Please note:

Further details are provided in the Final Report on Site Selection Process (doc ref: 7.05) that can be found on the Thames Tideway Tunnel section of the Planning Inspectorate’s web site.
Site Suitability Report
C32XB

The AHOY Centre, junction
Borthwick Street and Deptford Green
THAMES TUNNEL

SITE SUITABILITY REPORT C32XB

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<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOD</td>
<td>above Ordnance Datum</td>
</tr>
<tr>
<td>BAP</td>
<td>Biodiversity Action Plan</td>
</tr>
<tr>
<td>BT</td>
<td>British Telecom</td>
</tr>
<tr>
<td>CPO</td>
<td>compulsory purchase order</td>
</tr>
<tr>
<td>CSO</td>
<td>combined sewer overflow</td>
</tr>
<tr>
<td>DLR</td>
<td>Docklands Light Railway</td>
</tr>
<tr>
<td>EA</td>
<td>Environment Agency</td>
</tr>
<tr>
<td>GLA</td>
<td>Greater London Authority</td>
</tr>
<tr>
<td>HGV</td>
<td>heavy goods vehicle</td>
</tr>
<tr>
<td>LNR</td>
<td>local nature reserve</td>
</tr>
<tr>
<td>LPA</td>
<td>local planning authority</td>
</tr>
<tr>
<td>LU</td>
<td>London Underground</td>
</tr>
<tr>
<td>m</td>
<td>metre/metres</td>
</tr>
<tr>
<td>MOL</td>
<td>Metropolitan Open Land</td>
</tr>
<tr>
<td>ONS</td>
<td>Office of National Statistics</td>
</tr>
<tr>
<td>ORN</td>
<td>Olympic Route Network</td>
</tr>
<tr>
<td>PLA</td>
<td>Port of London Authority</td>
</tr>
<tr>
<td>POS</td>
<td>public open space</td>
</tr>
<tr>
<td>PTAL</td>
<td>public transport accessibility level</td>
</tr>
<tr>
<td>SAM</td>
<td>scheduled ancient monument</td>
</tr>
<tr>
<td>SINC</td>
<td>site of importance for nature conservation</td>
</tr>
<tr>
<td>SNCI</td>
<td>site(s) of nature conservation importance</td>
</tr>
<tr>
<td>SSR</td>
<td>site suitability report</td>
</tr>
<tr>
<td>SSSI</td>
<td>site(s) of special scientific interest</td>
</tr>
<tr>
<td>SuDS</td>
<td>sustainable urban drainage systems</td>
</tr>
<tr>
<td>TfL</td>
<td>Transport for London</td>
</tr>
<tr>
<td>TD</td>
<td>tunnel datum</td>
</tr>
<tr>
<td>TLRN</td>
<td>Transport for London Road Network</td>
</tr>
<tr>
<td>TPA</td>
<td>Thames Policy Area</td>
</tr>
<tr>
<td>UDP</td>
<td>unitary development plan</td>
</tr>
<tr>
<td>UXO</td>
<td>unexploded ordnance</td>
</tr>
</tbody>
</table>
1 INTRODUCTION

1.1 Purpose and structure of the report

1.1.1 The Site Selection Methodology (May 2009) paper (paragraphs 2.3.29 - 2.3.34) outlines the process to be used to create the preferred list of shaft sites, and this process also applies to CSO sites. Paragraph 2.3.31 lists the type of general considerations that will be addressed in each site suitability report, but they depend on the relevance to the site and professional judgement made in the assessments.

1.1.2 This report was prepared through the assessment of information from the perspective of a number of technical disciplines: Engineering, Planning, Environment, Property and Community. The reports have been prepared on the basis of the information listed in Appendix 1 - Sources of Information, and this level of information is considered to be appropriate to the current stage.

1.1.3 The Background Technical Paper provides information on the requirements for different site types, their sizes and typical activities/facilities within the sites.

1.1.4 Each site suitability report considers a particular site on its own merits. In addition, an engineering options report was produced. Information from both of these reports will feed into the technical assessment of how well the site may fit in with tunnel design options, ensuring combinations of sites spread across the length of the tunnel route provide a reasonable spatial distribution of sites (that will best assist with the construction of the tunnel, operation and maintenance). This is considered in the Preferred Scheme Report.

1.2 Background

1.2.1 The process for selecting sites is set out in the Site Selection Methodology (May 2009) paper. All sites have previously passed through the following parts of Stage 1:

- Part 1A - Creation of the long list of potential shaft (and CSO) sites
- Part 1B - Creation of a short list of potential shaft (and CSO) sites
  - Table 2.2: Long list of shaft (and CSO) sites - an assessment against set considerations and values
  - Table 2.3: Draft short list of shaft (and CSO) sites - assessment against a list of detailed considerations
  - Workshops to consider each site to arrive at a short list of sites.

1.2.2 The final part of Stage 1 includes this report. The following is an overall summary of all elements that apply to all the sites on the final short list:

- Part 1C - Creation of the Preferred List of shaft (and CSO) sites - site data, site visits, site suitability reports, engineering options report and optioneering workshops that will result in the Preferred Scheme Report.

1.3 Consultation

1.3.1 The Thames Water project team held meetings with London local authorities, statutory and other stakeholders to review the provisional short list of shaft and CSO sites. All general and site specific comments can be found in a separate report titled Consultation on the Short List of Sites: Consultation Feedback Report. These comments were considered to help determine the final short list of sites, but they were also considered at the optioneering workshops.

1.3.2 Further meetings were held with London local authorities, statutory and other stakeholders between January and March 2010. Comments from these meetings have also been considered within the site suitability assessments.
2 SITE INFORMATION

2.1 Site and surroundings

2.1.1 This site is one of the shortlisted sites for Deptford Storm Relief CSO. This section provides an overview of all the site information that will be used by one or more disciplines to assess the site in sections 3 to 9 of this report.

2.1.2 The site C32XB is currently occupied by the AHOY Centre yacht club and is located on the waterfront of the River Thames in the London Borough of Greenwich. It is rectangular in shape and is accessed by Borthwick Street. The site also incorporates part of Glaisher Street. A site location plan is attached as Appendix 2.

2.1.3 The site is adjacent to an electricity substation to the northwest, the River Thames to the northeast and Borthwick Street to the southwest.

2.1.4 The site is bounded to the southeast by a six- to eight-storey modern block of flats, known as Stretton Mansions, which has views towards the site.

2.1.5 The AHOY Centre is a registered charity that runs water-based activities for adults and young people, including school groups. The centre specialises in enabling disabled people to use their facilities. The centre is also available for events hire and their website states that they have plans for an extension to provide additional facilities, based on the use of the disused landing stage located opposite the centre.

2.1.6 The Thames Path is adjacent to the site to the south and east, on Glaisher Street, and is paved and well maintained.

2.1.7 The site is within a number of the Greenwich Unitary Development Plan (2006) designated areas, including the Thames Policy Area and strategic riverside walkways. All the mapped designations are shown on the planning and environment plans in Appendix 3.

2.1.8 Photographs of the site and surroundings, together with an aerial photograph of the site, are attached as Appendix 4.

2.1.9 There is road access to the site from Borthwick Street/Deptford Green and possibly along Glaisher Street, which fronts the river. There is no rail network local to the site. There are no existing wharfage/jetty facilities directly at the site, although there is a large, existing landing stage approximately 30m offshore but without connection to the shore. A transport plan for the site is attached as Appendix 5.

2.1.10 Third-party assets and significant utilities are listed below and are shown on the services and geology plan in Appendix 6:

- Borthwick Wharf building outside the western boundary of the site
- Jetty at the north and east boundary of the site
- Deptford Power Station west of the site
- Deptford Power Station Cable Tunnel through the centre of the site and outside the eastern half of the site
- AHOY Centre, used for sailing and boating facilities
- River wall
- Deptford Storm Relief 1.524 x 0.914m overflow sewer through the western edge of the site. CSO connection is to this sewer.

2.1.11 The locations of other third-party assets, such as BT and fibre optic communication cables, are to be confirmed by further studies and utility searches and may not be shown on the services and geology plan.

2.1.12 Information on the geology specific to this site can be found within the services and geology plan, which is in Appendix 6. This plan shows that the shaft would be founded in the Chalk.
2.2 Type of site
2.2.1 The site C32XB is being considered as a CSO site to intercept the Deptford Storm Relief CSO.

3 PROPOSED USE OF SITE – CONSTRUCTION PHASE
3.1.1 The proposed construction phase layouts for the CSO site are located in Appendix 7 – Construction Phase Layout, and are based on a preliminary assessment.

3.1.2 The construction phase layout drawings are illustrative and show:

   - the layout as a CSO site
   - potential access point.

3.1.3 These drawings provide initial preliminary schematic layouts that have not been optimised. If the site proceeds to the next stage as a preferred site, construction phase layouts would be optimised to minimise impacts.

3.1.4 Photographs of typical activities associated with the CSO site construction phase are provided in Appendix 7. Potential above ground construction features include:

   - approximately 3m high hoarding around the site boundary
   - welfare facilities, temporary structures, approximately 3m high
   - grout plant, approximately 3m to 5m high, including silos
   - mobile crane, approximately 30m high (maximum and not for full construction duration).

3.1.5 A turning circle to the north of Stretton Mansions is within the construction boundary at this site and may need to be closed, with parking suspended adjacent to the closure, to allow for turning manoeuvres. The Thames Path currently runs north-south between the AHOY Centre and Stretton Mansions, and would also be severed by this construction site. A diversion route could be provided via existing footways in Hamilton Crescent. A preliminary assessment of the traffic management which would be required is indicated on the temporary traffic management plan in Appendix 5.

