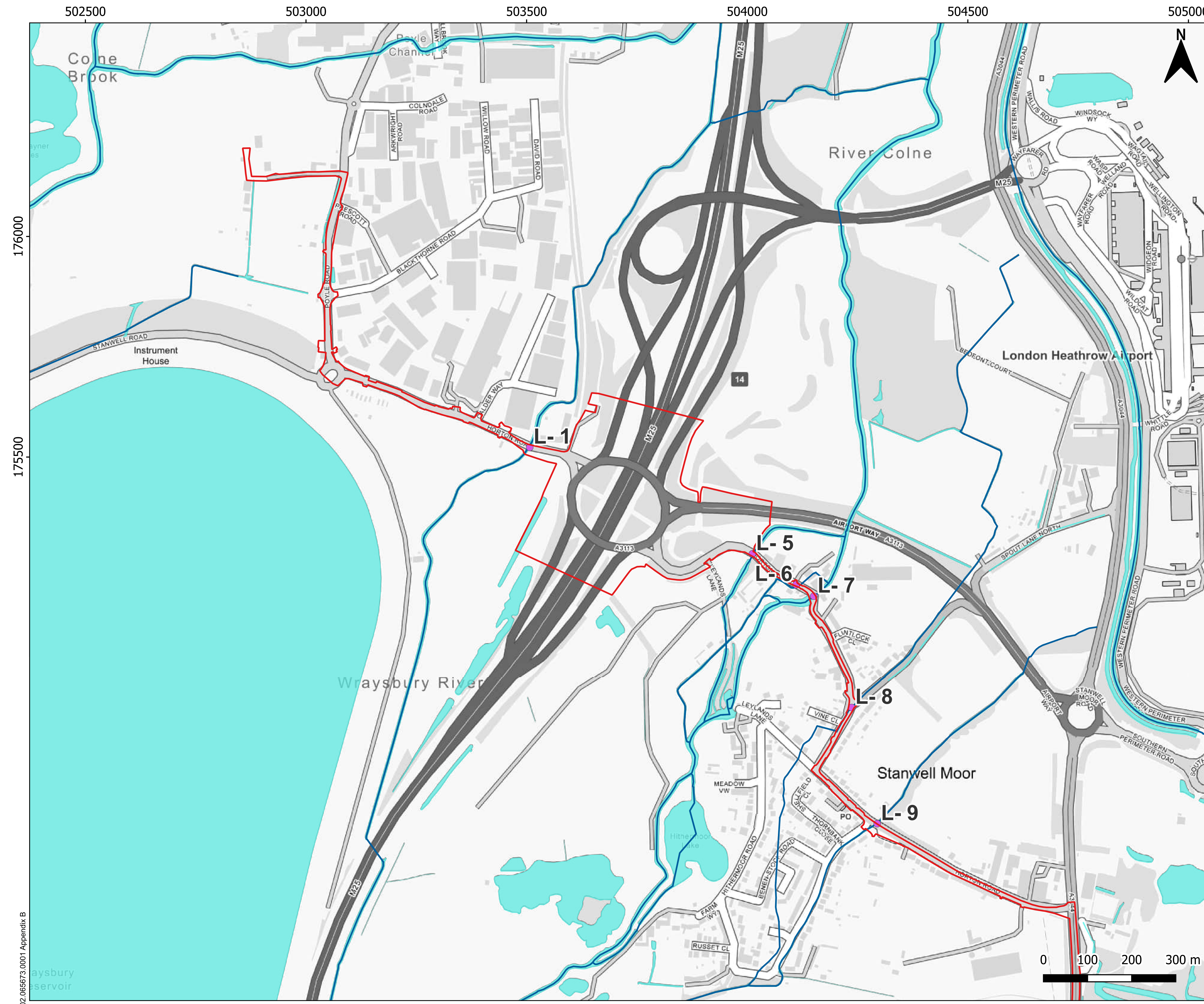
Appendix B Local Watercourse

Flood Risk Report

Manor Farm Cable – Laleham Substation Corridor

SLR Project No.: 402.065673.00001

11 September 2025



LEGEND

— Statutory Main River

— OS Mapped Surface Water Feature (Line)

▨ OS Mapped Surface Water Feature (Area)

🟥 132kV Site Boundary

● Watercourse Crossing

Notes
[% "Notes" %]

Juniper Energy Ltd

SLR

MANOR FARM CABLES:
LALEHAM SUBSTATION CORRIDOR

FLOOD RISK ASSESSMENT

APPENDIX B

Figure 3.1

Scale	Date
1:8,000 @ A3	SEPTEMBER 2025

402.065673.0001 Appendix B

503500 504000 504500 505000 505500

174500 174000 173500

L- 9

Lower Mill Farm

King George VI Reservoir

Staines Moor

Bonehead Ditch

Staines Reservoirs

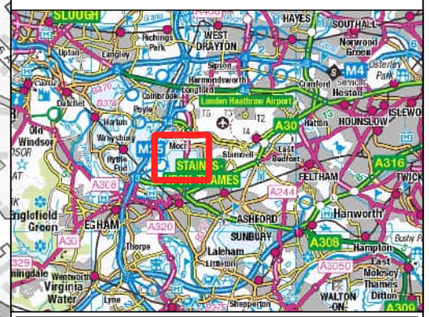
M25 HITHERMOOR ROAD BEMENSTOCK ROAD THORNBANK CLOSE FARM WAY RUSSET CL HORTON ROAD A3113 RUSSELL DR STANWELL GARDENS GLENRICKLES CL GIBSON PLACE B378 PARK ROAD SELWOOD GARDENS STANHOPE HEATH LORD KNYVETT CL HADFIELD TRINITY CL JUBILEE CL TOWN LANE HAWTHORNE WAY ST MARY'S AVENUE LAUSER ROAD TOWN FARM WAY ROSE GARDENS ST ANNE'S AVENUE JORDANS CLOSE DIAMEDES AVENUE FOXGLOVE CL B378

N

LEGEND

- Statutory Main River
- OS Mapped Surface Water Feature (Line)
- OS Mapped Surface Water Feature (Area)
- 132kV Site Boundary
- Watercourse Crossing

Notes
[% "Notes" %]



0 100 200 300 m

Juniper Energy Ltd

SLR

MANOR FARM CABLES:
LALEHAM SUBSTATION CORRIDOR

FLOOD RISK ASSESSMENT

APPENDIX B

Figure 3.2

Scale: 1:8,000 @ A3

Date: SEPTEMBER 2025

402.065673.0001 Appendix B

504000 504500 505000 505500 506000

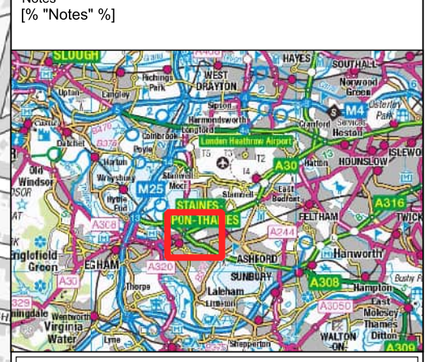
172500 172000 171500

N

LEGEND

- Statutory Main River
- OS Mapped Surface Water Feature (Line)
- OS Mapped Surface Water Feature (Area)
- 132kV Site Boundary
- Watercourse Crossing

Notes
[% "Notes" %]



Juniper Energy Ltd

SLR

MANOR FARM CABLES:
LALEHAM SUBSTATION CORRIDOR

FLOOD RISK ASSESSMENT

APPENDIX B

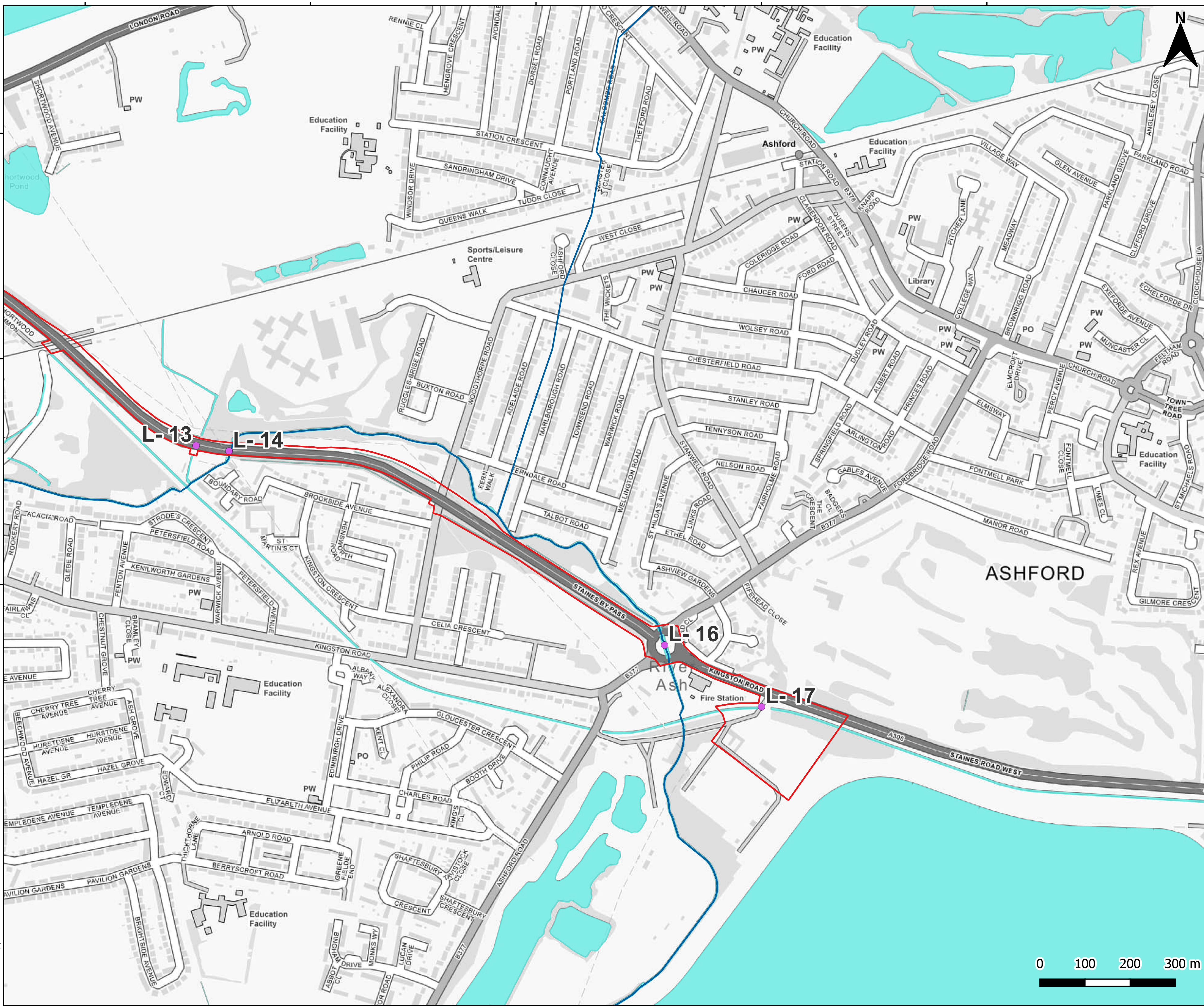
Figure 3.3

Scale 1:8,000 @ A3

Date SEPTEMBER 2025

0 100 200 300 m

402.065673.0001 Appendix B



LEGEND

- Statutory Main River
- OS Mapped Surface Water Feature (Line)
- OS Mapped Surface Water Feature (Area)
- 132kV Site Boundary
- Watercourse Crossing

Notes
[% "Notes" %]

Juniper Energy Ltd

SLR

MANOR FARM CABLES:
LALEHAM SUBSTATION CORRIDOR

FLOOD RISK ASSESSMENT

APPENDIX B

Figure 3.4

Scale	Date
1:8,000 @ A3	SEPTEMBER 2025

402.065673.0001 Appendix B

Appendix C Flood Risk Maps

Flood Risk Report

Manor Farm Cable – Laleham Substation Corridor

SLR Project No.: 402.065673.00001

11 September 2025

502000 503000 504000

177000 176000

N

LEGEND

- 132kV Site Boundary
- Statutory Main River
- Flood Map for Planning (Rivers and Sea) Flood Zone 2
- Flood Map for Planning (Rivers and Sea) Flood Zone 3

Colnbrook
Dingy Park
Poyle
Cone Brook
River Colne
Willow Piggeries
Moorbridge Bungalow
Instrument House
London
Education Facility
COLNBROOK BY-PASS
BATH ROAD
M25
20m
30m
PW

0 0.5 1
Kilometres

JUNIPER ENERGY LTD

SLR

MANOR FARM CABLES:
LALEHAM SUBSTATION CORRIDOR

FLOOD RISK ASSESSMENT

FLOOD MAP FOR PLANNING

FIGURE 1.1

Scale 1:10,000 @ A3

Date SEPTEMBER 2025

402.065673.00001.0010.1 Flood Zones

504000 505000 506000

175000 174000

402.065673.00001.0010.1 Flood Zones

N

LEGEND

- 132kV Site Boundary
- Statutory Main River
- Flood Map for Planning (Rivers and Sea) Flood Zone 2
- Flood Map for Planning (Rivers and Sea) Flood Zone 3

Stanwell Moor

Stanwell

Lower Mill Farm

King George VI Reservoir

Staines Moor

Staines Reservoirs

Bonehurch Ditch

0 0.5 1

Kilometres

JUNIPER ENERGY LTD

SLR

MANOR FARM CABLES:
LALEHAM SUBSTATION CORRIDOR

FLOOD RISK ASSESSMENT

FLOOD MAP FOR PLANNING

FIGURE 1.2

Scale 1:10,000 @ A3

Date SEPTEMBER 2025

503000 504000 505000 506000

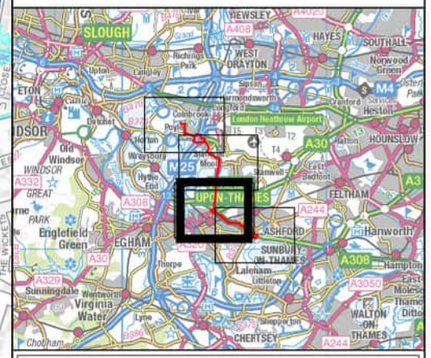
173000 172000

Staines Moor
Bonehurch Pitch
River Colne
STAINES-UPON-THAMES
Staines Reservoirs
20m
N
KINGSWAY
SCOTS CLOSE
VIOLA AVENUE
TOWN LANE
A312
LONDON ROAD
A30
KENILWORTH ROAD
CUMBERLAND ROAD
AVONDALE ROAD
DORSET ROAD
PORTLAND ROAD
NEWMOOR CRESCENT
STAINES BY-PASS
A30
Church Lammas
Birch Green
River
Education Facility
PW
SHORTWOOD AVENUE
STATION CRESCENT
SANDRINGHAM DRIVE
WINDSOR DRIVE
TUDOR CLOSE
QUEENS WALK
Sports/Leisure Centre
Police Station
Staines
Knowle Green
Ashleigh
Art Gallery
Library
PO
ACACIA ROAD
ROOKERY ROAD
GLEBE ROAD
PETERSFIELD ROAD
KENILWORTH GARDENS
CELIA CRESCENT
WORPLE AVENUE
WITHYGATE AVENUE
CHERRY TREE AVENUE
BEECHWOOD AVENUE
HAZEL DR
STUART WY
Sweeps Ditch

0 0.5 1
Kilometres

LEGEND

- 132kV Site Boundary
- Statutory Main River
- Flood Map for Planning (Rivers and Sea) Flood Zone 2
- Flood Map for Planning (Rivers and Sea) Flood Zone 3



JUNIPER ENERGY LTD

SLR

MANOR FARM CABLES:
LALEHAM SUBSTATION CORRIDOR

FLOOD RISK ASSESSMENT

FLOOD MAP FOR PLANNING

FIGURE 1.3

Scale	Date
1:10,000 @ A3	SEPTEMBER 2025

402.065673.00001.0010.1 Flood Zones

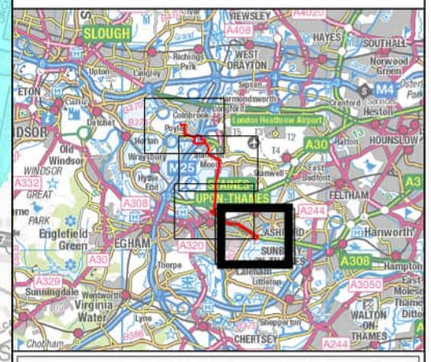
505000 506000 507000 508000

172000 171000 170000

N

LEGEND

- 132kV Site Boundary
- Statutory Main River
- Flood Map for Planning (Rivers and Sea) Flood Zone 2
- Flood Map for Planning (Rivers and Sea) Flood Zone 3



Ashford
Chattern Hill
ASHFORD
Ashleigh
Queen Mary Reservoir
Education Facility
Sports/Leisure Centre
Library
PO
Fire Station
STAINES ROAD WEST
A308
20m

0 0.5 1
Kilometres

JUNIPER ENERGY LTD

SLR

MANOR FARM CABLES:
LALEHAM SUBSTATION CORRIDOR

FLOOD RISK ASSESSMENT

FLOOD MAP FOR PLANNING

FIGURE 1.4

Scale 1:10,000 @ A3

Date SEPTEMBER 2025

402.065673.00001.0010.1 Flood Zones

502000 503000 504000

177000 176000

LEGEND

132kV Site Boundary

Surface Water Flood Likelihood Category

High

Medium

Low

N

Colnbrook
Dingy Park
Colnbrook Water
Willow Piggeries
Education Facility
Poyle
Poyle Channel
Colne Brook
Moorbridge Bungalow
River Colne
Eric Mortimer Rayner Memorial Lakes
Instrument House
London
Starwell Moor

0 0.5 1
Kilometres

JUNIPER ENERGY LTD

SLR

MANOR FARM CABLES:
LALEHAM SUBSTATION CORRIDOR

FLOOD RISK ASSESSMENT

SURFACE WATER FLOODING

FIGURE 2.1

Scale 1:10,000 @ A3

Date SEPTEMBER 2025

402.065673.00001.0011.2 Surface Water

504000 505000 506000

175000 174000

402.065673.00001.0011.2 Surface Water

N

LEGEND

132kV Site Boundary

Surface Water Flood Likelihood Category

High

Medium

Low

Stanwell Moor

Lower Mill Farm

King George VI Reservoir

Staines Moor

Bonehead Ditch

Staines Reservoirs

Stanwell

0 0.5 1

Kilometres

JUNIPER ENERGY LTD

SLR

MANOR FARM CABLES:
LALEHAM SUBSTATION CORRIDOR

FLOOD RISK ASSESSMENT

SURFACE WATER FLOODING

FIGURE 2.2

Scale 1:10,000 @ A3

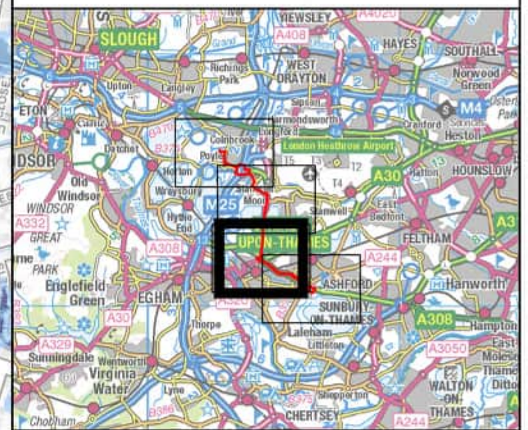
Date SEPTEMBER 2025

LEGEND

🟥	132kV Site Boundary

Surface Water Flood Likelihood Category

▨	High
▨	Medium
▨	Low



JUNIPER ENERGY LTD

SLR

MANOR FARM CABLES:
LALEHAM SUBSTATION CORRIDOR

FLOOD RISK ASSESSMENT

SURFACE WATER FLOODING

FIGURE 2.3

Scale	Date
1:10,000 @ A3	SEPTEMBER 2025

505000 506000 507000 508000

172000 171000 170000

N

ASHFORD

Chattern Hill

Queen Mary Reservoir

River Ash

Ashleigh

Education Facility

Fire Station

Sports Centre

Library

PO

PW

STAINES BY-PASS

STAINES ROAD WEST

A308

B377

20m

0 0.5 1

Kilometres

LEGEND

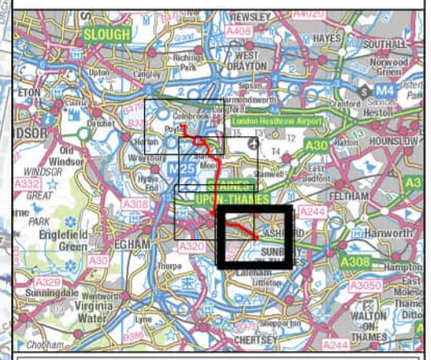
132kV Site Boundary

Surface Water Flood Likelihood Category

High

Medium

Low



JUNIPER ENERGY LTD

SLR

MANOR FARM CABLES:
LALEHAM SUBSTATION CORRIDOR

FLOOD RISK ASSESSMENT

SURFACE WATER FLOODING

FIGURE 2.4

Scale	Date
1:10,000 @ A3	SEPTEMBER 2025

402.065673.00001.0011.2 Surface Water

Appendix D Utility Plans

Flood Risk Report

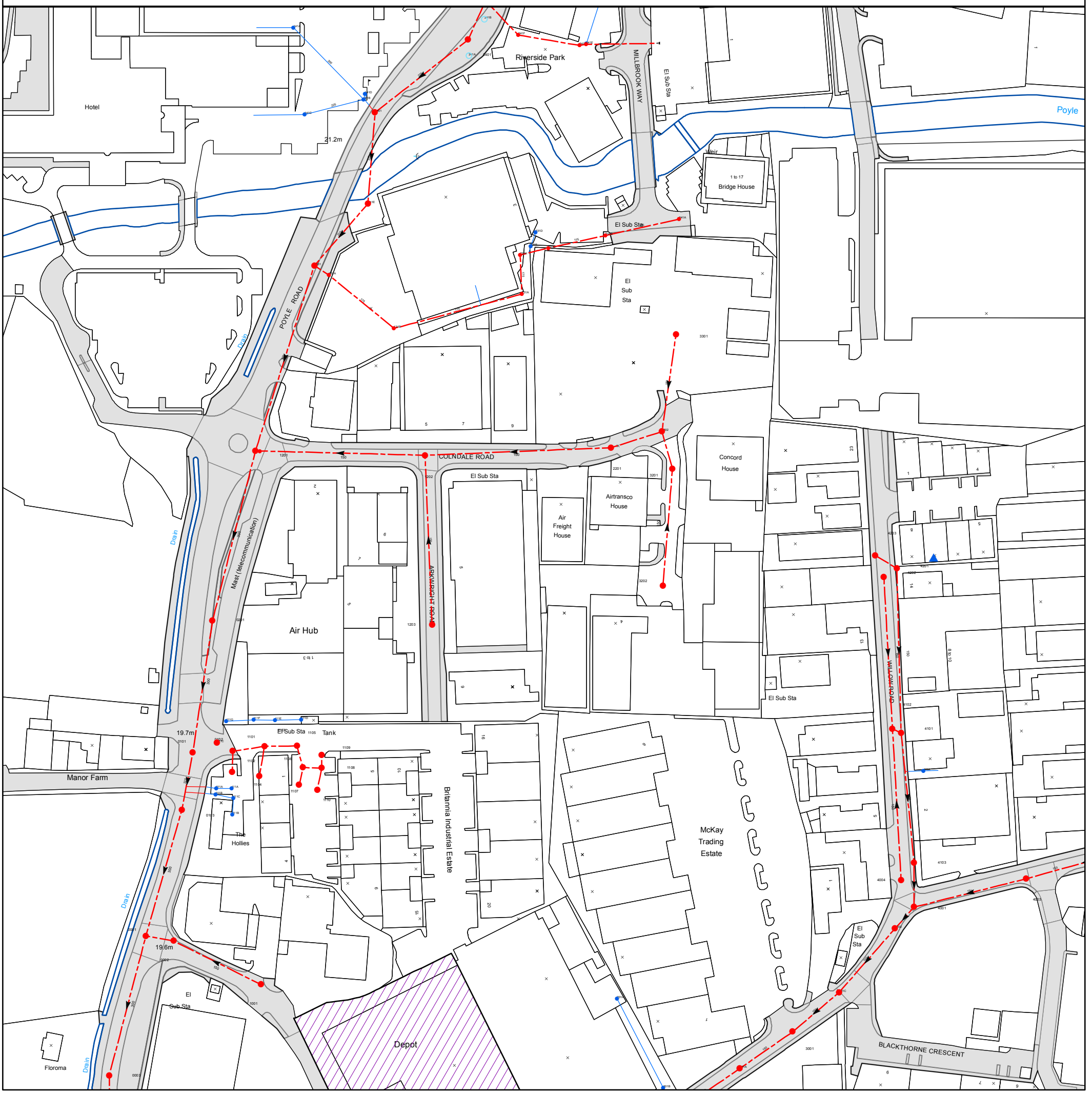
Manor Farm Cable – Laleham Substation Corridor

SLR Project No.: 402.065673.00001

11 September 2025

Based on the Ordnance Survey Map with the sanction of the Controller of H.M Stationary Office License Number 10019345

ALS/ALS Standard/2025_5149830



0 10 20 40 60 80 Meters

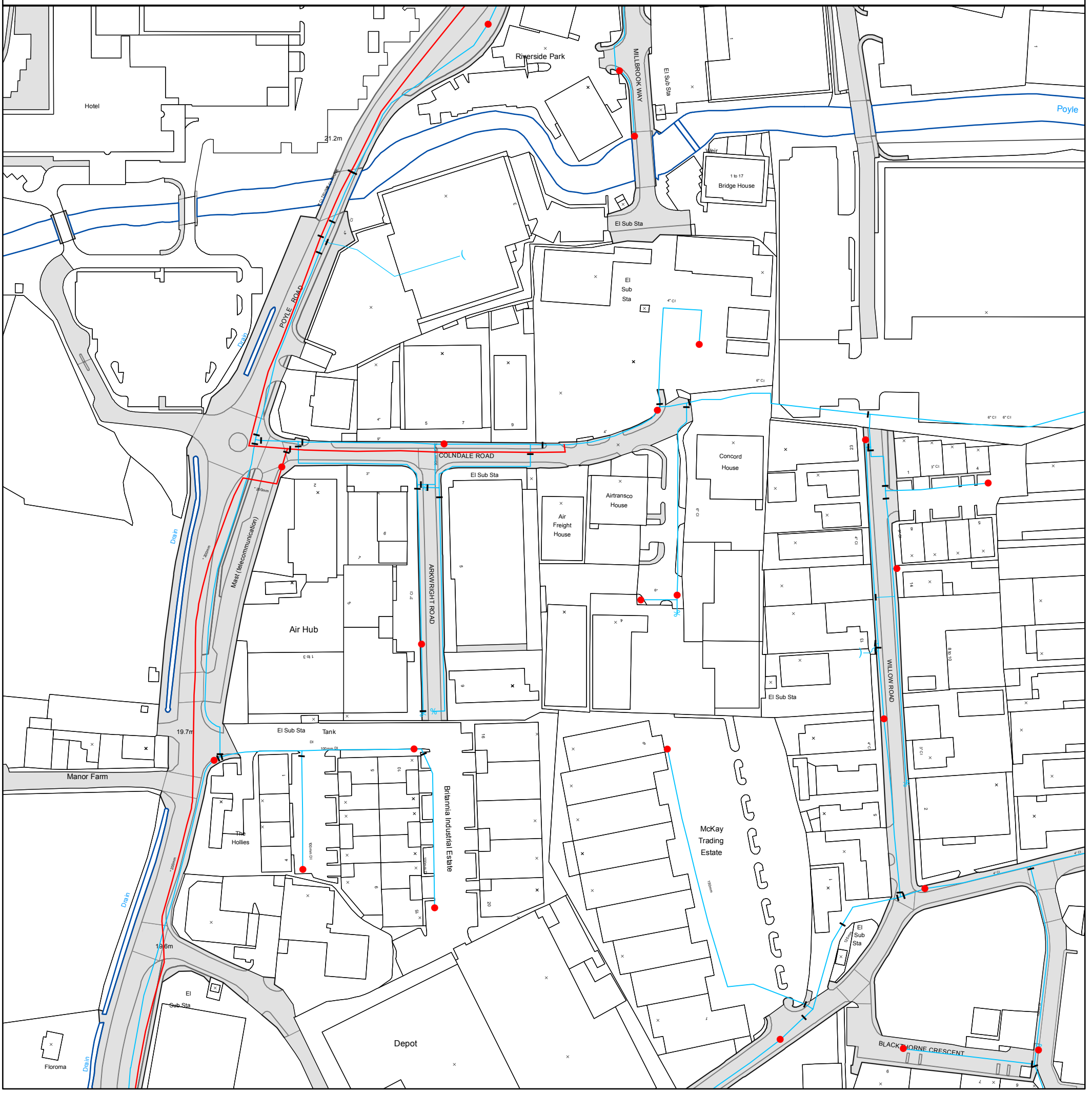
The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified before any works are undertaken. Crown copyright Reserved

Scale:	1:1789
Width:	500m
Printed By:	SAshok1
Print Date:	15/04/2025
Map Centre:	503250,176250
Grid Reference:	TQ0376SW

Comments:

Based on the Ordnance Survey Map with the sanction of the Controller of H.M Stationary Office License Number 10019345

ALS/ALS Standard/2025_5149830



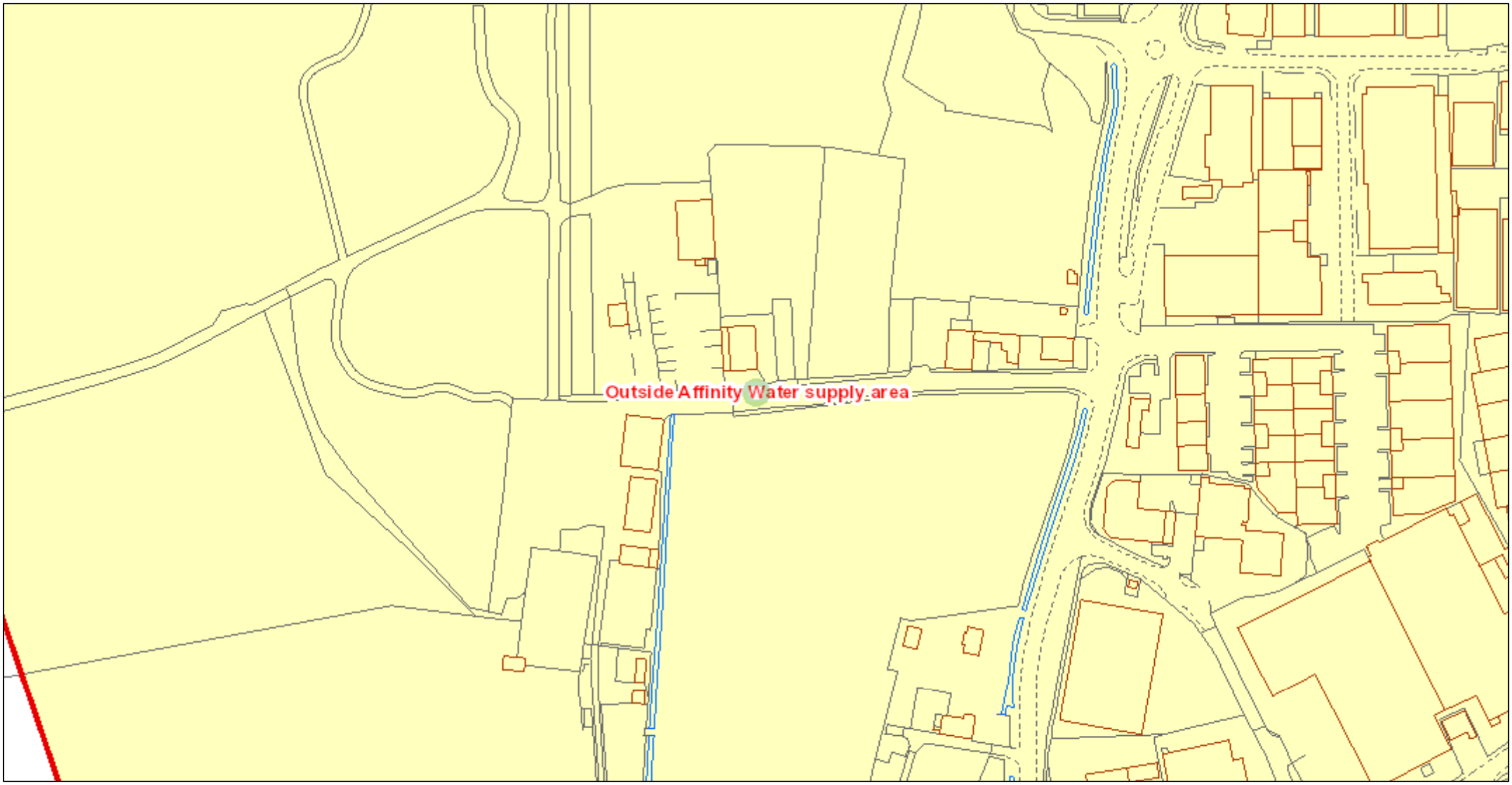
0 10 20 40 60 80 Meters

Scale:	1:1789
Width:	500m
Printed By:	SAshok1
Print Date:	15/04/2025
Map Centre:	503250,176250
Grid Reference:	TQ0376SW

Comments:

Title

Created on - 4/15/2025



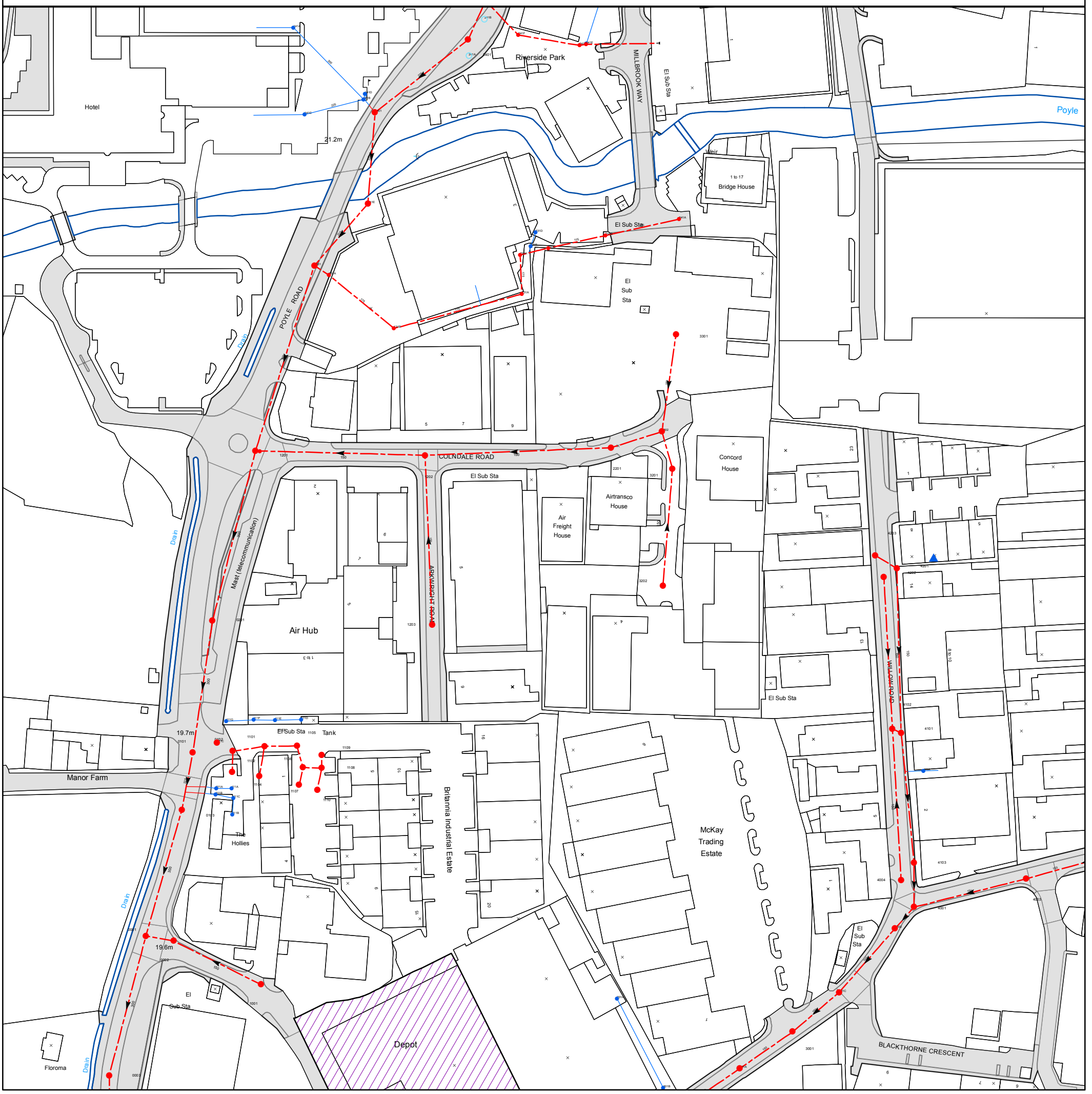
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Based on the Ordnance Survey Map with the sanction of the Controller of H.M Stationary Office License Number 10019345

ALS/ALS Standard/2025_5149830



0 10 20 40 60 80 Meters

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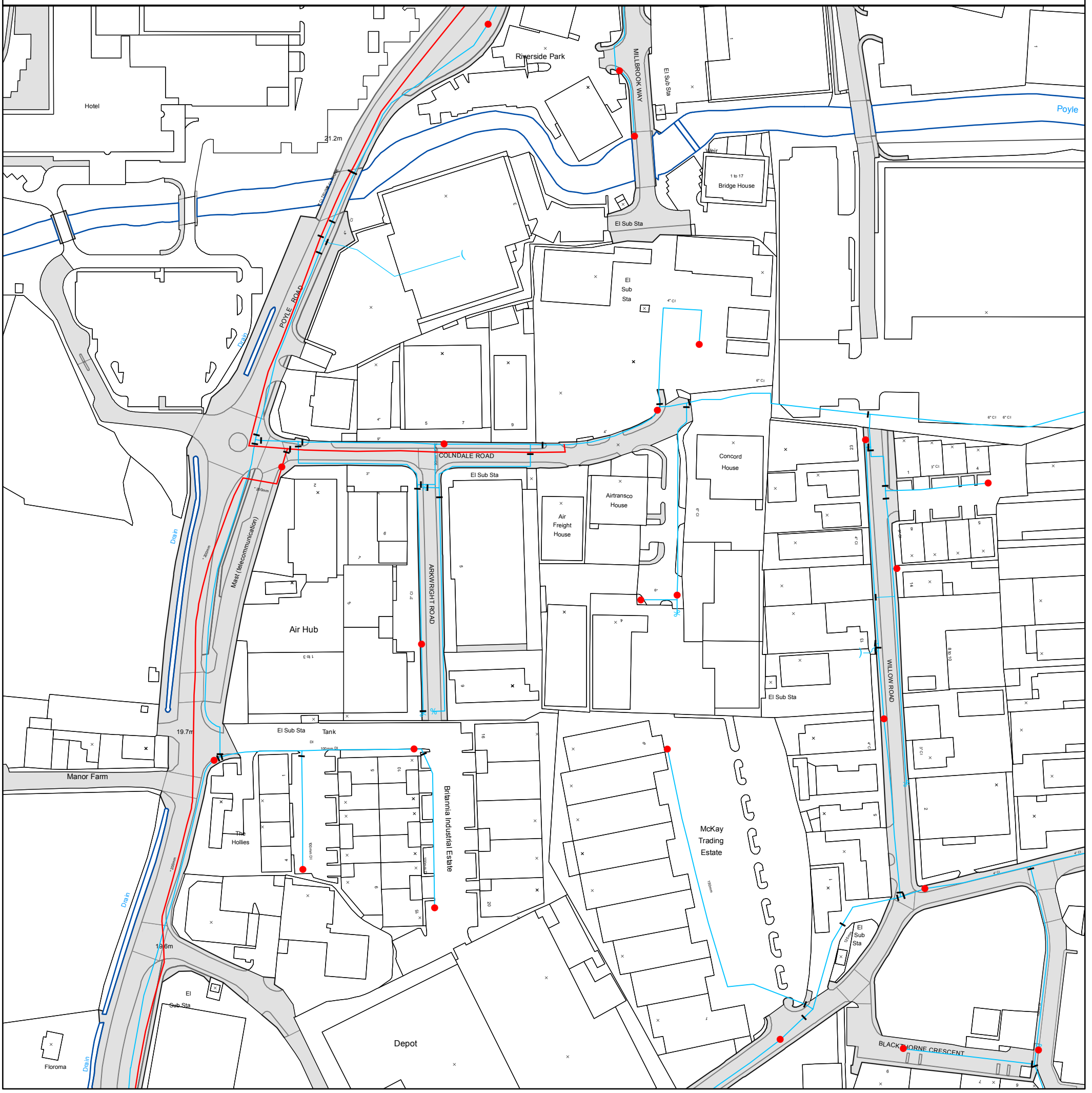
Scale:	1:1789
Width:	500m
Printed By:	SAshok1
Print Date:	15/04/2025
Map Centre:	503250,176250
Grid Reference:	TQ0376SW

