



Development Consent Order

Application Reference Number: WW010001

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



Application for Development Consent

Application Reference Number: WWO10001

Environmental Statement

Doc Ref: **6.2.26**

Volume 26: Beckton Sewage Treatment Works figures

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

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

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Thames Tideway Tunnel

Environmental Statement

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Thames Tideway Tunnel

Environmental Statement

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Thames Tideway Tunnel

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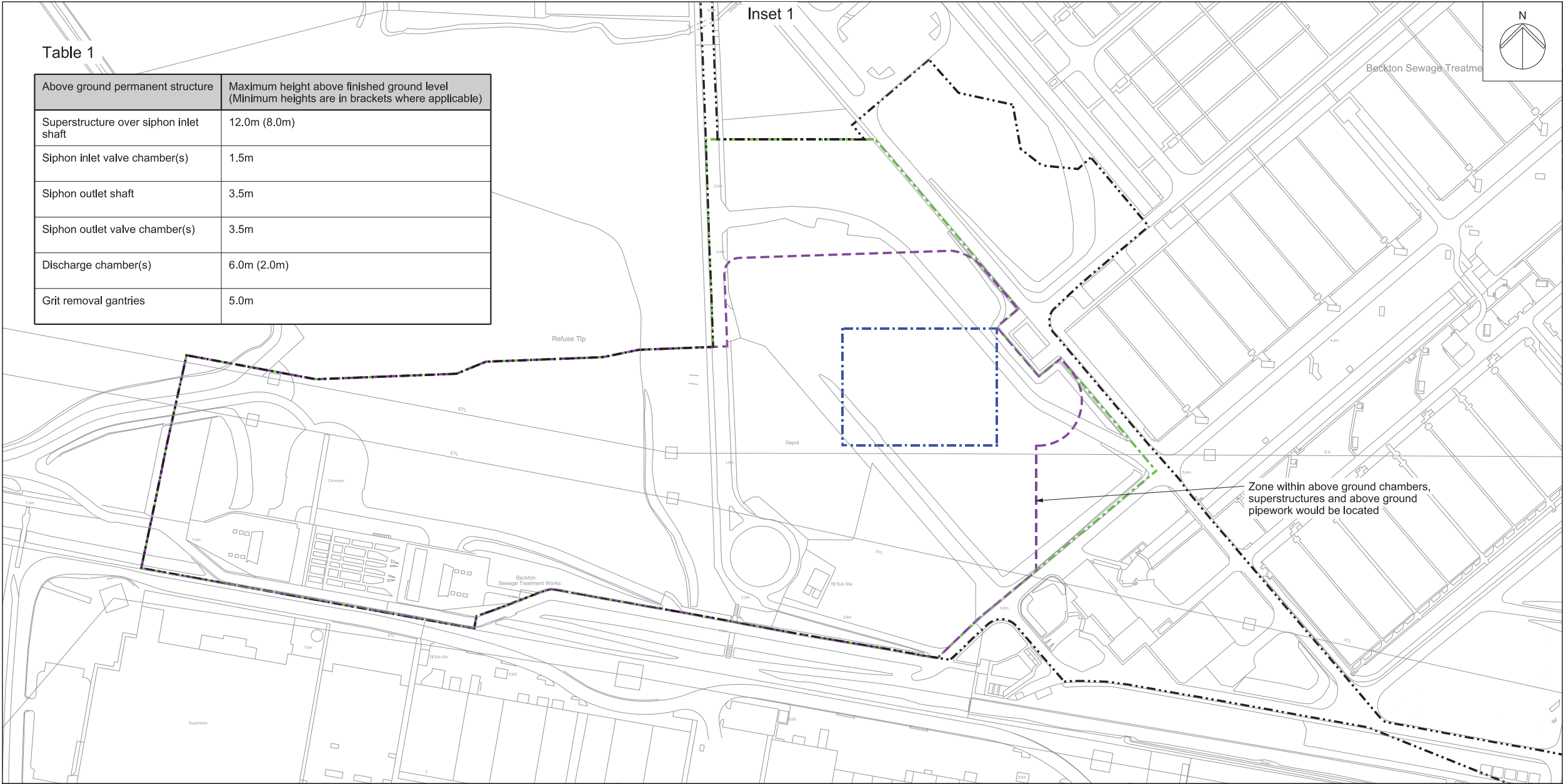
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1 Plans from the Book of Plans

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Table 1

Above ground permanent structure	Maximum height above finished ground level (Minimum heights are in brackets where applicable)
Superstructure over siphon inlet shaft	12.0m (8.0m)
Siphon inlet valve chamber(s)	1.5m
Siphon outlet shaft	3.5m
Siphon outlet valve chamber(s)	3.5m
Discharge chamber(s)	6.0m (2.0m)
Grit removal gantries	5.0m



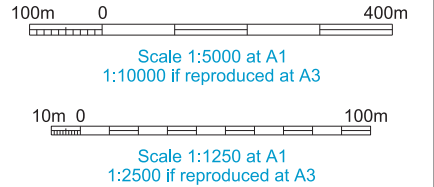
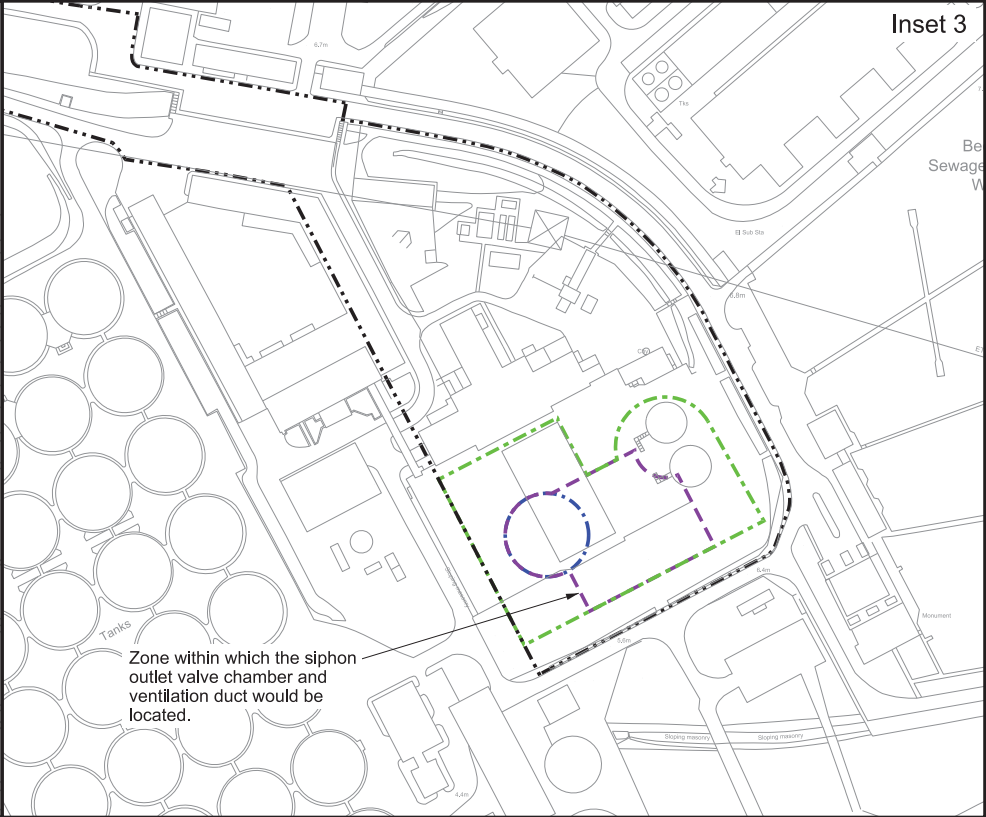
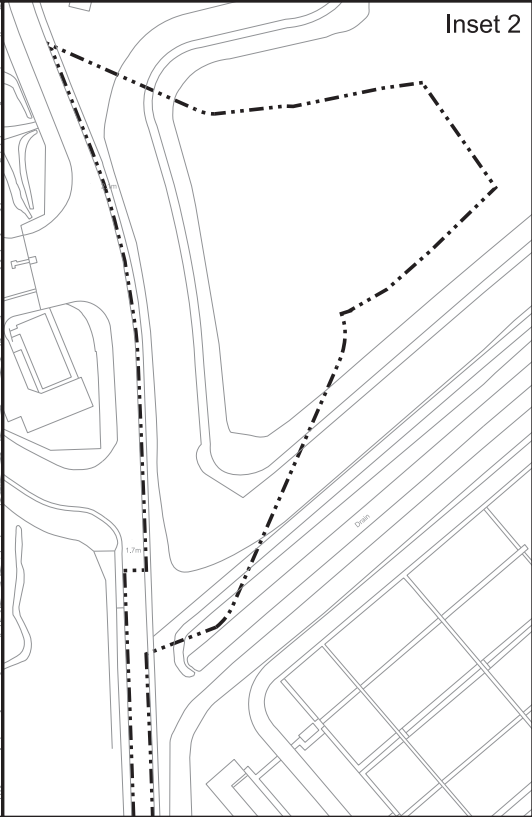
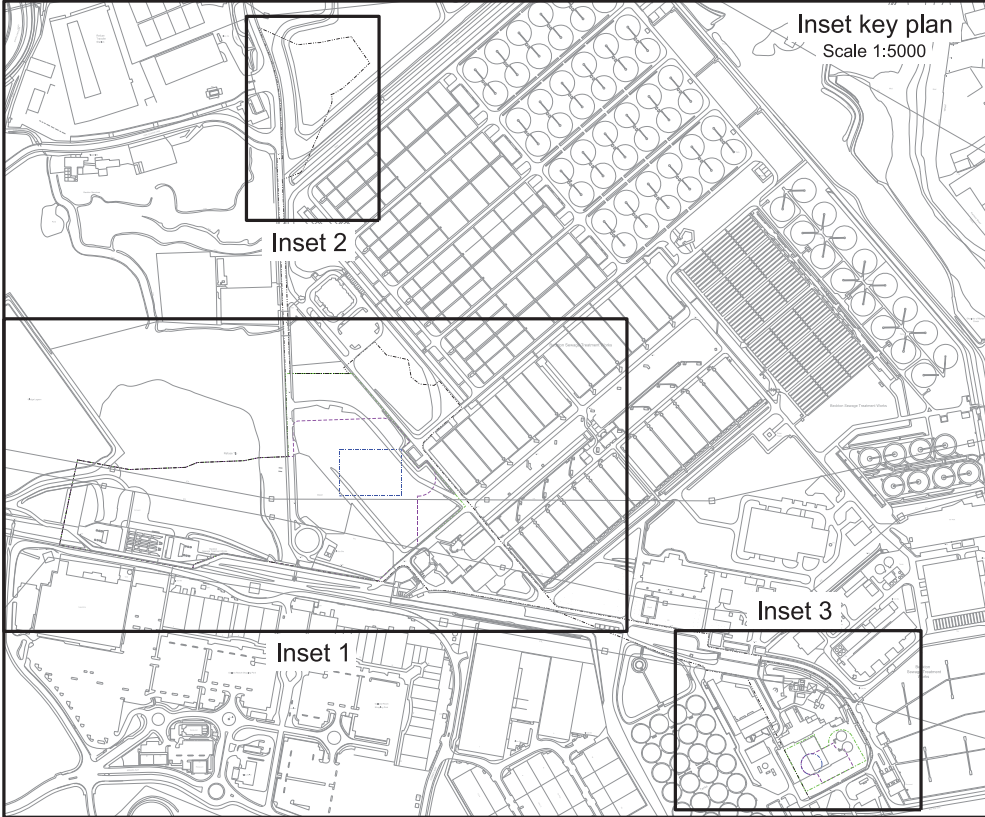
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Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

- 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)

- Notes:**
- All dimensions and levels are approximate.
 - The Site Works Parameter Key Plan identifies each zone independently.
 - 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.



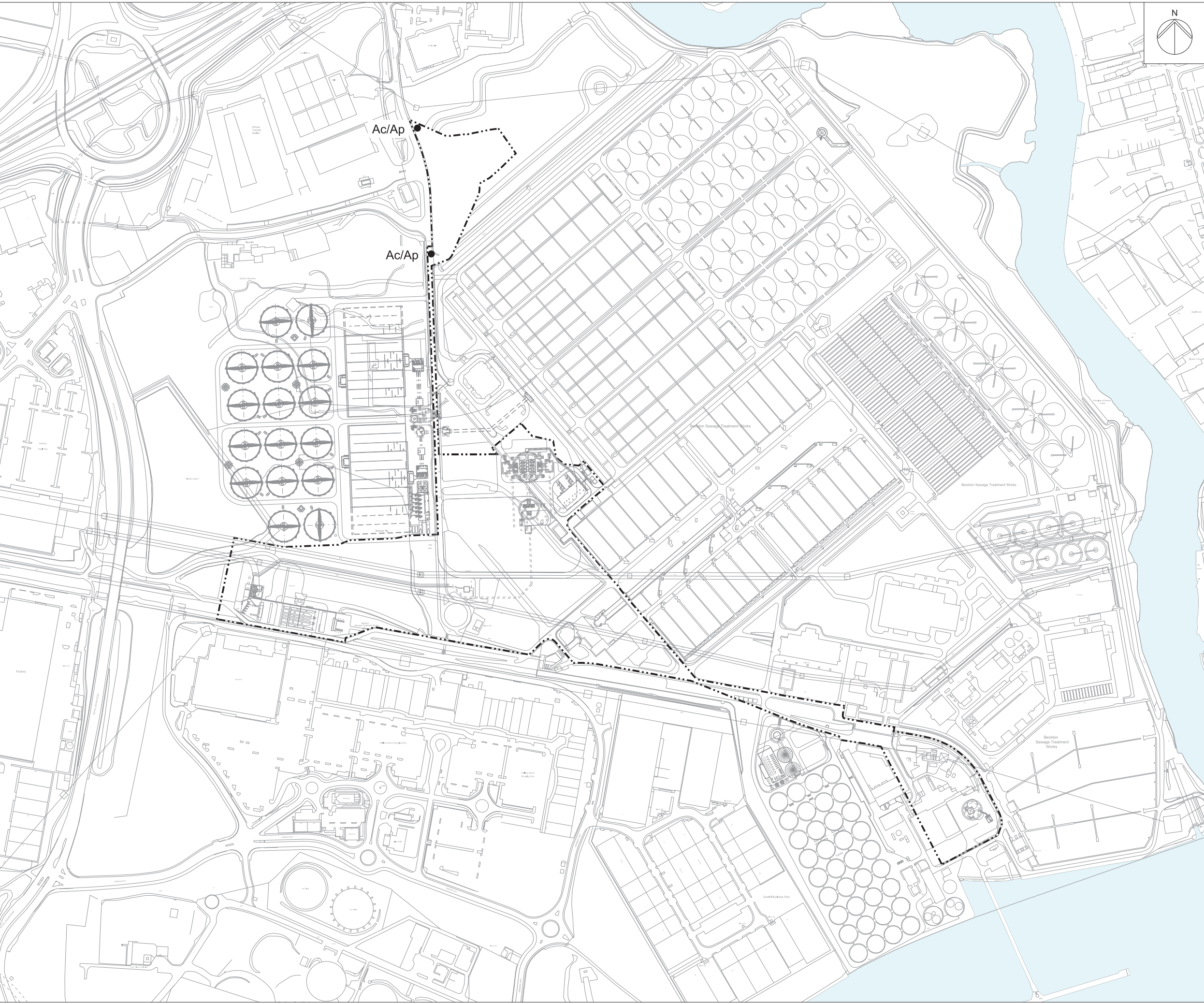
FOR APPROVAL

Location
Beckton STW
London Borough of Newham

Document Information
Application for Development Consent
Site works parameter plan

Book of plans - section 28
DCO-PP-27X-BESTW-280003
January 2013





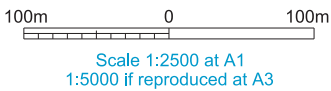
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- Key:**
- Limits of land to be acquired or used (LLAU)
 - Ap ● Access to permanent works
 - Ac ● Access to construction works

- Notes:**
1. This plan does not show stopping up and diversions of limited duration (eg hoarding erection, minor utility diversions and minor highway works).
 2. The Lee Tunnel and STW extensions are currently under construction and will be 'existing' when construction of the Thames Tunnel project commences.



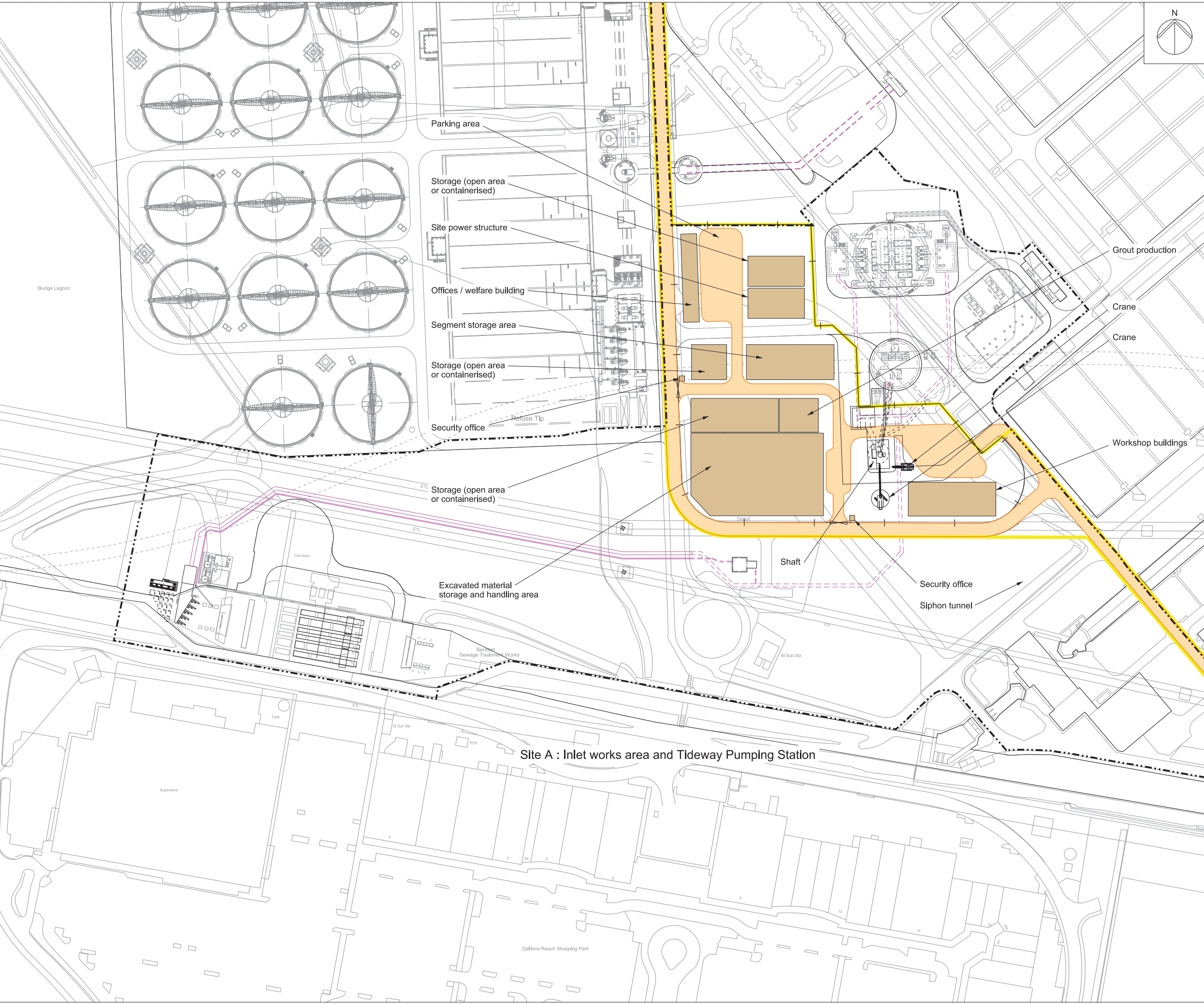
FOR APPROVAL

Location
Beckton STW
London Borough of Newham

Document Information
Application for Development Consent
Access plan

Book of plans - section 28
DCO-PP-27X-BESTW-280002
January 2013





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Keyplan: This drawing

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Key:

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

Notes :

1. These construction phasing plans have been prepared to illustrate possible site layouts for the principle 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.

10m 0 100m
Scale 1:1000 at A1
1:2000 if reproduced at A3

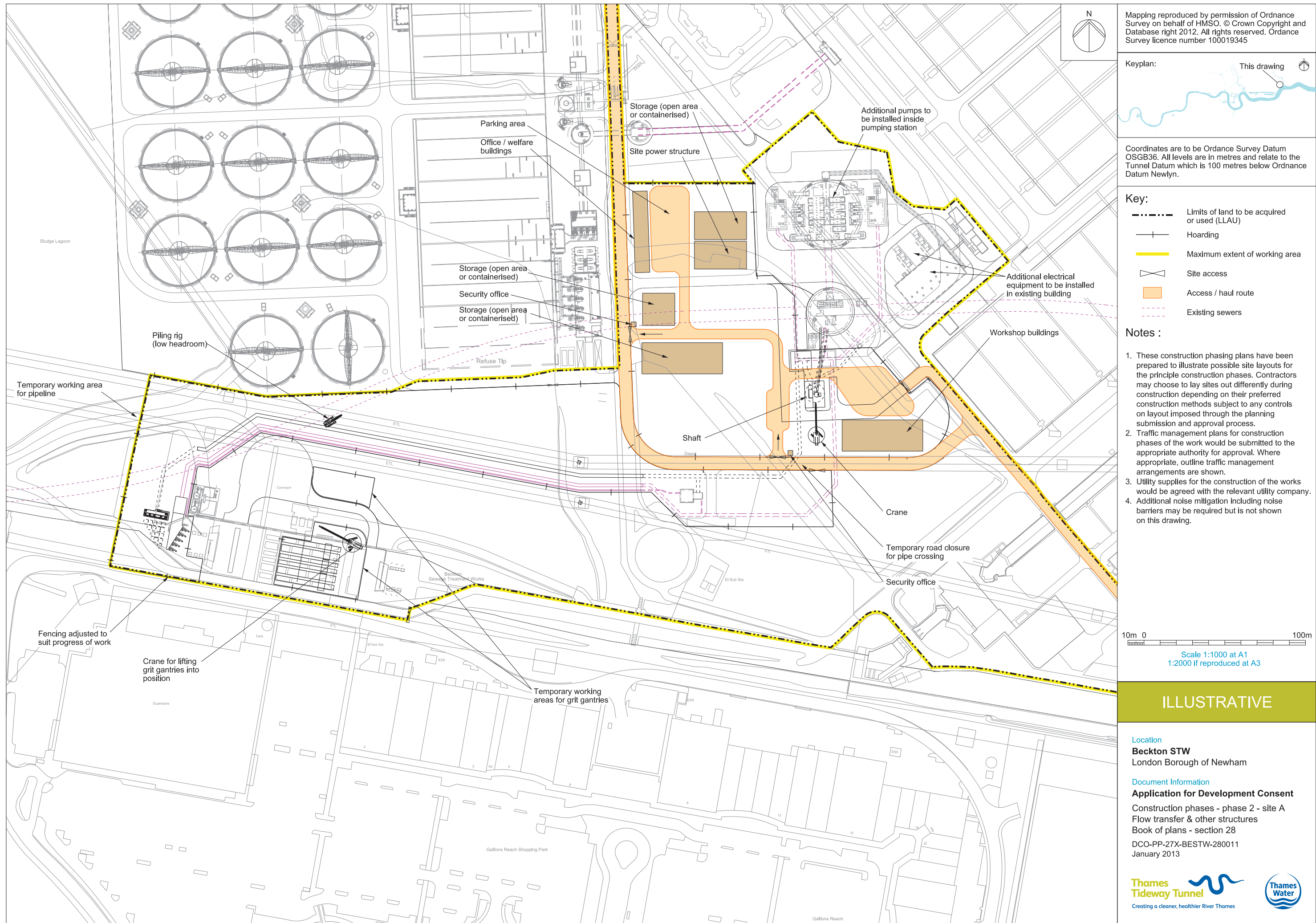
ILLUSTRATIVE

Location
Beckton STW
London Borough of Newham

Document Information
Application for Development Consent
Construction phases - phase 1 - site A
Setup, shaft construction & siphon tunnelling
Book of plans - section 28
DCO-PP-27X-BESTW-280009
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames

Thames Water



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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)
 - Hoarding
 - Maximum extent of working area
 - Site access
 - Access / haul route
 - Existing sewers

- Notes :
1. These construction phasing plans have been prepared to illustrate possible site layouts for the principle 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.
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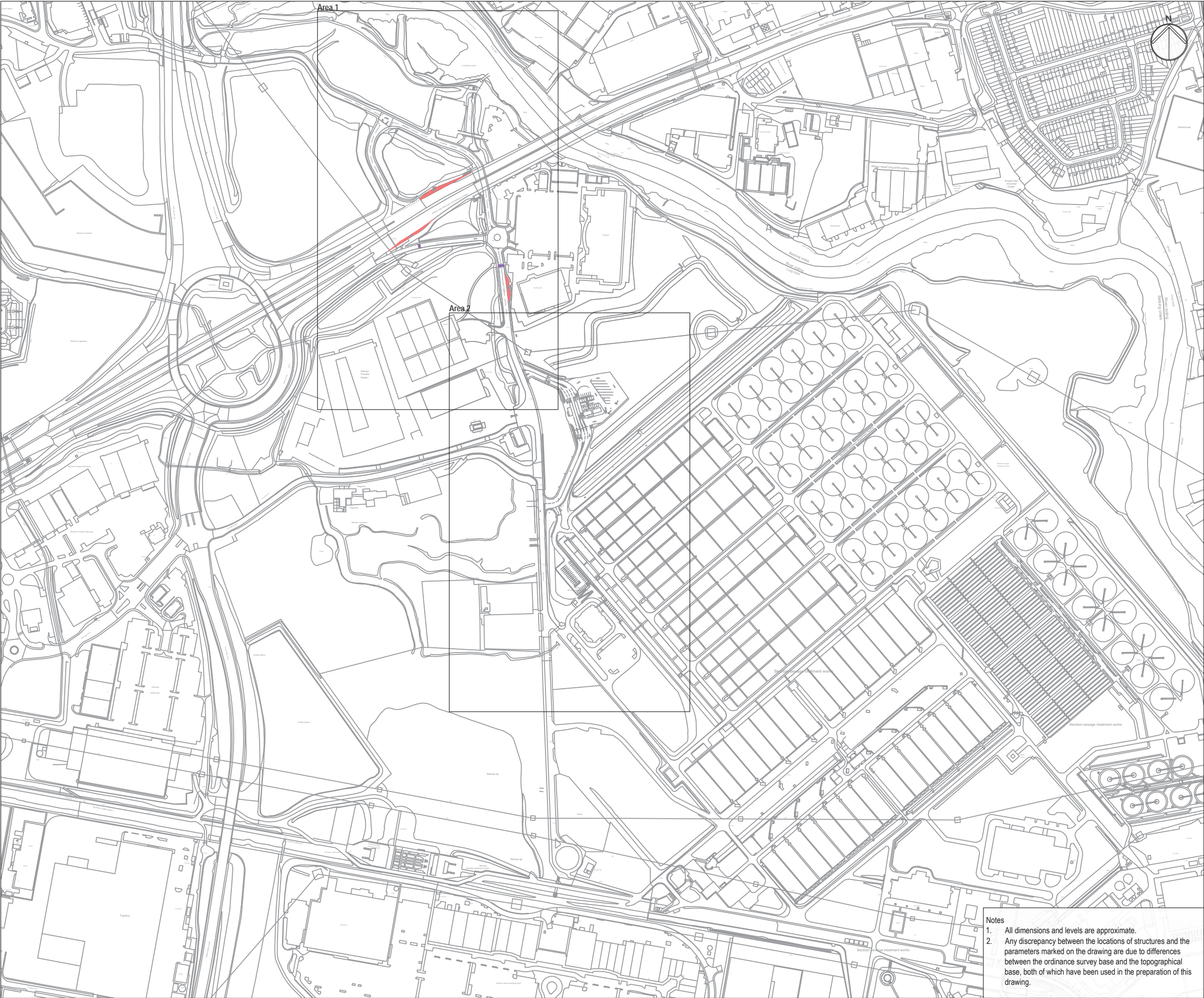
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Scale 1:1000 at A1
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ILLUSTRATIVE

Location
Beckton STW
London Borough of Newham

Document Information
Application for Development Consent
Construction phases - phase 2 - site A
Flow transfer & other structures
Book of plans - section 28
DCO-PP-27X-BESTW-280011
January 2013





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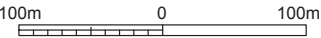


Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

- Key
- Bus stop / stand
 - Pedestrian crossing

- 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



Scale 1:2500 at A1
1:5000 if reproduced at A3

FOR INFORMATION

Location
Beckton sewage treatment plant
London Borough of Newham

Document Information
Application for Development Consent
Existing highway layout

DCO-PP-27X-BESTW-280012
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.



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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

Revised

--- LLA.U.

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

All phases

10m 0 100m

Scale 1:1000 at A1
1:2000 if reproduced at A3

ILLUSTRATIVE

Location

Beckton sewerage treatment plant
London Borough of Newham

Document Information

Application for Development Consent
Highway layout during construction
2 of 2

DCO-PP-27X-BESTW-280014
January 2013

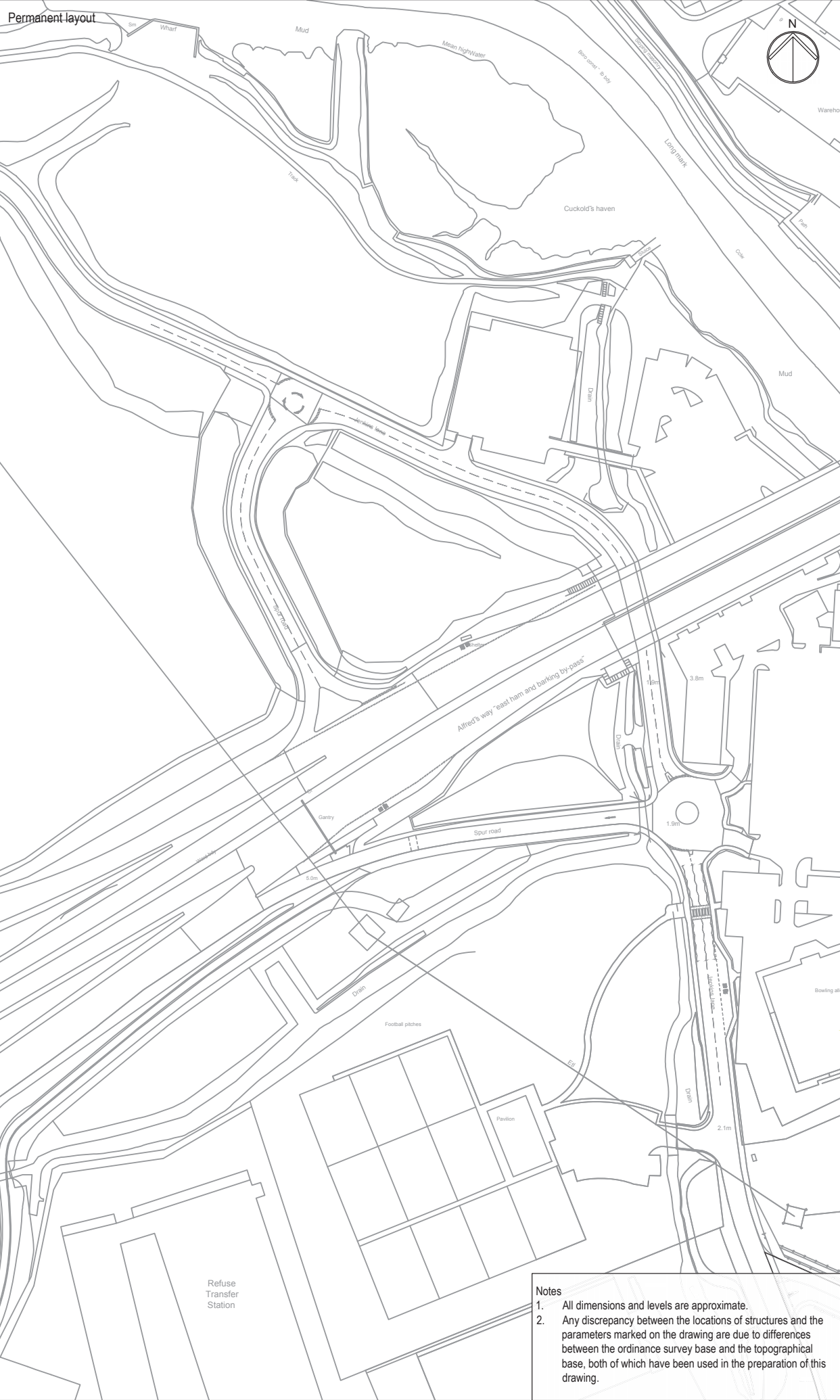
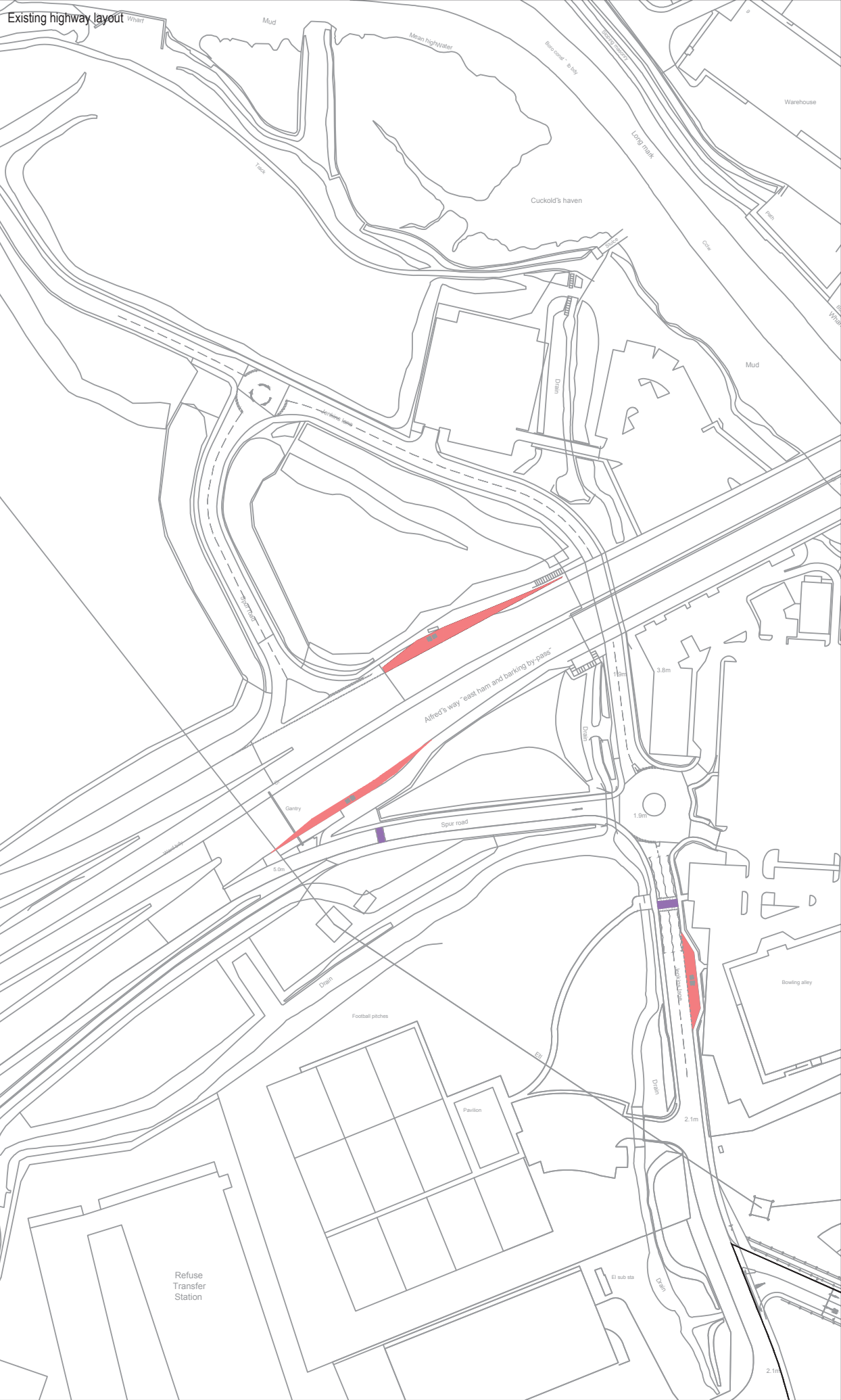
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Keyplan:

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Key

Existing

Bus stop / stand

Pedestrian crossing

Revised

See schedule of works

On street parking

Permit holder

permit holders only mon - fri 8:30am - 6:30pm

Solo motorcycle

solo motorcycles only at all times

Car club permit holders

car club permit holders 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 phase

10m 0 100m

Scale 1:1000 at A1
1:2000 if reproduced at A3

ILLUSTRATIVE

Location

Beckton sewage treatment plant

London Borough of Newham

Document Information

Application for Development Consent

Permanent highway layout

1 of 2

DCO-PP-27X-BESTW-280015

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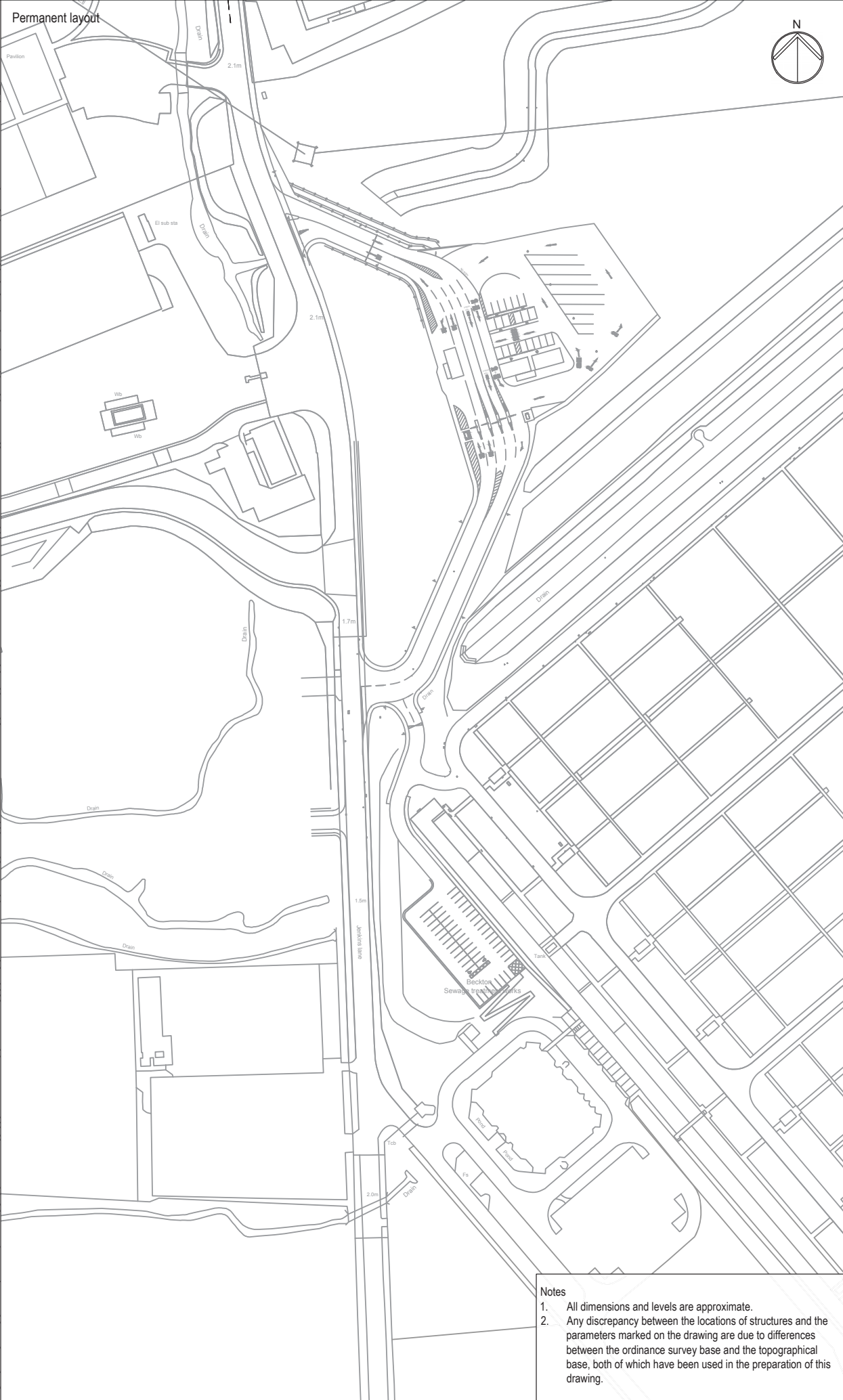
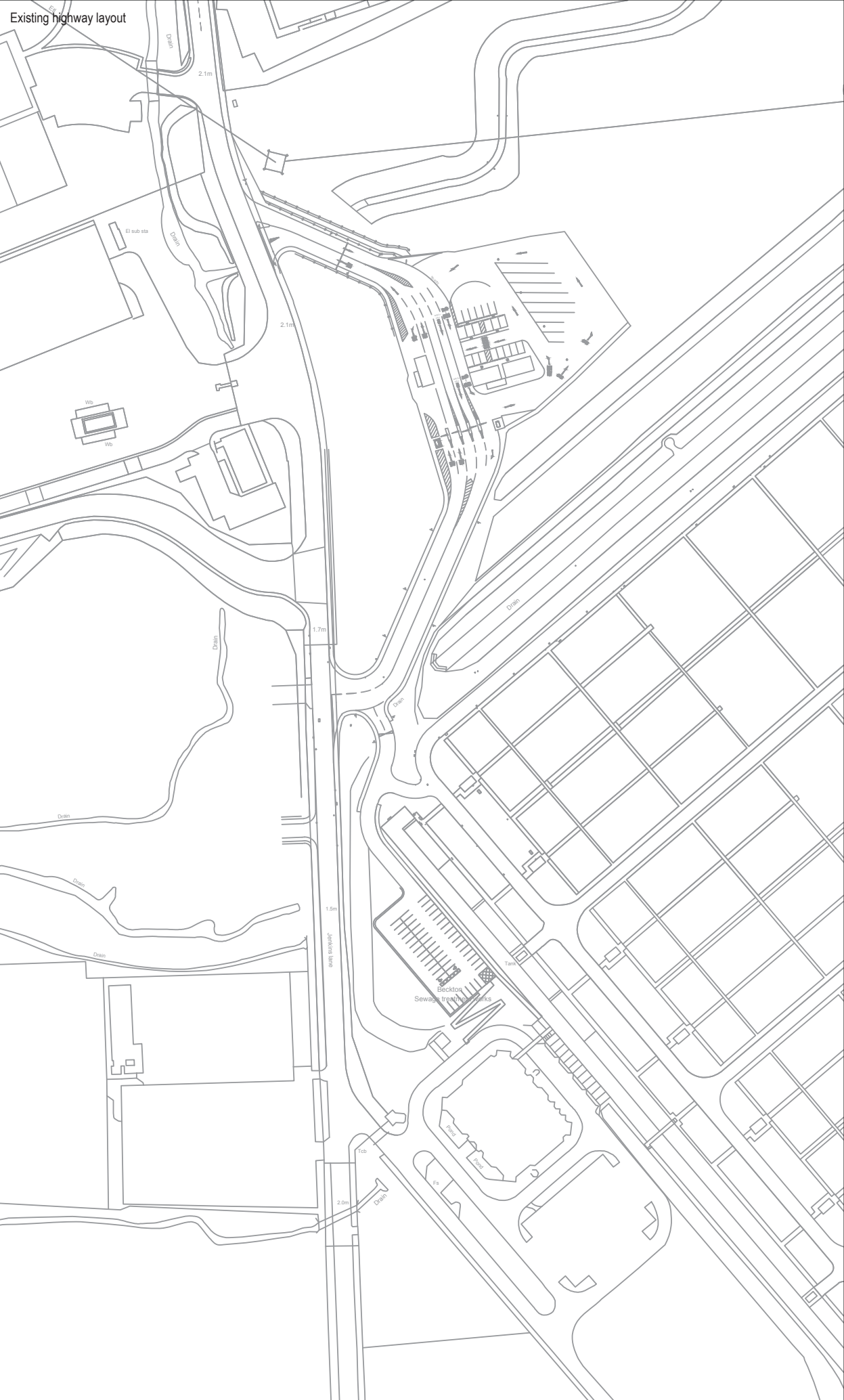
Thames Tideway Tunnel

Creating a cleaner, healthier River Thames

Thames Water

Notes

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Keyplan:



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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, CHT, 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 phase

10m 0 100m

Scale 1:1000 at A1
1:2000 if reproduced at A3

ILLUSTRATIVE

Location

Beckton sewage treatment plant
London Borough of Newham

Document Information

Application for Development Consent

Permanent highway layout
2 of 2

DCO-PP-27X-BESTW-280016
January 2013

Notes

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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.