3.1.6 Preliminary data associated with the construction phase are provided in Table 3.1.

Table 3.1 Construction phase data

<table>
<thead>
<tr>
<th>Activity</th>
<th>CSO site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of construction period</td>
<td>0.5 to 2 years</td>
</tr>
<tr>
<td>Likely working hours, ie, (night/day/weekend)</td>
<td>12 hrs from 7am to 7pm</td>
</tr>
<tr>
<td>Working days</td>
<td>Mon to Sat</td>
</tr>
<tr>
<td>Primary means of transporting excavated material away from site</td>
<td>Road*</td>
</tr>
<tr>
<td>Primary means of transporting materials to site</td>
<td>Road*</td>
</tr>
</tbody>
</table>

*There may be feasible opportunities to use barge transport for this site.

4 PROPOSED USE OF SITE – OPERATIONAL PHASE

4.1 Introduction
4.1.1 The indicative operational phase layout for the CSO site is located in Appendix 8 – Operational Phase Layout, and is based on a preliminary assessment.

4.1.2 The generic elevations of structures shown on the operational phase layout are located in Appendix 8 and provide an illustration of typical examples of the permanent structures which are applicable to CSO sites.
4.1.3 The above ground infrastructure at this site is likely to comprise a ventilation column 10m\(^a\) high and 3m diameter, a ventilation building 5m x 15m x 5m high and a 20m x 10m top structure with openings. The top structure is to provide access and egress into the main shaft and flap valve chamber.

4.1.4 The top structures are envisaged to be finished at a level of 107m\(^b\) tunnel datum (TD) (7m AOD), and since the ground level mean value at this site is 104m TD (4m AOD), the top structures would be raised to approximately 3m above the current ground level. For further information on the generic layout of this top structure, refer to Appendix 8.

4.1.5 A hardstanding would be provided to the top structures. The site would not be fenced.

4.1.6 Preliminary data associated with the operational phase are provided in Table 4.1.

<table>
<thead>
<tr>
<th>Table 4.1 Operational phase data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of inspections and</td>
</tr>
<tr>
<td>maintenance and likely working</td>
</tr>
<tr>
<td>hours, ie, (night/day/weekend) -</td>
</tr>
<tr>
<td>frequency of visits</td>
</tr>
<tr>
<td>No of traffic movements</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

4.2 Restoration and after-use

4.2.1 The portion of the site not occupied by the permanent works would be restored to its original condition on completion of the construction works. If any buildings were demolished, these would not be reinstated unless required.

5 ENGINEERING ASSESSMENT

5.1 Access

5.1.1 This section should be read in conjunction with Section 7.2.

Road

5.1.2 The site is 1.5km from the TLRN (A2). The site could be reached from Borthwick Street/Deptford Green. However, the route is potentially unsuitable for HGVs as the roads are narrow and the route passes under one bridge with 4.8m height restrictions. The alternative route through Glaisher Street could be possible (with the shaft relocated) but this route is also restricted.

5.1.3 During the construction phase, a one-way through system would be used, with both access and egress off Borthwick Street.

5.1.4 Access for the operational phase is proposed off Borthwick Street/Deptford Green, although the possibility also exists of using Glaisher Street, which fronts the river.

\(^a\) It was anticipated that the ventilation column at shaft sites would be 10m high when the assessment in this report was undertaken. Although this was subsequently changed to 15m high, the assessment was not revised as it was considered that the difference would not change any discipline’s conclusion on the suitability of the site.

\(^b\) It was anticipated that the elevation of top structures at both CSO and shaft sites would be finished at 107m TD when the assessment in this report was undertaken. Although this was subsequently changed to 104.5m TD, the assessment was not revised as it was considered that the difference would not change any discipline’s conclusion on the suitability of the site.
Rail

5.1.5 Rail facility is located approximately 1km from site. The route to the rail link would be constrained with a 3.7m height restriction on Edward Street, which has traffic calming. The nearest rail station would be Deptford, which is approximately 1km away from the site. However, rail access is not considered to be a significant factor for CSO sites.

River

5.1.6 River access and jetty/wharfage facilities are not a requirement for CSO sites. However, as the site is adjacent to the river, there may be feasible opportunities to use barge transport, in particular when considering the road access constraints referred to above. Barge access could be considered by utilising the existing landing stage and adding a conveyor or bridge to land, which would allow effective, continuous barge access. This utilisation would depend on the structural suitability and availability of the landing stage.

5.1.7 The alternative of mooring up directly against the site would be limited by tidal movements. There appears to be no existing constraints to the use of barges in the area. However, it would be necessary for this to be examined in detail in the form of a specific risk assessment (including modelling of barge movements), which would require discussions with and approval of the PLA.

5.2 Construction works considerations

5.2.1 The site is partly within the compound of the AHOY Centre, which is used for sailing and boating activities. This would need to be closed and the building demolished (or removed for possible later relocation) to make room for the site.

5.2.2 The cover to the chamber would be sloped to follow the profile of the slipway. The construction phase layout shown is to allow continued use of the slipway and some of the boat storage area during construction.

5.2.3 Data available on third-party assets and significant utilities show that the main items of concern in this area are the residential high-rise building south of the site, the substation to the west, the jetty and the Deptford Substation Cable Tunnel through the outside northern edge and eastern part of the site. Construction methods would be adopted, as appropriate, to mitigate potential settlement of these assets.

5.2.4 It is likely that the proposed works can be constructed within the overall construction programme.

5.2.5 The interception chamber would be outside the site in a difficult location between the AHOY Centre and the adjacent substation, and would require exceptional care in design and construction. This is a particular issue in respect of the overall viability of the site.

5.3 Permanent works considerations

5.3.1 The top structures to the drop shaft and flap valve chamber would be 1m above ground level.

5.4 Health and safety

5.4.1 There are no unusual health and safety issues with this site.

6 PLANNING ASSESSMENT

6.1 Introduction

6.1.1 The planning assessment builds on the advantages and disadvantages reported in Table 2.3 and covers the following areas:

• Planning applications and permissions
Planning context

Planning applications and permissions

An initial desktop search of the London Borough of Greenwich online planning applications database identified only minor applications submitted within the last five years applicable to the site. These were for private parties and functions to be held at the AHOY Centre, and for the erection of a pontoon/jetty facility for disabled access.

Planning context

The current planning policy context for the site is provided from the saved policies in the Greenwich Unitary Development Plan, adopted in 2006. The planning designations and policies that are applicable to the site are detailed below.

The site is wholly within an archaeological important area to the south.

Policy D30, *Archaeology*, states that the council will expect applicants to properly assess and plan for the impact of proposed developments on archaeological remains where they fall within areas of archaeological potential as defined on the constraints Map 10. In certain instances, preliminary archaeological site investigations may be required before proposals are considered. The council will seek to secure the co-operation of developers in the excavation, recording and publication of archaeological finds before development takes place by use of planning conditions/legal agreements, as appropriate.

The site is located wholly within the Thames Policy Area.

Policy W1, *Development Principles*, states that developments in the waterfront must, among other requirements, conserve and enhance the area's historical heritage and biodiversity, and integrate and connect new proposals with the existing pattern of development.

Policy W2, *Thames Policy Area*, seeks a high quality of design, respecting the special character of the River Thames within the Thames Policy Area as defined on the proposals map. Proposals within the area will be expected to satisfy the development principles under Policy W1.

Approximately 10% to 20% of the site’s surface to the northwest is within a site of nature conservation importance designation.

Policy DEV62, *Nature Conservation and Ecology*, states that where development proposals should destroy or adversely affect the ecology or special interest of sites of nature conservation importance, the council will seek mitigation measures to be taken, or comparable replacement if the loss is unavoidable. The creation and enhancement of nature conservation features and provision of public access will be sought in new developments, where appropriate.

A Strategic Riverside Walkway and Cycle Route run across the site.

Policy T20, *Strategic Pedestrian Route*, states that the council will support the improvement of pedestrian facilities along the canal and riversides and the northern sewer outfall embankment, in collaboration with adjoining boroughs and the Lee Valley Regional Park Authority, to form a strategic pedestrian route network.

Policy O16, *Recreational Footpaths and Cycleways*, states that the existing riverside footpath will be safeguarded and improved so that a continuous signposted walk from Deptford to Thamesmead is created. Development proposals for riverside sites will be required to incorporate provision for a riverside walkway along the river frontage, or contribute to improvements where the existing footpath needs it.

The site is almost wholly within a contaminated land designation.

Policy E11, *Contaminated Land* – a preliminary site investigation prior to the determination of a planning application will normally be required if a site is known, or is likely to have been, in contaminative uses. Where contamination is found, the council will need to be
assured that the development can be built and occupied safely without any adverse environmental or health impacts, otherwise conditions requiring full remedial action will be imposed.

6.3.14 The site is in close proximity to residential properties.

6.3.15 Policy E1, *Pollution*, seeks to protect the amenities of existing occupiers and users from the impacts of development, especially in terms of unacceptable emissions.

6.4 Consultation comments

6.4.1 A series of consultations on the shortlisted sites were held with London local authorities, statutory and other pan-London stakeholders during July to September 2009 and January to March 2010. This section summarises factual comments that have been made by consultees, and which have informed the SSR assessments.

**London Borough of Greenwich**

6.4.2 The council advised that the AHOY Centre has been the subject of S106 funding from major developments that have taken place in the area. It is considered by the council to make a positive contribution to local community facilities in the area.

**English Heritage**

6.4.3 English Heritage stated that there are archaeological issues associated with the site.

**Environment Agency**

6.4.4 No comment.

**Port of London Authority**

6.4.5 The Port of London Authority stated that the site comprises a large community use. Its loss would be a concern.

**Transport for London**

6.4.6 No comment.

**Other statutory consultees**

6.4.7 No comment.

6.5 Planning comments

6.5.1 There are a number of planning designations and policies that are applicable both on and adjacent to the site. These designations and policies have been identified and described in Section 6.3. Those relating to riverside sites within the Thames Policy Area and residential amenity are of the most relevance to the proposed development.