Comments:

Based on the Ordnance Survey Map with the sanction of the Controller of H.M Stationary Office License Number 10019345

ALS/ALS Standard/2025_5149830



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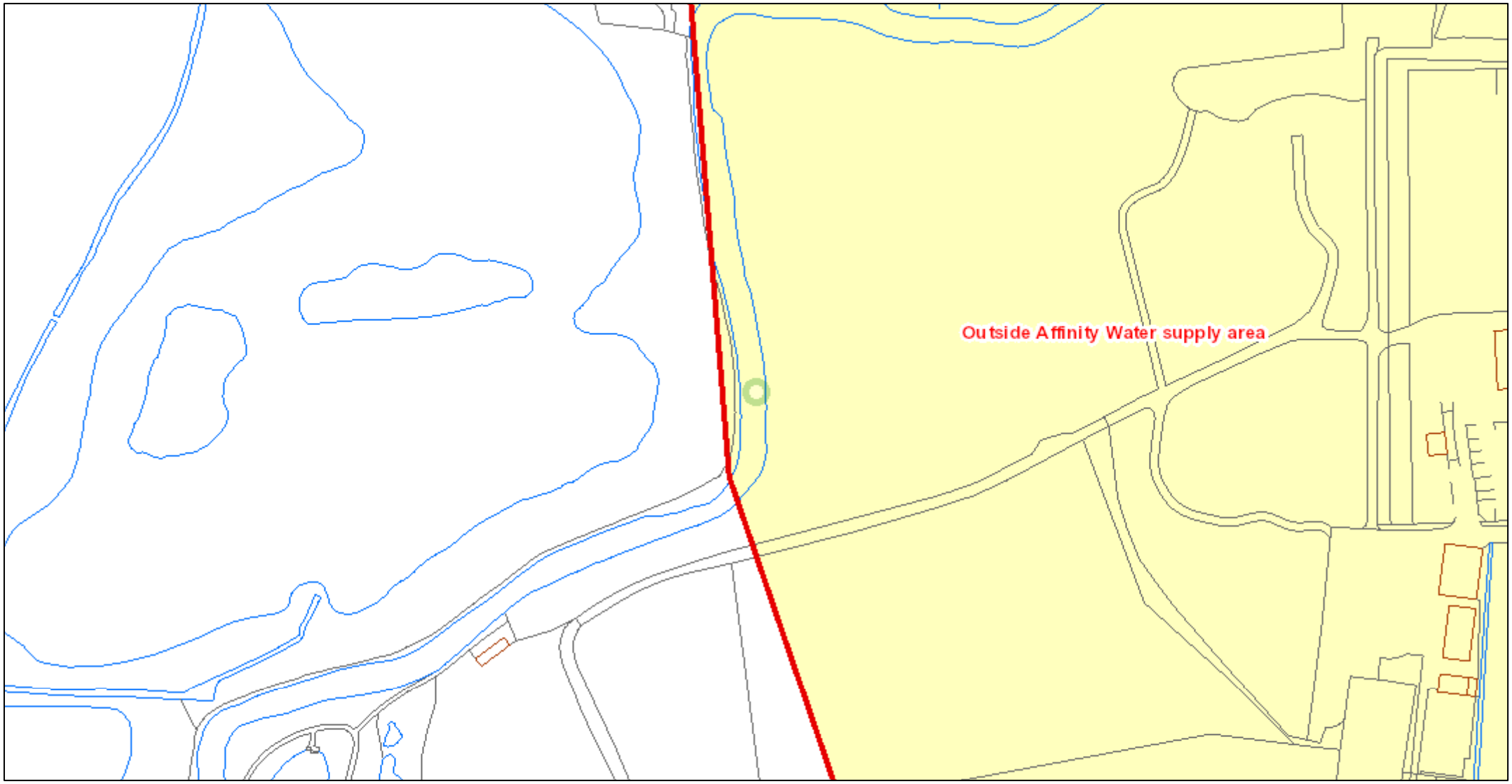
Scale:	1:1789
Width:	500m
Printed By:	SAshok1
Print Date:	15/04/2025
Map Centre:	503250,176250
Grid Reference:	TQ0376SW

Comments:

Title

Created on - 4/15/2025



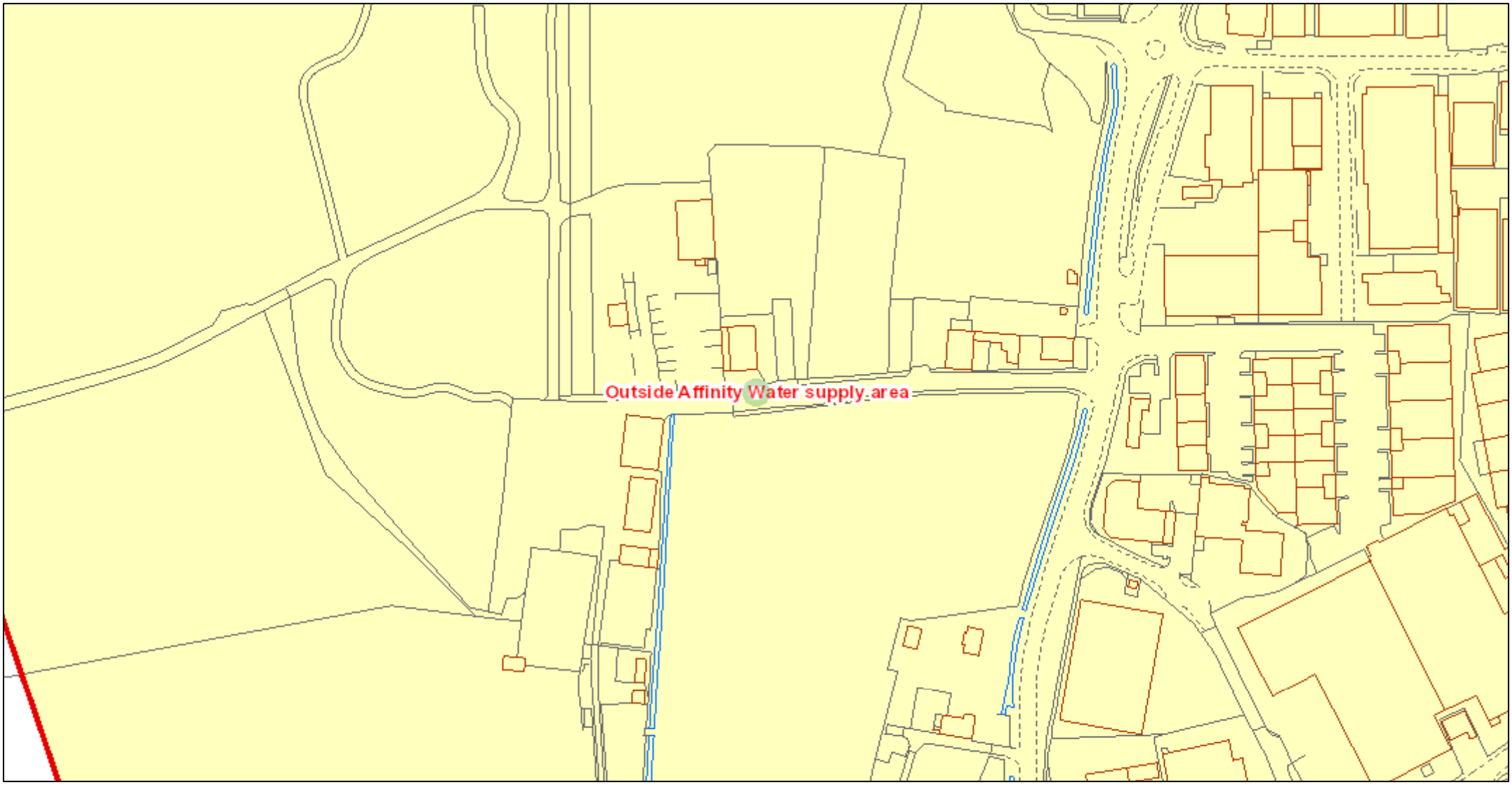
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 4/15/2025



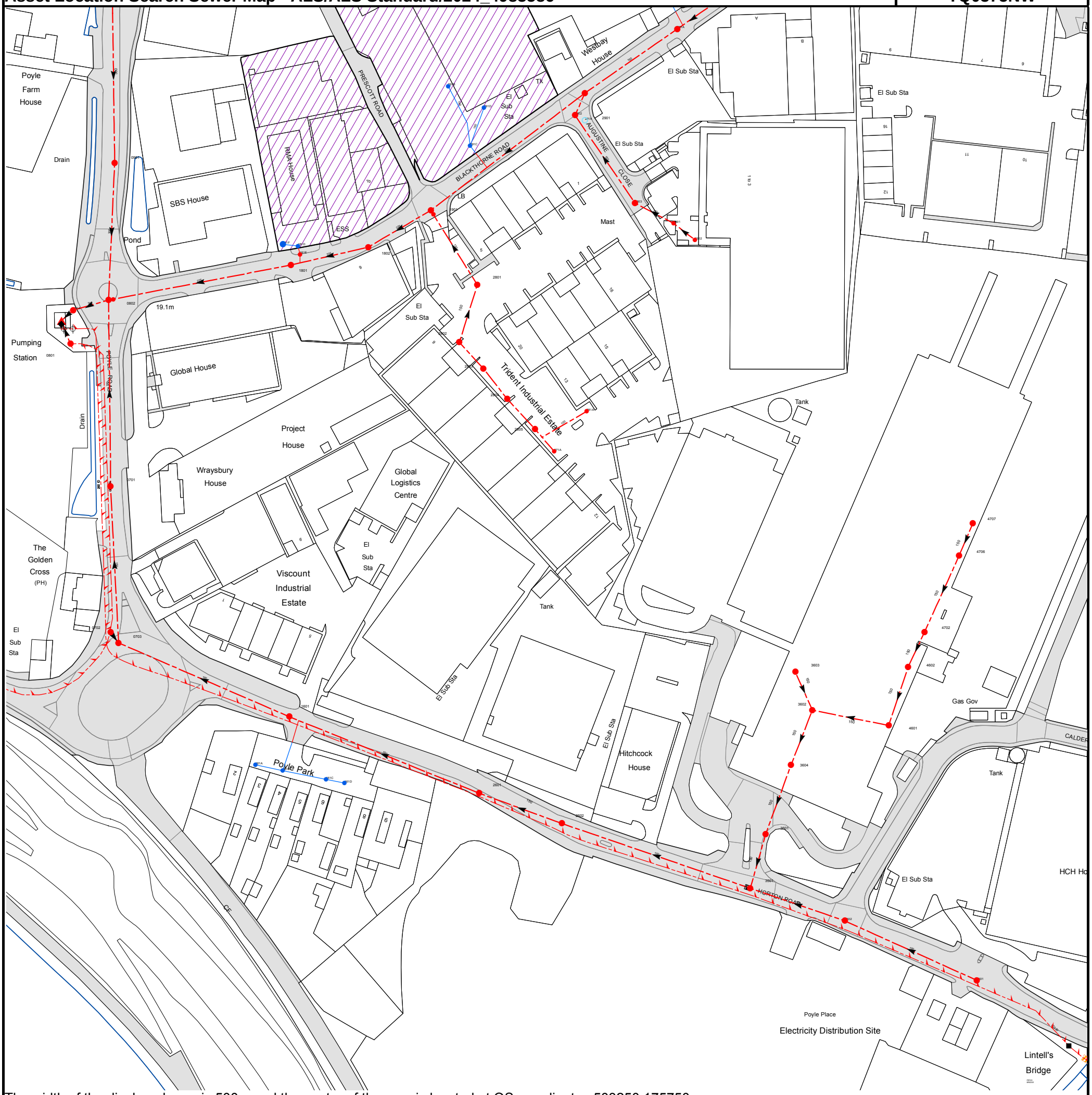
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Asset Location Search Sewer Map - ALS/ALS Standard/2024_4983586

TQ0375NW

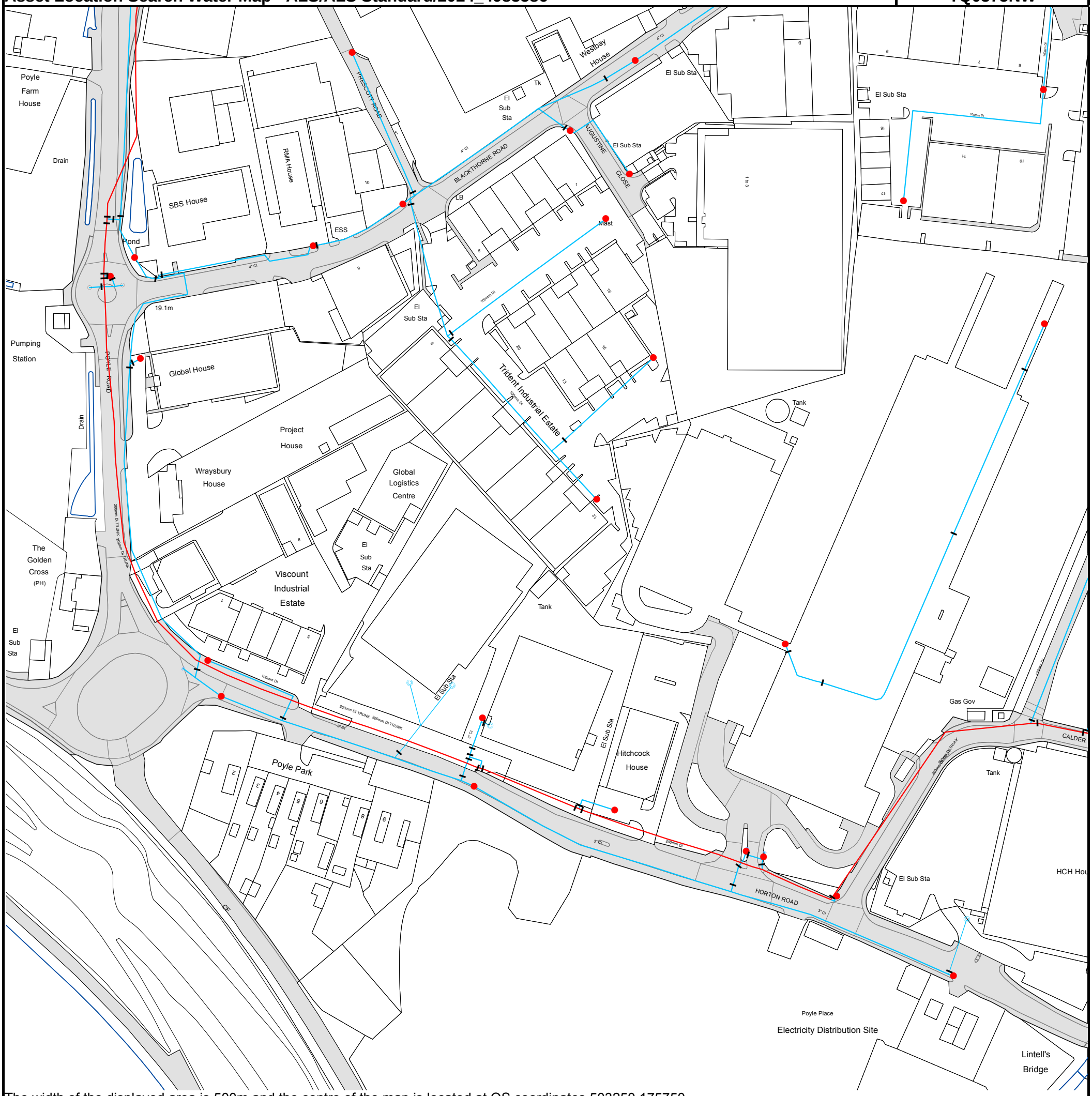


The width of the displayed area is 500m and the centre of the map is located at OS coordinates 503250,175750

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Asset Location Search Water Map - ALS/ALS Standard/2024_4983586

TQ0375NW



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 503250,175750

Asset Location Search Sewer Map - ALS/ALS Standard/2024_4983586

TQ0375NE

The width of the displayed area is 500m and the centre of the map is located at OS coordinates 503750,175750

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

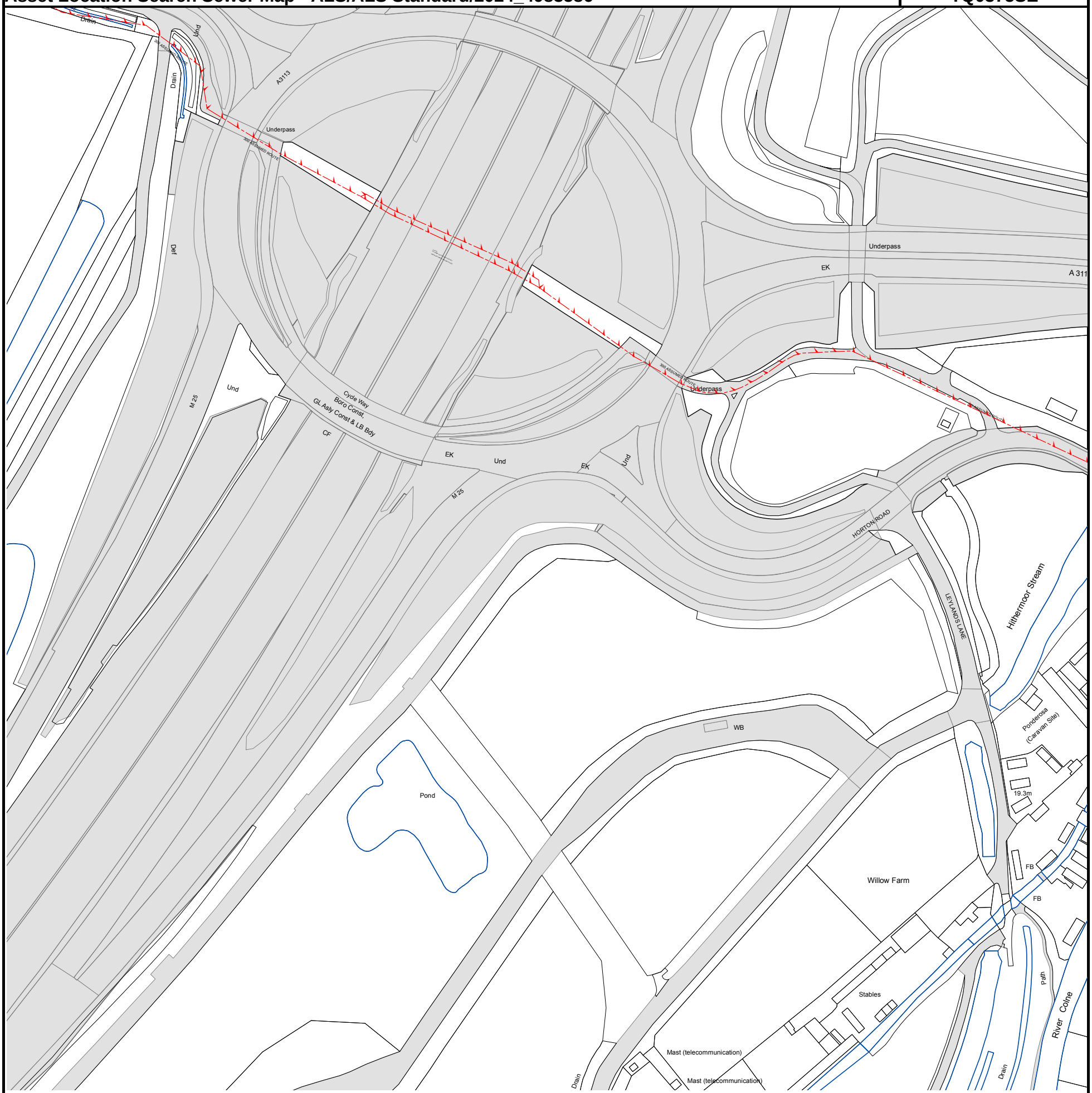
Asset Location Search Water Map - ALS/ALS Standard/2024_4983586

TQ0375NE

The width of the displayed area is 500m and the centre of the map is located at OS coordinates 503750,175750

Asset Location Search Sewer Map - ALS/ALS Standard/2024_4983586

TQ0375SE

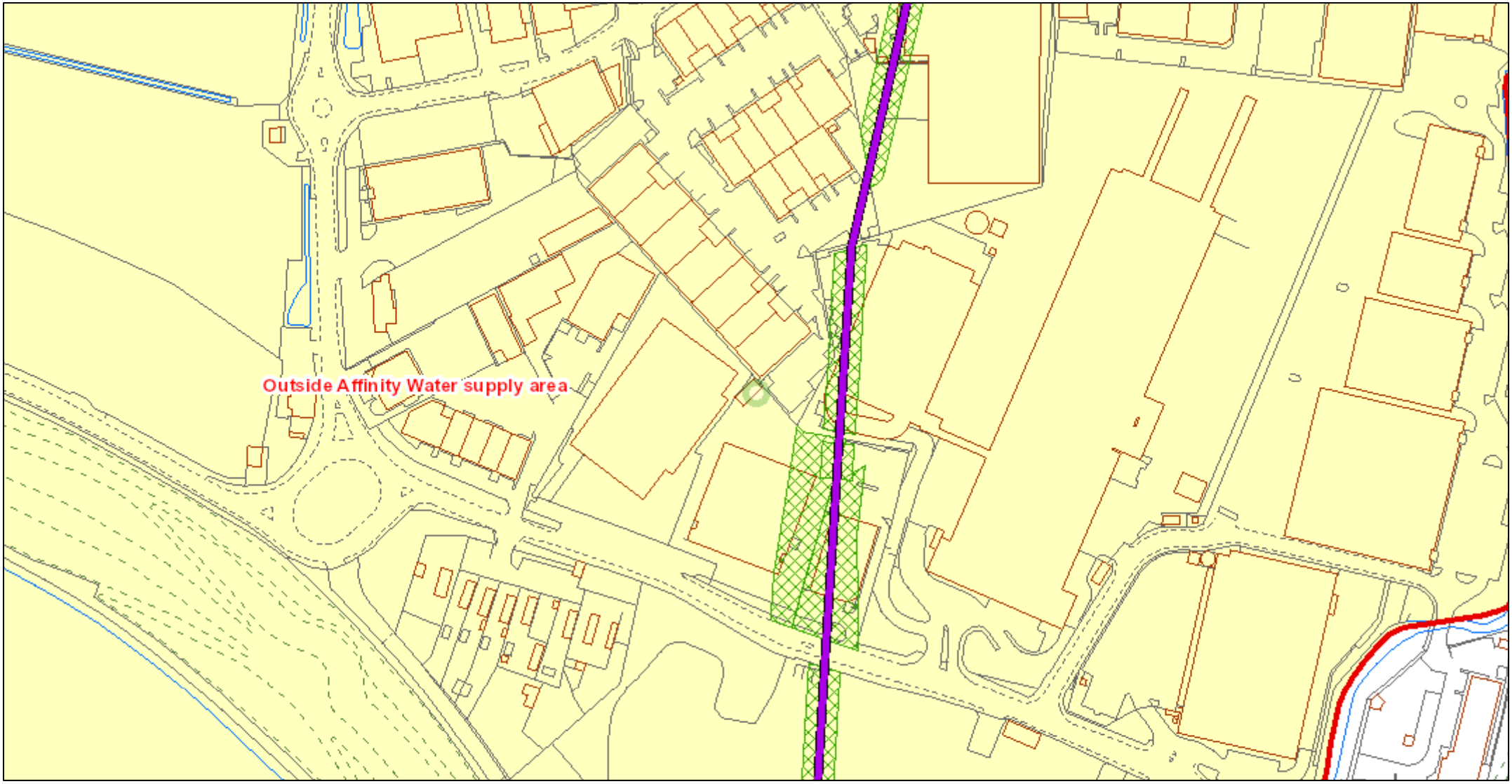


The width of the displayed area is 500m and the centre of the map is located at OS coordinates 503750,175250

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Title

Created on - 5/1/2024



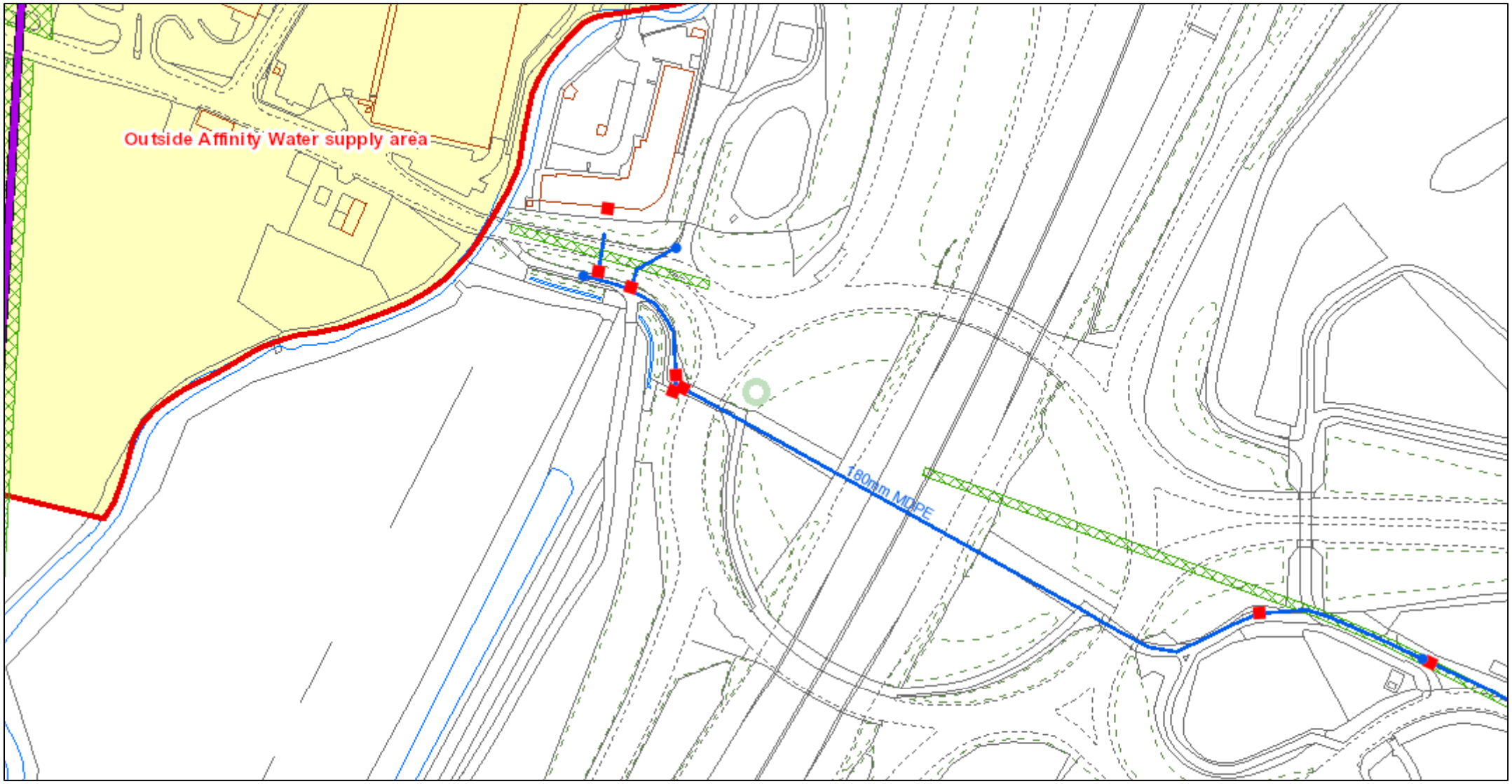
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 5/1/2024



N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Asset Location Search Sewer Map - ALS/ALS Standard/2024_4983586

TQ0375NE

The width of the displayed area is 500m and the centre of the map is located at OS coordinates 503750,175750

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

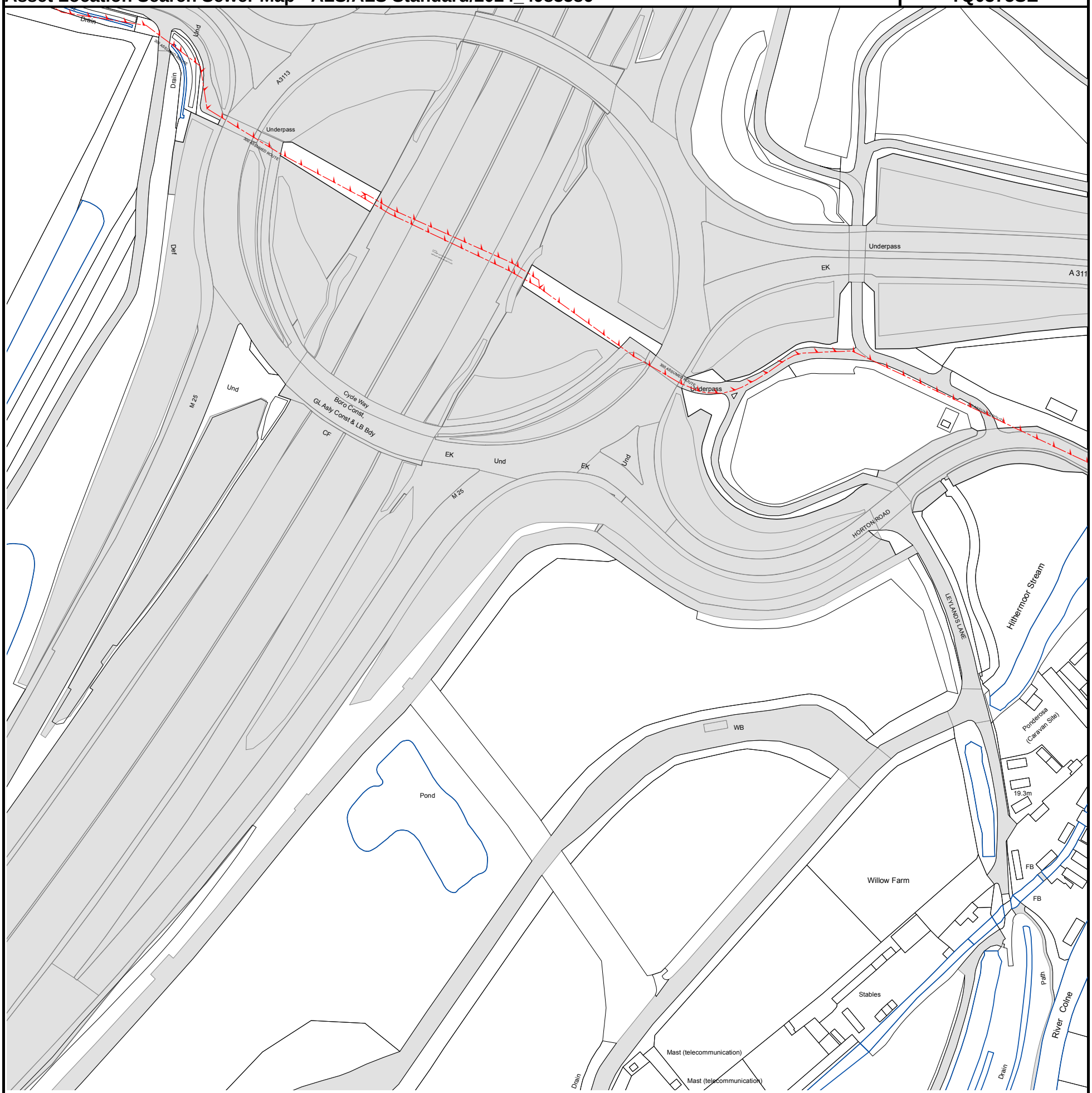
Asset Location Search Water Map - ALS/ALS Standard/2024_4983586

TQ0375NE

The width of the displayed area is 500m and the centre of the map is located at OS coordinates 503750,175750

Asset Location Search Sewer Map - ALS/ALS Standard/2024_4983586

TQ0375SE

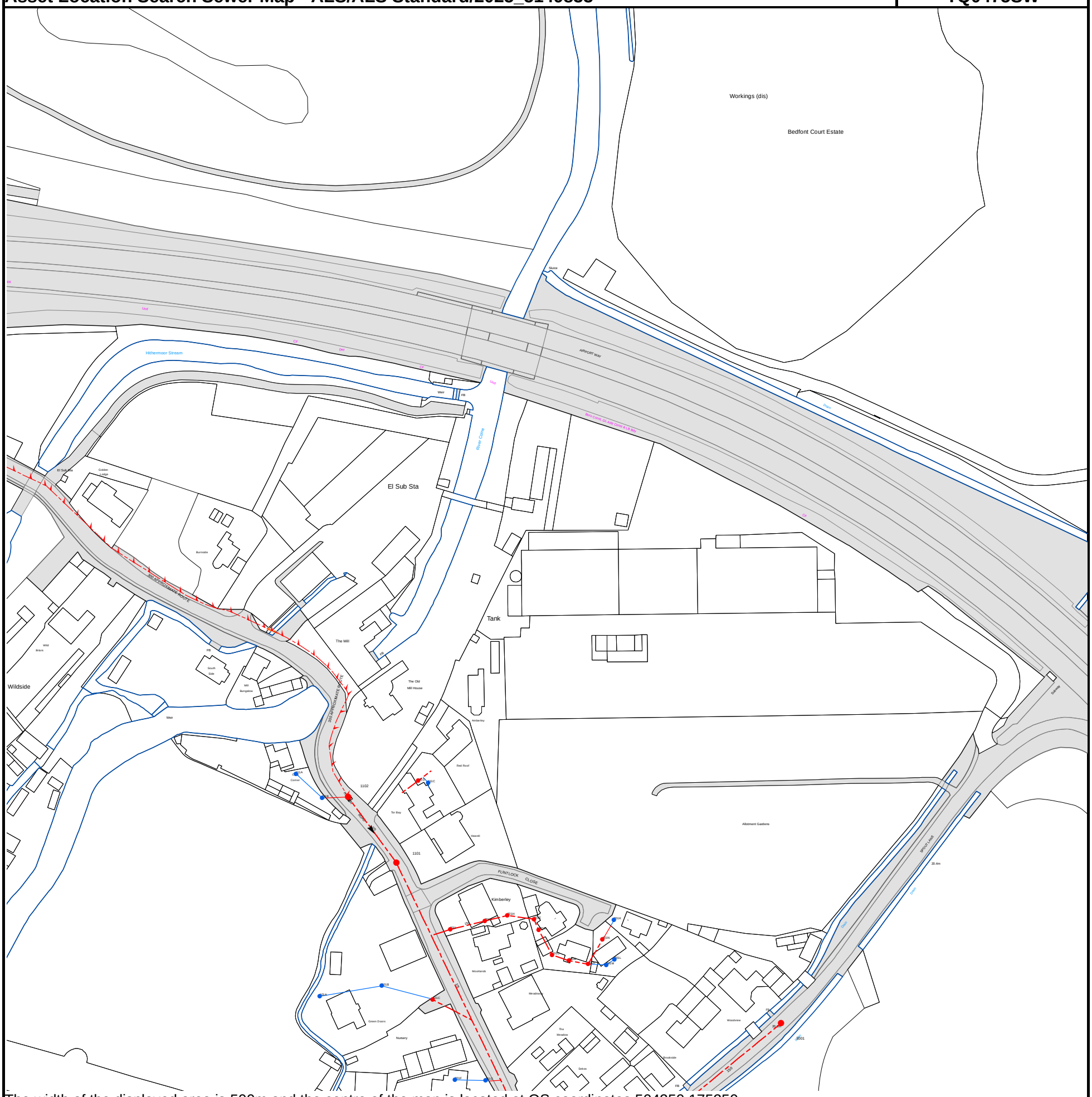


The width of the displayed area is 500m and the centre of the map is located at OS coordinates 503750,175250

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Asset Location Search Sewer Map - ALS/ALS Standard/2025_5149833

TQ0475SW

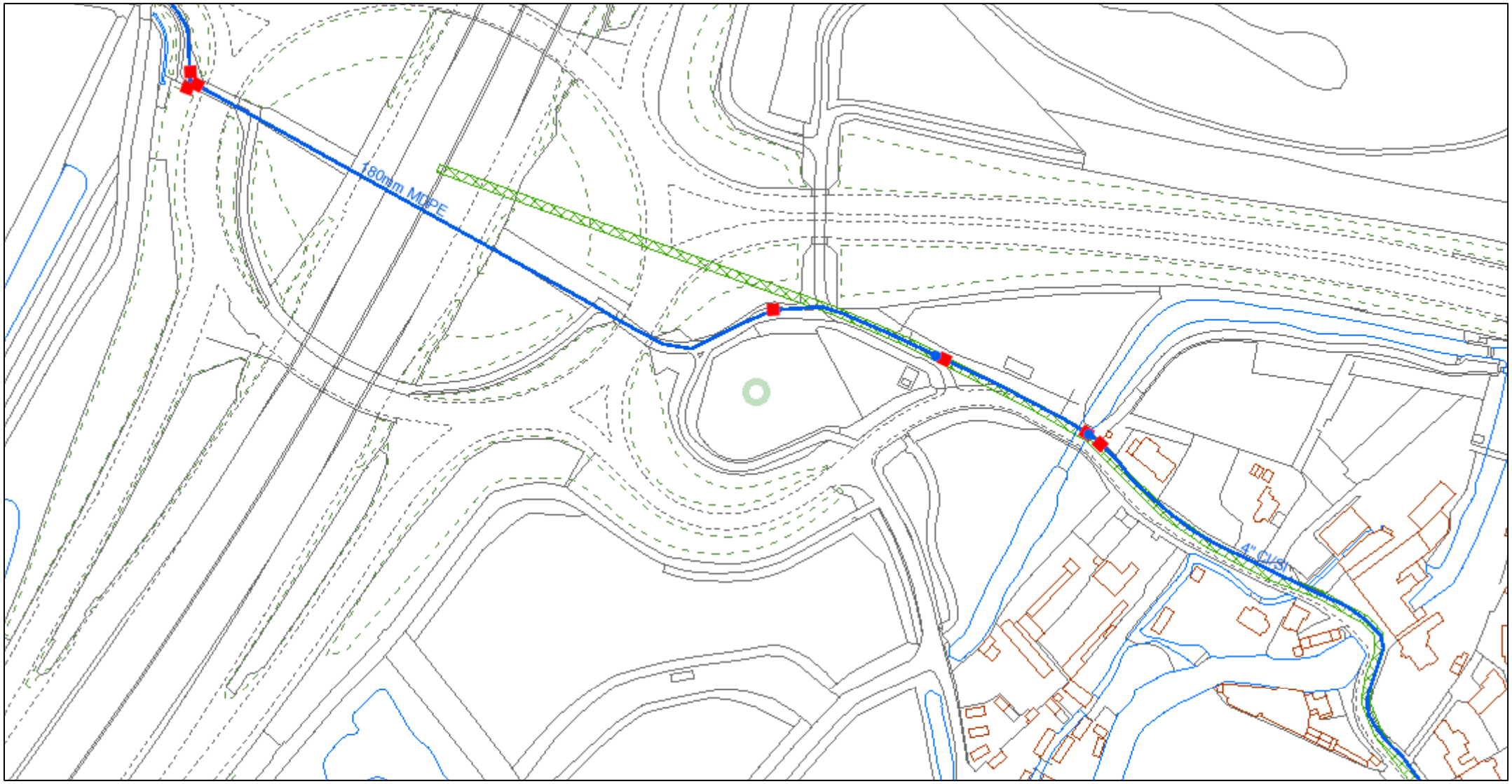


The width of the displayed area is 500m and the centre of the map is located at OS coordinates 504250,175250