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames



2 Environmental impact assessment figures

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LONDON BOROUGH OF
BARKING AND DAGENHAM

LONDON BOROUGH OF NEWHAM

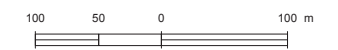
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Keyplan:



Key

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



Scale 1 : 6,000 at A3

FOR INFORMATION

[Location](#)

Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)

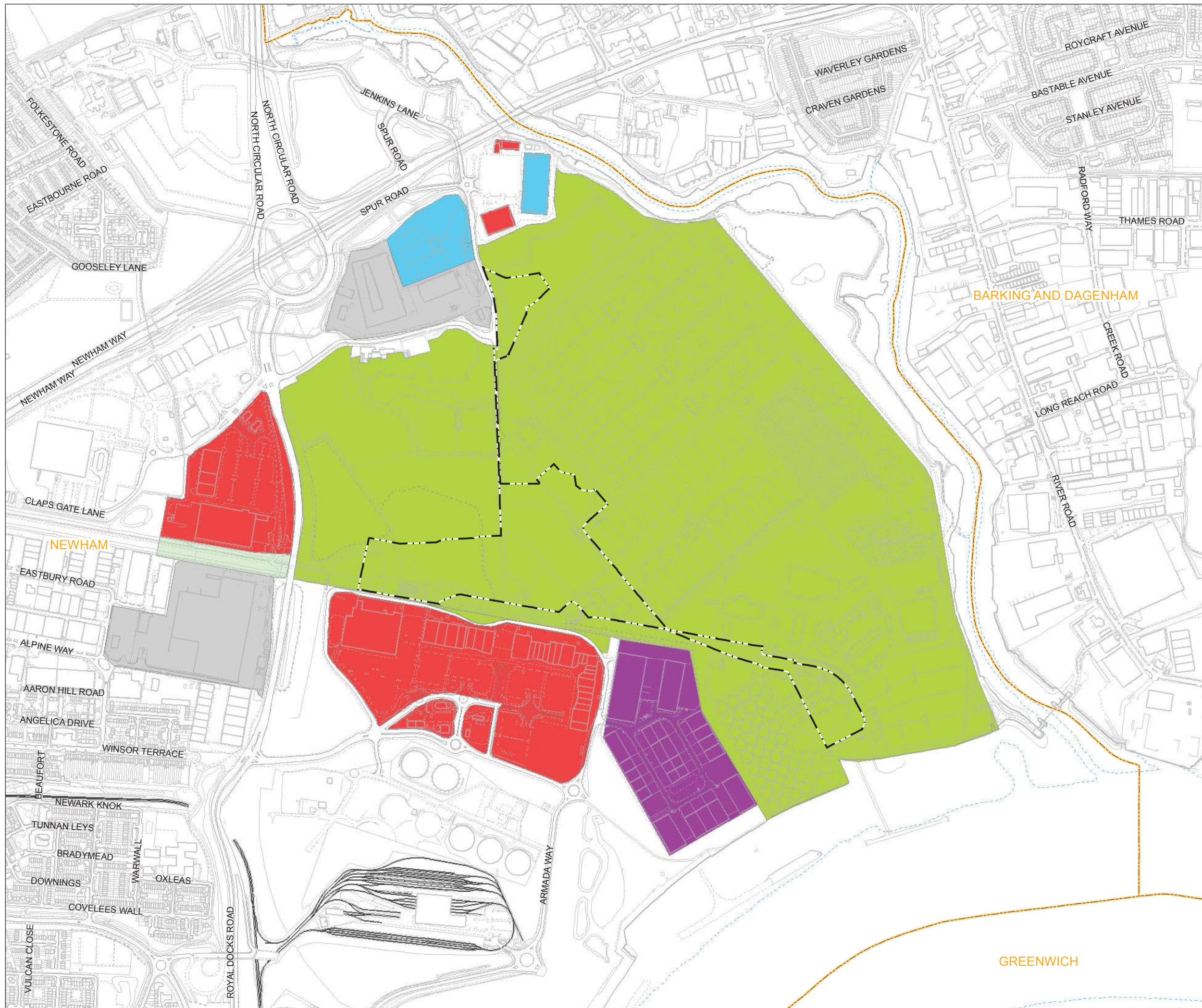
Environmental Statement

Site location plan
Vol. 26 Figure 2.1.1

1PL03-MG-00718
January 2013

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Creating a cleaner, healthier River Thames

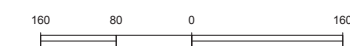




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- Key**
- Limits of Land to be Acquired or Used
 - Local Authority Boundary
- Land Use**
- Class A1-A5 (Shops, Financial & Professional Services, Restaurants, Drinking Establishments and Hot Food Takeaways)
 - Class B1 (Business (Offices except A2) Research and Development, Light Industry)
 - Class B2-B8 (General Industrial / Storage or Distribution)
 - Class D1-D2 (Non Residential Institutions (Community Facilities) and Assembly and Leisure)
 - Other
 - Open Space



Scale 1 : 8,000 at A3

FOR INFORMATION

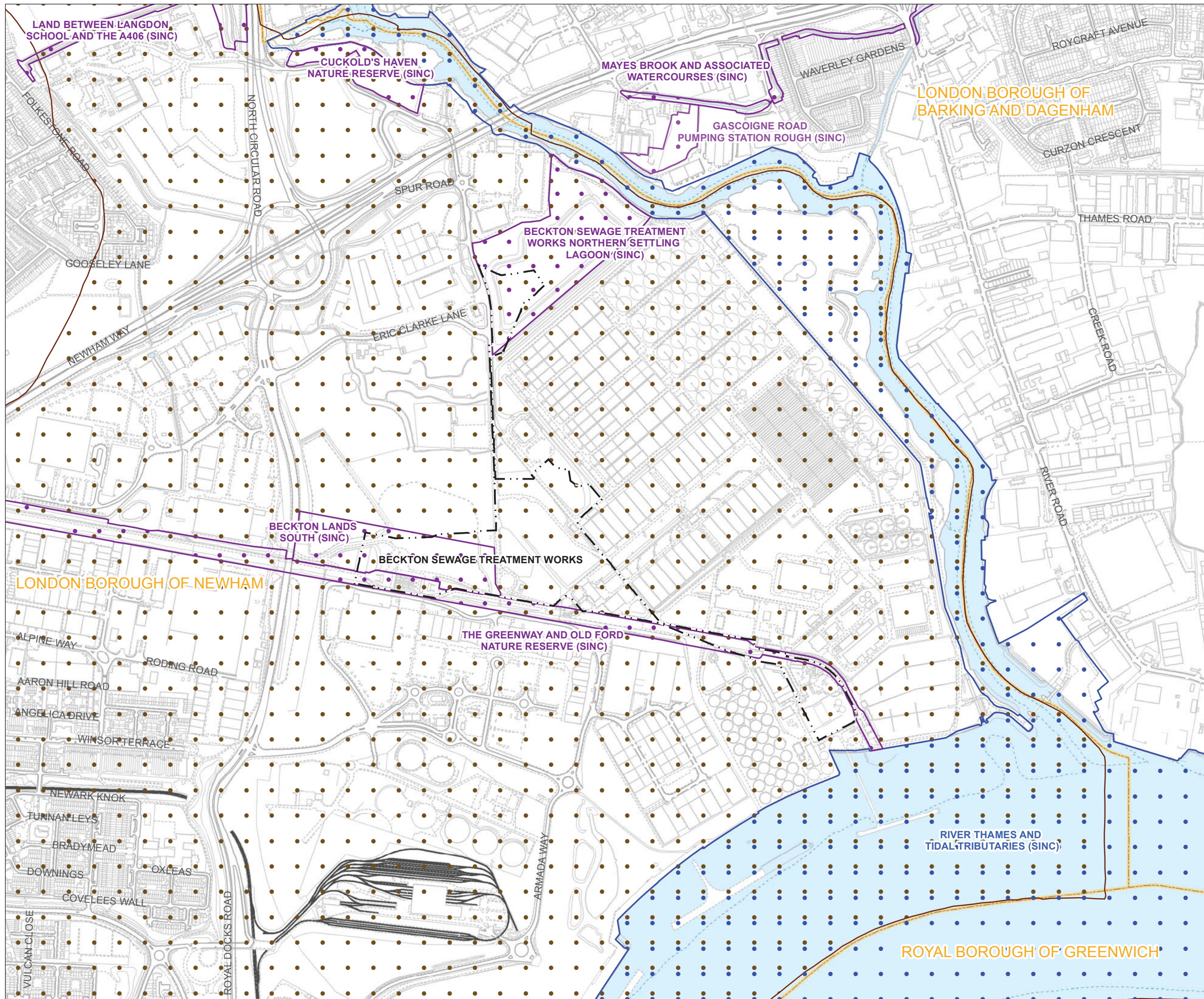
[Location](#)
Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)
Environmental Statement

Land use
Vol. 26 Figure 2.1.2

1PL03-MG-00748
January 2013





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

150 75 0 150 m
Scale 1 : 8,000 at A3

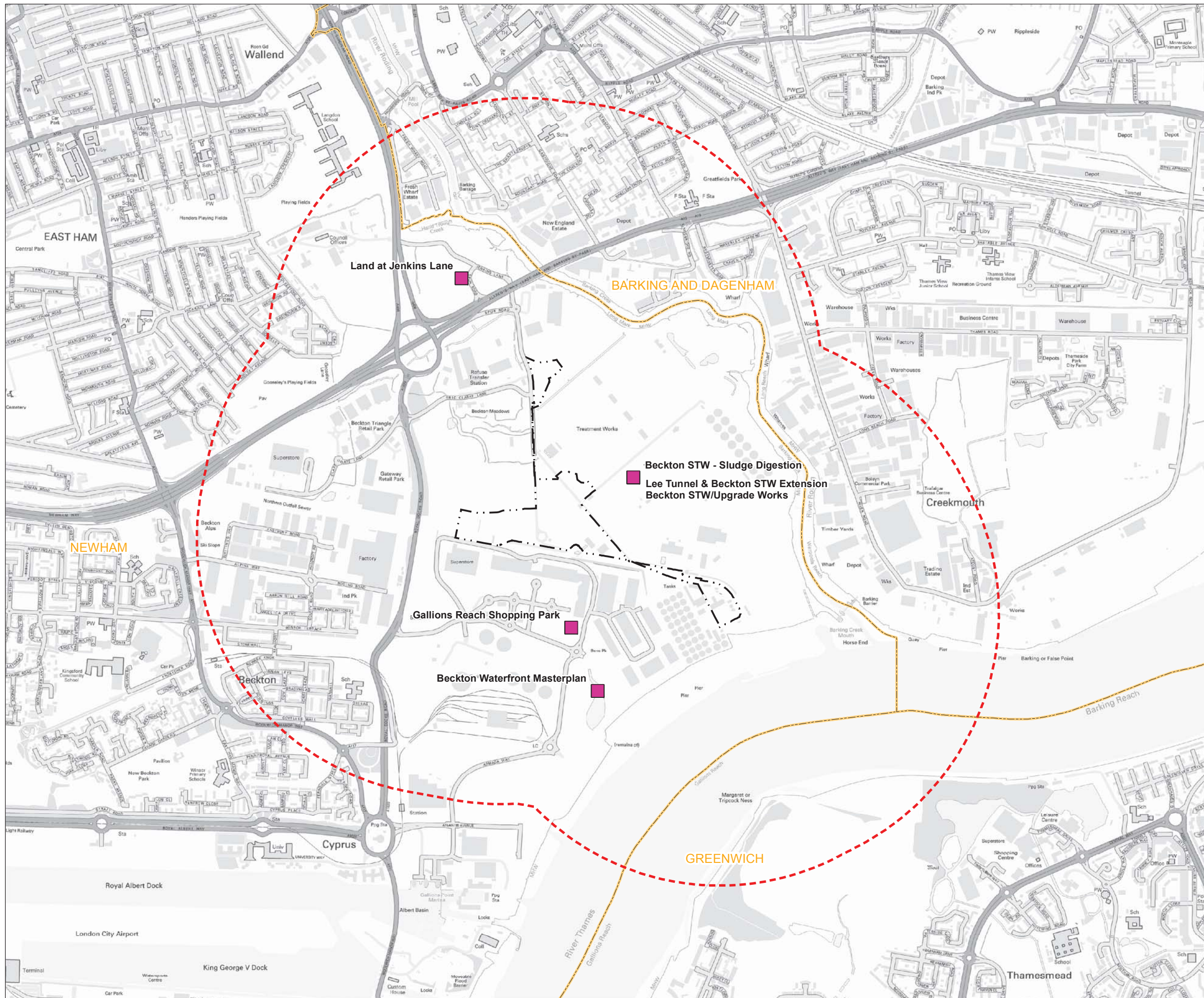
FOR INFORMATION

Location
Beckton Sewage Treatment Works
London Borough of Newham

Document Information
Environmental Statement
Environmental setting
Vol. 26 Figure 2.1.3

1PL03-MG-00696
January 2013



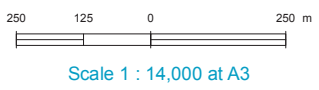


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- Key**
- Planning Application
 - Limits of Land to be Acquired or Used
 - Planning Application (1km Boundary)
 - Local Authority Boundary

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

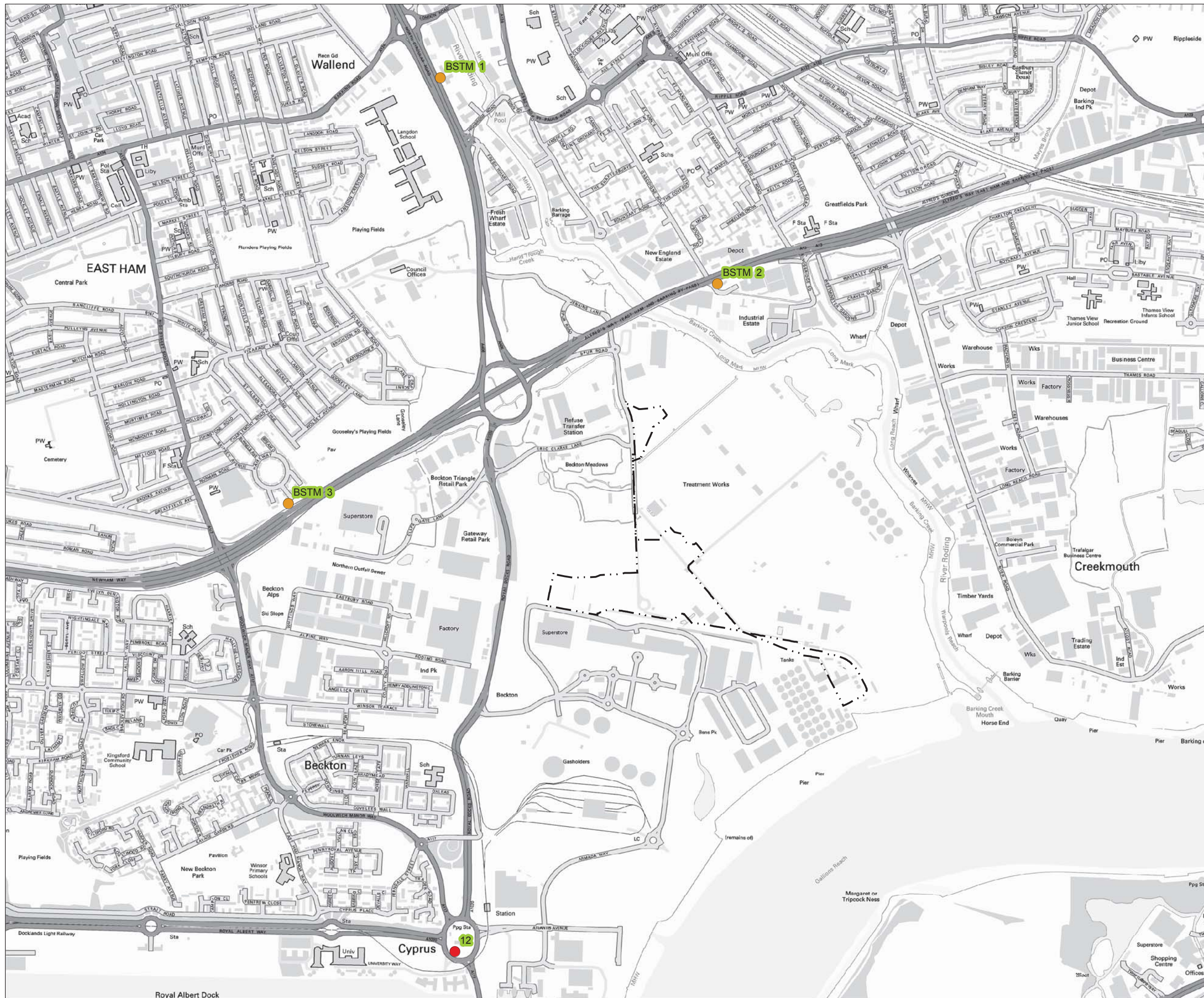


FOR INFORMATION

Location
Beckton Sewage Treatment Works
London Borough of Newham

Document Information
Environmental Statement
Base case and cumulative development projects
Vol. 26 Figure 3.5.1
1PL03-MG-00743
January 2013





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Keyplan:



Key

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

200 100 0 200 m

Scale 1 : 12,500 at A3

FOR INFORMATION

[Location](#)

Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)

Environmental Statement

Air quality and odour - air quality monitoring sites

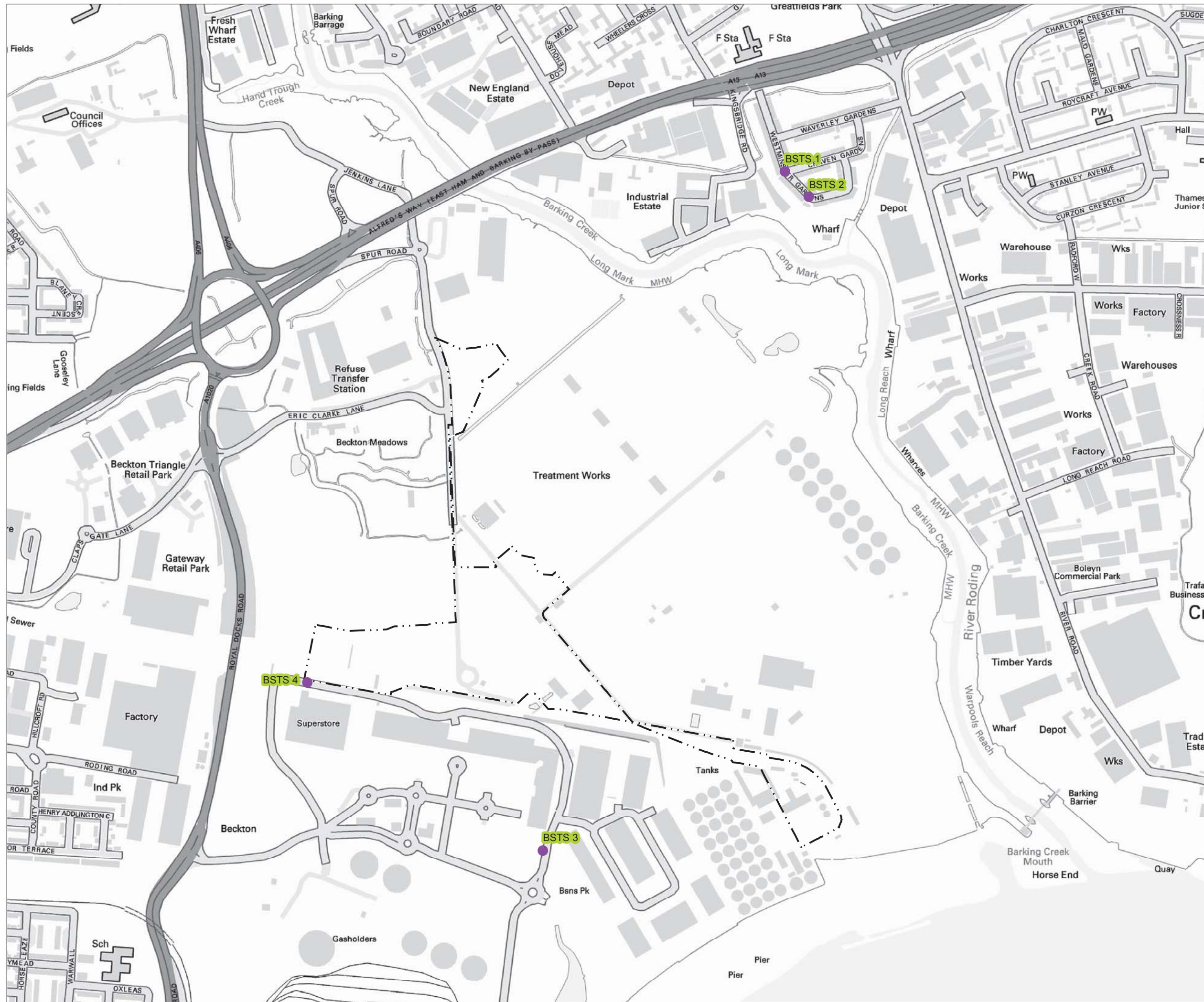
Vol.26 Figure 4.4.1

1PL03-AQ-10794

January 2013

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- Key
- Limits of Land to be Acquired or Used
 - H₂S Monitoring Locations

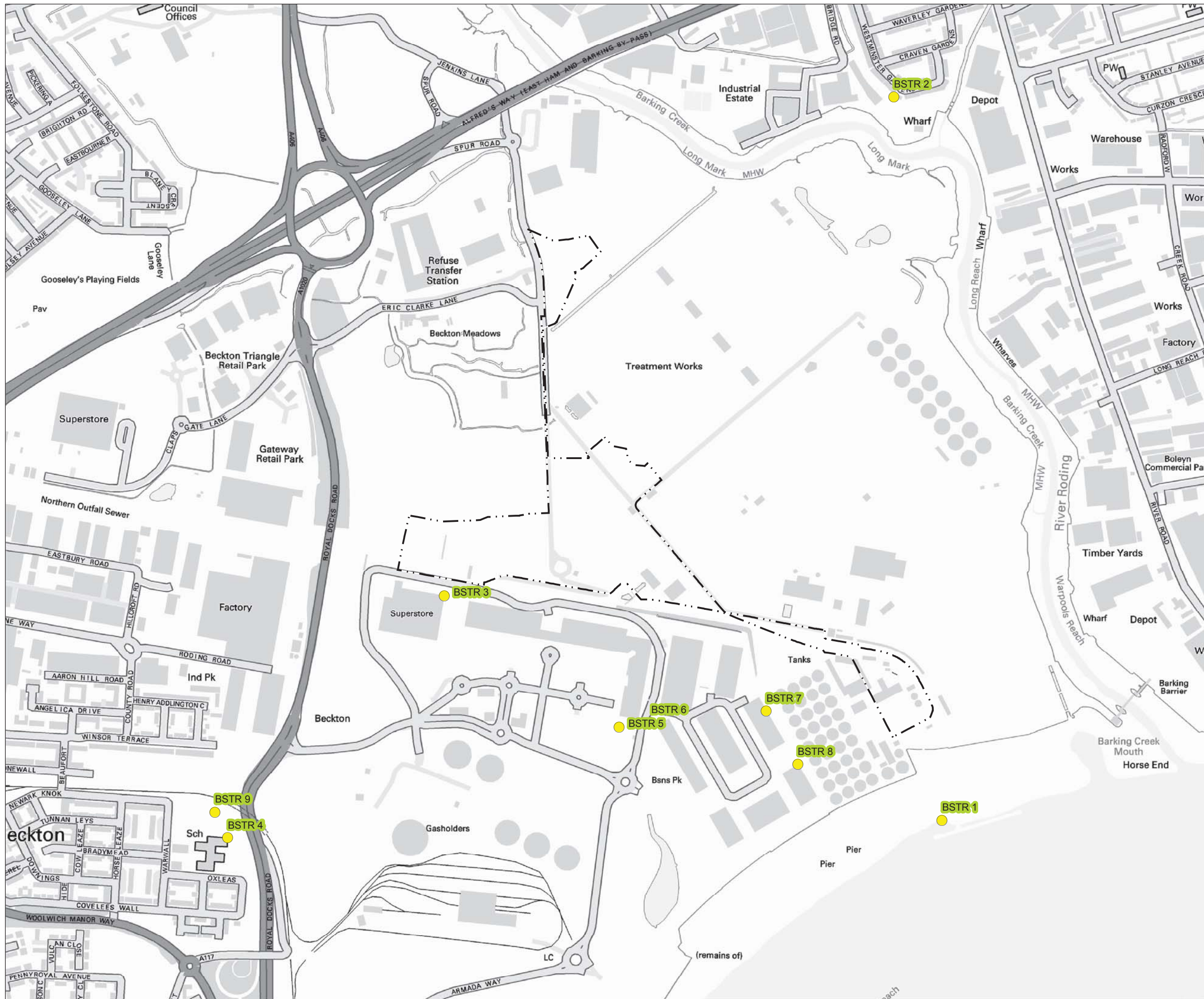
120 60 0 120 m
Scale 1 : 7,500 at A3

FOR INFORMATION

[Location](#)
Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)
Environmental Statement
Air quality and odour - H₂S monitoring locations
Vol.26 Figure 4.4.2
1PL03-AQ-10795
January 2013





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Keyplan:

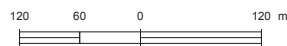


Key

- 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.