6.5.2 The use of the site would result in the loss of the existing yacht club. Loss of an established river-based facility within a riverside location and the Thames Policy Area would conflict with the aims of polices W1 and W2. It is likely that the LPA would require the reprovision of the yacht club within the surrounding area to avoid the complete loss of a river-based recreation facility.

6.5.3 The nearest dwellings are located less than 5m from the working area boundary. The limited separation distance achievable at the site, combined with the potential impacts on outlook and general enjoyment, may not be considered sufficient to safeguard residential amenity.
6.5.4 There is limited scope to relocate the construction works to increase these separation distances, due to the restrictive nature of the site and further residential properties located to the south of the site. If the site were used, significant mitigation to avoid negative impacts on amenity as a result of noise, dust, vibration and traffic movements would be required, in order to comply with Policy E1. The hours of operation of the construction works may also be restricted to those normally operated within residential areas, which are typically 8am to 6pm during weekdays, 9am to 1pm on Saturdays and not at all on Sundays.

6.5.5 The site is within a wider contaminated land designation and Policy E11 will require site investigations and remediation, should the site be used for the purposes of the project. A further detailed assessment can be found in Section 7.

6.5.6 The site falls within a designated archaeological priority zone. The appropriate level of site investigation should be agreed with the LPA, in accordance with Policy D30. Further appraisal of the archaeological potential on the site is provided in Section 7.

6.5.7 The proposal site is partly within the site of importance for nature conservation designation applicable to the entire stretch of the River Thames. Given the extensive nature of this designation, and the purpose of the Thames Tunnel Project to improve the environmental quality of the river, on balance, and with appropriate mitigation, the construction works should not result in unacceptable development. A detailed assessment of the likely impacts is included in Section 7.

6.5.8 A strategic riverside walkway and a cycle route run along the southern boundary of the site. These routes are likely to be temporarily affected by the construction works and may require diversion. A further transport assessment is made in Section 7.

7 ENVIRONMENTAL APPRAISAL

7.1 Introduction

7.1.1 The following sections summarise specialist assessments which are provided in Appendix 9 – Environmental Appraisal Tables.

7.2 Transport

7.2.1 The site is less suitable due to access being taken through a home zone area. The route to the TLRN (A2) is less suitable, passing through a residential estate and a home zone with raised tables, and encounters on-street parking and width restricting features which would require removal. The route to the rail link is also less suitable, containing identical and additional restrictions in the form of on-street parking, speed cushions and two bridges with height/width restrictions. However, the use of rail transport is unlikely to be required due to the small quantities of excavated material associated with a CSO site. The site is adjacent to the River Thames for river access, although river access is not essential for a CSO site. Some parking could be provided onsite for the workforce, with no parking available on surrounding roads due to permit holder restrictions. There is good public transport accessibility to the site. Traffic management would be required to remove traffic calming, on-street parking and home zone features to enable access.

7.3 Archaeology

7.3.1 The site is suitable. No records of any archaeological receptors have been identified on the site. However, based on the information available, it is possible that archaeological receptors of potential medium or high value may be present within this site. While no direct evidence has been revealed, peat deposits containing archaeological material may be present at depth. These have been commonly recorded throughout London in a similar proximity to the Thames. Given the location of the site and wider evidence for historical occupation along the river, it is a reasonable assumption to suggest that waterlogged remains of archaeological value may be present.
7.4 **Built heritage and townscape**

7.4.1 This site is considered to be suitable in relation to built heritage and townscape as it is likely to result in relatively few impacts upon the built heritage environment and the local townscape character. There is, however, potential for impacts upon the character of the River Thames, its frontages and local views. Mitigation in the form of a high-quality scheme design, screening and landscaping of the site, especially during construction, would help to reduce any adverse impacts upon built heritage receptors and the local townscape character, and has the potential to have a permanent positive impact on local views upon completion.

7.5 **Water resources – hydrogeology and surface water**

7.5.1 In terms of hydrogeology, this site is considered to be suitable because although the construction of the drop shaft would take place within Chalk (major aquifer), the site does not lie within 400-day capture zones of licensed abstractions. No long-term impact on the Chalk aquifer is expected, although dewatering of the Chalk and Thanet Sand would be required during the construction phase. The Chalk piezometric head is likely to be approximately 43m above the base of construction and should be taken into account in the engineering design. The superficial deposits at the location of the CSO site are alluvium, which is classified as a minor aquifer and is likely to be the subject of limited impacts on flow due to sheet piling.

7.5.2 In terms of surface water resources, this site is considered to be suitable because there is no direct pathway to the River Thames for pollution.

7.6 **Ecology**

7.6.1 The site is suitable, as an initial review of the site indicates that, assuming impacts on the River Thames and foreshore can be avoided, it is likely to require only basic ecological surveys and limited mitigation, if selected.

7.7 **Flood risk**

7.7.1 This site is less suitable because although it is defended from flooding from the River Thames, there is a limited opportunity for surface or infiltration SuDS due to space constraints and the underlying geology.

7.8 **Air quality**

7.8.1 This site is considered less suitable. There are residential properties adjacent to the site, therefore there is the potential for fugitive emissions of dust during construction to have a perceptible impact at these properties. These impacts can be reduced through the application of standard dust control measures. There is potential for HGV movements on the local road network to cause localised air quality impacts in areas of already poor air quality. This can be somewhat mitigated by minimising the movement of HGVs during peak hours.

7.9 **Noise**

7.9.1 The site is less suitable due to the very short separation distances between the site and the closest sensitive receptors, including a school, in addition to the relatively high density of residential dwellings surrounding the site. The site is therefore likely to result in adverse noise and vibration impacts. The number of vehicles associated with the construction phase is anticipated to be considerably high and therefore likely to cause an adverse noise impact to properties located on Deptford Green. Perimeter hoarding would reduce potential noise impact but would be relatively ineffective at shielding noise from the upper floor properties at Stretton Mansions and Hughes House.
7.10 Land quality

7.10.1 The site is considered to be less suitable, based on the moderate potential for contamination of the site to have occurred, specifically from the wharf operations onsite and the fuel tanks, foundry operations, power stations and gas industry in the near vicinity of the site. This has the potential to impact on site workers and adjacent human receptors through direct contact exposure pathways and, to a lesser extent, volatilisation. Additionally, the potential exists for contaminants to be drawn to the deeper Chalk aquifer and for migration to surface water receptors to occur through shallow groundwater transport. There is the potential for unexploded ordnance to be present onsite, as historical information indicates that an area of the site has previously been cleared (1958) following wartime bombing. It would therefore be prudent for a UXO survey (or equivalent) to be conducted at the site if not done so already.

8 SOCIO-ECONOMIC AND COMMUNITY ASSESSMENT

8.1 Socio-economic profile

8.1.1 The site is within the Greenwich West ward of Greenwich. Statistics from ONS 2001 Census data show the following indicators for the ward, in comparison to the rest of Greenwich, London and England as a whole:

- Higher rate of economically active, aged people that are full-time employees.
- A higher proportion having achieved Level 4 or 5 educational qualifications and a corresponding high proportion of people in managerial or professional occupations.
- A lower proportion of owner-occupied households and a higher proportion of housing rented from the local council.
- A higher proportion of people aged between 20 and 44, and also a slightly higher proportion of children aged 0 to 4.
- Approximately 76% of ward residents were born in the UK and there is a higher proportion of black African or black British African people.

8.1.2 These statistics indicate people in this area are mostly highly-educated, working professionals. There is a high proportion of very young children, indicating growing families in the area. The ethnic mix of people around the site appears to be mostly indigenous but with other ethnicities present. The presence of the AHOY Centre indicates the area may be popular among young people as well as disabled people.

8.2 Issues and impacts

8.2.1 Due to the proposed location of the engineering works for a small CSO site, it seems likely that the greatest impact from a community impacts perspective would be on the AHOY Centre. The AHOY Centre building is likely to be lost through the use of the site and there is also likely to be loss of the majority of the boat storage yard. The centre caters for both young people and adults, and specifically targets people with disabilities. The loss of these facilities may be detrimental to community cohesion locally, while the effects on disabled members of the community are likely to be especially severe.

8.2.2 The noise and visual disturbance from the site is likely to affect people using the Thames Path adjacent to the site. As the site was identified as being a relatively tranquil environment, the increased noise levels from the site at close proximity to the residential properties opposite the site are likely to be disruptive, especially as some of the properties have balconies.
9 PROPERTY ASSESSMENT

9.1 Introduction
9.1.1 The area identified for a CSO site extends to approximately half the total within site C32XB during the construction phase. The whole site includes the AHOY Centre clubhouse, part of the boatyard, part of the slipway and part of the roadway associated with the adjoining residential development.

9.1.2 No inspection of the site has been undertaken for the purpose of preparing this property assessment. Maps, plans and aerial imagery have been relied on.

9.2 Crown Land and Special Land comments
9.2.1 The land is not Crown or Special Land and special procedures for the compulsory acquisition of the site would not apply.

9.3 Land to be acquired
9.3.1 The referencing exercise suggests that the site is part-owned by the sailing club and part by Fairview Homes (assumed to be the developer of the adjoining residential development).

9.3.2 The AHOY Centre appears to be a charitable organisation, offering sailing tuition and experience to youth and other groups, disabled and able-bodied. It was established around 2000 and the clubhouse was built around 2003 on land secured under a Section 106 Agreement.

9.3.3 The entry in the 2005 Rating List for this site is ‘Club House and Premises’, with a rateable value of £16,750.

9.3.4 Planning enquiries suggest there have been no major planning applications on the site during the last five years but consent has recently been granted to use the clubhouse for weddings and other functions, and to construct a pontoon/jetty to enable disabled sailors to access the boats.