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Title

Created on - 4/15/2025



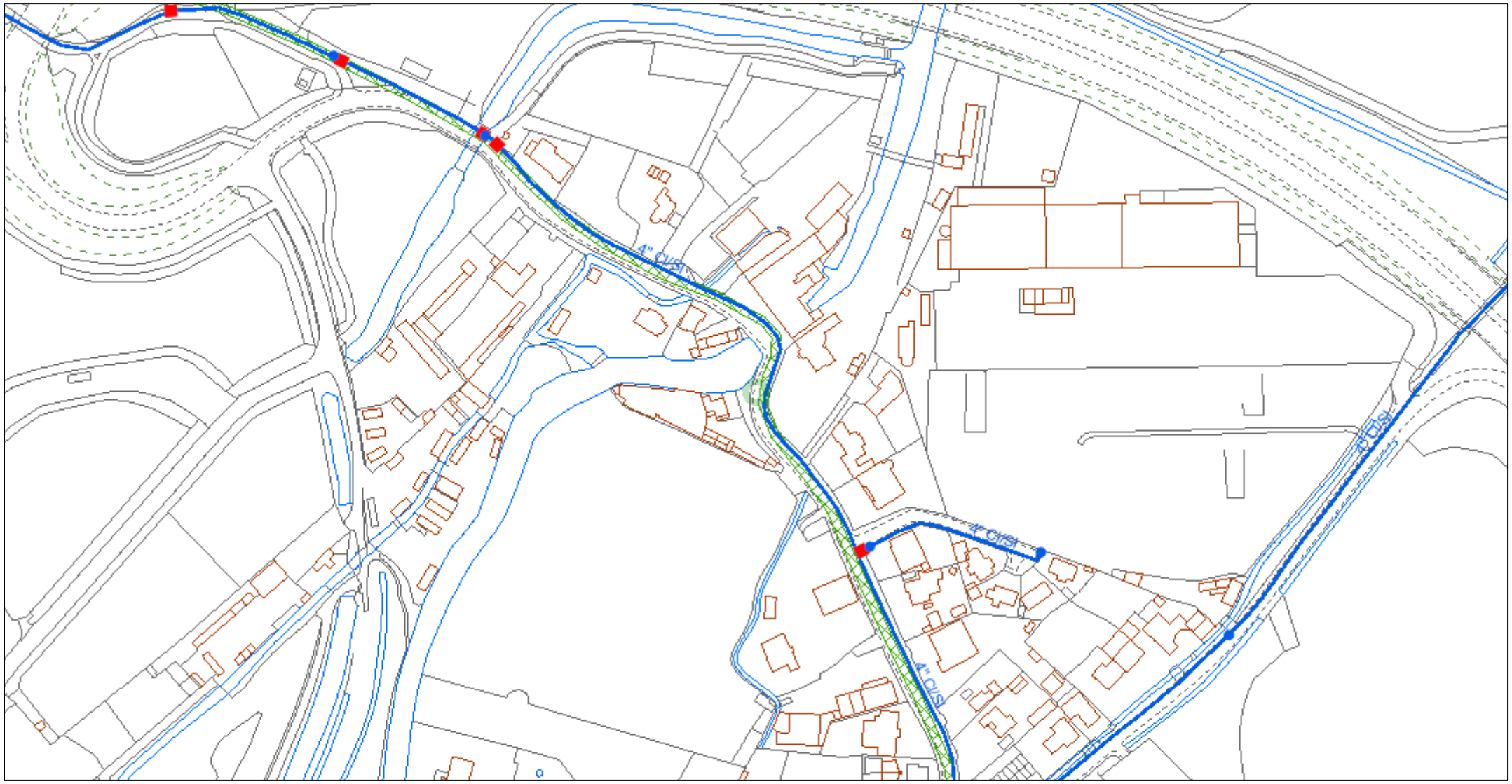
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 4/15/2025



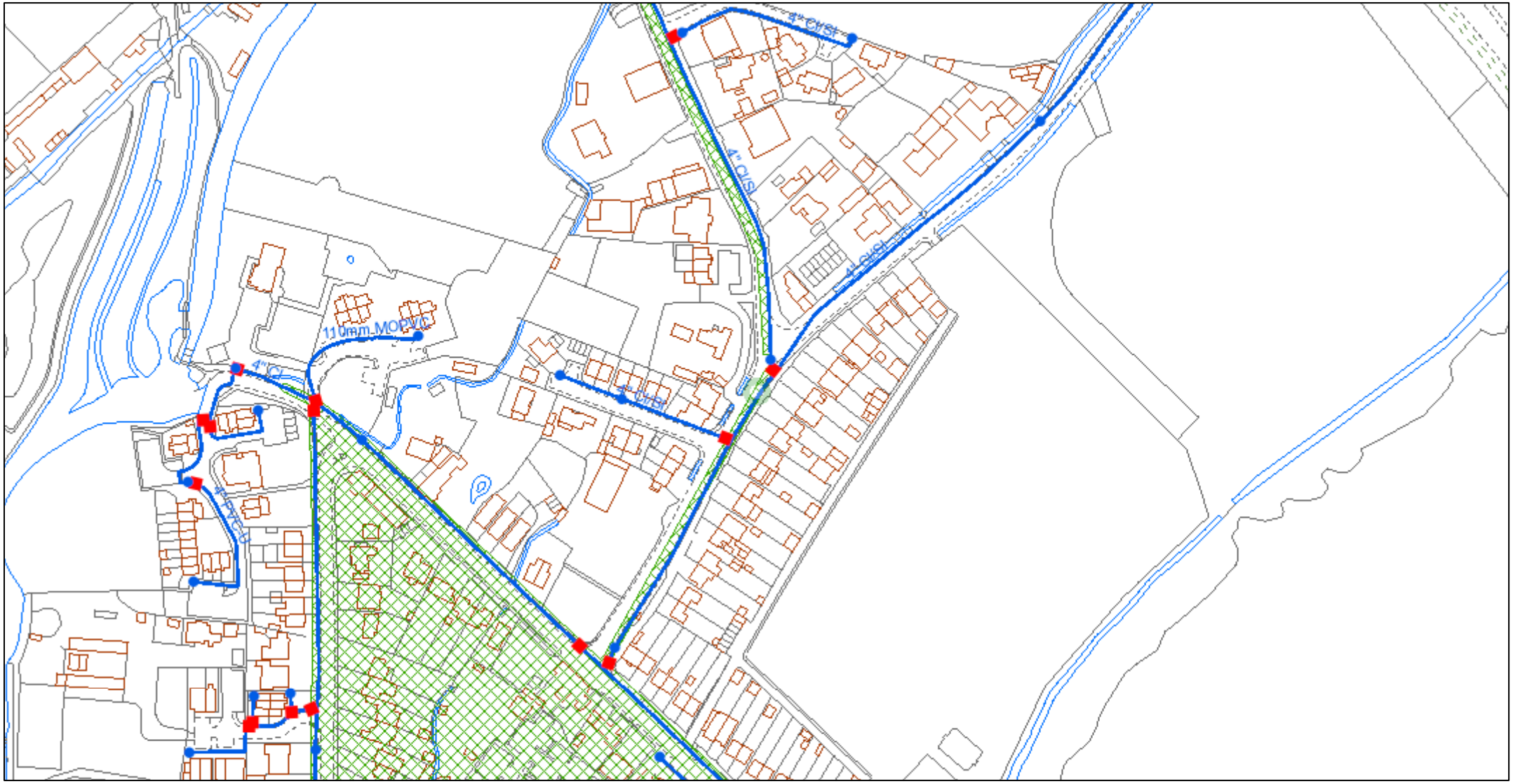
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 4/15/2025



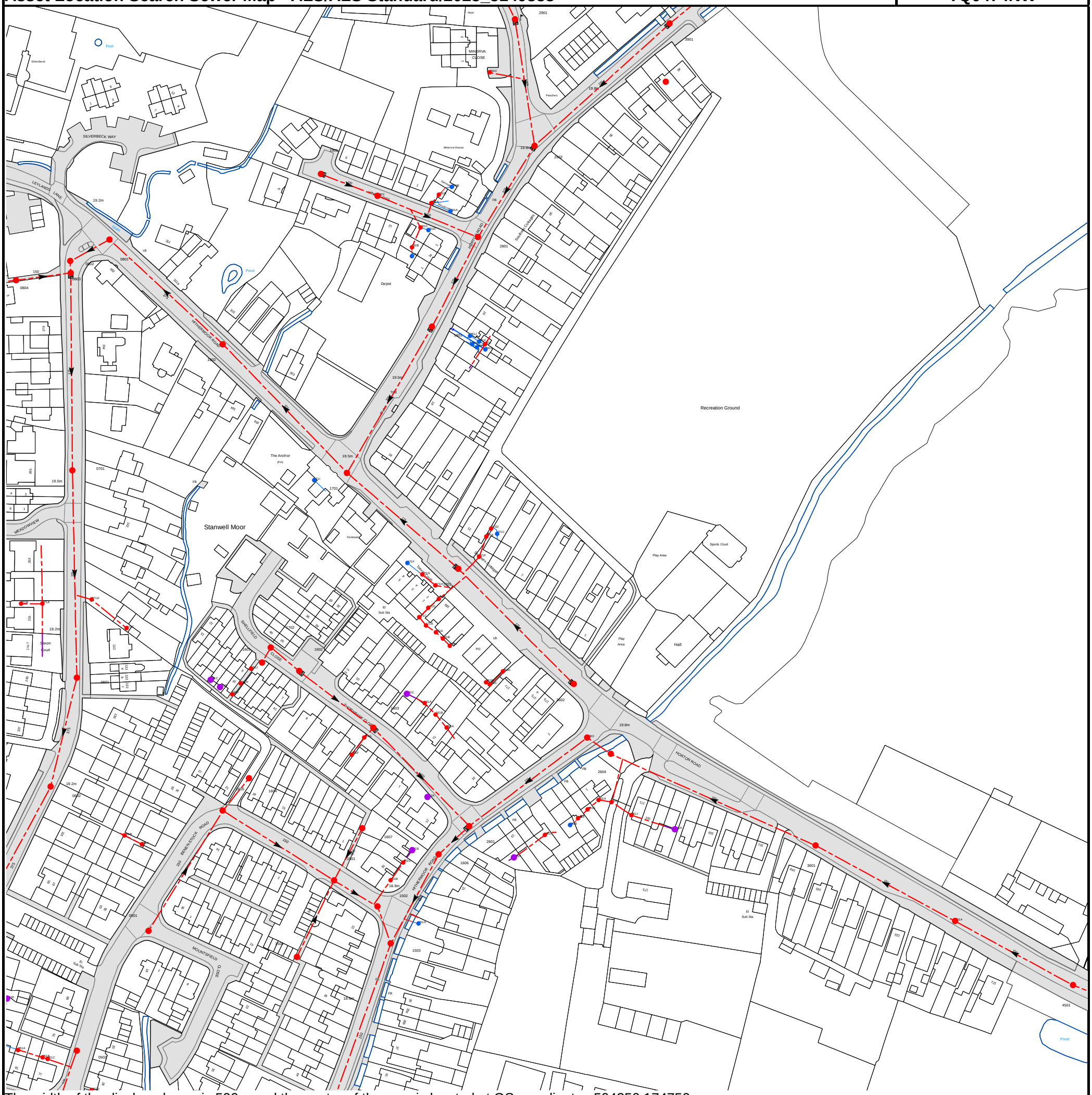
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Asset Location Search Sewer Map - ALS/ALS Standard/2025_5149833

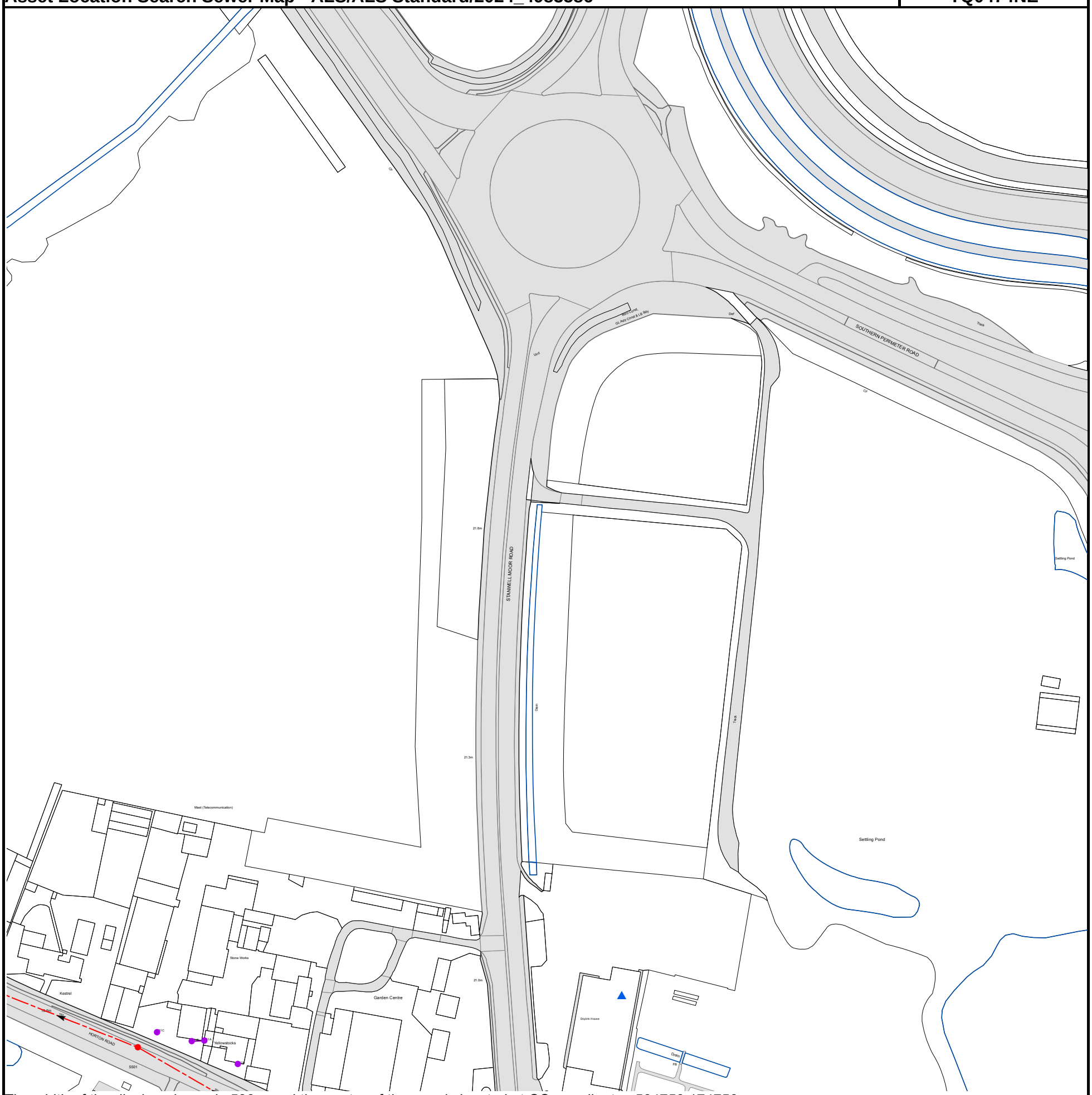
TQ0474NW



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 504250,174750

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Asset Location Search Sewer Map - ALS/ALS Standard/2024_4983586	TQ0474NE



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 504750,174750

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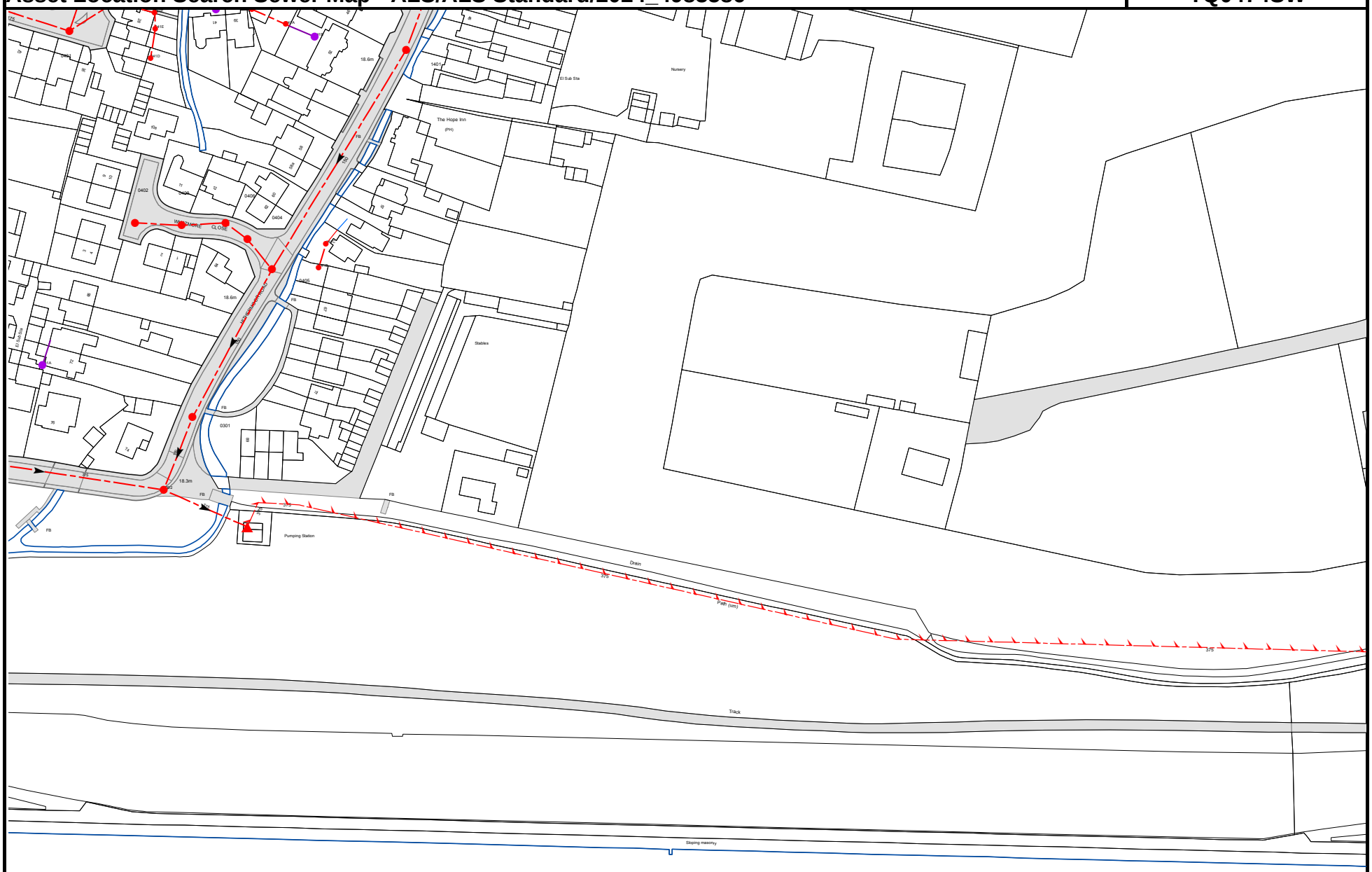
Asset Location Search Sewer Map - ALS/ALS Standard/2024_4983586

TQ0474SW

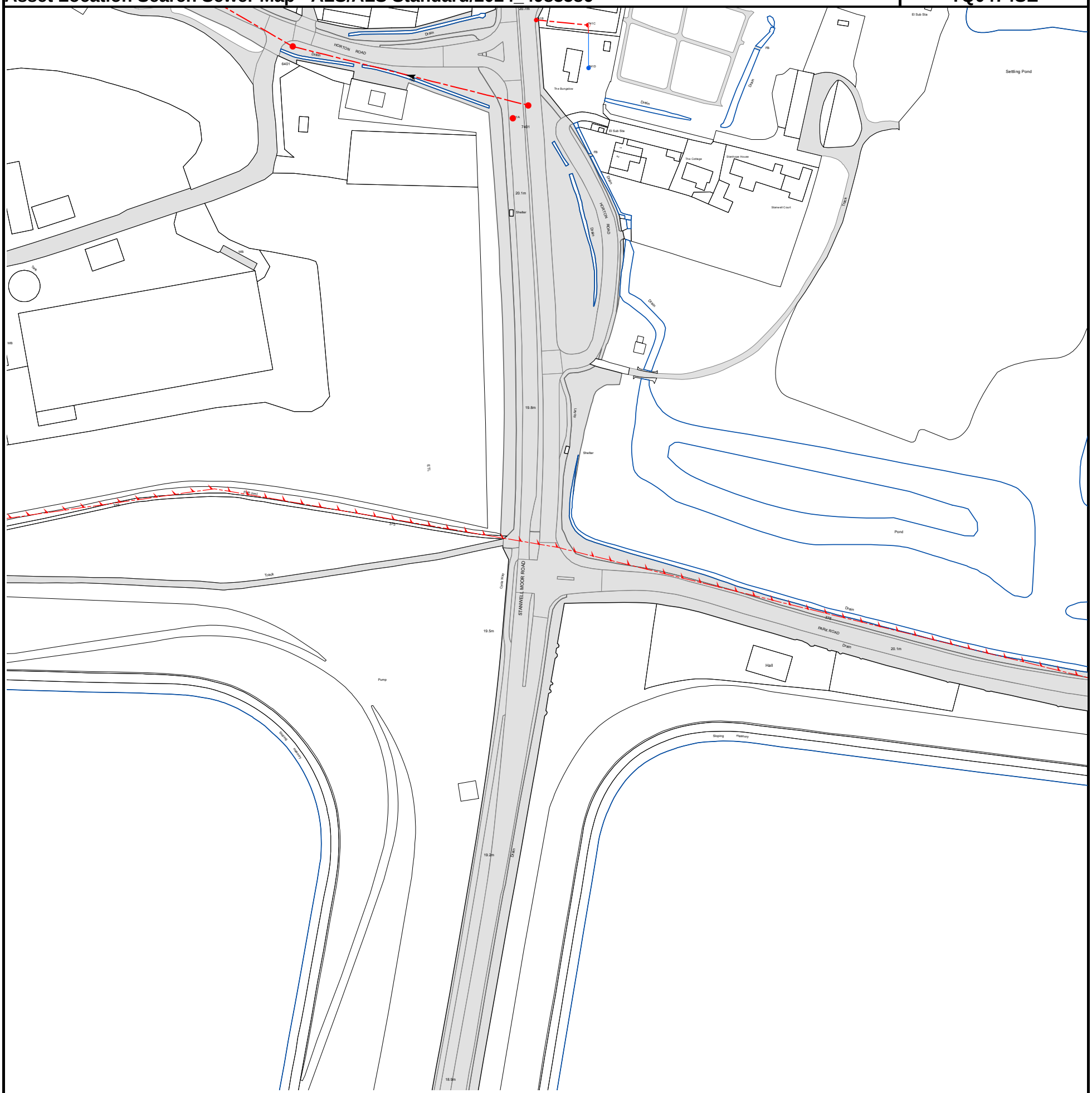


The width of the displayed area is 500m and the centre of the map is located at OS coordinates 504250,174250

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Asset Location Search Sewer Map - ALS/ALS Standard/2024_4983586

TQ0474SE



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 504750,174250

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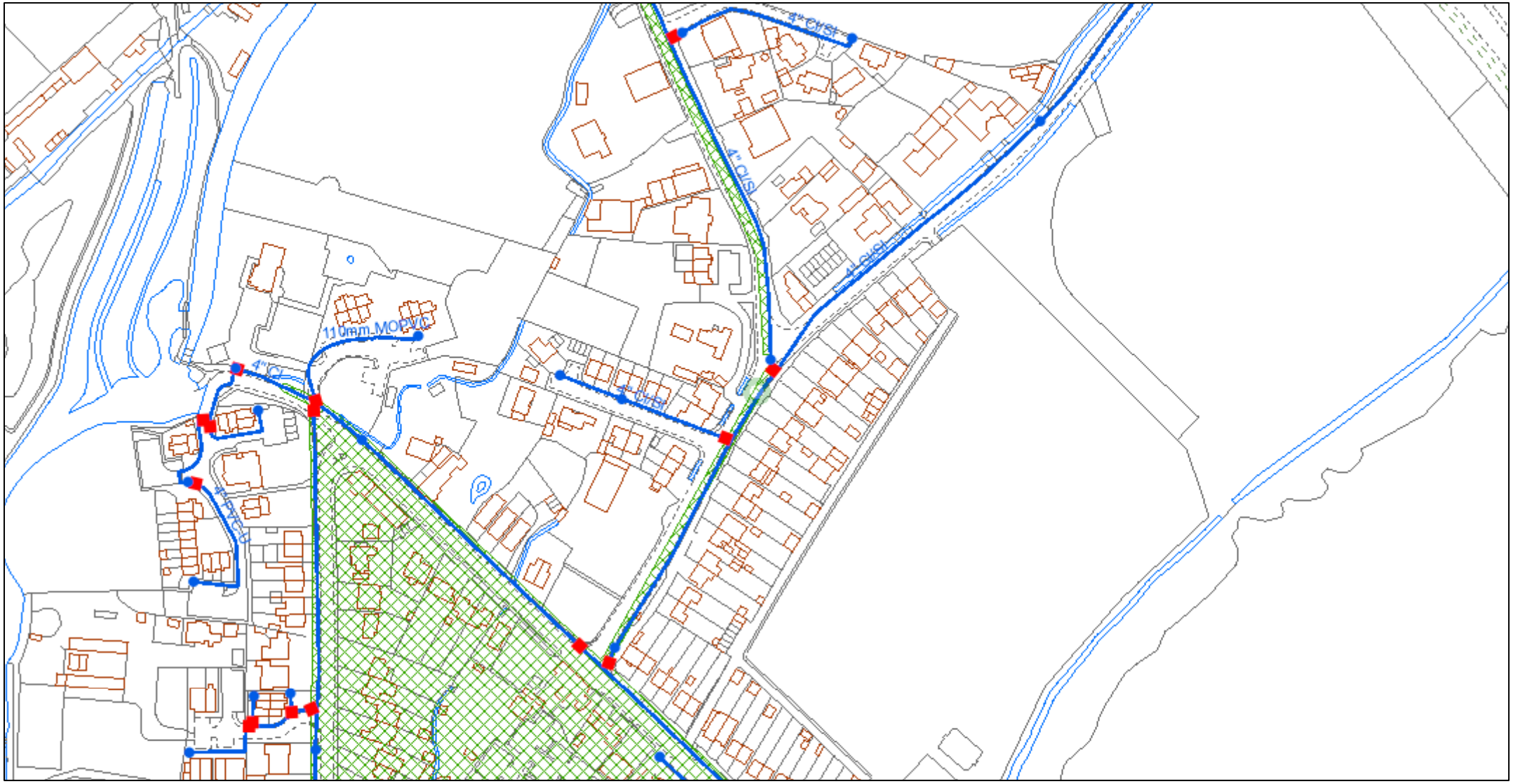
Title

Created on - 4/15/2025



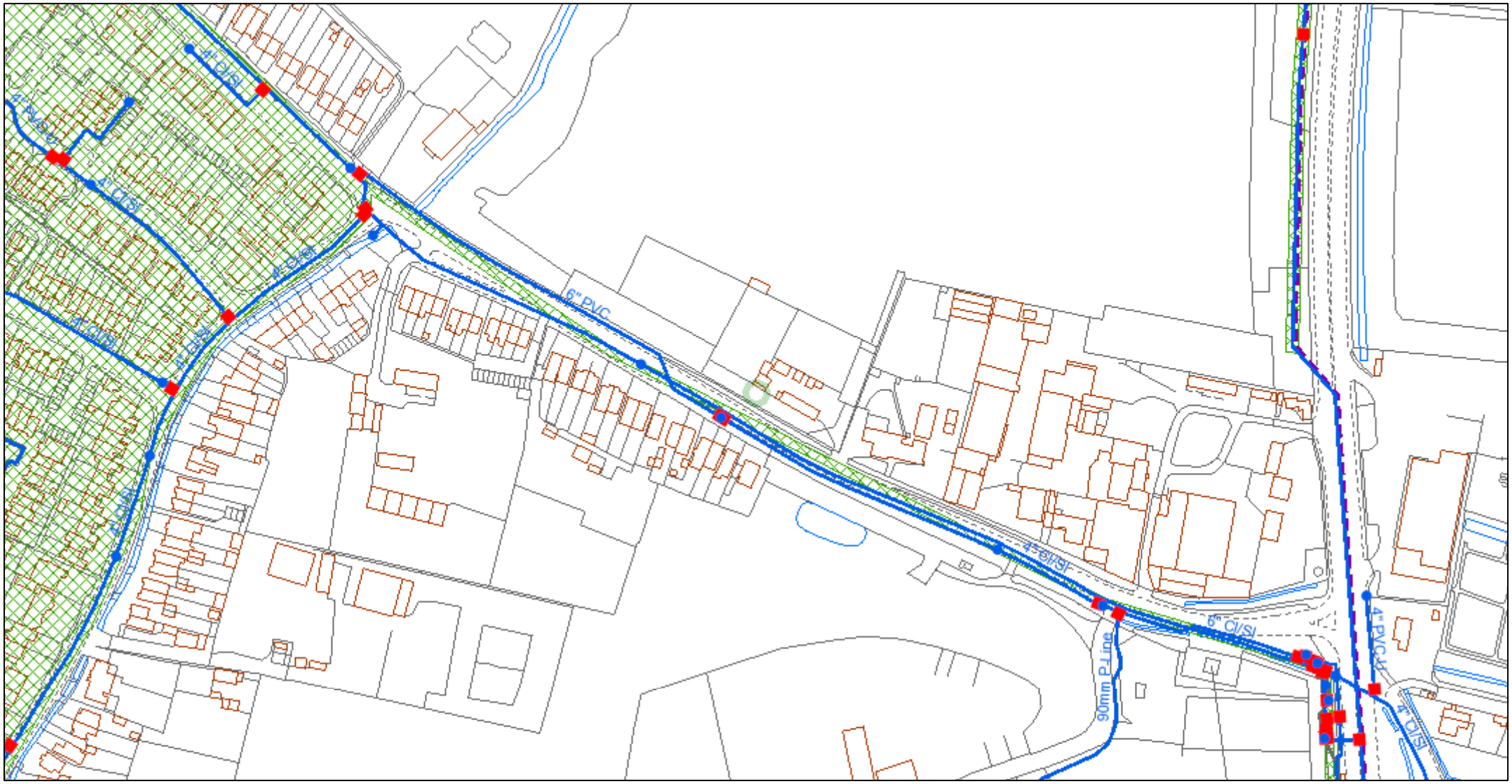
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 5/1/2024



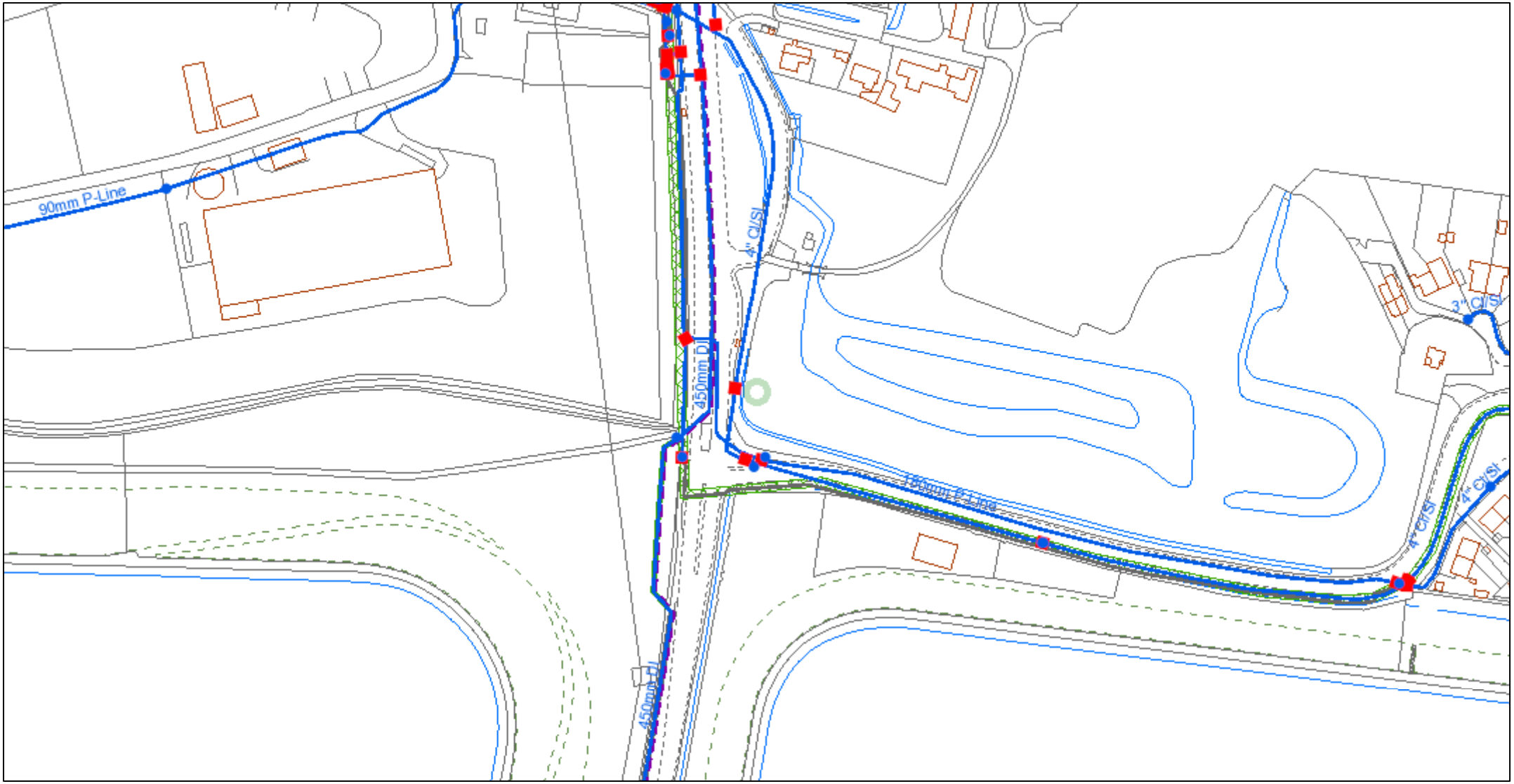
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 5/1/2024



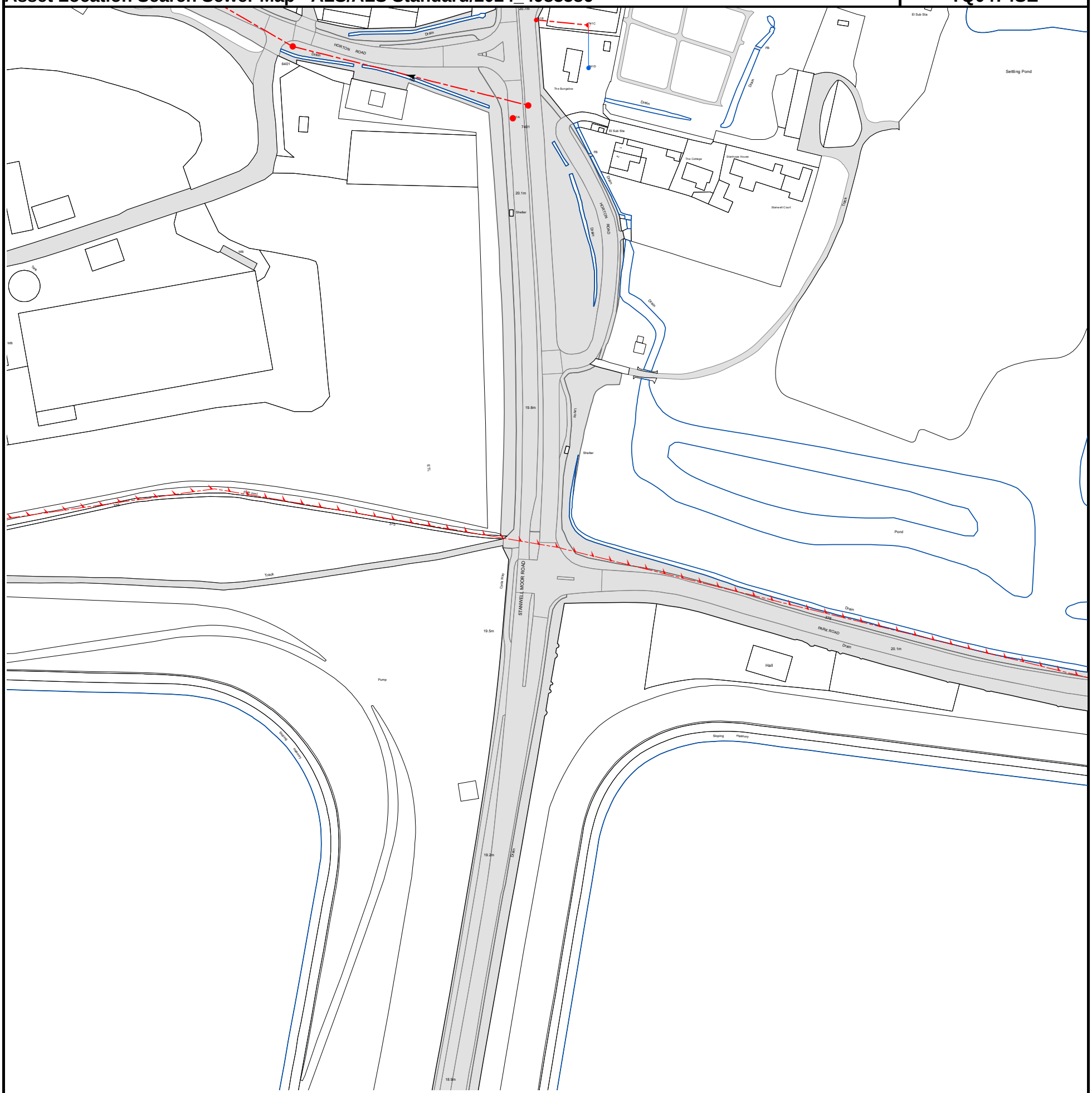
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Asset Location Search Sewer Map - ALS/ALS Standard/2024_4983586

TQ0474SE



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 504750,174250

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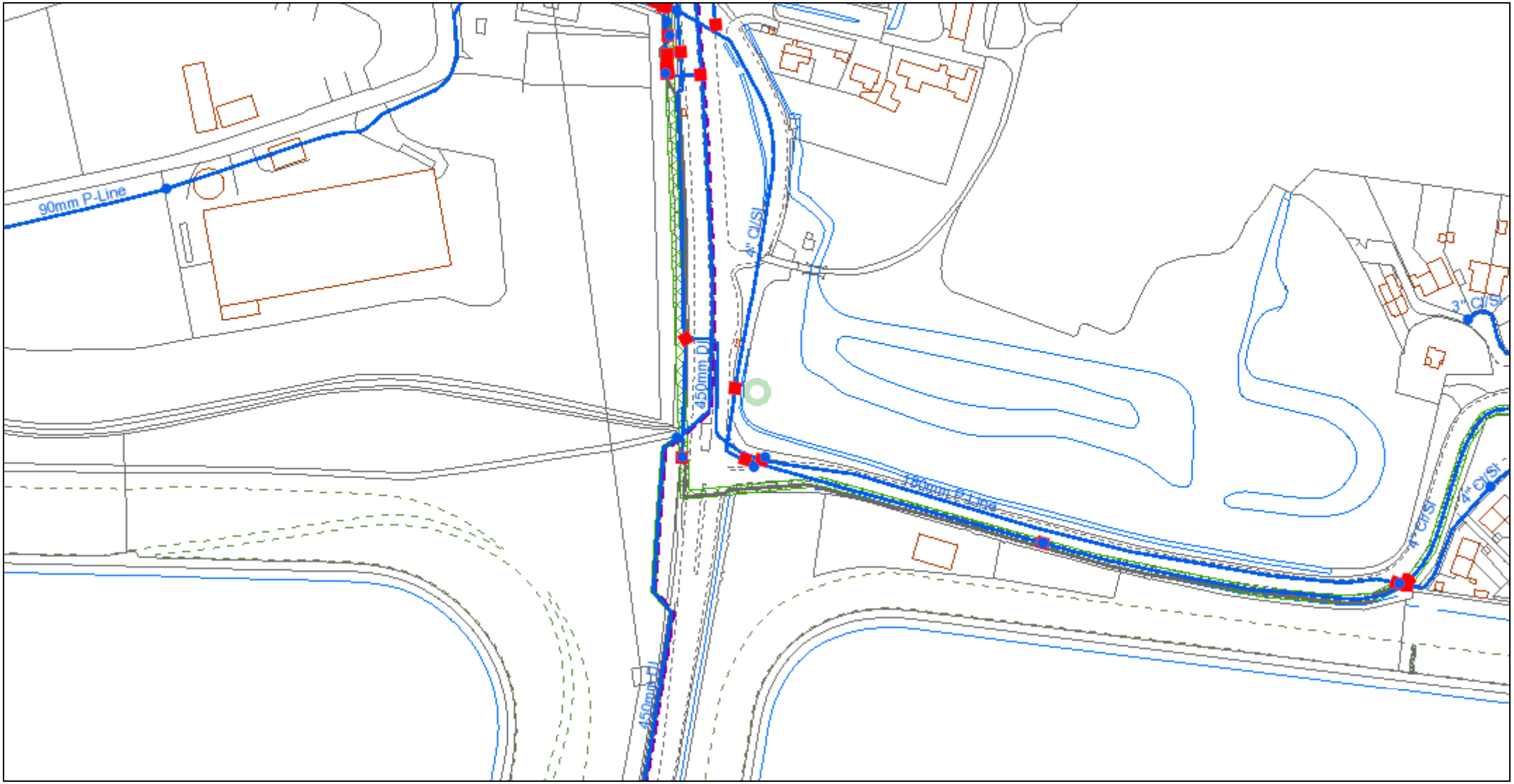
Title

