



# Development Consent Order

Application Reference Number: WWO10001

## Documents for Certification September 2014

We, Lindsay Speed and Sarah Fairbrother hereby certify that this is a true copy of the environmental statement referred to in Article 61 (1) (f) of the Thames Water Utilities Limited (Thames Tideway Tunnel) Order 2014.

*Lindsay Speed*

*Sarah Fairbrother*

September 2014

**Thames  
Tideway Tunnel**



Creating a cleaner, healthier River Thames

Thames Tideway Tunnel  
Thames Water Utilities Limited



# Application for Development Consent

Application Reference Number: WWO10001

## Environmental Statement

Doc Ref: 6.2.22

### Volume 22: Earl Pumping Station figures

APFP Regulations 2009: Regulation 5(2)(a)

Hard copy available in  
Box **68** Folder **A**  
January 2013

Thames  
Tideway Tunnel   
Creating a cleaner, healthier River Thames

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## Thames Tideway Tunnel

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## Thames Tideway Tunnel

### Environmental Statement

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# Thames Tideway Tunnel

## Environmental Statement

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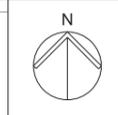
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## 1 Plans from the Book of Plans

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Table 1

Above ground permanent structure	Maximum height above finished ground level (Minimum heights are in brackets where applicable)
Ventilation column(s) serving the interception chamber	6.0m
Valve chamber(s)	4.0m
Drop shaft (Parapet)	5.0m
Ventilation structure(s) over shaft	7.0m (5.0m)
Ventilation column(s) serving the shaft	8.0m (4.8m)



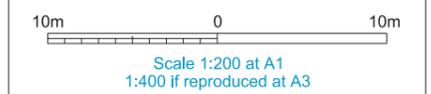
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Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

- Key:**
-  Limits of land to be acquired or used (LLAU)
  -  Zone within which all permanent site structures would be located
  -  Zone within which the shaft would be located
  -  Zone within which permanent above ground structures would be located (those listed in Table 1)
  -  Zone within which required landscaping would be located

- Notes:**
1. All dimensions and levels are approximate.
  2. The Site Works Parameter Key Plan identifies each zone independently.
  3. The zone within which the shaft would be located would include all permanent works including shaft walls (including appropriate allowances for construction tolerances) and if applicable under-reaming. Shaft construction temporary works may be located within or outside this zone provided they are located within the Limits of land to be acquired or used.



**FOR APPROVAL**

**Location**  
Earl Pumping Station  
London Borough of Lewisham

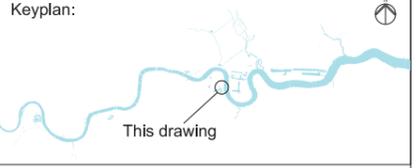
**Document Information**  
**Application for Development Consent**  
Site works parameter plan

Book of plans - section 22  
DCO-PP-21X-EARPS-220005  
January 2013





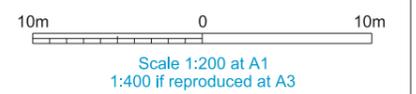
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- Key:**
- Limits of land to be acquired or used (LLAU)
  - Above ground structures to be removed
  - Below ground structures to be removed or infilled

- Notes:**
1. Minor items to be removed (e.g. barriers, bollards etc.) are not shown.
  2. General activities of site clearance such as removal of hardstanding and foundations, stripping of topsoil and clearance of minor vegetation not shown.



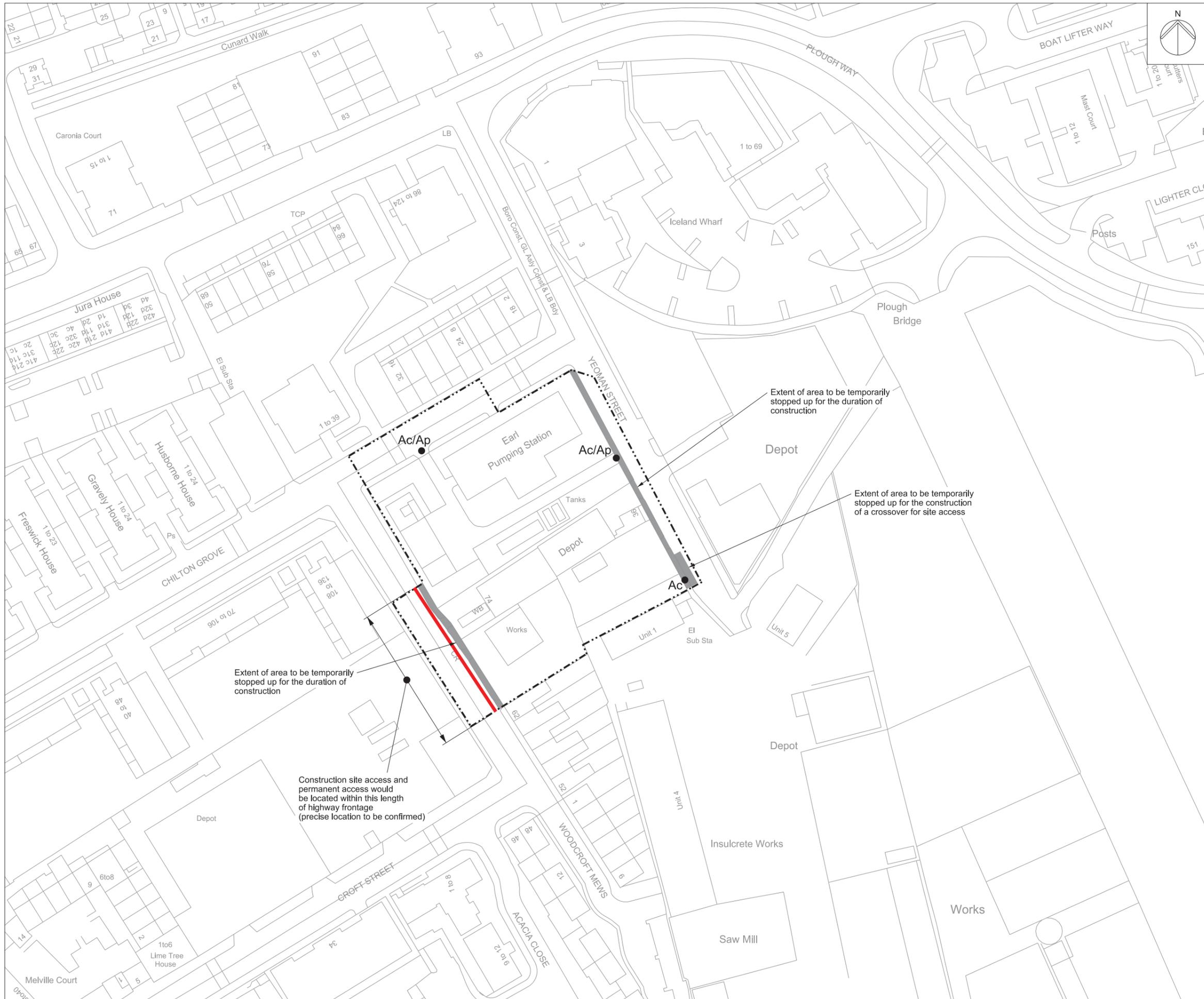
**FOR APPROVAL**

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

**Document Information**  
**Application for Development Consent**  
 Demolition and site clearance

Book of plans - section 22  
 DCO-PP-21X-EARPS-220004  
 January 2013





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- Key:**
- Limits of land to be acquired or used (LLAU)
  - Area of highway to be temporarily stopped up
  - Ap Access to permanent works
  - Ac Access to construction works
  - Highway frontage within which access would be located

- Notes:**
- This plan does not show stopping up and diversions of limited duration (eg hoarding erection, minor utility diversions and minor highway works).



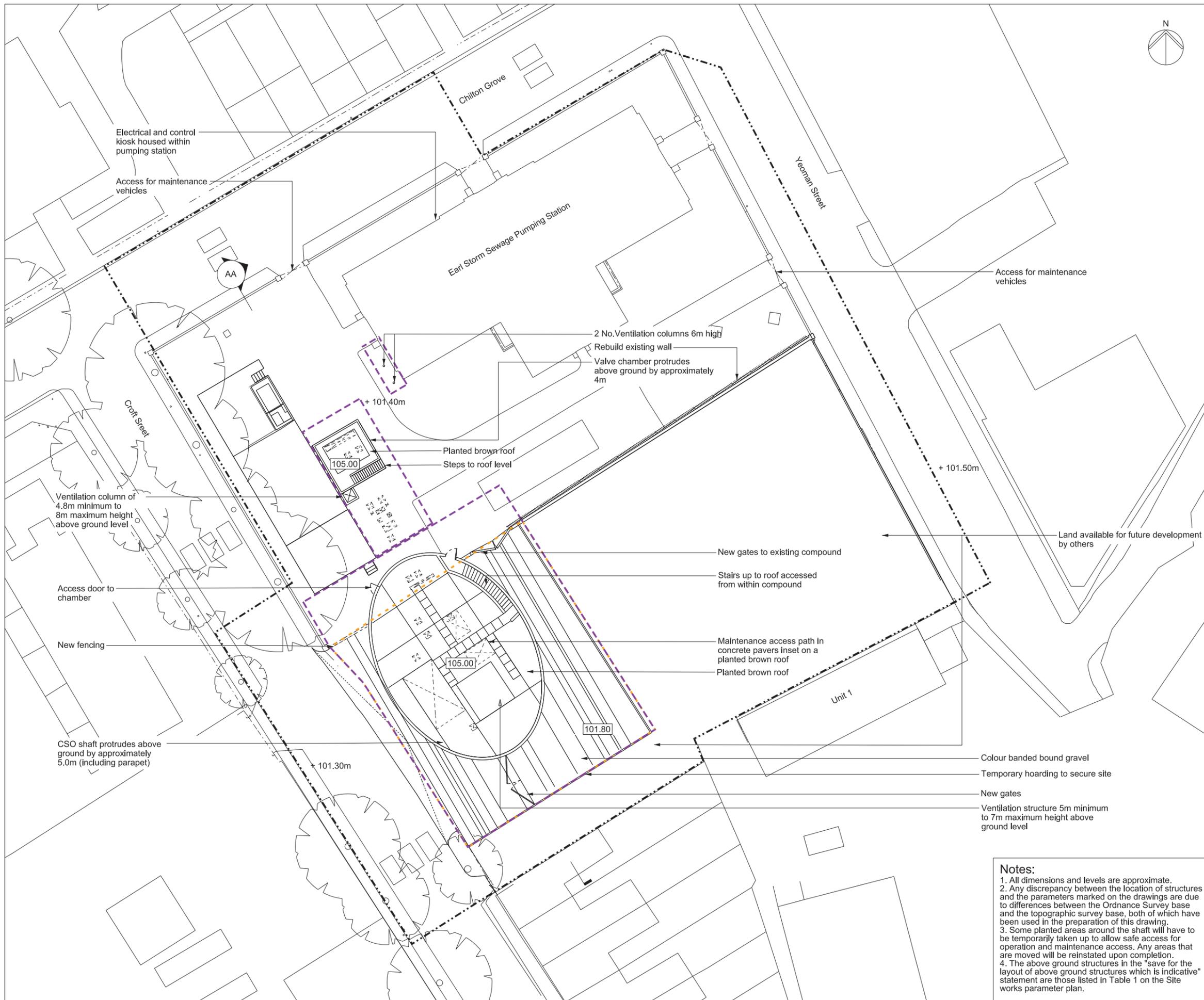
**FOR APPROVAL**

**Location**  
Earle Pumping Station  
London Borough of Lewisham

**Document Information**  
Application for Development Consent  
Access plan

Book of plans - section 22  
DCO-PP-21X-EARPS-220003  
January 2013





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- Key:**
- Limits of land to be acquired or used (LLAU)
  - Zone within which permanent above ground structures would be located
  - Zone within which required landscaping would be located
  - + 105.40m Existing levels (shown in metres above tunnel datum)
  - 105.40 Proposed levels (shown in metres above tunnel datum)
  - Existing trees within surveyed area (trunk sizes vary)



**ILLUSTRATIVE**  
Save for the scale of above ground structures which is indicative

**Location**  
Earl Pumping Station  
London Borough of Lewisham

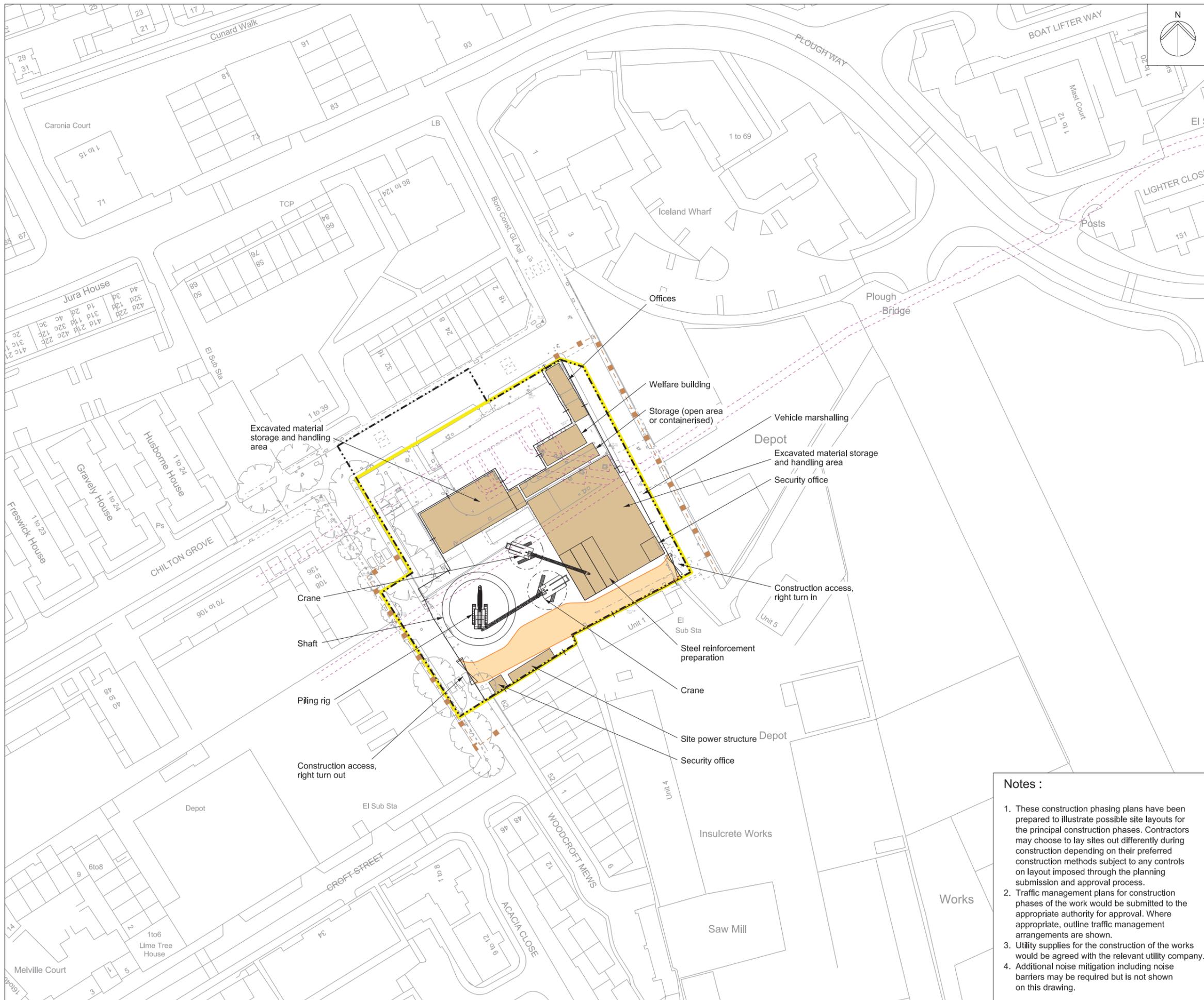
**Document Information**  
Application for Development Consent

Proposed  
Landscape plan  
Book of plans - section 22  
DCO-PP-21X-EARPS-220008  
January 2013

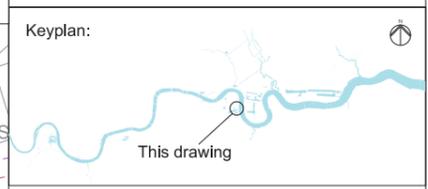


**Notes:**

1. All dimensions and levels are approximate.
2. Any discrepancy between the location of structures and the parameters marked on the drawings are due to differences between the Ordnance Survey base and the topographic survey base, both of which have been used in the preparation of this drawing.
3. Some planted areas around the shaft will have to be temporarily taken up to allow safe access for operation and maintenance access. Any areas that are moved will be reinstated upon completion.
4. The above ground structures in the "save for the layout of above ground structures which is indicative" statement are those listed in Table 1 on the Site works parameter plan.



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**Key:**

- Limits of land to be acquired or used (LLAU)
- Hoarding
- Maximum extent of working area
- Route of temporary diversion of footway
- Site access
- Access / haul route
- Existing sewers



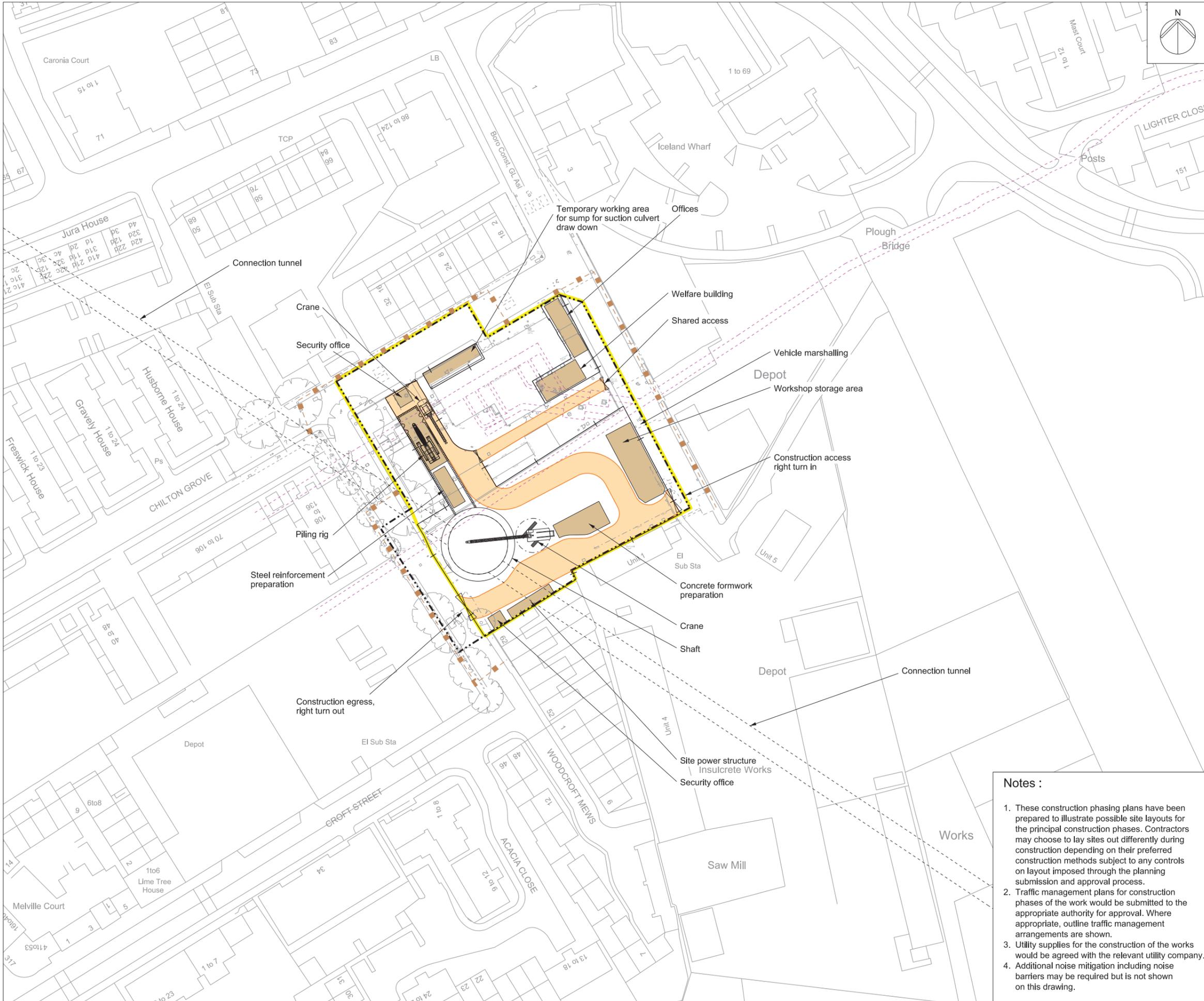
## ILLUSTRATIVE

- Notes :**
1. These construction phasing plans have been prepared to illustrate possible site layouts for the principal construction phases. Contractors may choose to lay sites out differently during construction depending on their preferred construction methods subject to any controls on layout imposed through the planning submission and approval process.
  2. Traffic management plans for construction phases of the work would be submitted to the appropriate authority for approval. Where appropriate, outline traffic management arrangements are shown.
  3. Utility supplies for the construction of the works would be agreed with the relevant utility company.
  4. Additional noise mitigation including noise barriers may be required but is not shown on this drawing.

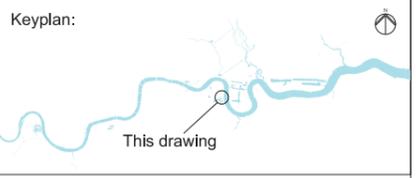
**Location**  
Earle Pumping Station  
London Borough of Lewisham

**Document Information**  
**Application for Development Consent**  
Construction phases - phase 1  
Site setup and shaft construction  
Book of plans - section 22  
DCO-PP-21X-EARPS-220012  
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- Key:**
- Limits of land to be acquired or used (LLAU)
  - Hoarding
  - Maximum extent of working area
  - Route of temporary diversion of footway
  - Site access
  - Access / haul route
  - Existing sewers

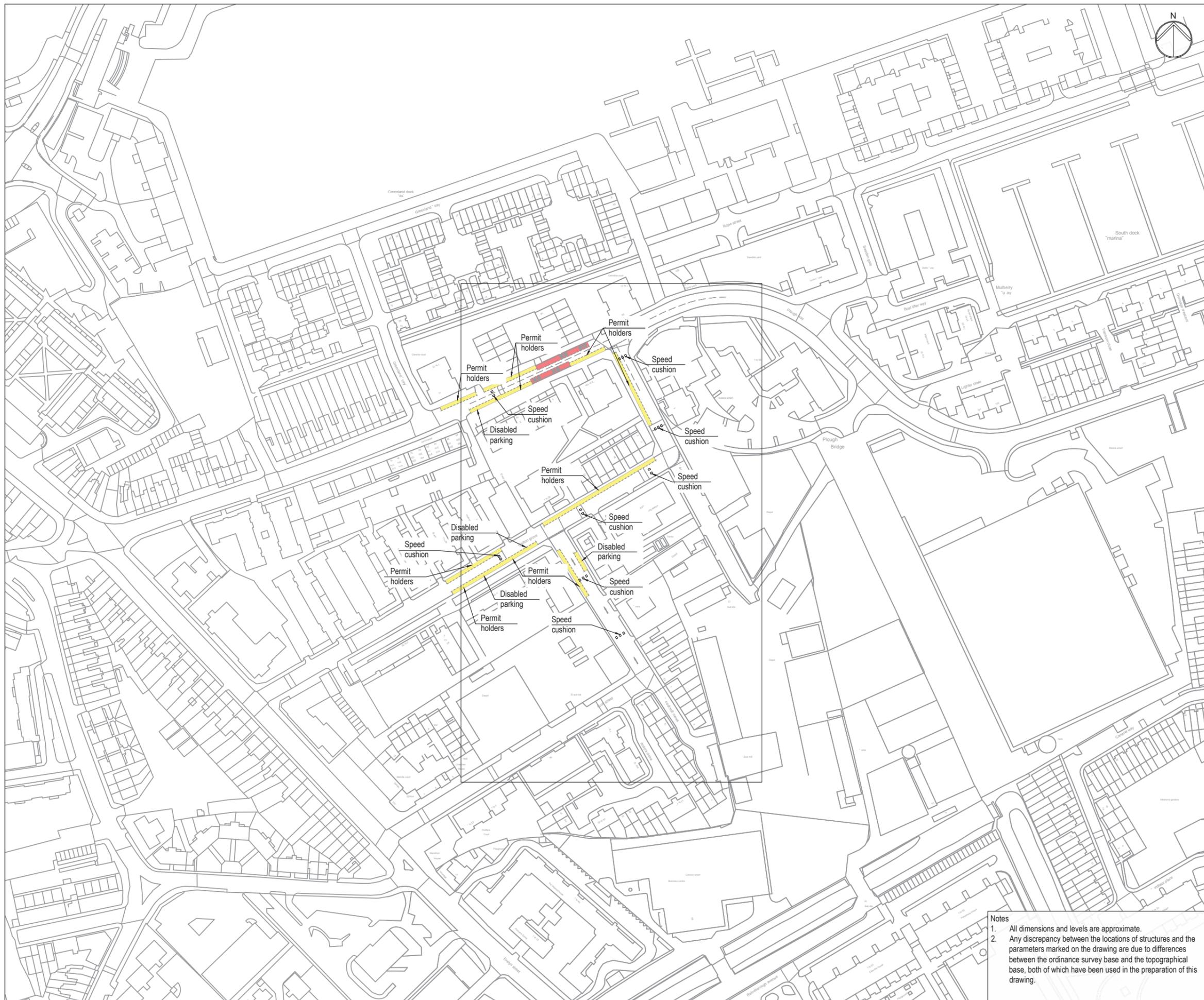


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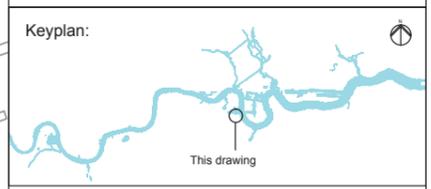
- Notes :**
1. These construction phasing plans have been prepared to illustrate possible site layouts for the principal construction phases. Contractors may choose to lay sites out differently during construction depending on their preferred construction methods subject to any controls on layout imposed through the planning submission and approval process.
  2. Traffic management plans for construction phases of the work would be submitted to the appropriate authority for approval. Where appropriate, outline traffic management arrangements are shown.
  3. Utility supplies for the construction of the works would be agreed with the relevant utility company.
  4. Additional noise mitigation including noise barriers may be required but is not shown on this drawing.