9.3.5 The compensation assessment usually assumes that the working areas would be acquired temporarily, via the acquisition of new rights for the period of the works stated in the engineering section above. It also usually assumes that a smaller area would need to be acquired permanently for the operational plant.

9.3.6 No rights of way or easements have been included in the assessment of this site acquisition cost.

9.4 Property valuation comments
9.4.1 Compensation for the acquisition of new rights is normally based on the diminution in value to the land caused by the acquisition. Compensation for the permanent acquisition of land is normally based on market value. However, compensation for the permanent acquisition of unusual types of property, where there is no general market, can be assessed on the basis of the cost of equivalent reinstatement at a new site, but there must be a genuine intention to reinstate.

9.4.2 If compensation is assessed on a diminution in value basis for the new rights (temporary occupation during works, access rights during works, access rights for operational purposes) and on a market value basis for the permanent acquisition, the costs are likely to be relatively low and therefore acceptable.

9.4.3 A sailing club is not considered to be an unusual property for which there would be no general market, so it is unlikely that equivalent reinstatement would be the basis of compensation. However, there are likely to be significant adaptations to be made to any alternative property to enable the AHOY Centre to be relocated.

9.4.4 It is understood that the land would be reinstated after the works are complete as a part of the engineering work and therefore reinstatement costs are not included in the compensation assessment. However, in this case, the current drawings indicate that the
9.4.5 It may be possible to mitigate the acquisition cost, possibly very significantly, by relocating the CSO drop shaft within the whole site and by affecting the yard area only. If this was possible, the compensation claim might be restricted to temporary disturbance only.

9.5 Disturbance compensation comments
9.5.1 See 9.4.5 above. Disturbance compensation is likely to be significant as there would be considerable disruption to the AHOY Centre. If the clubhouse building can be retained, the acquisition cost is likely to be disturbance compensation and little else.

9.6 Offsite statutory compensation comments
9.6.1 There should be limited potential for offsite statutory compensation under Section 10 of the Compulsory Purchase Act 1965, as there is unlikely to be any physical interference with public or private property rights.
9.6.2 There should also be limited potential for claims under Part 1 of the Land Compensation Act 1973, as the completed works are unlikely to emit physical factors, such as noise, vibration, smell, fumes, smoke, artificial lighting and discharge of solids or liquids, which may cause a diminution in value to property.

9.7 Site acquisition cost assessment
9.7.1 The overall site acquisition cost is likely to be significant but this cost could be mitigated if the use of the site could be redesigned to avoid demolition of the clubhouse.

10 SITE CONCLUSIONS BY DISCIPLINE

10.1 Introduction
10.1.1 The conclusions presented in this section are drawn from each discipline’s assessment, and are designed to inform the workshop where a final conclusion on whether the site moves forward as one of the preferred sites or not.

10.2 Engineering
10.2.1 The site is suitable as a CSO site with the following reservations: Road access is restricted, although there may be river transport opportunities, and construction of the interception chamber would be constrained by the adjacent electrical substation and associated buried power cables.
10.2.2 Whether a CSO site of this size is appropriate or not for the interception of the Deptford Storm Relief CSO would be considered at the next stage, in conjunction with the drive strategy that is developed in the Engineering Options Report.

10.3 Planning
10.3.1 On balance, the site is considered less suitable as a CSO site.
10.3.2 There are a number of planning considerations related to the use of this site. Proximity to residential properties and loss of the existing yacht club facility are of the most significance.
10.3.3 It is likely that mitigation against potential adverse impacts on residential amenity would be difficult at this location and the LPA may require the relocation of the existing yacht club to avoid the loss of this facility.
10.4 Environment

10.4.1 Overall, the site is considered to be suitable as a CSO site.

10.4.2 The site is suitable from the perspectives of archaeology, built heritage and townscape, water resources (hydrogeology and surface water) and ecology.

10.4.3 The site is considered less suitable from the perspectives of transport, flood risk, air quality, noise and land quality.

10.4.4 Overall, the site is considered to be suitable, subject to whether transport, flood risk, air quality, noise and land quality impacts can be mitigated. Likely mitigation considerations include the following:

- Transport – traffic management required to remove the traffic calming, on-street parking and home zone features to enable access.
- Flood risk – there is limited opportunity for surface or infiltration SuDS, and a flood risk assessment would be required to assess the residual risk of flooding to the site.
- Air quality – measures to minimise potential impacts of fugitive dust emissions during construction on adjacent residential properties and the school.
- Noise – use of perimeter hoarding to reduce potential noise impacts on residential properties immediately adjacent, although this is likely to be relatively ineffective at shielding noise from the upper floor properties at Stretton Mansions and Hughes House.
- Land quality – any required remediation of contamination (at this moderate risk site) and/or measures to ensure no mobilisation of contaminants retained in situ.

10.5 Socio-economic and community

10.5.1 The site is not suitable as a small CSO site. The greatest impact from a community impacts perspective appears to be on the AHoy Centre on the site. The potential impacts include the loss of facilities targeted at equalities groups, namely young people and people with disabilities. Mitigation is likely to involve discussions around compensation and relocation of the centre. Obtaining a relocation site in the local area with access to the river is likely to be difficult.

10.5.2 The local residents and the users of the Thames Path are likely to be affected by the noise levels and visual disruption to views over the river. Mitigation may involve discussions around screening the site and minimising the intrusiveness of the permanent structures on the site. In terms of the noise levels, mitigation may involve discussions around minimising noise disturbance and potentially limiting working hours.

10.6 Property

10.6.1 From a property perspective, the site should be classified as less suitable on cost grounds, unless the design could be revised to reduce the impact on the AHoy Centre.

10.6.2 The advantage of this site is that it is not subject to any special procedures. The disadvantage is that the acquisition cost is likely to be significant.
APPENDIX 1 – SOURCES OF INFORMATION

Engineering

- Traffic Management and Access Roads/Rail – Scott Wilson
- Access River – BMT
- Third Parties (Shafts/CSOs) – Mott MacDonald and AECOM
- Geology – Thames Water
- Utilities – Thames Water and AECOM
- Construction and Operational Layout Template – London Tideway Tunnels
- Background Technical Paper – London Tideway Tunnels

Planning

- London Borough of Greenwich online planning applications database
- Saved policies in the Greenwich Unitary Development Plan, adopted in 2006

Environment

Transport

- Map of Transport for London Road Network (TLRN) - www.tfl.gov.uk
- Bus Route Maps: North-east, north-west, south-west, south-east - www.tfl.gov.uk
- Crossrail Plans - www.crossrail.co.uk/crossrail-bill-documents
- PTAL scores - Obtained from Table 2.3 information
- Thames Path map - www.walklondon.org.uk
- Capital Ring - www.walklondon.org.uk
- The Lea Valley Walk - www.walklondon.org.uk
- Cycle Routes - www.sustrans.org.uk and Local Cycling Guides, 1-14
- Design Manual for Roads and Bridge TD 42/95, Highways Agency

Built heritage and townscape

- Wandsworth List of Locally Listed Buildings
- Hammersmith and Fulham list of Conservation Areas
- Hammersmith and Borough list of Open Spaces
- Greenwich List of Locally Listed Buildings
- Newham List of Locally Listed Buildings
- Westminster Open Spaces Strategy
- Southwark list of Conservation Areas
- National Monuments Record - for some additional information regarding registered historic parks and gardens
- Unitary development plans
- Local authority websites
- Bing maps
**Water resources – hydrogeology and surface water**
- Environment Agency abstraction licence details
- Environment Agency groundwater levels
- Local authority details of unlicensed abstractors
- Envirocheck

**Ecology**
- Richmond upon Thames Habitat Action Plan for the Tidal Thames
- Multi-Agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk - statutory designated sites
- London Wildweb - http://wildweb.london.gov.uk - non-statutory site of importance for nature conservation
- National Biodiversity Network - http://searchnbn.net - distribution of protected species
- Google Maps - aerial views of habitat features
- BAP habitats - www.natureonthemap.org.uk
- Priority habitats and species on national and local scales - www.ukbap.org.uk

**Flood risk**
- Envirocheck

**Air quality**
- Local authority websites
  - www.londonair.org.uk/london/asp/default.asp?la_id=&showbulletins=&width=1680
  - www.airquality.co.uk

**Noise**
- Envirocheck - Identification of receptors
- Promap - Calculation of distances between site and receptors
- Multimap - Aerial photography – www.multimap.co.uk
- Defra noise maps - Identification of existing noise levels
Land quality
- Google Maps/Earth
- Site walkover information

Socio-economic and community
- Statistics from the Office of National Statistics (ONS) 2001 Census data
- The AHOY Centre - www.ahoy.org.uk
- The AHOY Centre - www.ahoy.org.uk/DISABILITY%20BOAT.html
- The AHOY Centre - www.ahoy.org.uk/ THE%20FUTURE.html
- The AHOY Centre - www.ahoy.org.uk/VOLUNTEERING.html
- South East London Chamber of Commerce - www.selondonchamber.org/home.php

Property
- Multimap
- VOA website
APPENDIX 2 – SITE LOCATION PLAN
APPENDIX 2
C32XB SITE
SITE LOCATION PLAN

Legend
- Local Authority Boundary
- Short Listed CSO Sites
- CSO (Directly Controlled)

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Map Ref: ..........101PL-SS-01049
Date: ............2009/11/26
Projection: .... British National Grid

Thames Water Utilities
MAJOR PROJECTS

The Point, 7th Floor,
37 North Wharf Road,
Paddington, London W2 1AF
APPENDIX 3 – PLANNING AND ENVIRONMENT PLANS
Areas of Opportunity

Proposals Sites

DRAFT & CONFIDENTIAL

Legend

- **Protected/Strategic Views**
- **Proposals Sites**
- **Areas of Opportunity**
- **Development Sites**

**Title:** APPENDIX 3A
C32XB SITE
PLANNING AND ENVIRONMENT PLAN
APPENDIX 4 – PHOTOGRAPHS OF THE SITE AND SURROUNDINGS
View of the AHOY Centre yacht club from Borthwick Street looking northeast.

