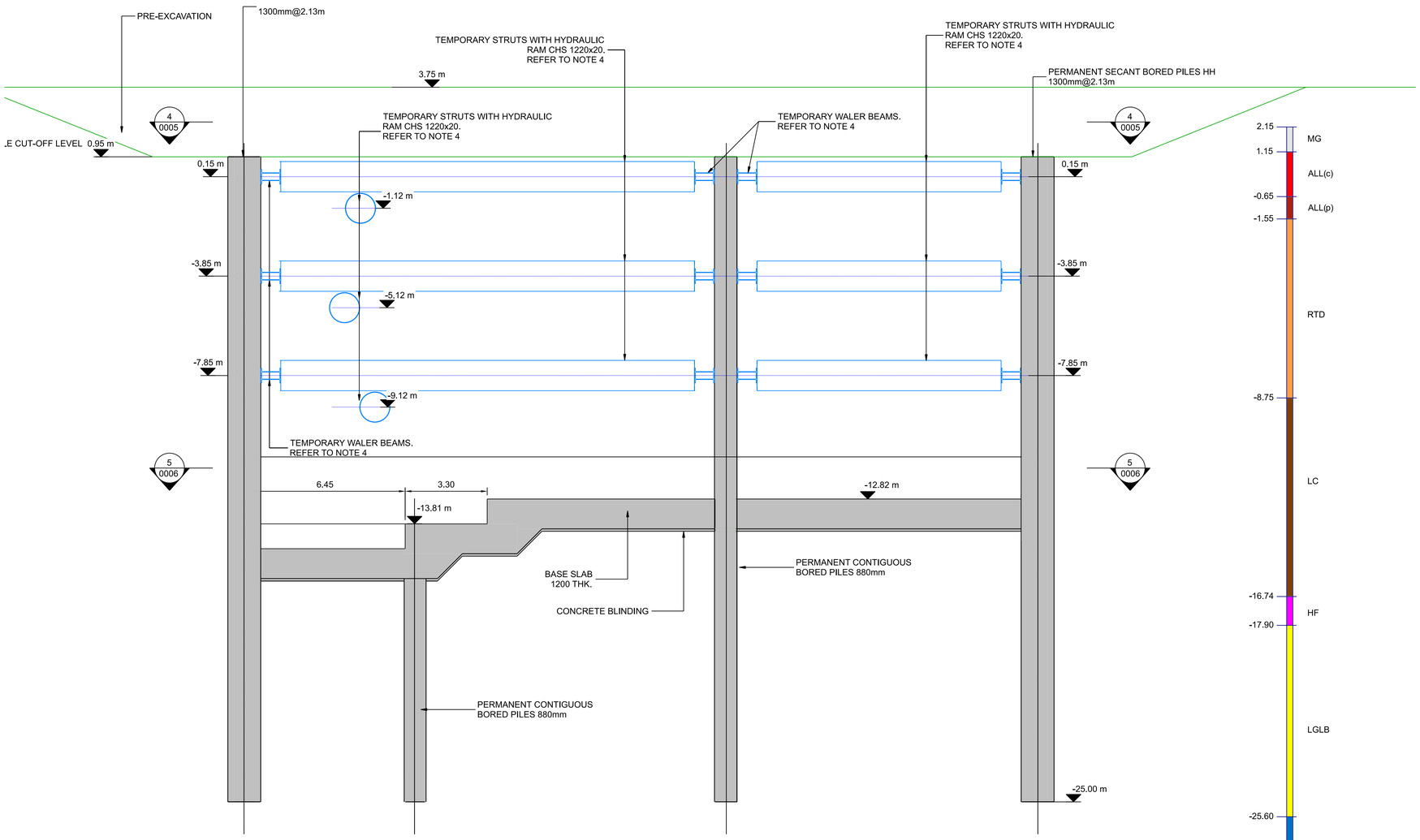


CROSS SECTION A - CH 1+135 NORTHBOUND

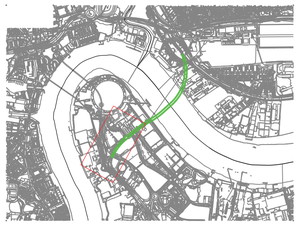
Scale 1 : 100

NOTE:

Temporary structural steel

For temporary strut removal sequence refer to ST150030-AYE-BAS-40-Z14-DRG-SE-0025-26-27

Key plan



Notes:

1. All levels are noted in m above ordnance datum (m AoD).
2. All dimensions are in meters unless shown otherwise.
3. For secant bored piles, positional tolerance +-25 mm, vertically tolerance 1/200.
4. Materials:
   Primary Secant Bored Piles: C35/45 (Hard piles).
   Secondary Secant Bored: C35/45 (Hard piles).
   Base Slab: C35/45.
   Blinding concrete: C12/15.
   Steel Reinforcement Bars: B-500B.
5. Surcharge load considered for construction stage: 10 kN/m².
   Surcharge load considered for long term: 75 kN/m2
   Load considered on top of roof slab: 75 kN/m2
   Load considered for construction stage at the location of the foundations of the service diversion temporary bridge: 30 kN/m2
   Temporary steel beam. 2N° Universal UKB 838x292x226 beams.
   Temporary struts CHS 1220x20-high load capacity.
   Hydraulically activated strut with possible prestressing.
   Axial characteristic capacity 7000 kN.
   Structural Steel: S355.
6. Conceptual design has been prepared based on the Tender requirements and information available. It is subject to further development and refinement during detail design, in accordance with the requirements of the contract and additional information.
7. Do not scale from this drawing.
8. Do not take digital dimensions off this drawing.
9. Design of Portal South performed with the following main assumptions:
   a) The Open Cut and Cut and Cover South proximity areas are excavated concurrently with Portal South.
   b) Bottom-up construction methodology.

For construction sequence drawings refer to ST-150030-AYE-BAS-40-Z11-DRG-SE-0025-26-27.

10. The service diversion temporary bridge shall not be connected to the Portal and shall be provided above the Portal roof slab.
11. For the safety. Health and Environmental information, please refer to construction sequence drawings ST150030-AYE-BAS-40-Z11-DRG-SE-0025-26-27.
12. Site Team to guarantee temporary pile casing up to the Toe level of the piles.
13. Site Team to guarantee the complete filling of the void underneath the casing while removing it, to avoid any inclusion of the soil, in order to guarantee the minimum cover required for durability.