- BSTR 1 - River Thames
- BSTR 2 - Westminster Gardens
- BSTR 3 - Commercial - Superstore
- BSTR 4 - Gallions Primary School (Building)
- BSTR 5 - Gallions Reach Shopping Park (Unimplemented Part)
- BSTR 6 - Beckton Waterfront Masterplan (Proposed)
- BSTR 7 - Gemini Business Park 1
- BSTR 8 - Gemini Business Park 2
- BSTR 9 - Gallions Primary School (Playground)



Scale 1 : 7,500 at A3

FOR INFORMATION

[Location](#)

Beckton Sewage Treatment Works
London Borough of Newham

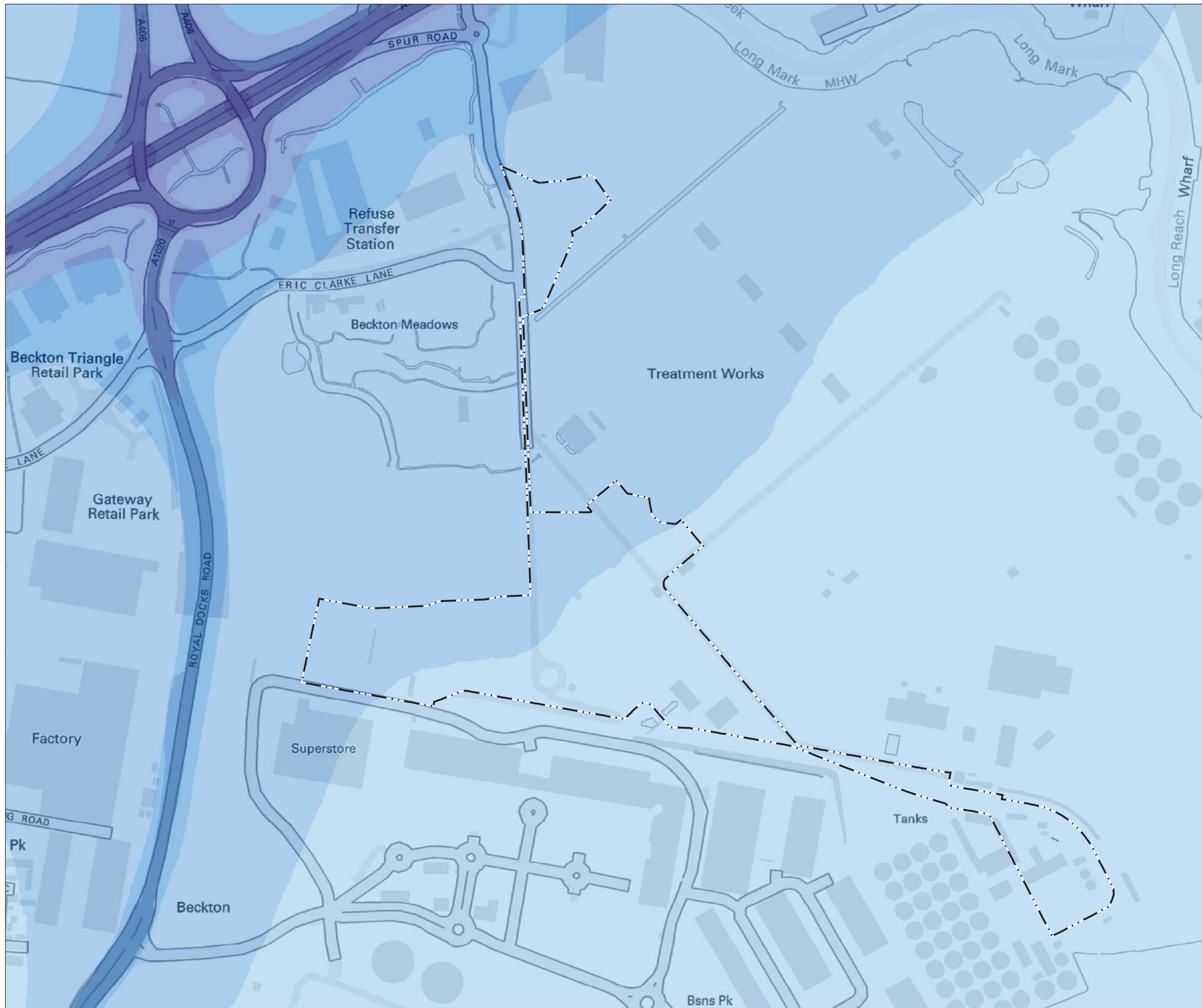
[Document Information](#)

Environmental Statement

Air quality and odour - modelled air quality receptors
Vol.26 Figure 4.4.3
1PL03-AQ-10796
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





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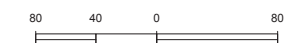
Keyplan:



Key

— Limits of Land
to be Acquired or Used

Predicted Annual Mean NO₂ Concentration (µg/m³)



Scale 1 : 5,000 at A3

FOR INFORMATION

[Location](#)

Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)

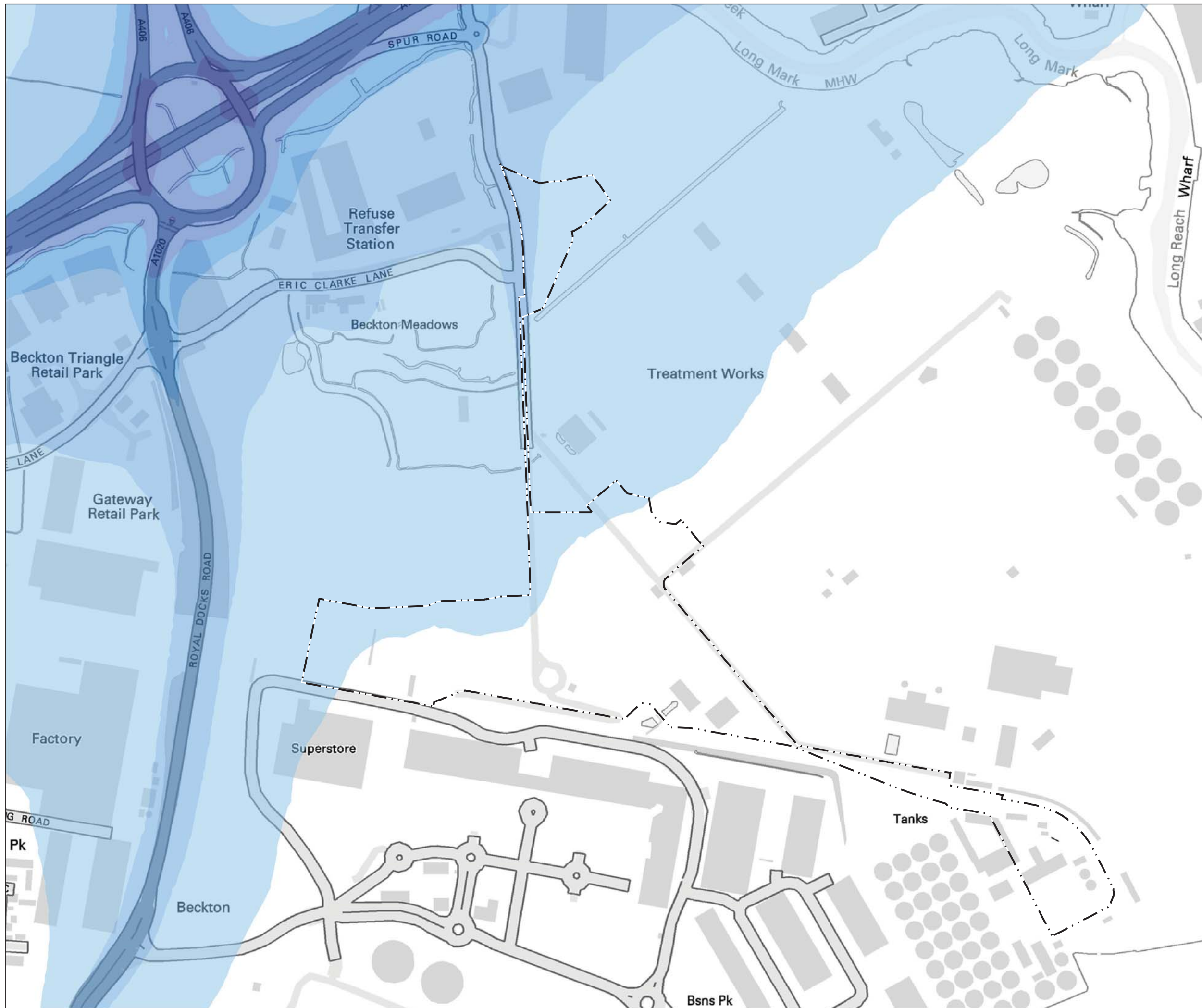
Environmental Statement

Air quality and odour - annual mean NO₂
for 2010 baseline
Vol.26 Figure 4.5.1

1PL03-AQ-10797
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





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Keyplan:

Key

— Limits of Land to be Acquired or Used

Predicted Annual Mean NO₂ Concentration (µg/m³)

< 30
30 - 40
40 - 60
60 - 80
80 - 120
120 - 160

80 40 0 80 m

Scale 1 : 5,000 at A3

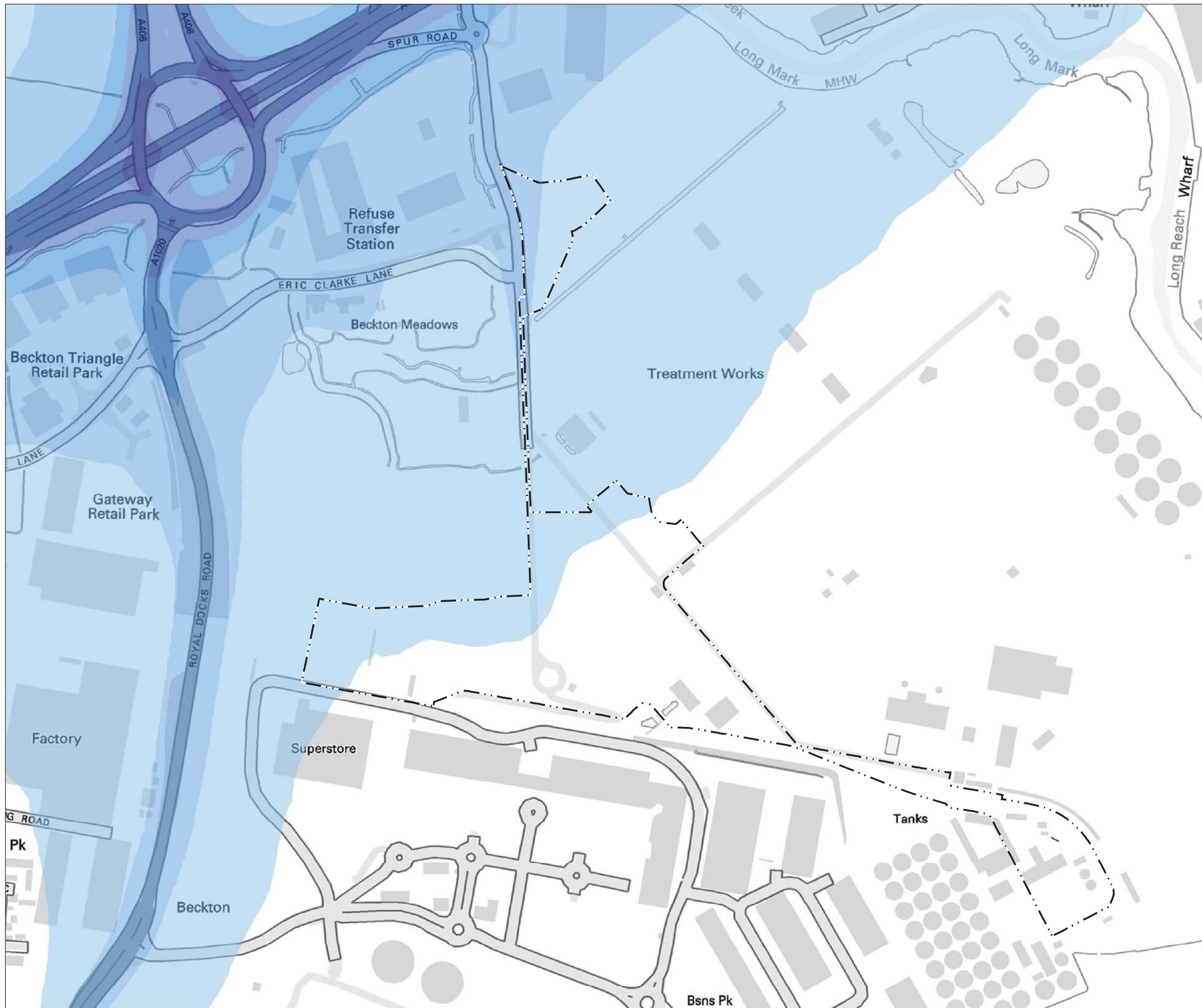
FOR INFORMATION

[Location](#)
Beckton Sewage Treatment Works
London Borough of Newham

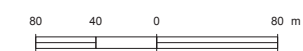
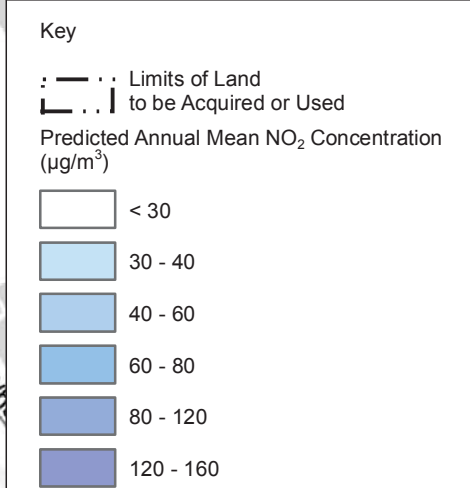
[Document Information](#)
Environmental Statement
Air quality and odour - annual mean NO₂ for peak construction year base case
Vol.26 Figure 4.5.2
1PL03-AQ-10798
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames

Thames Water



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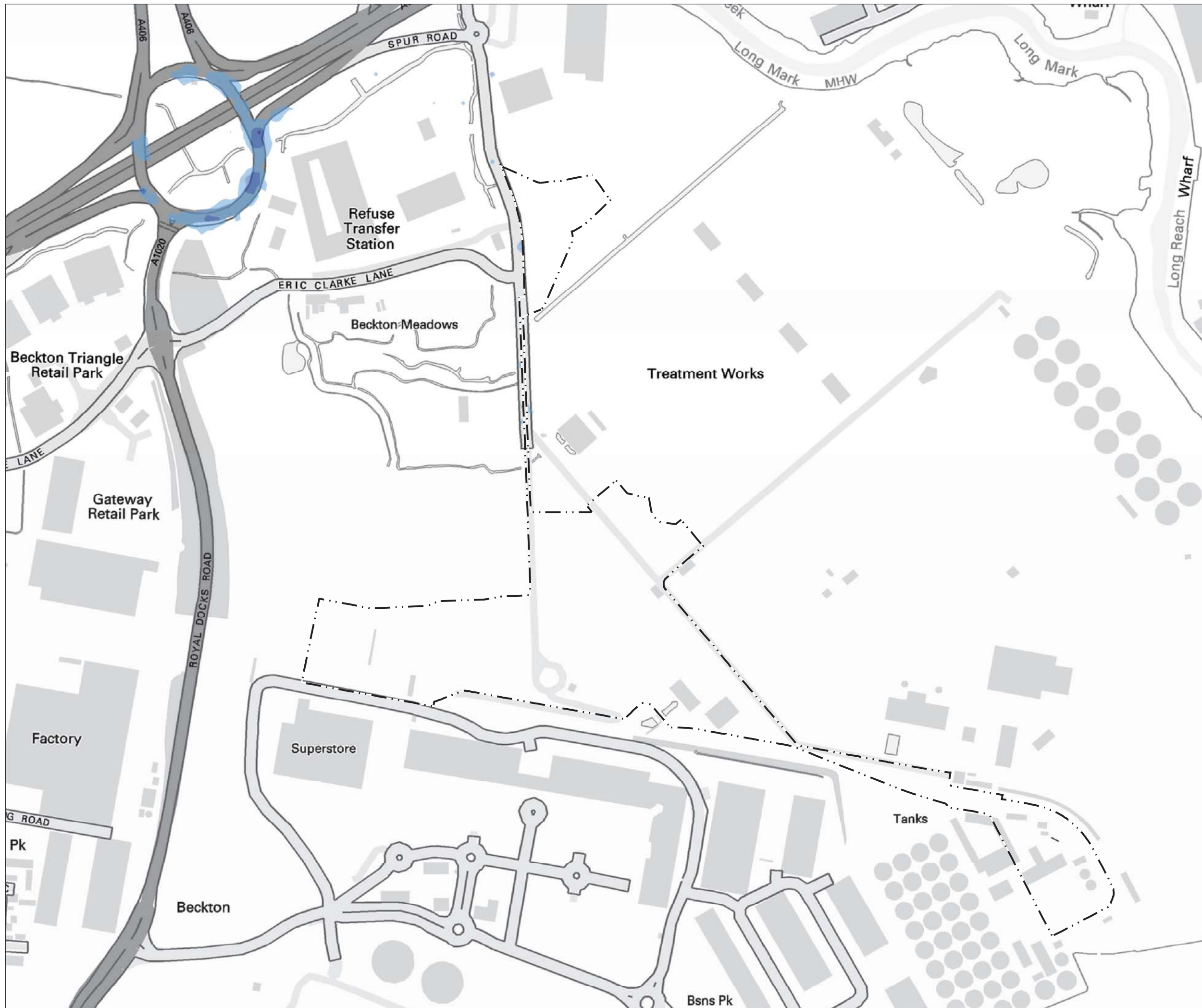
Scale 1 : 5,000 at A3

FOR INFORMATION

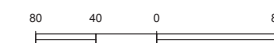
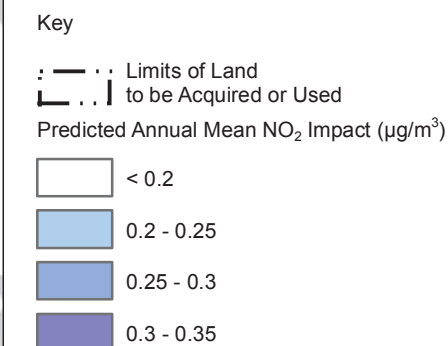
Location
Beckton Sewage Treatment Works
London Borough of Newham

Document Information
Environmental Statement
Air quality and odour - annual mean NO₂ for peak construction year development case Vol.26 Figure 4.5.3
1PL03-AQ-10799
January 2013





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Scale 1 : 5,000 at A3

FOR INFORMATION

Location

Beckton Sewage Treatment Works
London Borough of Newham

Document Information

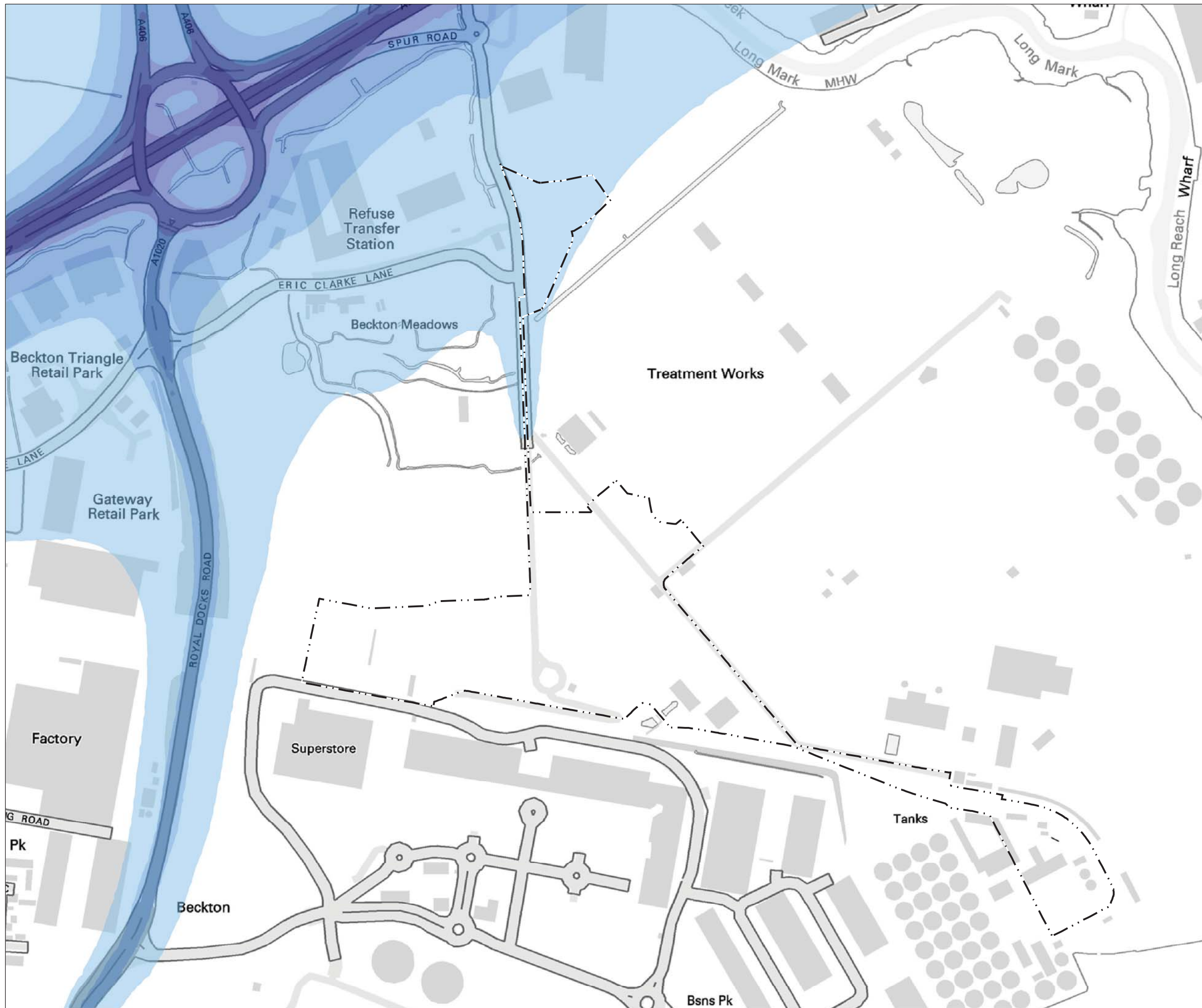
Environmental Statement

Air quality and odour - annual mean NO₂ impact for peak construction year
Vol.26 Figure 4.5.4

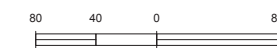
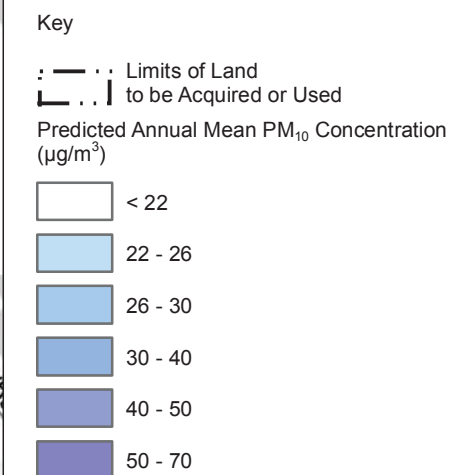
1PL03-AQ-10800
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