View of the site taken from the footpath between Borthwick Street and Glaisher Street looking north.
View of the AHOY Centre yacht club and River embankment looking northwest.

View of the south eastern part of the site taken from the southern boundary and showing Stretton Mansions adjacent to the site.
APPENDIX 5 – TRANSPORT PLAN
APPENDIX 5
C32XB SITE
TRANSPORT PLAN
APPENDIX 6 – SERVICES AND GEOLOGY PLAN
APPENDIX 7 – CONSTRUCTION PHASE LAYOUT
APPENDIX 8 – OPERATIONAL PHASE LAYOUT
1. Structure to be protected by removable handrails in the temporary case.

2. Position of covers are variable within 10m from the edge of the structure, and the location is based on site-specific requirements.

3. Cladding of ventilation building to suit location and aesthetics.

4. All top structures to have:
   - Access stairs/ladder
   - Temporary or permanent hand railing

5. All dimensions in millimetres unless otherwise stated.
### APPENDIX 9 – ENVIRONMENTAL APPRAISAL TABLES

<table>
<thead>
<tr>
<th>Transport</th>
<th>Site considerations</th>
<th>Comments</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to road network</td>
<td>Temporary construction site access and egress will be taken from/onto Borthwick Street utilising existing access/egress points. Both access and egress will require the removal of some fencing. The Thames Path will need diverting due to the location of the site access. Permanent site access will be onto Glaisher Street to the east of the site and will require the construction of a new access. Borthwick Street is street lit and subject to a 20mph speed limit. Visibility appears to be adequate from the site egress. Access to the TLRN (A2) from the site egress is via Borthwick Street, Deptford Green home zone, McMillan Street, A200 Creek Road, and south on the A2209 Deptford Church Street. The initial part of the access route on Deptford Green and McMillan Street is via a home zone and is subject to raised tables, surface paving (shared space), on street parking and other street furniture such as width restricting planters. Further on, there is a rail bridge over Deptford Church Street with a 16’ vehicular height restriction. Distance to the TLRN (A2) is 1.3km from the site egress. See Transport Access Plan in Appendix 5.</td>
<td>Conclusion: Road access is least suitable. Temporary construction site access and egress will utilise existing points requiring the removal of some fencing. Permanent site access will require construction. Thames Path will need diversion as it runs within the site. Route to TLRN (A2) will require removal of raised tables, on street parking and street furniture on Deptford Green – a home zone. McMillan Street is relatively narrow and will also require removal of on street parking. Route also runs under rail bridge with height restriction.</td>
<td></td>
</tr>
<tr>
<td>Access to river</td>
<td>Site located adjacent to river, although river access not essential as excavated material will be transported by road to main hub site.</td>
<td>Site located adjacent to river, although river access not essential as excavated material will be transported by road to main hub site.</td>
<td></td>
</tr>
<tr>
<td>Site considerations</td>
<td>Comments</td>
<td>Mitigation required and conclusions</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>----------</td>
<td>-----------------------------------</td>
<td></td>
</tr>
<tr>
<td>Access to rail</td>
<td>Use of rail is unlikely to be required due to the small quantities of excavated material produced by a CSO site. Access to East London Line Depot via Deptford Creek, McMillan Street, A200 Creek Road/Evelyn Street, Abinger Grove, Arklow Road, Edward Street and Milton Court Road. Constraints on route include the raised tables within the Deptford Green Home Zone along with on street parking and street furniture. On street parking and speed cushions along Abinger Grove, Arklow Road, Edward Street and Milton Court Road which are residential streets. Route to rail runs under rail bridge on Arklow Road which is subject to a width restriction of 7ft and a height restriction of 12’ 3”, and a further rail bridge on Edward Street with a height restriction of 12’ 1”. The East London Line Depot has the potential to be used during the day although significant use constraints and issues with loading would exist. Distance is 1.3km from site egress.</td>
<td>Route to East London Line Depot contains several constraints and is least suitable. The route runs through private residential area of the Deptford Green Home Zone with numerous traffic calming features, under a restricted bridge on Arklow Road, and through another residential area on Abinger Grove, Arklow Road, Edward Street and Milton Court Road. Route also contains on street parking throughout residential areas and traffic calming measures which may require removal. The East London Line Depot has the potential to be used during the day however significant constraints and issues with loading exist.</td>
<td></td>
</tr>
<tr>
<td>Parking</td>
<td>Some parking could be provided onsite for workforce. On street parking is not available in the immediate area due to permit holder restrictions.</td>
<td>Potential for limited parking to be provided onsite for workforce. No parking available in the vicinity due to parking restrictions.</td>
<td></td>
</tr>
<tr>
<td>Public transport accessibility</td>
<td>PTAL 5-6 (high) as identified in Table 2.3.</td>
<td>Good potential for workforce to use public transport to access the site.</td>
<td></td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Construction of permanent site access. Thames Path will require diversion as it runs through the site. Raised tables and street</td>
<td>Construction of permanent site access. Diversion of Thames Path and removal of traffic calming, street furniture and on street parking to provide road and rail</td>
<td></td>
</tr>
</tbody>
</table>
### Transport

<table>
<thead>
<tr>
<th>Site considerations</th>
<th>Comments</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>furniture require removal to allow access to the TLRN (A2) for construction vehicles.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional on street parking and speed humps will require removal to provide rail access for construction vehicles.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative route may be required to avoid low bridge.</td>
<td></td>
<td></td>
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</tbody>
</table>

**Summary:** The site is less suitable due to access being taken through a home zone area. The route to TLRN (A2) is less suitable, passing through a residential estate, a ‘Home Zone’ with raised tables, and encounters on street parking and width restricting features which will require removal. Route to rail link is also less suitable, containing identical and additional restrictions in the form of on street parking, speed cushions and two bridges with height/width restrictions. However, the use of rail transport is unlikely to be required due to the small quantities of excavated material associated with a CSO site. Site adjacent to river for river access, although not essential for a CSO site. Some parking could be provided onsite for workforce, with no parking available on surrounding roads due to permit holder restrictions. There is good public transport accessibility to the site. Traffic management will be required to remove traffic calming, on street parking and home zone features to enable access.
<table>
<thead>
<tr>
<th>Site considerations</th>
<th>Comments</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designations, including archaeological priority areas</td>
<td>The site is within the Greenwich Archaeological Priority Area (APAS)</td>
<td>N/A</td>
</tr>
<tr>
<td>Summary of historical uses</td>
<td>The 19th century OS maps indicate the site to be located immediately to the south of the Thames Foreshore. The 1st edition OS (1868) shows the site as Wharves and a large foundry and engineering works to the west of the site. By the 1950’s this has changed use to a timber packing case works. The site has remained developed to the present day.</td>
<td>A detailed desk based assessment is required to sufficiently understand the archaeological resource and define risk to potential development.</td>
</tr>
<tr>
<td>Potential receptors of very high or high value with the potential to be directly affected</td>
<td>No archaeological receptors of high value are recorded within the site. This does not preclude the possibility of unrecorded archaeological receptors of High value being within the site.</td>
<td>A detailed desk based assessment is required to sufficiently understand the archaeological resource and define risk to potential development.</td>
</tr>
<tr>
<td>Potential receptors of medium value with the potential to be directly affected</td>
<td>No archaeological receptors of Medium value are recorded within the site. This does not preclude the possibility of unrecorded archaeological receptors of Medium value being within the site.</td>
<td>A detailed desk based assessment is required to sufficiently understand the archaeological resource and define risk to potential development.</td>
</tr>
<tr>
<td>Other receptors with the potential to be directly affected</td>
<td>Construction impact of potential waterlogged deposits containing archaeological remains may cause dewatering. This potential impact should be considered given the sites close proximity to the Thames River.</td>
<td>A detailed desk based assessment is required to sufficiently understand the archaeological resource and define risk to potential development.</td>
</tr>
<tr>
<td>Extent of existing disturbance</td>
<td>Construction impact of previous development for the works to the south west may have disturbed earlier remains. Borehole data in the area suggests made ground of 8 m some of which could be archaeological in nature.</td>
<td>A detailed desk based assessment is required to sufficiently understand the archaeological resource and define risk to potential development.</td>
</tr>
<tr>
<td>Potential issues</td>
<td>Detailed design proposals, and an outline method statement will be required to enable initial assessment of development</td>
<td>Mitigation methods could include: • Review/production of...</td>
</tr>
</tbody>
</table>

Appendix 9 - Page 4
<table>
<thead>
<tr>
<th>Site considerations</th>
<th>Comments</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>impacts, and to inform mitigation proposals. With the currently available information it is not possible to highlight specific potential issues.</td>
<td>existing desk based assessments • Production of deposits model • Archaeological monitoring of geotechnical investigations • Archaeological evaluation • Archaeological watching brief • Archaeological excavation</td>
</tr>
</tbody>
</table>

**Summary:** The site is suitable. No records of any archaeological receptors have been identified on the site. However, based on the information available, it is possible that archaeological receptors of potential medium or high value may be present within this site. While no direct evidence has been revealed, peat deposits containing archaeological material may be present at depth. These have been commonly recorded throughout London in a similar proximity to the Thames. Given the location of the site, and wider evidence for historical occupation along the river, it is a reasonable assumption to suggest waterlogged remains of archaeological value may be present.
### Built heritage and townscape