Restricted

Rev	Date	Purpose / Description	Drawn	T. Checked	T. Approved	P. Approved	Authorised
P00	14/05/20	Concept Design	SR	IL	---		
P01	14/05/20	Concept Design	SR	IL	SG	---	---

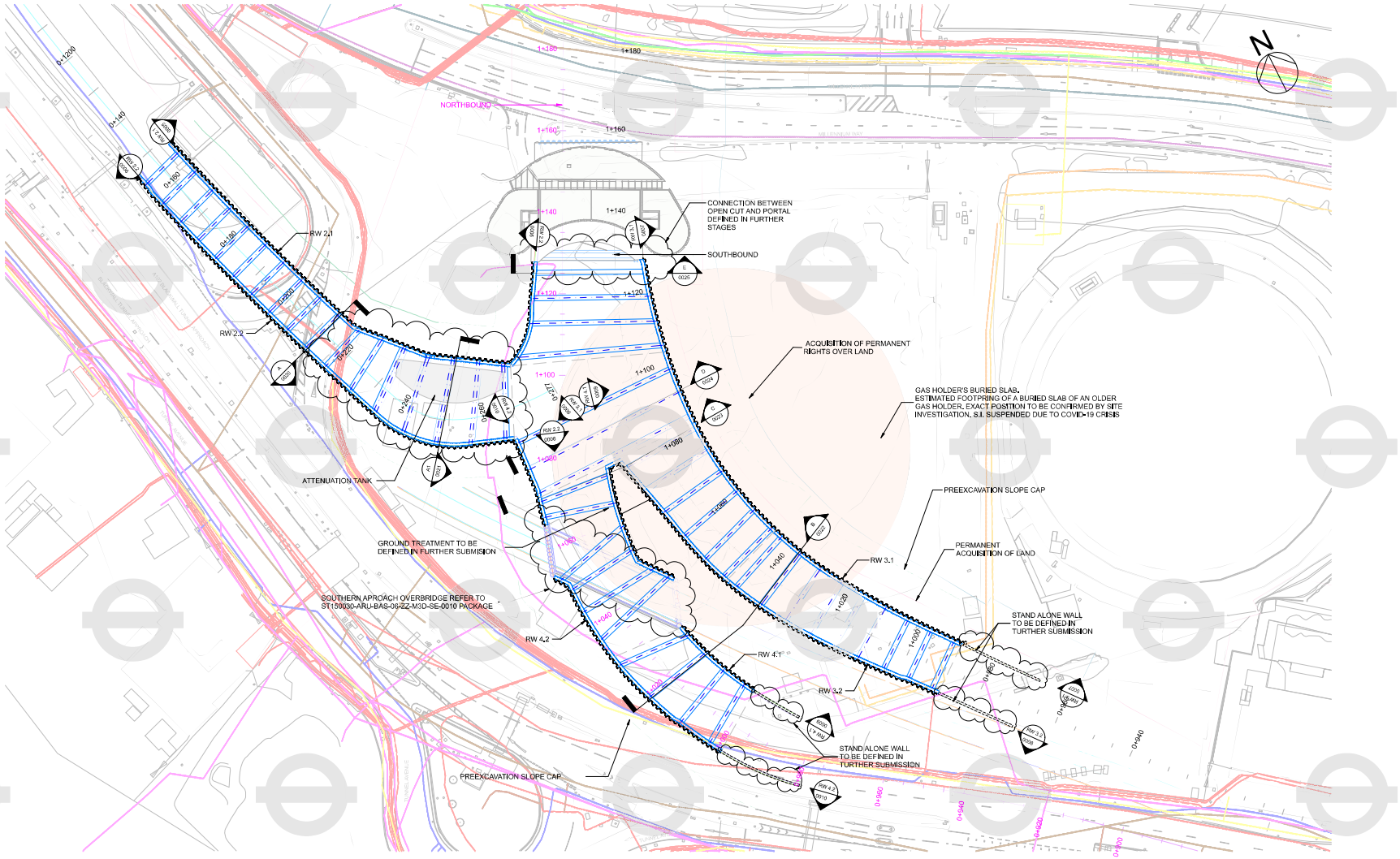
Project: Silvertown Tunnel
Originator: Ayesa
Location: Silvertown Tunnel
Asset Classification: Bridges & Structures
Lifecycle: Concept Design
Suitability: S3 | Fit for Internal Review and Comment

Title: Portal South
Temporary Structures
Cross Section A

Transport for London
RIVERLINX CJV

Drawing Number: ST150030-AYE-BAS-40-Z14-DRG-SE-0015
Rev.: P01

Appendix E: Open Cut



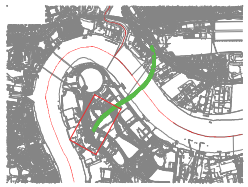
NOTE:

SETTING OUT OF SHEET PILES MADE FOLLOWING ASSUMPTIONS FINAL GROUND LEVELS EXPECTED. FINAL GROUND LEVEL PENDING OF LANDSCAPING DEFINITION

GENERAL PLAN

Scale 1 : 500

Key plan



Notes:

1. All levels are noted in m above ordnance datum (m AoD)
2. All dimensions are in meters unless shown otherwise.
3. Sheet pile positional tolerance +-25 mm and verticality tolerance 1/100.
4. Concrete classes:
Base Slab and retaining wall: C35/45
Blinding concrete: C12/15
Concrete backfill:C12/15
5. Steel Reinforcement Bars: B-500B
6. Structural Steel: S355
7. Surcharge load considered for construction stages: 10 kN/m²
8. Do not scale from this drawing.
9. Do not take digital dimensions off this drawing.
10. Temporary struts CHS 1220x20-High load capacity. Hydraulically activated strut with possible prestressing.
11. Temporary steel beam. 2 No Universal UKB 838x292x226 beams
12. Permanent structure to be defined in South Open Cut permanent structure submission. Shown in this drawing as a reference for its better understanding.
13. Future Ground level to be defined by landscaping. Setting out of sheet piles has been defined based in Existing ground level except in the zone surrounding the Portal south.
14. Ground level and amount of pre-excavation to be confirmed post onsite survey.
15. Existing buried slab from an old Gas holder assumed to be demolished previous to sheet piles driving to drive sheet piles. Site Investigation suspended due to Covid-19 Crisis.

