern side of the park.

A significant length of river frontage adjacent to the Rotherhithe Tunnel ventilation shaft will remain accessible throughout the construction period as will the vast majority of the park.

The proposed construction access route runs parallel to the river frontage and after the construction works are completed, this access would remain. It would offer an improved route for the Thames Path and better integration with the park.

The park would be enlarged due to the extension into the foreshore. There would also be opportunities to reinstate recreational facilities and enhance the park following completion of the interception of the CSO.

S.5 Site development

S.5.1 Following the selection of King Edward Memorial Park foreshore as the recommended preferred site, further feedback from stakeholders and ongoing scheme development work have contributed to a number of further site changes.

Engagement with stakeholders

S.5.2 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.

S.5.3 We have engaged with community and interest groups through ongoing meetings and correspondence. Furthermore, we have had regular meetings and workshops with officers from the London Borough of Tower Hamlets, Transport for London (TfL), Port of London Authority (PLA), the Environment Agency, English Heritage and our other pan-London stakeholders 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 review for King Edward Memorial Park Foreshore was attended by the London Borough of Tower Hamlets and our pan-London stakeholders.
S.5.4 We have undertaken a series of drop-in sessions to present and discuss the suitability of potential alternative sites. These comments have been considered and details are provided in the *Interim engagement report*.

**Construction layout**

S.5.5 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 phase one consultation, the temporary office and welfare buildings required to service the construction site have been moved from the foreshore of the River Thames to the multipurpose sports area and park depot in the south-western corner of the park. A smaller area of foreshore is now required for the construction works, thereby reducing potential effects on river ecology, river navigation and river users.

- The access route to the site has been amended since phase one consultation. The proposed access at phase one consultation was from the north of the site, directly off The Highway (A1203). We are now proposing to access the site from the southwest, off Glamis Road. The proposed construction access would reduce the effects of construction traffic on the strategic highway network and provide a safer access to the site via an existing traffic light controlled junction.

- In addition, the new access road avoids a wildlife meadow in the eastern part of the park and is also located further from the Free Trade Wharf residential development and the access to Free Trade Wharf. The proposed access route through the park runs parallel to the river frontage and offers an opportunity to reinstate the Thames Path with improved pedestrian and cycle access on completion of the project.

S.5.6 Further information on the construction logistics and the site layouts for the construction and operational phases can be found in the *King Edward Memorial Park Foreshore site information paper*.

**Design**

S.5.7 Since this site was selected as our recommended preferred site, we have also progressed the design for the permanent use and look of King Edward Memorial Park foreshore, taking into account comments made at our phase one consultation and the ongoing engagement with London Borough of Tower Hamlets and other technical consultees.

S.5.8 Full details of design development for the King Edward Memorial Park foreshore site are provided in the *Design development report*.

**Phase two consultation**

S.6.1 A final preferred sites 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
C29XA: King Edward Memorial Park foreshore should remain the phase two consultation preferred site for the interception of the North East Storm Relief CSO. We propose to reduce the size of the construction site in the foreshore compared to our proposals at phase one consultation, which would reduce the effect on the foreshore and adjacent residential area.

S.6.2 Phase two consultation will provide an opportunity for the public to comment on our revised preferred site and scheme for the Thames Tunnel 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.