Created on - 5/1/2024



N

1:2,500

- Distribution Main
- Asbestos Distribution Main
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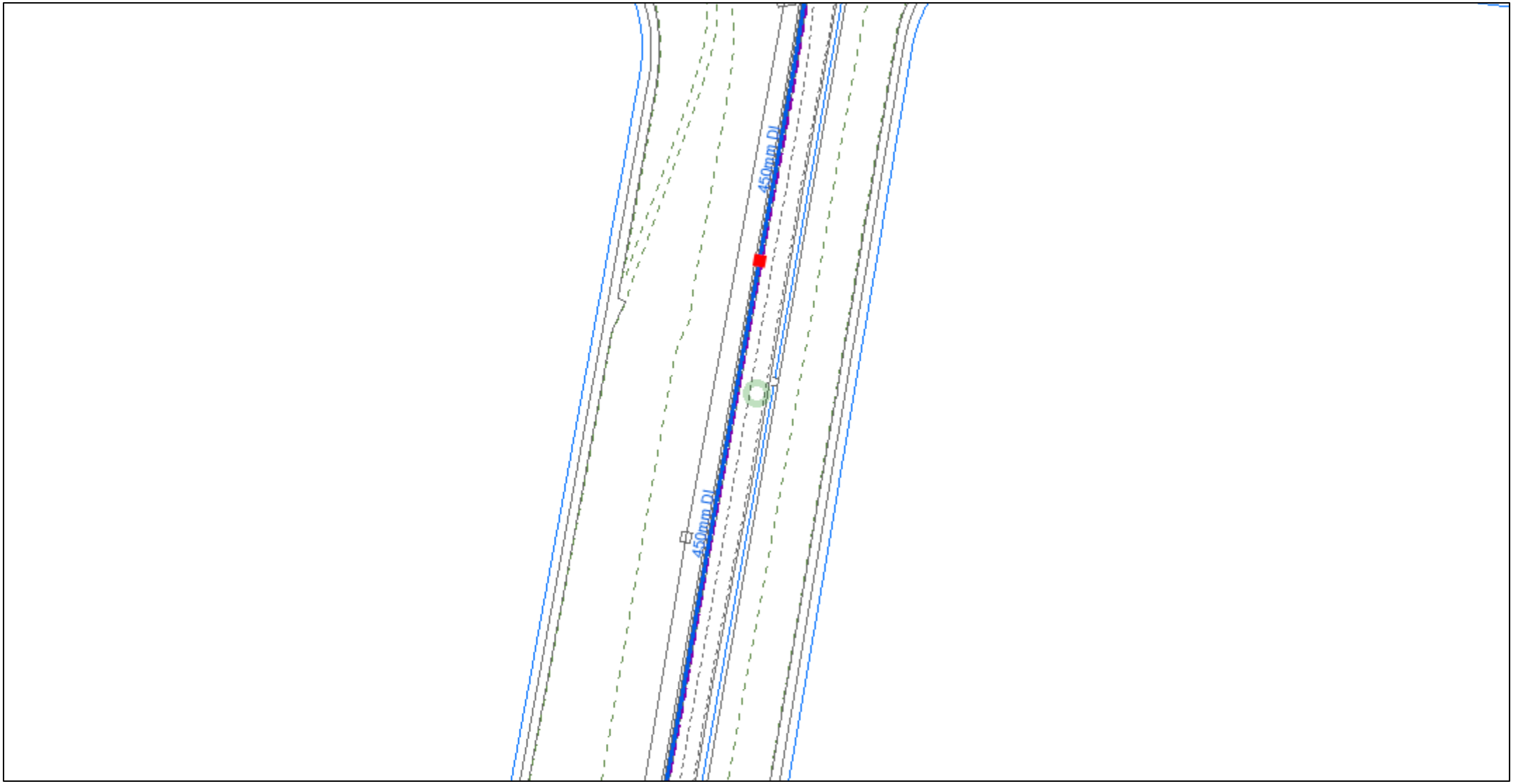
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 5/1/2024



N

1:2,500

- Distribution Main
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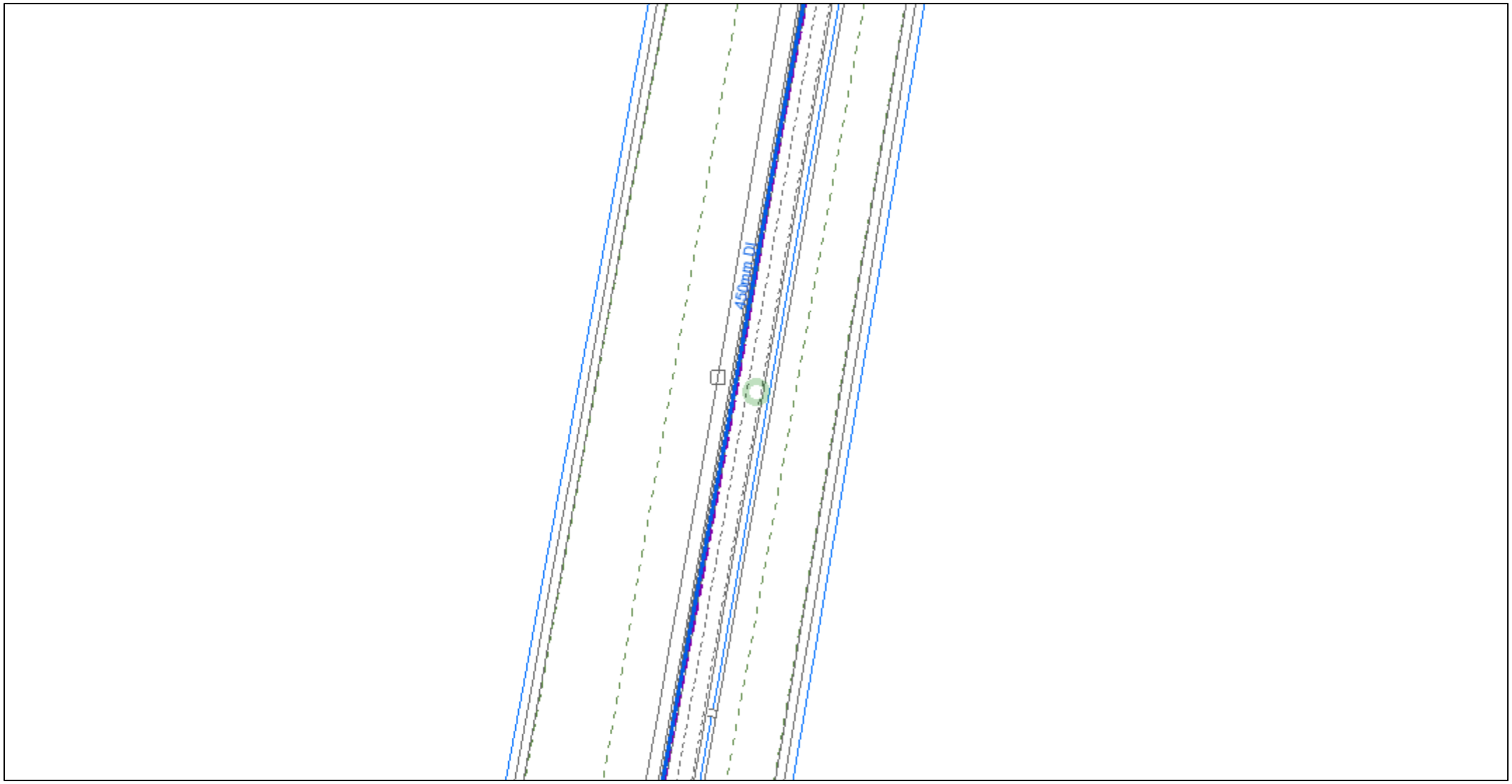
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 5/1/2024



N

1:2,500

- Distribution Main
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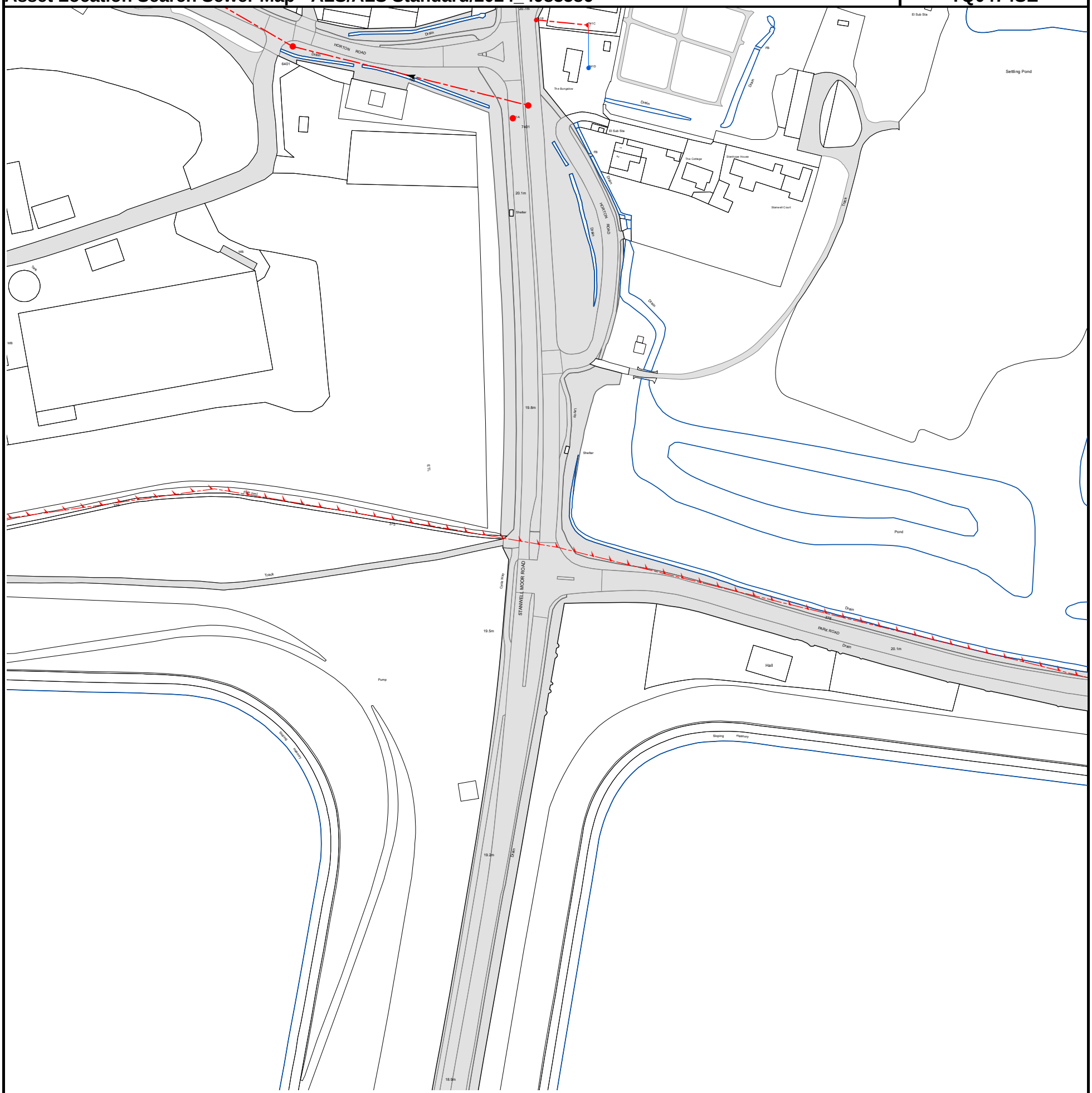
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Asset Location Search Sewer Map - ALS/ALS Standard/2024_4983586

TQ0474SE



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 504750,174250

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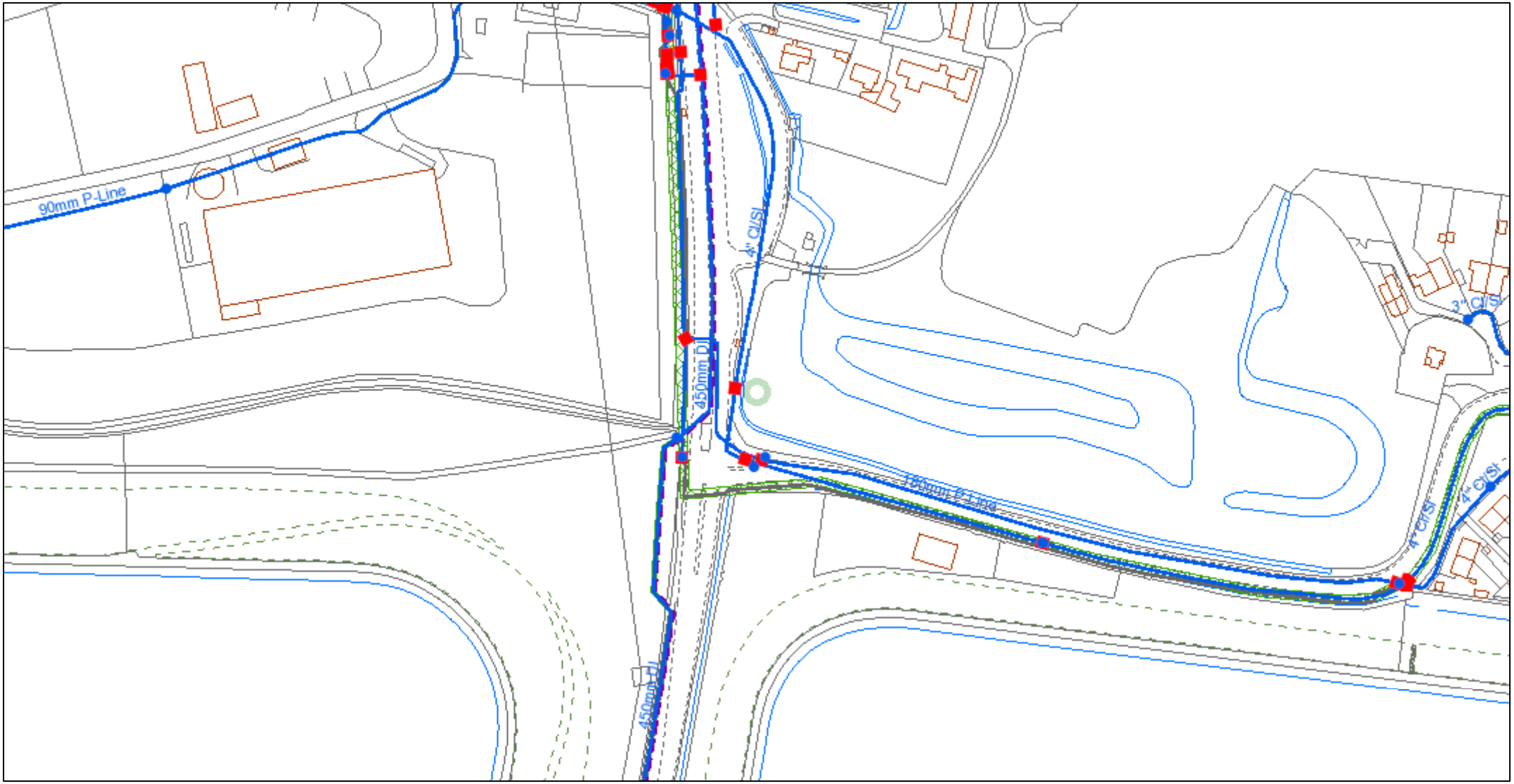
Created on - 5/1/2024



N

1:2,500

- Distribution Main
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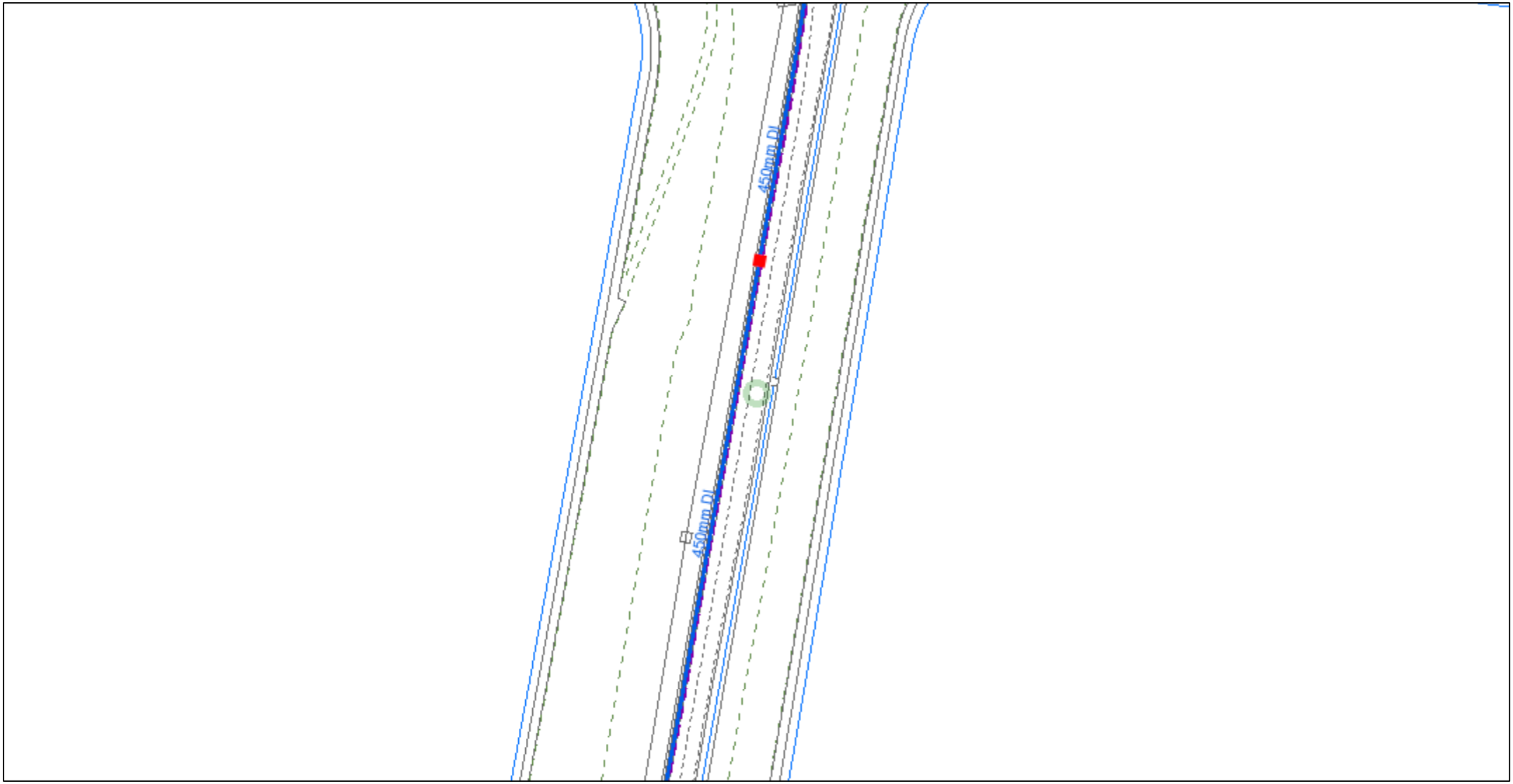
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 5/1/2024



N

1:2,500

- Distribution Main
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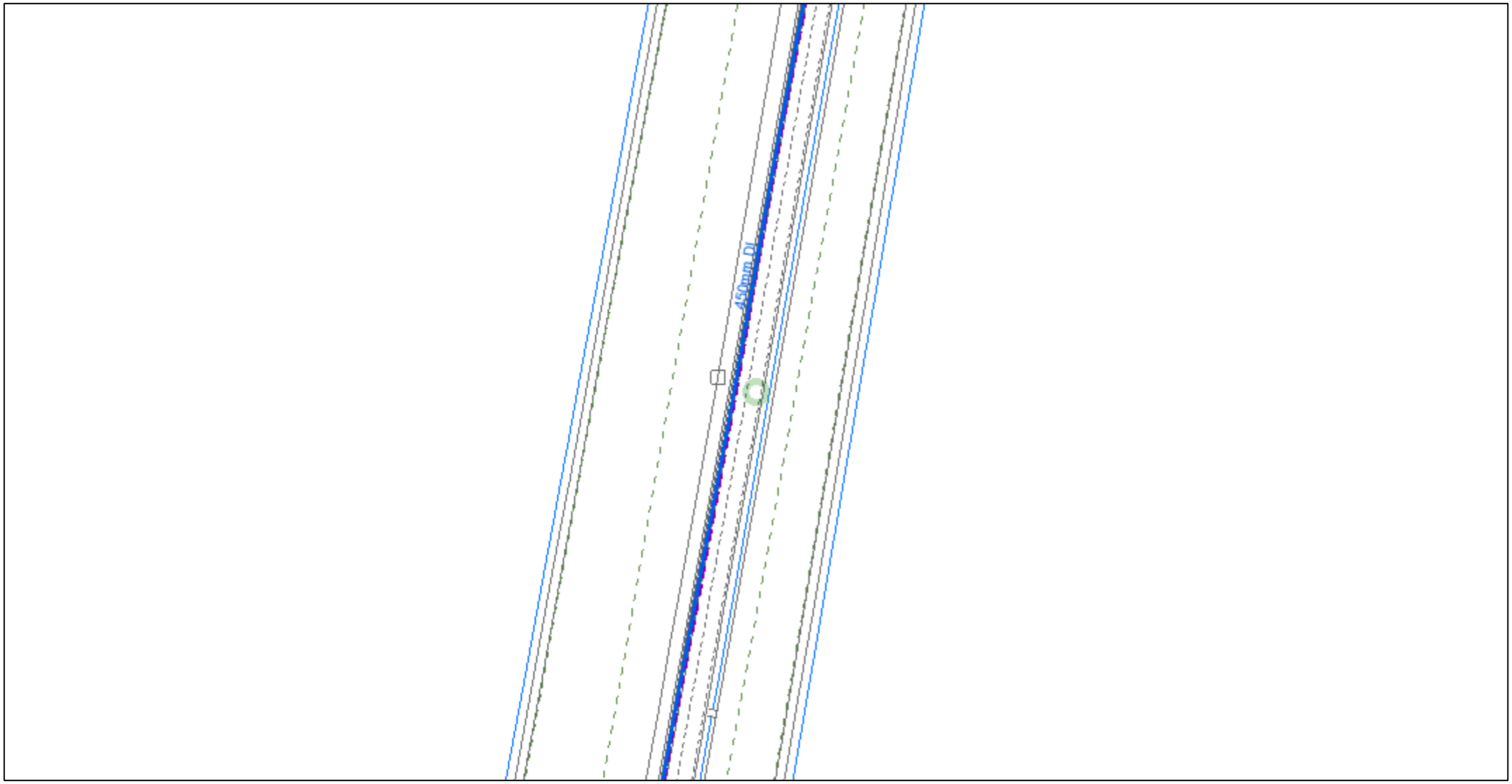
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 5/1/2024



N

1:2,500

- Distribution Main
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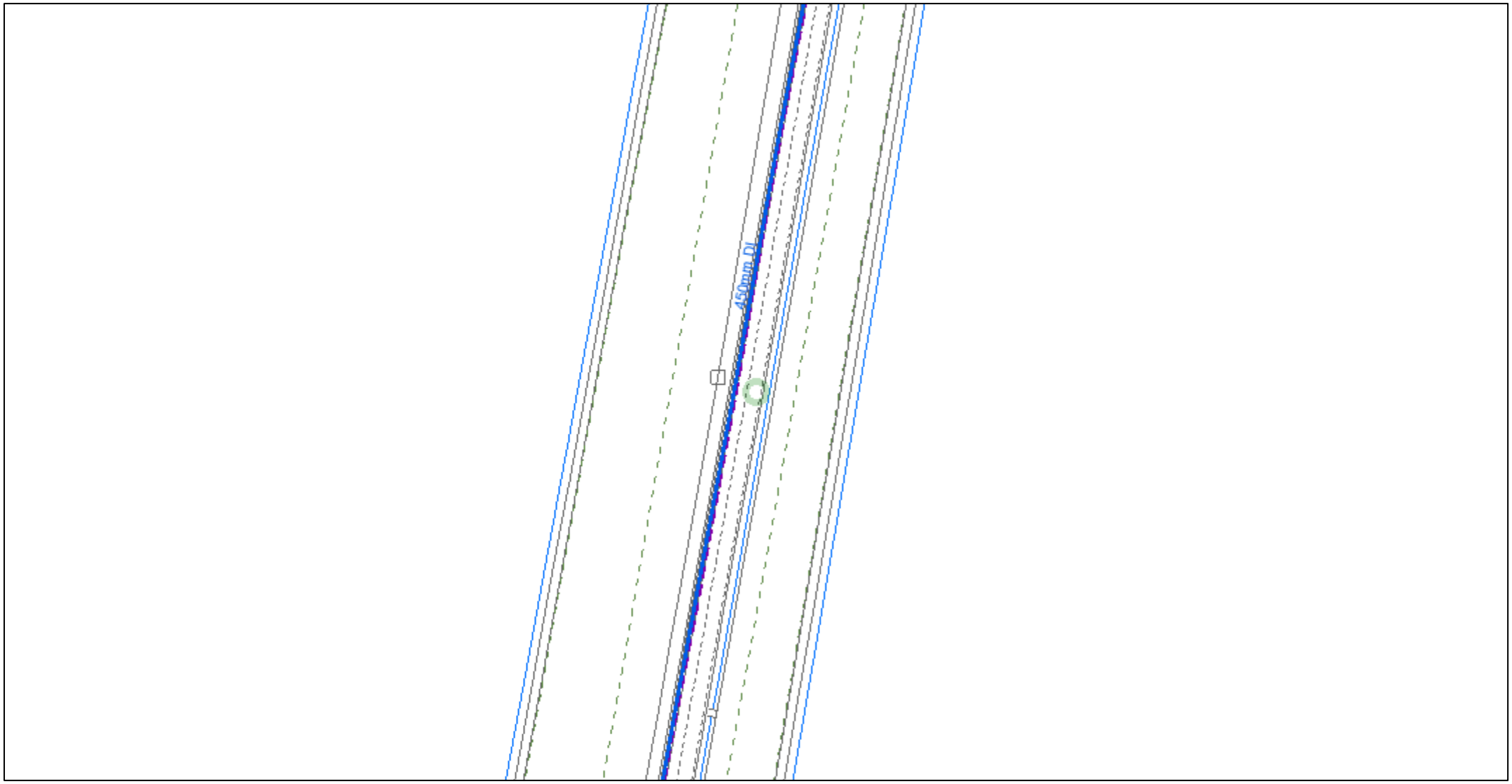
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 5/1/2024



N

1:2,500

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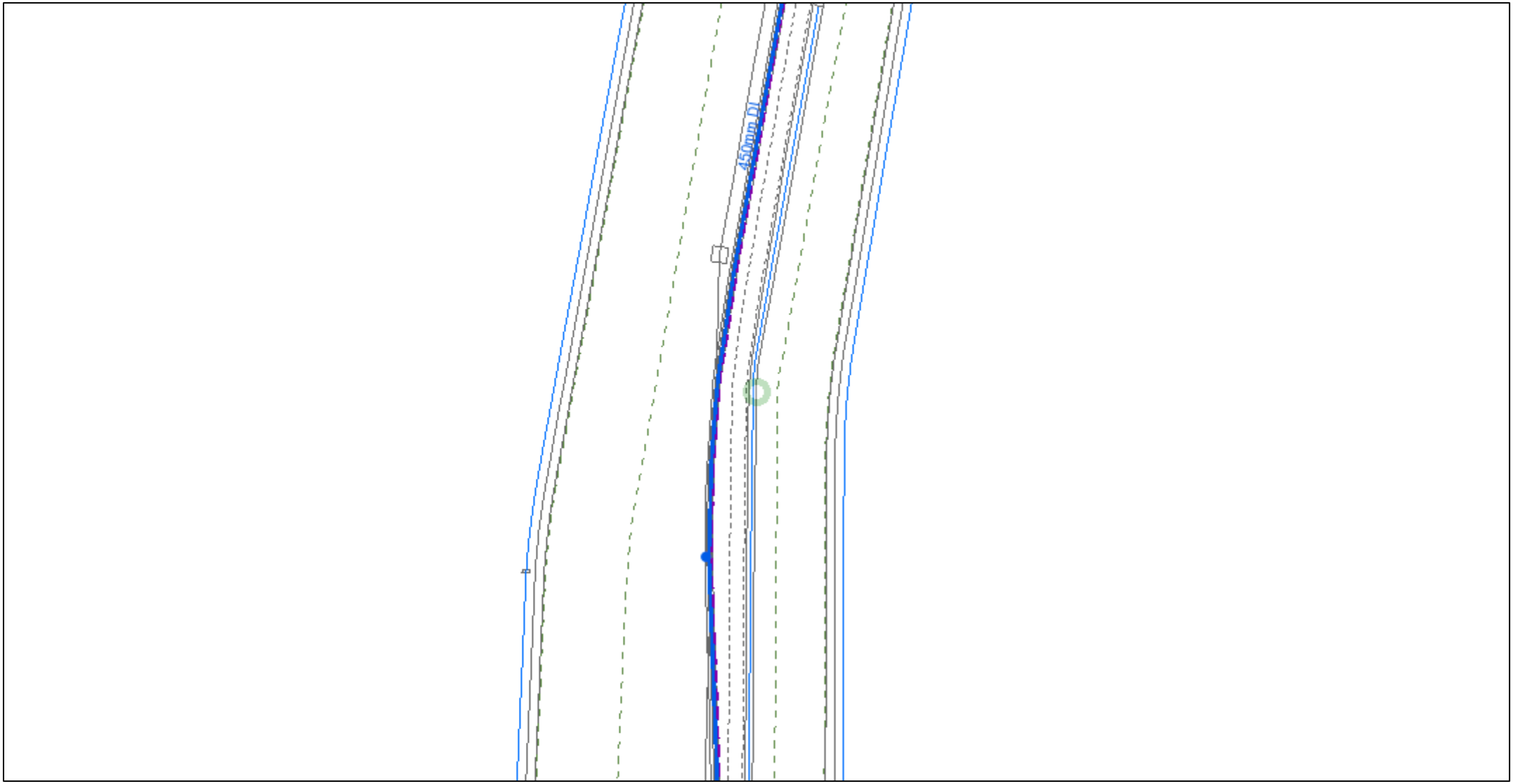
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 5/1/2024



N

1:2,500

- Distribution Main
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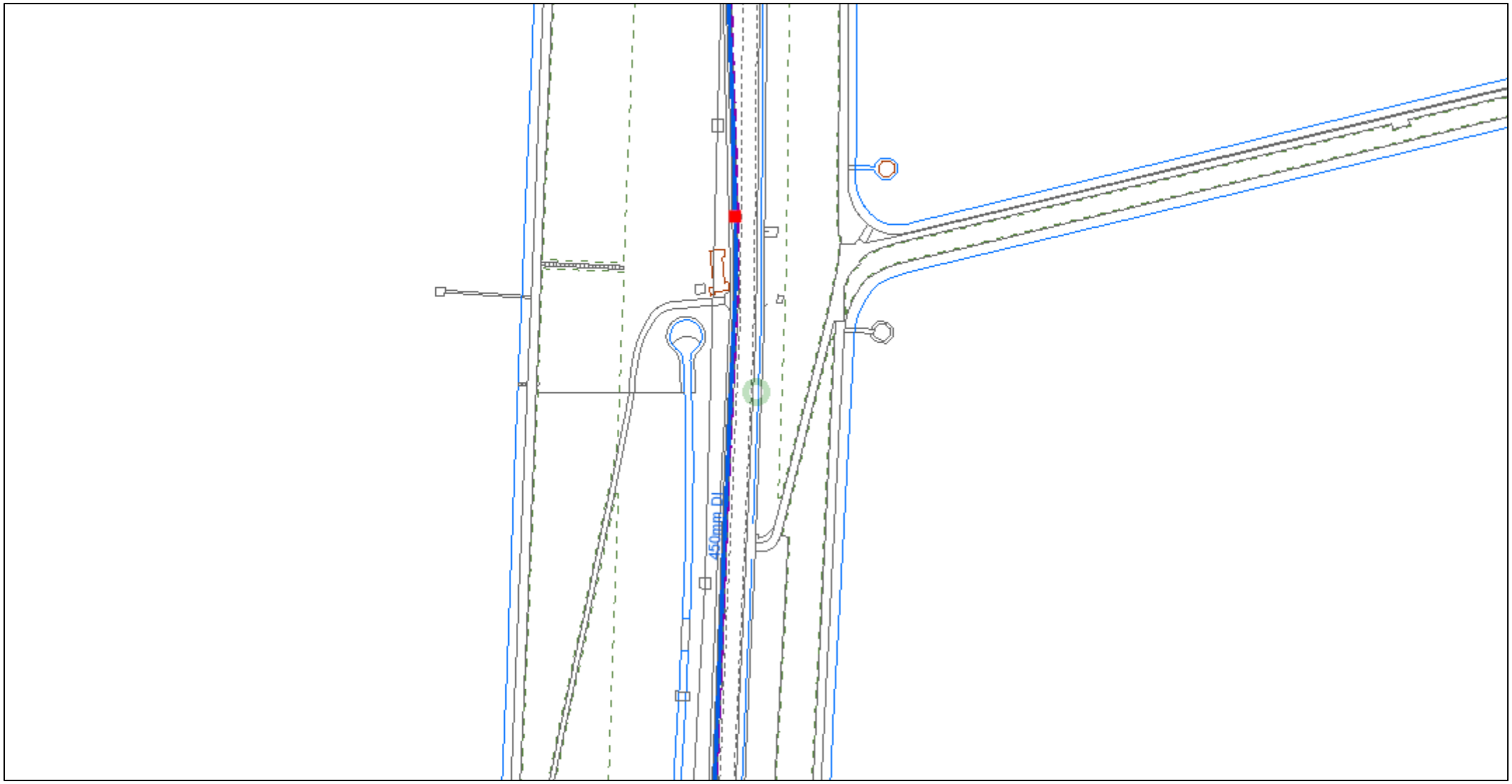
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 5/1/2024

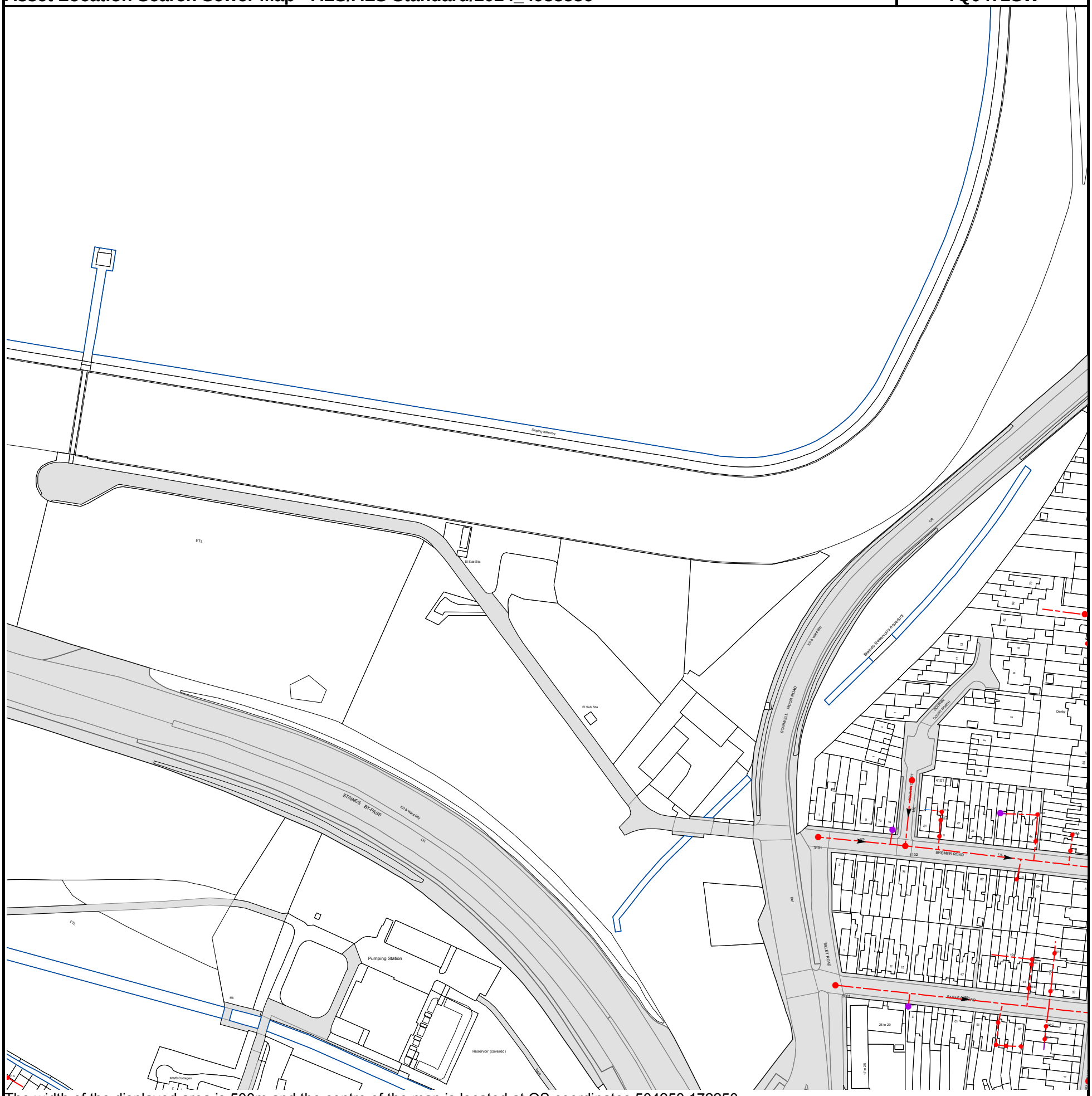


N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Asset Location Search Sewer Map - ALS/ALS Standard/2024_4983586	TQ0472SW



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 504250,172250

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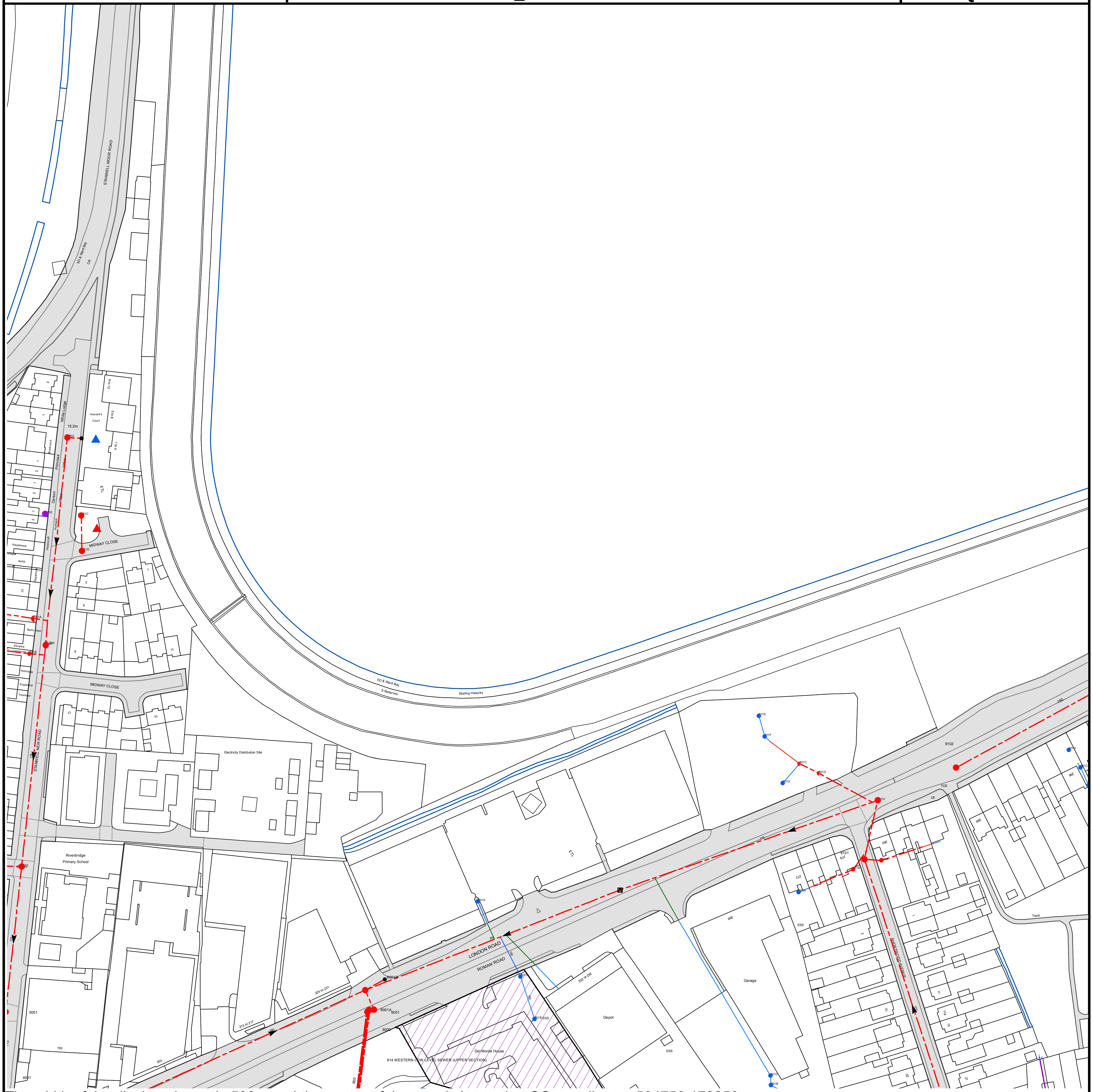
Asset Location Search Sewer Map - ALS/ALS Standard/2024_4983586	TQ0472SE