Restricted

Rev	Date	Purpose / Description	Drawn	T. Checked	T. Approved	P. Approved	Authorised
P00	21/05/20	Concept Design	sc	cl	–		
P01	21/05/20		sc	cl	RS	–	–

Project	Silvertown Tunnel
Originator	Ayesa
Location	Greenwich
Asset Classification	Bridges & Structures
Lifecycle	Concept Design
Suitability	S3 | Fit for Internal Review and Comment
Title	Open Cut South Temporary Structures General Plan
Drawing Number	ST150030-AYE-BAS-06-Z0-DRG-SE-0002
Rev.	P01

Transport for London

RIVERLINX CVX

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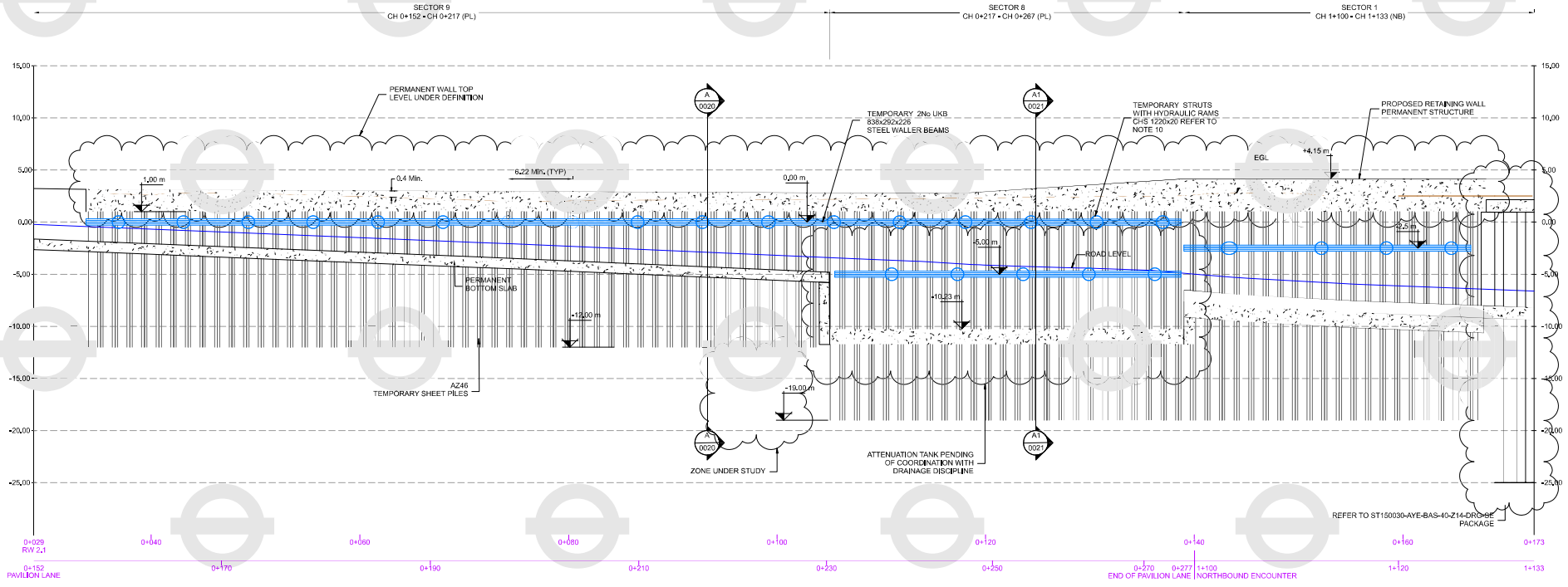
at : 5/20/2020 11:40
File name: ST150030-AYE-BAS-06-Z0-DRG-SE-0002
A1

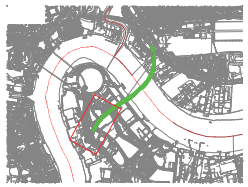
CROSS SECTION



LONGITUDINAL PROFILE RW 2.1. SECTION 1

Scale 1 : 200

Key plan



Notes:

1. All levels are noted in m above ordnance datum (m AoD)
2. All dimensions are in meters unless shown otherwise.
3. Sheet pile positional tolerance +-25 mm and verticality tolerance 1/100.
4. Concrete classes:
Base Slab and retaining wall: C35/45
Blinding concrete: C12/15
Concrete backfill:C12/15
5. Steel Reinforcement Bars: B-500B
6. Structural Steel: S355
7. Surcharge load considered for construction stages: 10 kN/m²
8. Do not scale from this drawing.
9. Do not take digital dimensions off this drawing.
10. Temporary struts CHS 1220x20-high load capacity. Hydraulically activated strut with possible prestressing.
11. Temporary steel beam. 2 No Universal UKB 838x292x226 beams
12. Permanent structure to be defined in South Open Cut permanent structure submission. Shown in this drawing as a reference for its better understanding.
13. Future Ground level to be defined by landscaping. Setting out of sheet piles has been defined based in Existing ground level except in the zone surrounding the Portal south.
14. Ground level and amount of pre-excavation to be confirmed post onsite survey.
15. Existing buried slab from an old Gas holder assumed to be demolished previous to sheet piles driving to drive sheet piles. Site Investigation suspended due to Covid-19 Crisis.