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Scale 1 : 5,000 at A3

FOR INFORMATION

Location

Beckton Sewage Treatment Works
London Borough of Newham

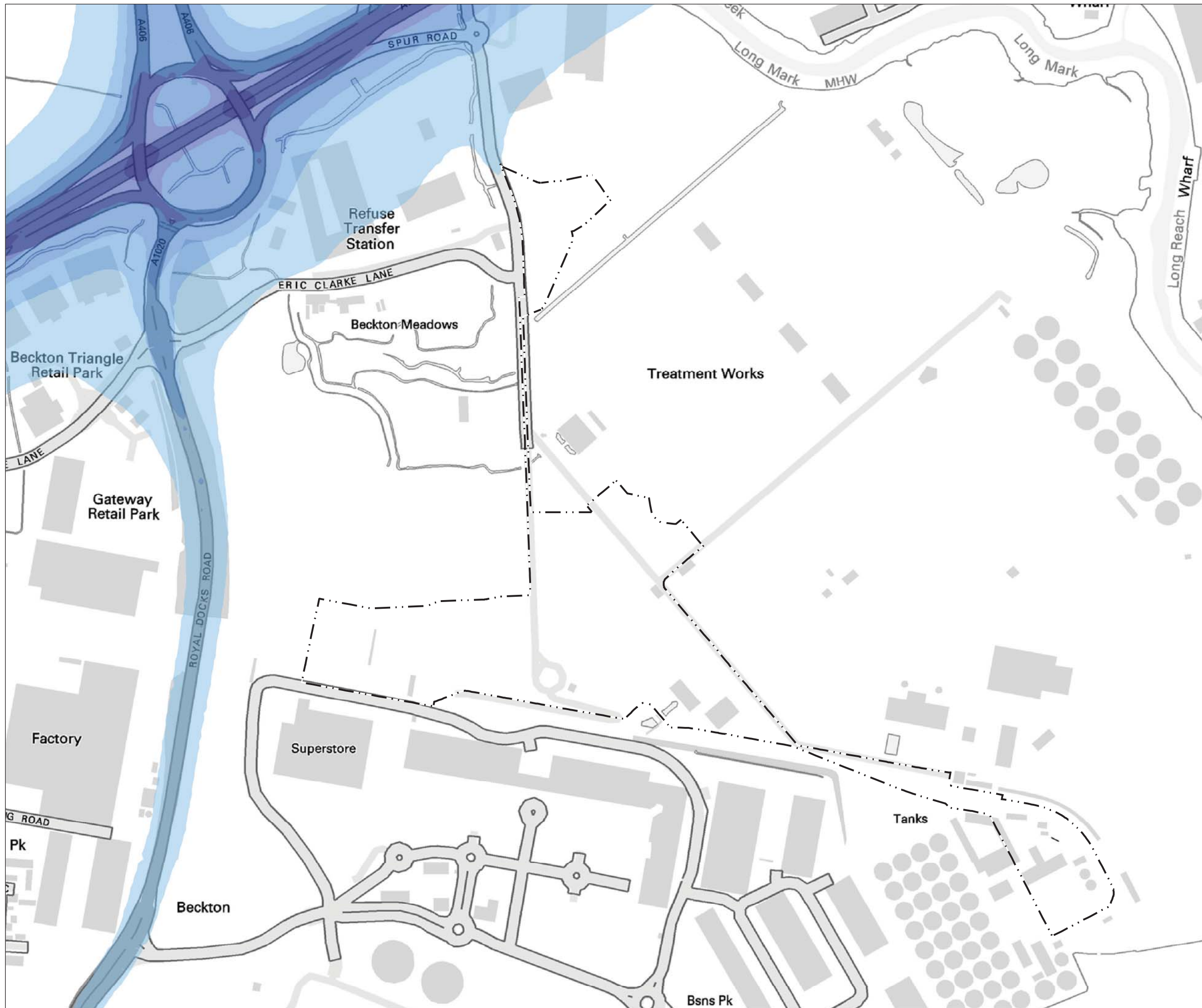
Document Information

Environmental Statement

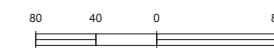
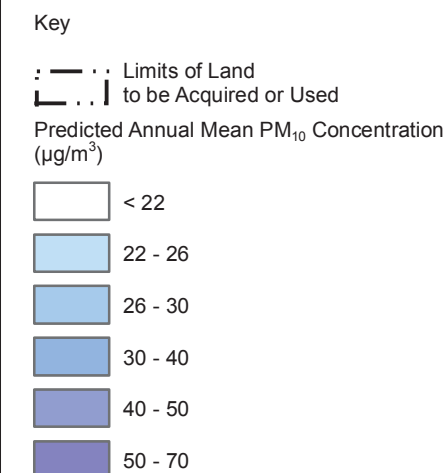
Air quality and odour - annual mean PM₁₀
for 2010 baseline
Vol.26 Figure 4.5.5
1PL03-AQ-10801
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





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Scale 1 : 5,000 at A3

FOR INFORMATION

Location

Beckton Sewage Treatment Works
London Borough of Newham

Document Information

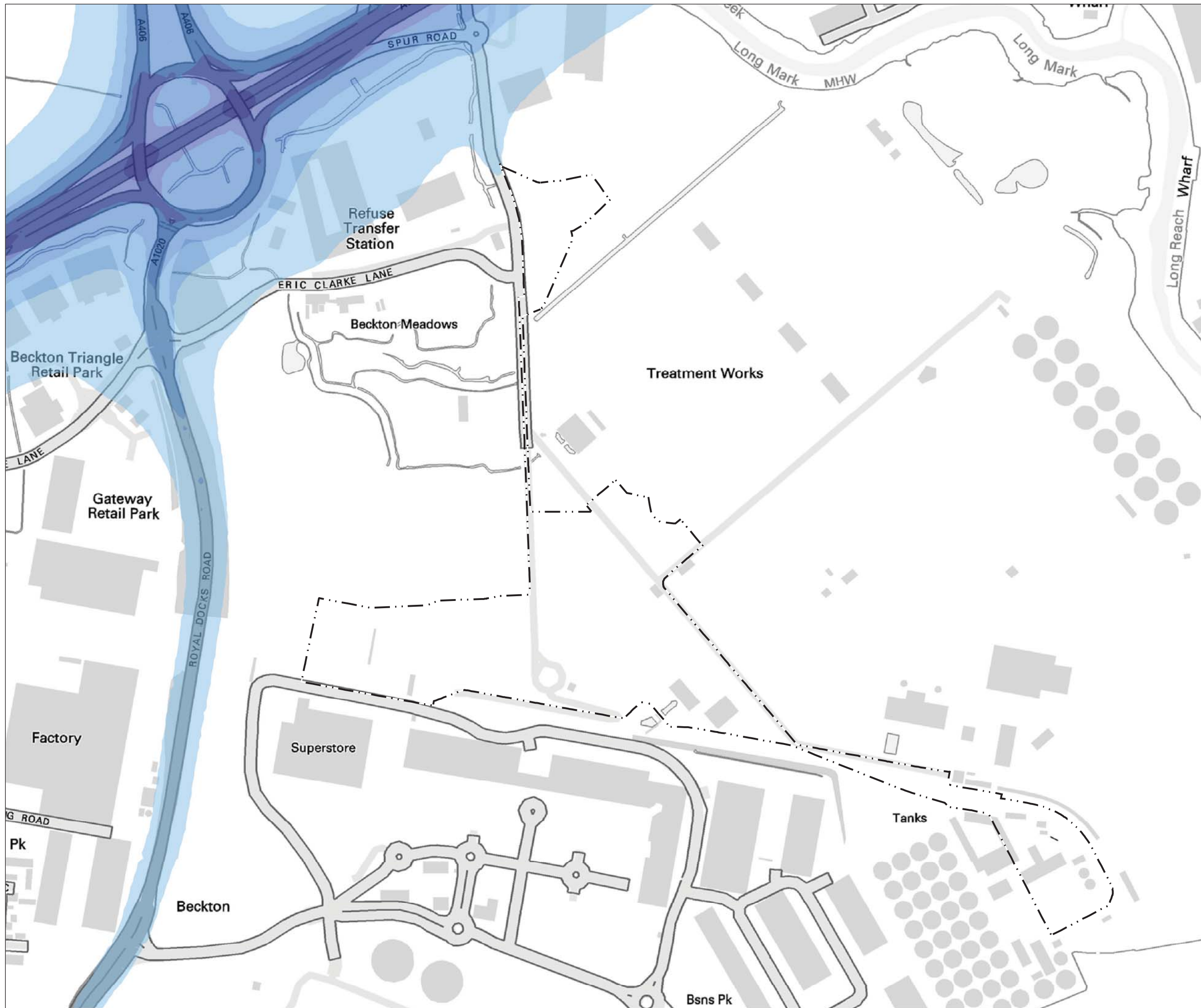
Environmental Statement

Air quality and odour - annual mean PM₁₀
for peak construction year base case
Vol.26 Figure 4.5.6

1PL03-AQ-10802
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





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Keyplan:

Key

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

Predicted Annual Mean PM₁₀ Concentration (µg/m³)

< 22
22 - 26
26 - 30
30 - 40
40 - 50
50 - 70

80 40 0 80 m
Scale 1 : 5,000 at A3

FOR INFORMATION

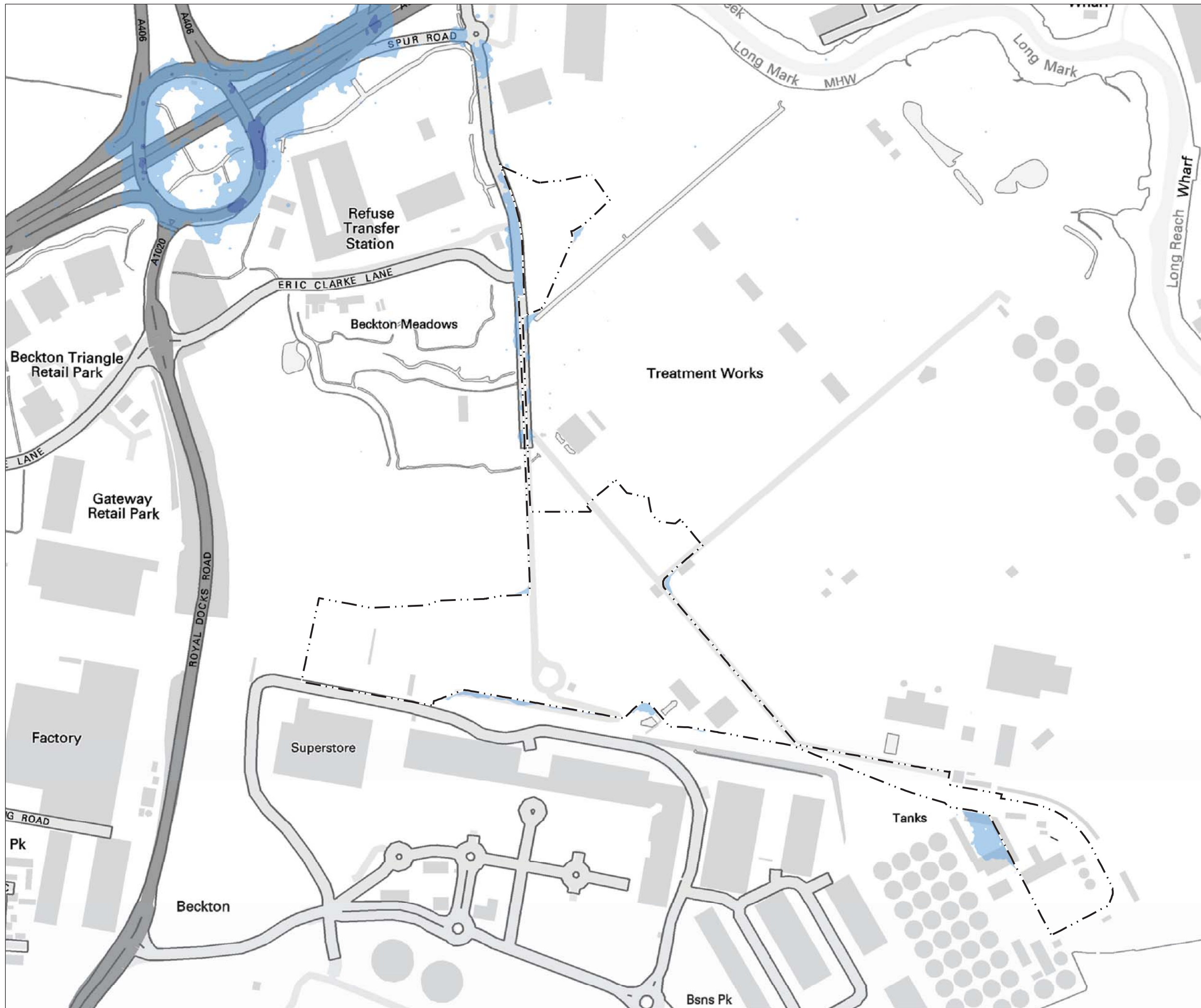
[Location](#)
Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)
Environmental Statement
Air quality and odour - annual mean PM₁₀
for peak construction year development case
Vol.26 Figure 4.5.7
1PL03-AQ-10803
January 2013

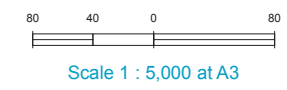
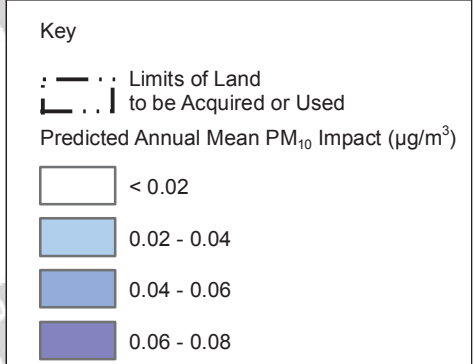
Thames Tideway Tunnel
Creating a cleaner, healthier River Thames

Thames Water

© Thames Water Utilities Ltd 2008



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FOR INFORMATION

Location
Beckton Sewage Treatment Works
London Borough of Newham

Document Information
Environmental Statement
Air quality and odour - annual mean PM₁₀ impact for peak construction year
Vol.26 Figure 4.5.8
1PL03-AQ-10804
January 2013



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Keyplan:



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.

120 60 0 120 m

Scale 1 : 7,000 at A3

FOR INFORMATION

Location

Beckton Sewage Treatment Works
London Borough of Newham

Document Information

Environmental Statement

Terrestrial ecology - designated sites

Vol. 26 Figure 6.4.1

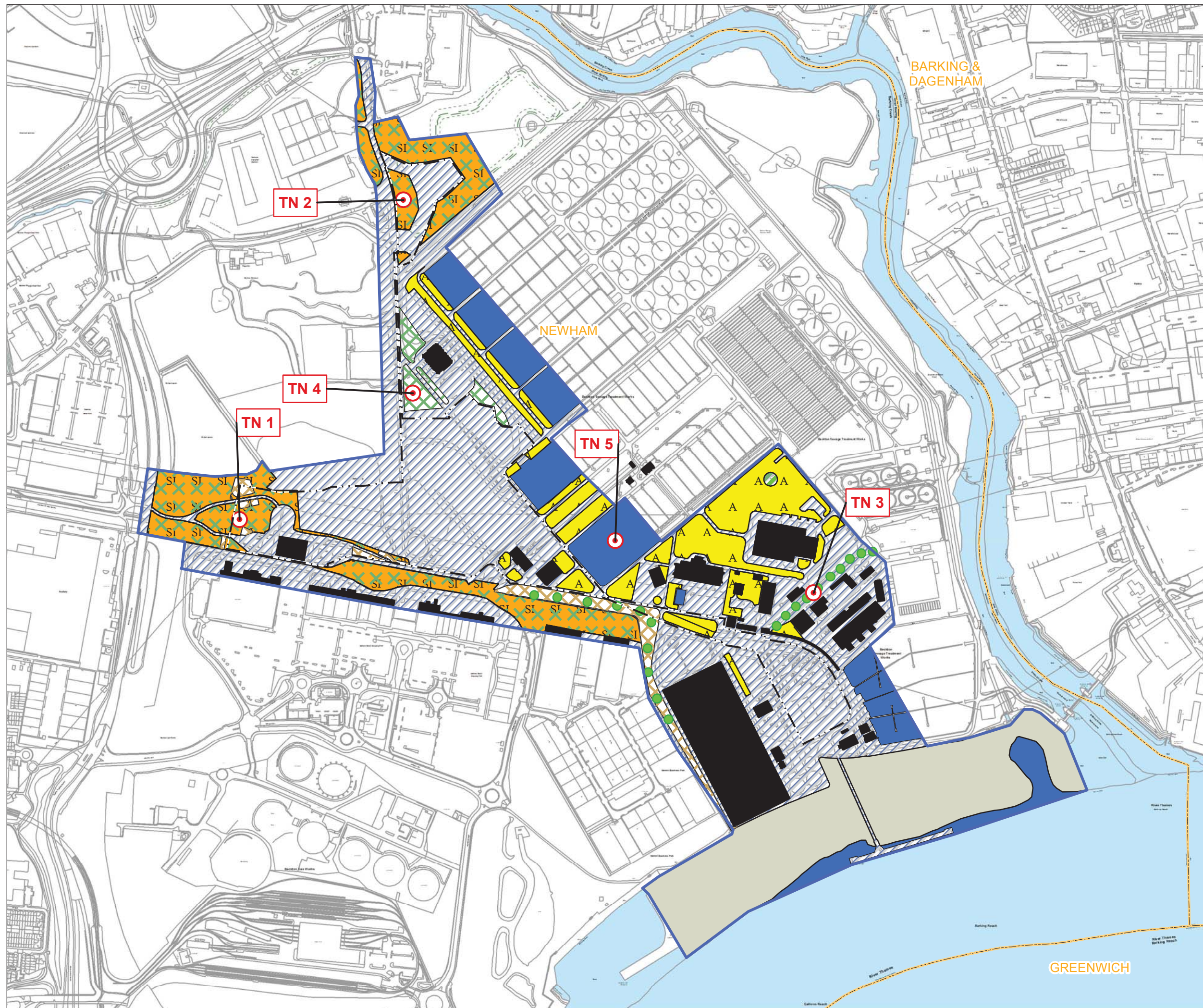
1PL03-TE-40127
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames



GREENWICH

© Thames Water Utilities Ltd 2008



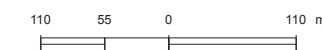
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Keyplan:



Key

- Limits of Land to be Acquired or Used
- Survey Area
- Local Authority Boundary
- Built-Up Areas - Buildings
- Cultivated/Disturbed Land - Amenity Grassland
- Hard Standing
- Intertidal - Mud/Sand
- Running Water
- Scrub - Dense/Continuous
- Cultivated/disturbed land - Introduced shrub
- Neutral Grassland - Semi-Improved
- Scrub - Scattered
- Target Note
- Scattered Trees



Scale 1 : 6,500 at A3

FOR INFORMATION

[Location](#)

Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)

Environmental Statement

Terrestrial ecology – Phase 1 Habitat Survey

Vol. 26 Figure 6.4.2

1PL03-TE-40175
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames



Bat Triggering Survey (Remote Recording)	Date
Night 1	13/05/2011
Night 2	14/05/2011
Night 3	15/05/2011

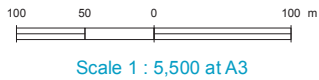
Anabat™ Location 1	
Bat Species	Maximum Number of Bat Passes*
Common Pipistrelle	267

*on any one night during survey period.

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- Key
- Limits of Land to be Acquired or Used
 - Survey Area
 - Local Authority Boundary
 - Bat Triggering Survey (Remote Recording)
 - Anabat™ Location (1)
 - Activity Survey (Dawn at 04:46 on 28/06/2011)
 - hh.mm Time of Bat Registration
 - Flight Paths (Observed)
 - Common Pipistrelle



FOR INFORMATION

Location
Beckton Sewage Treatment Works
London Borough of Newham

Document Information
Environmental Statement
Terrestrial ecology – bat triggering (remote recording) and bat activity survey
Vol. 26 Figure 6.4.3
1PL03-TE-40118
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames



Species of conservation concern (red list):	Species of conservation concern (amber list):	Species of conservation concern (green list):
HG Herring gull	D. - Dunnock	B. - Blackbird
LI - Linnet	LB - Lesser black - backed gull	BC - Blackcap
	WH - Whitethroat	BT - Blue tit
		CC - Chiffchaff
		CH - Chaffinch
		FP - Feral pigeon
		GO - Goldfinch
		GR - Greenfinch
		GS - Great spotted woodpecker
		GT - Great tit
		LT - Long-tailed tit
		MG - Magpie
		PW - Pied wagtail
		R. - Robin
		SW - Sedge warbler
		WP - Wood pigeon
		WR - Wren

Kestrel observed foraging over grassland. Not breeding within the survey area.

BARKING & DAGENHAM

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Keyplan:



Key

Key
 .. — : Limits of Land
 I. . — : to be Acquired or Used

 Survey Area

 Local Authority Boundary

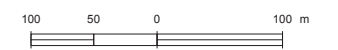
Breeding Territories

Species of Conservation Concern

 Red List

 Amber List

 Green List



Scale 1 : 6,000 at A3

FOR INFORMATION

Location

Beckton Sewage Treatment Works

London Borough of Newham

Document Information

Environmental Statement

Terrestrial ecology - breeding bird survey

Vol. 26 Figure 6.4.4

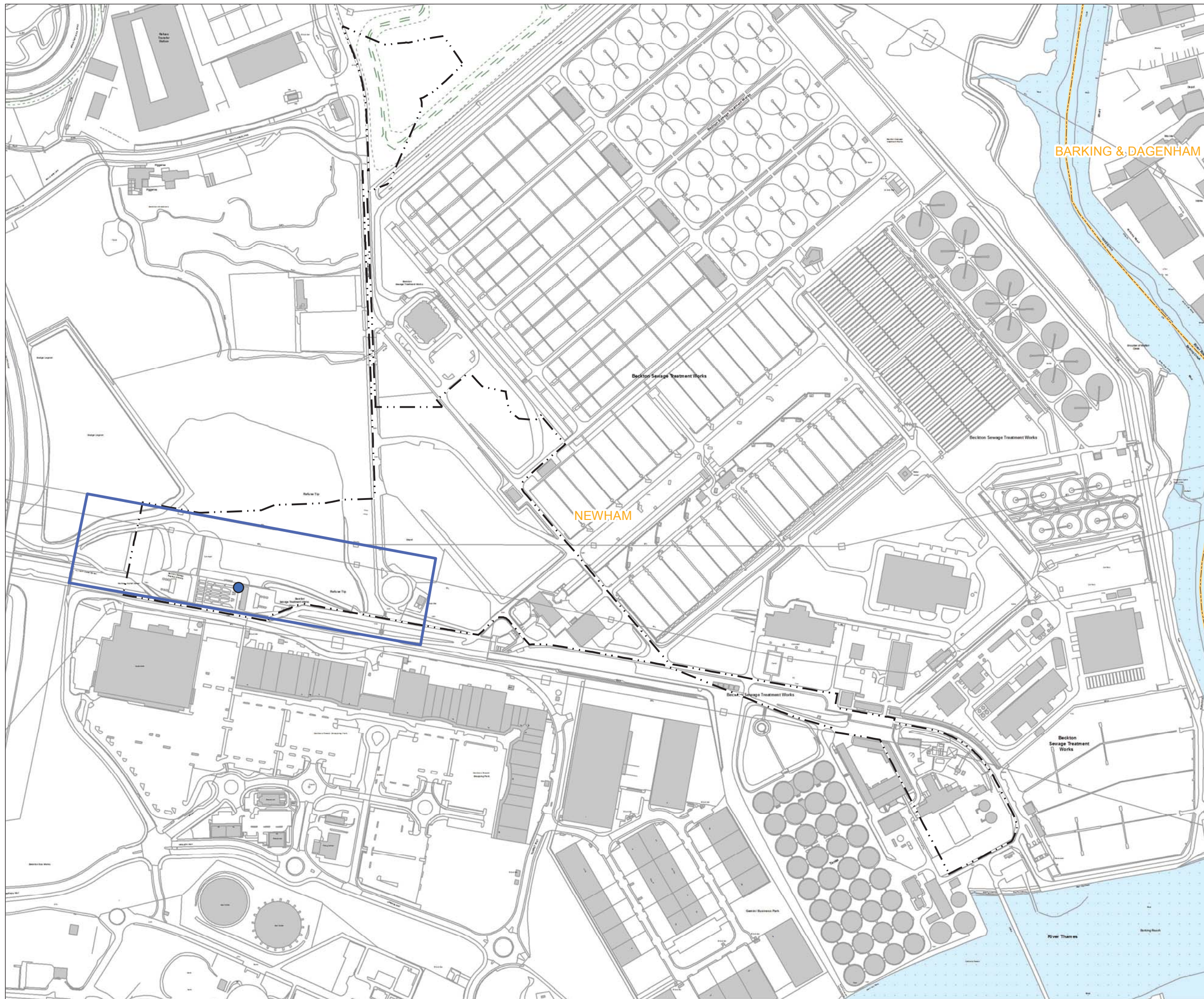
1PL03-TE-40040

January 2013

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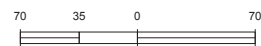
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Keyplan:



Key

- Limits of Land to be Acquired or Used
- Survey Area
- Local Authority Boundary
- Barn owl nest – breeding confirmed spring/summer 2012



Scale 1 : 4,500 at A3

FOR INFORMATION

Location

Beckton Sewage Treatment Works
London Borough of Newham

Document Information

Environmental Statement

Terrestrial ecology - barn owl survey

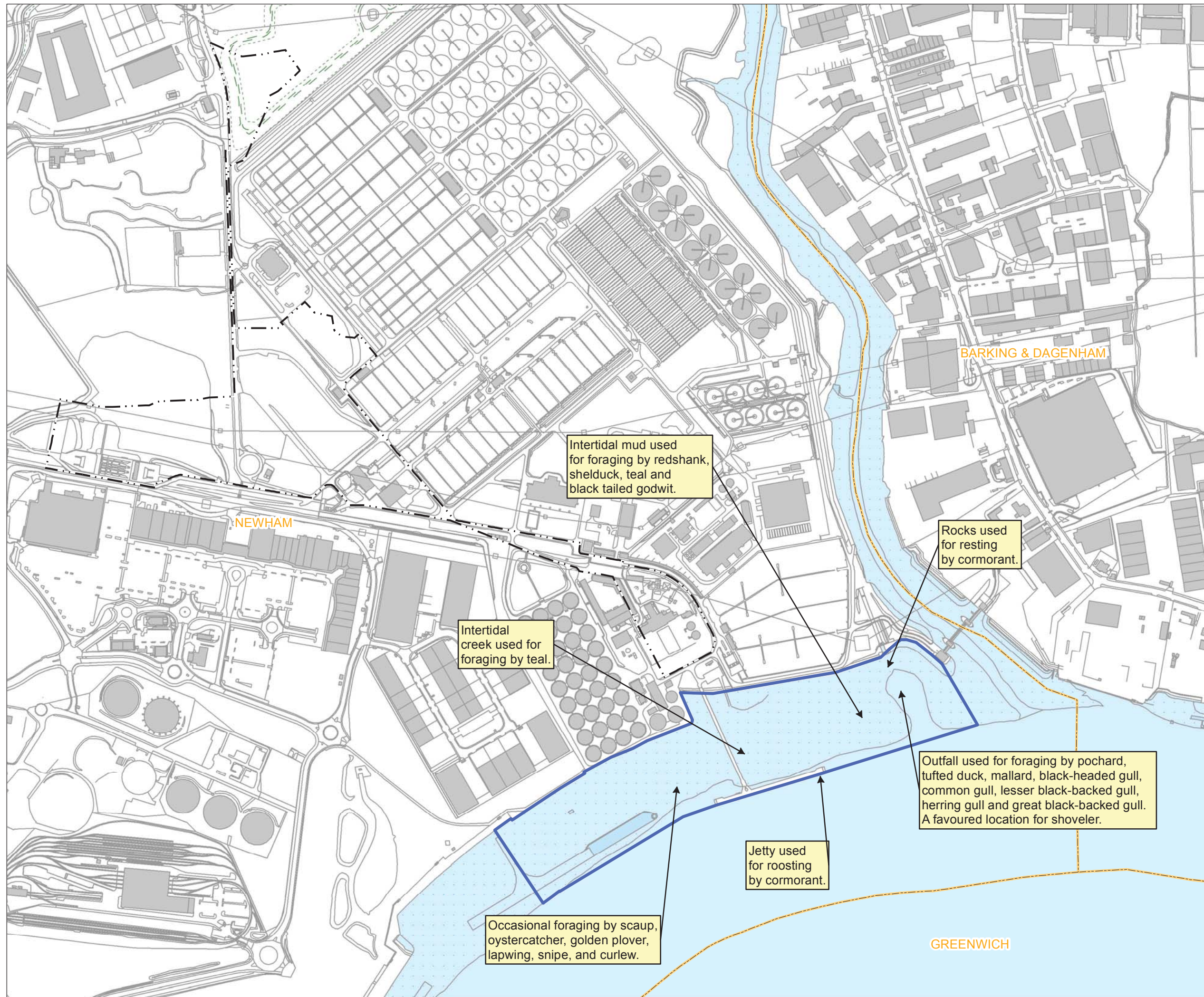
Vol. 26 Figure 6.4.5

1PL03-TE-40223

January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





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

90 45 0 90 m
Scale 1 : 6,000 at A3

FOR INFORMATION

Location

Beckton Sewage Treatment Works
London Borough of Newham

Document Information

Environmental Statement

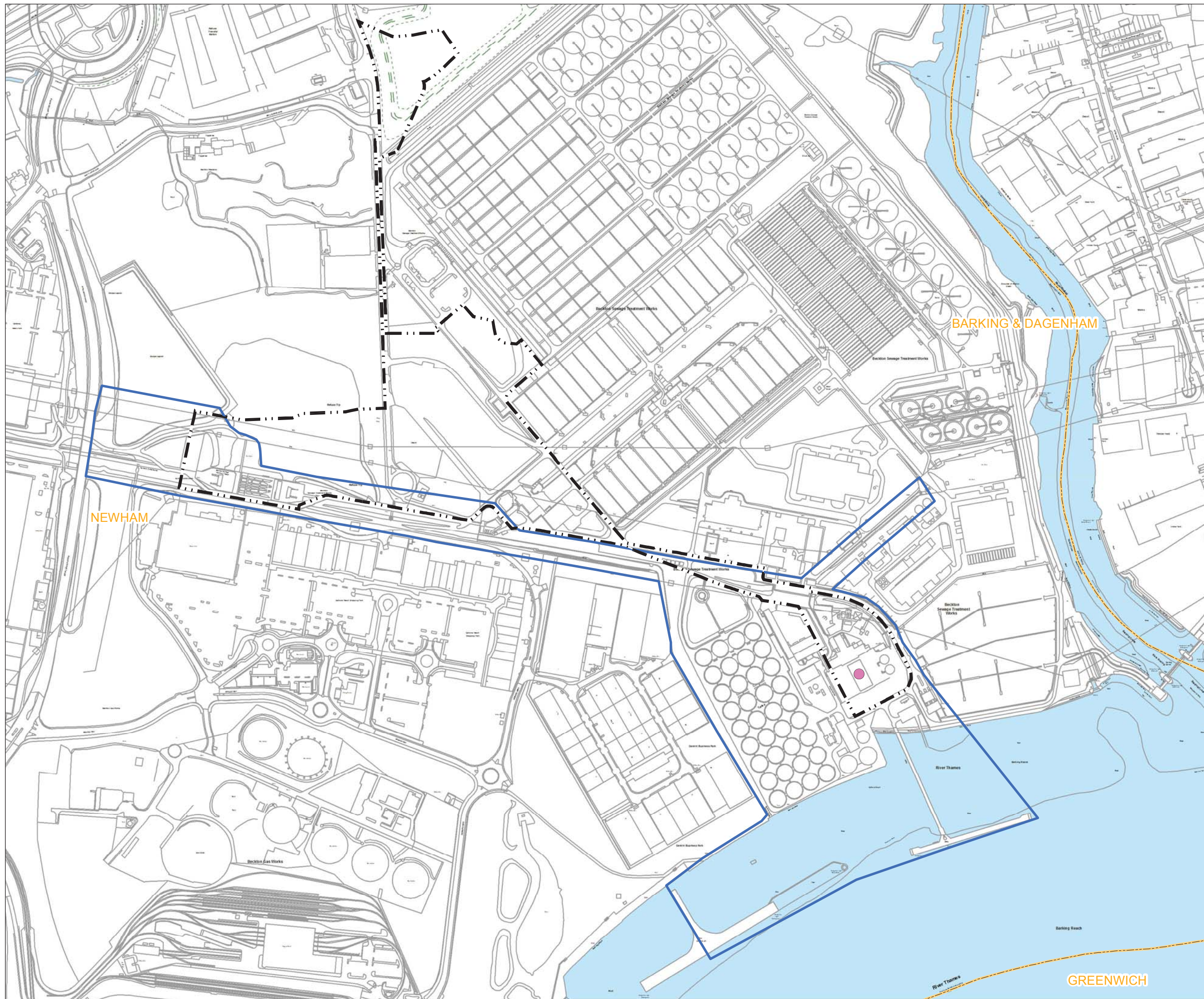
Terrestrial ecology – wintering birds survey

Vol. 26 Figure 6.4.6

1PL03-TE-40064
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





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Keyplan:



Key

- Limits of Land to be Acquired or Used
- Survey Area
- Local Authority Boundary
- Black Redstart Location Recorded within the Last 10 Years (GiGL)

Note:
No field signs recorded during survey.

80 40 0 80 m

Scale 1 : 5,500 at A3

FOR INFORMATION

[Location](#)

Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)

Environmental Statement

Terrestrial ecology – black redstart survey

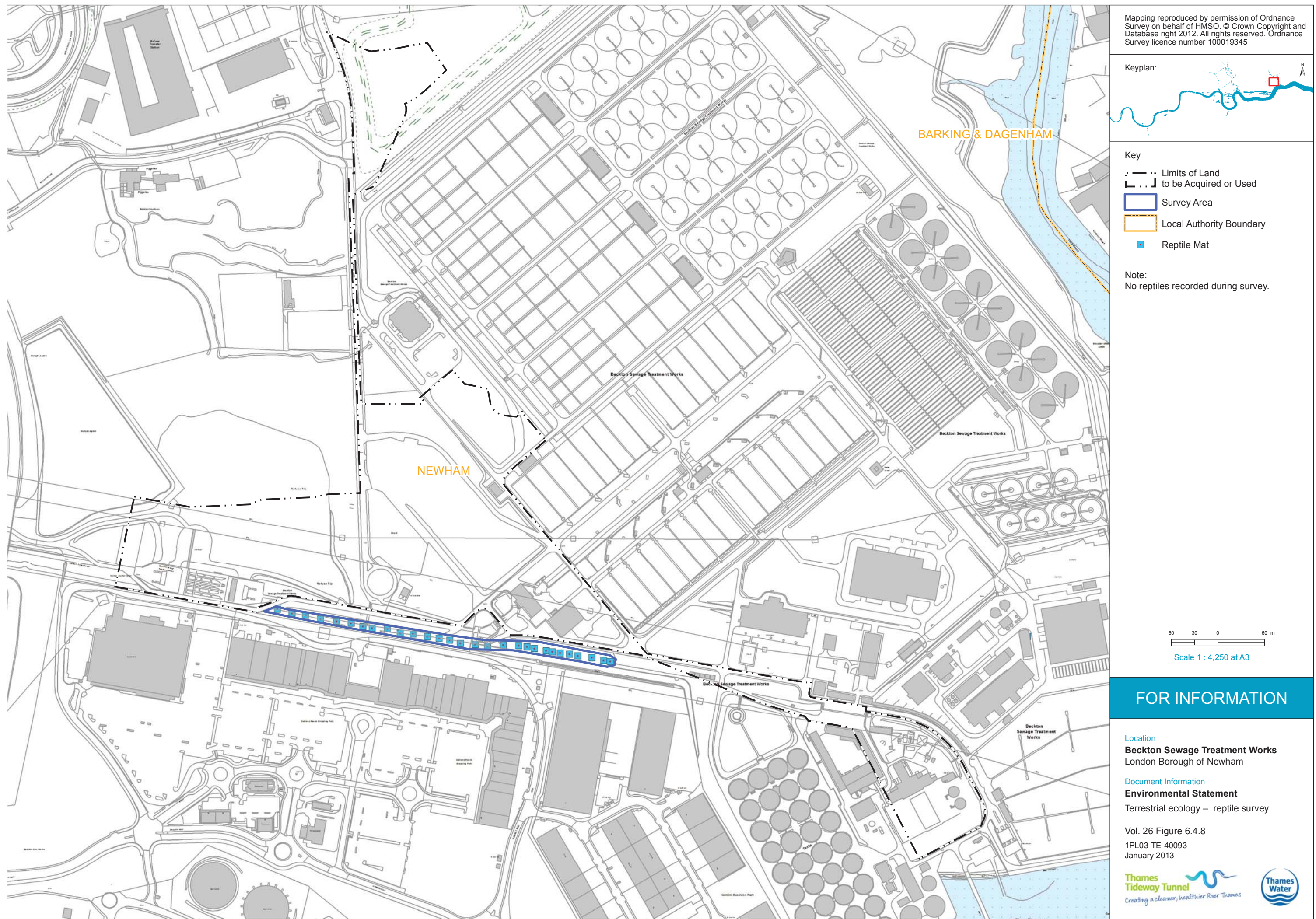
Vol. 26 Figure 6.4.7

1PL03-TE-40049

January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames









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Keyplan:

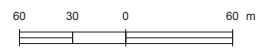


Key

-  Limits of Land to be Acquired or Used
 Survey Area
 Local Authority Boundary
 Reptile Mat

Note:

No reptiles recorded during survey.



Scale 1 : 4,250 at A3

FOR INFORMATION

Location

Beckton Sewage Treatment Works

London Borough of Newham

Document Information

Environmental Statement

Terrestrial ecology – reptile survey

Vol. 26 Figure 6.4.8

1PL03-TE-40093

January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames



Keyplan:

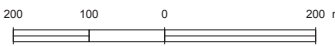


Key

- Limits of Land to be Acquired or Used
- Assessment Area
- Heritage Feature/Findspot
- Past Archaeological Investigation
- Statutorily Listed Building
- # Wreck/Obstruction
- Bazalgette Sewer
- ▨ Heritage Feature
- Wreck/Obstruction

The reference numbers for historic environment features correspond to the descriptions in the 'Gazetteer of known heritage assets' in Environmental Statement Vol. 26 Appendix E.1

Note: Archaeological Priority Zones/Conservation Areas not shown



Scale 1 : 10,000 at A3

FOR INFORMATION

Location

Beckton Sewage Treatment Works
London Borough of Newham

Document Information

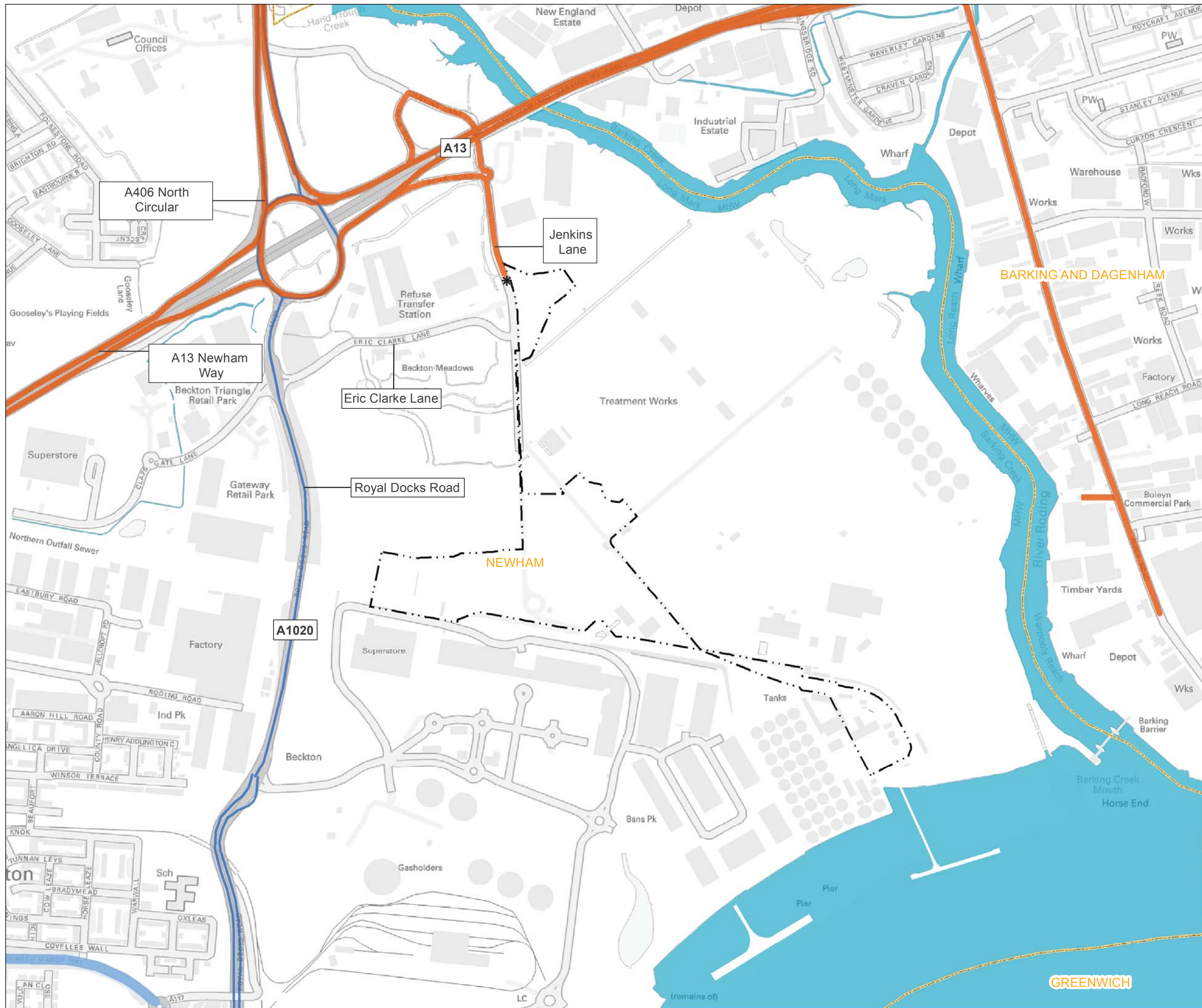
Environmental Statement

Historic environment -
historic environment features map
Vol.26 Figure 7.4.1

1PL03-HE-60071
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





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Keyplan:



Key

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

110 55 0 110 m

Scale 1 : 7,500 at A3

FOR INFORMATION

[Location](#)

Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)

Environmental Statement

Transport - construction traffic routes

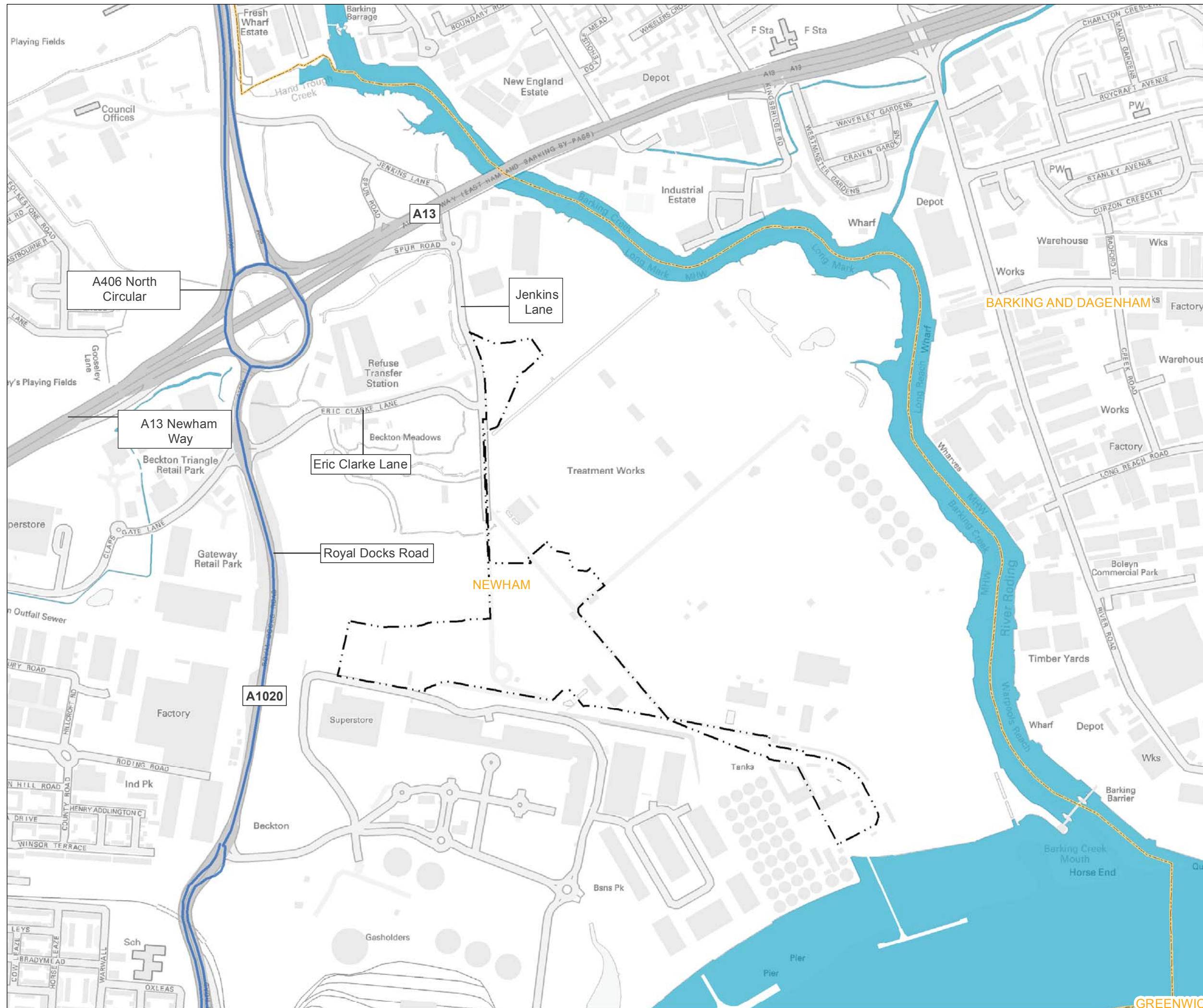
Vol.26 Figure 12.2.1

1PL03-TT-50448

January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





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Keyplan:



Key

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



Scale 1 : 7,500 at A3

FOR INFORMATION

[Location](#)

Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)

Environmental Statement
Transport - site location plan

Vol.26 Figure 12.4.1
1PL03-TT-50456
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames



GREENWICH



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Keyplan:



Key

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

220 110 0 220 m

Scale 1 : 14,000 at A3

FOR INFORMATION

[Location](#)