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 504750,172250

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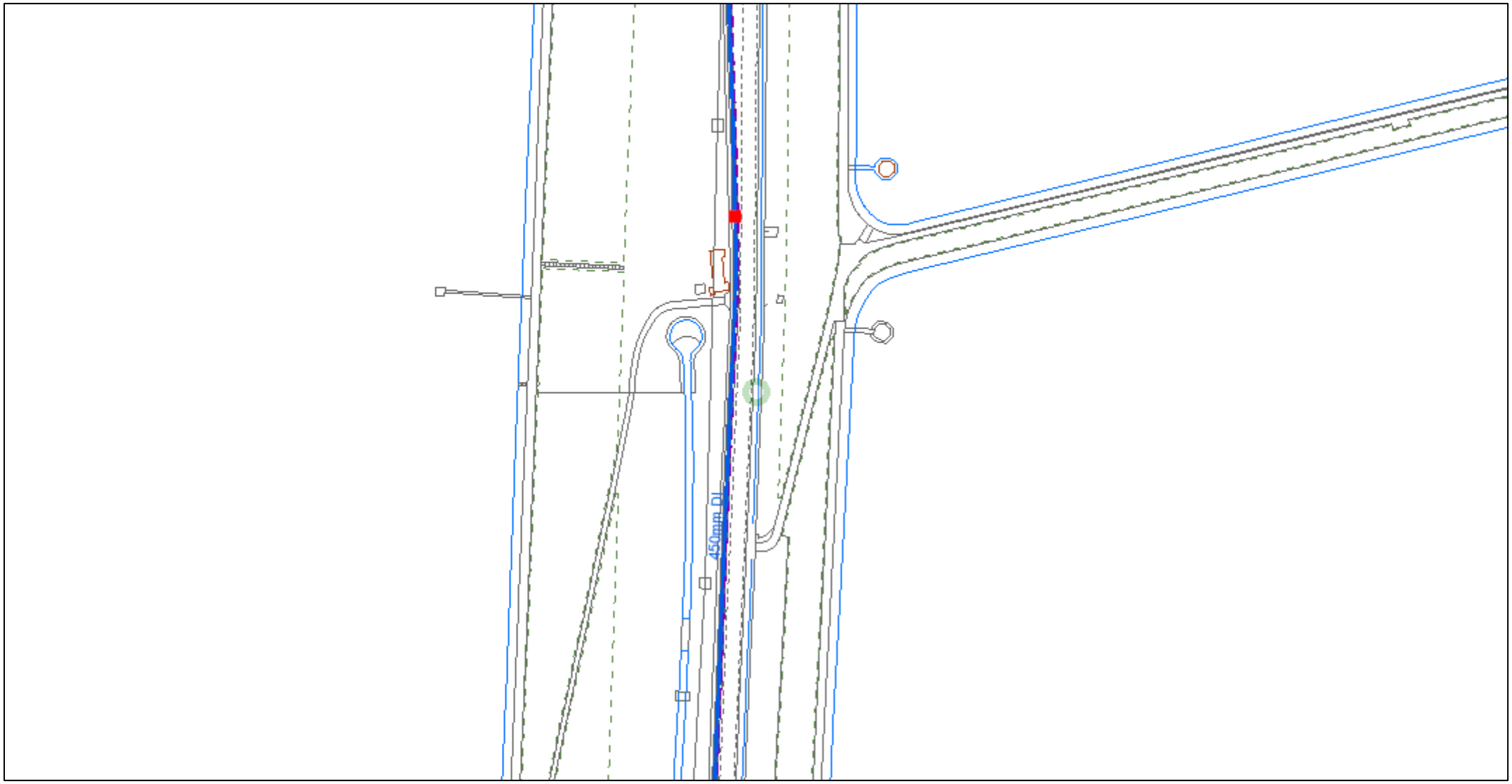
Title

Created on - 5/1/2024



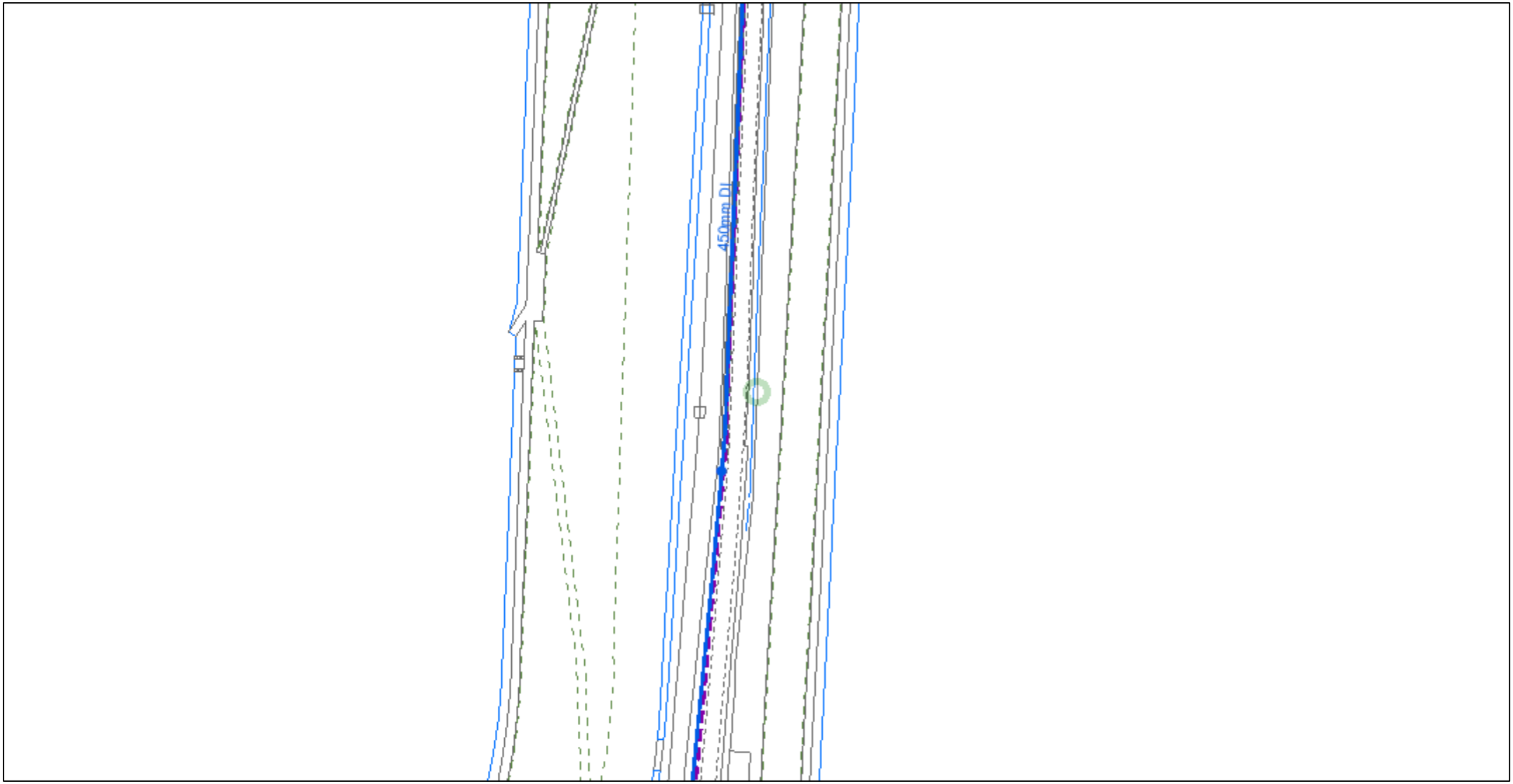
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 5/1/2024



N

1:2,500

- Distribution Main
- Asbestos Distribution Main
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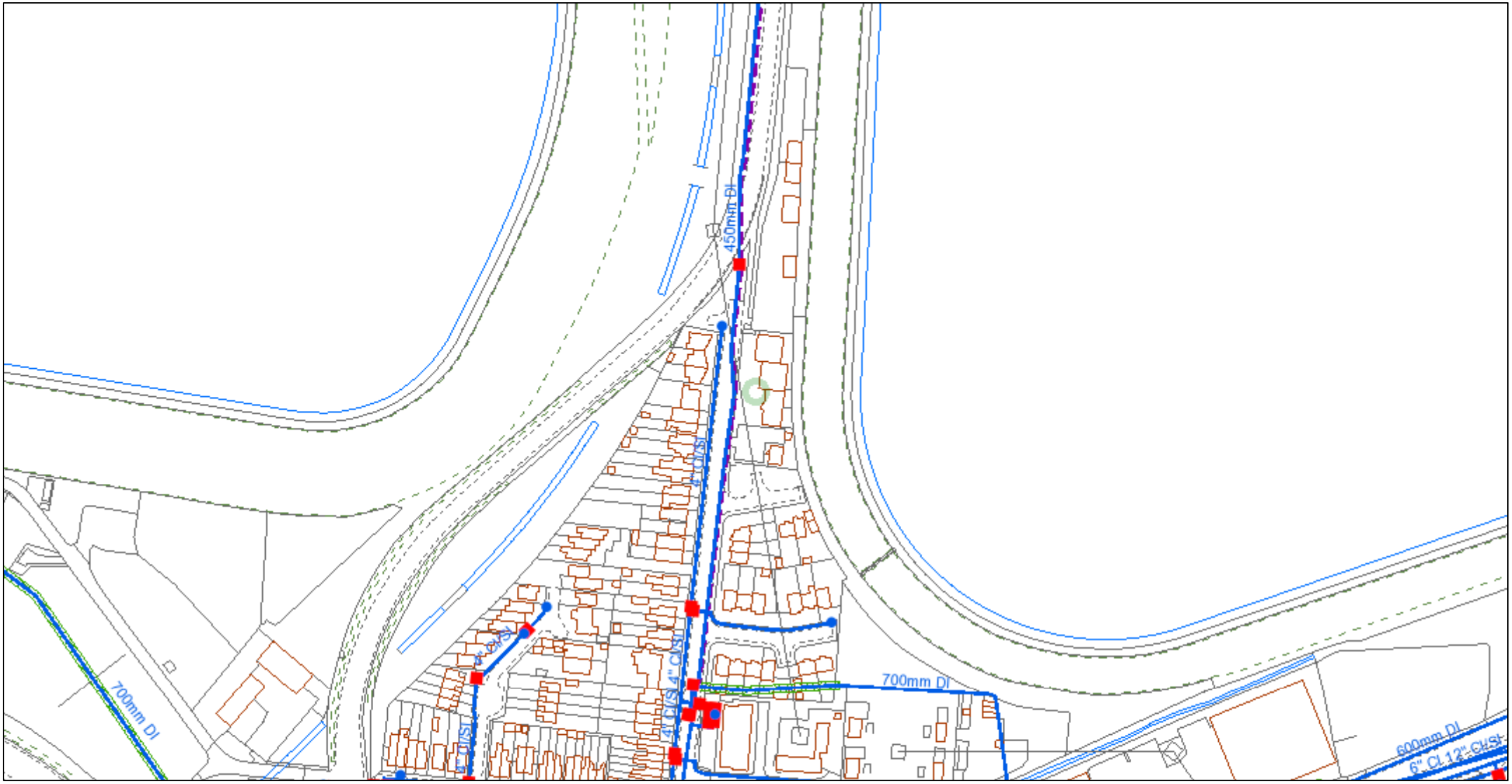
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Title

Created on - 5/1/2024



N

1:2,500

- Distribution Main
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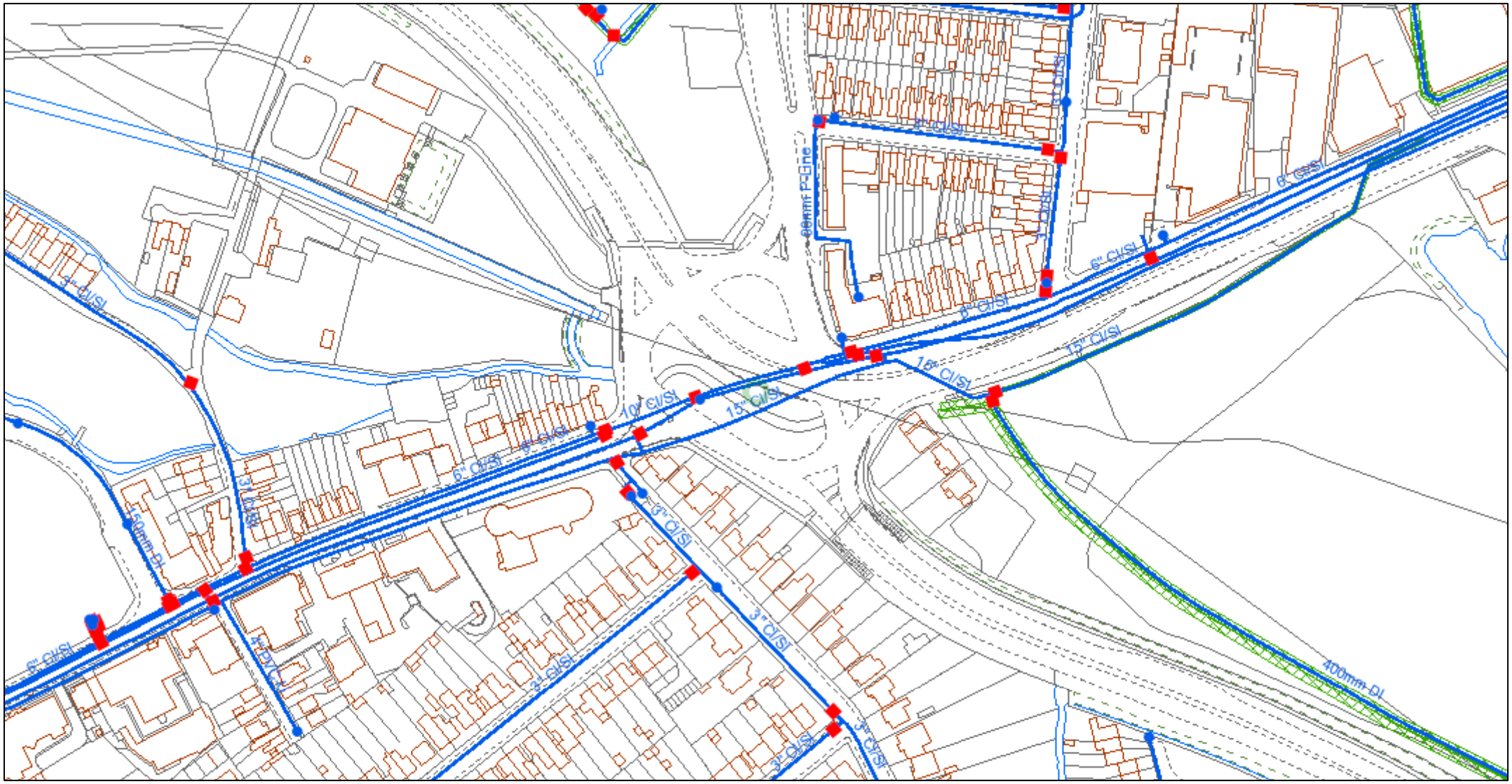
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Affinity Water

Created on - 4/15/2025



N

1:2,500

- Distribution Main
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- Hydrant
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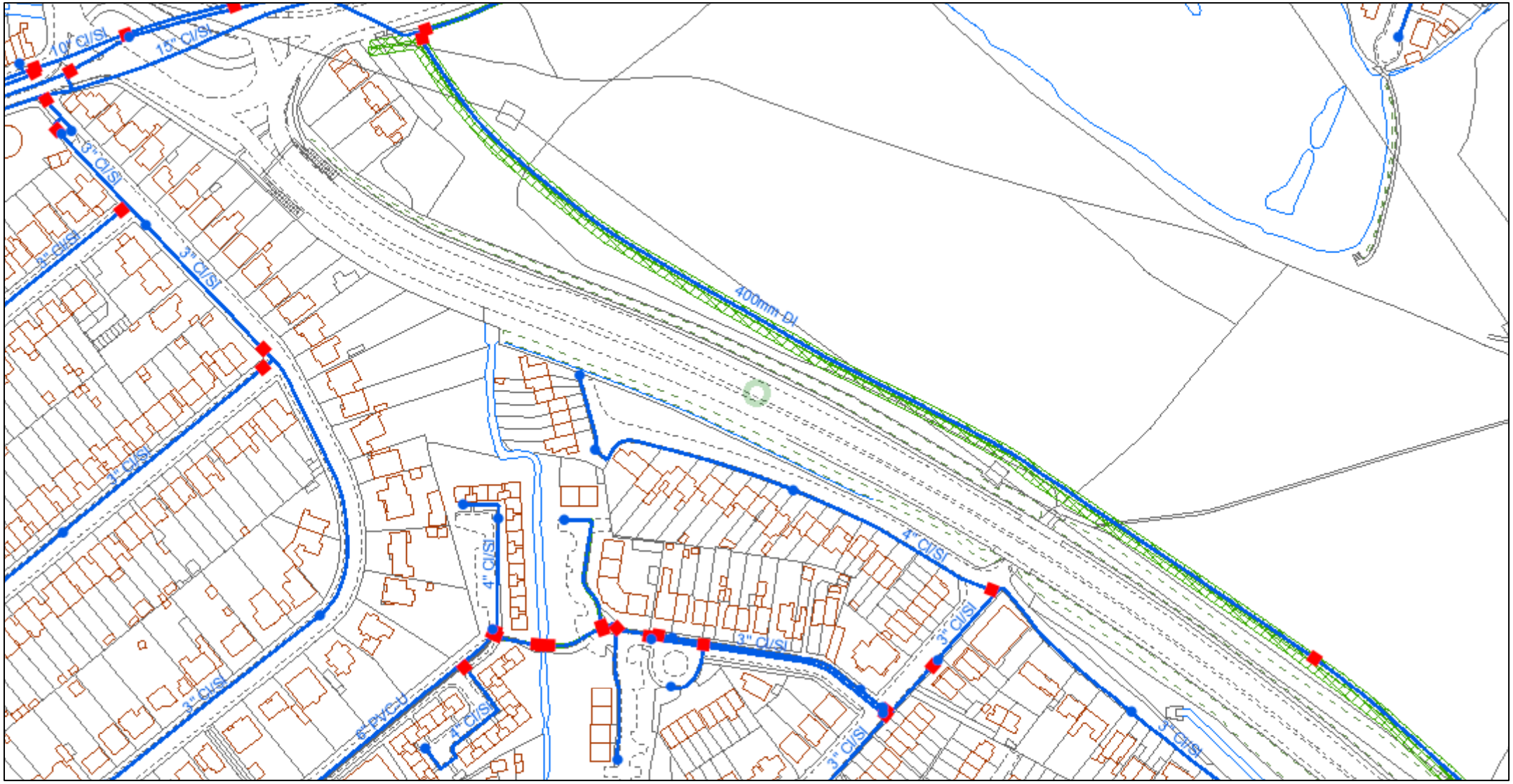
- Easement
- Company Boundary

Affinity Water

Created on - 4/15/2025



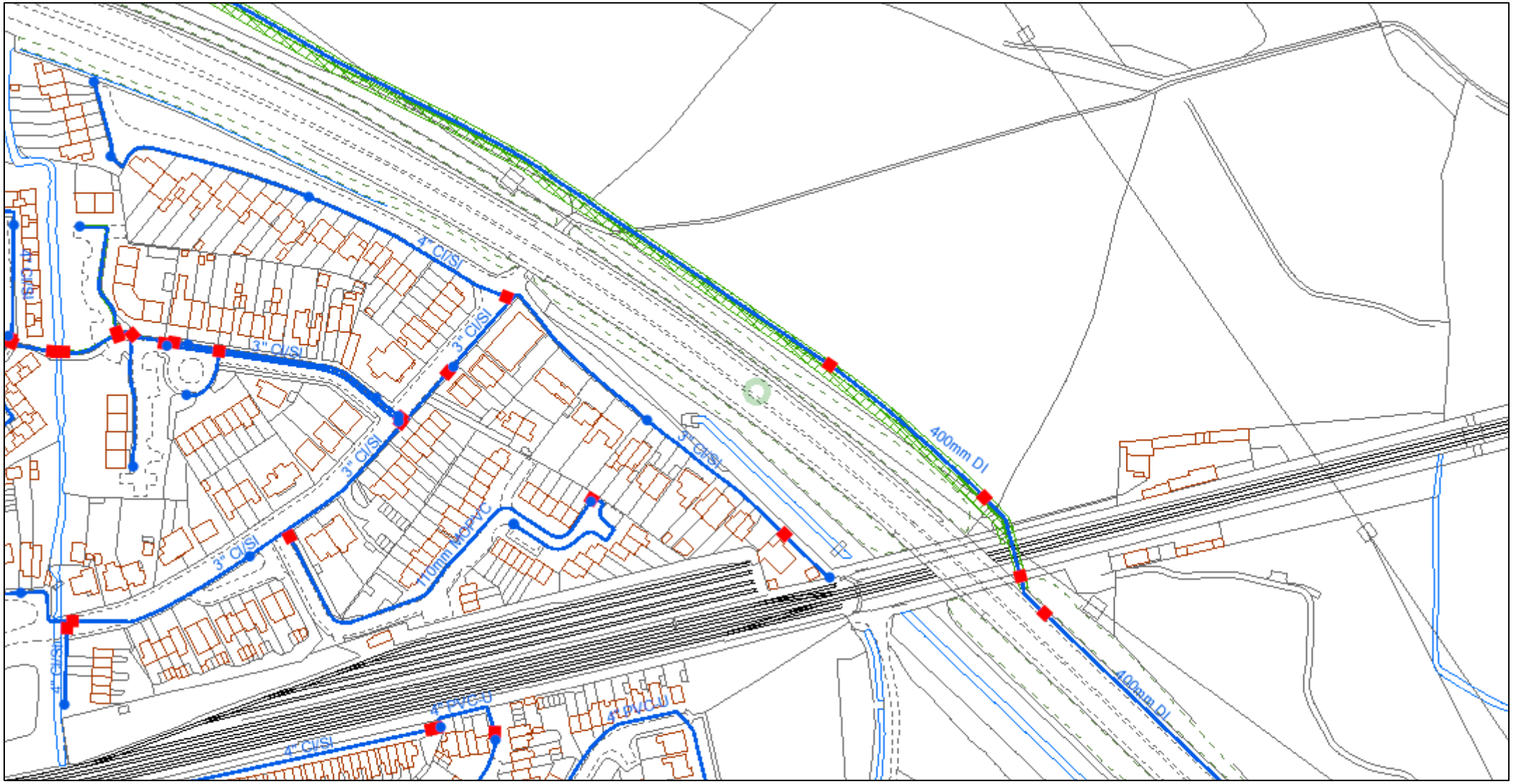
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Affinity Water

Created on - 4/15/2025



N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
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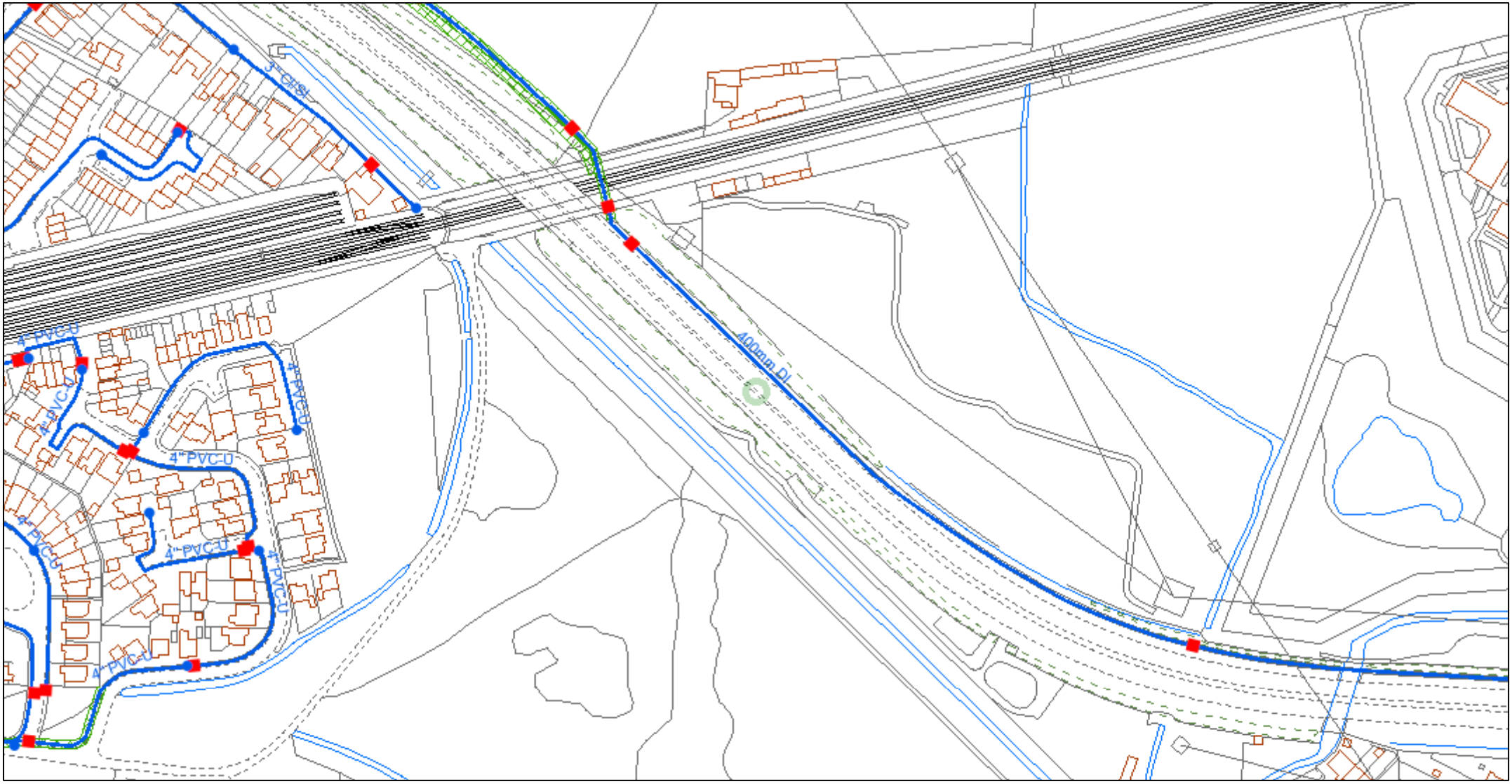
- Easement
- Company Boundary

Affinity Water

Created on - 4/15/2025



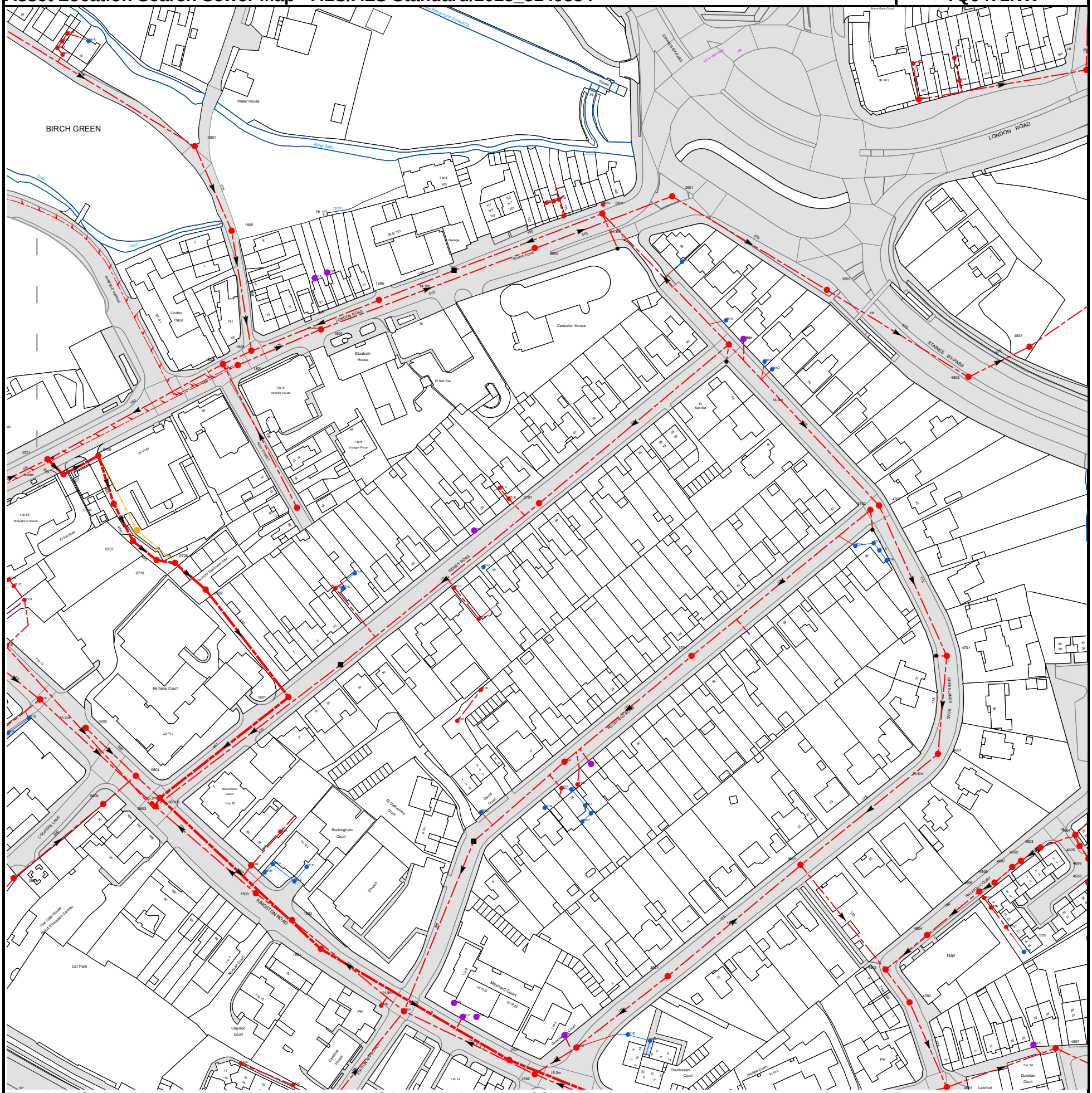
N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Asset Location Search Sewer Map - ALS/ALS Standard/2025_5149834

TQ0471NW



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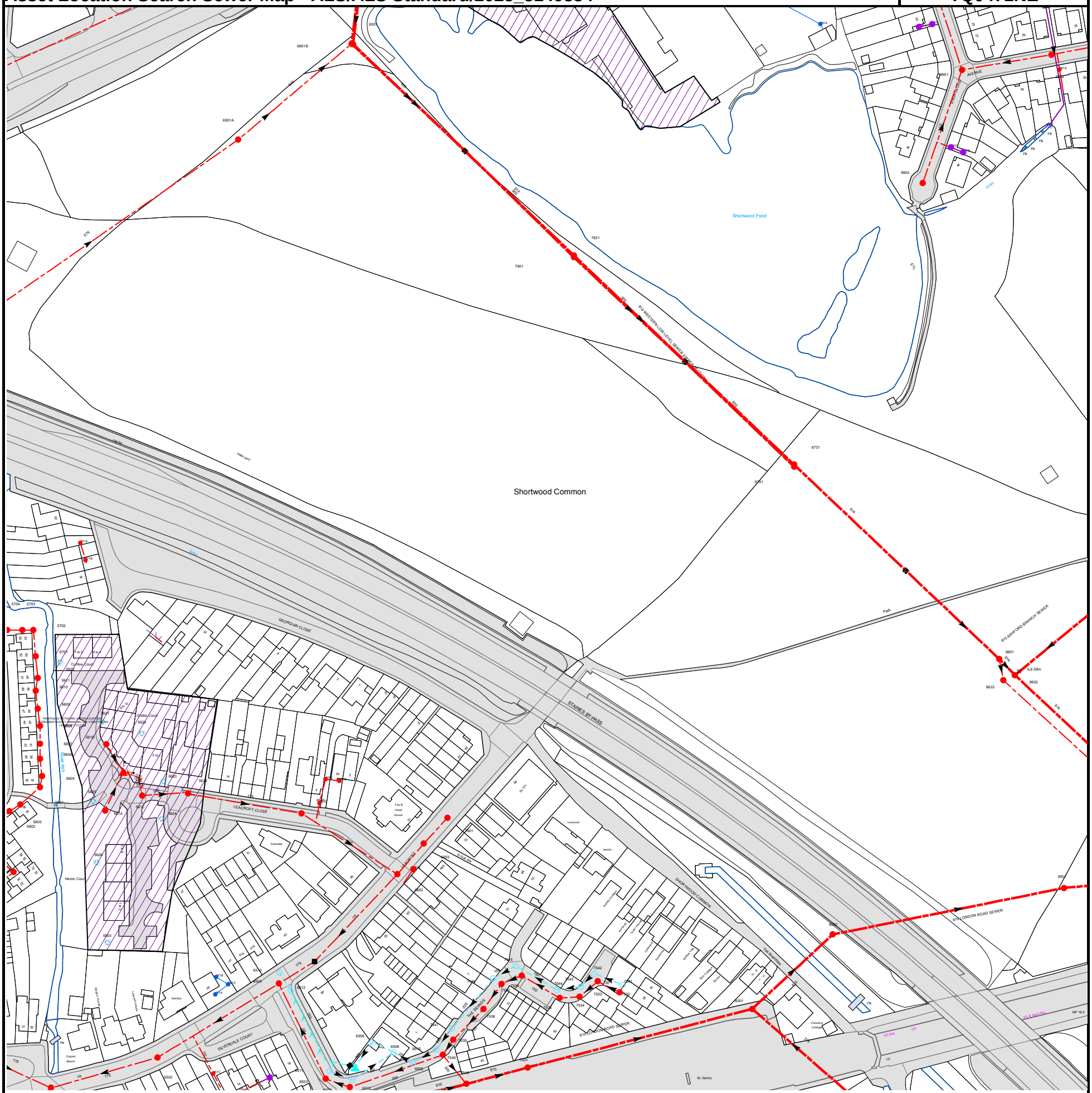
Asset Location Search Sewer Map - ALS/ALS Standard/2025_5149834

TQ0471NE



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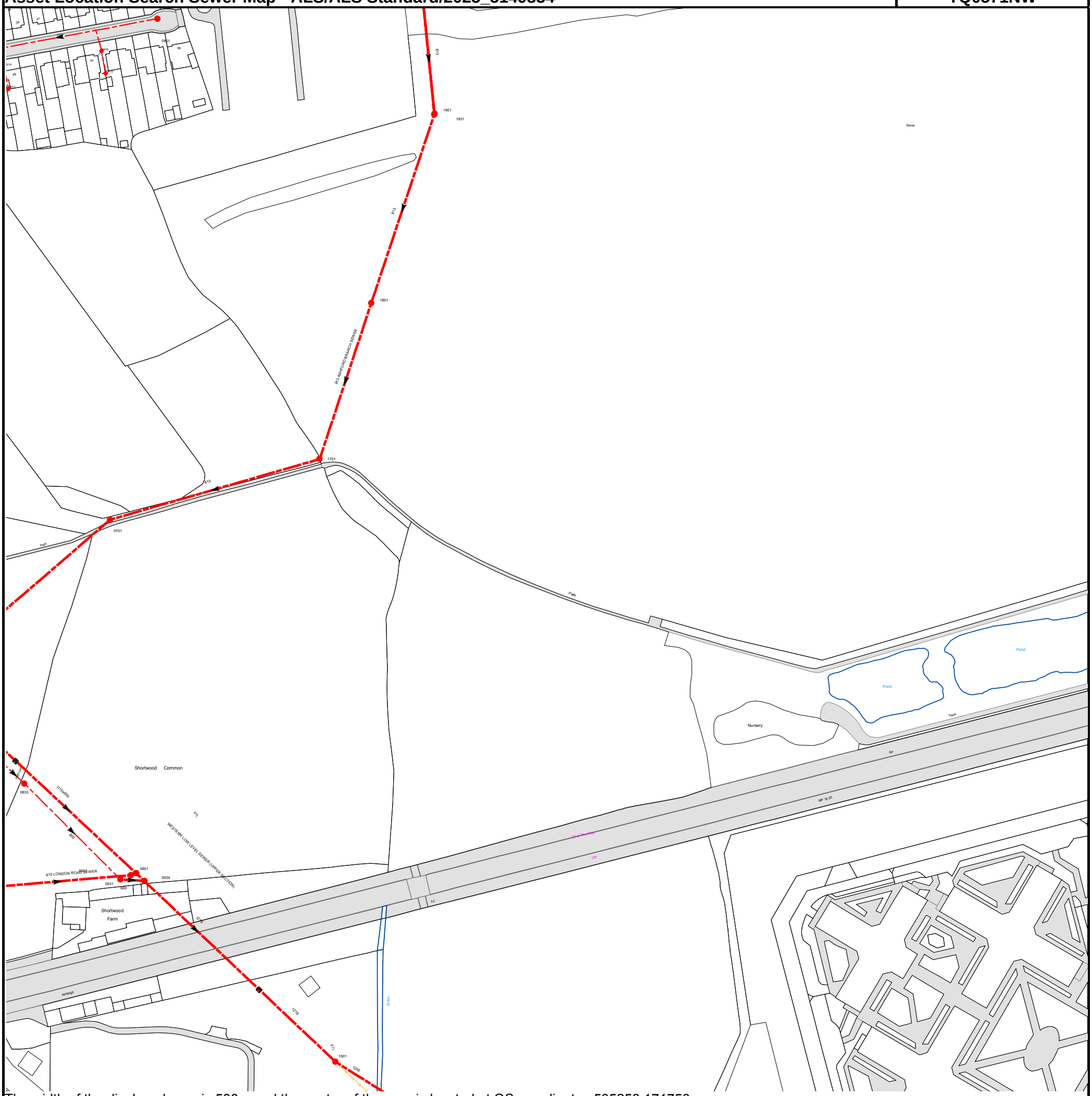
Asset Location Search Sewer Map - ALS/ALS Standard/2025_5149834