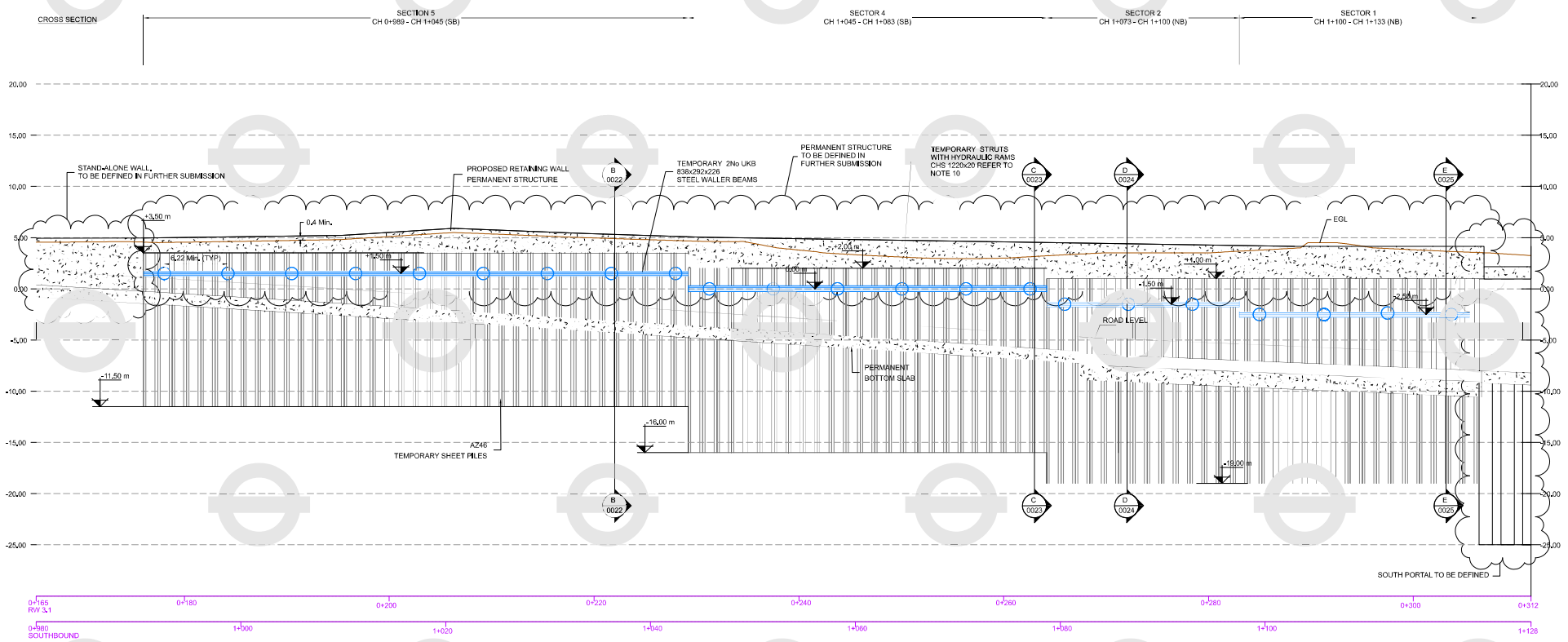
Restricted

Rev.	Date	Purpose / Description	Drawn	T. Checked	T. Approved	P. Approved	Authorised
P02	21/05/20	Concept Design	sc	cl	–		
P01	21/05/20		sc	cl	RS	–	–

Project	Silvertown Tunnel
Originator	Ayesa
Location	Greenwich
Asset Classification	Bridges & Structures
Lifecycle	Concept Design
Suitability	S3 | Fit for Internal Review and Comment
Title	Open Cut South Temporary Structures Longitudinal Profile RW 2.1. Section 1
Drawing Number	ST150030-AYE-BAS-06-Z0-DRG-SE-0005
Rev.	P01

Transport for London

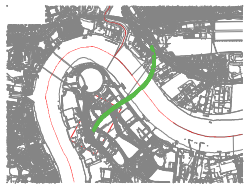
RIVERLINX CVV



LONGITUDINAL PROFILE RW 3.1. SECTION 3

Scale 1 : 200

Key plan



Notes:

1. All levels are noted in m above ordnance datum (m AoD)
2. All dimensions are in meters unless shown otherwise.
3. Sheet pile positional tolerance +-25 mm and verticality tolerance 1/100.
4. Concrete classes:
Base Slab and retaining wall: C35/45
Blinding concrete: C12/15
Concrete backfill:C12/15
5. Steel Reinforcement Bars: B-500B
6. Structural Steel: S355
7. Surcharge load considered for construction stages: 10 kN/m²
8. Do not scale from this drawing.
9. Do not take digital dimensions off this drawing.
10. Temporary struts CHS 1220x20-high load capacity. Hydraulically activated strut with possible prestressing.
11. Temporary steel beam. 2 No Universal UKB 838x292x226 beams
12. Permanent structure to be defined in South Open Cut permanent structure submission. Shown in this drawing as a reference for its better understanding.
13. Future Ground level to be defined by landscaping. Setting out of sheet piles has been defined based in Existing ground level except in the zone surrounding the Portal south.
14. Ground level and amount of pre-excavation to be confirmed post onsite survey.
15. Existing buried slab from an old Gas holder assumed to be demolished previous to sheet piles driving to drive sheet piles. Site Investigation suspended due to Covid-19 Crisis.

Restricted

Rev.	Date	Purpose / Description	Drawn	T. Checked	T. Approved	P. Approved	Authorised
P02	31/05/20	Concept Design	sc	cl	–		
P01	31/05/20		sc	cl	RS	–	–

Project: Silvertown Tunnel
Originator: Ayesa
Location: Greenwich
Asset Classification: Bridges & Structures
Lifecycle: Concept Design
Suitability: S3 | Fit for Internal Review and Comment

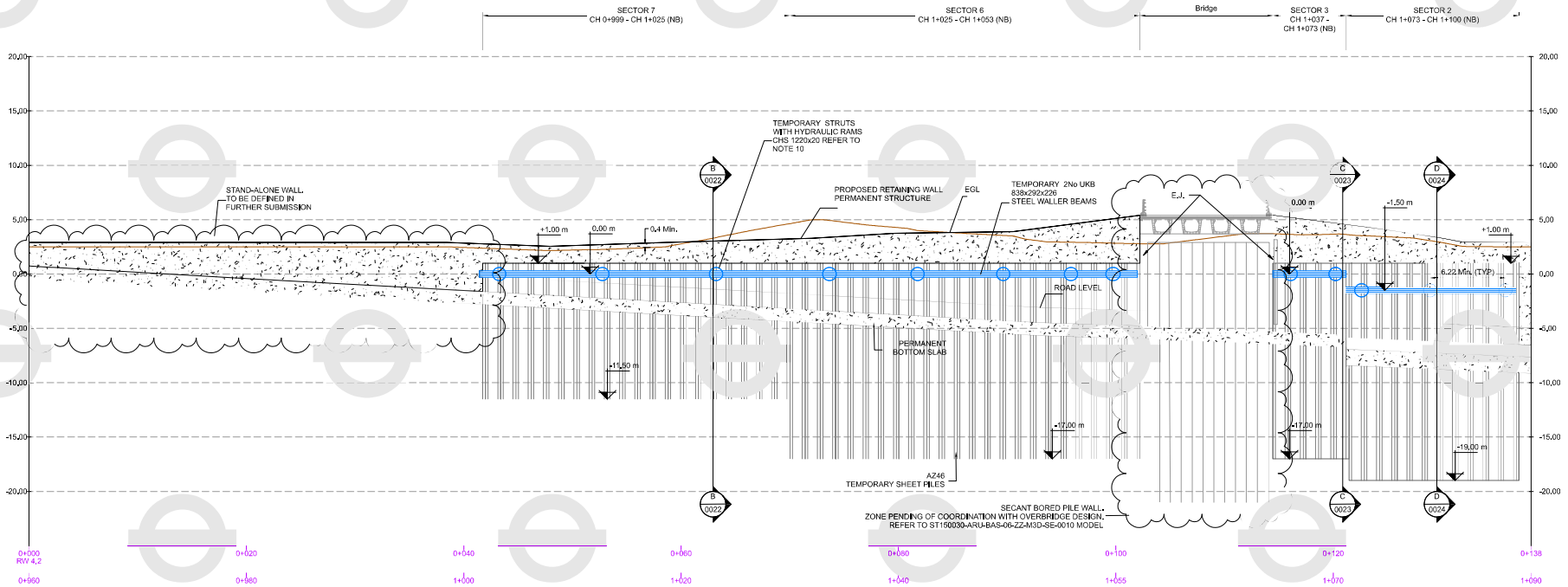
Title: Open Cut South
Temporary Structures
Longitudinal Profile RW 3.1. Section 3