**Location**  
Earl Pumping Station  
London Borough of Lewisham

**Document Information**  
**Application for Development Consent**  
Construction phases - phase 2  
Construction of other structures  
Book of plans - section 22  
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January 2013



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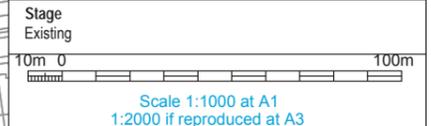
**Key**  
— On street parking  
— Bus stop / stand

**On street parking**  
 Disabled parking  
 disabled parking only  
 Permit holders  
 resident permit holders only  
 mon - fri 8:00am - 6:30pm  
 Car club  
 car club users only  
 On street parking  
 unrestricted parking  
 at all times

**Standards**

- Design manual for roads and bridges, DfT, 1992
- Traffic signs regulations & general directions, TSO, 2002
- Traffic signs manual, DfT, 2006
- Manual for streets, DfT, 2007
- Manual for streets 2, CIHT, 2010
- Designing for deliveries, Fta, 1998
- Cycle infrastructure design Ltn 2/08, DfT, 2008
- Design of pedestrian crossings Ltn 2/95, DfT, 1995
- Guidance for the use of tactile paving, DfT, 1998
- Accessible bus stop design guidance, TfL, 2006

**Stage**  
 Existing



## FOR INFORMATION

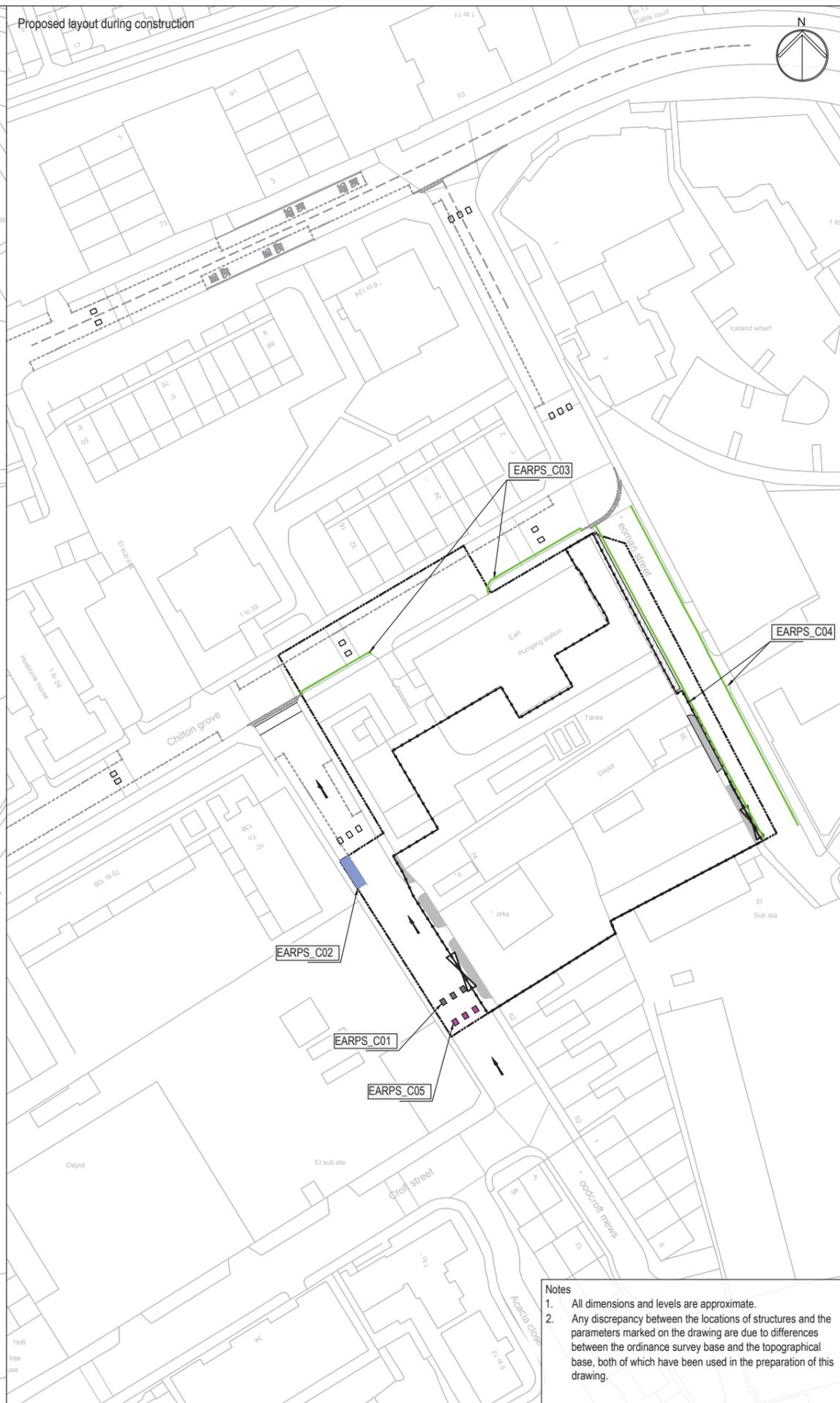
**Location**  
 Earl pumping station  
 London Borough of Lewisham

**Document Information**  
 Application for Development Consent  
 Existing highway layout

DCO-PP-21X-EARPS-220015  
 January 2013



**Notes**  
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Keyplan:

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**Key**

Existing

- On street parking
- Bus stop / stand
- Pedestrian crossing

Revised

- L.L.A.U.
- Removal of footway
- Suspended on street parking
- See schedule of works
- Hoarding line
- Site access
- Removal of speed cushion
- Temporary parking restrictions
- New speed cushion
- Temporary footway restrictions

Disabled parking disabled parking only  
 Permit holders resident permit holders only  
 mon - fri 8:00am - 6:30pm

Car club car club users only  
 On street parking unrestricted parking at all times

**Standards**

- Design manual for roads and bridges, dft, 1992
- Traffic signs regulations & general directions, tso, 2002
- Traffic signs manual, dft, 2006
- Manual for streets, dft, 2007
- Manual for streets 2, cilt, 2010
- Designing for deliveries, fta, 1998
- Cycle infrastructure design ltn 2/08, dft, 2008
- Design of pedestrian crossings ltn 2/95, dft, 1995
- Guidance for the use of tactile paving, dft, 1998
- Accessible bus stop design guidance, tfl, 2006

**Stage**  
 Construction phases

10m 0 40m  
 Scale 1:500 at A1  
 1:1000 if reproduced at A3

**ILLUSTRATIVE**

**Location**  
 Earl pumping station  
 London Borough of Lewisham

**Document Information**  
 Application for Development Consent  
 Highway layout during construction - Phase 1

DCO-PP-21X-EARPS-220016  
 January 2013

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Keyplan:

Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

**Key**

Existing  
 Yellow line: On street parking  
 Red line: Bus stop / stand

Revised  
 Dashed line: L.L.A.U.  
 Blue hatched area: Reinstated on street parking  
 Blue line: Suspended on street parking  
 Boxed area: See schedule of works  
 Line with arrows: Hoarding line  
 Square with X: Site access  
 Square: Removal of speed cushion  
 Green line: Temporary parking restrictions  
 Dotted line: Temporary footway restrictions  
 Grey line: Removal of footway

**On street parking**  
 Disabled parking  
 disabled parking only  
 Permit holders  
 resident permit holders  
 only  
 mon - fri 8:00am - 6.30pm  
 Car club  
 car club users only  
 On street parking  
 unrestricted parking  
 at all times

**Standards**

- Design manual for roads and bridges, Dft, 1992
- Traffic signs regulations & general directions, TSO, 2002
- Traffic signs manual, Dft, 2006
- Manual for streets, Dft, 2007
- Manual for streets 2, CIHT, 2010
- Designing for deliveries, Fta, 1998
- Cycle infrastructure design Ltn 2/08, Dft, 2008
- Design of pedestrian crossings Ltn 2/95, Dft, 1995
- Guidance for the use of tactile paving, Dft, 1998
- Accessible bus stop design guidance, TfL, 2006

**Stage**  
 Construction phases

Scale 1:500 at A1  
 1:1000 if reproduced at A3

**ILLUSTRATIVE**

**Location**  
 Earl pumping station  
 London Borough of Lewisham

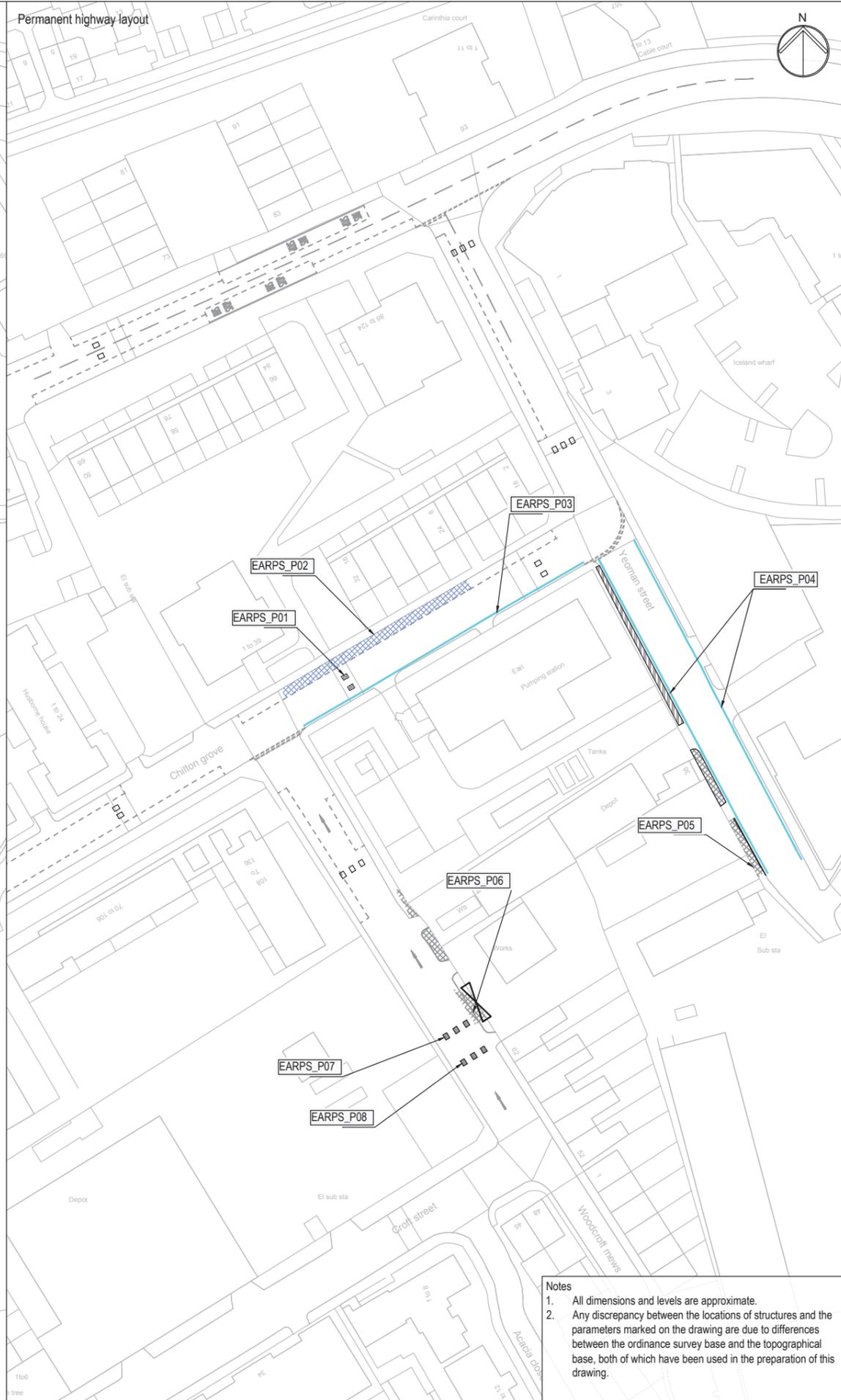
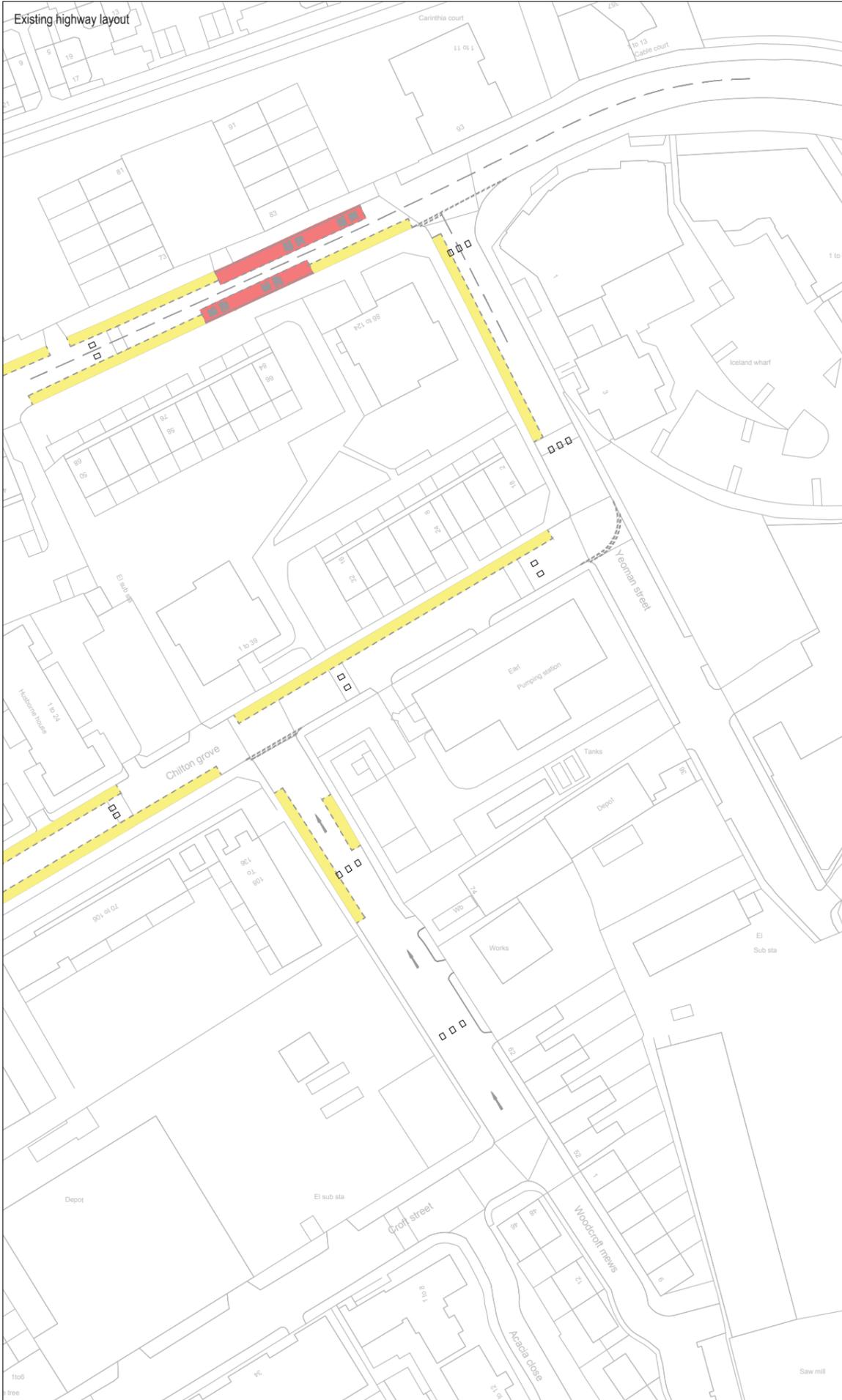
**Document Information**  
 Application for Development Consent  
 Highway layout during construction - Phase 2

DCO-PP-21X-EARPS-220017  
 January 2013

**Notes**

1. All dimensions and levels are approximate.
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Keyplan:

Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

**Key**

**Existing**

- On street parking
- Bus stop / stand

**Revised**

- Reinstated footway
- Reinstated carriageway
- Reinstated on street parking
- See schedule of works
- Reinstated speed cushion
- Remove temporary parking restrictions
- Site access
- Removal of speed cushion
- Remove temporary footway restrictions

**On street parking**

Disabled parking  
disabled parking only

Permit holders  
resident permit holders only  
mon - fri 8:00am - 6.30pm

Car club  
car club users only

On street parking  
unrestricted parking  
at all times

**Standards**

- Design manual for roads and bridges, Dft, 1992
- Traffic signs regulations & general directions, TSO, 2002
- Traffic signs manual, Dft, 2006
- Manual for streets, Dft, 2007
- Manual for streets 2, CIHT, 2010
- Designing for deliveries, Fta, 1998
- Cycle infrastructure design Ltn 2/08, Dft, 2008
- Design of pedestrian crossings Ltn 2/95, Dft, 1995
- Guidance for the use of tactile paving, Dft, 1998
- Accessible bus stop design guidance, TfL, 2006

**Stage**  
Permanent

10m 0 40m  
Scale 1:500 at A1  
1:1000 if reproduced at A3

**ILLUSTRATIVE**

**Location**  
Earl pumping station  
London Borough of Lewisham

**Document Information**  
Application for Development Consent  
Permanent highway layout

DCO-PP-21X-EARPS-220018  
January 2013

**Notes**

1. All dimensions and levels are approximate.
2. Any discrepancy between the locations of structures and the parameters marked on the drawing are due to differences between the ordnance survey base and the topographical base, both of which have been used in the preparation of this drawing.

## 2 Environmental impact assessment figures

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Keyplan:



Key

- Limits of Land to be Acquired or Used
- Local Authority Boundary
- River Thames



Scale 1 : 2,500 at A3

## FOR INFORMATION

Location

**Earl Pumping Station**  
London Borough of Lewisham

Document Information

**Environmental Statement**

Site location plan  
Vol. 22 Figure 2.1.1

1PL03-MG-00714  
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### Key

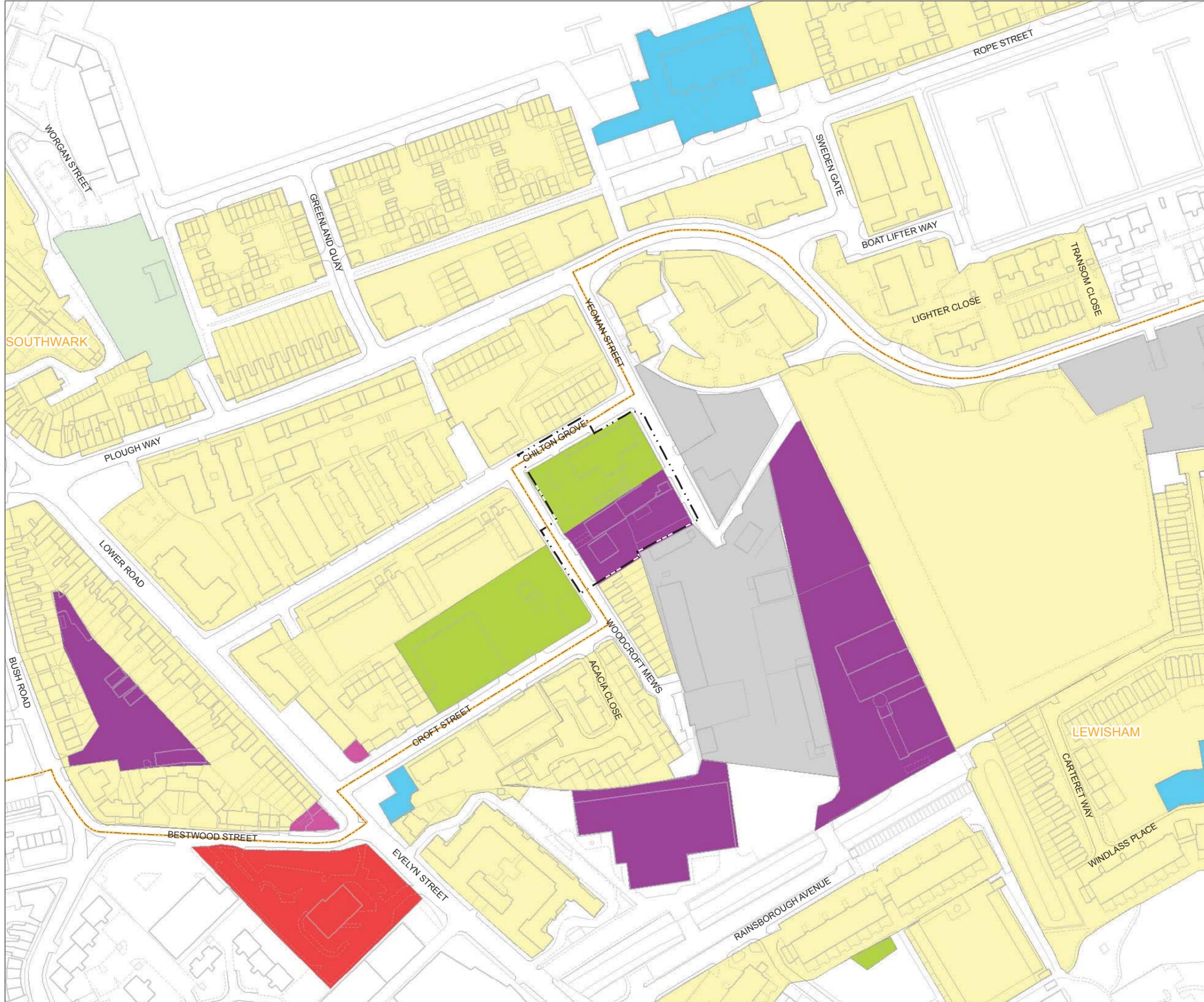
- Limits of Land to be Acquired or Used
- Local Authority Boundary

### Land Use

- Class A1-A5 (Shops, Financial & Professional Services, Restaurants, Drinking Establishments and Hot Food Takeaways)
- Class B1 (Business (Offices except A2) Research and Development, Light Industry)
- Class B2-B8 (General Industrial / Storage or Distribution)
- Class C3-C4 (Dwelling Houses)
- Class D1-D2 (Non Residential Institutions (Community Facilities) and Assembly and Leisure)
- Mixed Use
- Other
- Open Space



Scale 1 : 2,000 at A3



## FOR INFORMATION

**Location**  
Earl Pumping Station  
London Borough of Lewisham

**Document Information**  
Environmental Statement

Land use  
Vol. 22 Figure 2.1.2

1PL03-MG-00765  
January 2013



Keyplan:



Key

- Limits of Land to be Acquired or Used
- Listed Building Area
- LPA Archaeological Area
- Local Authority Boundary
- River Thames
- Sites of Importance for Nature Conservation (SINC)**
- Borough Importance
- Local Importance



Scale 1 : 2,000 at A3

## FOR INFORMATION

[Location](#)

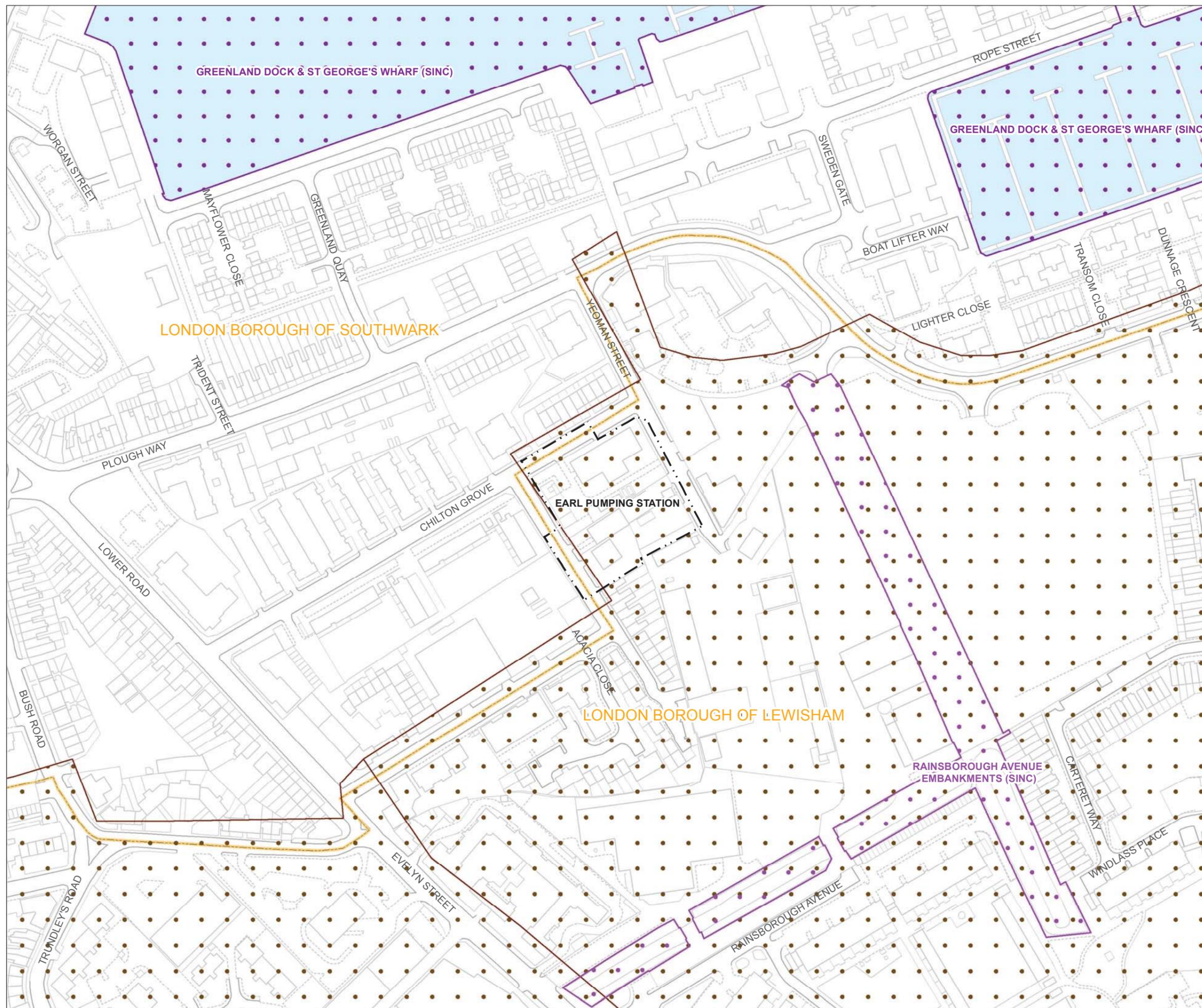
**Earl Pumping Station**  
London Borough of Lewisham

[Document Information](#)

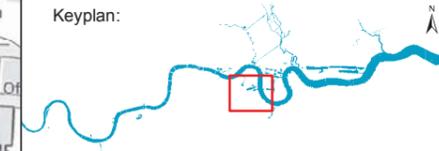
**Environmental Statement**

Environmental setting  
Vol. 22 Figure 2.1.3

1PL03-MG-00685  
January 2013



Keyplan:



Key

- Planning Application
- Limits of Land to be Acquired or Used
- Planning Application (1km Boundary)
- Local Authority Boundary

Note: This plan does not show the full extent for each planning application, but a single point within the application site.