<table>
<thead>
<tr>
<th>Site considerations</th>
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<th>Mitigation required and conclusions</th>
</tr>
</thead>
</table>
| **Designations including conservation areas, including trees** | **Listed Buildings**  
Church of St. Nicholas, Grade II*, 220m  
N & E walls of St. Nicholas Church, Grade II: 205m  
Office building, Convoy's Wharf, Grade II: 180m  
Cast iron bollard with Watergate Street, Grade II: 165m  
Boundary wall to Convoy's wharf, Grade II: 170m  
Master shipwrights apartment, Convoy's wharf, Grade II: 205m  
Paynes Wharf, Grade II: 115m  
**Locally Listed Buildings**  
There are no locally listed buildings within 250m of C32XB.  
**Conservation Areas**  
There are no conservation areas within 250m of C32XB.  
**Registered Historic Parks and Gardens**  
There are no registered historic parks and gardens within 250m of C32XB.  
**Locally Listed Parks and Gardens**  
There are no locally listed parks and gardens within 250m of C32XB.  
**Protected Views**  
Greenwich Park: 95m (as designated in the London Views Management Framework) | In the case of listed buildings and protected views a high quality scheme design and adequate screening for the development may be required as discussed below.  
A detailed desk-based assessment in conjunction with archaeology work will be required to further inform the likely impact of the development and to determine more detailed mitigation proposals.  
On the basis of currently available information (August 2009), mitigation will not be applicable in the case of conservation areas, registered historic parks and gardens, locally listed parks and gardens, locally listed buildings. |

| Potential receptors of medium to very high importance with the potential to be directly affected | Not applicable | Not applicable |
| Other receptors of lesser importance with the potential to be directly affected | Not applicable | Not applicable |
| Potential receptors of medium to very high importance with the potential to be indirectly affected | There is the potential for seven listed buildings including the Grade II* church of St Nicholas | All of the identified listed structures fall outside of the visual envelope of |
## Built heritage and townscape

<table>
<thead>
<tr>
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</thead>
</table>
| and one protected view to be indirectly affected by construction and operation of the development, especially during construction. | C32XB, reflecting the built character of the local area. Consequently no impact upon these listed buildings is anticipated as a result of construction and operation of the development and no mitigation would be required.  
The Greenwich Park protected view lies some distance outside of the site and is therefore unlikely to be affected by the proposals and will therefore not require any mitigation. |                                                                                                                                                                                                                                   |
| Other receptors of lesser importance with the potential to be indirectly affected     | Not applicable                                                                                                                                                                                                         | Not applicable                                                                                                                                                                                                                   |
| Sensitive landscape character areas likely to be affected                              | Site adjacent to the River Thames. The, Cycle Route Network and Thames Path runs along the River, diverted away from the river at the site.  
Site is located on the south bank of the River Thames on the Ahoy boating Centre site.  
River Thames to the north with residential properties along the north bank, landing stage on the River with Stretton Mansions on Glassier Street to the east, residential development to the south, a school to the south west, and an electrical substation immediately to the west with a vacant site further west and industrial development adjacent to it.  
Demolition of building onsite increases openness. The presence and operation of machinery, materials stores and buildings is likely to result in temporary, adverse impacts on the character of the river frontage and temporary, adverse indirect impacts on neighbouring areas. | Introduction of landscape scheme to include appropriate surface treatments and planting to enhance the character of the River frontage and the site itself.  
This site is suitable, since, although, the proposals would have an adverse impact on the River frontage; there is opportunity to enhance the character of the River frontage and the site itself with appropriate mitigation. |
## Built heritage and townscape

<table>
<thead>
<tr>
<th>Site considerations</th>
<th>Comments</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent elements have the potential to adversely impact on the river frontage.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Potential views likely to be affected</strong></td>
<td>Strategic View to the north-east of the site. Open views from the River, Stretton Mansions, residential properties along the north bank of the River, residences on Deptford Green, plus views from the junction of Borthwick Street and Deptford Green and the end of Borthwick Street. Partially interrupted views from Borthwick Street further north and Deptford Green further west. During construction, views of cranes from properties listed above. Permanent elements mainly visible from the River, residences along its north bank and Stretton Mansions.</td>
<td>During construction, the use of hoardings and appropriate lighting would minimise visual impact. Design of top structure, vent column, and electrical kiosk to be given careful consideration. Planting to screen permanent plant. Integrated landscape scheme to enhance visual amenity and reduce visual impact. This site is likely to be suitable since although the proposals would have a visual impact, there could be an opportunity to soften the views with planting onsite that also serves as screening.</td>
</tr>
<tr>
<td><strong>Particular considerations on sites where new permanent structures are required</strong></td>
<td>Permanent structures at C32XB have the potential to indirectly impact upon the visual amenity of the River, its frontages and the residential properties. Consequently, careful consideration would need to be given to the appearance of any above ground structures in the scheme design and some form of screening and landscaping for the site may be required.</td>
<td>Any permanent structures would need to be of a high quality design and/or screened and landscaped in order that any indirect impacts upon the local townscape character, river frontage and local views can be mitigated against.</td>
</tr>
<tr>
<td><strong>Potential issues</strong></td>
<td>Construction and operation of the development could result in an indirect impact upon the visual amenity of the river and local views. There is the potential to mitigate adverse impacts through a high quality scheme design and/or screening and landscaping.</td>
<td>The scheme design would need to be of a sufficiently high quality and may need to incorporate some screening and landscaping in order that the potential visual impact of the development upon the visual amenity of the Thames and local views is minimised.</td>
</tr>
<tr>
<td>Built heritage and townscape</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site considerations</td>
<td>Comments</td>
<td>Mitigation required and conclusions</td>
</tr>
</tbody>
</table>

**Summary:** This site is considered to be suitable in relation to built heritage and townscape, as it is likely to result in relatively few impacts upon the built heritage environment and the local townscape character. There is the potential for impacts upon the character of the River, its frontages and local views. Mitigation in the form of a high quality scheme design, screening and landscaping of the site, especially during construction, would help to reduce any adverse impacts upon built heritage receptors and the local townscape character, and has the potential to have a permanent positive impact on local views upon completion.
### Water resources – hydrogeology and surface water

<table>
<thead>
<tr>
<th>Site considerations</th>
<th>Comments</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
</table>
| **Hydrological conditions** (Groundwater and Surface Water) | **Geology** (thickness)  
- Superficial Geology and Made Ground (8m)  
- Lambeth Group (3m)  
- Thanet Sand (15m)  
- Chalk (to beyond the depth of shaft)  
**Hydrogeology**  
- Piezometric Level in Chalk Aquifer: ~ -7m AOD (~13 mbgl) from EA Jan 08 water level contouring  
**Groundwater Monitoring Location**  
- EA Hydrometry Sites:  
  TQ37-268 – 1.54km northwest of the site (water levels to Nov 2007)  
  TQ37-254A, BL, BU – 826 m southeast of the site (water levels to May 2009)  
**Watercourses**  
- Adjacent to River Thames | The drop shaft will be constructed to an invert level of approximately 56.11 mbgl therefore the shaft will be founded in the Chalk. Piezometric head\(^1\) in Chalk will be approximately 43.11 m above the base of the construction. Therefore, dewatering would be required and should be considered as part of geotechnical design. |

| **Source Protection Zones (SPZ) and groundwater users** | **SPZ**  
- Not located in a Source Protection Zone defined by EA  
**EA Licensed Groundwater Abstractions and Details**  
- 1 public water supply borehole within 2km radius  

*Licence Numbers:*  
28/39/43/0019 (12 borehole)  
**Location**  
1.45km south of the site  
**Operator**  
Thames Water Utilities Ltd.  
**Abstracted Aquifer**  
Chalk  
**Abstraction Quantity (annual)**  
12,775,000m\(^3\)  
- 4 licensed abstraction borehole within 2km radius | A simple volumetric approach has been used to calculate the 400 days travel times of the abstraction borehole. A conservative mean annual recharge of 100 mm/year was used to calculate a radius for licensed abstraction boreholes as follows:  
Public water supply abstraction borehole  
Defined by EA  
Licensed abstraction boreholes  
1. 250m  
2. 203m  
3. 126m  
The shaft is not located within any of these |
## Site considerations

<table>
<thead>
<tr>
<th>Licence Numbers:</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 28/39/39/0234 (1 borehole)</td>
<td>catchment areas.</td>
</tr>
<tr>
<td>2. 28/39/42/0073 (2 boreholes)</td>
<td></td>
</tr>
<tr>
<td>3. 28/39/44/0039 (1 borehole)</td>
<td></td>
</tr>
</tbody>
</table>

### Locations:

1. 1.9 km north of the site
2. 1.98 km northwest of the site
3. 1.19 km southeast of the site

### Operator:

1. Britannia Hotels Limited
2. Harmsworth Quays Printing Limited
3. Trustees Of National Maritime Museum

### Abstracted Aquifer Unit:

1. Chalk
2. Chalk
3. Chalk

### Abstraction Purposes:

1. Industrial, commercial and public services (hotels, public houses and conference centres- drinking, cooking, sanitary, washing)
2. Industrial, commercial and public services (paper and printing- process water and drinking, cooking, sanitary, washing)
3. Private water supply (general use)