Transport for London

Drawing Number: ST150030-AYE-BAS-06-Z0-DRG-SE-0007
Rev.: P01

Pen Table : CORE-TFL-MAC-XX_00-RS-ZZ-PRINTCONFIG.ctb
Published by : —
at : 5/20/2020 11:40
File name: ST150030-AYE-BAS-06-Z0-DRG-SE-0007
A 1

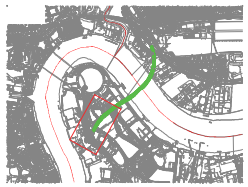
CROSS SECTION



LONGITUDINAL PROFILE RW 4.2. SECTION 6

Scale 1 : 200

Key plan



Notes:

1. All levels are noted in m above ordnance datum (m AoD)
2. All dimensions are in meters unless shown otherwise.
3. Sheet pile positional tolerance +-25 mm and verticality tolerance 1/100.
4. Concrete classes:
Base Slab and retaining wall: C35/45
Blinding concrete: C12/15
Concrete backfill:C12/15
5. Steel Reinforcement Bars: B-500B
6. Structural Steel: S355
7. Surcharge load considered for construction stages: 10 kN/m²
8. Do not scale from this drawing.
9. Do not take digital dimensions off this drawing.
10. Temporary struts CHS 1220x20-High load capacity. Hydraulically activated strut with possible prestressing.
11. Temporary steel beam. 2 No Universal UKB 838x292x226 beams
12. Permanent structure to be defined in South Open Cut permanent structure submission. Shown in this drawing as a reference for its better understanding.
13. Future Ground level to be defined by landscaping. Setting out of sheet piles has been defined based in Existing ground level except in the zone surrounding the Portal south.
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15. Existing buried slab from an old Gas holder assumed to be demolished previous to sheet piles driving to drive sheet piles. Site Investigation suspended due to Covid-19 Crisis.

Restricted

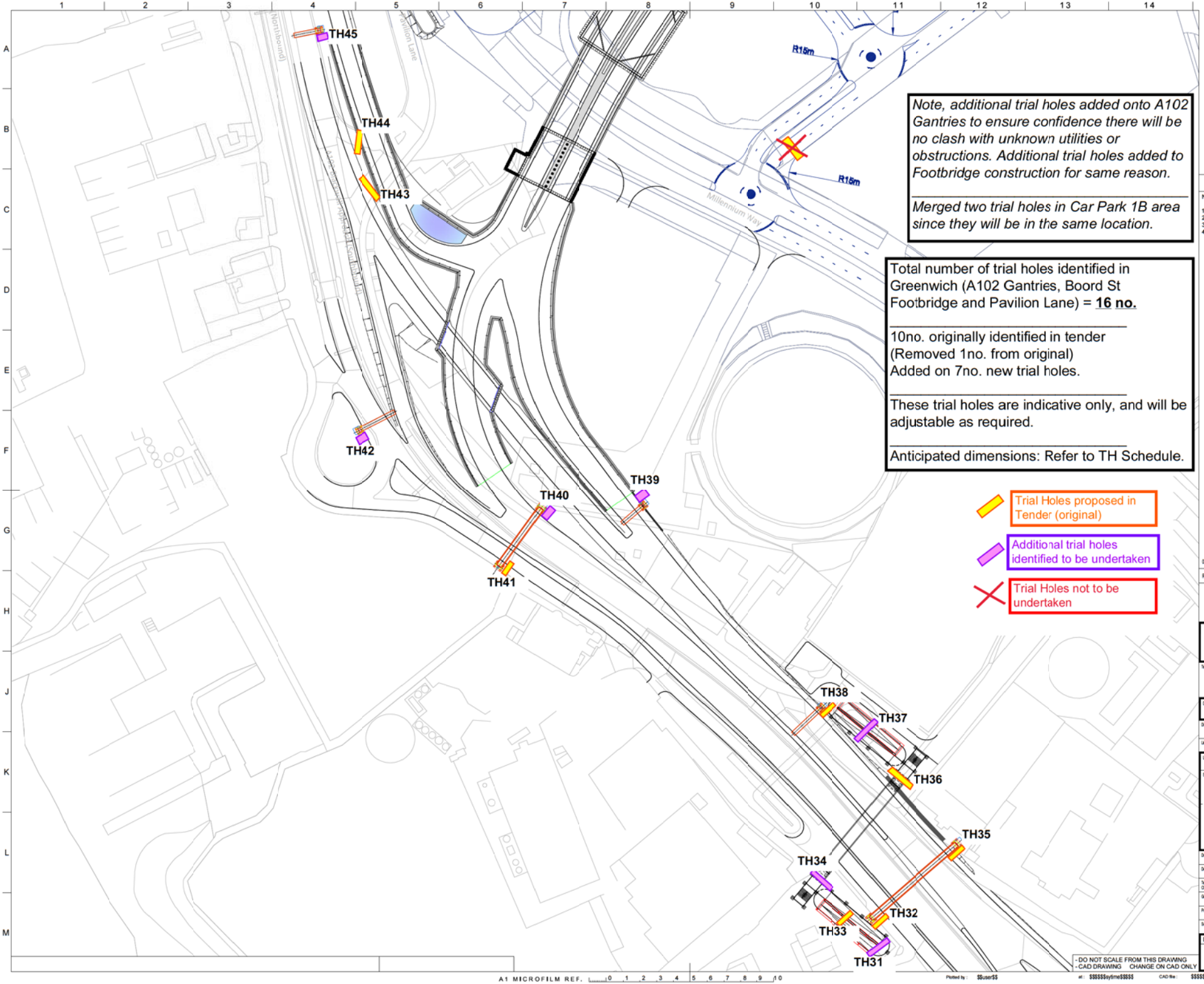
Rev.	Date	Purpose / Description	Drawn	T. Checked	T. Approved	P. Approved	Authorised
P00	31/05/20	Concept Design	sc	cl	–		
P01	31/05/20		sc	cl	RS	–	–

Project	Silvertown Tunnel
Originator	Ayesa
Location	Greenwich
Asset Classification	Bridges & Structures
Lifecycle	Concept Design
Suitability	S3 | Fit for Internal Review and Comment
Title	Open Cut South Temporary Structures Longitudinal Profile RW 4.2. Section 6
Drawing Number	ST150030-AYE-BAS-06-Z0-DRG-SE-0010
Rev.	P01

Transport for London

RIVERLINX CJV

Appendix F: Utility trial holes



Note, additional trial holes added onto A102 Gantries to ensure confidence there will be no clash with unknown utilities or obstructions. Additional trial holes added to Footbridge construction for same reason.