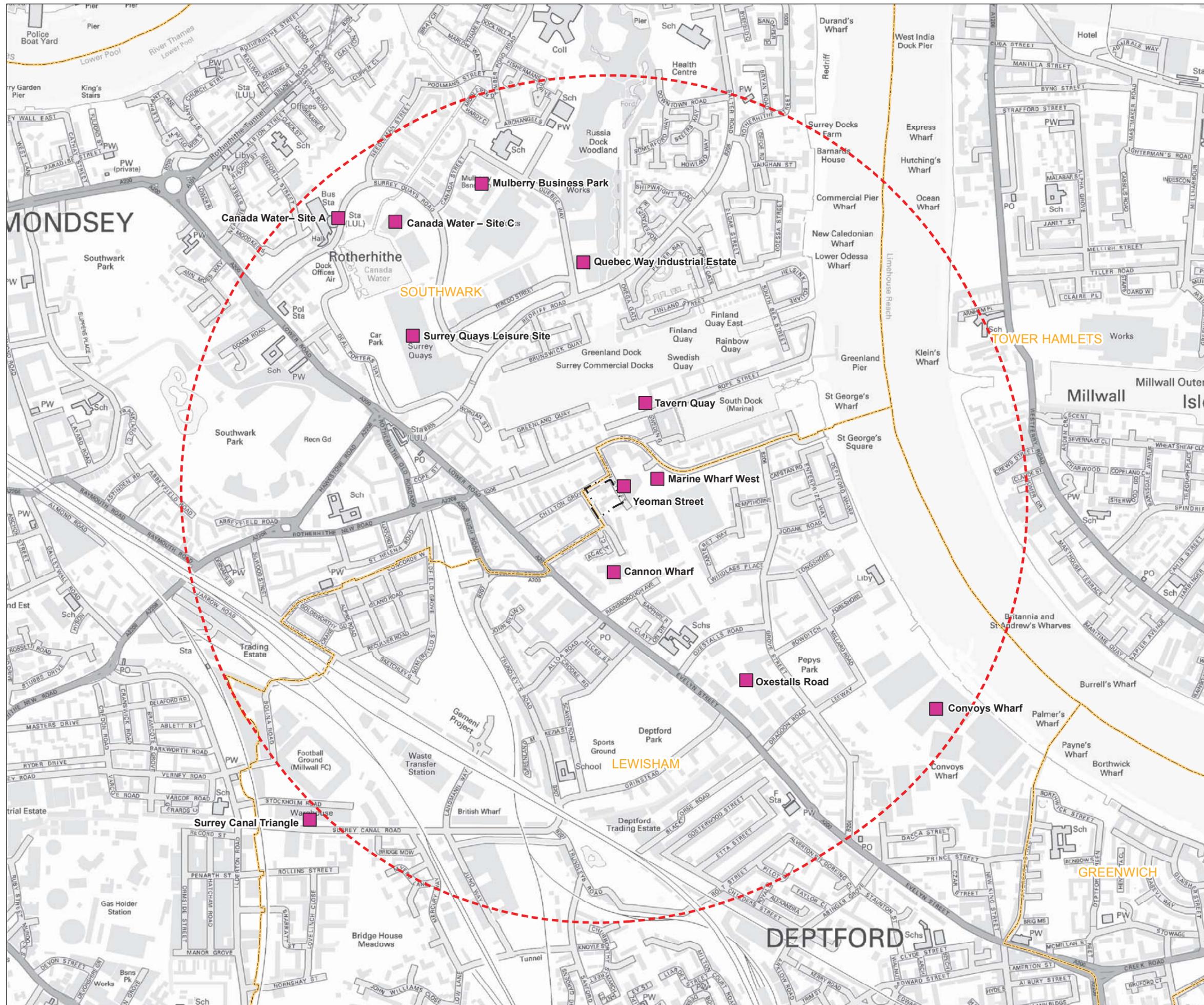
Scale 1 : 9,000 at A3

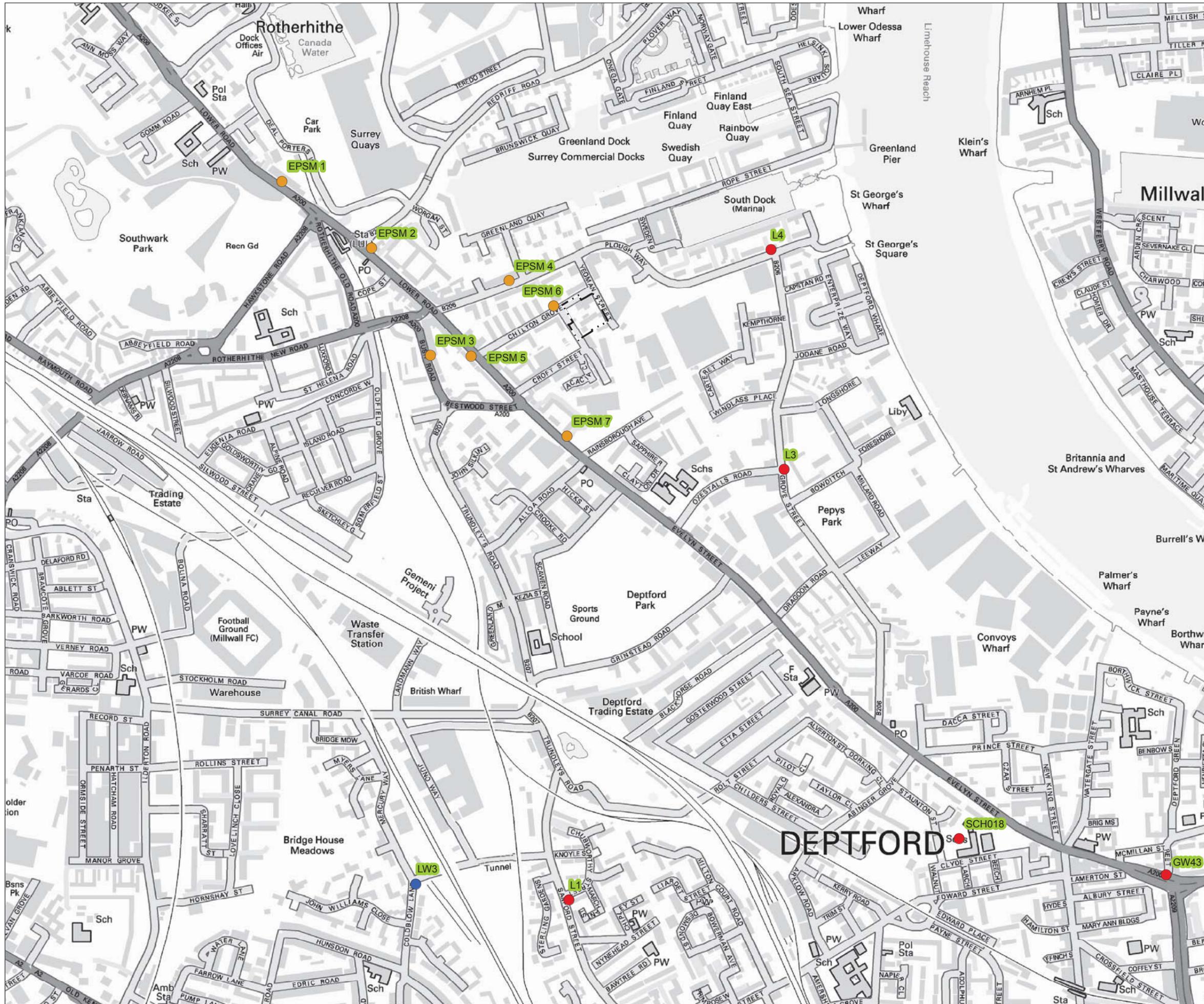
## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Boroughs of Lewisham & Southwark

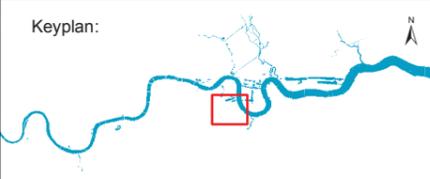
**Document Information**  
**Environmental Statement**

Base case and cumulative development projects  
 Vol. 22 Figure 3.5.1  
 1PL03-MG-00737  
 January 2013





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- Key**
- Limits of Land to be Acquired or Used
  - Existing Local Authority Continuous Monitors
  - Existing Local Authority Diffusion Tubes
  - New Diffusion Tubes (Project)



## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Boroughs of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
 Air quality and odour - air quality monitoring sites  
 Vol.22 Figure 4.4.1  
 1PL03-AQ-10893  
 January 2013





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- Key
- Limits of Land to be Acquired or Used
  - H<sub>2</sub>S Monitoring Locations



## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Boroughs of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
 Air quality and odour - H<sub>2</sub>S monitoring locations  
 Vol.22 Figure 4.4.2  
 1PL03-AQ-10894  
 January 2013





**Key**

- Limits of Land to be Acquired or Used
- Modelled Receptors

Note: The receptors are selected on the basis that they are representative of sensitive land uses closest to the site.

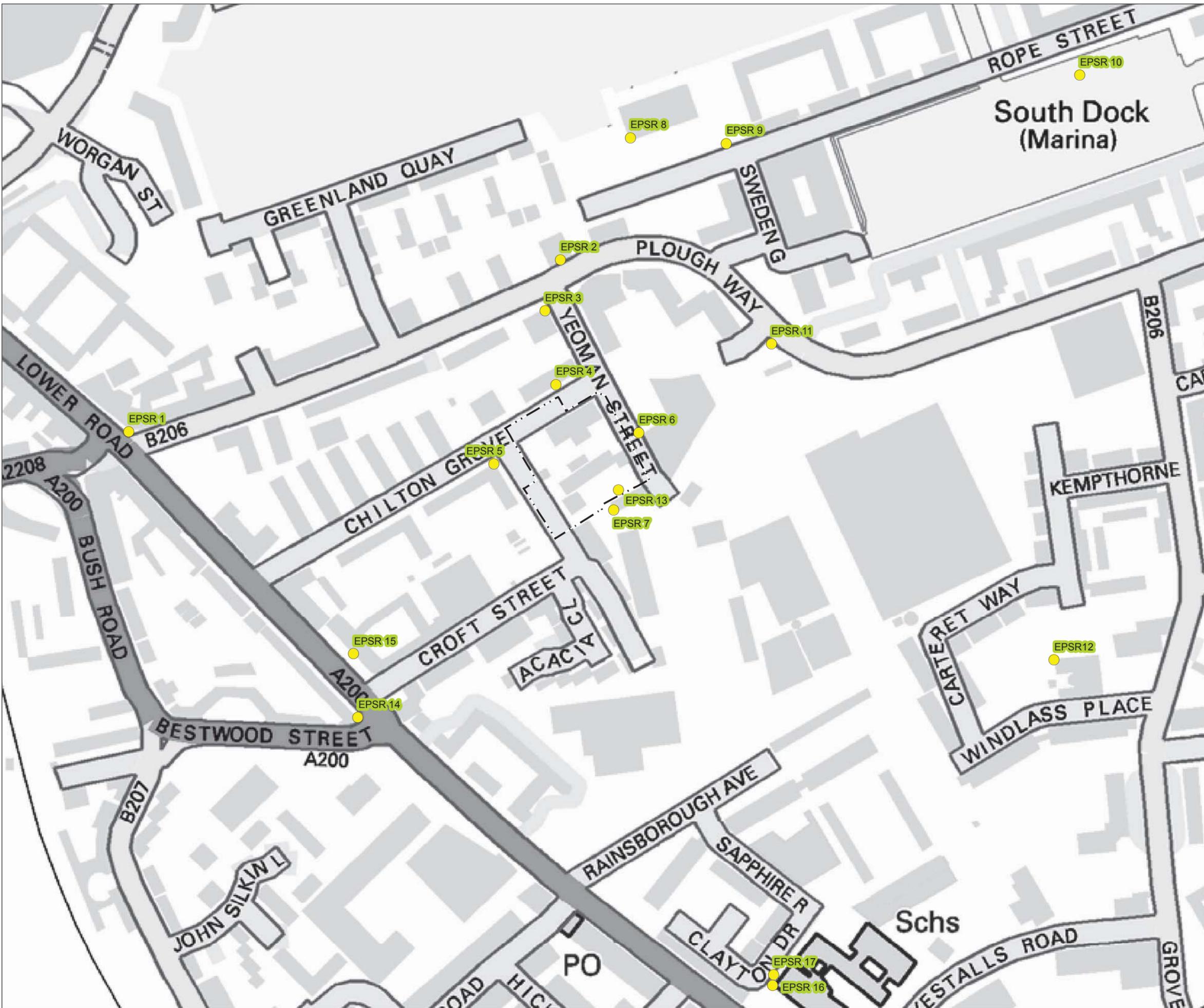
- EPSR 1 - Plough Way (Commercial)
- EPSR 2 - Plough Way (Residential)
- EPSR 3 - Yeoman Street (Residential)
- EPSR 4 - Chilton Grove
- EPSR 5 - Croft Street
- EPSR 6 - Yeoman Street (Proposed)
- EPSR 7 - Industrial & Storage Distribution
- EPSR 8 - Surrey Docks Water Sports Centre
- EPSR 9 - Tavern Quay (Proposed)
- EPSR 10 - Theodorus, South Dock Marina
- EPSR 11 - Marine Wharf West (Proposed)
- EPSR 12 - The Grove Medical Centre
- EPSR 13 - Cannon Wharf (Proposed)
- EPSR 14 - Lower Road (Commercial)
- EPSR 15 - Rose Court Care Home
- EPSR 16 - Deptford Park Primary School (Building)
- EPSR 17 - Deptford Park Primary School (Playground)



## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Boroughs of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
 Air quality and odour - modelled air quality receptors  
 Vol.22 Figure 4.4.3  
 1PL03-AQ-10895  
 January 2013



# Surrey Commercial Docks

# Quay

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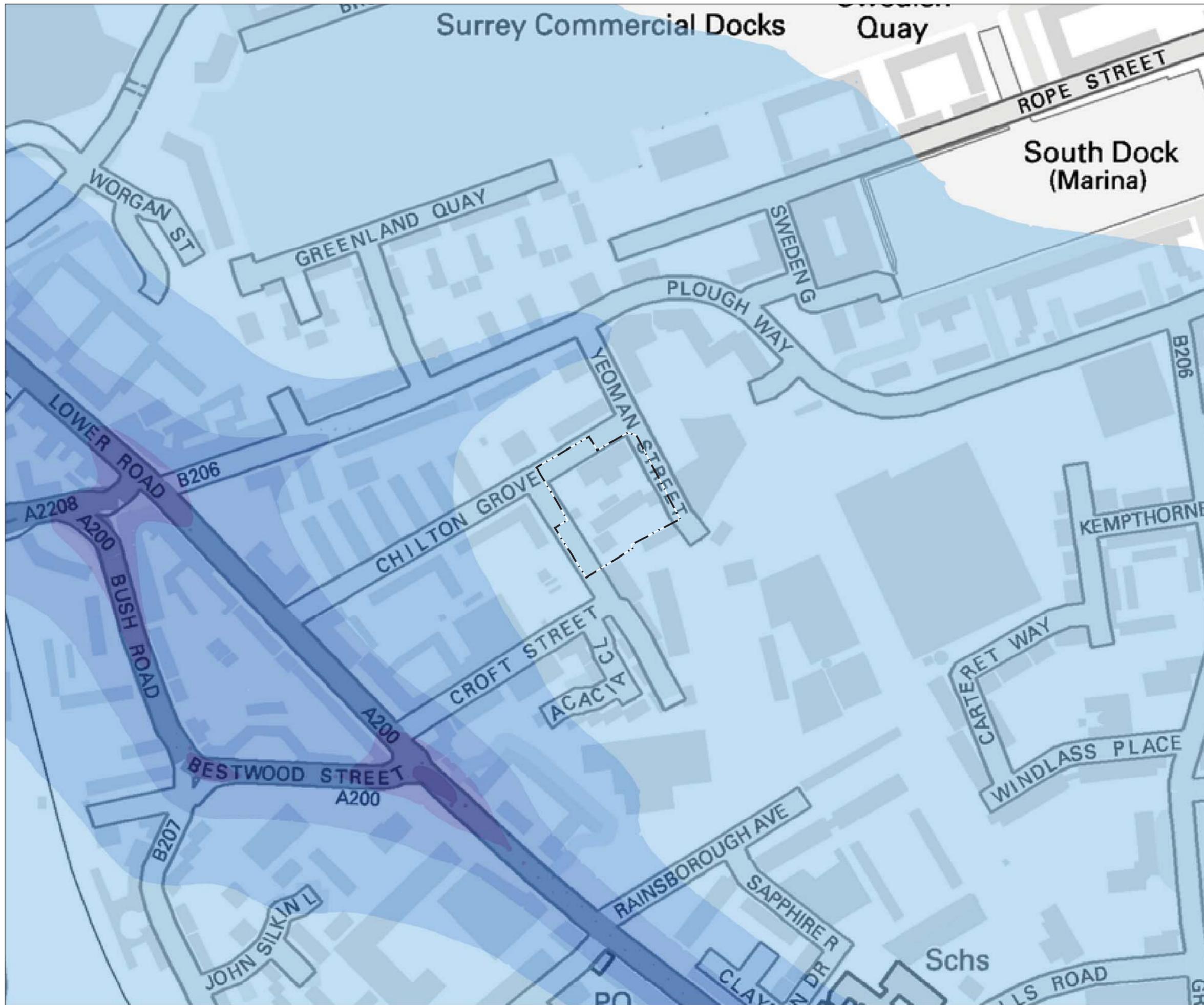


**Key**

- Limits of Land to be Acquired or Used

**Predicted Annual Mean NO<sub>2</sub> Concentration (µg/m<sup>3</sup>)**

< 40
40 - 50
50 - 60
60 - 80
80 - 100
100 - 120



## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Boroughs of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
 Air quality and odour - annual mean NO<sub>2</sub> for 2010 baseline  
 Vol.22 Figure 4.5.1  
 1PL03-AQ-10896  
 January 2013



# Surrey Commercial Docks

# Quay

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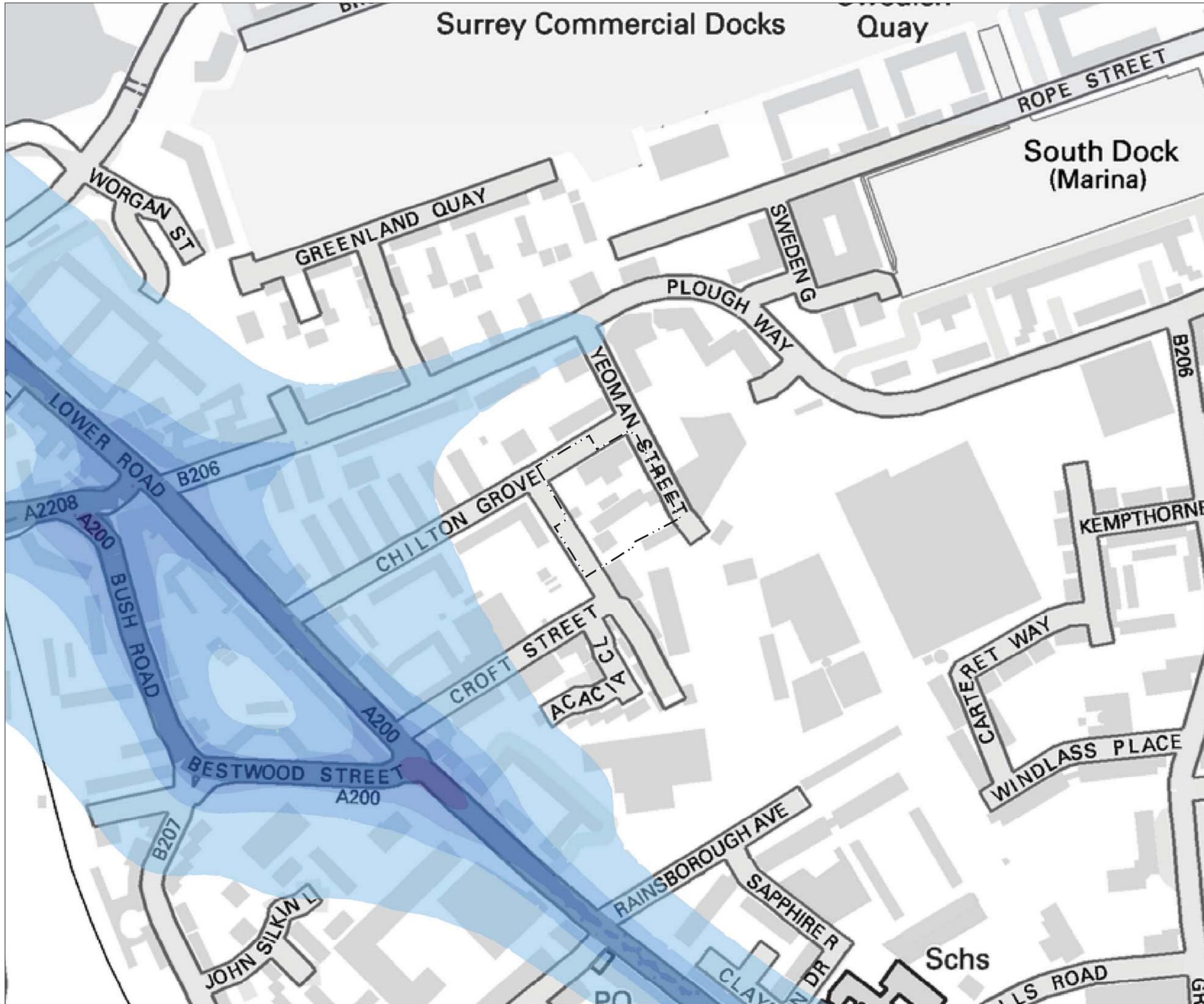


**Key**

- Limits of Land
- - - to be Acquired or Used

**Predicted Annual Mean NO<sub>2</sub> Concentration (µg/m<sup>3</sup>)**

< 40
40 - 50
50 - 60
60 - 80
80 - 100



## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Boroughs of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
 Air quality and odour - annual mean NO<sub>2</sub> for peak construction year base case  
 Vol.22 Figure 4.5.2  
 1PL03-AQ-10897  
 January 2013



# Surrey Commercial Docks

# Quay

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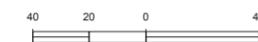


**Key**

- Limits of Land
- - - to be Acquired or Used

**Predicted Annual Mean NO<sub>2</sub> Concentration (µg/m<sup>3</sup>)**

< 40
40 - 50
50 - 60
60 - 80
80 - 100

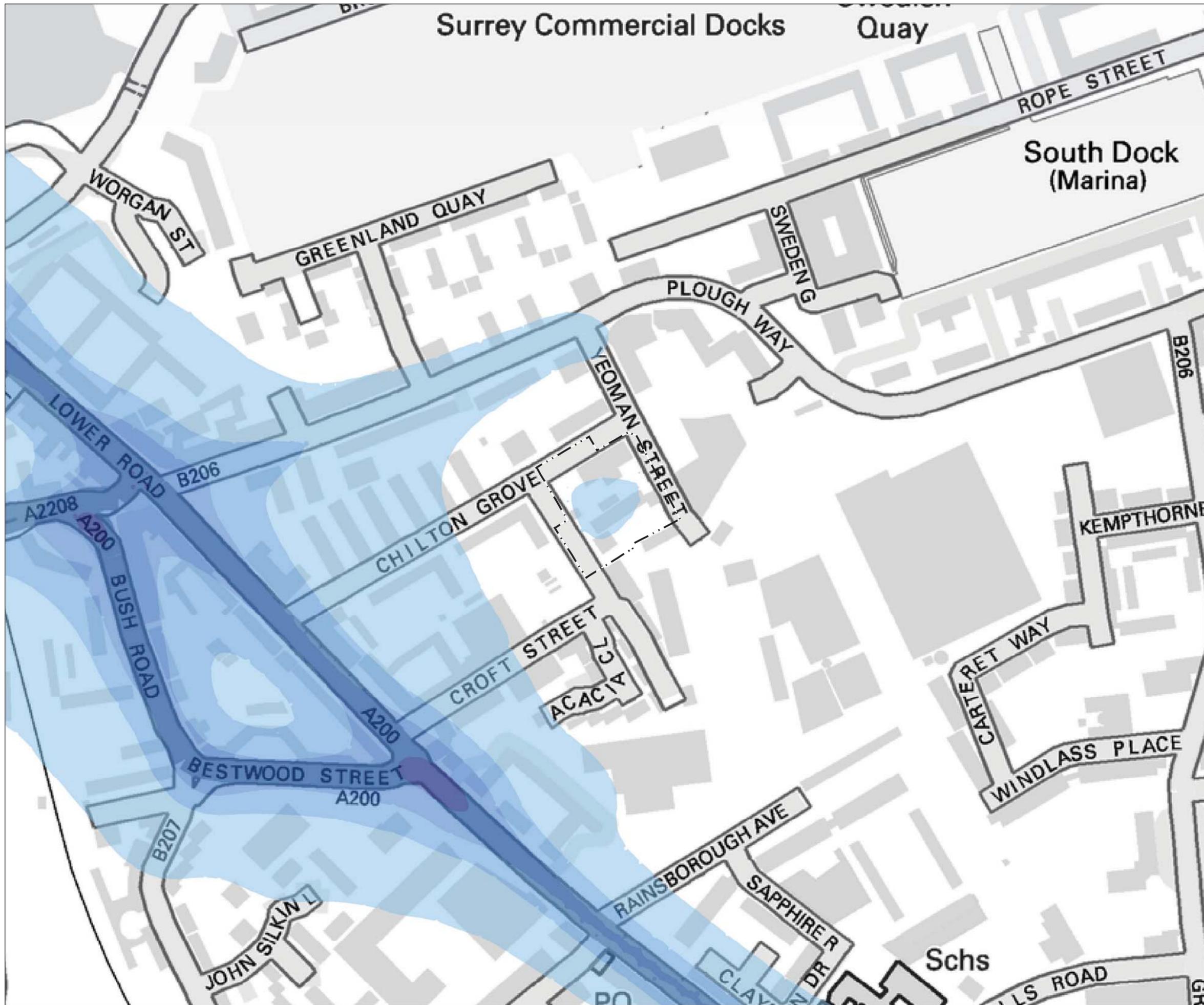


Scale 1 : 2,500 at A3

## FOR INFORMATION

**Location**  
Earl Pumping Station  
London Boroughs of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
Air quality and odour - annual mean NO<sub>2</sub> for peak construction year development case Vol.22 Figure 4.5.3  
1PL03-AQ-10898  
January 2013