### Abstraction Quantity (annual):

1. 78,840 m³
2. 52,000 m³
3. 20,000 m³

### Unlicensed Groundwater Abstractions and Details:

- No abstraction borehole within 1km radius inside Tower Hamlet Council Boundary
- No abstraction borehole within 1km radius inside Lewisham Council Boundary
- No abstraction borehole within 1km radius inside Greenwich Council Boundary
<table>
<thead>
<tr>
<th>Site considerations</th>
<th>Comments</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borehole locations and depths</td>
<td>There are 14 historical records of water wells within 1km radius.</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>Depth range: 6.09 – 201.78m</td>
<td></td>
</tr>
<tr>
<td>Potential impacts on surface water features</td>
<td>The site is located adjacent to the River Thames. The site is behind flood defences so the pollution risk is through drainage to the Thames.</td>
<td>Work needs to be undertaken in consideration of Pollution Prevention Guidelines – PPG1, PPG5 and PPS23.</td>
</tr>
<tr>
<td>Potential impacts on groundwater (resources and quality)</td>
<td>An impact on groundwater is likely since the drop shaft is to be constructed in Chalk (major aquifer) overlain by Thanet Sand (minor aquifer) which will need to be dewatered. At shallow depth, the shaft is located in Alluvium which is classified as a minor aquifer. Impact on shallow aquifer is likely to be limited where water is excluded from the excavation by sheet piling.</td>
<td>See below (likely types of mitigation measures that will be required)</td>
</tr>
<tr>
<td>Likely types of mitigation measures that will be required</td>
<td>No mitigation will be required for groundwater as construction of drop shaft will not take place within the 400 day capture zone of licensed abstractions.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Potential issues</td>
<td>The drop shaft to be excavated in Chalk below the piezometric head, therefore dewatering of the Chalk and Thanet Sand would be required. Limited impact on flow in shallow aquifer due to sheet piling.</td>
<td>Piezometric head in Chalk to be considered as part of geotechnical design. The issue of the appropriate disposal of discharges from dewatering to be considered.</td>
</tr>
</tbody>
</table>

**Summary:** In terms of hydrogeology, this site is considered to be suitable because although the construction of the drop shaft will take place within Chalk (major aquifer), the site does not lie within 400 day capture zones of licensed abstractions. No long term impact on the Chalk aquifer is expected, although dewatering of the Chalk and Thanet Sand will be required during the construction phase. The Chalk piezometric head is likely to be approximately 43 m above the base of construction and should be taken into account in the engineering design. The superficial deposits at the location of the CSO site comprise Alluvium classified as a minor aquifer, which is likely to be the subject of limited impacts on flow due to sheet piling.

In terms of surface water resources, this site is considered to be suitable because there is no direct pathway to the River Thames for pollution.
<table>
<thead>
<tr>
<th>Ecology (terrestrial and aquatic)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site considerations</strong></td>
</tr>
<tr>
<td>Statutory designations</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Non-statutory designated wildlife sites</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>BAP priority habitats</td>
</tr>
<tr>
<td>Protected or otherwise notable species within the Study Area</td>
</tr>
<tr>
<td>Potential issues</td>
</tr>
</tbody>
</table>

**Summary:** The site is suitable as an initial review of the site indicates that, assuming impacts on the River Thames and foreshore can be avoided, it is likely to require only basic ecological surveys and limited mitigation if selected.
### Flood risk assessment

<table>
<thead>
<tr>
<th>Site considerations</th>
<th>Comments</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flood Risk Zone</td>
<td>Flood Zone 3 (1 in 200 year flood extent) but defended to the 1 in 1000 year flood level – there is a residual risk of a breach for which mitigation would need to be considered as part of the FRA. Sewage transmission infrastructure is considered to be water compatible according to table D.2 of PPS25</td>
<td>An FRA would be required to assess the residual risk of flooding to the site.</td>
</tr>
<tr>
<td>Assessment of conditions for SuDS</td>
<td>There is minimal space for SuDS and the site is existing hardstanding on alluvial clay geology – it is therefore likely to be unsuitable for SuDS</td>
<td>N/A</td>
</tr>
<tr>
<td>Potential issues</td>
<td>None further issues identified</td>
<td>None further issues identified</td>
</tr>
</tbody>
</table>

**Summary:** This site is less suitable because although it is defended from flooding from the River Thames, there is a limited opportunity for surface or infiltration SuDS due to space constraints and the underlying geology.
### Air quality

<table>
<thead>
<tr>
<th>Site considerations</th>
<th>Comments</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing air quality</td>
<td>The air quality objectives for NO$_2$ exceeded on major roads in vicinity of site.</td>
<td>There is a need for more site specific data.</td>
</tr>
<tr>
<td>Sensitive receptors</td>
<td>There are residential properties along Evelyn Street/Creek Road (A200) and the access route to the site. The nearest residential properties are within 15m of the site on Glaisher Street.</td>
<td>There are relevant air quality sensitive receptors present along the route the construction traffic is likely to take and close to the proposed construction works.</td>
</tr>
<tr>
<td>Existing traffic issues</td>
<td>The main traffic issue in this area is exhaust emissions from vehicles along the A200 corridor.</td>
<td>Additional vehicle emissions have a moderate potential to interfere with local air quality action plan policies.</td>
</tr>
<tr>
<td>Existing sources of significant air pollutants</td>
<td>See above</td>
<td>See above</td>
</tr>
<tr>
<td>Notable gaps in existing air quality monitoring</td>
<td>There is no data at likely access to A200 and the nearest existing data indicates existing exceedance of AQLV.</td>
<td>Collect a minimum of 6 months diffusion tube data at site access to the A200 or other point of access to major road network.</td>
</tr>
<tr>
<td>Potential issues</td>
<td>The risk from additional exhaust emissions from construction HGVs is undefined at present. The risk from dust impacts at residential properties is moderate.</td>
<td>Minimise HGV movements on the local road network during the peak hour. Standard dust control measures will minimise the effect of fugitive dust on nearby sensitive receptors.</td>
</tr>
</tbody>
</table>

**Summary:** This site is less suitable. There are residential properties adjacent to the site, therefore there is the potential for fugitive emissions of dust during construction to have a perceptible impact at these properties. These impacts can be reduced through the application of standard dust control measures. There is potential for HGV movements on the local road network to cause localised air quality impacts in areas of already poor air quality. This can be somewhat mitigated by minimising the movement of HGVs during peak hours.
## Noise

<table>
<thead>
<tr>
<th>Site considerations</th>
<th>Comments</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise band level (from Defra noise maps)</td>
<td>Information from Defra noise maps indicates daytime noise levels of less than 58 dB $L_{\text{Aeq}}$ and night-time noise levels of less than 50 dB $L_{\text{Aeq}}$ at the nearest residential properties located to the site. The residential properties closest to and facing the site are likely to experience relatively low daytime and night-time noise levels due to their distance from any major roads. Noise levels from the Defra noise maps provide an indication of prevailing noise levels only, and will not be employed in any detailed assessments for chosen sites.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Sensitive receptors</td>
<td>There are sensitive receptors close to the south eastern and south western boundaries of the site. The closest receptors are located at Stretton Mansions on Hamilton Crescent to the south east of the site. Further residential properties are located at Hughes House on Deptford Green a few metres to the south west of the site. Sensitive receptors at Stretton Mansions to the south east comprise 6-7 storey residential flats. These are located on the boundary of the temporary working area and 5m from the shaft location. Properties at Hughes House to the south west of the site comprise 5 storey residential dwellings and are located approximately 50m from the temporary working area boundary and 65m from the shaft location. Hughes Field Primary School is also located a short distance away from the site to the south west.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Existing traffic issues</td>
<td>Road traffic on local roads including distant road traffic on the A220 to the south will contribute to the existing noise climate in the area.</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
## Noise

<table>
<thead>
<tr>
<th>Site considerations</th>
<th>Comments</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing sources of significant noise emissions</td>
<td>Road traffic on local roads including distant road traffic on the A220 to the south will contribute to the existing noise climate in the area. There are no railways or significant industrial noise sources noted in the immediate surrounding area.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Potential issues</td>
<td>Construction: The construction period is estimated at up to 2 years and working hours will be 12 hours per day (7am-7pm) Monday to Saturday. This has the potential to result in adverse noise impacts to sensitive receptors surrounding the site. The HGV movements has the potential to have an adverse impact on residential receptors located on Deptford Green. The immediate site area is fairly large and, whilst the shaft location may be fixed, ancillary plant should be sited as far as is practicable from surrounding sensitive receptors. Situating plant to the north or west of the site would maximise the distance between them and the nearest sensitive receptors and minimise potential disturbance. Proposed 3m site boundary fencing will provide useful noise mitigation to some plant and construction activities. Vibration resulting from general construction works is not anticipated to result in an adverse impact. The nearest receptors to the proposed shaft location are at a distance of approximately 5m and it is possible that vibration levels may result in minor cosmetic damage during shaft sinking and may also give rise to annoyance. Vibration from tunnelling should be considered on a case by case basis at particular sensitive locations.</td>
<td>Adherence to the good site practices provided in BS5228. Siting of noisy equipment and construction activities as far as is practicable from sensitive receptors. Provision of site boundary noise fences.</td>
</tr>
</tbody>
</table>
## Noise

<table>
<thead>
<tr>
<th>Site considerations</th>
<th>Comments</th>
<th>Mitigation required and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation:</td>
<td>With appropriate attenuation (if necessary), there is no apparent reason why noise from the ventilation column and top chamber should result in adverse noise impacts to nearby sensitive receptors.</td>
<td></td>
</tr>
</tbody>
</table>

**Summary:** The site is less suitable due to the very short separation distances between the site and the closest sensitive receptors, including a school, in addition to the relatively high density of residential dwellings surrounding the site. The site is therefore likely to result in adverse noise and vibration impacts. The number of vehicles associated with the construction phase is anticipated to be relatively high and therefore is likely to cause an adverse noise impact to properties located on Deptford Green. Perimeter hoarding will reduce potential noise impact but will be relatively ineffective at shielding noise from the upper floor properties at Stretton Mansions and Hughes House.
<table>
<thead>
<tr>
<th>Land quality</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Site location</td>
<td>Grid Reference: 537406, 178013</td>
</tr>
<tr>
<td>Current site use</td>
<td>AHoy Boating Centre</td>
</tr>
<tr>
<td>Topography</td>
<td>Majority of site is flat. Potential jetty sloping into the Thames in the western side of the site.</td>
</tr>
<tr>
<td>Field evidence of Contamination (ie, visual/olfactory)</td>
<td>None identified at this stage.</td>
</tr>
<tr>
<td>Current surrounding land use (immediately adjacent to site)</td>
<td>North: River and landing stage / Jetty / Wharf East: Block of flats (7 storeys) and Glaisher Street (Thames Path) South: Borthwick Street, 5 Storey Residential properties West: Industrial Site (Electricity substation)</td>
</tr>
</tbody>
</table>