Merged two trial holes in Car Park 1B area since they will be in the same location.

Total number of trial holes identified in Greenwich (A102 Gantries, Boord St Footbridge and Pavilion Lane) = **16 no.**

10no. originally identified in tender
(Removed 1no. from original)
Added on 7no. new trial holes.

These trial holes are indicative only, and will be adjustable as required.

Anticipated dimensions: Refer to TH Schedule.

Trial Holes proposed in Tender (original)

Additional trial holes identified to be undertaken

Trial Holes not to be undertaken

Notes

1. Donot scale from this drawing.
2. All dimensions are in metres unless otherwise shown.
3. This drawing is based upon topographical survey data.
4. This drawing is to be read in conjunction with all other drawings.

Rev.	By	Revision	Dsgn	TChkd	TAppd	Date
00	AC	First Issue	AC	DC	DC	21/10/19

Drawing Issue Status: FOR TENDER

Discipline: HIGHWAYS

Location: SILVERTOWN TUNNEL

Site/Project: SILVERTOWN TUNNEL TENDER
Greenwich
A102, Tunnel Avenue, Pavilion Lane & Boord Street
Trial Hole Locations (TH31 - 45)

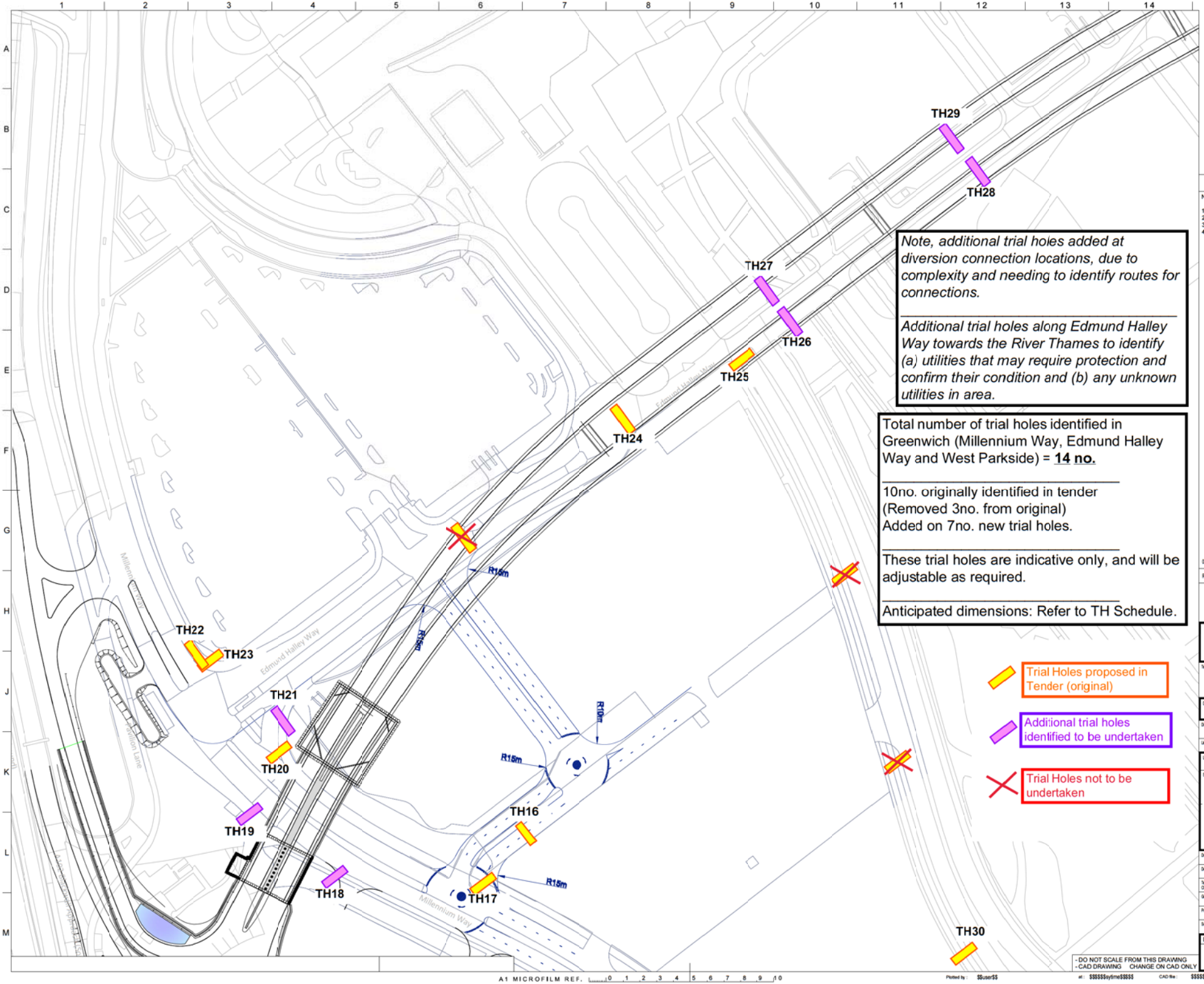
Drawn	AC	Date	21/10/2019
Designed	AC	Technical Approved	DC
Technical Checked	DC	Project Approved	DH
Grid	OS GRID	PER / Cost No	
Project Document Code			
Scales	NTS	Sheet Number	1 of x

Drawing No.: STT-South-A102-TH-0001 Rev.: 00

- DO NOT SCALE FROM THIS DRAWING
- CAD DRAWING CHANGE ON CAD ONLY

A1 MICROFILM REF.

A1



Note, additional trial holes added at diversion connection locations, due to complexity and needing to identify routes for connections.