Beckton Sewage Treatment Works
London Borough of Newham

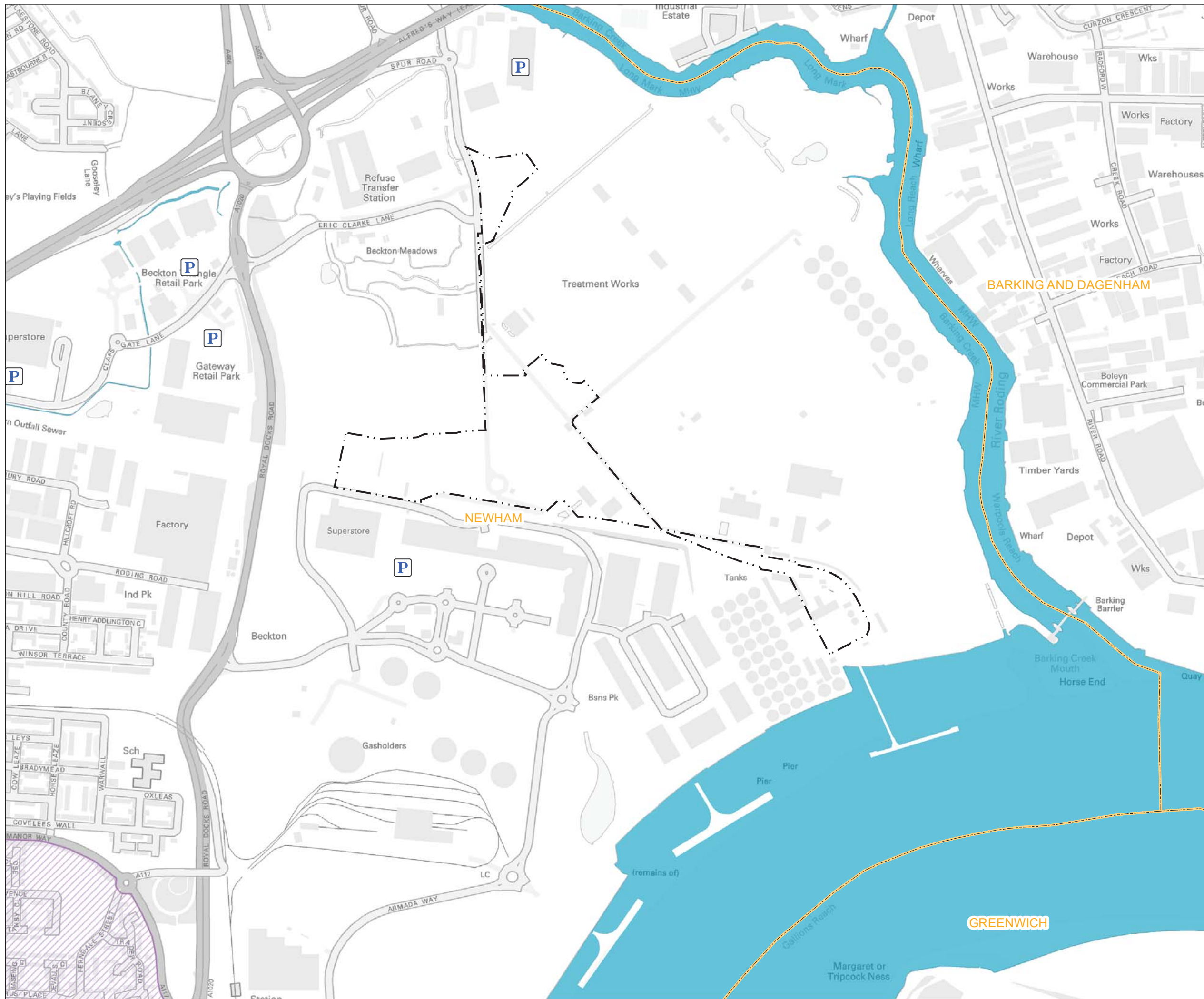
[Document Information](#)

Environmental Statement
Transport - public transport

Vol 26 Figure 12.4.3
1PL03-TT-50472
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





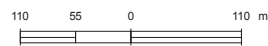
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Keyplan:



Key

- Private car parking
- Limits of Land to be Acquired or Used
- Local authority boundary
- Controlled Parking Zones and hours of operation



Scale 1 : 7,500 at A3

FOR INFORMATION

[Location](#)

Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)

Environmental Statement

Transport - parking

Vol.26 Figure 12.4.4

1PL03-TT-50480

January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





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Keyplan:



Key

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

110 55 0 110 m

Scale 1 : 7,500 at A3

FOR INFORMATION

[Location](#)

Beckton Sewage Treatment Works
London Borough of Newham

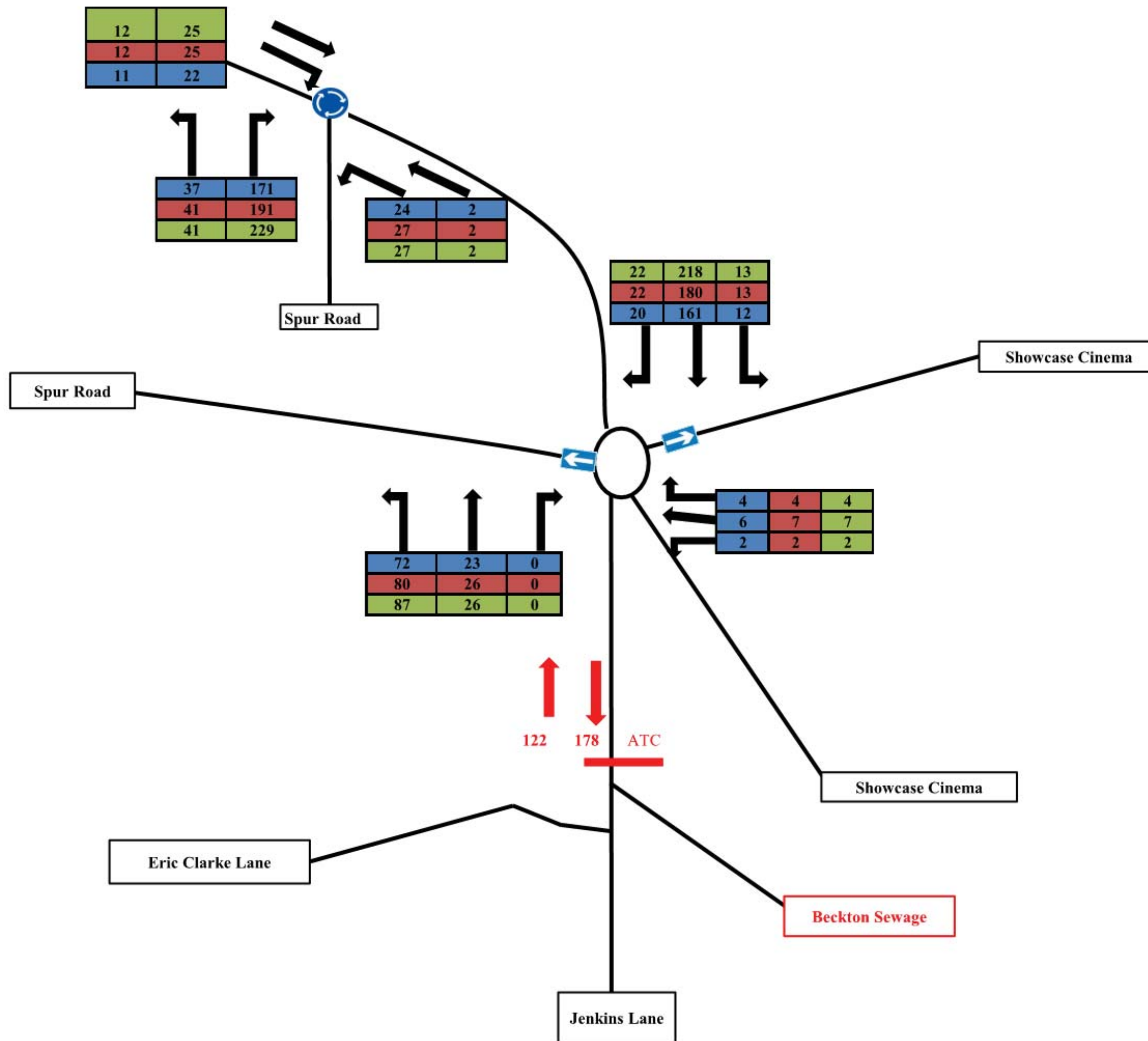
[Document Information](#)

Environmental Statement
Transport - survey locations

Vol.26 Figure 12.4.5
1PL03-TT-50488
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





Key

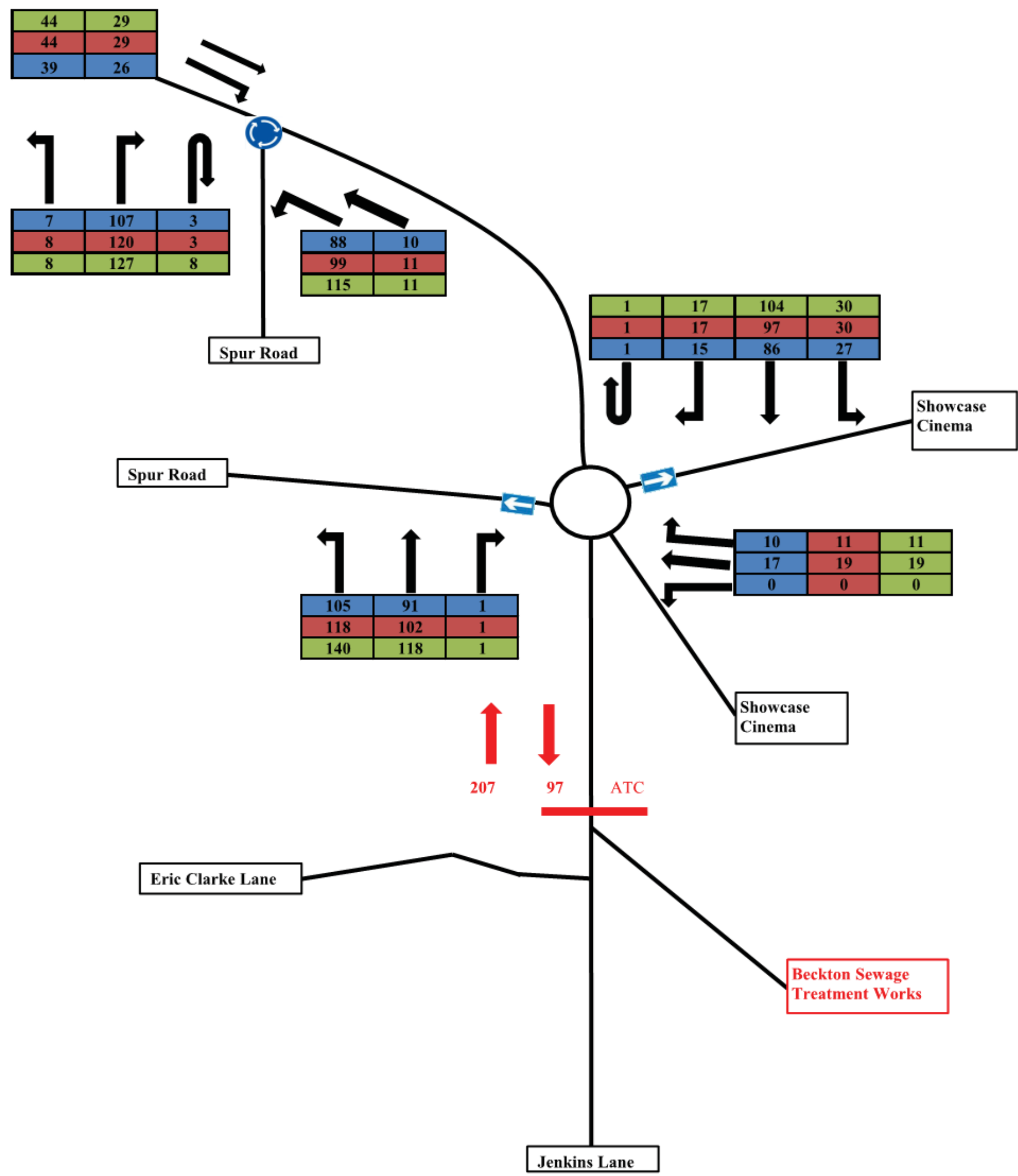
Base Traffic Flow	Base Traffic Flow
Construction Base	Construction Base
Development Case	Development Case

FOR INFORMATION

Location
Beckton Sewage Treatment Works
 London Borough of Newham

Document Information
Environmental Statement
 Transport - Baseline, Construction and Development case traffic flow (AM peak hour)
 Vol.26 Figure 12.4.6
 1PL03-TT-50859
 January 2013





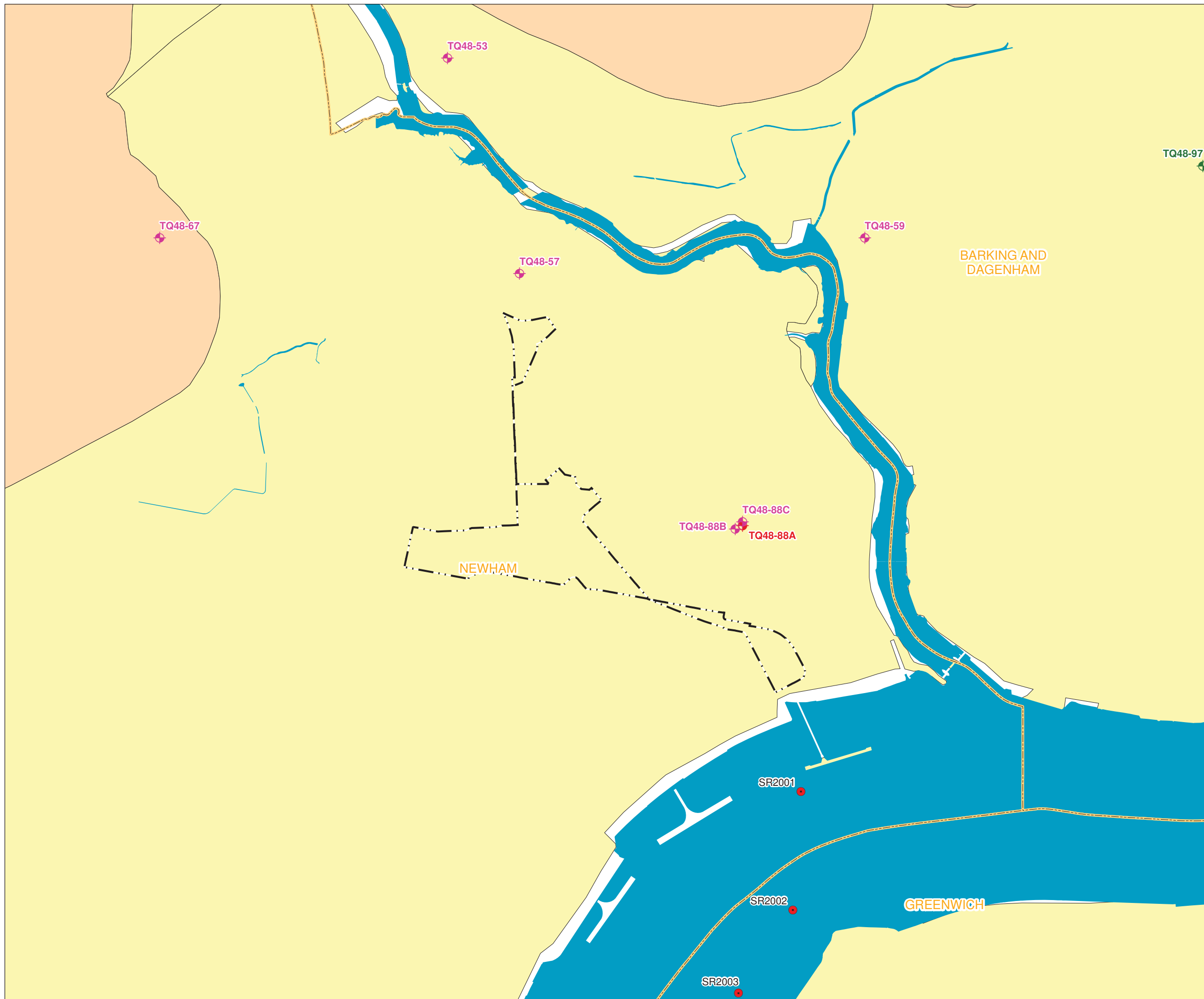
- Key
- Base Traffic Flow
 - Construction Base
 - Development Case

FOR INFORMATION

Location
Beckton Sewage Treatment Works
 London Borough of Newham

Document Information
Environmental Statement
 Transport - Baseline, Construction and Development case traffic flow (PM peak hour)
 Vol.26 Figure 12.4.7
 1PL03-TT-50883
 January 2013





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Keyplan:



Key

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

Drilled Boreholes

Depth (m)

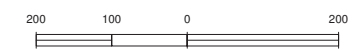
- 0 - 10
- 10 - 30
- 30+

EA Groundwater Level Monitoring Locations

- Historical Data Available
- Data Not Available
- Recent Data Available

Superficial Geology

- Alluvium
- Taplow Gravel Formation



Scale 1 : 10,000 at A3

FOR INFORMATION

[Location](#)

Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)

Environmental Statement

Water resources – groundwater - superficial geology

Vol.26 Figure 13.4.1

1PL03-WR-20192

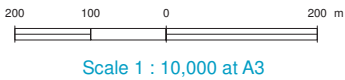
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames





- Key
- Limits of Land
 - - - to be Acquired or Used
 - Local Authority Boundary
- Drilled Boreholes
- Depth (m)
- 0 - 10
 - 10 - 30
 - 30+
- EA Groundwater Level Monitoring Locations
- Historical Data Available
 - Data Not Available
 - Recent Data Available
 - EA Chalk Piezometric Level (mATD) - Jan 11
- Source Protection Zones
- Zone II (Outer Protection Zone)
- Solid Geology
- London Clay Formation
 - Lambeth Group
 - Thanet Sand
 - Chalk Formation

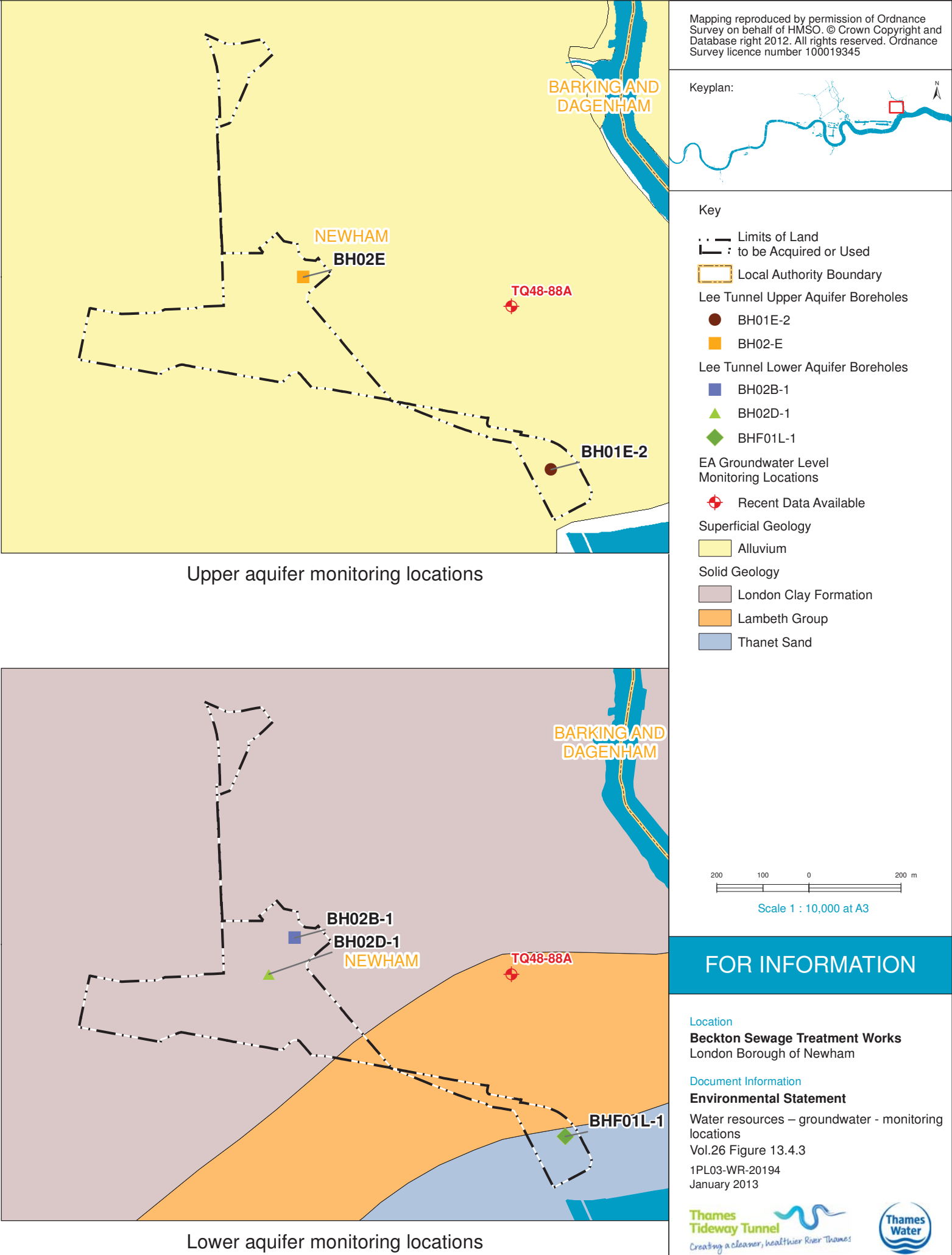
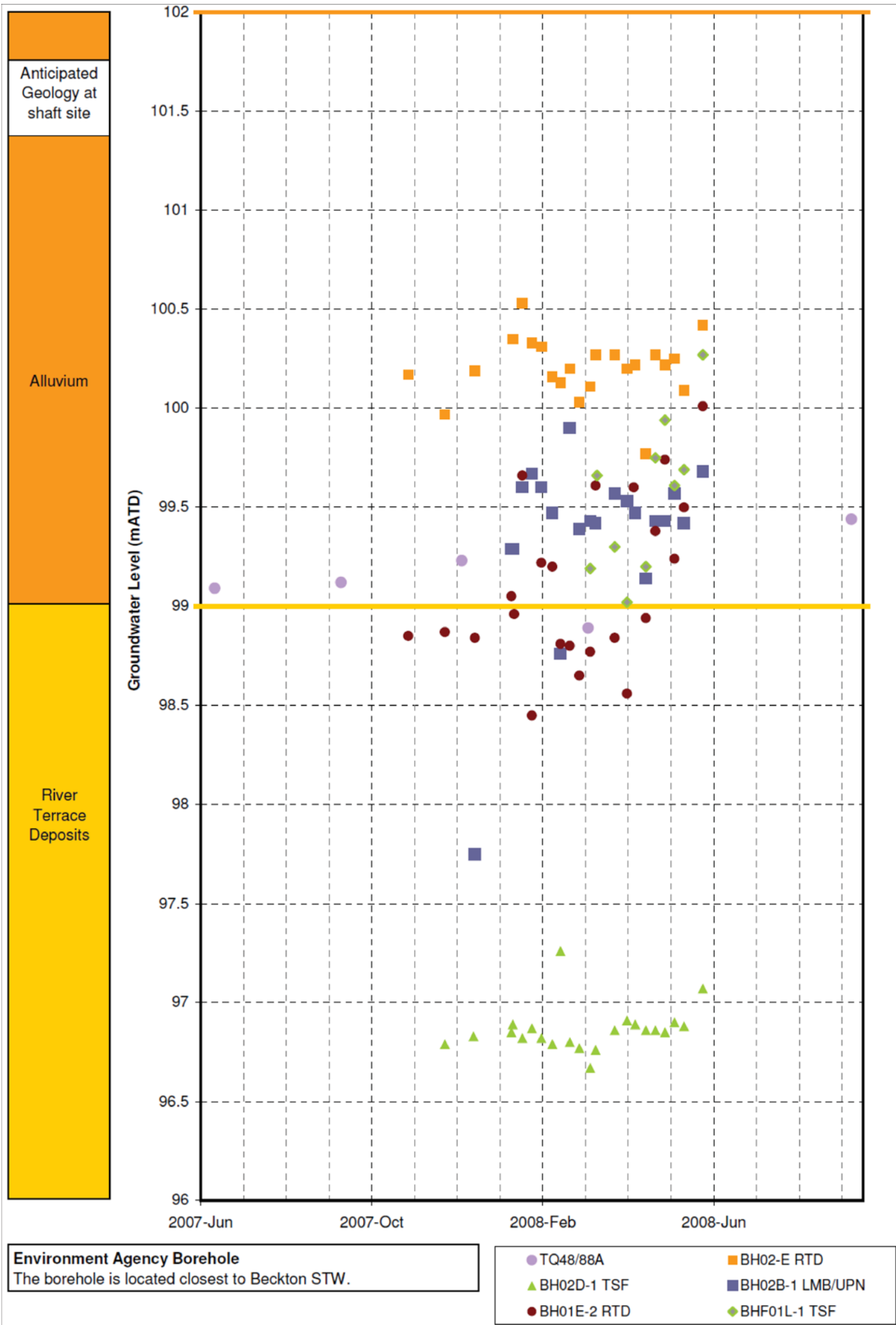