TQ0571NW



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 505250,171750

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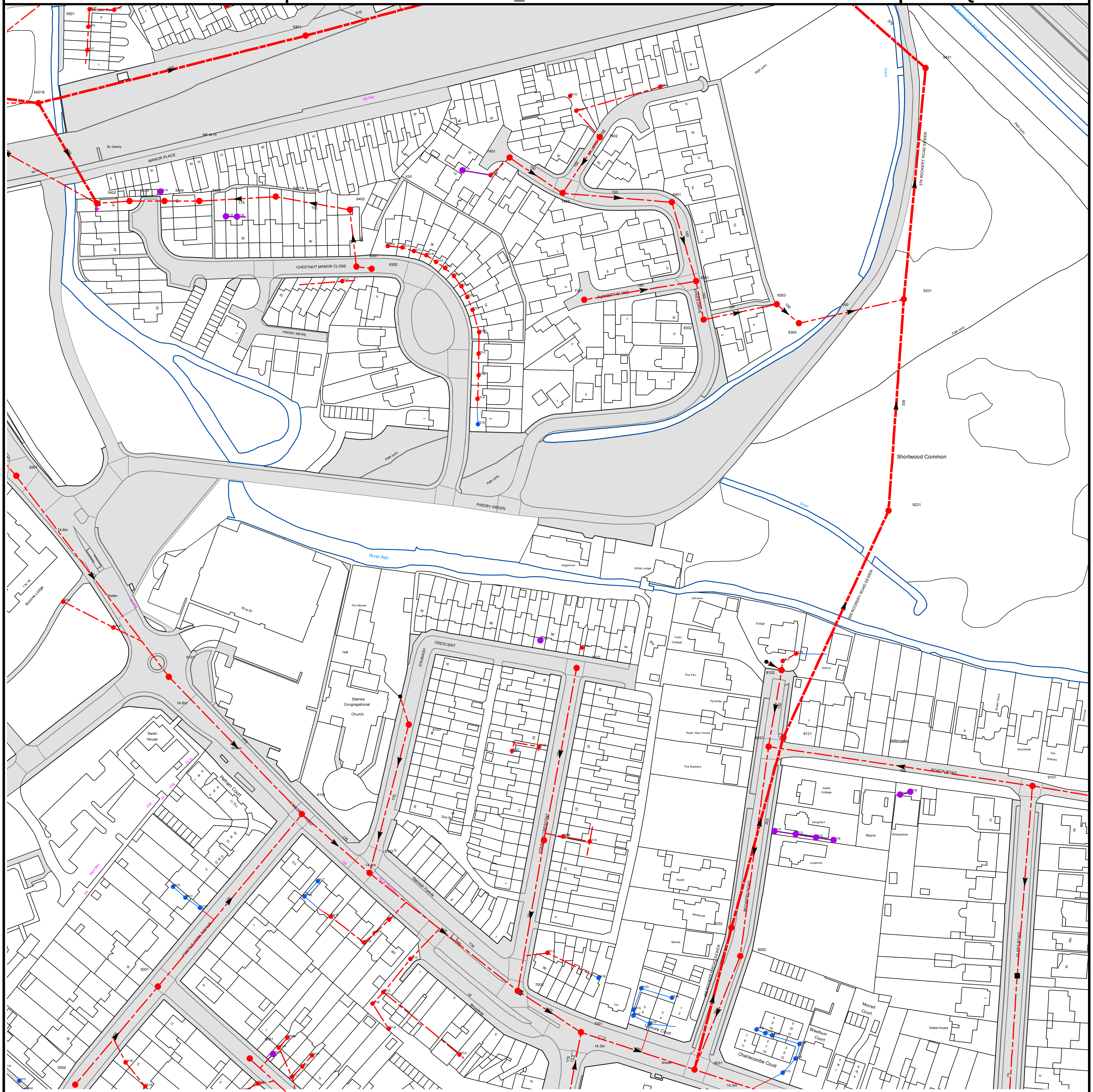
Asset Location Search Sewer Map - ALS/ALS Standard/2025_5149834	TQ0471SE



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 504750,171250

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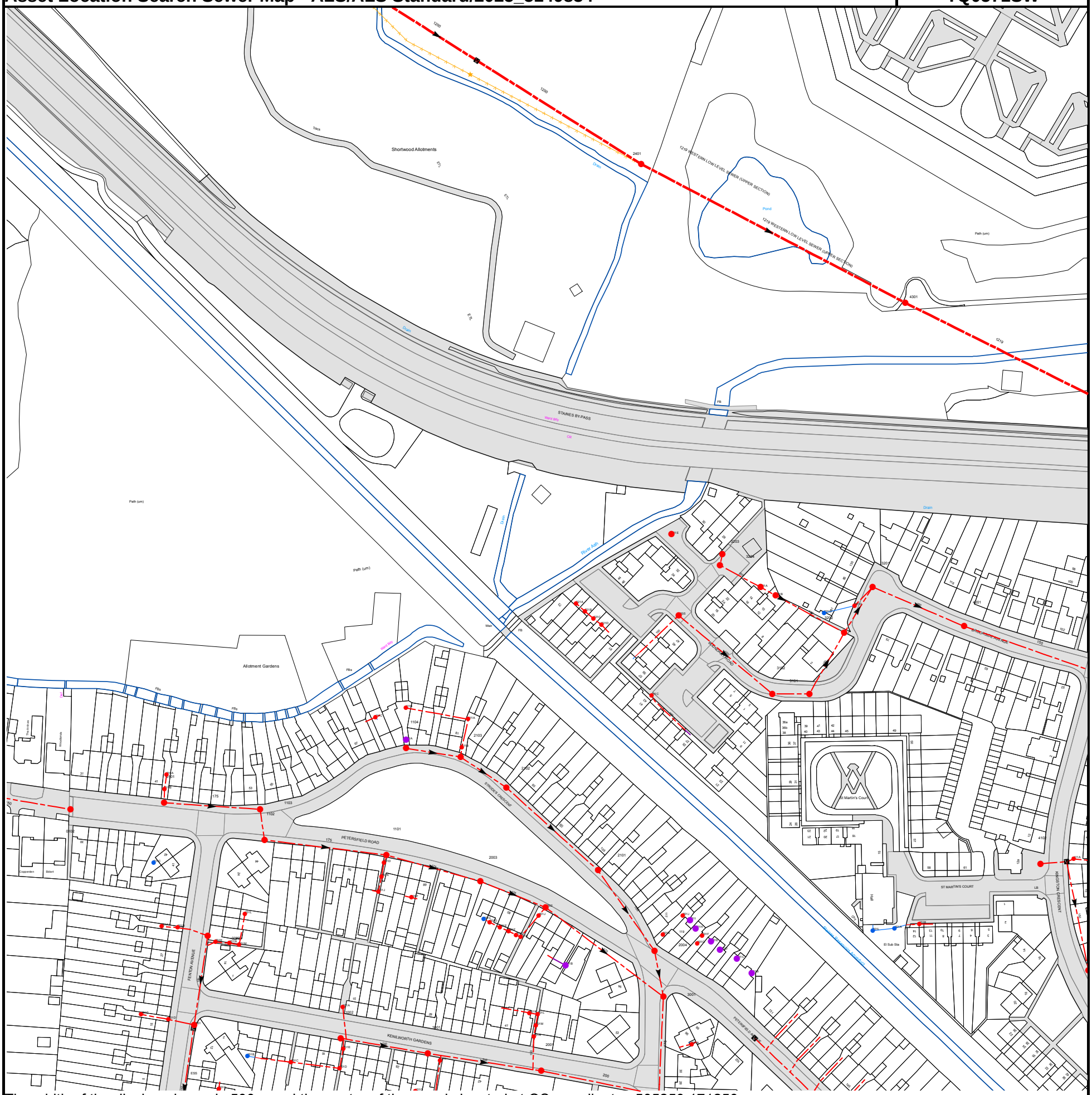
Asset Location Search Sewer Map - ALS/ALS Standard/2025_5149834

TQ0571SW



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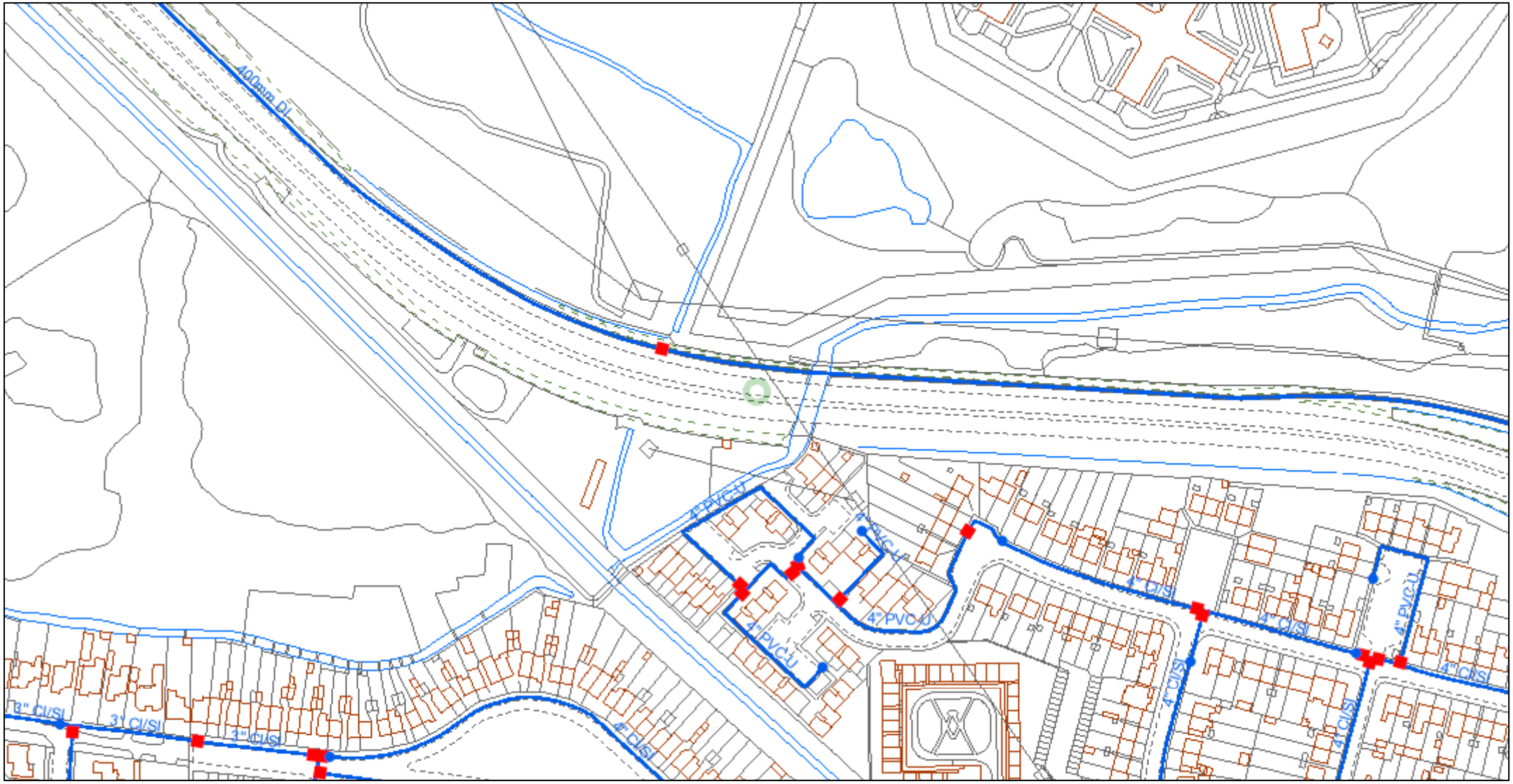
Based on the Ordnance Survey Map (2024) with the Sanction of the controller of H.M. Stationery Office, License no. AC0000849556 Crown Copyright Reserved.

Affinity Water

Created on - 4/15/2025

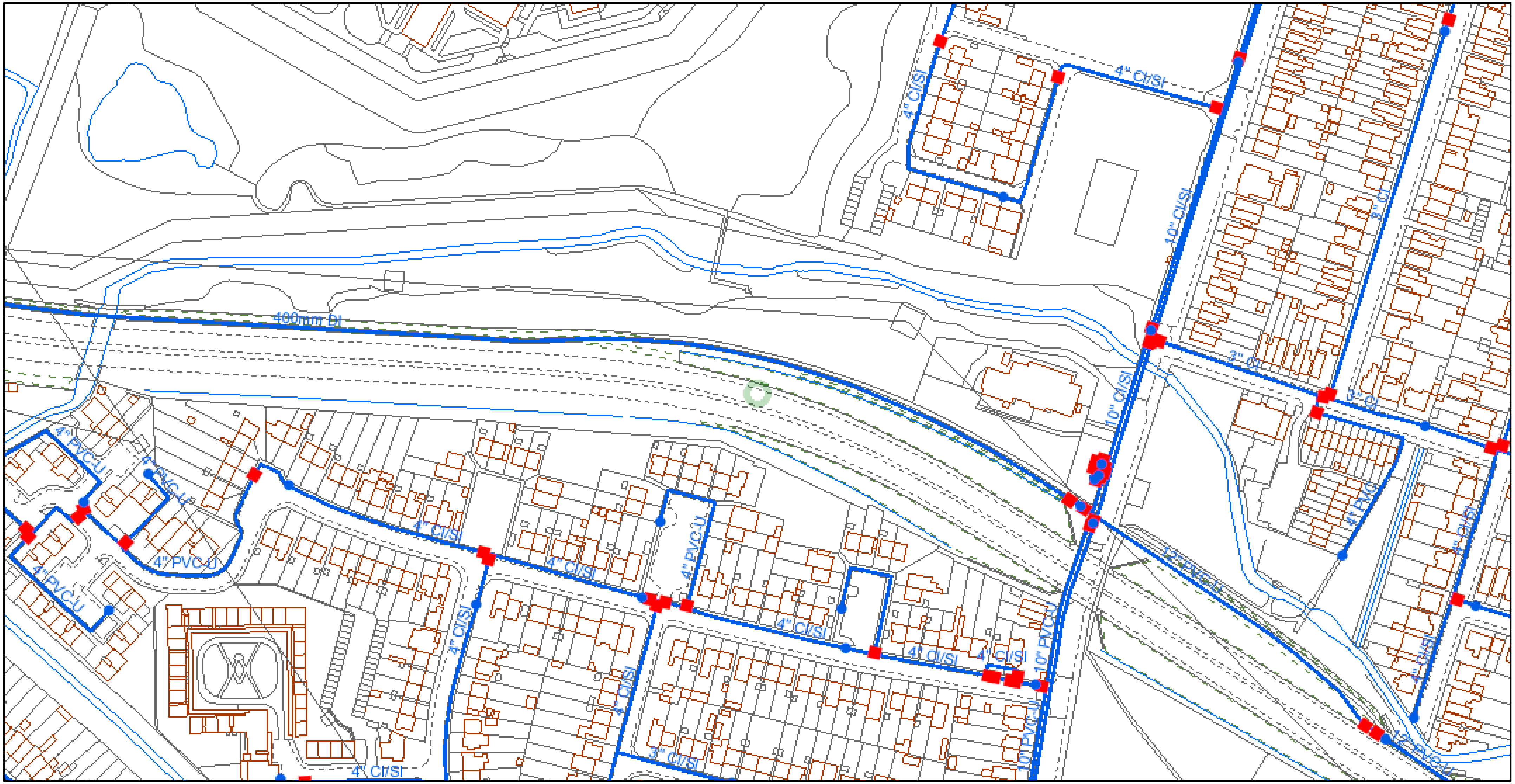


N

1:2,500

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Searched Location
- Hydrant
- Fitting
- Easement
- Company Boundary

Created on - 4/15/2025



Plans are continuously being updated, so out of date plans should be destroyed and not relied upon. The position of apparatus shown on this plan is provided for guidance only and should not be relied upon as being precise. Therefore the Company accepts no responsibility in the event of inaccuracy. Service pipes are not necessarily shown on this plan. Cover is normally 915mm for mains and 750mm for communication pipes but this may vary.
The actual position of apparatus must be determined on site by making hand dug trial holes. The Company requires a minimum of two working days notice of the intention to excavate trial holes.
Except where prior written permission has been obtained, it is an offence under Section 174 of the Water Industry Act 1991 to operate or interfere with any valves, hydrants or other apparatus vested in Affinity Water.

N

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Distribution Main
Asbestos Distribution Main
Abandoned Main
Asbestos Abandoned Main
Adit / Tunnel
Cable
Searched Location
Hydrant
Fitting
Easement
Company Boundary

Affinity Water

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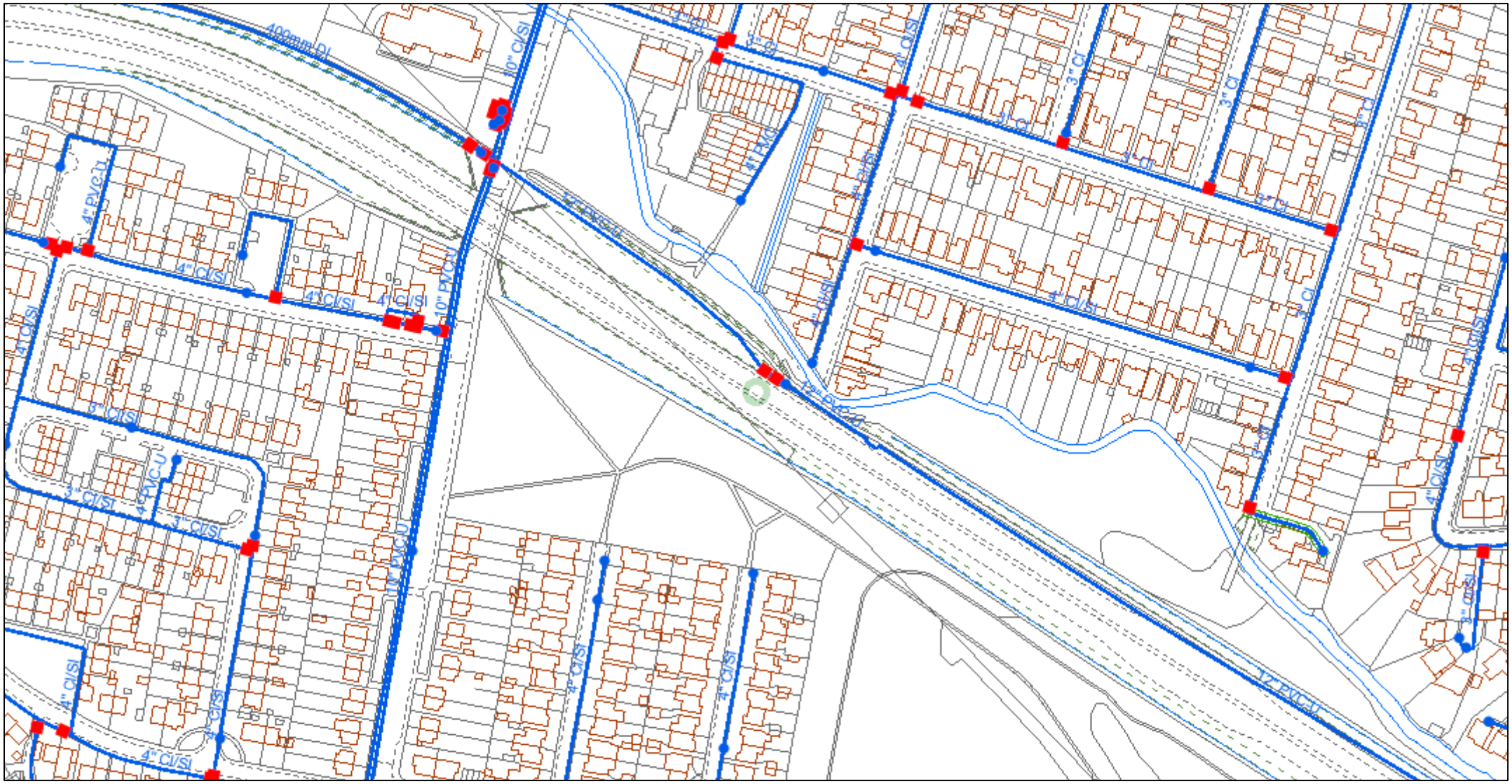

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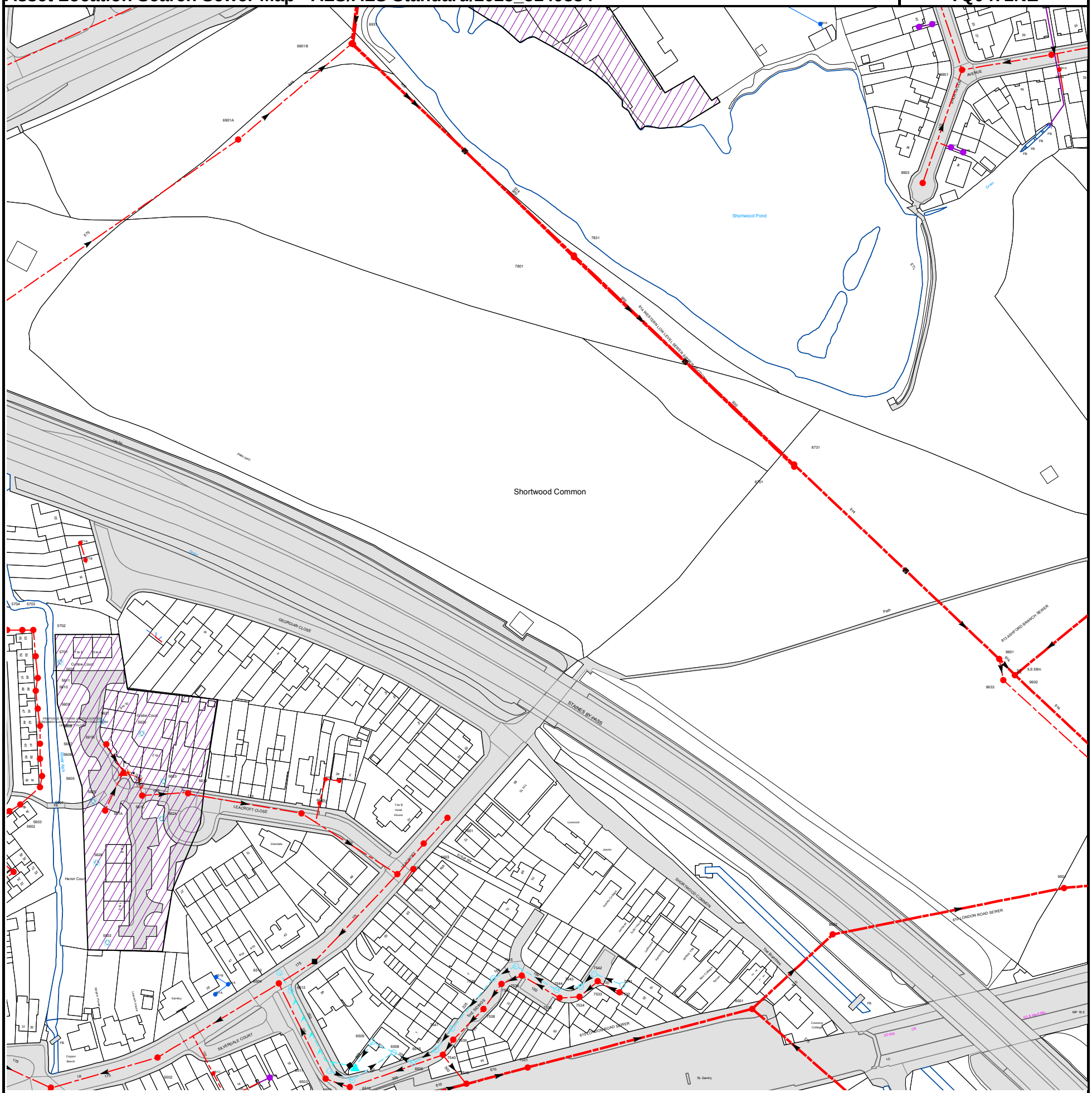
Asset Location Search Sewer Map - ALS/ALS Standard/2025_5149834

TQ0471NE



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 504750,171750

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Asset Location Search Sewer Map - ALS/ALS Standard/2025_5149834

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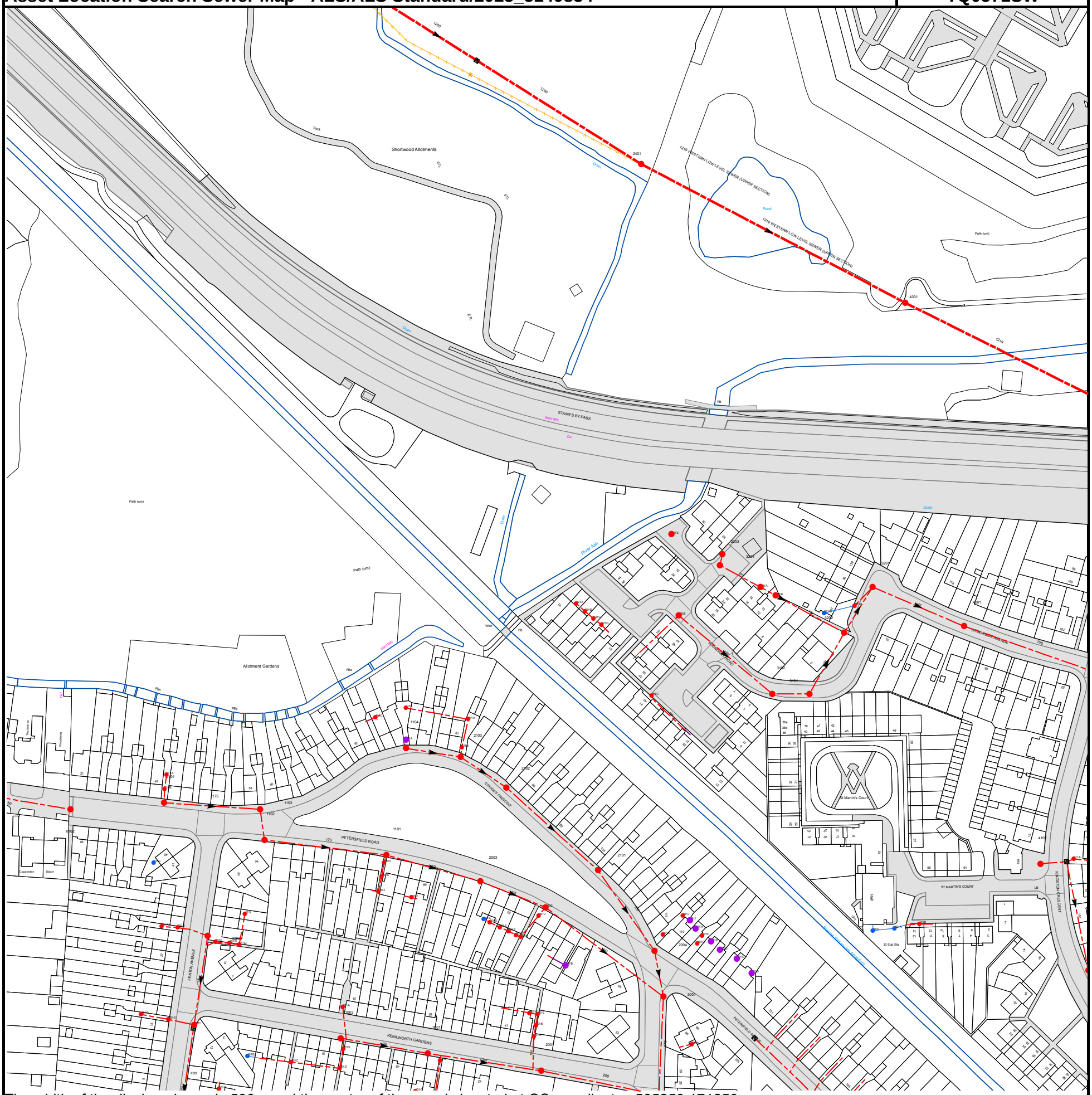

The width of the displayed area is 500m and the centre of the map is located at OS coordinates 505250,171250

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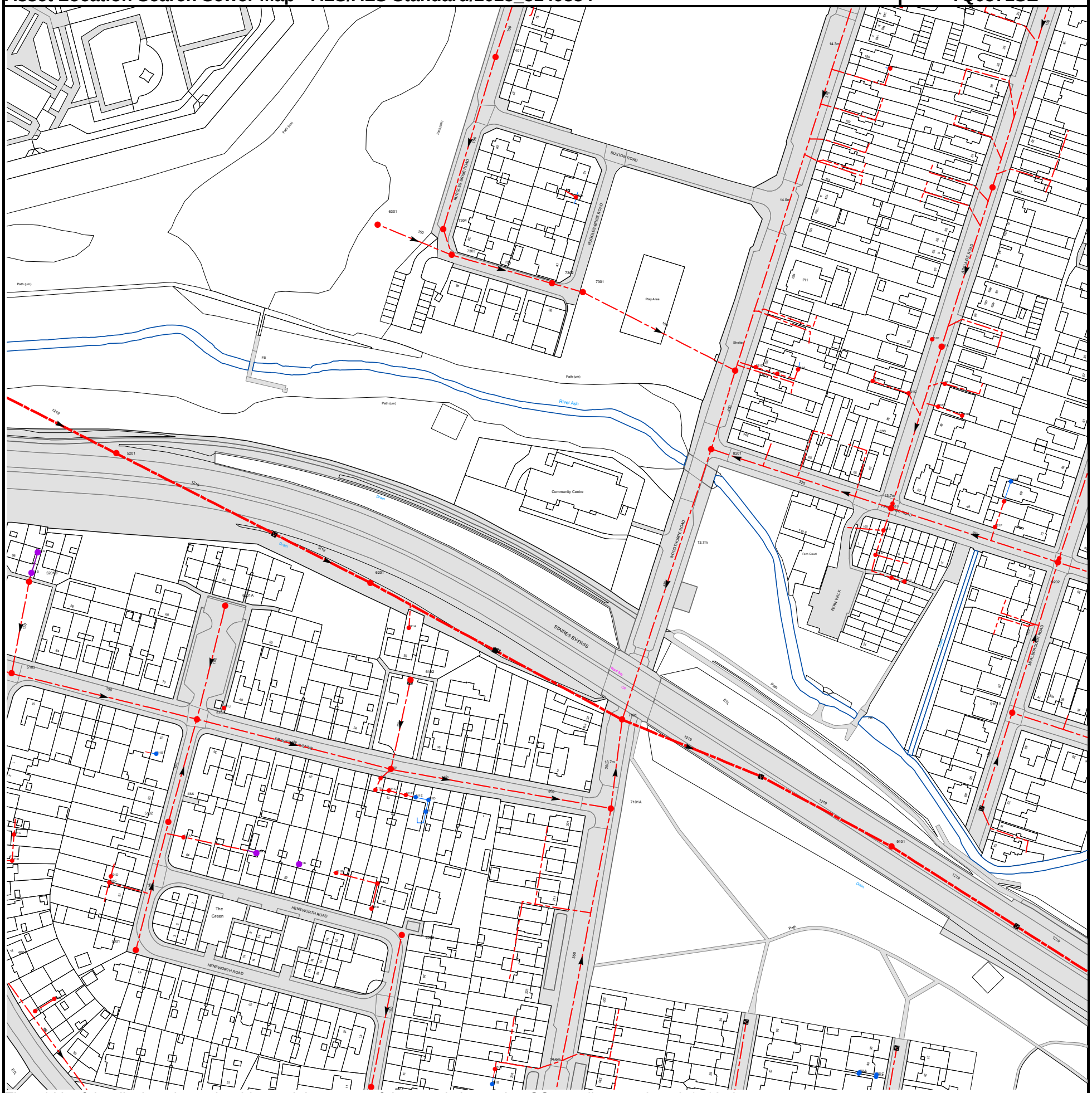
Asset Location Search Sewer Map - ALS/ALS Standard/2025_5149834

TQ0571SE



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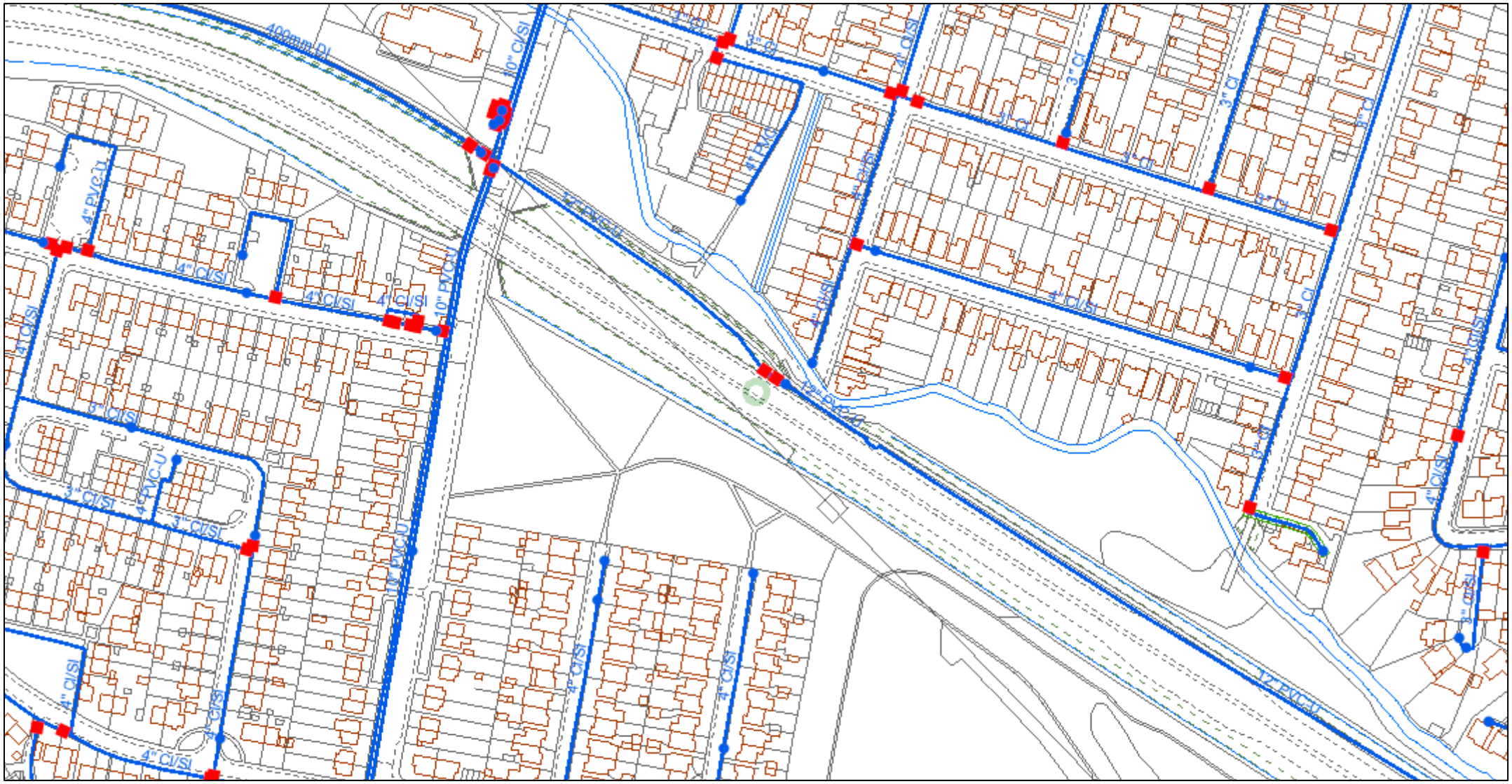
Affinity Water

Created on - 4/15/2025



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Affinity Water

Title

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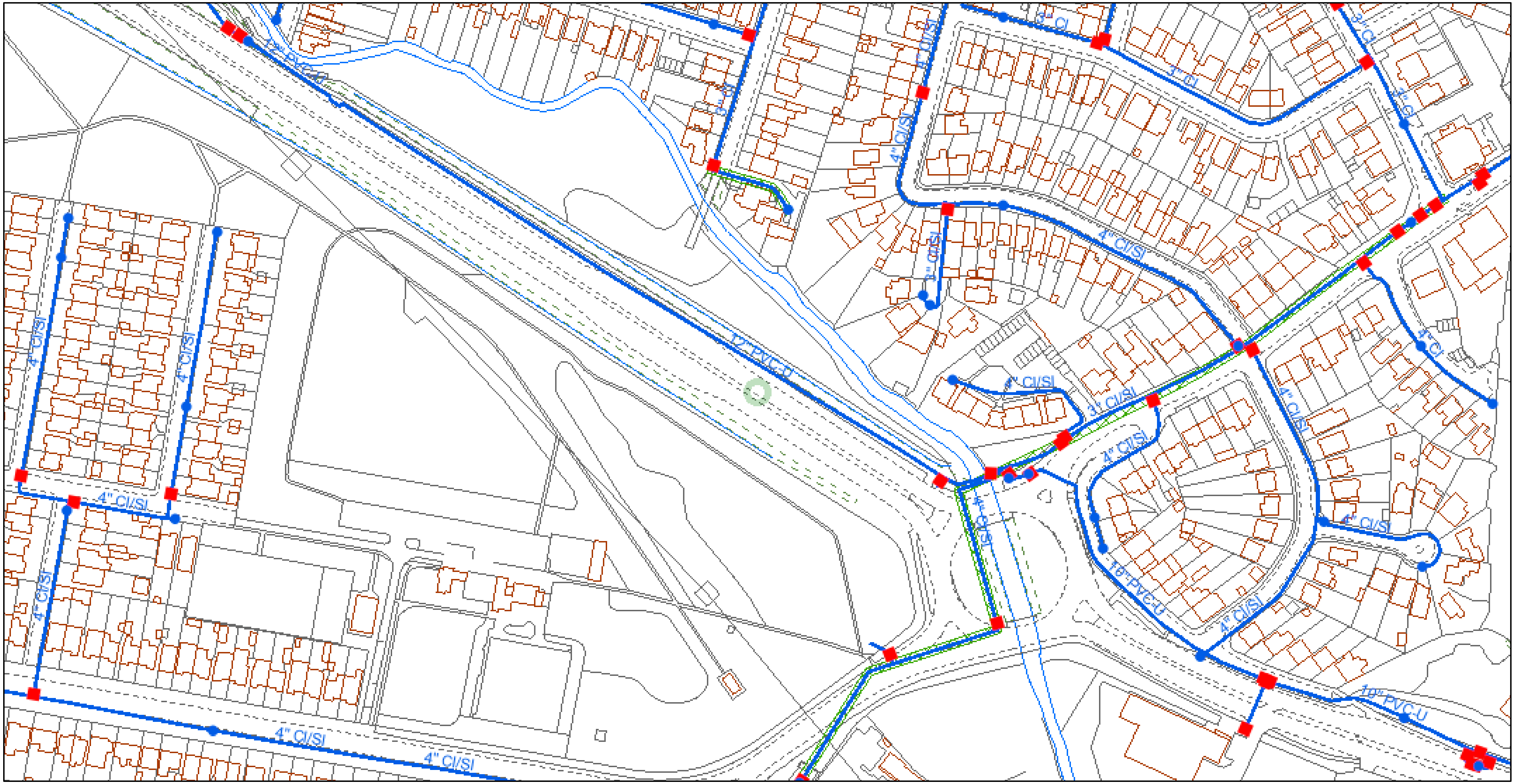

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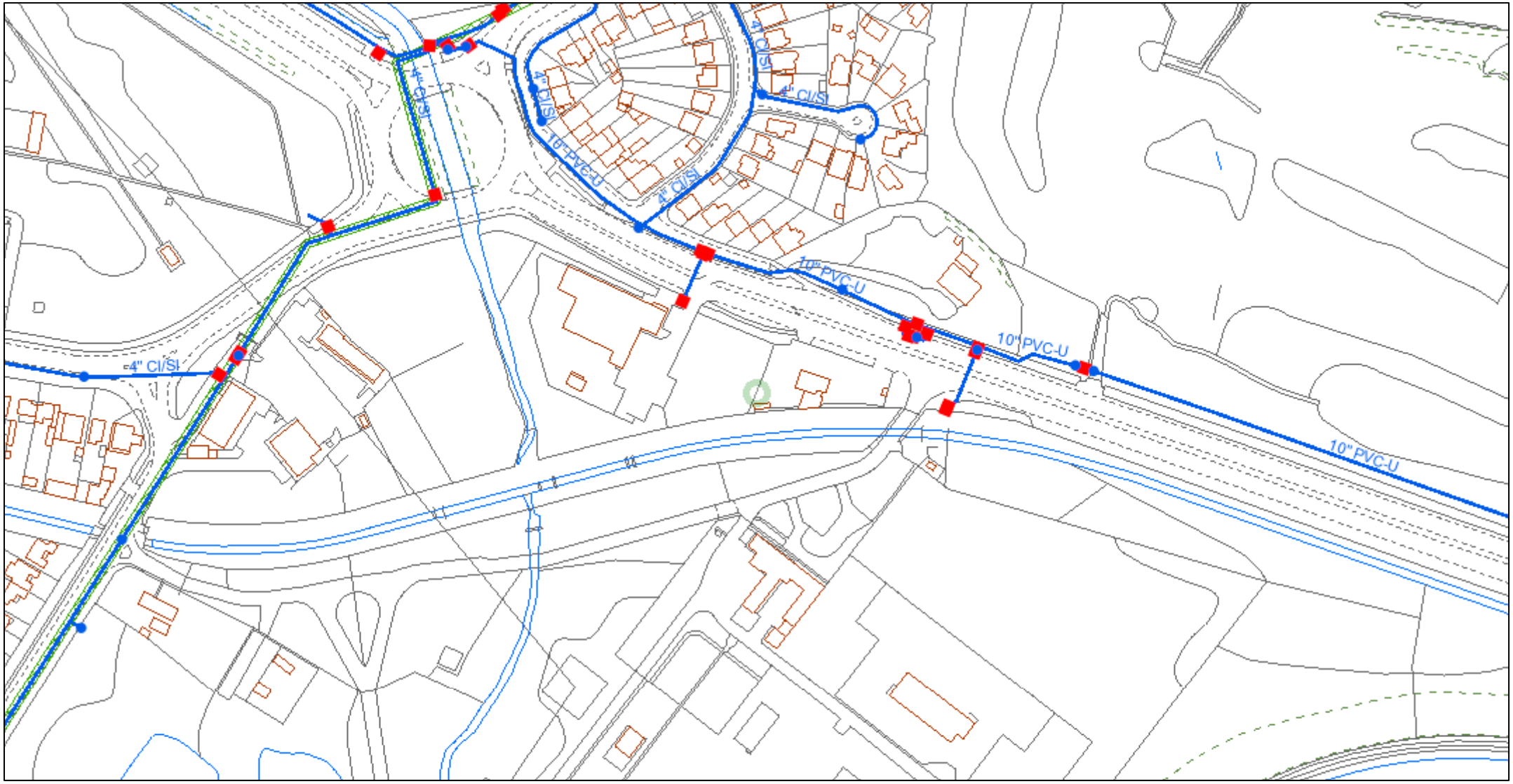