Additional trial holes along Edmund Halley Way towards the River Thames to identify (a) utilities that may require protection and confirm their condition and (b) any unknown utilities in area.

Total number of trial holes identified in Greenwich (Millennium Way, Edmund Halley Way and West Parkside) = **14 no.**

10no. originally identified in tender
(Removed 3no. from original)
Added on 7no. new trial holes.

These trial holes are indicative only, and will be adjustable as required.

Anticipated dimensions: Refer to TH Schedule.

Notes:

1. Do not scale from this drawing.
2. All dimensions are in metres unless otherwise shown.
3. This drawing is based upon topographical survey data.
4. This drawing is to be read in conjunction with all other drawings.

Rev.	By	Revision	Dsgn	T.Chkd	T.Appd	Date
00	AC	First Issue	AC	DC	DC	21/10/19

Drawing Issue Status: FOR TENDER

Discipline: HIGHWAYS

Location: SILVERTOWN TUNNEL

Site/Project: SILVERTOWN TUNNEL TENDER
Greenwich
Millennium Way, Edmund Halley Way & West Parkside
Trial Hole Locations (TH16 - 30)

Drawn	AC	Date	21/10/2019
Designed	AC	Technical Approved	DC
Technical Checked	DC	Project Approved	DH
Grid	OS GRID	PER / Cost No	
Project Document Code			
Scales	NTS	Sheet Number	1 of x

Drawing No.: STT-South-MWEHW-TH-0001 Rev.: 00

- DO NOT SCALE FROM THIS DRAWING
- CAD DRAWING CHANGE ON CAD ONLY

Plotted by : $$user$$ at : $$$$$$$systime$$$$$ CAD file : $$$$$$$$$$$$$$$$$dgnspec$$$$$$$$$$$$$$$$

A1 MICROFILM REF.

A1

Appendix G: **Historic Environment Research Framework**

B.1.1 The purpose of the framework is to provide a structure of research priorities to be considered when developing a strategy of archaeological investigation to apply to the wide variety of above and below ground heritage assets likely to be present at the Silvertown tunnel site.

B.1.2 The research framework allows the whole strategy of investigation (evaluation, watching brief, excavation and post-excavation work) to be focused and informed, so that it prioritises the sites and types of archaeological remains agreed to have the most potential to enhance public appreciation of the historic environment.

B.1.3 The framework categorises some of the main topics and themes under which human history and the development of London as a world city may be described as having influenced, where relevant, the Silvertown Tunnel site. The dominant scheme-wide factor in patterns of past settlement and land use has been the River Thames and the River Lea.

Structure

B.1.4 The document comprises two main sections. The first section sets the scene with a description of the physical development and influence of the river and its tributaries. The major fluctuations in sea level and river regime that have occurred since the Palaeolithic have profoundly influenced the shaping of the natural landscape at the Silvertown Tunnel site and past human activity within it. This climate-driven process provides the setting and environmental context for the second section of this document; discussion of topics that reflect the role of the site in the development of London.

B.1.5 The topics are:

a) Theme 1: Palaeo-environment and prehistory

b) Theme 2: Settlement patterns and boundaries (industrial)

c) Theme 3: River management, transport, infrastructure and trade

d) Theme 4: Industries associated with the Thames and its tributaries

B.1.6 The topics are in turn to be supported by specific research objectives set out in the *Research Framework for London Archaeology* (Museum of London and English Heritage, 2002)[18] and updated in (MOLA 2015) *A strategy for researching the historic environment of Greater London* and similar work undertaken on the *Greater Thames Estuary Historic Environment Research Framework* (Heppell, 2010)[19].

Physical setting and environmental influences

B.1.7 The route of the Silvertown Tunnel crosses different topographic zones and hence landscapes; comprising various geomorphological landforms and distinctive sedimentary sequences, each with differing palaeoenvironmental and archaeological potential. The features comprise: the river terraces; the Thames floodplain; the modern foreshore; and the tributary valleys. The sequence of gravel terraces form a flight of progressively younger steps descending down the valley side towards the Thames. These formed as a result of tectonic uplift, and sea level fluctuations that forced episodes of floodplain incision and aggradation as the climate lurched from arctic (Glacial) to temperate (Interglacial) conditions over the past 0.5 million years. Interglacial deposits are known to exist at the interface between river terraces, and sometimes occur as lenses of fine grained sediments interleaved within the coarse gravel sediments. These were former floodplain edge locations, where the deposits were able to survive river scour during the succeeding arctic episodes. Palaeolithic flint tools and bone within the gravel are likely to be far removed from their original position, having been transported with the gravel by the ancestral Thames. Palaeolithic artefacts, including palaeoenvironmental information, located at the interface of the brickearth and gravels, or within fine-grained lenses, may be in situ.

[18] Museum of London & English Heritage. 2002. A research framework for London archaeology.
[19] Heppell, EM. 2010. The Greater Thames Estuary Historic Environment Framework English Heritage, Essex County Council and Kent County Council.

B.1.8 Post-glacial prehistoric activity (from the Mesolithic onwards) would have been focused on the river terraces and especially their edges adjacent to the floodplain and tributary valleys and streams. Although much fragile evidence from this period will have been removed by later activity.

B.1.9 The majority of the route is located within the Thames floodplain, which was created by the Pleistocene arctic river during the last major cold stage c.18,000 to 15,000 years ago (the Devensian Glaciation), and is much wider than the river and foreshore that are exposed today, which are constrained by historic and modern river defences. Its extent is currently defined by the British Geological Survey mapping of alluvium. During the prehistoric period the floodplain was characterised by low islands separated by marshes and multiple meandering channels, attractive for settlement and resource exploitation.

B.1.10 Archaeological, palaeoenvironmental and geoarchaeology remains may lie within the alluvium and at the gravel/alluvial interface. Palaeochannels and associated palaeoenvironmental evidence may also be present. The alluvial deposits reflect the changing river pattern over many thousands of years. The alluvium can include sands (from former active watercourses), clay and humic clay (from ponds and lakes), peat and organic silts (from marsh and backwaters), weathered clay (from seasonal flooding) and silts and clays (from intertidal mud and salt marsh formed as a result of estuarine encroachment upstream). Hunting, fishing and gathering the abundant wild resources available took place in the lower-lying wetland areas. As well as preserving organic artefacts and structures such as timber trackways, boats and fishtraps, the former wetland landscape also contains the remains of seeds, pollen, snails and insects, and also tree stumps from the prehistoric floodplain forest. These environmental remains can be utilised to reconstruct the changing past environment. In particular such environmental evidence provides information about the nature of the river, climatic conditions, vegetation cover and evidence of human land use.