# Surrey Commercial Docks

# Quay

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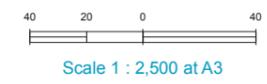
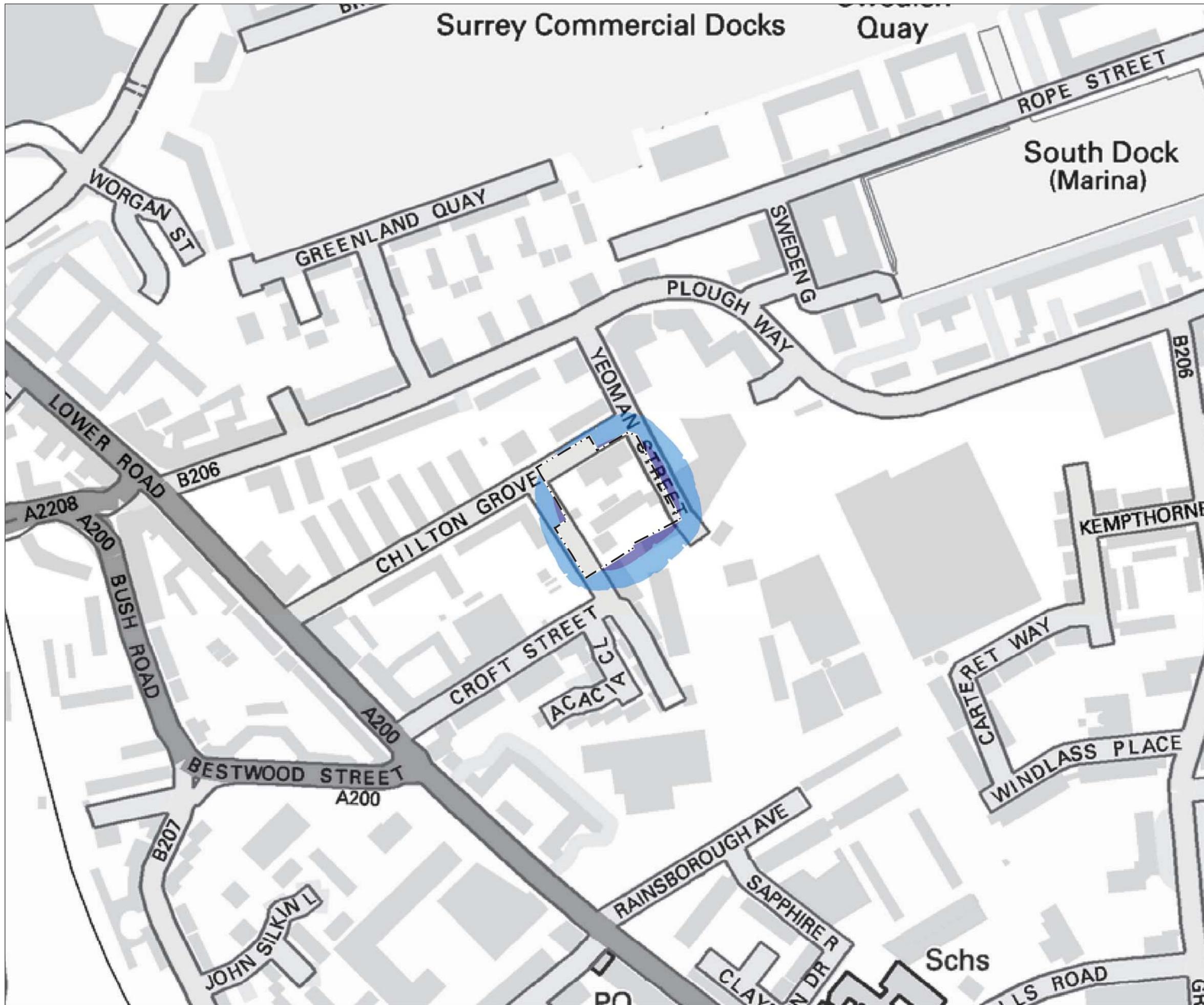


**Key**

- Limits of Land
- - - to be Acquired or Used

**Predicted Annual Mean NO<sub>2</sub> Impact (µg/m<sup>3</sup>)**

- < 1
- 1 - 2
- 2 - 3



## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Boroughs of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
 Air quality and odour - annual mean NO<sub>2</sub> impact for peak construction year  
 Vol.22 Figure 4.5.4  
 1PL03-AQ-10899  
 January 2013



# Surrey Commercial Docks

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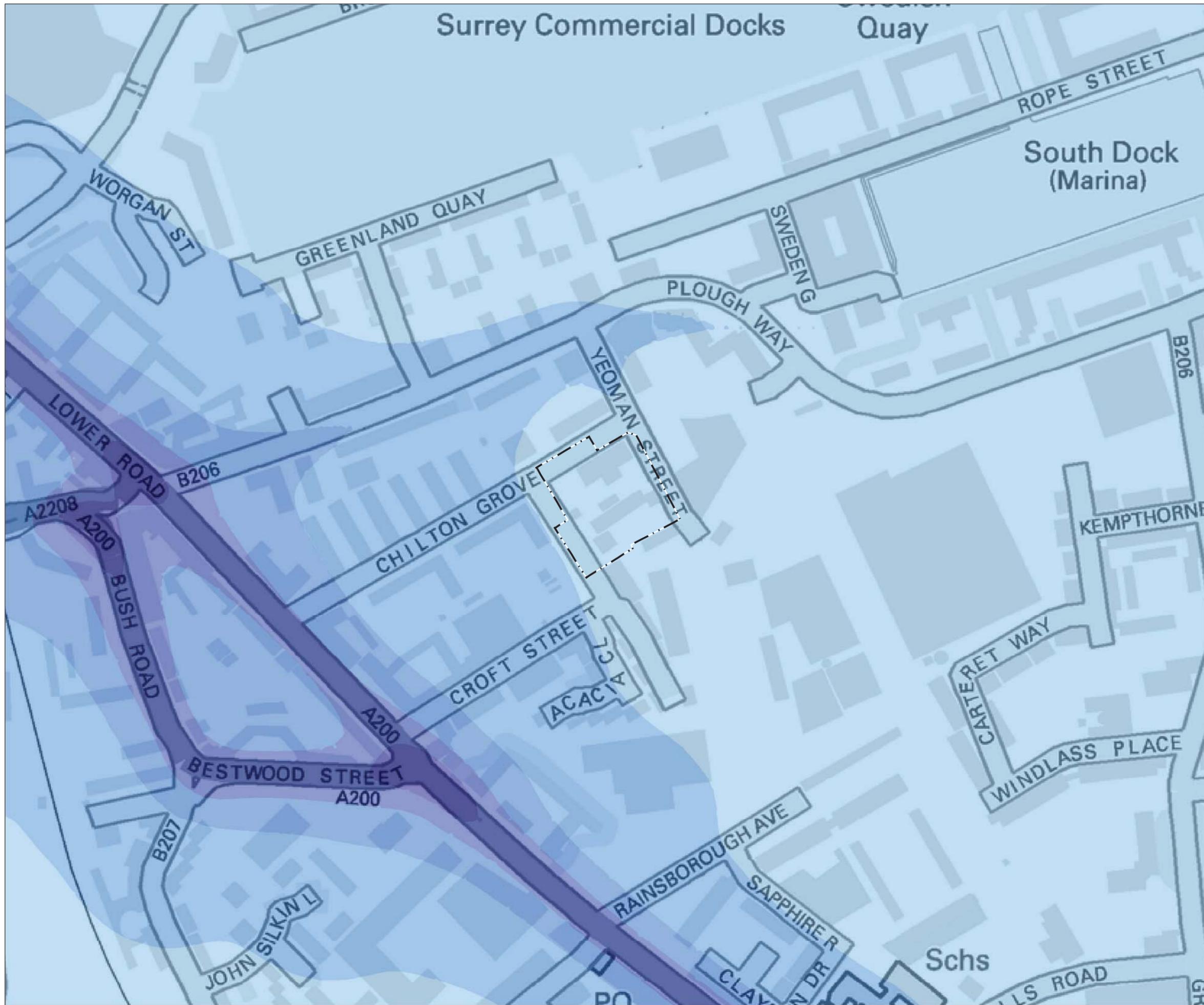


**Key**

- Limits of Land
- - - to be Acquired or Used

Predicted Annual Mean PM<sub>10</sub> Concentration (µg/m<sup>3</sup>)

Lightest Blue	21 - 23
Light Blue	23 - 25
Medium Blue	25 - 28
Dark Blue	28 - 32
Very Dark Blue	32 - 40



## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Boroughs of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
 Air quality and odour - annual mean PM<sub>10</sub>  
 for 2010 baseline  
 Vol.22 Figure 4.5.5  
 1PL03-AQ-10900  
 January 2013



# Surrey Commercial Docks

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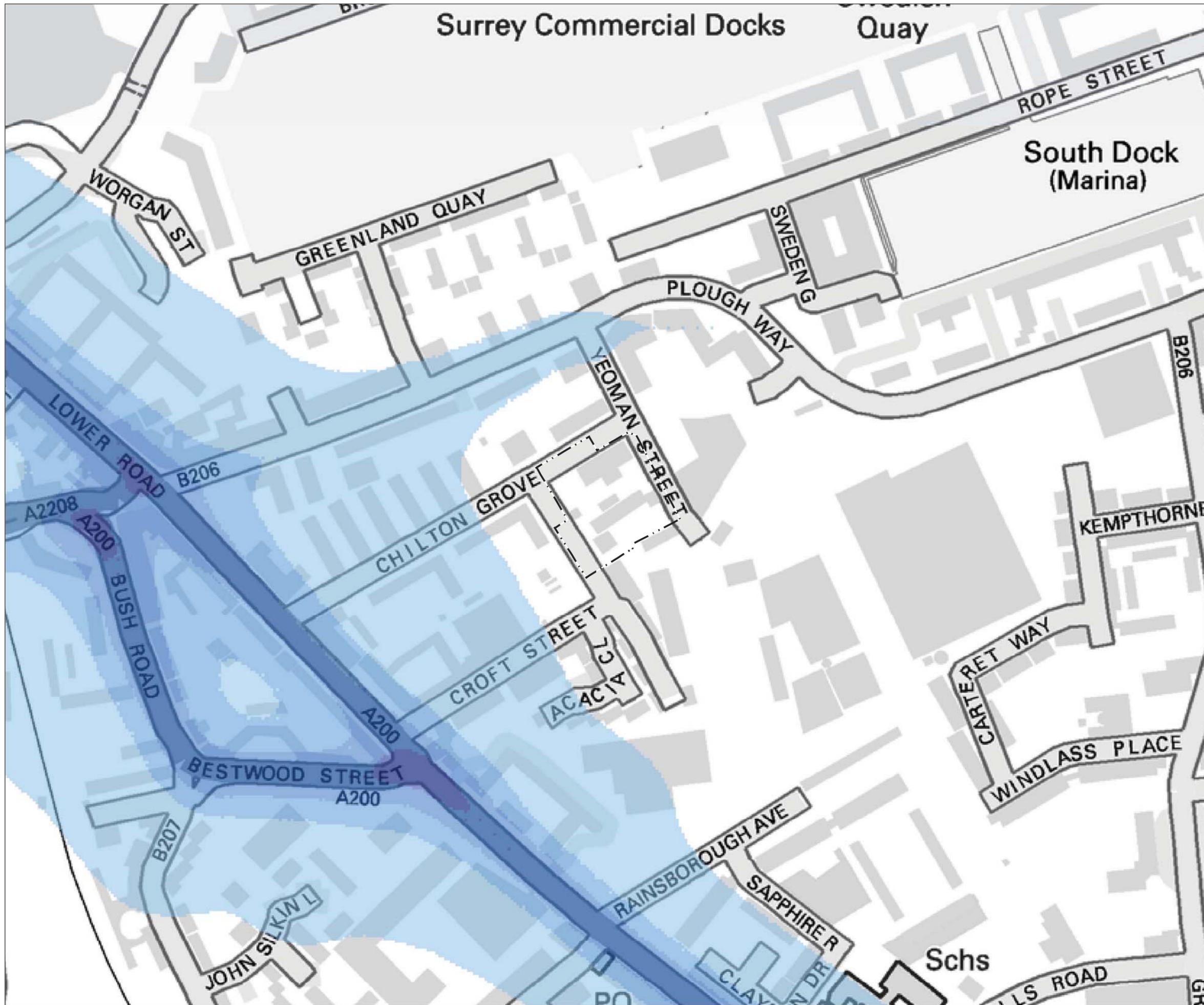


**Key**

- Limits of Land
- - - to be Acquired or Used

**Predicted Annual Mean PM<sub>10</sub> Concentration (µg/m<sup>3</sup>)**

< 21
21 - 23
23 - 25
25 - 28
28 - 32



## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Boroughs of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
 Air quality and odour - annual mean PM<sub>10</sub>  
 for peak construction year base case  
 Vol.22 Figure 4.5.6  
 1PL03-AQ-10901  
 January 2013



# Surrey Commercial Docks

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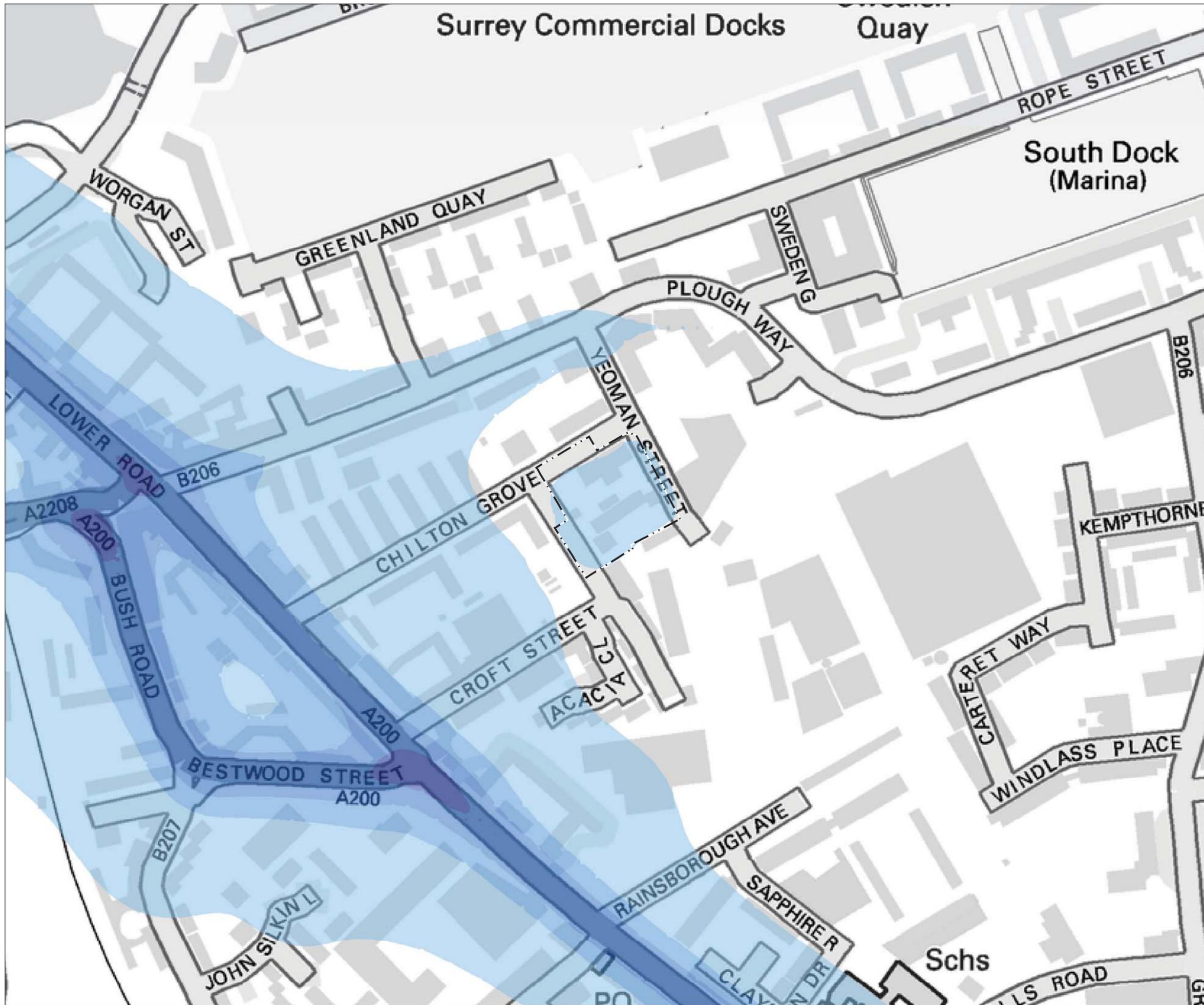
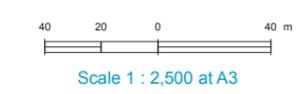


**Key**

- Limits of Land
- - - to be Acquired or Used

**Predicted Annual Mean PM<sub>10</sub> Concentration (µg/m<sup>3</sup>)**

< 21
21 - 23
23 - 25
25 - 28
28 - 32



## FOR INFORMATION

**Location**  
Earl Pumping Station  
London Boroughs of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
Air quality and odour - annual mean PM<sub>10</sub>  
for peak construction year development case  
Vol.22 Figure 4.5.7  
1PL03-AQ-10902  
January 2013



# Surrey Commercial Docks

# Quay

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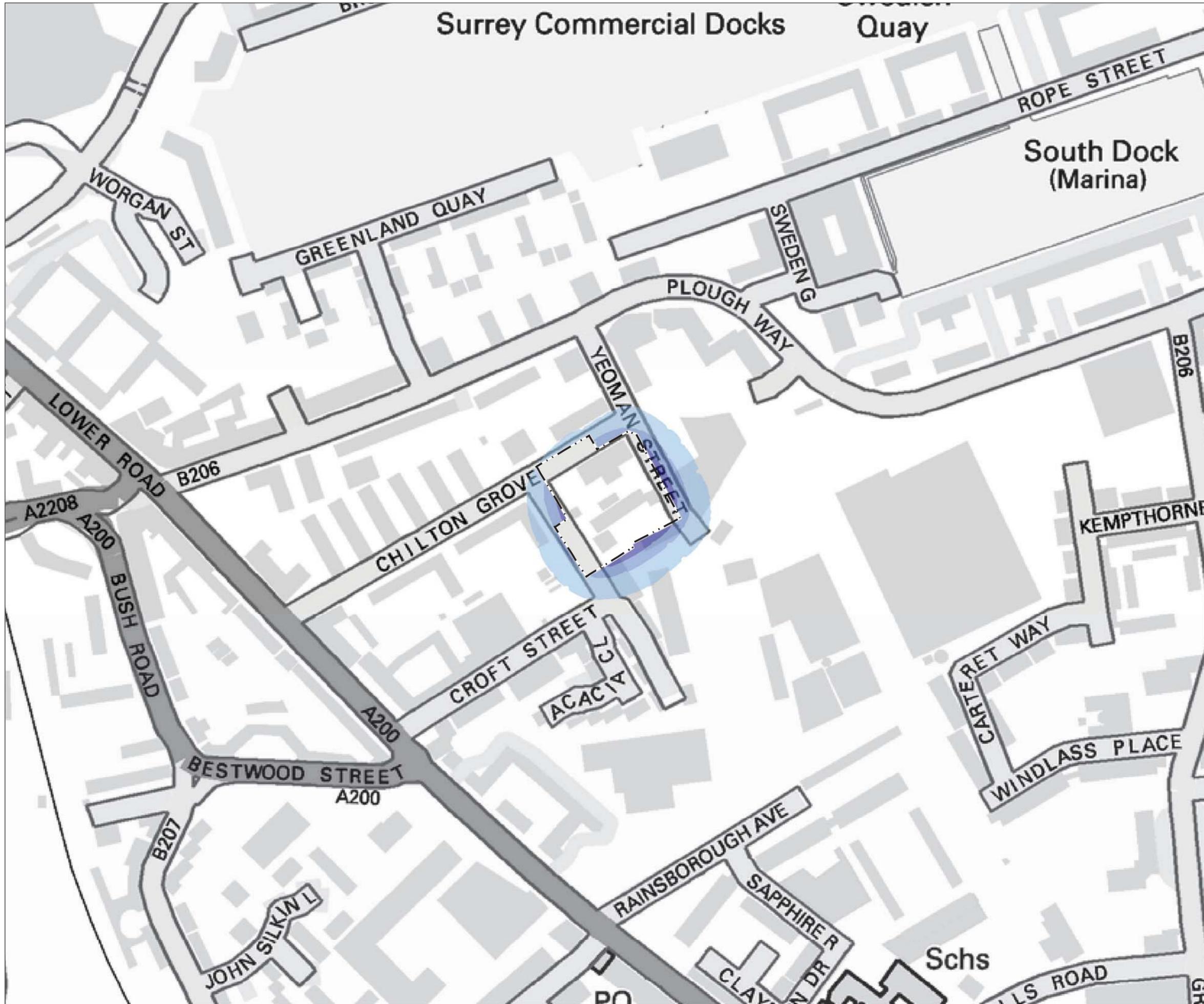


**Key**

- Limits of Land
- - - to be Acquired or Used

**Predicted Annual Mean PM<sub>10</sub> Impact (µg/m<sup>3</sup>)**

- < 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4

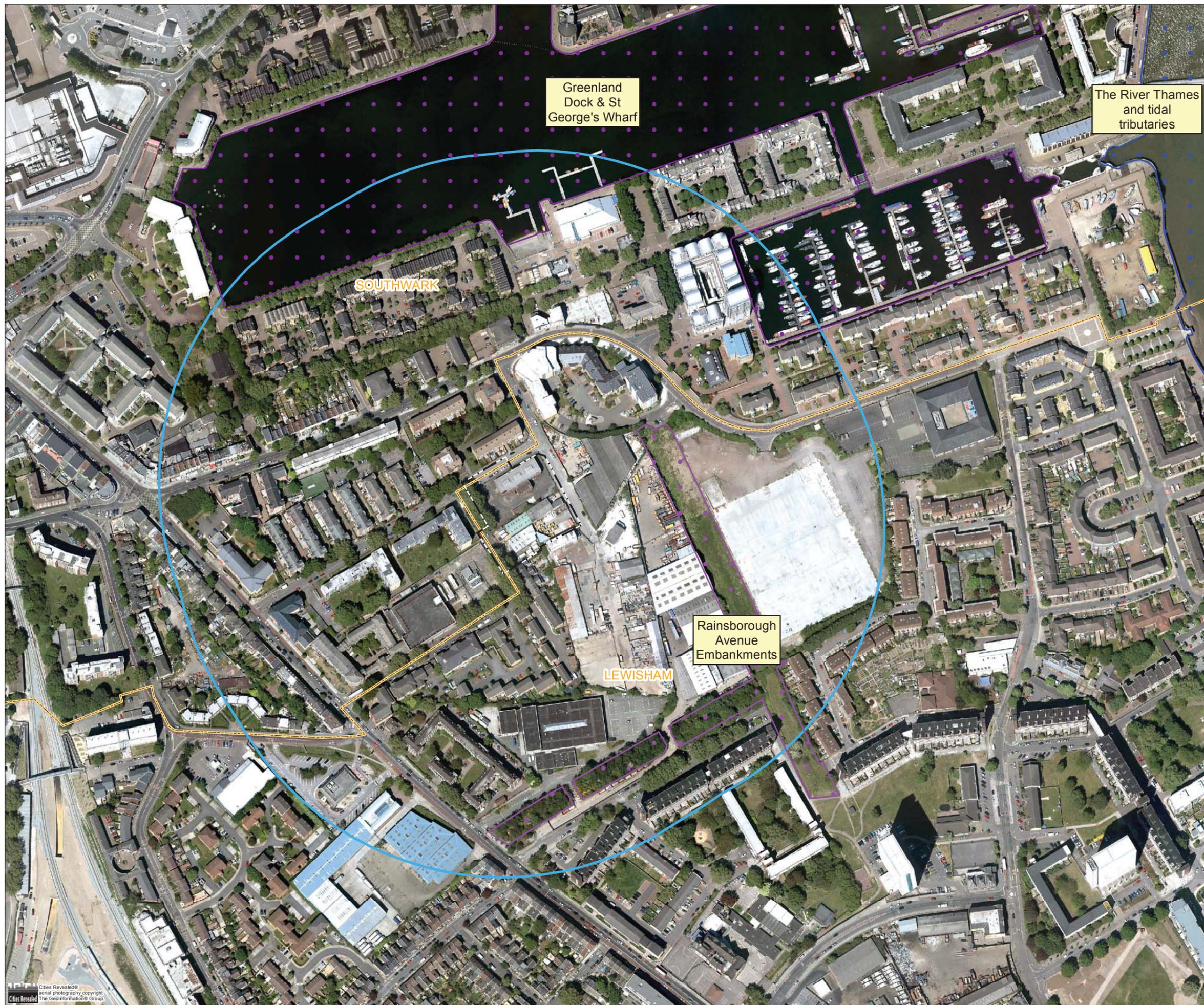


## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Boroughs of Lewisham & Southwark

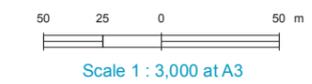
**Document Information**  
**Environmental Statement**  
 Air quality and odour - annual mean PM<sub>10</sub> impact for peak construction year  
 Vol.22 Figure 4.5.8  
 1PL03-AQ-10903  
 January 2013





- Key**
- Limits of Land
  - to be Acquired or Used
  - 250m from Site
  - Local Authority Boundary
- Sites of Importance for Nature Conservation (SINC)**
- Metropolitan Importance
  - Borough Importance
  - Local Importance

**Note:**  
Aerial Imagery taken in 2010, before assessment.



## FOR INFORMATION

**Location**  
Earl Pumping Station  
London Boroughs of Lewisham and Southwark

**Document Information**  
**Environmental Statement**  
Terrestrial ecology - designated sites

Vol. 22 Figure 6.4.1  
1PL03-TE-40158  
January 2013





- Key**
- -- Limits of Land
  - to be Acquired or Used
  - Survey Area
  - Local Authority Boundary
  - Cultivated/Disturbed Land - Amenity Grassland
  - Built-Up Areas - Buildings
  - Cultivated/Disturbed Land - Introduced Shrub
  - Hard Standing
  - Boundaries - Fence
  - Target Note
  - Scattered Trees