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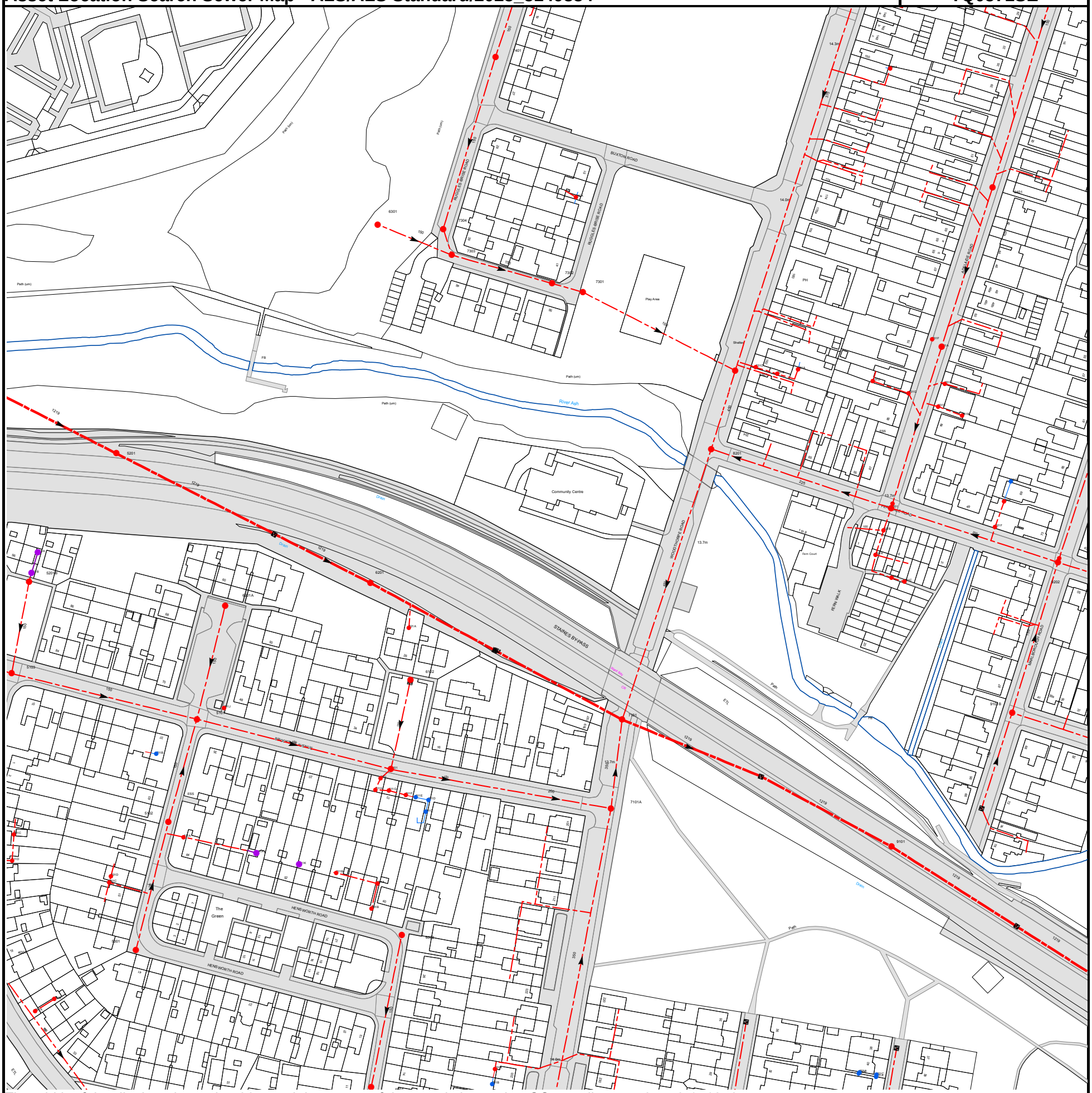

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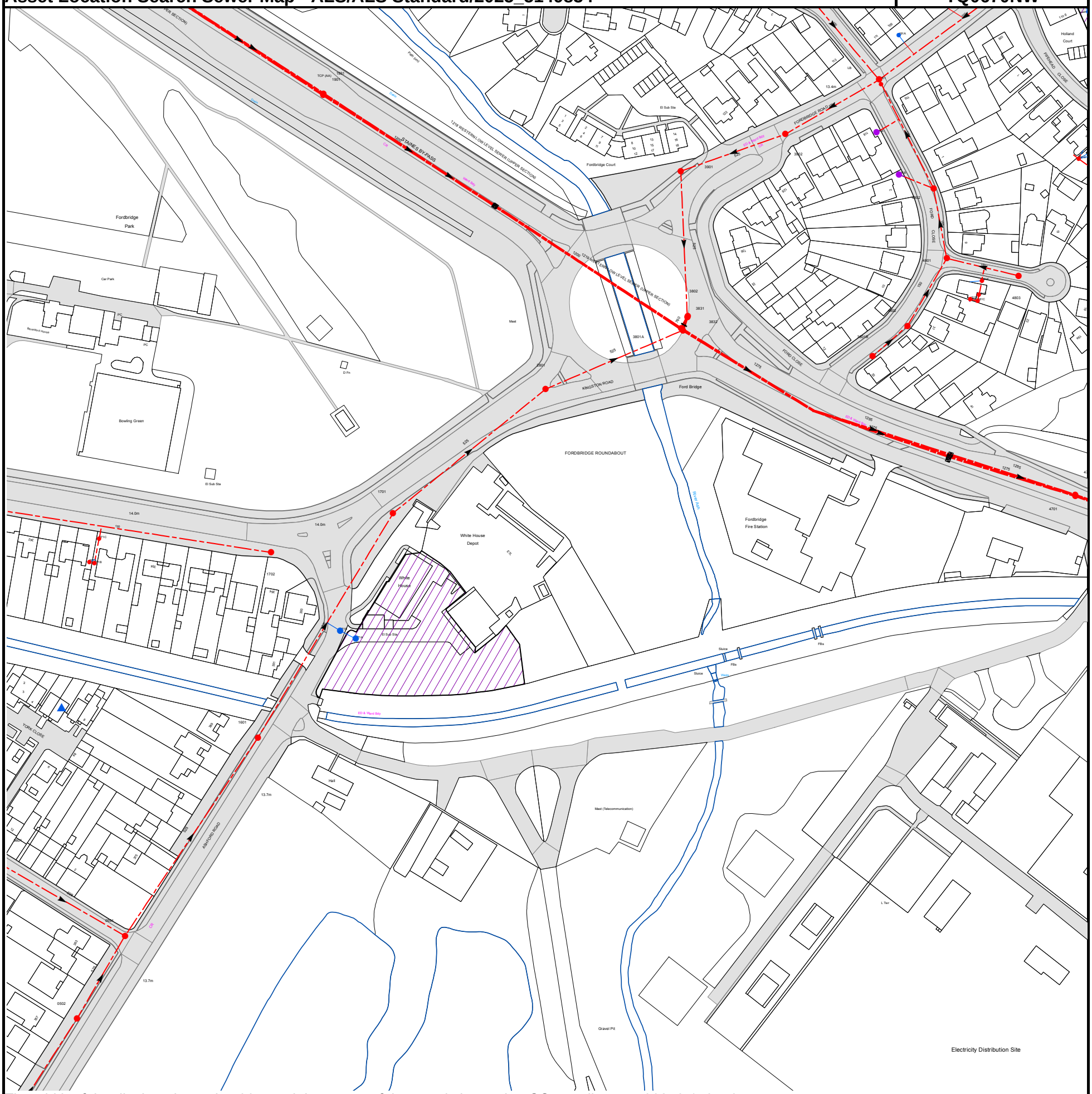

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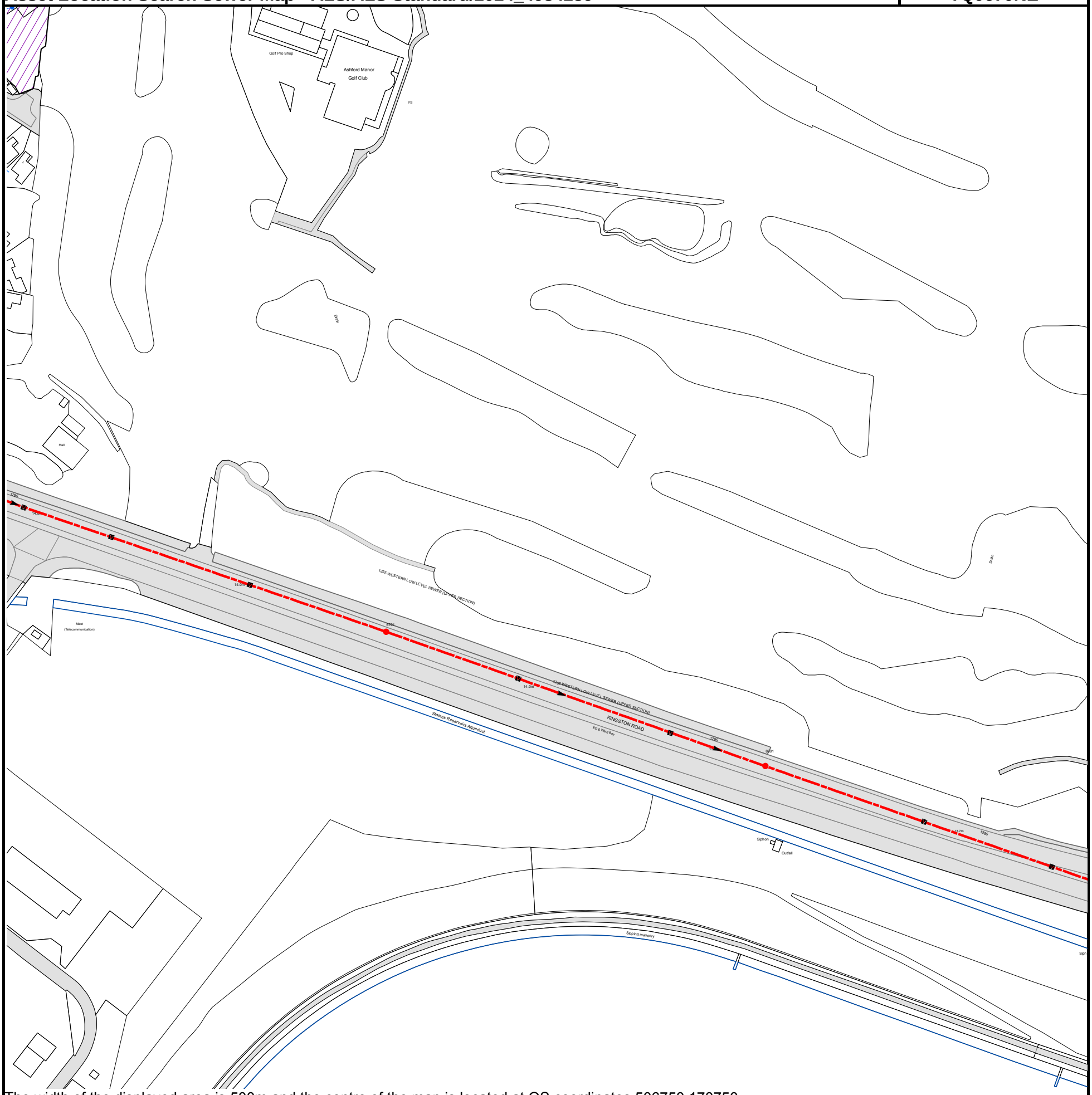

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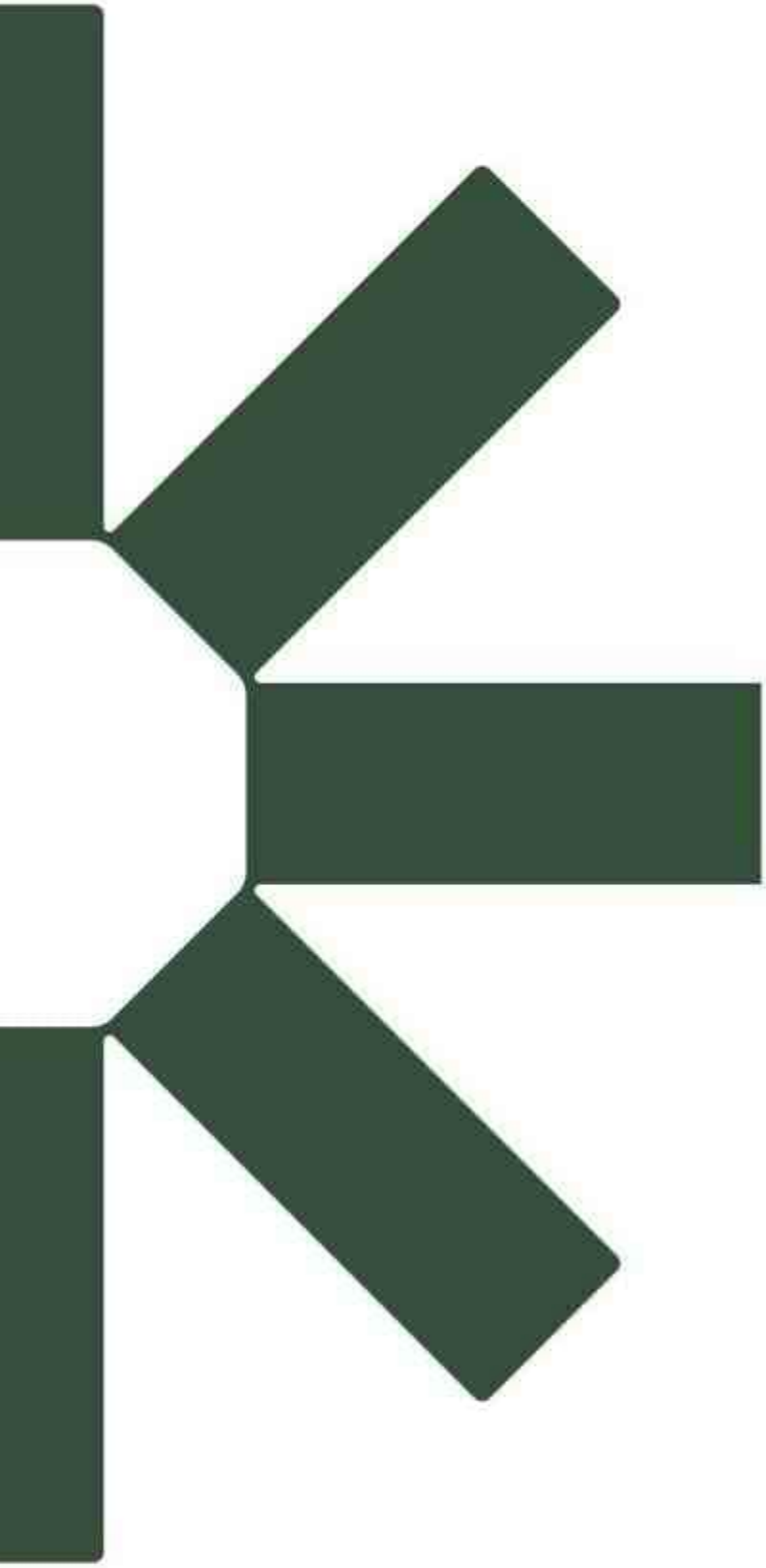
The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.



Making Sustainability Happen

Preliminary Ecological Appraisal Report

Manor Farm Cables: Laleham Substation Corridor

Juniper Energy Limited

Prepared by:

SLR Consulting Limited

3rd Floor, Summit House, 12 Red Lion Square,
London, WC1R 4QH

SLR Project No.: 402.065673.00001

1 September 2025

Revision: 03 Issue

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
01	10 June 2025	Emma Griffin/Cara Sheldon	Jacob Ball	Paul Clack
02	27 August 2025	Emma Griffin/Cara Sheldon	Jacob Ball	Paul Clack
03	01 September 2025	Emma Griffin/Cara Sheldon	Jacob Ball	Paul Clack

Basis of Report

This document has been prepared by SLR Consulting Limited (SLR) with reasonable skill, care and diligence, and taking account of the timescales and resources devoted to it by agreement with Juniper Energy Limited (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

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Table of Contents

Tables in Text

Appendices

Acronyms and Abbreviations

BESS	Battery Energy Storage Site
BOCC5	Birds of Conservation Concern 5
CHSR	Conservation of Habitats and Species Regulations
CMP	Construction Management Plan
EPS	European Protect Species
GiGL	Green Information for Greater London
GLTA	Ground level tree assessment
IASO	Invasive Alien Species Order
INNS	Invasive Non-Native Species
LERC	Local Environmental Records Centre
LNR	Local Nature Reserve
LPA	Local Planning Authority
LWS	Local Wildlife Sites
MAGIC	Multi-Agency Geographic Information for the Countryside
NE	Natural England
NGR	National Grid Reference
PEA	Preliminary Ecological Appraisal
PRF	Potential Roost Features
RLB	Red Line Boundary
SIBC	Surrey Biodiversity Information Centre
SNCI	Sites of Nature Conservation Importance
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
TVERC	Thames Valley Environmental Records Centre
WCA	Wildlife and Countryside Act

1.0 Introduction

SLR Consulting Limited (SLR) was commissioned at the instruction of Juniper Energy Limited Ltd ('the Client') to undertake a Preliminary Ecological Appraisal (PEA) in relation to an electrical cabling project on land between Manor Farm, Slough and National Grid (NG) Land at Laleham Surrey.

This report refers to the section of the cable from the proposed Manor Farm Data Centre, Berkshire (centroid approximately NGR TQ 02935 76236) (planning ref; P/10076/013) to Laleham Substation, Surrey (centroid approximately NGR TQ 06448 70547), (hereafter refer to as "the Proposed Development").

1.1 Site Description

The Proposed Development generally follows the highway network, running from the proposed data centre/Battery Energy Storage Site (BESS), following the highway network bordered by an industrial estate, crossing the M25 motorway at junction 14, again following the highway network along minor roads before passing between Staines and King George VI reservoirs. It then runs southwards along the A308 and A3044 before entering the Laleham substation site.

Dominant habitat types along the route are sealed surfaces and hardstanding, modified grassland (verges and central reservation). Adjacent habitats include areas of woodland, hedgerows, scrub and mature trees. Various watercourses are crossed by the route, though all but one (the Wraysbury River at Horton Road) will be crossed using no-dig engineering techniques.

1.2 Details of the Proposed Development

It is proposed that the application seek permission for the installation of underground and electrical connection and communication cables extending between land at Manor Farm, Poyle Road, Slough and the Laleham Substation, with temporary construction compounds, and associated infrastructure and works

The land at Manor Farm will support a data centre and BESS. The data centre/BESS site is located approximately 6.5km from Laleham substation, as the crow flies. The length of the cable route is approximately 8.4km.

The cabling from the substation will provide the power required for the data centre to operate and a connection to the national grid for the BESS.

The cable installation works for the Laleham corridor will involve the following:

- The excavation of a temporary trench to accommodate the cabling infrastructure consisting of up to two 132 kV dual circuits, together with associated communications cabling – unless:
    - A trenchless solution is proposed, e.g. under the M25 J14 or under a watercourse; or
    - Open cut watercourse.
- The construction trench will be up to 1.0m wide and up to 3m deep, the depth is expected to vary due to existing buried services (specially designed trenchless solutions such as the M25 Junction 14 crossings may result in an increase in the installation depth).
- The construction trench will be infilled once the required cabling components have been laid; and

- At intervals along the grid connection route, it is necessary to install a junction box where lengths of the cable can be joined together. Each junction box would be below ground level and would measure c.500mm x 300mm.

The route between the substation and the data centre/BESS site is predominantly urban in nature, thereby limiting the potential available route options. As a result, a significant length of this route is along public highway.

It is intended that the cable laying operation will be undertaken on a phased basis with an identified section being excavated and reinstated prior to moving on to a new section.

For areas of verge and unmade ground, the excavation and reinstatement will be carried out using existing excavated materials where possible. If the original 'turf' is unable to be re-laid or is of a poor quality, then new topsoil and grass seed will be used. Digging will be undertaken using mechanical aids except where trees or other obstructions exist when sensitive installation techniques such as hand digging, vacuum excavation or horizontal directional drilling will be employed.

When installing cables within hard surfaced areas (such as roadway, footpaths or cycleways), these sections will be open cut using a floor saw and/or a mechanical pecker to break up the top surface. No percussive piling is proposed for the project.

Mechanical means would then be used to remove the subsurface and associated materials to the correct depths. Once the cable is installed, the original surface would then be reinstated to the relevant specifications for the type of surface in agreement with the council.

Machinery and materials will be kept at temporary laydown areas, the location of which will be agreed as part of a Construction Management Plan (CMP). Machinery may also be temporarily stored overnight at the location of the previous day's completed cable trench. In this instance, the machinery would be located behind secure fencing.

All construction methodology details will be agreed with the local authorities through the submission of a CMP.

1.3 Purpose of this Report

This report presents the findings of the PEA. The report seeks:

- To establish baseline conditions and determine the importance of ecological features present (or those that could be present), as far as is possible;
- To identify potential ecological constraints to the proposed development and make initial recommendations to avoid potentially significant effects on important ecological features, where possible;
- To identify potential requirements for mitigation, where possible, including mitigation measures that will be required and those that may be required (depending on results of further surveys or final scheme design);
- To establish any requirements for more detailed surveys; and
- To identify opportunities for biodiversity enhancements as part of the project.

1.4 Evidence of Technical Competence and Experience

Habitat field surveys were conducted by William Dent, Katherine Jones and Jacob Ball. Will is a Project Ecologist with almost two years of experience in professional consultancy. Will has experience in various habitat surveys, Ground Level Tree Assessments (GLTAs), badger exclusion, environmental DNA (eDNA) surveys, bat emergence surveys, barn owl surveys and technical report writing.

River condition assessments (RCA) and otter and water vole surveys were undertaken by Laura Lyons and Eva Booth. Laura is a Senior Field Ecologist with several years of experience in ecological consultancy. Laura holds a Modular River Survey qualification and is experienced in RCA processes and techniques. Eva Booth is a Graduate Ecologist with a BSc in Wildlife Conservation; Eva is experienced in a range of ecological assessments. RCA reporting was undertaken by Katherine a Senior Field Ecologist with over three years' experience in ecological consultancy. Katherine is a qualifying member of CIEEM and is proficient in a range of protected species surveys and ecological assessments.

Ground-level tree assessments (GLTA) were undertaken by Anna Volak and assisted by Jon Foster. Anna BSc (Hons) is Senior ecologist at SLR and has over four years' experience as a consultant ecologist. Anna is a qualifying member of CIEEM. She is experienced in a variety of protected species surveys, specialising in badger and water vole surveys. She is also experienced in completing UKHab surveys and has completed numerous BNG assessments on a variety of projects.

Jon is an ecologist based in our London office. He holds an MBiol degree in Biosciences, contributing to published work in plant genomics, and prior to his start at SLR held over a years' experience working within the Environmental Sector. Since starting with SLR Jon has assisted in protected species surveying and has fulfilled Ecological Clerk of Works (ECoW) roles.

This report has been written by Emma Griffin BSc (Hons), a project ecologist and Qualifying member of the Chartered Institute of Ecology and Environmental Management.

This report has been reviewed by Jacob Ball, a Senior Ecologist at SLR with over seven years of experience in the conservation and ecological sector which has included working and managing projects in the built environment, renewable energy, minerals and infrastructure. He is also a Qualifying member of CIEEM.

The report has been quality assured by Dr Paul Clack, CEnv, MCIEEM, a Technical Director with SLR. Paul has over 20 years of experience as a professional ecologist, which has included preparing and overseeing assessments for many projects, including small and large infrastructure projects across the UK.

1.5 Relevant Legislation and Policy

The key wildlife legislation underpinning the conservation of habitats and species and National planning policies are presented in Appendix A. The relevant local planning policies are summarised in Section 1.5.1.

1.5.1 Local Plans

1.5.2 Spelthorne Borough Council[1]

Policy EN8: Protecting and Improving the Landscape and Biodiversity

The Council will seek to protect and improve the landscape and biodiversity of the Borough by:

a) safeguarding sites of international and national importance,

b) working with partners in the public, private and voluntary sectors to develop and secure the implementation of projects to enhance the landscape and create or improve habitats of nature conservation value, and to secure the more effective management of land in the Borough,

c) ensuring that new development, wherever possible, contributes to an improvement in the landscape and biodiversity and also avoids harm to features of significance in the landscape or of nature conservation interest,

d) refusing permission where development would have a significant harmful impact on the landscape or features of nature conservation value,

e) safeguarding the Borough's Common Land and working with other interested parties to protect and where appropriate enhance its nature conservation and recreational value.

1.5.3 Slough Local Plan[2]

Core Policy 9 (Natural and Built Environment)

Development will not be permitted unless it:

- Enhances and protects the historic environment.
- Respects the character and distinctiveness of existing buildings, townscapes and landscapes and their local designations.
- Protects and enhances the water environment and its margins.
- Enhances and preserves natural habitats and the biodiversity of the Borough, including corridors between biodiversity rich features.

Policy EN4 (Protection of trees)

Development will not be permitted if it would damage or destroy one or more trees which are protected by their tree preservation order designation or because they are located in a conservation area, unless:

[1] Core Strategy and Policies, Development Plan Document, Adopted February 2009, Spelthorne Borough Council. (It should be noted that the Emerging Local Plan 2024-2039 was still being consulted on at the time of writing and relevant policies are not yet available).

[2] Slough Local Development Framework, Core Strategy 2006-2026 (December 2008), Development Plan Document.

a) it would be in the interests of good arboriculture practice and/or

b) the desirability of the proposed development outweighs the amenity value of the protected trees. If the removal of one or more trees is permitted as part of a development, an equivalent number or more new trees, of similar or appropriate size and species, must be planted in the location, or as near to the location, of the removed trees, in the next available planting season.

A scheme for the subsequent maintenance and retention of the proposed planting must be established.

Policy EN22 (Protection of Sites with Nature Conservation Interest)

Special account will be taken of nature conservation interest when determining proposals for development which would be detrimental to identified and future Wildlife Heritage Sites and any other land which meets the criteria for Wildlife Heritage Sites or contains features of local ecological importance.

Any proposed development which would have a detrimental effect on such a site will be refused unless it can be demonstrated that appropriate measures can be taken to conserve the site's wildlife interest as far as possible.

Ecological appraisals will be required where proposed development is likely to threaten any nature conservation interest.

Policy EN23 (Areas of Local Nature Conservation Interest)

Encouragement will be given to the creation and enhancement of areas of local nature conservation interest by identifying them as local informal nature reserves or wildlife corridors. Sympathetic habitat management and suitable public access arrangements will be sought.

Policy EN24 (Protection of watercourses)

Development will not be permitted which will have a detrimental effect on water quality or the ecological, amenity or historical value of the watercourse. Where appropriate, measures to enhance or restore watercourses will be encouraged. In certain circumstances, the substitution of replacement features of equal or greater value, through the use of planning conditions or agreements, will be considered if there is no overall detrimental affect on water quality, ecological or amenity value.

1.5.4 London Borough of Hillingdon Local Plan[3]

Biodiversity and Geological Conservation

SO8: Protect and enhance biodiversity to support the necessary changes to adapt to climate change. Where possible, encourage the development of wildlife corridors.

Policy EM7: Biodiversity and Geological Conservation

The Council will review all the Borough grade Sites of Importance for Nature Conservation (SINCs). Hillingdon's biodiversity and geological conservation will be preserved and enhanced with particular attention given to:

1. The conservation and enhancement of the natural state of: Harefield Gravel Pits, Colne Valley Regional Park, Fray's Farm Meadows, Harefield Pit.
2. The protection and enhancement of all Sites of Importance for Nature Conservation. Sites with Metropolitan and Borough Grade 1 importance will be protected from any

[3] A Vision for 2026, Local Plan: Part 1, Strategic Policies (Adopted November 2012), London Borough of Hillingdon.

adverse impacts and loss. Borough Grade 2 and Sites of Local Importance will be protected from loss with harmful impacts mitigated through appropriate compensation.

3. The protection and enhancement of populations of protected species as well as priority species and habitats identified within the UK, London and the Hillingdon Biodiversity Action Plans.
4. Appropriate contributions from developers to help enhance Sites of Importance for Nature Conservation in close proximity to development and to deliver/ assist in the delivery of actions within the Biodiversity Action Plan.
5. The provision of biodiversity improvements from all development, where feasible.
6. The provision of green roofs and living walls which contribute to biodiversity and help tackle climate change.
7. The use of sustainable drainage systems that promote ecological connectivity and natural habitats.

2.0 Methodology

Preliminary baseline field surveys and a detailed desk study has been undertaken to collect baseline Site conditions. Methods are described below in sections 2.1 and 2.2.

2.1 Baseline Data Collection

2.1.1 Desk Study

An ecological data search for designated sites and records of protected and priority species occurring within the potential zone of influence was received in April 2025 from Thames Valley Environmental Records Centre (TVERC), Greenspace Information for Greater London (GiGL) and Surrey Biodiversity Information Centre (SBIC). To identify relevant records, records from LERCs have been collated and filtered to those recorded within a 2km radius of the cable route within the last 10 years.

The results of the data search have been provided in a linear format running north to south from the proposed data centre/BESS development site towards Laleham substation situated at Staines Road West, Ashford, Borough of Spelthorne, Surrey, England, TW15 3RT (Approximate National Grid Reference (NGR): TQ 06448 70561).

The provided Red Line Boundary (RLB) for the development is linear in shape and therefore, records may not apply to the whole route, but consideration of those species outlined are applicable where appropriate habitat for that species is found along each route length. Therefore, where habitat is present, the species outlined should be considered further and mitigation may apply depending on seasonality.

The nearest distance to the cable route for all designated sites, priority habitats, habitats and species have been provided. There are features that are found within 2 km of the proposed development area at multiple lengths. Due to the likely limited impact of the proposed development on these features only the shortest distance has been provided.

An internet-based desk study was also undertaken, using Multi-Agency Geographic Information for the Countryside (MAGIC) website. The website provided information on habitats and species of principal importance for conservation in England.

2.2 Field Survey

2.2.1 Habitat Survey

A UK Habitat Classification (UKHab) Survey[4] was undertaken by William Dent, Katherine Jones and Jacob Ball in April and May 2025. This method was extended to include preliminary checks for notable, protected, or rare species of both flora and fauna. The survey area was selected to include any trees within the zone of influence, that might be directly and indirectly impacted by the Proposed Development.

UKHab is a comprehensive classification system for the UK that has been developed in recent decades to benefit changes in habitat categorisation recording analysis. The system comprises a principal hierarchy (the Primary Habitats) which include broad habitats and priority habitats and non-hierarchical secondary codes. Habitat nomenclature and definitions have been designed to remain as close to existing systems as possible in order that data can be collected, analysed, and translated without ambiguity.

This level of survey includes the documentation of habitats to a recognised standard but also includes the recording of field evidence indicating the presence or potential presence of

[4] UKHab Ltd (2023) *UK Habitat Classification Version 2.0 (at https://www.ukhab.org)*.

species that could constitute a material consideration in planning terms, such as protected or priority plant or animal species. Notes of principal habitat types, supported by photographs were made. Whilst not a full botanical or protected species survey, the method of survey enables experienced ecologists to obtain an understanding of the ecology of a site such that it is possible either:

- to confirm the conservation significance of the project and assess the potential for impacts on habitats/species likely to represent a material consideration in planning terms, or
- to establish the scope and extent of any additional specialist ecological surveys that will be required before such confirmation can be made.

In addition, the presence of plant species included within Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (WCA) was searched for during the survey. Plants included within the schedule are considered derogated pest species that are pernicious or injurious, such as Japanese knotweed *Reynoutria japonica*, Himalayan balsam *Impatiens glandulifera* and giant hogweed *Heracleum mantegazzianum*. It is an offence under the Act to plant or cause the spread of Schedule 9 species in the wild.

2.2.2 Ground level tree assessment

A ground level tree assessment (GLTA) survey was undertaken by Anna Volak and Jon Foster on the 9th of June 2025. The survey followed the methods outlined within the BCT guidelines[5]. Those trees that were previously identified during UKHab field surveys as containing suitable roosting features for bats were assessed for features. Features were identified to outline the extent and likelihood to support one or multiple bats. Details of the locations, roost characteristics, tree species and tree heath were provided within the survey.

2.2.3 River Condition Assessment (RCA)

An RCA was undertaken by Laura Lyons and Eva Booth between the between 23rd and 25th June 2025. The survey followed best practice guidelines[6] following “MoRPH” survey methodology in which field characteristics for subreaches of a stream or river are collected across at least 20% of the total stream length within the area of proposed development[7]. Field survey data is assessed alongside desk-based study to determine the “type” based on geomorphological characteristics to provide a final condition of the watercourses on site.

2.2.4 Otter and water vole surveys

Combined otter and water vole surveys were carried out across all watercourses through the assessment of field signs for these species. Surveys were undertaken between 23rd and 25th June 2025. Surveys followed good practice standards for these species that are briefly described in subsequent sections:

2.2.4.1 Otter Survey

The otter survey involved assessing the suitability of the watercourses and habitats within the survey area in line with survey guidance. Otter field signs that were searched for, as

[5] Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London.

[6] Lucy J. Shuker *et al.* (2017) MoRPh: A citizen science tool for monitoring and appraising physical habitat changes in rivers.

[7] Gurnell, A.M. *et al.* (2019) Assessing river condition: A multiscale approach designed for operational application in the context of biodiversity net gain.

described in Bang & Dahlstrøm (2006)[8], Sargent & Morris (2003)[9] and Chanin (2003a & b)[10] [11]. Habitat characteristics assessed included:

- Water depth, quality, and likely frequency and height of water level changes, relative to bank height;
- Presence of potential couch, lay-up points, or holt locations (such as overhanging tree roots);
- Presence of spraint and spraint-marking locations (prominent features such as large rocks protruding from the watercourse, bridges, and logs);
- Presence of prey items within the watercourse or within proximity to; and
- Presence of public pressure/disturbance.

2.2.4.2 Water Vole Survey

The water vole survey also involved assessing the suitability of the watercourses and habitats within the survey area in line with survey guidance. Water vole field signs that were searched for, as described in Strachan & Moorhouse (2006)[12] and Dean *et al* (2016)[13].

Habitat characteristics assessed included:

- Bank profile and substrate (suitability for burrowing);
- Water flow and depth, and likely frequency and height of water level changes, relative to bank height;
- Amount of shading from trees and shrubs;
- Bankside herbaceous vegetation type and density;
- In-channel herbaceous vegetation type, density, and width (from toe of bank);
- Percentage of channel with herbaceous in-channel vegetation; and
- Evidence of current or recent management, and likely effects.

Any evidence found of either species was recorded and photographs were taken.

2.3 Limitations

2.3.1 Desk Study

Spatially referenced data were not available from GiGL, as such these data are relevant to the length of the development. Therefore, consideration of those species outlined are applicable where appropriate habitat for that species is found. As such, where habitat is present, the species outlined should be considered further and mitigation may apply depending on seasonality.

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[8] Bang, P. & Dahlstrøm, P. (2006). *Animal Tracks and Signs*. Oxford University Press, Oxford.

[9] Sargent, G. & Morris, P. (2003) *How to find & Identify Mammals*. The Mammal Society, London.

[10] Chanin P (2003a) Ecology of the European Otter. Conserving Natura 2000 Rivers, Ecology Series No. 10. English Nature, Peterborough

[11] Chanin P (2003b) Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No 10. English Nature, Peterborough

[12] Strachan, R., Moorhouse, T. & Gelling, M. (2011) *The Water Vole Conservation Handbook*. Third Edition, Wildlife Conservation Research Unit, University of Oxford, Abingdon.

[13] Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) *The Water Vole Mitigation Handbook (Mammal Society Mitigation Guidance Series)*. Eds Fiona Mathews and Paul Chanin. Mammal Society, London.

Three individual 2 km radius searches were undertaken from different sections along the route length, as such, it is possible that records may overlap. This is not considered to be a significant limitation as all relevant records have been included.

Desk study data is unlikely to be exhaustive, especially in respect of species, and is intended mainly to set a context for the study. It is therefore possible that important habitats or protected species not identified during the data search do in fact occur within the vicinity of the site. Interpretation of maps and aerial photography has been conducted in good faith, using recent imagery, but it has not been possible to verify the accuracy of any statements relating to land use and habitat context outside of the field study area.

The evidence set out in this report describes the characteristics of the Site at the time at which the survey was undertaken. Many species of wildlife are highly mobile by nature and will routinely take advantage of new opportunities, which arise within their home ranges[14] (CIEEM, 2019). Over time this will alter the baseline conditions present at the Site. Should there be delays in the delivery of this project, it is possible that the baseline ecology will change. In the event of a significant delay (24 months) between the baseline survey and commencement of works at the Site, advice on the implications of potential changes at the Site should be sought from a suitably experienced ecologist.

2.3.2 Field Survey

Areas of private landholdings within the 20 m buffer zone were not freely accessible, therefore observations of habitat types and species composition were at time limited to that which could be seen from adjacent habitats. Due to the location of works (primarily in highway) and methods to be applied for construction this was not seen as a limiting factor.

GLTA were undertaken when trees were in leaf and views may be obstructed. All trees of suitable maturity to contain Potential Roost Features (PRFs) were however surveyed fully and roost features readily identifiable. The proposed works are not to impact any trees and generally remain within the highway network, as such this was not seen as a significant limitation.

Assessments of all areas where water course crossing could potentially occur were made in full. Further assessment of the upstream and downstream reaches relevant to the water crossing were made where possible, allowing for the characteristics of the onsite habitats to be determined. As such, this is only seen as a partial limitation to the findings of this report and is only applicable to the Horton Road Bridge and Hithermoor Stream, neither of which will be directly impacted by the works.

Ecological studies provide only a ‘snapshot’ of the conditions prevailing at the time of survey. Lack of evidence of any one protected species does not necessarily preclude them from being present on site at a later date. Whilst it is considered unlikely that any significant evidence of protected or otherwise notable mammal species has been overlooked, due to the nature of the subjects of ecological surveys it is feasible that species that use the site may not have been recorded by virtue of their seasonality, cryptic behaviour, habit or random chance. It is considered unlikely, however, that additional surveys of the site at this time would materially alter the conclusions of this report.

[14]CIEEM Advice note (2019) On the Lifespan of Ecological reporting and Surveys. Available from: www.cieem.net

3.0 Results

3.1 Desk Study

Data was searched for within TVERC, SBIC and GiGL, results of the desk study are provided for statutory sites, non-statutory sites and priority habitats along the Project.

3.1.1 Designated Sites

3.1.1.1 Statutory Designated Sites

There are six statutory designated sites within 2 km from the Proposed Development The location of the statutory sites in relation to the cable route are presented below in Table 3-1.

Table 3-1: Statutory Designated Sites within 2 km

Site Name	Designation	Area (ha)	Distance to Route (m)	Feature
South West London Waterbodies	Special Protection Area (SPA) and Ramsar site	830	Adjacent	Internationally important numbers of gadwall *Anas strepera* and shoveler *Anas clypeata*
South West London Waterbodies	Ramsar Site	830	Adjacent	The site qualifies under Ramsar criterion 6 due to the presence of internationally important numbers of the following qualifying species: • A051 Gadwall, *Mareca strepera*, (non-breeding) • A056 Northern Shoveler, *Spatula clypeata*, (non-breeding)
Wraysbury Reservoir	SSSI	205	Adjacent	Nationally important numbers of wintering cormorant *Phalacrocorax carbo*, great crested grebe *Podiceps cristatus* and shoveler *Anas clypeata.*
Staines Moor	Site of Special Scientific Interest (SSSI)	510	Adjacent	Nationally important populations of wintering wildfowl and rare aquatic flora
Arthur Jacob Nature Reserve	Local Nature Reserve (LNR)	4	480	Wetland habitats featuring dragonflies and butterflies.
Bedfont Lakes	LNR	31	1907	Over 350 plant species, 156 species of birds, 24 species of butterfly, 124 species of moth, 20 species of dragonflies and damselflies, 58 species of spider, 97 species of fungi, 4 species of amphibians and 20 species of mammal.

3.1.1.2 SSSI Impact Risk Zones

A SSSI Impact Risk Zone is a defined zone around each SSSI in England that reflect the particular sensitivities of the features for which they are notified and indicate the types of

development proposal that could potentially have adverse impacts. Developments of a certain size and nature that fall within SSSI Impact Risk Zones, require the Local Planning Authority (LPA) to consult with Natural England (NE) to determine whether the proposed development is likely to have an impact upon the SSSI.