B.1.11 The floodplain is no longer an obvious feature of the modern landscape and townscape, particularly in central London, having been progressively drained, infilled and reclaimed from the Roman period onwards. The Thames has in effect been canalised to gain extra land and prevent the river from flooding adjacent land.

Theme 1: Palaeoenvironment and prehistory

B.1.12 Recent geoarchaeological studies have emphasised the need to develop a holistic approach to understanding the development of the floodplain sequence, focusing not only on individual sites, but also how these can be combined into a basin wide model. The effects of climatic change over the last 18,000 years have been an important factor in determining patterns of human settlement and behaviour. By considering the palaeoenvironmental and landscape context of archaeological sites, the cause and effect relationship of past human populations with the changing floodplain landscape can be investigated.

B.1.13 Throughout prehistory the Thames was a key factor in the occupation and activity of past populations around London. The river was responsible for the geomorphological and palaeoenvironmental structure of the Thames basin, and hence constrained the development of occupation and activity. At the same time, it provided considerable resources for subsistence and communication and was also a focus for ritual, making London an area of considerable prehistoric activity.

B.1.14 River valley locations were also important for the advent of farming in the Neolithic and Early Bronze Age. Traces of these agricultural landscapes and more permanent settlements may occasionally be well-preserved beneath later flood alluvium.

Research objectives:

a. Establishing firm regional chronologies tied into national chronological frameworks, taking the opportunity to clarify extant terrace sequences (P1; P2; S1; M1);
b. Conducting baseline surveys and using these to develop models for understanding the significance of geomorphology, ecology, ecosystems and climate, hydrology, and vegetational and faunal development on human lives (TL1);
c. Understanding the many and changing roles of the River Thames (TL1);
d. Considering the roles that landscape features may have played in human activity and settlement (TL3);
e. Addressing aspects of continuity and change in the nature of the subsistence strategies pursued by human groups, including agricultural intensification (TE1);

f. Explaining why the Mesolithic is so poorly represented in the London region (P3);
g. Reconstructing the environment and ecology on a regional basis (P3; P4; R2; IA: 1C);
h. Elucidating the nature of the Mesolithic to Neolithic transition (P4);
i. Establishing/refining a dated regional ceramic sequence (P4; P5);
j. Examining the influence of landscape (P4; S2);
k. Understanding the relationship between the wooden trackways in the floodplain and the settlements to which they presumably led (P5);
l. Understanding the origins of the metalwork sequence from the Thames (P5);
m. Exploring seasonal craft activities such as salt production (P5).

Theme 2: Settlement patterns & boundaries

B.1.15 The river regime was a powerful factor in determining past patterns of settlement and land use.

B.1.16 The well-watered, fertile and easily cultivated soils of the Thames floodplain, gravel terraces and tributary valleys would have been increasingly important as a more settled agricultural economy began to replace nomadic hunting and herding from the early 2nd millennium BC. A more controlled food supply and the resulting population growth and pressure on land meant that attempts were made to bring low-lying islands and marsh margins under cultivation.

Research objectives:

a. Understanding the relationship between landscape, river and settlement, and the influences of the Thames (TL2), including the correlation between sites associated with watercourses and meander bends, so as to understand the origin of settlements (TD1; 4A);
b. Researching the potential for categorisation of prehistoric settlement sites (P4);
c. Examining the concept of core/periphery model for different periods of London's past (TD2);

Theme 3: River management, transport, infrastructure and trade

B.1.17 As a natural east-west communication and transport route, the River Thames (and its tributaries, which generally align north-south) would have been used as a major transport and trade route from the early prehistoric onwards. The river also provided a natural barrier that hindered movement north-south across the river. River crossings were therefore of strategic importance both commercially and militarily. The means used to cross the river in the past, either by boat, ford crossings, along with the bridges built across it, also form an integral part of the story of human activity.

B.1.18 The river itself was exploited for fish, and a number of fish traps have been identified along the river, typically at the confluence of tidal tributaries rivers such as the River Lea.

B.1.19 During the later medieval period, reclamation (including the construction of river defences, and consolidation of the banks of the Thames and its tributaries) continued on a larger scale. The purpose was primarily economic, to provide good quality grazing for livestock and fertile land for crops, and in close to the city, to provide additional land for wharves, ship making and river trade.

B.1.20 From 1700 London became the most important port in England, expanding so rapidly the new docks were built in the marshland to the east around the Isle of Dogs in order to accommodate the traffic.

Research objectives:

a. Identifying a pre-Roman road pattern (P6);
b. Understanding the reasons for evolution of the road systems, street layouts, river crossings and ferries, and their importance as transport networks and engines of development and change (TD4; R4; L2; S7; 2A);
c. Refining our understanding of the chronology and function of the riverside defences and extramural evidence of defensive or military structures (R10);
d. Improving understanding of the river management features, revetments and river defences of London (3B);
e. Refining understanding of how the port of Roman London functioned, including its role in trade and trans-shipment and what it meant for Londoners (R4; R13);
f. Using the archaeological record to challenge or augment inferences from documentary research on national and international trade and transport (M6);
g. Identifying materially how London became a distribution centre for the western world (L9; TE2);
h. Understanding development of London's docks and waterways (TD4);
i. Considering how ethnic diversity is represented in the archaeological record (TS4), and evidence for cultural interaction between different social or ethnic groups (TS1).

Theme 4: Industries associated with the Thames and its tributaries

B.1.21 The Thames and its tributaries were an essential source of water for industry from the earliest times. During the medieval period, the need for water for industries such as dyeing and brewing meant that many of these were located in waterfront areas and along tributaries of the Thames.

B.1.22 During the post-medieval period, the expanding scale of industry and steam power required greater supplies of coal, shipped in by river and canal, leading to a greater number of industrial jetties on the Thames. The same applies to the first gasworks and power stations, often located close to the river so that coal could be unloaded at fuelling piers (as at the North Greenwich Gasworks).

B.1.23 The Silvertown Tunnel sites have the potential to produce information (following further archaeological investigation) on the nature, scale and development of production and manufacturing both in the urban and outlying areas of London.

Research objectives:

a. Defining the economic character of different parts of the region (R1);

b. Refining theories of trade specialisation over time, shifting zonation within the main settlement and peripheral areas (R13; S7;M6; L9; TE1);

c. Investigating the role of fish and fishing in the diet and economy of the region (S7);

d. Contributing to the understanding of London's place as an industrial power (L9; 7A).