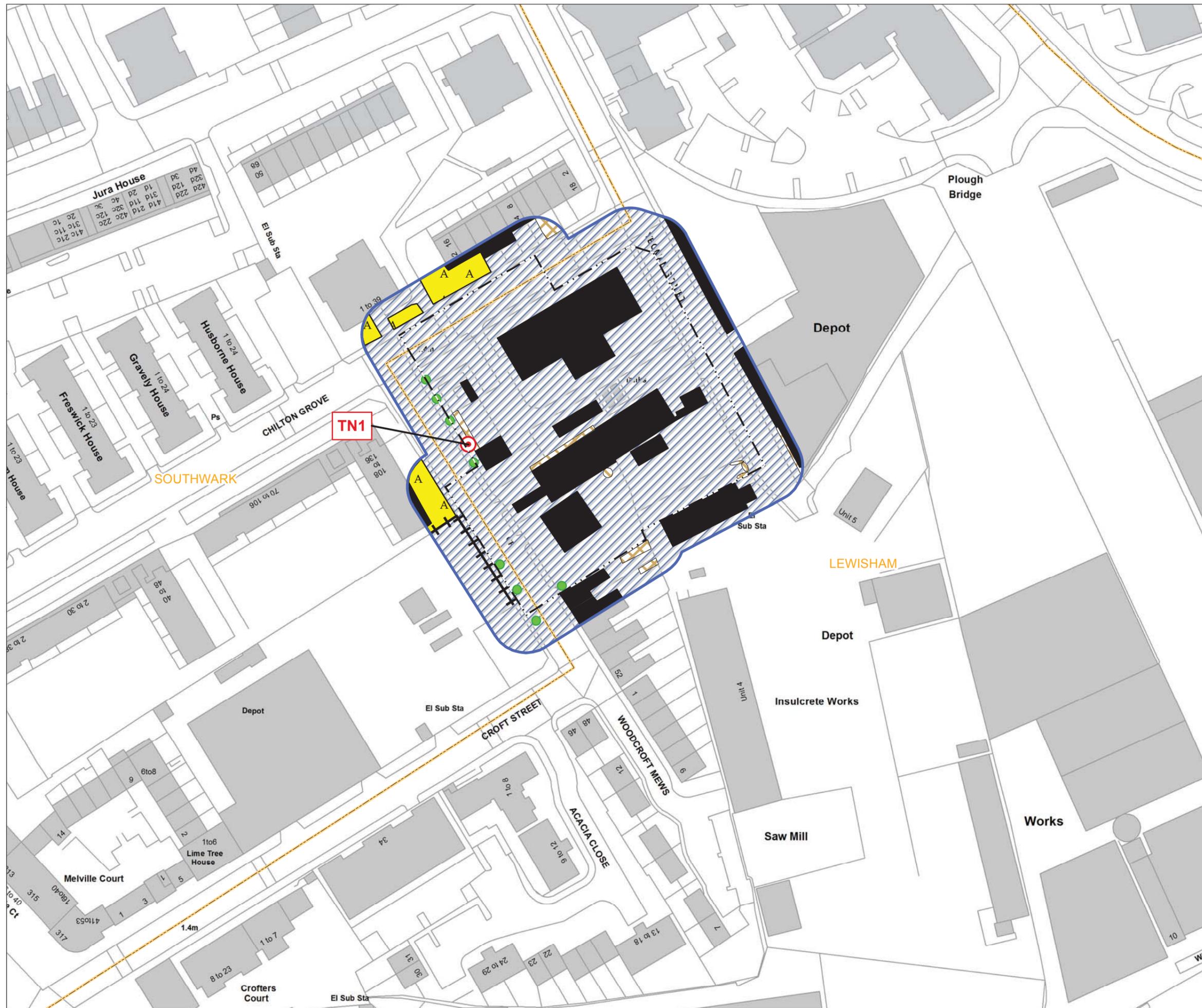


## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

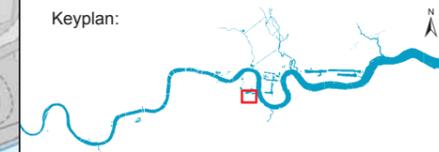
**Document Information**  
**Environmental Statement**  
 Terrestrial ecology – Phase 1 Habitat Survey

Vol. 22 Figure 6.4.2  
 1PL03-TE-40177  
 January 2013



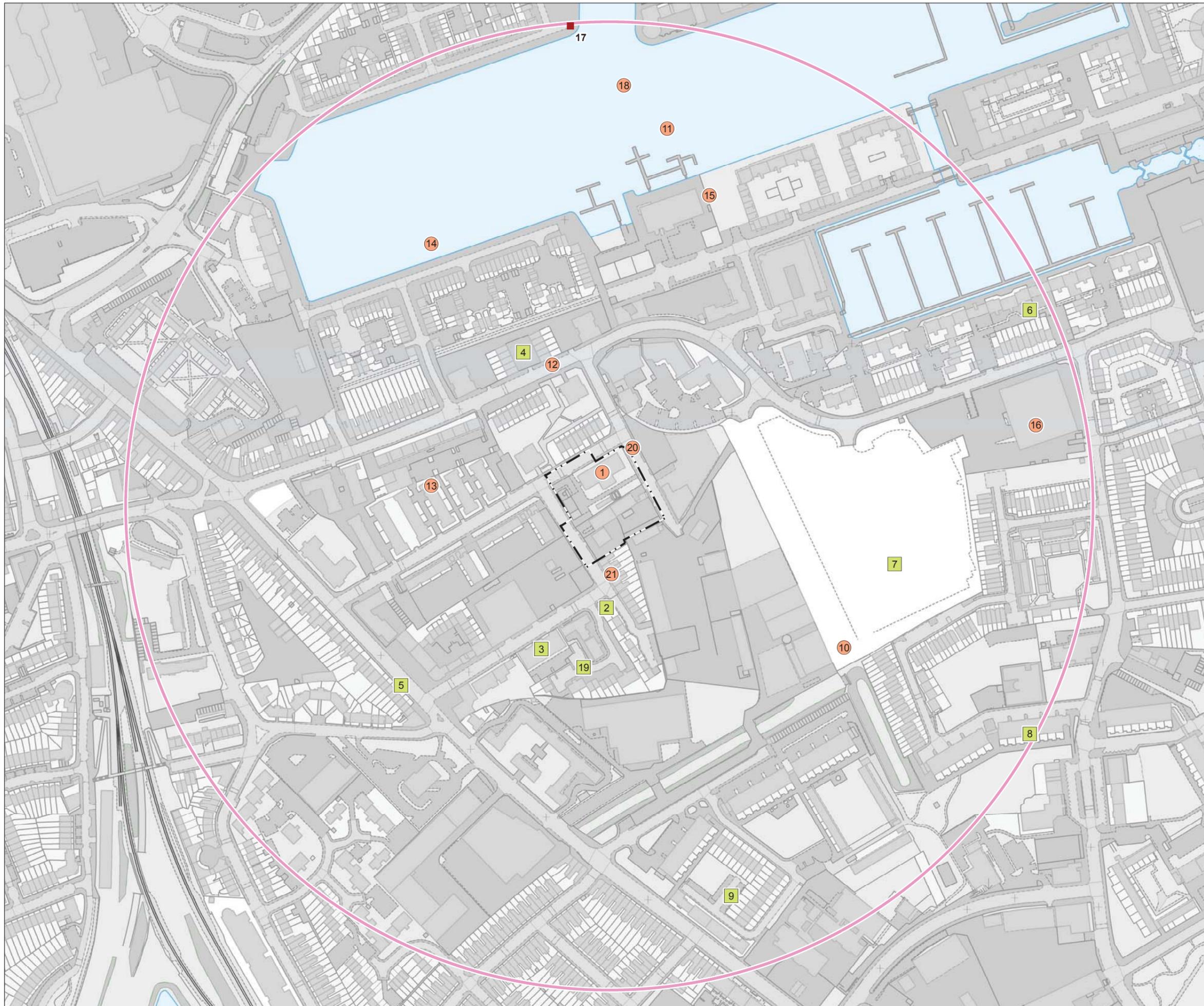


Keyplan:



Key

- Limits of Land to be Acquired or Used
- Assessment Area
- Heritage Feature/Findspot
- Past Archaeological Investigation
- Statutorily Listed Building



The reference numbers for historic environment features correspond to the descriptions in the 'Gazetteer of known heritage assets' in Environmental Statement Vol. 22 Appendix E.1

Note: Archaeological Priority Zones/ Conservation Areas not shown



Scale 1 : 3,000 at A3

## FOR INFORMATION

Location

**Earl Pumping Station**  
London Boroughs of Lewisham & Southwark

Document Information

**Environmental Statement**

Historic environment -  
historic environment features map  
Vol.22 Figure 7.4.1

1PL03-HE-60074  
January 2013



- Key**
- Limits of Land to be Acquired or Used
  - Local Authority Boundary
- Representative Receptor Locations:**
- Residential
  - Non-Residential



**Note:**  
The receptors are selected on the basis that they are representative of sensitive land uses closest to the site.



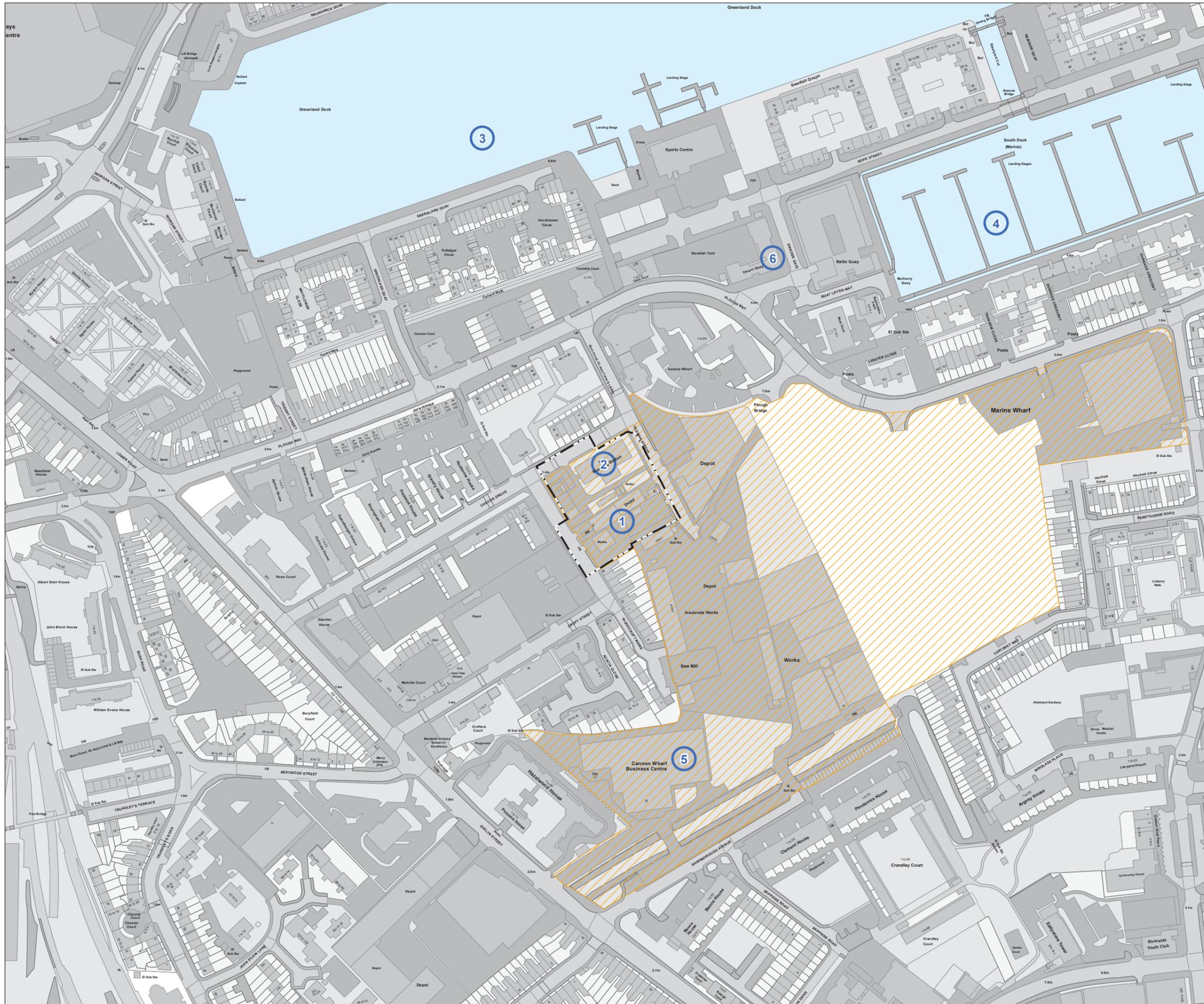
Scale 1 : 1,000 at A3

## FOR INFORMATION

**Location**  
Earl Pumping Station  
London Borough of Lewisham

**Document Information**  
Environmental Statement  
Noise and vibration - receptor locations

Vol.22 Figure 9.4.1  
1PL03-NV-40129  
January 2013



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Keyplan:



Key

- Limits of Land to be Acquired or Used
- Plough Way Strategic Site Allocation, LB of Lewisham Core Strategy
- Receptors and Site Context Features

- Receptors and Site Context Features
1. Businesses – Industrial and Warehousing
  2. Earl Pumping Station
  3. Greenland Dock
  4. South Dock Marina
  5. Cannon Wharf Business Centre
  6. Tavern Quay Commercial Centre

Note: Residential receptors have been identified on land use plans for this site.



Scale 1 : 2,500 at A3

## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Boroughs of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
 Socio-economics - context plan

Vol.22 Figure 10.4.1  
 1PL03-SE-20055  
 January 2013



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- Key:**
- Limits of Land to be Acquired or Used
  - - - Local Authority boundary
  - ▭ Extents of construction phase townscape assessment area
  - ▭ Extents of operational phase townscape assessment area
  - ▭ River Thames and tidal tributaries
- Building heights**
- 0 - 20m
  - 20 - 40m
  - 40 - 60m
  - 60 - 80m
  - 80 - 100m
  - >100m



## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

**Document Information**  
**Environmental Statement**  
 Townscape and visual  
 Development pattern and scale  
 Vol. 22 Figure 11.4.1  
 1PL03-TS-40500  
 January 2013



Keyplan:



Key:

-  Limits of Land to be Acquired or Used
-  Local Authority boundary
-  Extents of construction phase townscape assessment area
-  Extents of operational phase townscape assessment area



Scale 1 : 2,500 at A3

## FOR INFORMATION

**Location**  
Earl Pumping Station  
London Borough of Lewisham

**Document Information**  
Environmental Statement  
Townscape and visual  
Aerial photo showing pattern of vegetation  
Vol. 22 Figure 11.4.2

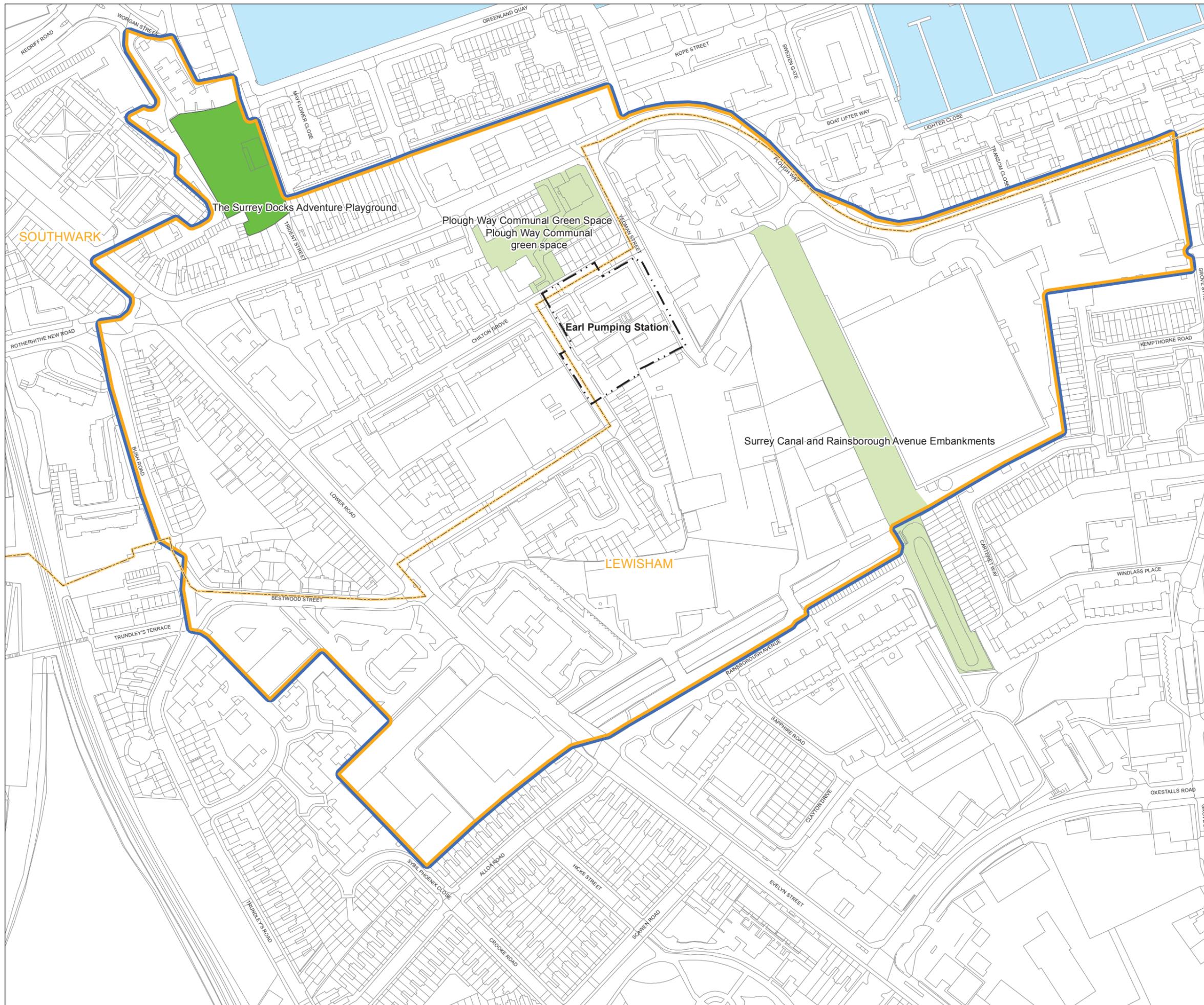
1PL03-TS-40501  
January 2013



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- Key:**
- Limits of Land
  - to be Acquired or Used
  - Local Authority boundary
  - Extents of construction phase townscape assessment area
  - Extents of operational phase townscape assessment area
  - Public open space
  - Private open space
  - River Thames and tidal tributaries



## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

**Document Information**  
**Environmental Statement**  
 Townscape and visual  
 Open spaces  
 Vol. 22 Figure 11.4.3  
 1PL03-TS-40502  
 January 2013



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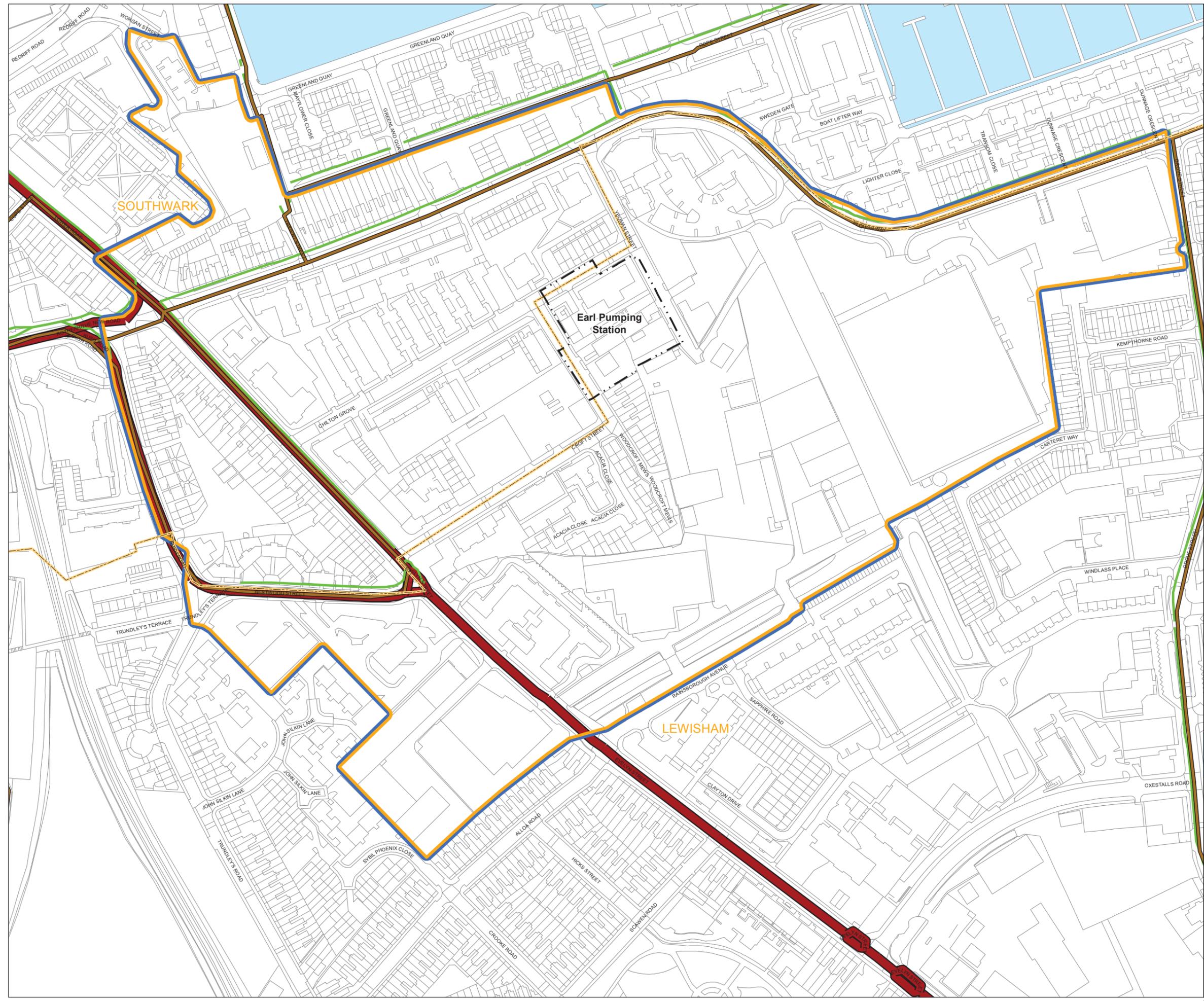
- Key:**
- Limits of Land to be Acquired or Used
  - Local Authority boundary
  - Extents of construction phase townscape assessment area
  - Extents of operational phase townscape assessment area
  - Provision for cyclists alongside busy roads
  - London cycle routes
  - Rail
  - A roads
  - River Thames and tidal tributaries



## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

**Document Information**  
**Environmental Statement**  
 Townscape and visual  
 Transport routes  
 Vol. 22 Figure 11.4.4  
 1PL03-TS-40503  
 January 2013





- Key:
- Limits of Land to be Acquired or Used
  - Local Authority boundary
  - Extents of construction phase townscape assessment area
  - Extents of operational phase townscape assessment area

The colour fills shown on the plan are used to differentiate between townscape character areas



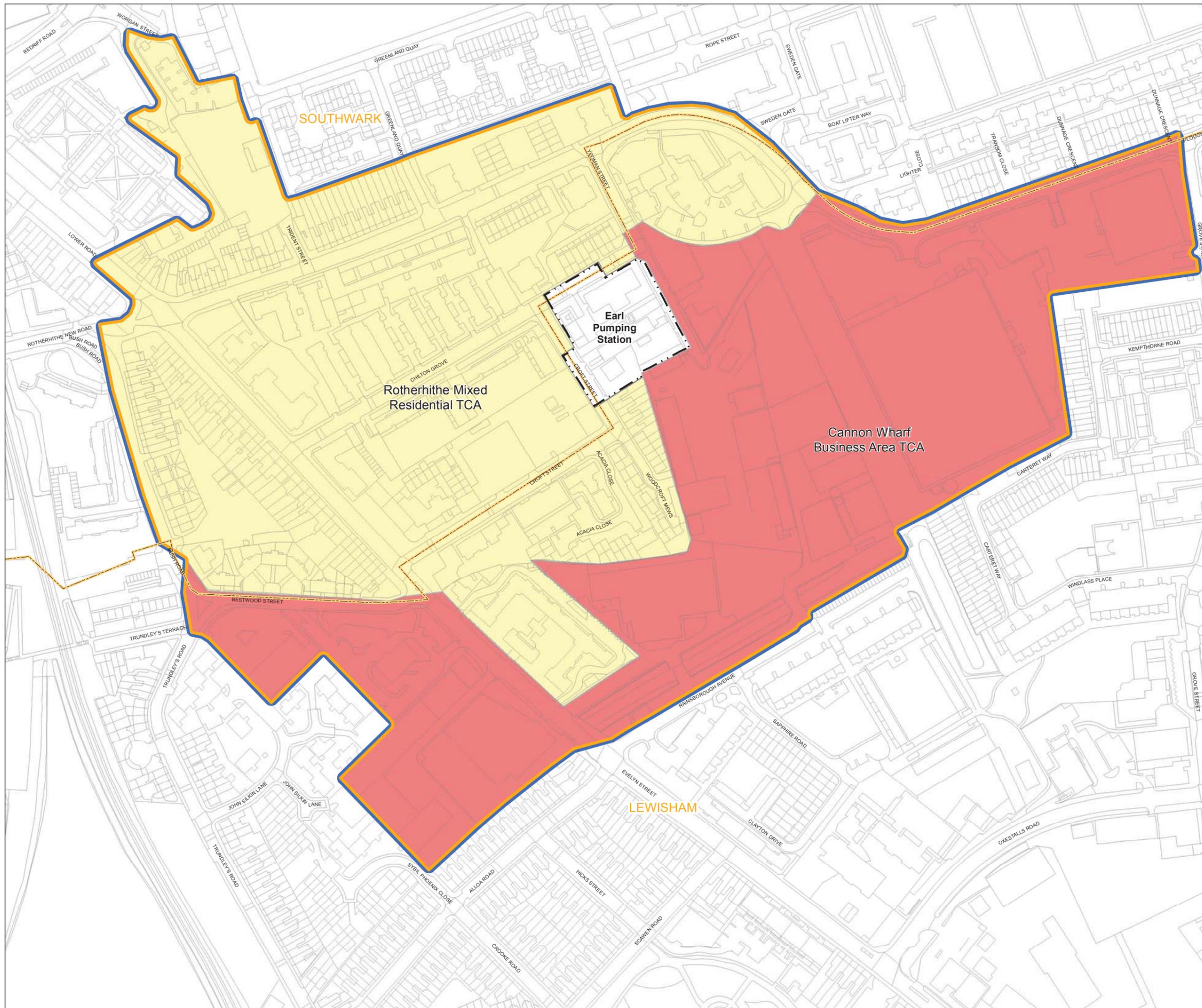
Scale 1 : 2,500 at A3

## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

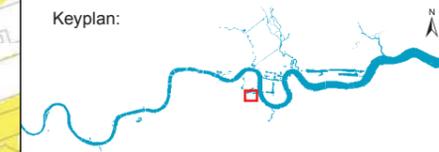
**Document Information**  
**Environmental Statement**

Townscape and visual  
 Townscape character areas  
 Vol. 22 Figure 11.4.5  
 1PL03-TS-40504  
 January 2013



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Keyplan:



**Key:**  
The zone of theoretical visibility (ZTV) is a computer generated model which indicates the theoretical visibility of the construction works (including cranes) and operational structures. As described in Volume 2 the ZTV is a starting point for defining the assessment area and for informing the assessment of likely significant effects. Theoretical visibility does not necessarily mean a location would be subject to adverse effects.