The Proposed Development is within Staines Moor SSSI Impact Risk Zone at the north of the SSSI boundary (approximately NGR TQ 03500 75496) and at the junction of Stanwell New Rd and London Rd (approximately NGR TQ 04498 71966), as such NE should be consulted prior to the beginning of works as part of the planning application process.

3.1.1.3 Non-Statutory Designated Sites

Eighteen non-statutory designated sites are found within 2 km of the Proposed Development. Further details of identified sites are found in Table 3-2 below. These included Sites of Nature Conservation Importance (SNCIs), a Local Wildlife Site (LWS) and a Conservation Road Verge.

Table 3-2: Non-Statutory Designated Sites within 2km

3.1.1.4 Priority Habitats

There are 10 priority habitat classifications within 2 km of the Proposed Development. Three priority habitats (woodland pasture and parkland, deciduous woodland and lowland

Site Name	Designation	Area (ha)	Distance from Route (m)
Stanwell II	SNCI	5.7	Adjacent
Shortwood Common North	SNCI	5.2	Adjacent
Queen Mary Reservoir	SNCI	320.2	Adjacent
River Colne (from County Boundary to Staines Moor). Stanwell Moor	SNCI	5.5	Adjacent
East of Poyle Meadows	SNCI	2.9	Adjacent
Greenham's Fishing Pond	SNCI	0.5	20
Wraysbury Reservoir	SNCI	48.5	30
West of Queen Mary Reservoir	SNCI	40.1	100
West of Poyle Meadows	SNCI	1.2	175
Birch Green by River Ash	SNCI	5.3	410
River Thames - Spelthorne	SNCI	69.6	950
River Thames - Runnymede	SNCI	49.3	988
Old Slade Lake	LWS	28.3	1702
Church Lammas	SNCI	8.7	1427
Princes Lake	SNCI	47.9	1115
Hilda May Lake	SNCI	5.8	1849
Moor Lane Nature Reserve	SNCI	4.27	1850
Chandos Road	Conservation Road Verge	0.25	1910

meadows) are found within the RLB. Woodland pasture and parkland and lowland meadows are found outside of the Proposed Development but within 20 m of the works. Deciduous woodland is found along the Proposed Development. These habitats are associated with designated sites, notably Staines Moor SSSI. None will be directly impacted.

Table 3-3: Priority Habitats within 2km

Habitat	No. of Areas	Closest to Route (m)	Approximate associated location/s (NGR)
Wood pasture and parkland (part of Shortwood Common which itself is part of the Staines Moor SSSI)	1	0	TQ 04523 71941
Deciduous woodland*[1]	148	0	TQ 03665 75434; TQ 03778 75367; TQ 03880 75316; TQ 04769 74330; TQ 05881 71161
Lowland meadows*[2]	10	0	TQ 03500 75496
Good quality semi-improve grassland (non-priority)	12	0	TQ 04523 71941
Ponds and lakes	2	178	TQ 04720 71951
Traditional orchard	9	509	TQ 04410 75700
Lowland fens	3	606	TQ 02312 75945
Lowland dry acid grassland	9	1225	TQ 03449 73879
Coastal and floodplain grazing marsh	5	1023	TQ 03557 73443
Ancient & semi natural woodland	2	1205	TQ 06078 69565

*[1]Situated approximately 1-1.5km into the Project route in the centre of the junction on the M25.

*[2]Situated approximately 1 km into the Project route within the RLB at the Wraysbury River.

3.1.2 Species

3.1.2.1 Plants

Protected Plant Species

Schedule 8 of the Wildlife and Countryside Act (WCA) 1981 lists endangered plant species which are protected by law from being picked, uprooted or destroyed. The data search returned one record of a schedule 8 species, English bluebell *Hyacinthoides non-scripta*, approximately 941 m from the Project.

No threatened plant species were identified within the data search.

Invasive Species

Schedule 9 of the WCA lists invasive non-native species (INNS) that are already established in the wild, which continue to pose a conservation threat to native biodiversity and habitats. Restrictions are in place for those listed under Schedule 2 Part 2 of the Invasive Alien Species Order (IASO). Species listed as ‘Priority’ or ‘Rapid’ under the Great Britain INNS Strategy (INNS Strategy List[15]) have been included.

[15] The Great Britain invasive non-native species strategy (2015) available from; https://www.gov.uk/government/publications/the-great-britain-invasive-non-native-species-strategy

The data search returned 32 records of 12 INNS within 2 km of the proposed development. Further details of species identified number of records and distance from the Project are found in Table 3-4 below.

Table 3-4: Invasive Species within 2 km

Common Name	Scientific Name	Legislation			No. of Records	Closest to Route (m)
		WCA Sch9	IASO Sch2	INNS Strategy List		
New Zealand pigmyweed	*Crassula helmsii*	✓	✓	✓	1	219
Parrot's-feather	*Myriophyllum aquaticum*	✓	✓	✓	1	219
Himalayan balsam	*Impatiens glandulifera*	✓	✓	✓	1	232
Butterfly-bush	*Buddleja davidii*			✓	1	232
Gammarid shrimp	*Crangonyx pseudogracilis/floridanus*			✓	18	339
Demon shrimp	*Dikerogammarus haemobaphes*			✓	2	339
Japanese Knotweed	*Reynoutria japonica*	✓	✓	✓	1	439
Eastern grey squirrel	*Sciurus carolinensis*	✓	✓	✓	2	812
Chinese muntjac	*Muntiacus reevesi*	✓	✓	✓	2	941
Water fern	*Azolla filiculoides*	✓	✓	✓	1	1245
Egyptian goose	*Alopochen aegyptiaca*	✓	✓	✓	1	1264
Zebra mussel	*Dreissena polymorpha*	✓	✓	✓	1	1688

3.1.2.2 Invertebrates

The data search returned 77 records of 14 species of invertebrate identified on Schedule 5 of the WCA and Section 41 of the NERC Act. Further details of species identified within 1km, number of records and distance from the Project are found in Table 3-5 below.

Table 3-5: Invertebrates within 2km

Common Name	Scientific Name	Protections			No. of Records	Closest to Route (m)
		NERC S41	WCA Sch5	UKBAP		
Small heath	*Coenonympha pamphilus*	✓		✓	32	20
Stag beetle	*Lucanus cervus*	✓	✓	✓	30	29

Common Name	Scientific Name	Protections			No. of Records	Closest to Route (m)
		NERC S41	WCA Sch5	UKBAP		
White-letter hairstreak	*Satyrium w-album*	✓	✓	✓	5	45
Green-brindled crescent	*Allophyes oxyacanthae*	✓		✓	1	941
Rustic	*Hoplodrina blanda*	✓		✓	1	941
Beaded chestnut	*Agrochola lychnidis*	✓		✓	1	941

3.1.2.3 Amphibians

All common amphibian species receive limited protection from harm under Schedule 5 of the WCA. Great crested newts *Triturus cristatus* receives additional protection as a European Protected Species (EPS) under the Conservation of Habitats and Species Regulations 2017 (as amended), commonly referred to as the Habitats Directive.

The desk study returned one record of common frog *Rana temporaria* at 567 m from the Project.

A single record of great crested newt was returned in the desk study, though a precise location was not available. No records of great crested newt licences were returned from the desk study.

3.1.2.4 Reptiles

All species of common reptiles receive limited protection from harm under Schedule 5 of the WCA.

The data search returned one record of grass snake *Natrix helvetica* at 1482 m from the Project.

3.1.2.5 Birds

All naturally occurring wild birds in the UK are protected from persecution under the WCA. It is illegal to harm any wild bird, damage their eggs and destroy their nests whilst in use or being built. Bird species listed on Schedule 1 of the WCA are afforded extra legal protection concerning the disturbance of their young and interference whilst nesting. Birds listed as red on the Birds of Conservation Concern 5 (BoCC5)[16] list are those with a high conservation concern.

The desk search returned 276 records of 43 species of bird species within 2 km of the proposed development. Further details of species identified, number of records and distance from the proposed development are found in Table 3-6 below.

[16] Stanbury et al. (2021) British Birds. *The Status of our bird populations: the fifth birds of conservation concern in the United Kingdom, Channel Islands and The Isle of Man, and Second IUCN Red List Assessment of extinction risk for Great Britain.*

Table 3-6: Birds within 2km

Common Name	Scientific Name	Protections			No. of Records	Closest to Route (m)
		NERC S41	WCA Sch1	BoCC5 Red		
House sparrow	*Passer domesticus*	✓		✓	6	51
Spotted flycatcher	*Muscicapa striata*	✓		✓	8	102
Tree pipit	*Anthus trivialis*	✓		✓	6	102
Brambling	*Fringilla montifringilla*		✓		6	102
Red kite	*Milvus milvus*		✓		14	102
Yellow wagtail	*Motacilla flava flavissima*	✓		✓	17	102
Dartford warbler	*Curruca undata*		✓		10	102
Swift	*Apus apus*			✓	5	102
Fieldfare	*Turdus pilaris*		✓	✓	10	102
Whinchat	*Saxicola rubetra*			✓	16	102
Bullfinch	*Pyrrhula pyrrhula*	✓			8	102
Hobby	*Falco subbuteo*		✓		3	102
Cuckoo	*Cuculus canorus*	✓		✓	7	102
Reed bunting	*Emberiza schoeniclus*	✓			2	102
White-fronted goose	*Anser albifrons*			✓	2	102
Marsh harrier	*Circus aeruginosus*		✓		1	183
House martin	*Delichon urbicum*			✓	2	183
Shore lark	*Eremophila alpestris*		✓		1	221
Wood sandpiper	*Tringa glareola*		✓		1	227
Garganey	*Spatula querquedula*		✓		2	227
Redwing	*Turdus iliacus*		✓		5	252
Ringed plover	*Charadrius hiaticula*			✓	13	252
Lapwing	*Vanellus vanellus*	✓		✓	17	252
Dunlin	*Calidris alpina*			✓	4	252
Green sandpiper	*Tringa ochropus*		✓		37	252
Dunnock	*Prunella modularis*	✓			8	252

Common Name	Scientific Name	Protections			No. of Records	Closest to Route (m)
		NERC S41	WCA Sch1	BoCC5 Red		
Starling	*Sturnus vulgaris*	✓		✓	6	252
Whimbrel	*Numenius phaeopus*		✓	✓	4	252
Linnet	*Linaria cannabina*	✓		✓	3	252
Skylark	*Alauda arvensis*	✓		✓	1	252
Song thrush	*Turdus philomelos*	✓			9	252
Greenshank	*Tringa nebularia*		✓		1	252
Peregrine	*Falco peregrinus*		✓		1	252
Pintail	*Anas acuta*		✓		1	252
Greenfinch	*Chloris chloris*			✓	7	252
Cetti's warbler	*Cettia cetti*		✓		8	287
Kingfisher	*Alcedo atthis*		✓		2	386
Goldeneye	*Bucephala clangula*		✓	✓	3	509
Lesser redpoll	*Acanthis cabaret*	✓			1	941
Marsh tit	*Poecile palustris*	✓		✓	1	1257

3.1.2.6 Mammals

Bats

Bats are protected from killing, injury, damage or destruction or obstruction of a resting place and disturbance while occupying a structure or place which it uses for shelter or protection' under Schedule 5 of the WCA and Schedule 2 of the Conservation of Habitats and Species Regulations (2017) (as amended), meaning all bats are also EPS.

The desk search returned 68 records of seven species of bat within 2 km of the Proposed Development. Further details of species identified number of records and distance from the Proposed Development are found in Table 3-7 below.

The desk search retuned three records of granted EPS Licences for bats within 2 km of the Proposed Development. Further details are provided in Table 3-8 below.

Table 3-7: Bats within 2km

Common Name	Scientific Name	Protections			No. of Records	Closest to Route (m)
		NERC S41	HabReg Sch2	WCA Sch5		
Soprano pipistrelle	*Pipistrellus pygmaeus*	✓	✓	✓	23	15
Common pipistrelle	*Pipistrellus pipistrellus*		✓	✓	18	15

Common Name	Scientific Name	Protections			No. of Records	Closest to Route (m)
		NERC S41	HabReg Sch2	WCA Sch5		
Noctule	*Nyctalus noctula*	✓	✓	✓	10	15
Nathusius's pipistrelle	*Pipistrellus nathusii*		✓	✓	4	54
Daubenton's bat	*Myotis daubentonii*		✓	✓	6	54
Natterer's bat	*Myotis nattereri*		✓	✓	1	54
Brown long-eared bat	*Plecotus auritus*	✓	✓	✓	4	152
Long-eared bat species	*Plecotus sp.*		✓	✓	1	1298
Pipistrelle species	*Pipistrellus sp.*		✓	✓	1	1776

Table 3-8: Granted EPSLs within 2km

Case Reference	Common Name	Scientific Name	Impacts	Licence End Date	Distance to Route (m)
EPSM2013-5923	Common pipistrelle	*Pipistrellus pipistrellus*	• Affects Breeding Place • Destroys Breeding Place • Destroys Resting Place	30/08/2015	1167
2020-49504-EPS-MIT	Soprano pipistrelle	*Pipistrellus pygmaeus*	• Affects Breeding Place • Destroys Breeding Place • Destroys Resting Place	13/10/2030	1412
EPSM2013-5530	Soprano pipistrelle	*Pipistrellus pygmaeus*	• Destroys Resting Place	31/08/2014	1547

Badger

Badgers are protected under the Protection of Badgers Act 1992, which makes it illegal to kill, injure, or take a badger, or to damage, destroy, or obstruct access to their setts (burrows). Additional protection is offered under the WCA 1981, and specific licences must be obtained for any activities that may affect badgers or their habitats, including development or control measures.

The desk search returned no records of badgers or their resting places within 2 km of the Proposed Development.

Otter and Water Vole

Otter and water vole are protected from deliberate capture, killing, injury or disturbance under Schedule 5 of the WCA 1981 (as amended) and the Conservation of Habitats and

Species Regulations (CHSR) 2017. Otter and water vole are both a priority species under the NERC Section 41 and are EPS.

The desk search returned one record of otter *Lutra lutra* located 1167 m from the Proposed Development.

Fish

The desk search returned one record of a notable fish species, bullhead *Cottus gobio* located 389 m from the Project. Bullhead is listed on Annex II of the Habitats Directive, as species of European interest from a conservation aspect.

Hazel dormouse

Hazel dormouse are fully protected under the WCA 1981 and the Habitats Directive, as such it is an offence to damage or destroy their breeding and/or resting places. Hazel dormouse is also therefore an EPS.

The desk search returned no records of hazel dormouse within 2 km of the Proposed Development.

Other Mammals

All mammals are protected from cruel treatment under the Wild Mammals Protection Act (1996). The Deer Act (2004) protects wild deer species from killing or injury. Additional limited protections are afforded to those mammals listed Schedule 5 of the WCA. Section 41 of the NERC Act also identifies mammals that are of conservation priority.

The desk search returned 20 records of three other species of mammal within 2 km of the Proposed Development. Further details are provided in Table 3-9 below.

Table 3-9: Mammals within 2km

Common Name	Scientific Name	Protections	No. of Records	Closest to Route (m)
Hedgehog	*Erinaceus europaeus*	NERC-S41	14	46
Roe Deer	*Capreolus capreolus*	Deer Act 1991	5	436

3.2 Field Survey

3.2.1 Habitats

The results of the UKHab survey are illustrated within Appendix B at the end of this report and are listed below in approximate order of dominance, summarised in Table 3-10 and described in Appendix C. Habitats have been mapped in using the fine scale minimum mappable unit (mmu) (25 m^2, 5 m length), in accordance with the UKHab classification manual[17].

The following habitats are found along the proposed development in approximate order of dominance:

- u1b6 – Other developed land
    - 800 – Road
    - 801 – Road verge or island
    - 827 - Garden
    - 816 – Commercial premises open space
- u1b5 – Buildings
    - 818 – Residential building
    - 817 – Industrial building
    - 815 – Commercial building
- g4 – Modified grassland
    - 801 – Road verge or island
    - 106 – Mown
    - 102 – Sheep grazed
    - 10 – Scattered scrub
    - 16 – Tall forbs
    - 32 – Scattered trees
    - 516 – Active management
    - 100 – Grazed
    - 203 – Mature tree
    - 87 – Pocket park
- w1f – Lowland mixed deciduous woodland (non-priority)
    - 30 – Semi-natural woodland
    - 214 – Fallen deadwood abundant
    - 215 – Standing deadwood abundant
    - 521 – Unmanaged
- w1f7 – Other lowland mixed deciduous woodland (priority)

[17] The UK Habitat Classification Working Group (September 2020) The UK Habitat Classification User Manual Version 1.1.

  - 30 – semi-natural woodland
- w1g – Other broadleaved woodland
  - 33 – Line of trees
- w1h5 – Other woodland, mixed, mainly broadleaved
  - 30 – semi-natural woodland
- g3c – Other neutral grassland
    106 – Mown
- h2 – Hedgerow
  - 11 – Hedgerow with trees
  - 116 – Flailed
  - 516 – Actively managed
- h3h – Mixed scrub
  - 32 – Scattered trees
- h3f – Hawthorn scrub
  - 32 – Scattered trees
- h3d – Bramble scrub
  - 32 – Scattered trees
  - 517 – Recent management
- r2b – Other rivers and streams (non-priority)
- u1 80 – Urban, Open mosaic (non-priority)
- w2c – Other coniferous woodland
  - 33 – Line of trees

Table 3-10 Summary of surveyed UKHab habitats.

Summary of Habitats on Site
Grassland
g4 - Modified grassland
There were 26 areas of modified grassland identified within the Proposed Development. The majority of these were mown (106). Two areas of modified grassland were sheep grazed (102), one had scattered scrub (10), one had tall forbs (16), one had scattered trees (32), one was being actively managed (516), one was being grazed (100), one had a mature tree (203), and one was a pocket park (807). Species assemblages were consistent throughout the grassland habitats comprised common grassland species with a mixed order of dominance such as common bent *Agrostis capillaris*, creeping bent *Agrostis stolonifera*, Yorkshire fog *Holcus lanatus*, timothy *Phleum pratense*, brome sp. *Bromus* spp., meadow foxtail *Alopecurus pratensis*, ryegrass *Lolium* spp., cock's-foot *Dactylis glomerata*, false oat-grass *Arrhenatherum elatius*, dandelion *Taraxacum officinale* agg., bristly oxtongue *Helminthotheca echioides*, red dead-nettle *Lamium purpureum*, cut-leaved cranesbill *Geranium dissectum*, bird's-foot trefoil *Lotus corniculatus*, common vetch *Vicia sativa*, hop trefoil *Trifolium campestre*, thistle sp. *Cirsium* spp./*Carduus* spp., common hogweed *Heracleum sphondylium*, greater dock *Rumex obtusifolius*, dock sp. *Rumex sp.*, creeping buttercup *Ranunculus repens*, red clover *Trifolium pratense*, white clover *Trifolium repens*, common daisy *Bellis perennis*, and hawkbit sp. *Leontodon* spp./*Scorzoneroides* spp.

Summary of Habitats on Site
Woodland
w1f - Lowland mixed deciduous woodland
There were nine areas of lowland mixed deciduous woodland within the Project, and all are within the first 4 km of the route. Six areas of lowland mixed deciduous woodland were semi-natural woodland (30), and one area was also fallen deadwood abundant (214), standing deadwood abundant (215), and unmanaged (521). Species assemblages were consistent throughout woodland habitats comprised English oak *Quercus robur*, ash *Fraxinus excelsior*, London plane *Platanus* × *acerifolia*, Norway maple *Acer platanoides*, field maple *Acer campestre*, common beech *Fagus sylvatica*, hawthorn *Crataegus monogyna*, sycamore *Acer pseudoplatanus*, poplar *Populus tremula*, cherry laurel *Prunus laurocerasus*, and elder *Sambucus nigra*.
w1f7 - Other lowland mixed deciduous woodland
There were 12 areas of other lowland mixed deciduous woodland within 20 m of the cable route, all located around the 4 km-6 km chainage of the route and all areas were semi-natural woodland (30). Species include ash, hawthorn, beech, and weeping willow *Salix babylonica*.
w1g - Other broadleaved woodland
Three areas of other broadleaved woodland were identified within the Proposed Development, and all were located near the 8 km mark of the route. One of the areas was a line of trees (33). Tree species included field maple, hawthorn, English oak, beech, ash, elder, willow *Salix* spp., poplar *Populus* spp., and wild cherry *Prunus avium*. Ground flora was typical of the habitat type species comprised bramble *Rubus fruticosus* agg., cleavers *Galium aparine*, lords and ladies *Arum maculatum*, dock *Rumex* spp., dandelion, ivy *Hedera helix* and nettle *Urtica dioica*.
w1h5 - Other woodland; mixed; mainly broadleaved
Five areas of other woodland; mixed; mainly broadleaved identified within the Proposed Development. Three of these areas were to the north of the reservoirs, and two were to the south. All of the areas were semi-natural woodland (30). The species assemblage was consistent between the habitat parcels and comprised Scots pine *Pinus sylvestris*, ash, hawthorn, cherry laurel, oak, and beech *Fagus sylvatica*.
w2c – Other coniferous woodland
Two areas of coniferous woodland were identified within the Proposed Development, close to the 2 km mark. These were both lines of pine trees (33). Species where dominated by leylandii *Leylandii sp.*
Hedgerows
h2a6 – Other native hedgerows
Four hedgerows were identified within the Proposed Development. Two were hedgerows with trees (11), two were flailed (116), and two were actively managed (516). The species assemblage was consistent between the habitat parcels and comprised field maple, hawthorn, blackthorn *Prunus spinosa*, English oak, ash, rose *Rosa* spp., beech, elder, and bramble and common privet *Ligustrum ovalifolium*.
h2b – Non-native hedgerow
Two non-native hedgerows were identified at the end of the Proposed Development route within the industrial park east of Poyle road. The species assemblage was dominated by copper beech *Fagus sylvatica 'Cuprea'*, with abundant bramble and rare ash. Further examples of this habitat included the following species cherry laurel, holly *Ilex aquifollium*, yew *Taxus spp.*, and Norway maple.
Scrub
h3d - Bramble scrub

Summary of Habitats on Site
One area of bramble scrub was identified at the start of the Proposed Development. Species included bramble, cleavers, and a bluebell hybrid *Hyacinthoides x massartiana*. Scattered trees (32) of sycamore and non-native black locust *Robinia pseudoacacia* were present, and the area had been recently managed (517).
h3f - Hawthorn scrub
Three areas of hawthorn scrub were identified within the Proposed Development and were all located between the reservoirs. Two of these areas had scattered trees (32). Habitat parcels were dominated by hawthorn only.
h3h - Mixed scrub
Four areas of mixed scrub were identified within 20 m of the Proposed Development. One area contained scattered trees (32). Species include bramble, blackthorn, hawthorn, hemlock *Conium maculatum*, dandelion, nettle, cleavers, dock *Rumex* spp., lords and ladies, ragwort *Jacobaea vulgaris*, cow parsley *Anthriscus sylvestris* and vetch species *Vicia* spp.
Rivers and Streams
r2b – Other rivers and streams
There are 16 areas of rivers and streams identified within the Proposed Development. These include ditches, the River Ash, Wraysbury River, Hithermoor Stream, River Colne, and Staines Reservoirs Aqueduct. The rivers are slow flowing lentic habitats with good marginal vegetation. Vegetation is dominated by rushes and sedges, with the exception of the Wraysbury River that contains dense stands of Japanese knotweed and Himalayan balsam. The Wraysbury River is a slow flowing river, a tributary of the Colne. The banks are dense with vegetation such as iris, Himalayan balsam, Japanese knotweed, bramble scrub, semi-mature ash and willows *Salix sp.*. The river is approximately 3-4 m wide running north to south alongside the M25.
Urban
Built-up areas and gardens u1, developed land; sealed surface u1b, built linear features u1e, sparsely vegetated urban land u1f
The majority of the Proposed Development is within 20 m of built up areas and gardens, and mostly contained within sealed road carriageway and pedestrian footpath (800). There are car parks (804), gardens (827), buildings (u1b5), including industrial buildings (815), development sites (805), fences (612), and tracks (839) within 20m of the Project. There is a small area at the beginning of the route that is comprised of u1 80 – Urban, open mosaic (non-priority).

3.2.1.1 Natural England Priority Habitat Inventory

There were 19 areas of lowland mixed deciduous woodland (w1f) identified during the UKHab Classification survey, which are Habitats of Principal Importance (HPI), as listed under Section 41 of the NERC Act (2006). 11 of these were recorded as other lowland mixed deciduous woodland (w1f7), a subset of the priority habitat.

3.2.2 Species

3.2.2.1 Plants

Protected Plant Species

The field survey did not identify any protected plant species within the survey area. No other notable plant species were identified within the surveyed area, and only plants typical of grassland, scrub and woodland communities were recorded during the survey.

Invasive Plant Species

Invasive non-native plant species (INNS) were identified within the development area for the project, most notably the presence of Japanese knotweed, Himalayan balsam and cotoneaster *Cotoneaster* s*p.*

- Japanese knotweed was identified on the banks of the Wraysbury River.
- Himalayan Balsam was identified on the banks of the Wraysbury River and the banks of the River Colne.
- Cotoneaster was identified on the roadside within a private garden (centroid approximately NGR TQ 03374 75597).

3.2.2.2 Invertebrates

No formal invertebrate surveys were undertaken, no notable invertebrates were identified during the survey within 20 m of the Proposed Development. The habitats found within the Proposed Development area provide **negligible** suitability for significant assemblages of notable invertebrates.

3.2.2.3 Fish

No formal surveys for fish were undertaken, however, the Proposed Development incorporates rivers and streams that are suitable for fish species. An ad-hoc record of common rudd *Scardinius erythrophthalmus* was identified through other ecological investigations.

The Wraysbury River, the only watercourse that may be open-cut, is likely to support a typical range of coarse fish species, though **no significant populations** are expected to occur.

3.2.2.4 Amphibians

No formal amphibian surveys were undertaken for the Proposed Development and no amphibians were identified within the development area during the survey.

The Proposed Development includes 11 rivers and/or streams multiple of which provide slow flowing environments that are potentially suitable for some amphibians. The proposed development area does provide limited areas of suitable terrestrial habitat for hibernating and/or resting amphibians. The habitats within the proposed development area have been assessed as having **low** suitability for amphibians, as such they shall be discussed further.

3.2.2.5 Reptiles

No formal reptile surveys were undertaken for the development and no reptiles were identified within the development area during the survey.

The Proposed Development area offers limited suitable habitat for reptiles and all suitable habitat areas are well managed for amenity purposes. As such, the proposed development area has been assessed as providing **negligible** value for reptiles and they shall not be discussed further.

3.2.2.6 Birds

The Proposed Development has a range of habitats within 20 m that are suitable for nesting birds such as woodland, scrub, and hedgerows.

No formal bird surveys were undertaken for the Proposed Development. Field surveys identified red kite *Milvus milvus,* a Schedule 1 species flying over the route. No other notable bird species were identified during the field survey.

The Proposed Development provides suitable habitat for nesting birds in patches throughout the length of the route. The proposed development area has been assessed as providing **low** suitability for nesting birds and shall be considered further.

3.2.2.7 Mammals

Bats

Multiple individual trees were assessed as having PRF along the length of the Proposed Development, however, where areas of baseline disturbance were high from the roadway and works also proposed within the highway outside of the root protection zone for all such trees / using sensitive techniques, the need for further investigation was not deemed necessary.

GLTAs were undertaken on a further 13 trees to allow for assessment of micro-siting during the works to reduce likelihood of disturbance on potential bat roosts. Two trees were identified as having a PRF-I and the remaining 11 trees as containing PRF. Results of the GLTA surveys are displayed within Appendix D.

The Proposed Development area has been assessed as providing **negligible** suitability for foraging and/or commuting bats and **low** suitability for roosting bats. As such, roosting bats shall be discussed further.

Badger

The field survey did not identify any setts or resting places within the Proposed Development. There is suitable habitat to support the creation of setts within the Proposed Development, however, the habitats available are limited and small in extent for the majority of the Proposed Development. There is a small patch of woodland at the south of the Proposed Development that provides suitable habitat for sett building and a sett was identified here beyond 30m from the works area during the walkover on 20/08/2025, as such the site is assessed as having **Low** potential for sett architecture.

The survey did not identify any mammal pathways within the Proposed Development area. The majority of the site does not provide suitable habitat for foraging badger, however, there is potential for commuting badger to utilise the Project area. The Project is therefore assessed as having **low** potential for foraging and/or commuting badger.

Otter and Water Vole

The field surveys did not identify any signs or otter and/or water vole within the Proposed Development area, including during the desiccated surveys for these species including the crossing point of the Wraysbury River. Despite this, there is potential for the habitats on site to provide suitable resting and foraging and/or commuting habitat for otter and water vole in the future.

Otter in particular are a highly mobile species, good practice working methods to reduce impact are prescribed in subsequent sections and further described in the project's EcIA.

Other Mammals

An active rabbit warren was identified within the Proposed Development area (centroid approximately NGR TQ 06303 70870). No other mammals were identified within the Proposed Development area, and the habitats with the development area are not deemed suitable to support any significant mammal populations. As such, the development area is of **negligible** suitability for other mammal populations, and they shall not be considered further.

4.0 Ecological Constraints and Opportunities

4.1 Designated Sites

4.1.1 Statutory Designated Sites

A total of six statutory designated sites are located adjacent to and within the project boundary (Section 3.1.1.1). Whilst adjacent to or within the Proposed Development area, the proposed works are to be generally within the roadway and as such shall not directly impact the statutory designated sites. The single watercourse that may be open cut, the Wraysbury River, is not within a designated site at the potential crossing point.

There is potential for the development to impact Staines Moor SSSI and SPA through accidental pollution, as such appropriate control measures shall be required when working within the risk zones of these sites, details of which must be provide within a CEMP and the associated EcIA[18]. This includes such controls should the Wraysbury River be crossed using open-cut technique.

4.1.2 Non-Statutory Designated Sites

The Proposed Development area is within proximity to multiple non-statutory sites the closest of which being within 100m of the Proposed Development area (Section 3.1.1.2). Whilst within potential areas of impact the proposed works are to be retained within the roadway and as such no direct impacts shall occur from the development. Suitable measures should be undertaken to control pollution and dust. Measures must be outlined within the relevant CEMP and follow guidance provided within the associated EcIA[18].

4.1.3 Priority Habitats

Three priority habitats, lowland meadow and retained lowland woodland, are found within adjacent areas to the Proposed Development area. All works are to be undertaken within the highway boundary. Control measures are to be applied to limit impacts to surrounding habitats, the details of which are to be outlined within a CEMP. Further measures are considered within the relevant EcIA[18].

4.2 Invasive Plant Species

Three INNS were identified within the Proposed Development area (Section 3.2.2.1). The development may involve earthworks and access to areas where INNS are located which shall create a risk of spread for these species, notably around the Wraysbury River. As such, an INNS management plan must be prepared before the works are to commence. This should outline the necessary precautions and procedures to reduce the risk of spread of the INNS identified.

4.3 Fish

The only location where fish could be directly impacted by the works is the potential open-cut crossing of the Wraysbury River. Further details on control measures to avoid accidental fish mortality should be provided within the CMP and CEMP. At the time of writing, it is understood that complete dewatering of the channel will not be required, so fish translocation / rescue will not be required.

[18] Ecological impact Assessment, Manor Farm Cables Laleham Substation Corridor DRAFT (2025) SLR Consulting.

As other sections of the Proposed Development will be within close proximity to watercourses where earthworks may be required for trenchless solutions, pollution and runoff control measures should be provided within the associated CEMP for the development.

4.4 Amphibians

The Proposed Development area has been identified as providing limited suitability for amphibians. The Proposed Development is not going to impact any open water habitat that would provide suitability for breeding amphibians as the use of trenchless solutions shall be applied to all crossings.

There is potential for the development to impact habitat suitable for hibernating and/or resting amphibians. As such, any vegetation to be cleared shall be done in a direction manner cutting towards retained habitat and using a two-stage clearance method. The details of the vegetation clearance must be provided within an Ecological Methods Statement (ECMS) outlined within the CEMP. Due to the limited extent of suitable habitat available for amphibians within the proposed development area, no further precautions are required.

4.5 Birds

The proposed development area provides suitable habitat for nesting birds within sections of the route, notably areas of scrub and woodland habitat. The desk study has not provided any details on rare and/or specifically protected bird species that may use the onsite habitats, as such no further surveys are required.

Vegetation should be cleared following methods outlined within an ECMS. Clearance should, where possible, avoid the breeding season for birds (March to early August inclusive), should clearance of suitable habitat occur during this period a nest check shall be required by a suitably trained ecologist and shall be valid for a period of 48 hours. Should any active nests be found, appropriate mitigation will be required until nesting is complete.

4.6 Mammals

4.6.1 Bats

The Proposed Development area includes multiple identified roost features. Further survey has been undertaken to assess the likelihood of these features to support one or more roosting bats, the results of which are displayed in Appendix D.

The Proposed Development is not to impact any trees along the length of the route. Where excavation is required within a root protection area (RPA) this shall be undertaken through sensitive methods such as hand digging. Any plant machinery that may cause a disturbance to any roost features should be micro-sited along the route and be situated more than 10 m from any identified roosting features.

Any lighting required for the Proposed Development should meet the relevant guidelines for lighting[19] and a soft lighting strategy applied for the duration of the works. The strategy should detail how methods will be applied to prevent the spill of light into habitat of importance and provide details of the lighting to be used.

[19]Bat Conservation Trust (2023) Guidance Note GN08/23 Bats and Artificial Lighting at Night. Available from; https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/

4.6.2 Badger

The Proposed Development area has identified an active outlier badger sett. This is outside of the proposed works area and therefore is not considered to be at risk of the development. However, prior to the commencement of works a walkover for any setts within 30m of the area of works must be undertaken by a suitably trained ecologist within the area in the south of the Site.

The development has been assessed as providing potential for foraging and/or commuting badger. The Proposed Development involves the excavation of a trench, as such this may have the potential to capture any mammals including badger during the works. All excavations, if left open overnight must either be secured or a ramp provided for escape at not greater than 30 degrees. Any materials/fuels/chemicals that are to be retained on site must be safely secured during the works to prevent animals from investigating materials that may be harmful. Details of methods for construction must be outlined within an ECMS provided alongside the CEMP prior to the beginning of works.

4.6.3 Otter

The Proposed Development is to impact the Wraysbury River through open-cutting methods. This has been identified as providing potential for foraging and/or commuting otter, though no evidence was found in the 2025 surveys. A pre-works check for signs of otter shall be undertaken within 48 hours of works. Details of methods for construction must be outlined within an ECMS provided alongside the CEMP prior to the beginning of works.

4.6.4 Other mammals

One rabbit warren was identified within the Proposed Development area. Where possible micro-siting must be applied to prevent the need for destruction of the warren. Should this not be possible, the warren should be removed through soft excavation under supervision from an ecological clerk of works (ECoW) outside of the breeding period for rabbits (January to July inclusive). Details are to be provided within an ECMS prior to the beginning of works.

4.7 Recommendations for Further Surveys

No further surveys are required due to the small extent of habitat to be impacted within the Proposed Development and the location of the works within the highway boundary, and avoidance of all watercourses by trenchless methods.

4.8 Potential Opportunities for Biodiversity Enhancements

Due to the scale and type of development being undertaken, the opportunity for enhancement is greatly limited. Furthermore, the proposed development area extends between multiple landowners, many of which require management of habitats to meet the requirements of other land uses. Therefore, the long-term management of habitats within the development area for the enhancement of biodiversity does not apply in this case.

Should the development change to include the requirement for loss of other habitats, protected species features or other notable ecological features, enhancements should be applied that are suitable for those ecological features impacted.

Opportunities for Biodiversity Net Gain (BNG) are likewise limited. A separate BNG report has been prepared for this application.

5.0 Conclusions and Recommendations

This report has determined that the proposed development area provides limited ecological value throughout the extent of the route. The current proposed plans are to have negligible impact on the onsite habitats, habitats beyond the site and those protected species that may be using them.

All grassland habitat on the site is to be excavated with the turf retained and replaced following the construction of the trench, allowing for reinstatement of the habitat within a two-year period and preventing long term impacts. All habitats that cannot be reinstated within two years are to be avoided through micro-siting.

The majority of the watercourses will be crossed using trenchless techniques or works will occur within overbridges. The only watercourse that may be directly impacted by open cut installation is the Wraysbury River. No otter or water vole evidence was found at the proposed crossing point. Further details on working methods to reduce negative impacts at this location will be presented within the EcIA for the project.

There are no requirements for further surveys as these have been undertaken. The works will require Ecological Method Statements (ECMSs) prior to the beginning of the works to detail methods required for works which may impact any protected species. These can be included within the CEMP for the project.

Appendix A Relevant Legislation

Relevant Legislation and Planning Policy

Legislation

A summary of legislation relevant to (onshore) biodiversity in England and Wales is provided below. Note that the summary provided here is intended for general guidance only and the original legislation should be consulted for definitive information.

Environment Act (2021)

The Environment Act has wide ranging provisions including those around:

- Environmental governance;
- Environmental regulation;
- Waste and resource efficiency;
- Air quality and environmental recall;
- Water;
- Nature and biodiversity;
- Conservation covenants.

Of particular relevance is Part 6 of the Act which introduces "biodiversity gain in planning" and will apply in England to planning applications under the Town & Countryside Act and the Planning Act. Schedule 14 now requires that biodiversity gain be a condition of planning permission in England. These changes will be enacted through subsequent secondary legislation or regulations. This part of the Act also changes the responsibilities that Government or public bodies have by strengthening the existing NERC Act biodiversity duty. Public authorities are now required to seek to conserve and enhance biodiversity in the exercise of their functions.

Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. Under the Habitats Regulations it is an offence to deliberately capture, kill or disturb[1] wild animals listed under Schedule 2 of the Regulations as well as damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time). European Sites, including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), are also protected under the Habitat Regulations, and any proposal that could affect them will require an Habitats Regulations Assessment (HRA).

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

Part 3 of the regulations provide for the protection of areas of habitats or species where maintenance of the status of water is an important factor. Under the regulations additional consideration may need to be given to sites in the form of a Water Framework Directive (WFD) assessment where a project lies in proximity to a water body or to linked water bodies which could be affected. This includes consideration

[1] Disturbance, as defined by the Conservation of Habitats and Species Regulations 2010, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.

of whether water bodies are WFD receptors in particular those of high status or have high status morphology.

Natural Environment & Rural Communities (NERC) Act 2006

Section 40 of the NERC Act 2006 places a duty on public authorities to have regard to the purpose of conserving biodiversity in the exercise of their functions. Public authorities include government departments, local authorities and statutory undertakers.

Section 41 of the Act (Section 42 in Wales) requires the publication of a list of habitats and species publish which are of principal importance for the purpose of conserving biodiversity. The Section 41 list is used to guide authorities in implementing their duty to have regard to the conservation of biodiversity.

Note that Sections 40 and 42 were superseded in Wales by the Environment (Wales) Act 2016 (see below).

Protection of Badgers Act 1992

The Protection of Badgers Act 1992 makes it illegal to kill, injure or take a badger or to intentionally or recklessly interfere with a badger sett. Sett interference includes disturbing badgers whilst they are occupying a sett or obstructing access to it.

Wildlife & Countryside Act 1981

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way (CRoW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act;
- intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act;
- intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act; or
- Plant or cause to grow in the wild any plant species listed under Schedule 9 of the Act.

Planning Policy

A summary of national planning policy relevant to (onshore) biodiversity in England and Wales is provided below. Note that the summary provided here is intended for general guidance only and the original policy documents should be consulted for definitive information. For local planning policy relevant to biodiversity the relevant local plans should be consulted.

1.1.1 National Planning Policy (England)

The National Planning Policy Framework (NPPF)[2] sets out guidance for local planning authorities and decision-makers in how to apply planning policies when drawing up plans and making decisions about planning applications. Along with Government Circular 06/05[2], the broad policy objectives in relation to

[2] Ministry of Housing, Communities & Local Government (2025). National Planning Policy Framework.

the protection of biodiversity and geological conservation in England through the planning system are set out. Specific policies relating to habitats and biodiversity are set out in paragraphs 174 and 179-182 of the NPPF.

Paragraph 174 states that:
"Planning policies and decisions should contribute to and enhance the natural and local environment by:
a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development f) should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
F) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate".

Paragraph 179 states that:
"To protect and enhance biodiversity and geodiversity, plans should:
a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."

Paragraph 180 states that:
"When determining planning applications, local planning authorities should apply the following principles:
a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."

Paragraphs 181-182 relate to European sites (referred to as habitats sites) and state:

“The following should be given the same protection as habitats sites:
a) potential Special Protection Areas and possible Special Areas of Conservation;
b) listed or proposed Ramsar sites; and
c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.”