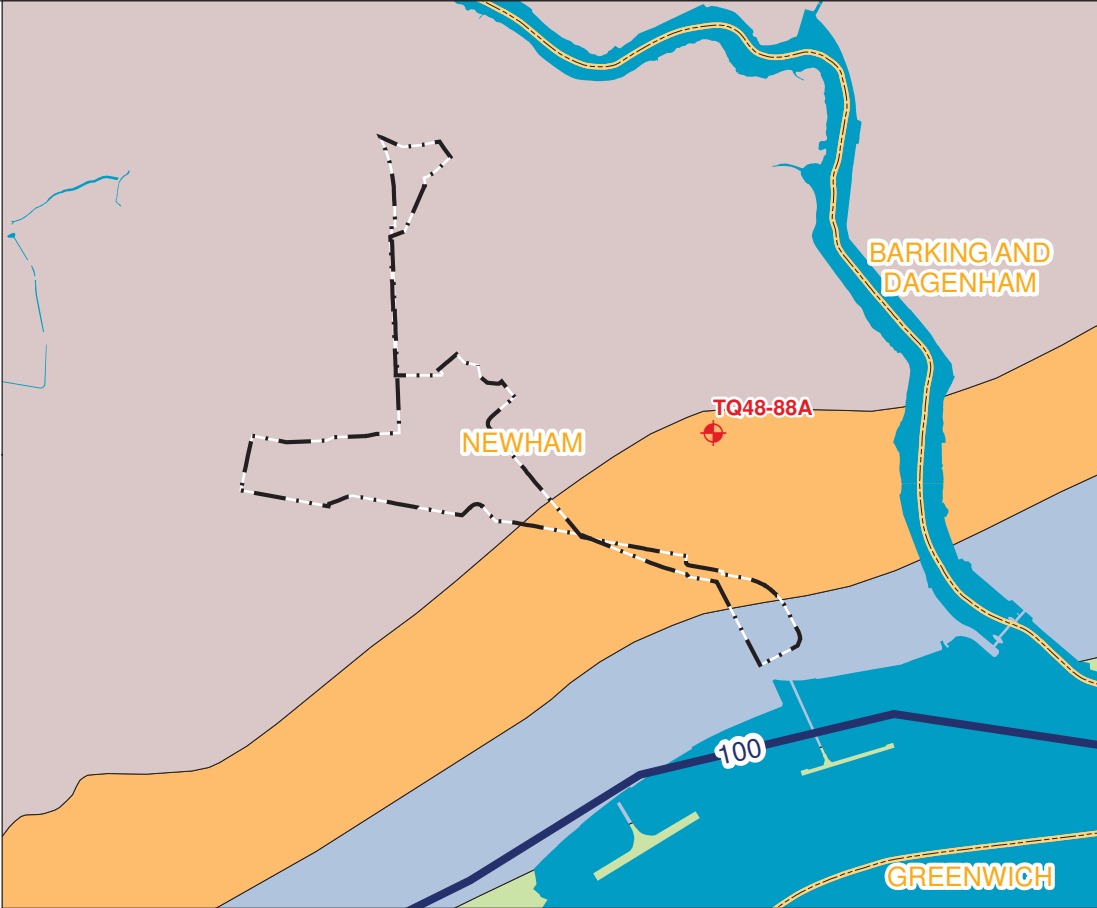
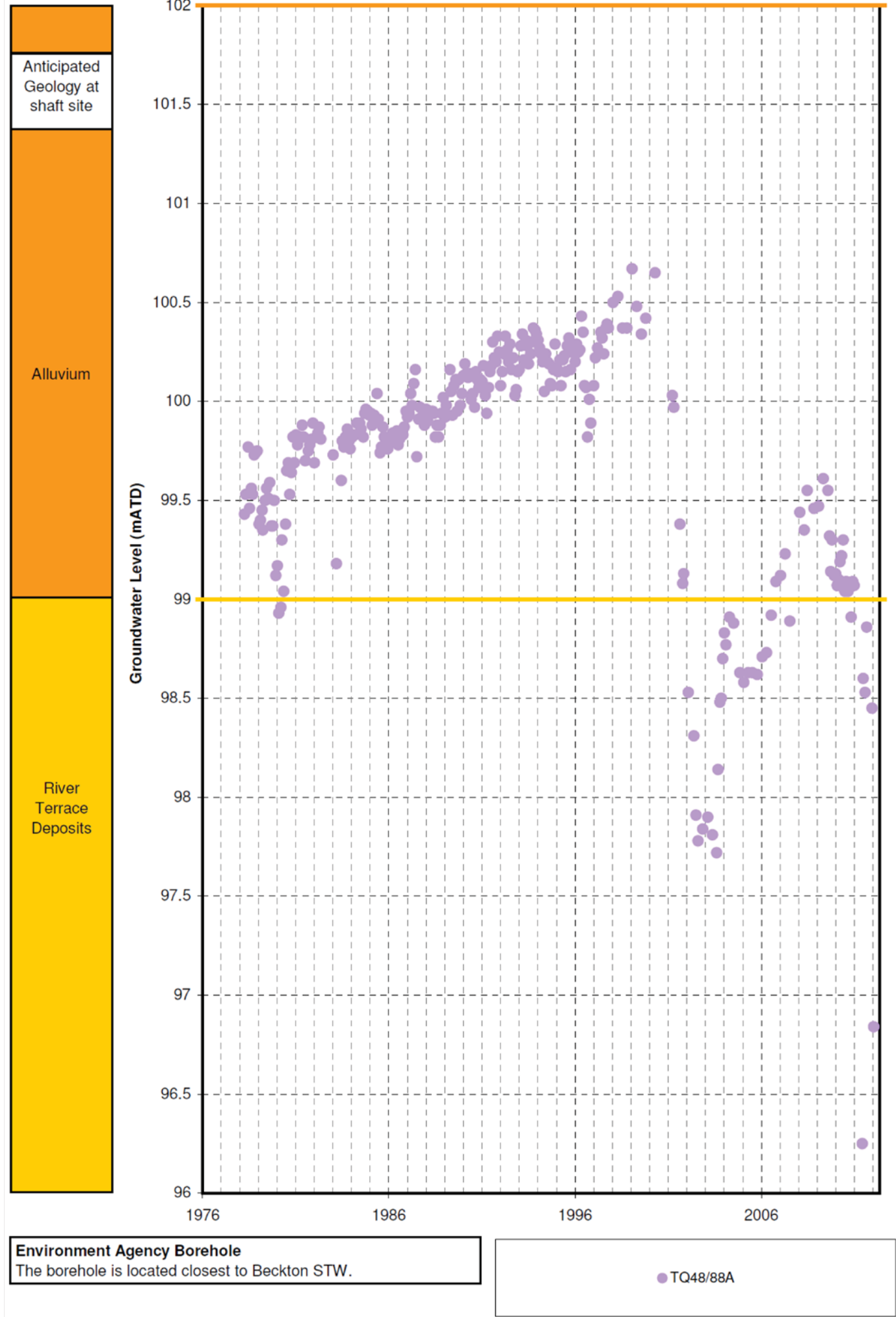
FOR INFORMATION

[Location](#)
Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)
Environmental Statement
Water resources – groundwater - solid geology
Vol.26 Figure 13.4.2
1PL03-WR-20193
January 2013







Long term groundwater level monitoring

9,700 4,850 0 9,700 m
Scale 1 : 15,000 at A3

FOR INFORMATION

[Location](#)
Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)
Environmental Statement
Water resources – groundwater - regional groundwater hydrograph
Vol.26 Figure 13.4.4
1PL03-WR-20195
January 2013





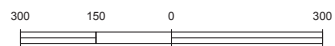
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Keyplan:



Key

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



Scale 1 : 15,000 at A3

FOR INFORMATION

Location

Bepton Sewage Treatment Works
London Borough of Newham

Document Information

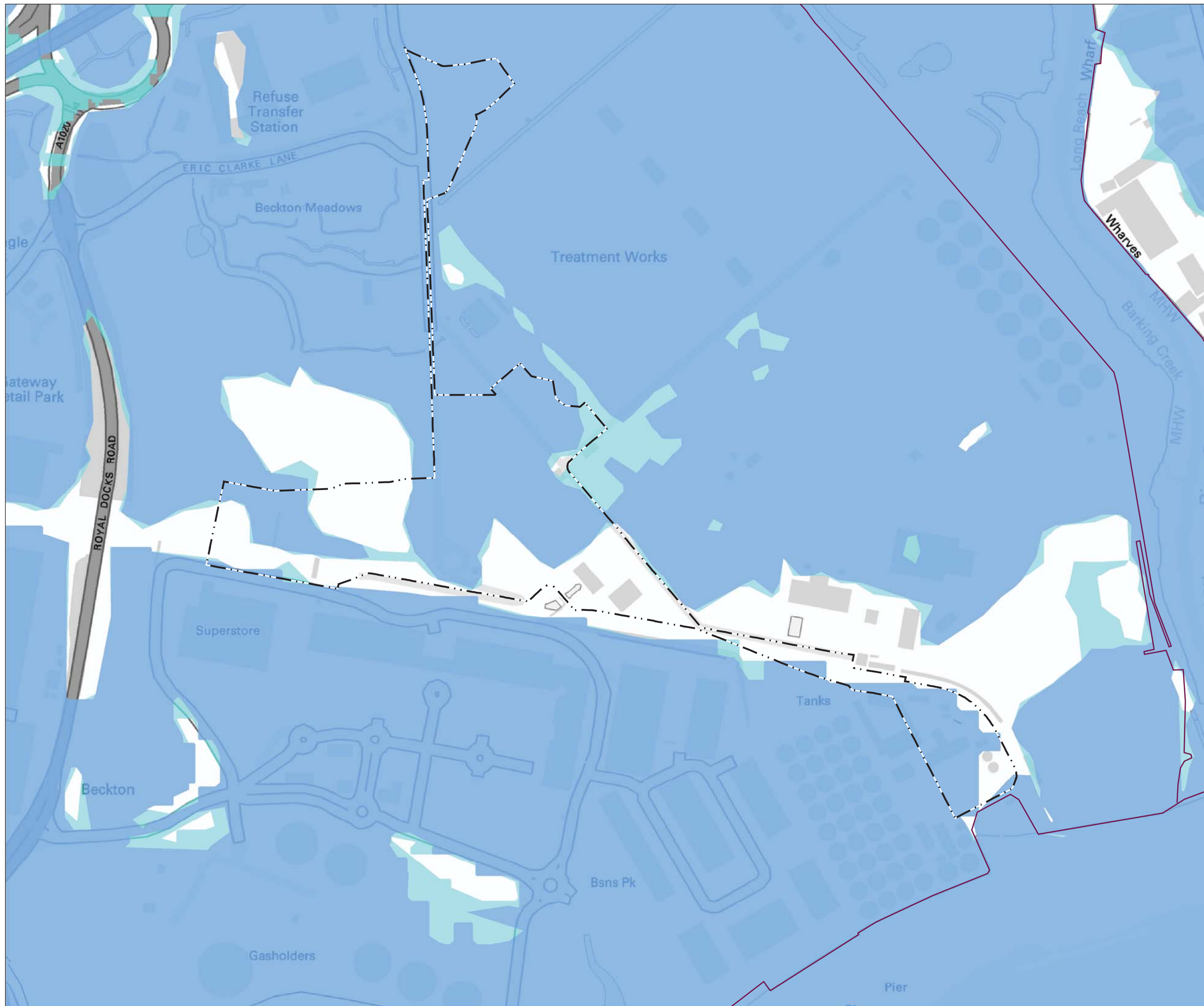
Environmental Statement

Water resources - surface water - water
quality monitoring points
Vol.26 Figure 14.4.1

1PL03-WR-21024
January 2013

Thames Tideway Tunnel
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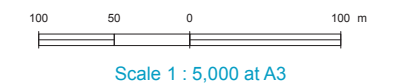




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- Key
- Limits of Land to be Acquired or Used
 - Thames Tidal Defences
 - EA Flood Zone 3
 - EA Flood Zone 2

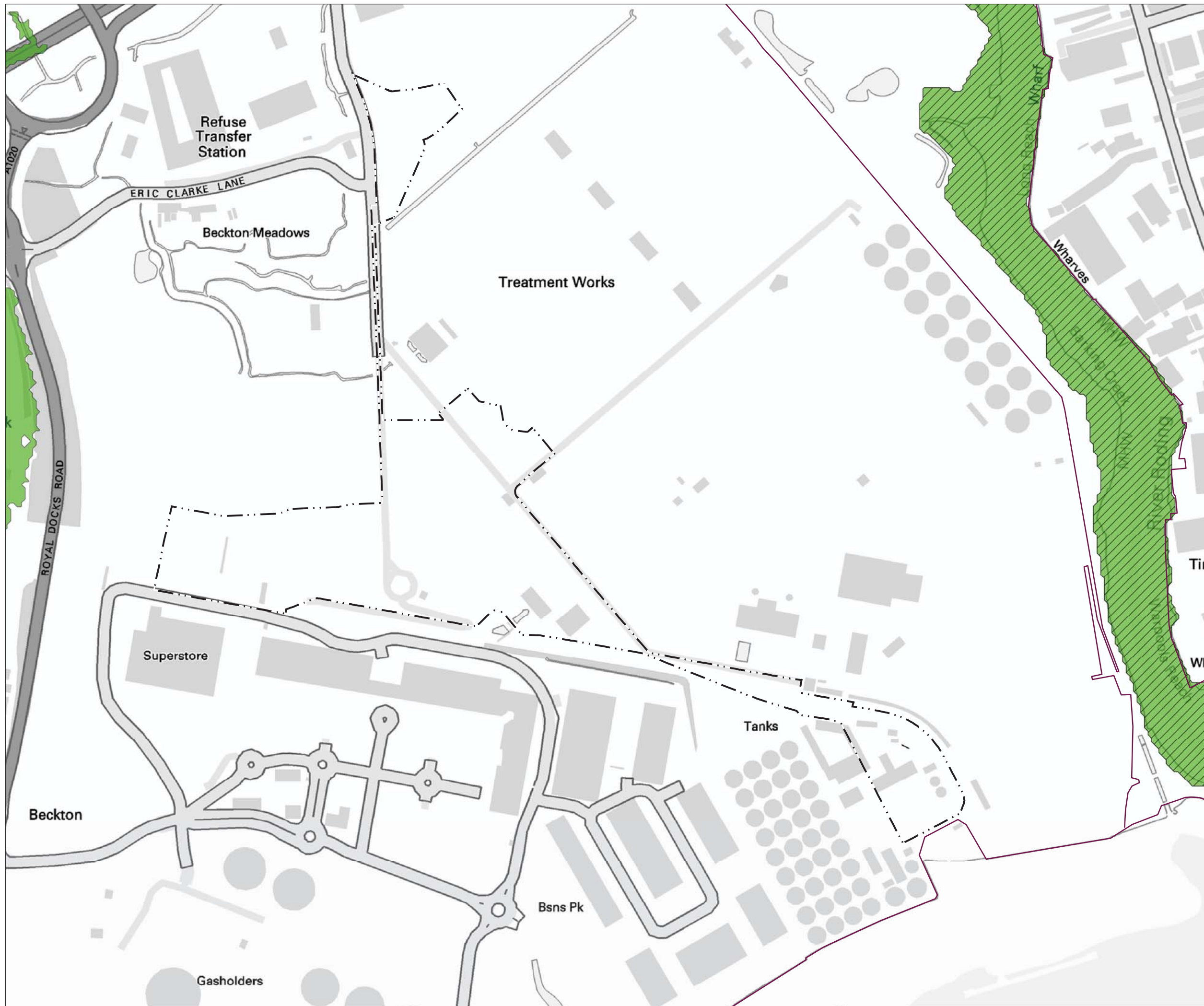


FOR INFORMATION

[Location](#)
Beckton Sewage Treatment Works
London Borough of Newham

[Document Information](#)
Environmental Statement
Flood risk - EA flood zones

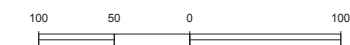
Vol.26 Figure 15.3.1
1PL03-FL-20151
January 2013



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- Key
- Limits of Land to be Acquired or Used
 - Thames Tidal Defences
 - River Roding Fluvial Flood Extent
 - 1% AEP Defended
 - 0.1% AEP Defended



Scale 1 : 5,000 at A3

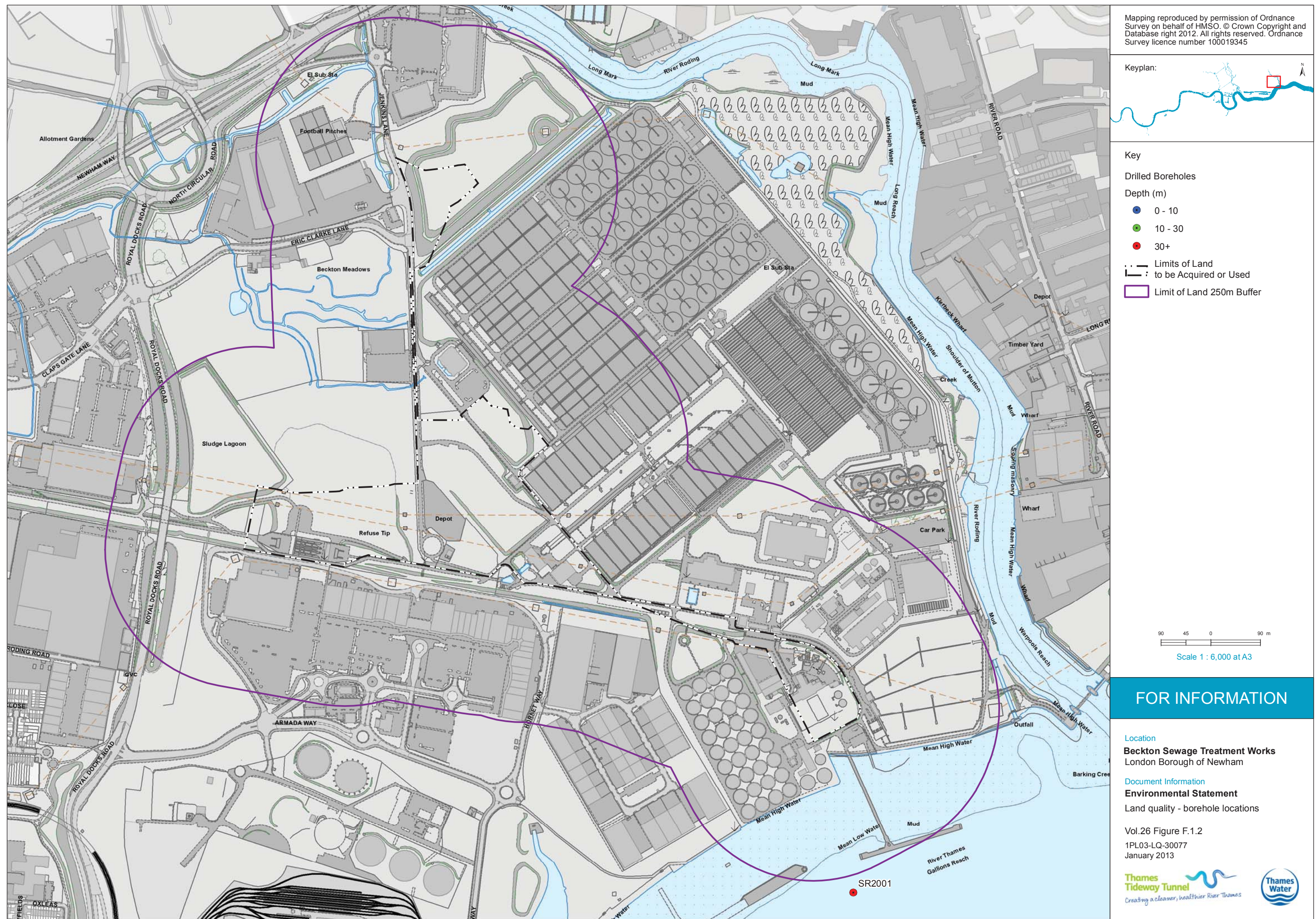
FOR INFORMATION

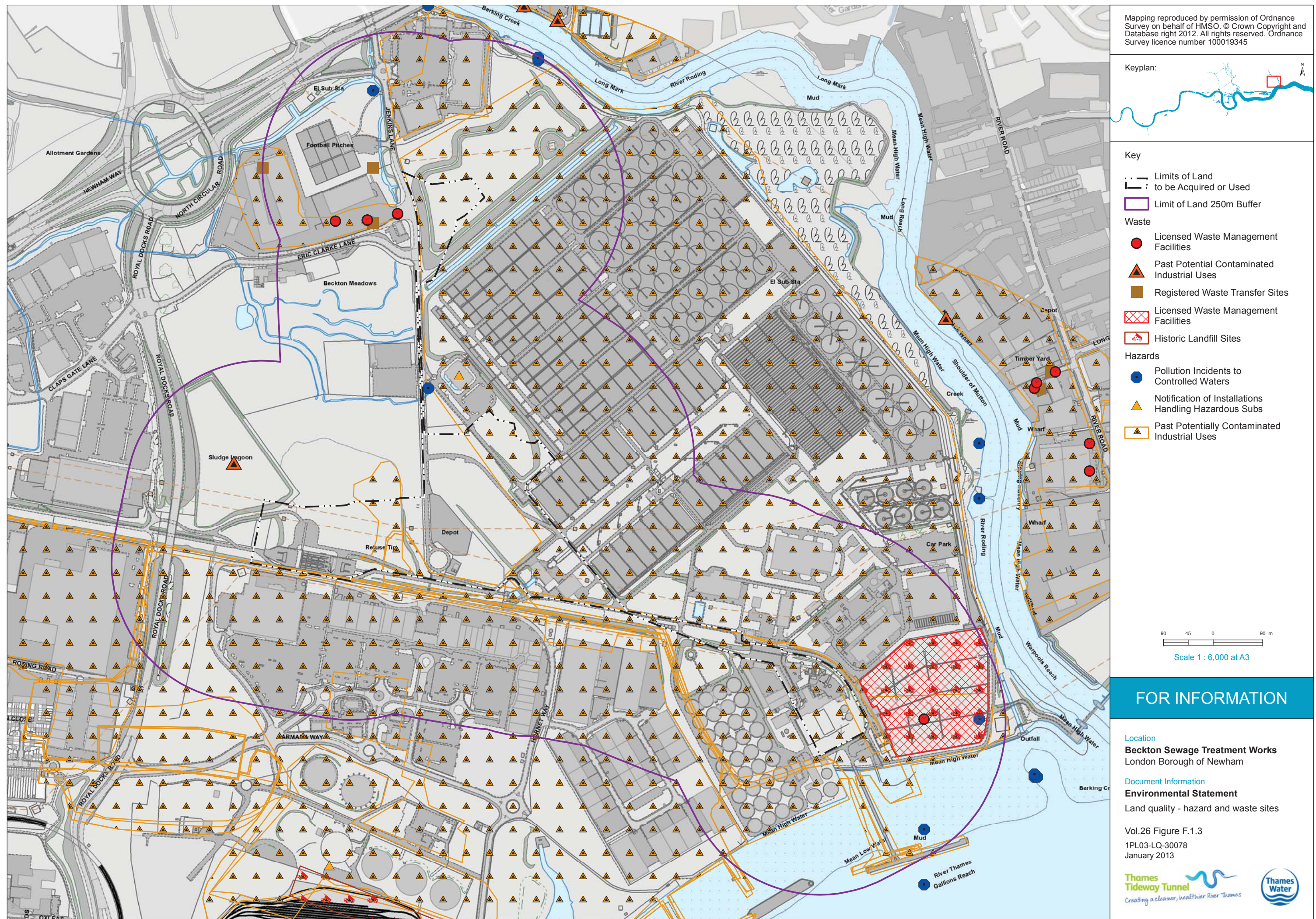
Location
Beckton Sewage Treatment Works
London Borough of Newham

Document Information
Environmental Statement
Flood risk - River Roding fluvial flood extents

Vol.26 Figure 15.3.2
1PL03-FL-20152
January 2013







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