- Limits of Land to be Acquired or Used
- Local Authority boundary
- Visual assessment points
- Verifiable photomontage locations
- London View Management Framework (LVMF) London Panorama
- Construction phase ZTV
- Operational phase ZTV
- River Thames and tidal tributaries



Scale 1 : 2,500 at A3

## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
London Borough of Lewisham

**Document Information**  
**Environmental Statement**

Townscape and visual Viewpoints  
Vol. 22 Figure 11.4.6  
1PL03-TS-40505  
January 2013



**Current baseline**

**Croft Street**

**Woodcroft Mews**

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Keyplan:



**Technical information**

Location: Viewpoint 1.6: View north from residences along Woodcroft Mews  
 Date taken: 24 March 2011  
 Time taken: 15.57  
 Focal length: 51.688mm

This verifiable photomontage shows an illustration of the site in Year 1 of operation. The layout of the proposed development may change within the zones shown on the Site works parameter plan [see volume of figures – Section 1], however the assessment of effects would be no worse than that described in the Environmental Statement Vol 22 Earl Pumping Station - Section 11 Townscape and visual.



Expanded image



Earl Pumping Station

**Operational phase verifiable photomontage**



Expanded image



Brick clad shaft enclosure

Hoardings around future possible development site

**FOR INFORMATION**

**Location**  
 Earl Pumping Station  
 London Borough of Southwark

**Document Information**  
 Environmental Statement

Townscape and visual  
 Viewpoint 1.6  
 Operational phase verifiable photomontage  
 Vol 22 Figure 11.6.1  
 1PL03-TS-40506  
 January 2013





- Key**
- \* Site access
  - TFL road network
  - Strategic road network
  - Primary construction route
  - Limits of Land to be Acquired or Used
  - Local authority boundary

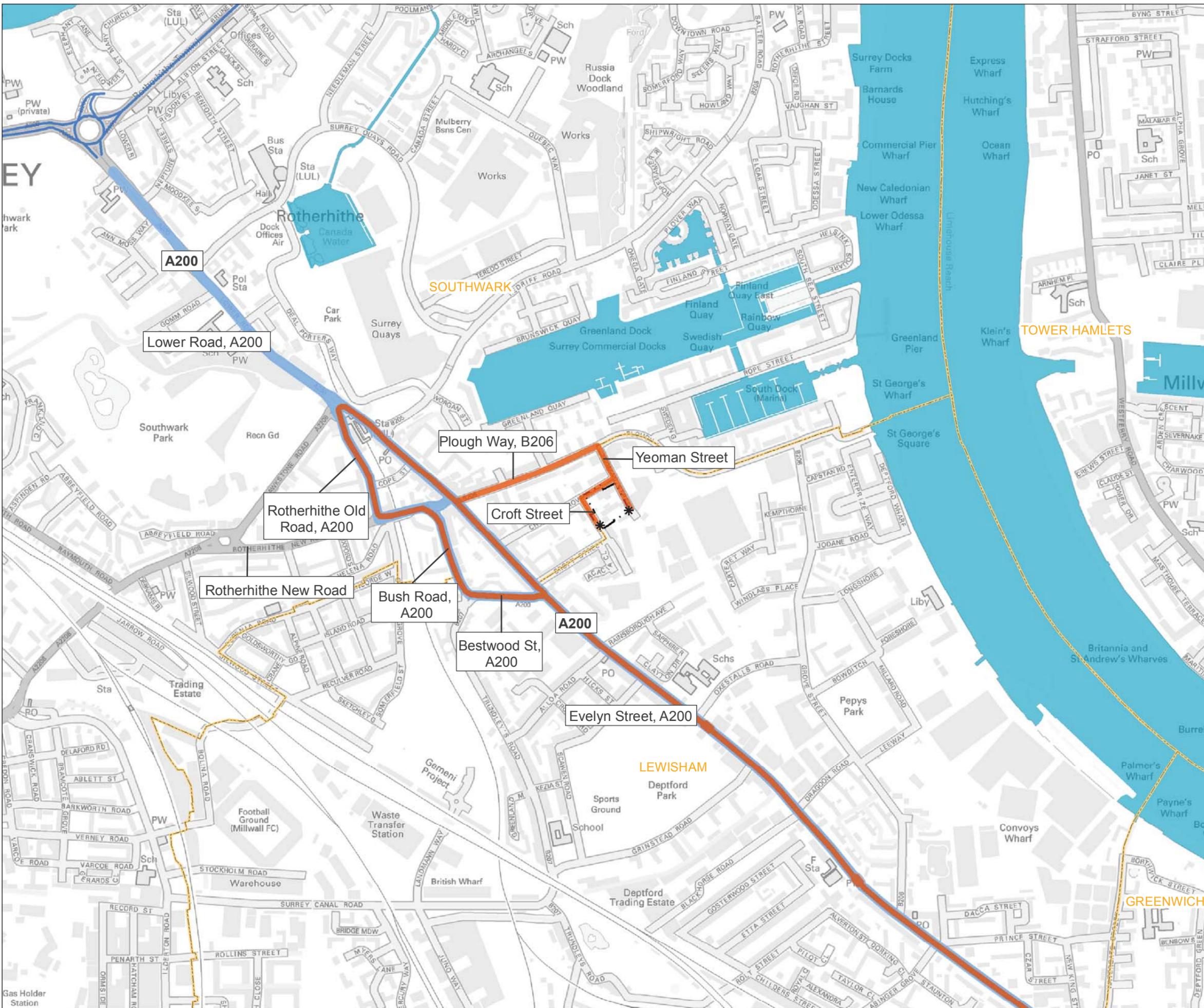


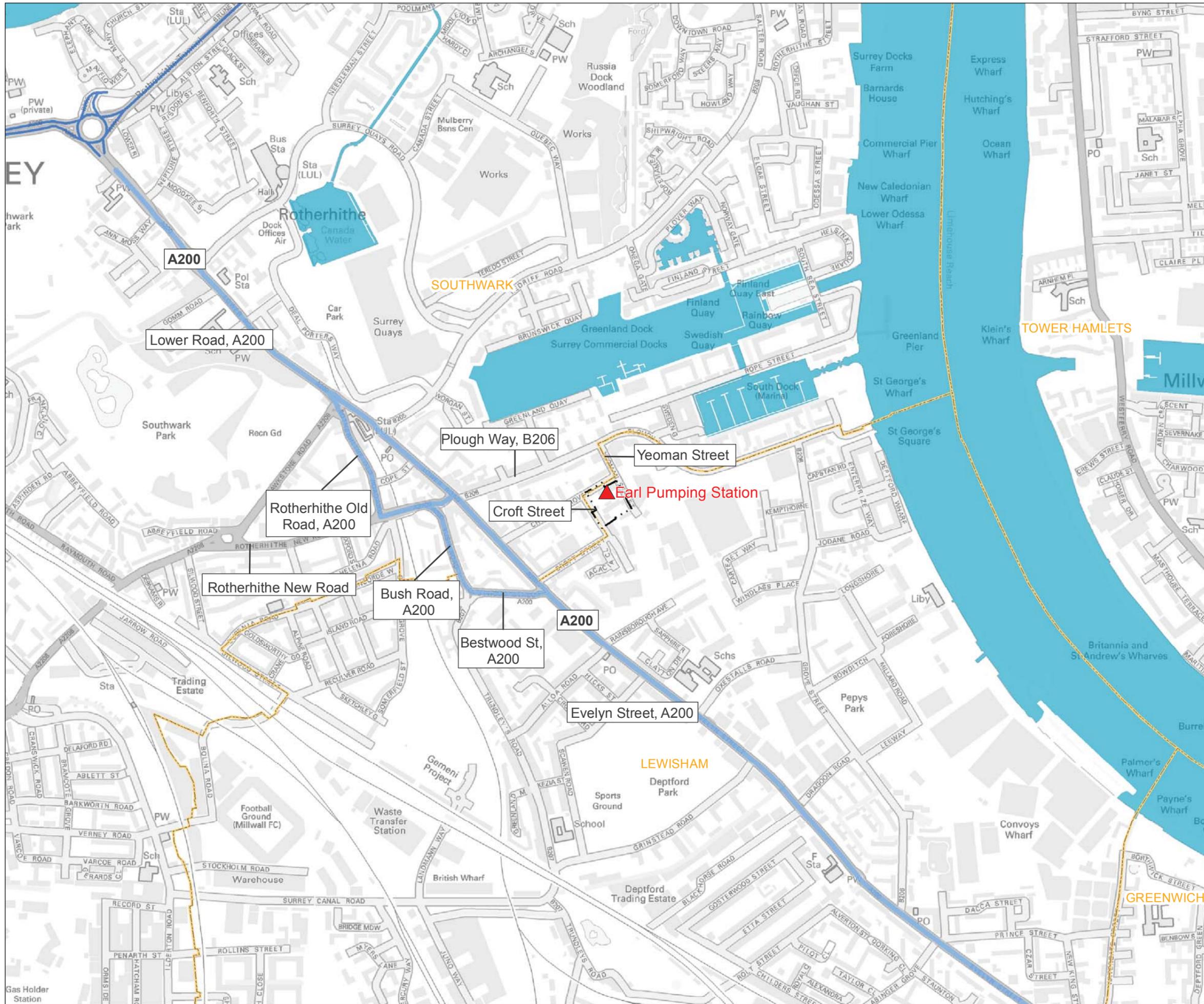
## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

**Document Information**  
**Environmental Statement**  
 Transport - construction traffic routes

Vol.22 Figure 12.2.1  
 1PL03-TT-50501  
 January 2013





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- Key
- Pumping station
  - TFL road network
  - Strategic road network
  - Limits of Land to be Acquired or Used
  - Local authority boundary



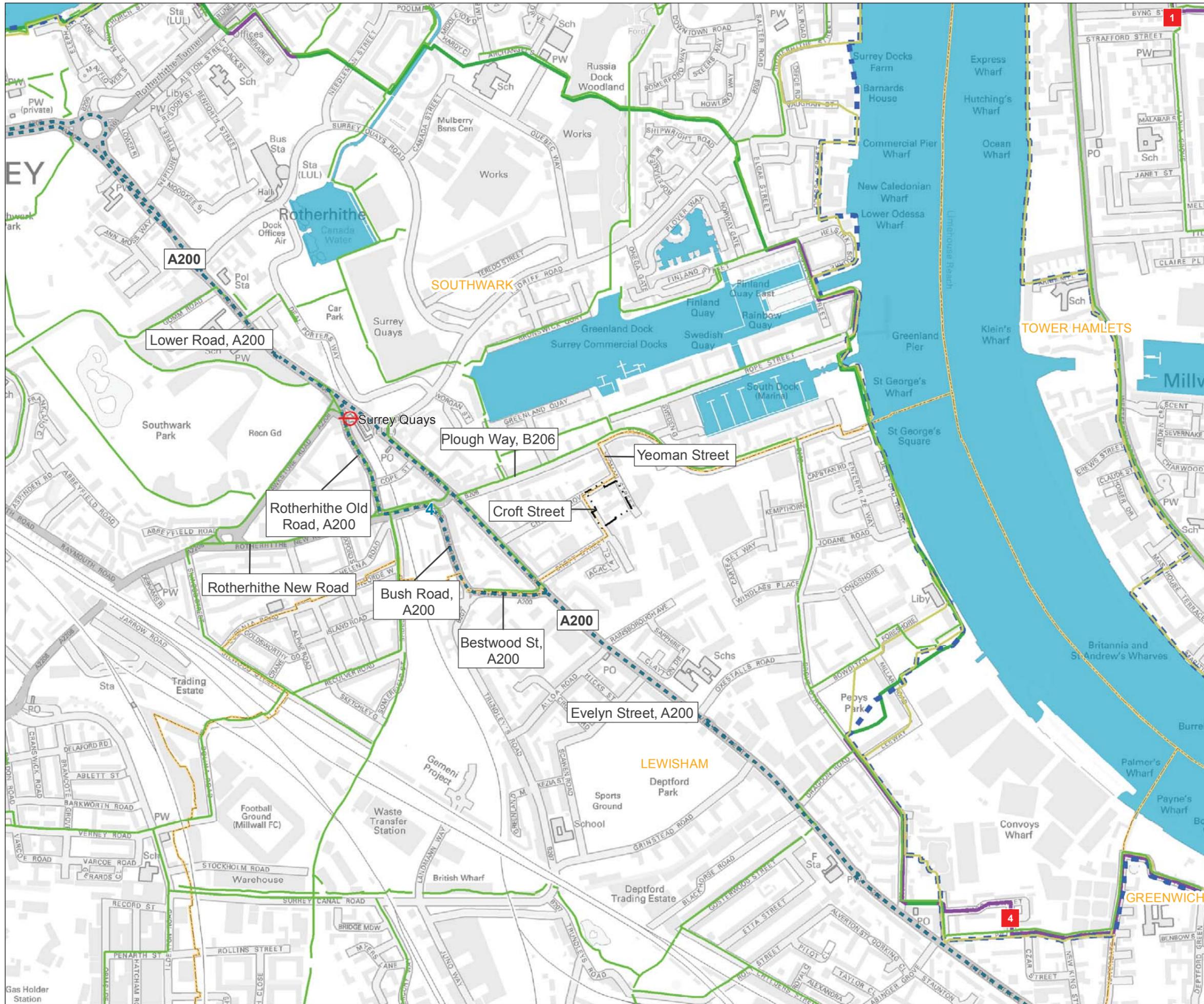
## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

**Document Information**  
**Environmental Statement**  
 Transport - site location plan

Vol.22 Figure 12.4.1  
 1PL03-TT-50509  
 January 2013





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- Key**
- Overground stations with cycle parking
  - Cycle superhighway (open 2015)
  - London cycle routes
  - Thames path
  - London strategic walk network
- National cycle network**
- Open Traffic Free
  - Open on-road
- Route Type**
- Limits of Land to be Acquired or Used
  - Local authority boundary



## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

**Document Information**  
**Environmental Statement**  
 Transport - pedestrian and cycle network

Vol.22 Figure 12.4.2  
 1PL03-TT-50517  
 January 2013





- Key**
- TFL bus stops
  - London overground stations
  - Docklands light railway stations
  - Pier locations
  - National rail stations
  - London underground stations
  - TfL bus routes
  - Limits of Land to be Acquired or Used
  - Local authority boundary

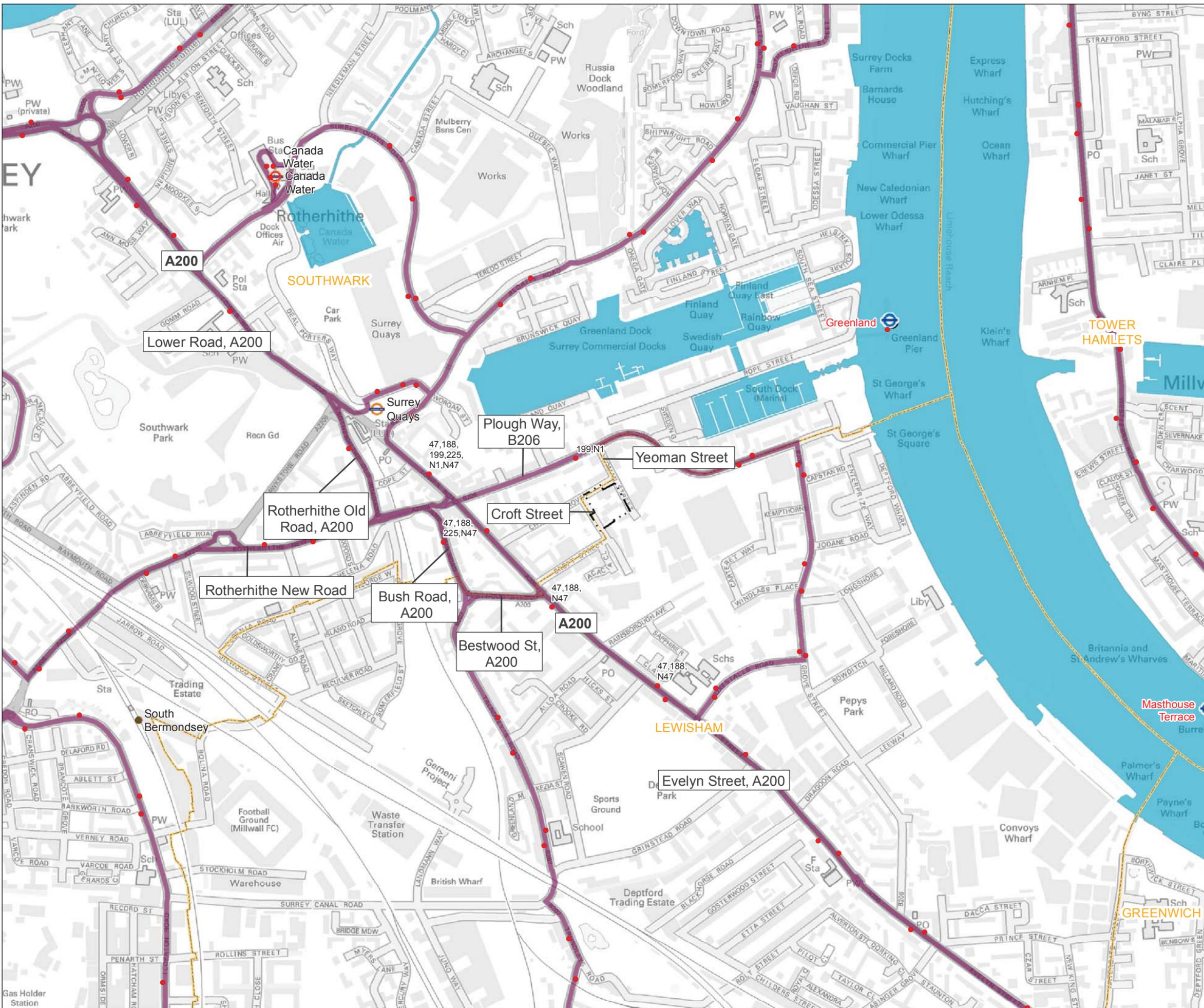


## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

**Document Information**  
**Environmental Statement**  
 Transport - public transport

Vol.22 Figure 12.4.3  
 1PL03-TT-50525  
 January 2013





- Key**
- Private car parking
  - Coach parking
  - City Car
  - Zip Car
  - Controlled Parking Zones and Hours of Operation
  - Limits of Land to be Acquired or Used
  - Local authority boundary

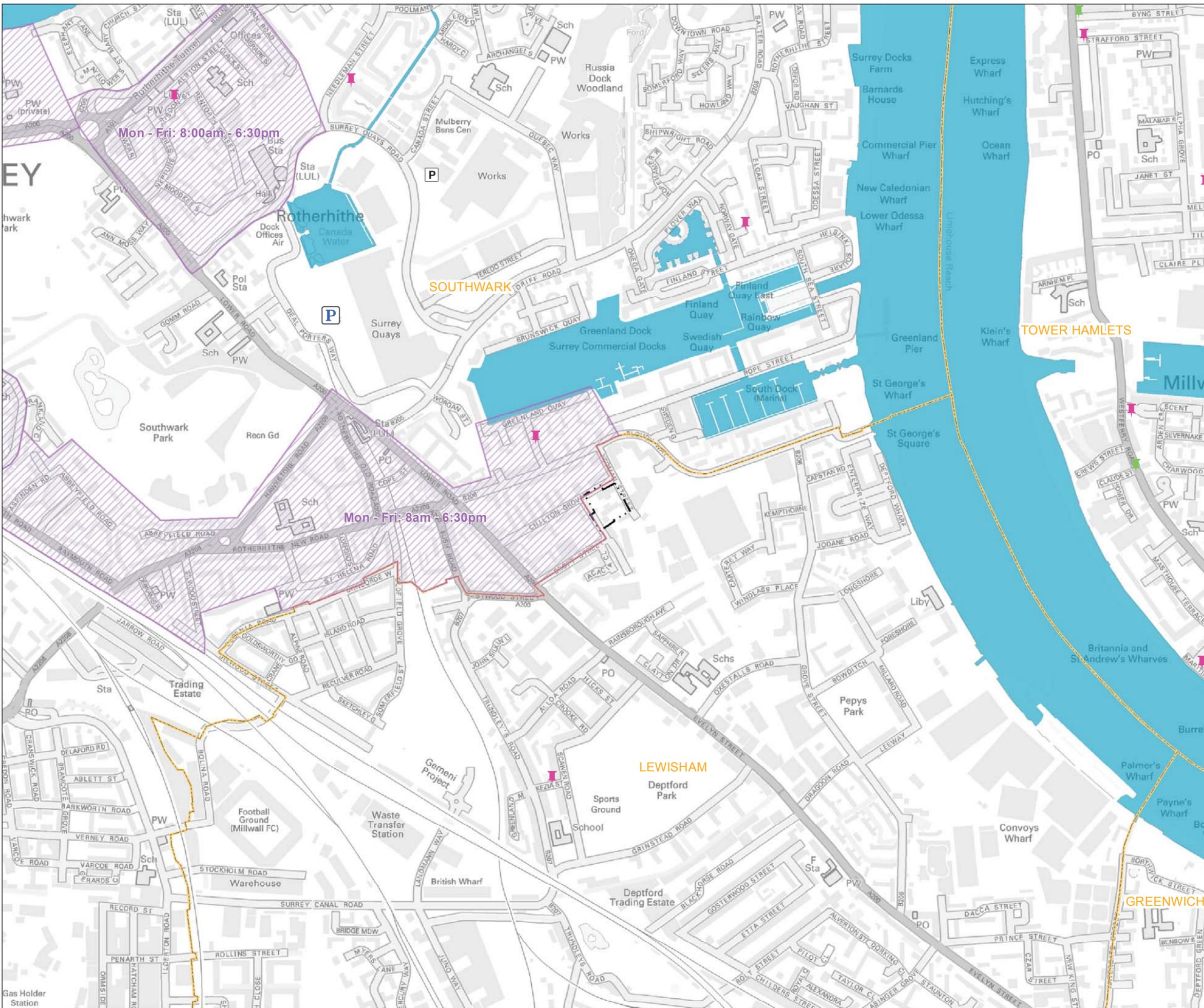


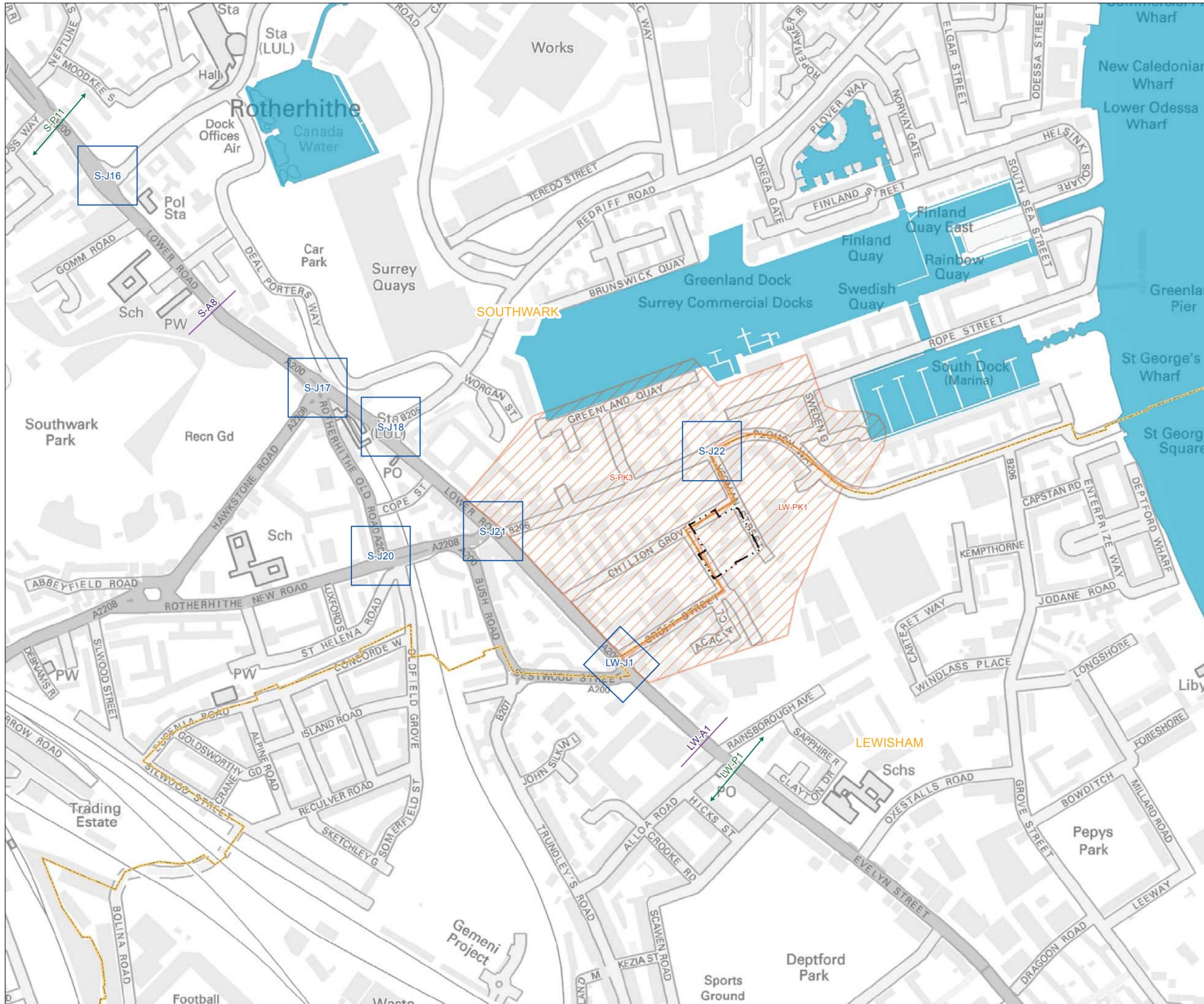
## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