**Geological and hydrogeological information**

<table>
<thead>
<tr>
<th>Geological strata</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Superficial Geology and Made Ground (8 m)</td>
<td></td>
</tr>
<tr>
<td>Lambeth Group (3 m)</td>
<td></td>
</tr>
<tr>
<td>Thanet Sand (15 m)</td>
<td></td>
</tr>
<tr>
<td>Chalk (to beyond the depth of shaft)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Underlying aquifer classes (Major/Minor/Non-aquifer)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-aquifer: London Clay</td>
<td></td>
</tr>
<tr>
<td>Minor aquifer: River Terrace Deposits, Lambeth Group, Thanet Sands</td>
<td></td>
</tr>
<tr>
<td>Major aquifer: Chalk</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Groundwater vulnerability/Soil Classification (High/Intermediate/Low/Not applicable)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>River Terrace Deposits - Minor Aquifer</td>
<td></td>
</tr>
<tr>
<td>High Leaching Potential of Soils (U)¹</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source Protection Zone details</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not located in a Source Protection Zone defined by EA</td>
<td></td>
</tr>
</tbody>
</table>

| Surface water receptors | River Thames (directly adjacent to the site) |

**Relevant information within a 250m radius of the site**

<table>
<thead>
<tr>
<th>Site history information and historical potentially contaminating activities (based on mapping data)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Onsite</td>
<td></td>
</tr>
<tr>
<td>• Drawing dock 1862</td>
<td></td>
</tr>
<tr>
<td>• Wharves 1862 – 1909</td>
<td></td>
</tr>
<tr>
<td>• The Ahoy Centre – present</td>
<td></td>
</tr>
<tr>
<td>• Area within site boundary cleared due to enemy action 1958</td>
<td></td>
</tr>
<tr>
<td>• Sawmilling, planning and impregnation – treatment of timber 1920 – 1949</td>
<td></td>
</tr>
<tr>
<td>Offsite</td>
<td></td>
</tr>
<tr>
<td>• Foundry and engineering works (directly adjacent to site, west) 1862 – 1896</td>
<td></td>
</tr>
<tr>
<td>• Tin box and packing case works (directly adjacent to site, west) 1909 – 1948</td>
<td></td>
</tr>
<tr>
<td>• Deptford power stations (directly adjacent to site, west) 1949 –</td>
<td></td>
</tr>
</tbody>
</table>
## Land quality

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976</td>
<td>Power station (directly adjacent to site, southeast) 1947 – 1972</td>
</tr>
<tr>
<td></td>
<td>Numerous electrical substations (closest located directly adjacent to site, west) 1949 – present</td>
</tr>
<tr>
<td></td>
<td>Transport manufacture and repair (closest located directly adjacent to site, west) 1882 – 1919</td>
</tr>
<tr>
<td></td>
<td>Factory/works – use not specified (directly adjacent to site, east) 1938 – 1949</td>
</tr>
<tr>
<td></td>
<td>Transformers (11m west) 1947</td>
</tr>
<tr>
<td></td>
<td>Dry dock (18m east) 1862 – 1909</td>
</tr>
<tr>
<td></td>
<td>Foundry (22m southwest) 1862 – 1909</td>
</tr>
<tr>
<td></td>
<td>Numerous tanks – contents unknown, potentially fuel related (closest located 22m west) 1943 – 1971</td>
</tr>
<tr>
<td></td>
<td>Historical building plans listing gas industry (closest located 39m southeast) 1943 – 1967</td>
</tr>
<tr>
<td></td>
<td>Graving dock (46m east) 1862 – 1909</td>
</tr>
<tr>
<td></td>
<td>Borthwick wharf (63m west) 1947 – present</td>
</tr>
<tr>
<td></td>
<td>Historical building plans listing oil storage (closest located 87m southeast) 1930 – 1967</td>
</tr>
<tr>
<td></td>
<td>Floor cloth works (104m south) 1862</td>
</tr>
<tr>
<td></td>
<td>Marine boiler works (123m west) 1862 – 1896</td>
</tr>
<tr>
<td></td>
<td>Deptford Green dockyard – iron shipbuilding (123m southeast) 1862</td>
</tr>
<tr>
<td></td>
<td>Payne’s wharf (123m west) 1947 – present</td>
</tr>
<tr>
<td></td>
<td>Deptford power stations (151m southeast) 1947 – 1976</td>
</tr>
<tr>
<td></td>
<td>Patent fuel company’s wharf (174m southeast) 1862</td>
</tr>
<tr>
<td></td>
<td>Stowage wharf (184m southeast) 1896 – 1909</td>
</tr>
<tr>
<td></td>
<td>Fuel station (235m southeast) – present</td>
</tr>
<tr>
<td></td>
<td>Engineering works (245m southeast) 1909 – 1947</td>
</tr>
<tr>
<td></td>
<td>Sawing and desiccating works (245m southeast) 1909</td>
</tr>
<tr>
<td></td>
<td>General steam navigation company’s works (245m southeast) 1862 – 1896</td>
</tr>
</tbody>
</table>

### Pollution incidents to controlled waters
- One:
  - Oils – unknown, minor incident (201m southeast)

### Landfill sites
- None

### Other waste sites
- None

### Registered radioactive substances
- None

### Fuel stations/Depots
- One fuel station:
  - Jet, open (235m southeast)

### Contemporary trade entries
- No data
<table>
<thead>
<tr>
<th>Land quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site classification based on above information</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity</th>
<th>Distance and direction to site</th>
<th>Contaminants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential site contaminants derived from surface sources (eg, contaminants in made ground)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Some potential for made ground from potential filling operations during development</td>
<td>1) Onsite and directly adjacent to site</td>
<td>1) Metals, TPH, PAHs</td>
</tr>
<tr>
<td>2) Wharf operations (transport support and cargo operations)</td>
<td>2) Onsite and directly adjacent to site</td>
<td>2) Metals, TPH, PAHs</td>
</tr>
<tr>
<td>3) Sawmilling, planning and impregnation</td>
<td>3) Onsite and directly adjacent to site</td>
<td>3) Metals, TPH, PAHs</td>
</tr>
<tr>
<td>Potential site contaminants derived from offsite sources and transported to site</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Foundry and engineering works</td>
<td>1) Directly adjacent to site, west</td>
<td>1) Metals, TPH, PAHs, PCBs, Solvents</td>
</tr>
<tr>
<td>2) Tin box works</td>
<td>2) Directly adjacent to site, west</td>
<td>2) Metals, TPH, PAHs</td>
</tr>
<tr>
<td>3) Power stations</td>
<td>3) Closest located directly adjacent to site, west and southeast</td>
<td>3) Metals, TPH, PAHs, PCBs</td>
</tr>
<tr>
<td>4) Electrical substation</td>
<td>4) Closest located directly adjacent to site</td>
<td>4) PCBs</td>
</tr>
<tr>
<td>5) Transport manufacture and repair</td>
<td>5) Closest located directly adjacent to site</td>
<td>5) Metals, TPH, PAHs</td>
</tr>
<tr>
<td>6) Factory/works – use not specified</td>
<td>6) Closest located directly adjacent to site</td>
<td>6) Metals, TPH, PAHs</td>
</tr>
<tr>
<td>7) Dock/wharf operations (transport support and cargo handling)</td>
<td>7) Closest located directly adjacent to site</td>
<td>7) Metals, TPH, PAHs</td>
</tr>
<tr>
<td>8) Tanks – contents unknown</td>
<td>8) Closest located 18m east</td>
<td>8) Metals, TPH, PAHs, Solvents</td>
</tr>
<tr>
<td>9) Gas industry</td>
<td>9) Closest located 22m west</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9) Closest located 39m southeast</td>
<td></td>
</tr>
</tbody>
</table>

Identified source-pathway-receptor risk assessment at CSO construction stage (Conceptual Site Model)²
- Source 1: A1, A2, A3, B4
- Source 2: D6, E1, F7

Contamination category
- Category 2 – Assessed as Moderate Risk
### Land quality

**Summary:** The site is considered to be less suitable based on the moderate potential for contamination of the site to have occurred, specifically from the wharf operations onsite and the fuel tanks, foundry operations, power stations and gas industry in the near vicinity of the site. This has the potential to impact on site workers and adjacent human receptors through direct contact exposure pathways, and to a lesser extent volatilisation. Additionally, the potential exists for contaminants to be drawn to the deeper Chalk aquifer and for migration to surface water receptors to occur through shallow groundwater transport. There is the potential for unexploded ordnance to be present onsite as historical information indicates that an area of the site has previously been cleared (1958) following wartime bombing. It would therefore be prudent for a UXO survey (or equivalent) to be conducted at the site if not done so already.

**Notes:**

1. Soil information for urban areas is based on fewer observations than elsewhere in the country. Therefore a worst case vulnerability (H) is assumed until proven otherwise.

2. Refer to schematic Conceptual Site Model for explanation of site-specific source-pathway-receptors

3. From BGS Geological Model giving average ground condition profile. Local near surface conditions may vary, particularly within the river.
Contacts

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For information about acceptance of our application and the examination process please contact the Planning Inspectorate.

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