**Document Information**  
**Environmental Statement**  
 Transport - parking

Vol.22 Figure 12.4.4  
 1PL03-TT-50533  
 January 2013

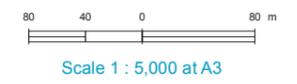




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- Key**
- Automatic traffic count surveys
  - Pedestrian and cycle surveys
  - Junction surveys
  - Parking surveys
  - Limits of Land to be Acquired or Used
  - Local authority boundary



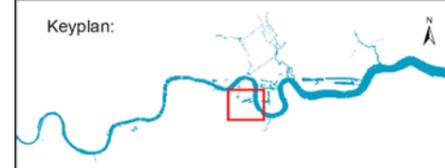
## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

**Document Information**  
**Environmental Statement**  
 Transport - survey locations

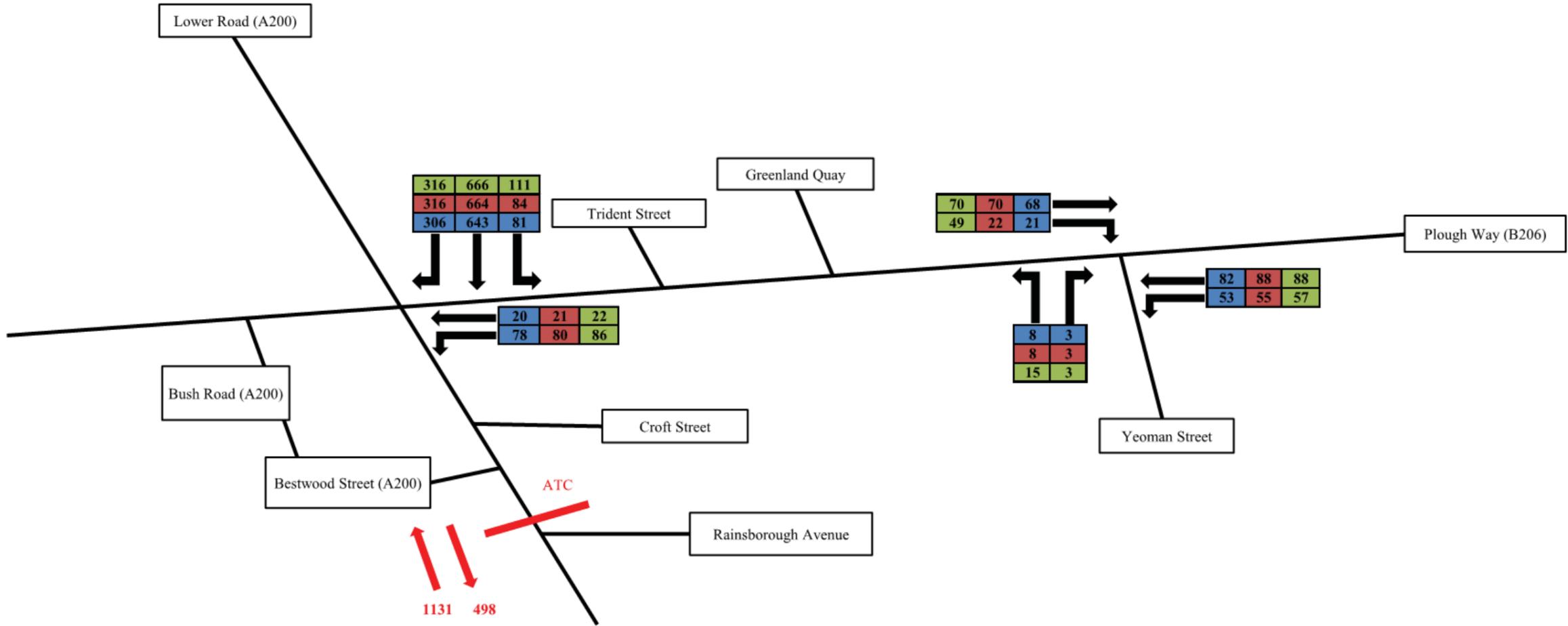
Vol.22 Figure 12.4.5  
 1PI03-TT-50541  
 January 2013





Key

- Base Traffic Flow
- Construction Base
- Development Case

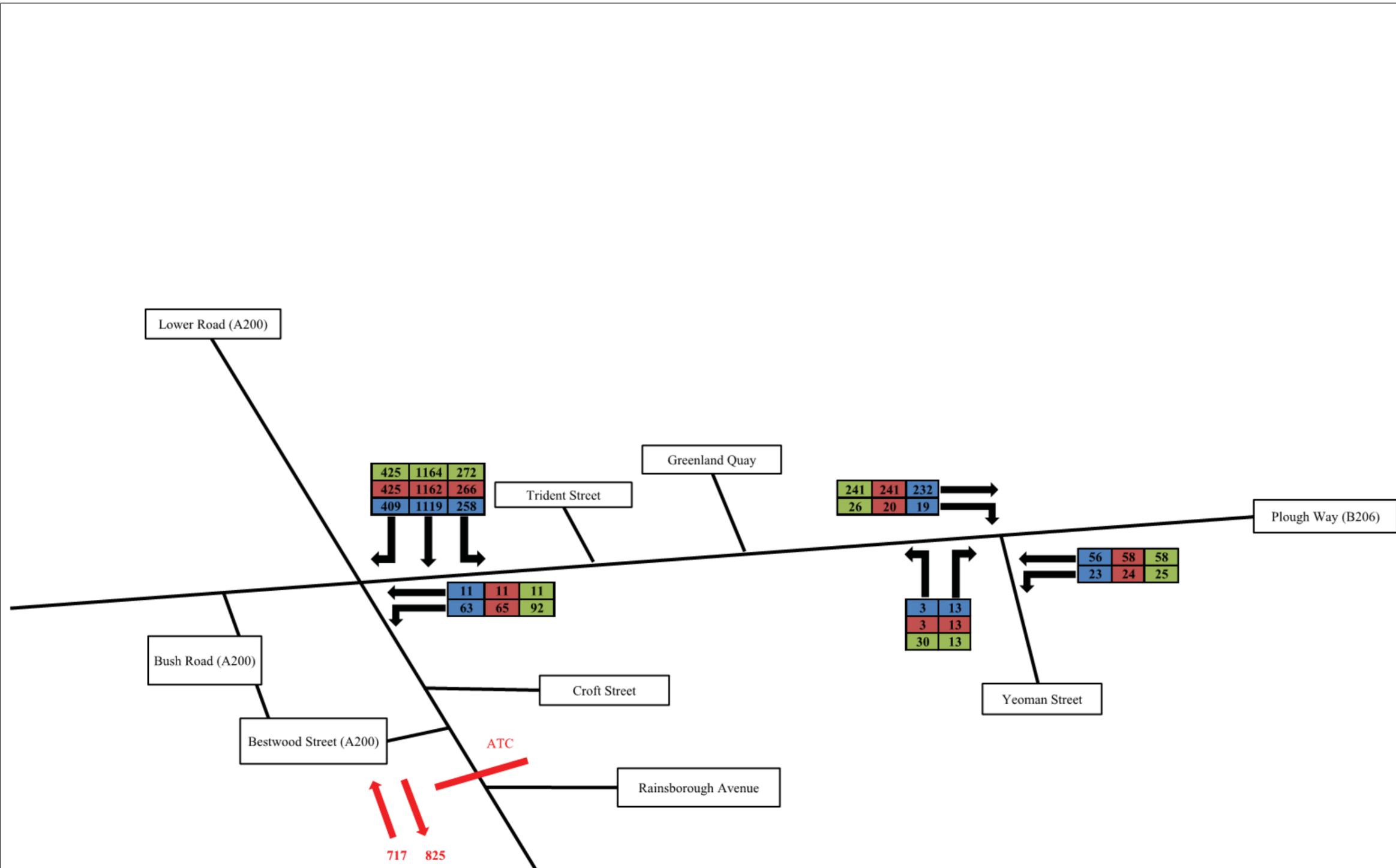


## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

**Document Information**  
**Environmental Statement**  
 Transport - Baseline, Construction and Development case traffic flow (AM peak hour)  
 Vol.22 Figure 12.4.6  
 1PL03-TT-50872  
 January 2013





Key

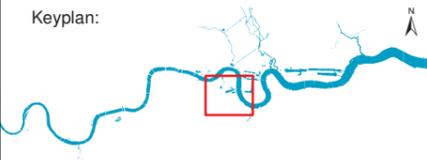
- Base Traffic Flow
- Construction Base
- Development Case

**FOR INFORMATION**

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

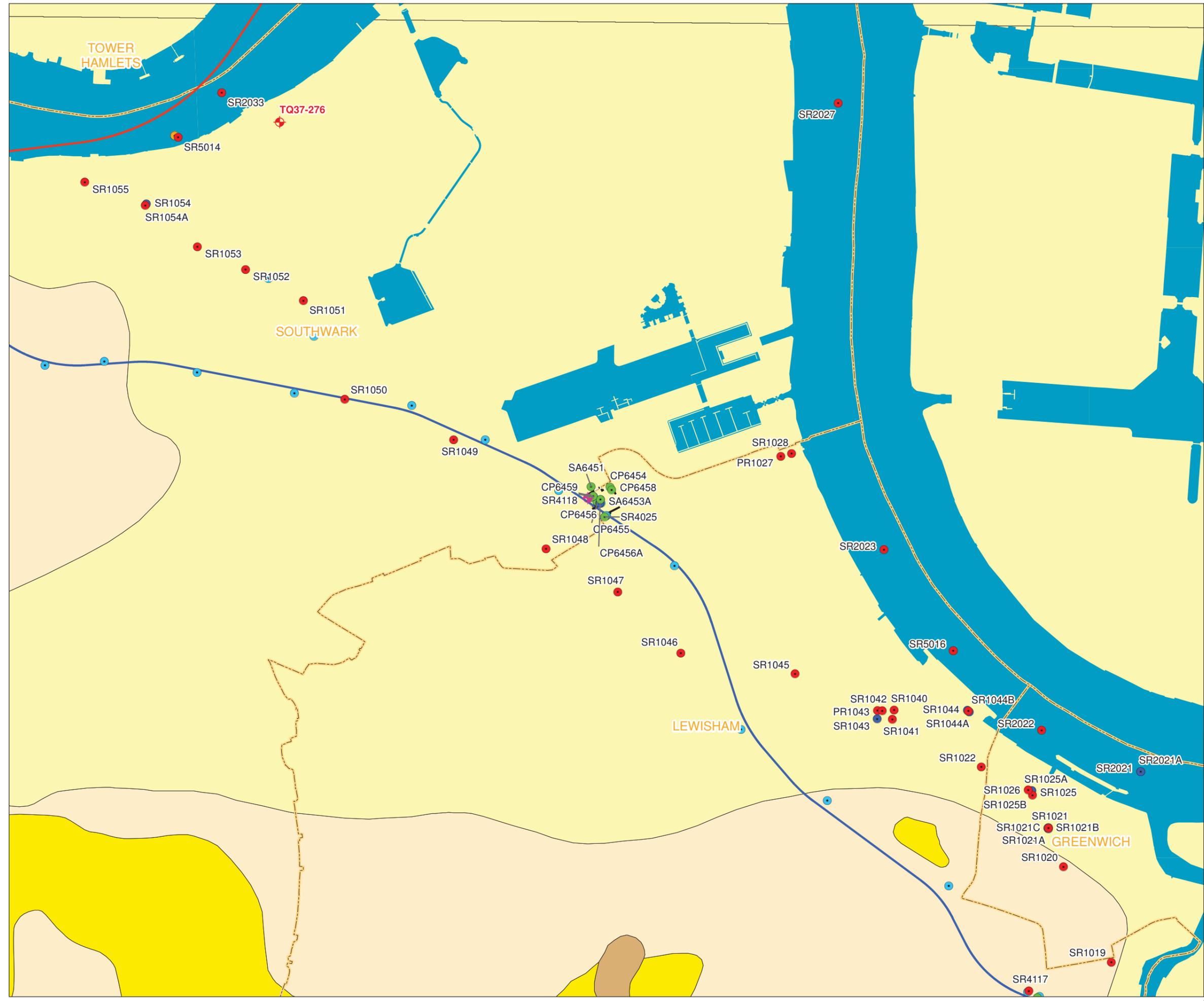
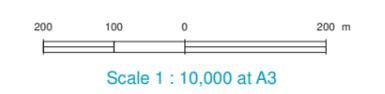
**Document Information**  
**Environmental Statement**  
 Transport - Baseline, Construction and Development case traffic flow (PM peak hour)  
 Vol.22 Figure 12.4.7  
 1PL03-TT-50896  
 January 2013

Thames Tideway Tunnel  
 Creating a cleaner, healthier River Thames



**Key**

- Limits of Land to be Acquired or Used
- Thames Tideway Tunnel
  - Main Tunnel
  - Connection Tunnel
- Local Authority Boundary
- Drilled Boreholes
  - Depth (m)
    - 0 - 10
    - 10 - 30
    - 30+
  - Proposed Boreholes
    - Water
    - Land
- EA Groundwater Level Monitoring Locations
  - Historical Data Available
  - Recent Data Available
- Superficial Geology
  - Peat
  - Alluvium
  - Kempton Park Gravel Member
  - Langley Silt Member

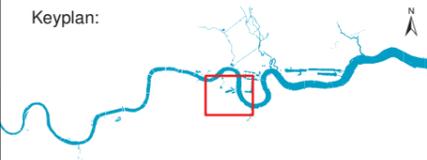


## FOR INFORMATION

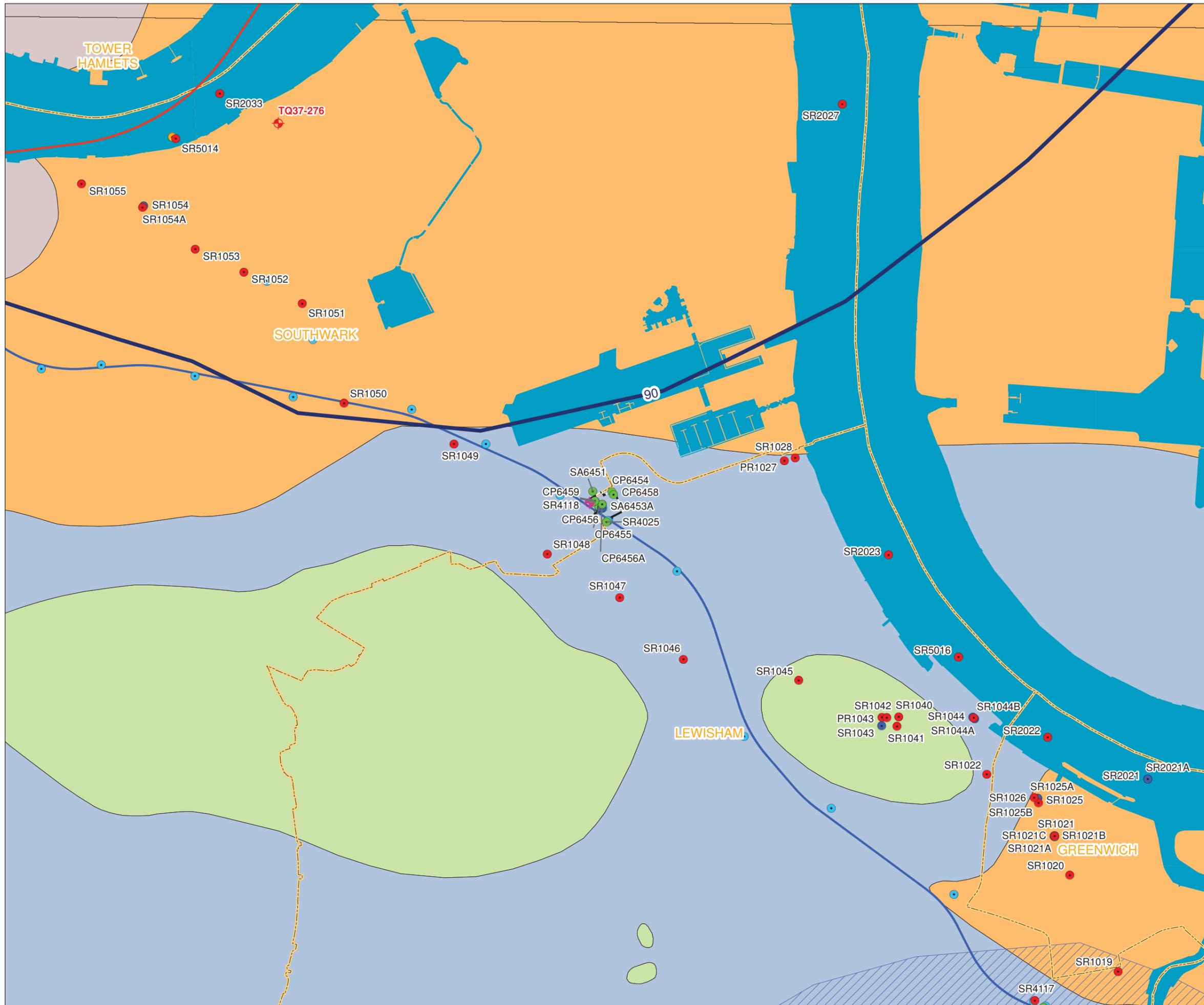
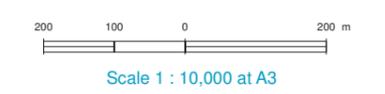
**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
 Water resources – groundwater - superficial geology  
 Vol.22 Figure 13.4.1  
 1PL03-WR-20176  
 January 2013





- Key**
- Limits of Land to be Acquired or Used
  - Thames Tideway Tunnel
    - Main Tunnel
    - Connection Tunnel
  - Local Authority Boundary
  - Drilled Boreholes
    - Depth (m)
      - 0 - 10
      - 10 - 30
      - 30+
    - Proposed Boreholes
      - Water
      - Land
  - EA Groundwater Level Monitoring Locations
    - ◆ Historical Data Available
    - ◆ Recent Data Available
    - EA Chalk Piezometric Level (mATD) - Jan 11
  - Source Protection Zones
    - Zone III (Total Catchment)
  - Solid Geology
    - London Clay Formation
    - Lambeth Group
    - Thanet Sand
    - Chalk Formation

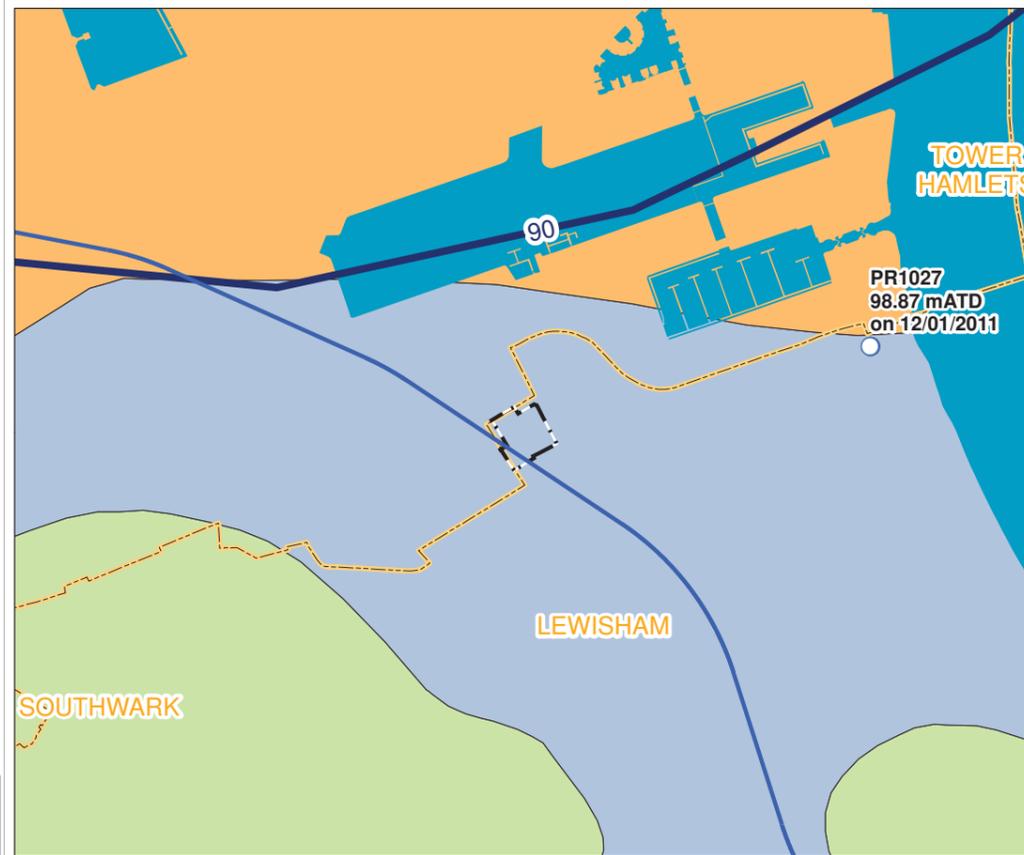
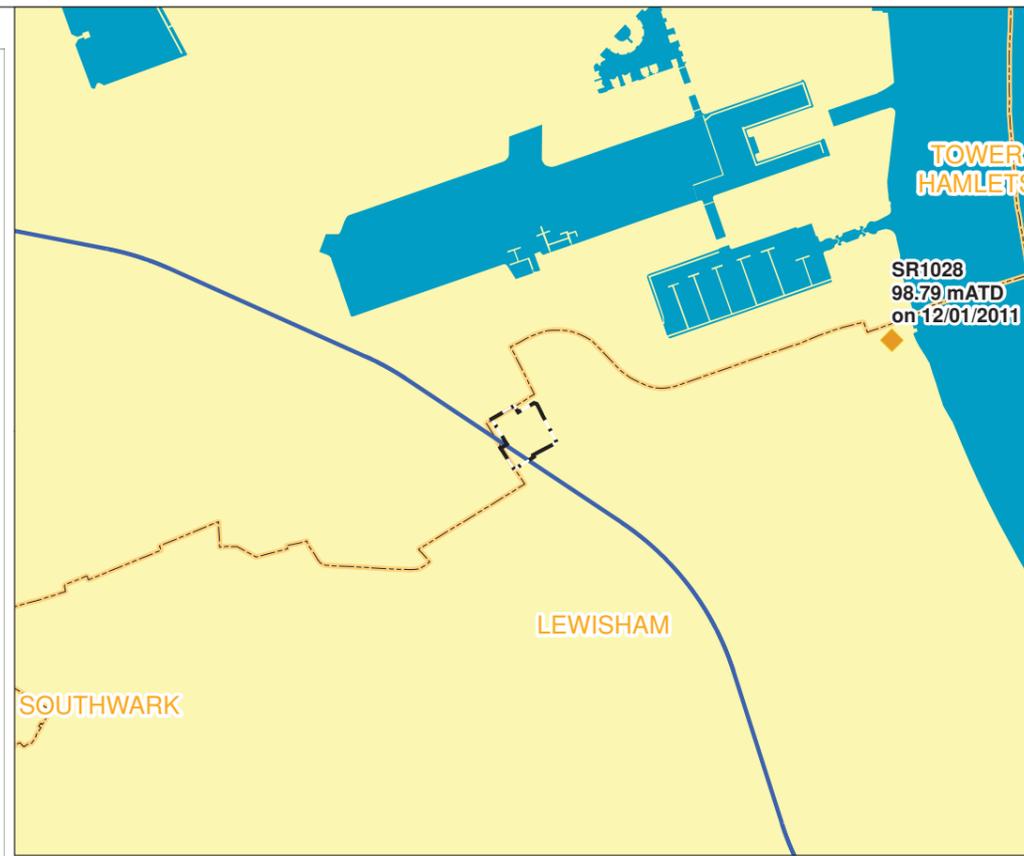
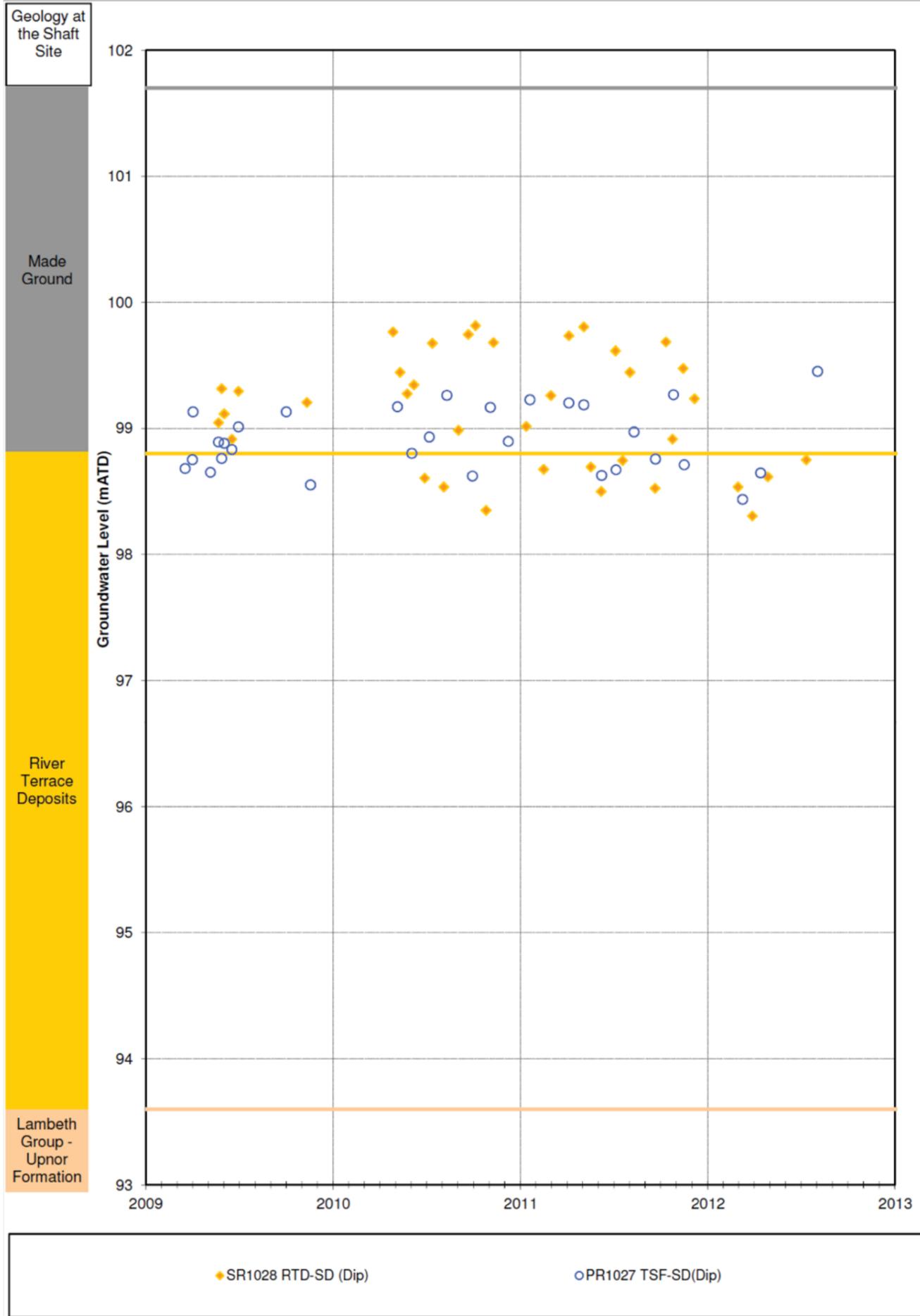


## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
 Water resources – groundwater - solid geology  
 Vol.22 Figure 13.4.2  
 1PL03-WR-20177  
 January 2013

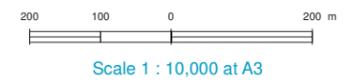




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- Key**
- Limits of Land to be Acquired or Used
  - Thames Tideway Tunnel
  - Connection Tunnel
  - Local Authority Boundary
  - Drilled Boreholes Upper Aquifer Water Levels
  - ◆ SR1028
  - Drilled Boreholes Lower Aquifer Water Levels
  - PR1027
  - EA Chalk Piezometric Level (mATD) - Jan 11
  - Superficial Geology
  - Alluvium
  - Solid Geology
  - Lambeth Group
  - Thanet Sand
  - Chalk Formation



**FOR INFORMATION**

**Location**  
Earl Pumping Station  
London Borough of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
Water resources – groundwater - monitoring locations  
Vol.22 Figure 13.4.3  
1PL03-WR-20178  
January 2013



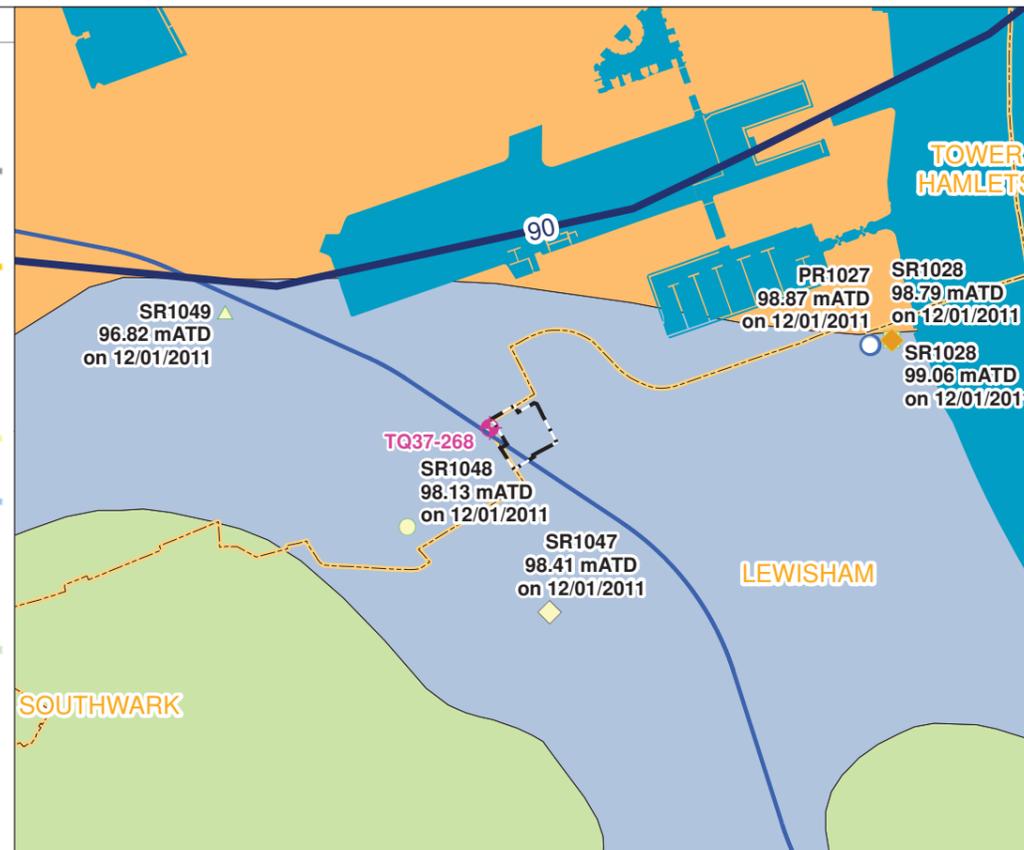
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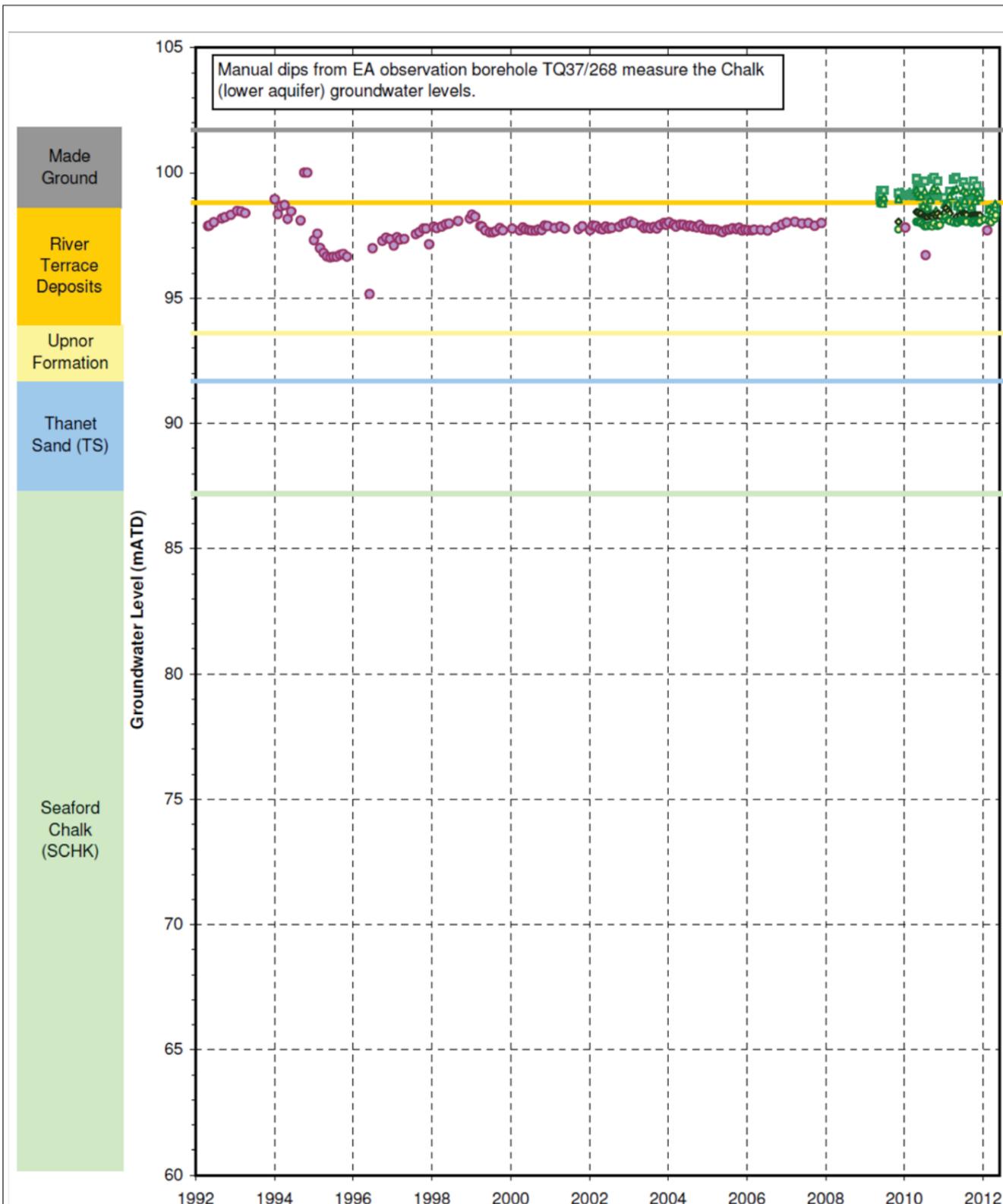
**Key**

- Limits of Land to be Acquired or Used
- Thames Tideway Tunnel
- Connection Tunnel
- Local Authority Boundary
- Drilled Boreholes Upper Aquifer Water Levels
- SR1028
- Drilled Boreholes Lower Aquifer Water Levels
- PR1027
- SR1028
- SR1049
- SR1048
- SR1047
- EA groundwater level monitoring locations
- Historical data available
- EA Chalk Piezometric Level (mATD) - Jan 11
- Solid Geology
- Lambeth Group
- Thanet Sand
- Chalk Formation

Scale 1 : 10,000 at A3



Long term groundwater level monitoring



— PR1027 TSF-SD(Logger)	■ SR1028 SCK-A2(Dip)
▲ SR1049 SCK-B1(Dip)	◆ SR1047 SCK-B1(Dip)
— PR1027 LCK-A1(Logger)	● SR1048 LCK-B1(Dip)
● TQ37/268 (EA OBS BH)	

**Environment Agency Borehole**  
The borehole is located closest to Earl Pumping Station.  
No recent water level record data

**Geological Information**  
Data obtained from Earl Pumping Station draft site construction report.  
(100-RG-CNL-PLM1X-000010)

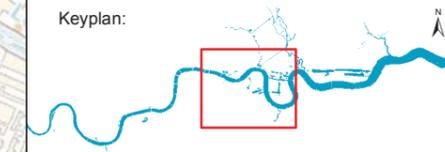
**FOR INFORMATION**

**Location**  
Earl Pumping Station  
London Borough of Lewisham & Southwark

**Document Information**  
**Environmental Statement**  
Water resources – groundwater - regional groundwater hydrograph  
Vol.22 Figure 13.4.4  
1PL03-WR-20179  
January 2013

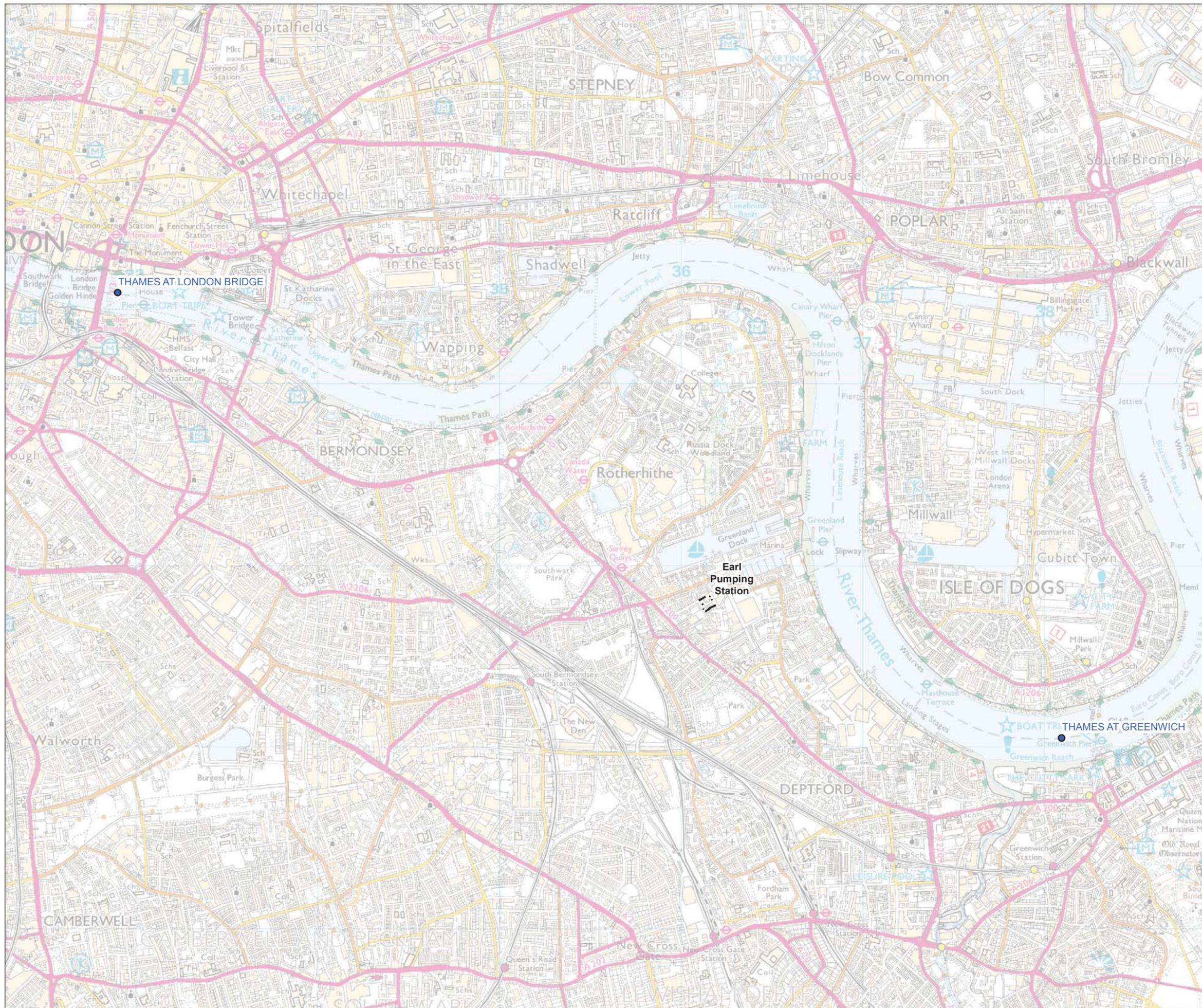


Keyplan:



Key

- Limits of Land to be Acquired or Used
- Spot Sample Locations



Scale 1 : 20,000 at A3

## FOR INFORMATION

[Location](#)

**Earl Pumping Station**  
London Boroughs of Lewisham & Southwark

[Document Information](#)

**Environmental Statement**

Water resources - surface water - water quality monitoring points  
Vol.22 Figure 14.4.1

1PL03-WR-21020  
January 2013

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- Key
- Limits of Land to be Acquired or Used
  - Thames Tidal Defences
  - EA Flood Zone 3
  - EA Flood Zone 2

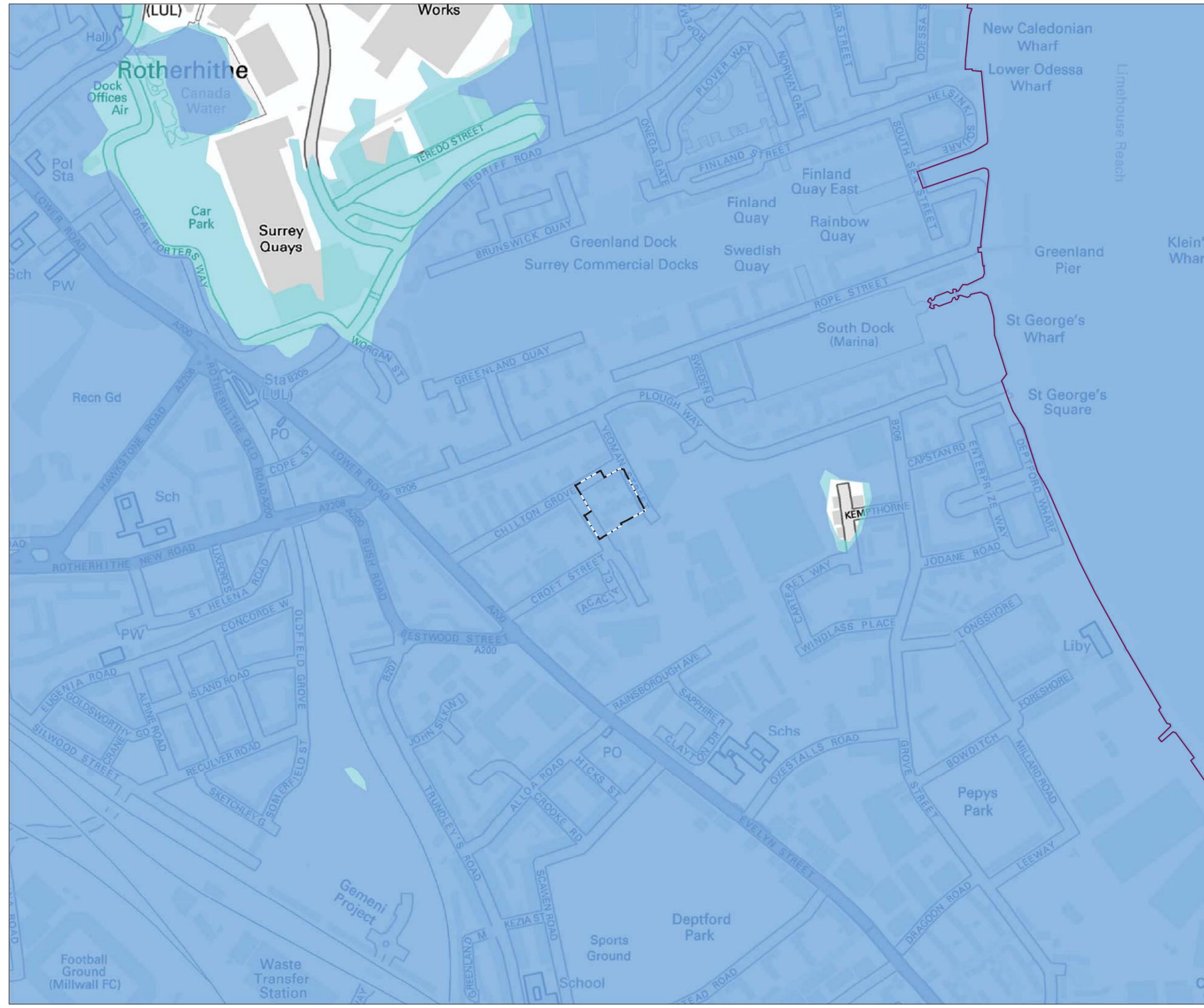


## FOR INFORMATION

**Location**  
Earl Pumping Station  
London Borough of Lewisham & Southwark

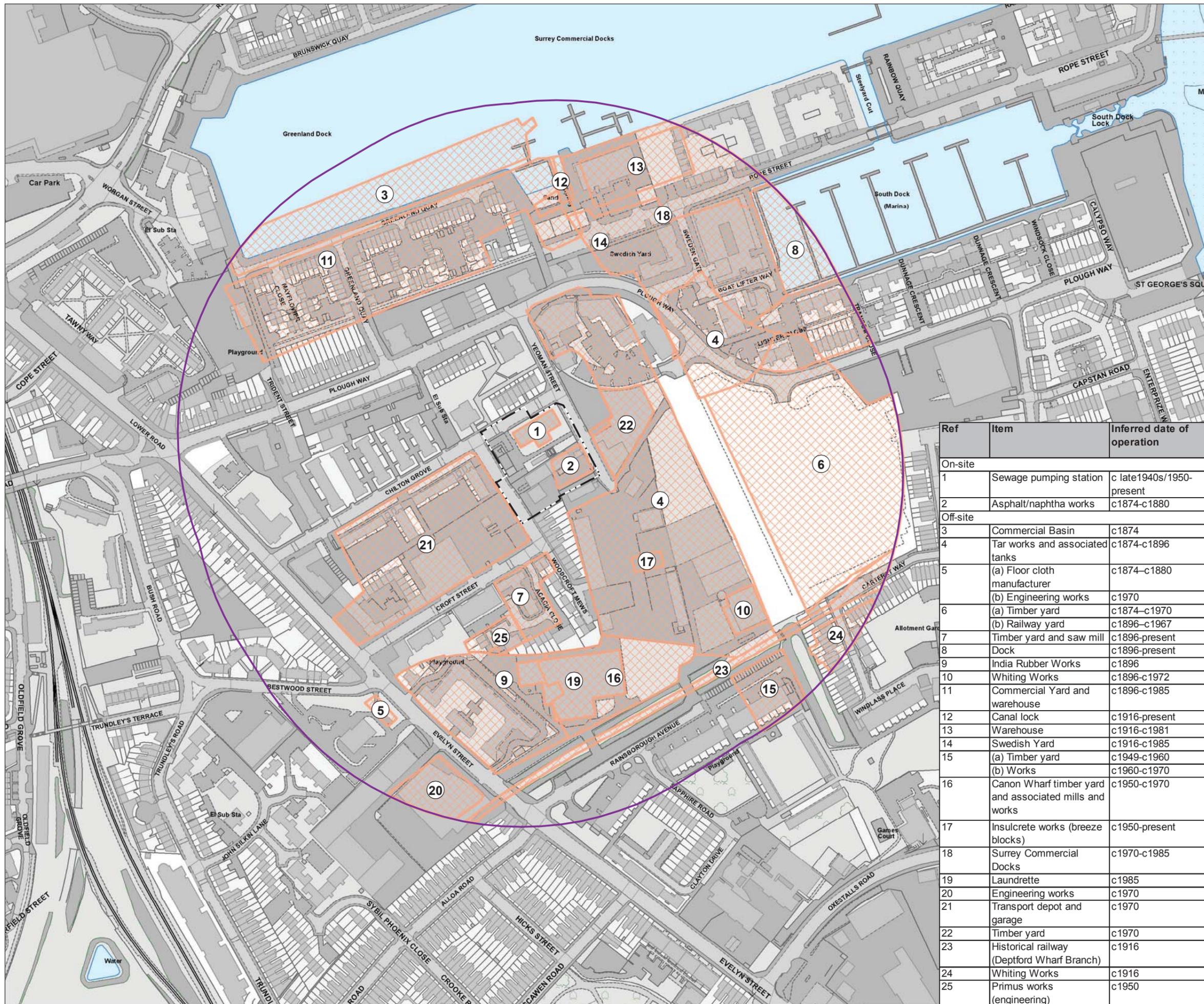
**Document Information**  
Environmental Statement  
Flood risk - EA flood zones

Vol.22 Figure 15.3.1  
1PL03-FL-20146  
January 2013





- Key**
- Limits of Land
  - - - to be Acquired or Used
  - Limit of Land 250m Buffer
  - ▨ Potentially Contaminating Land-Uses



Ref	Item	Inferred date of operation
<b>On-site</b>		
1	Sewage pumping station	c late1940s/1950-present
2	Asphalt/naphtha works	c1874-c1880
<b>Off-site</b>		
3	Commercial Basin	c1874
4	Tar works and associated tanks	c1874-c1896
5	(a) Floor cloth manufacturer	c1874-c1880
	(b) Engineering works	c1970
6	(a) Timber yard	c1874-c1970
	(b) Railway yard	c1896-c1967
7	Timber yard and saw mill	c1896-present
8	Dock	c1896-present
9	India Rubber Works	c1896
10	Whiting Works	c1896-c1972
11	Commercial Yard and warehouse	c1896-c1985
12	Canal lock	c1916-present
13	Warehouse	c1916-c1981
14	Swedish Yard	c1916-c1985
15	(a) Timber yard	c1949-c1960
	(b) Works	c1960-c1970
16	Canon Wharf timber yard and associated mills and works	c1950-c1970
17	Insulcrete works (breeze blocks)	c1950-present
18	Surrey Commercial Docks	c1970-c1985
19	Laundrette	c1985
20	Engineering works	c1970
21	Transport depot and garage	c1970
22	Timber yard	c1970
23	Historical railway (Deptford Wharf Branch)	c1916
24	Whiting Works	c1916
25	Primus works (engineering)	c1950



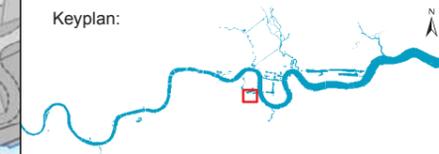
## FOR INFORMATION

**Location**  
**Earl Pumping Station**  
 London Borough of Lewisham

**Document Information**  
**Environmental Statement**  
 Land quality - potentially contaminating land-uses  
 Vol.22 Figure F.1.1  
 1PL03-LQ-30108  
 January 2013



Keyplan:



Key

Drilled Boreholes

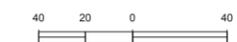
Depth (m)

- 0 - 10
- 10 - 30
- 30+

--- Limits of Land

--- to be Acquired or Used

□ Limit of Land 250m Buffer



Scale 1 : 3,000 at A3

## FOR INFORMATION

[Location](#)

**Earl Pumping Station**  
London Borough of Lewisham

[Document Information](#)

**Environmental Statement**

Land quality - borehole locations

Vol.22 Figure F.1.2

1PL03-LQ-30106

January 2013

Keyplan:



Key

- Limits of Land
- - - to be Acquired or Used
- ▭ Limit of Land 250m Buffer

Waste

- Licensed Waste Management Facilities
- ▲ Past Potential Contaminated Industrial Uses
- Registered Waste Transfer Sites
- ☒ Historical Landfill Sites

Hazards

- Pollution Incidents to Controlled Waters
- LA Pollution Prevention & Controls
- ▲ Past Potentially Contaminated Industrial Uses

40 20 0 40 m

Scale 1 : 3,000 at A3

## FOR INFORMATION

Location

**Earl Pumping Station**  
London Borough of Lewisham

Document Information

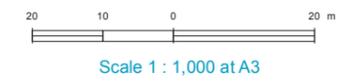
**Environmental Statement**  
Land quality - hazard and waste sites

Vol.22 Figure F.1.3

1PL03-LQ-30107  
January 2013



- Key**
- Limits of Land to be Acquired or Used
  - Local Authority Boundary
  - Noise Survey Locations
  - Attended



**FOR INFORMATION**

**Location**  
 Earls Pumping Station  
 London Boroughs of Lewisham & Southwark

**Document Information**  
 Environmental Statement  
 Noise and vibration - noise survey locations

Vol.22 Figure G.1  
 1PL03-NV-40143  
 January 2013



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### **Thames Water Utilities Limited**

Clearwater Court, Vastern Road, Reading RG1 8DB

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