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VICTORIA EMBANKMENT FORESHORE AND BLACKFRIARS BRIDGE FORESHORE APPLICATION STATEMENT

**To support a proposed non-material amendment
to the Thames Water Utilities (Thames Tideway
Tunnel) Order 2014 (as amended)**

TIDEWAY

VICTORIA EMBANKMENT FORESHORE AND BLACKFRIARS BRIDGE FORESHORE APPLICATION STATEMENT

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TIDEWAY

VICTORIA EMBANKMENT FORESHORE AND BLACKFRIARS BRIDGE FORESHORE APPLICATION STATEMENT

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1 Introduction

- 1.1 Bazalgette Tunnel Limited (trading as ‘Tideway’) has the benefit of The Thames Water Utilities Limited (Thames Tideway Tunnel) Order 2014 (SI:2014/2384) (as amended)¹ (“the DCO”) by virtue of a transfer of powers by Thames Water Utilities Limited dated 24 August 2015 made pursuant to Article 9 of the DCO.
- 1.2 The DCO grants consent for a ‘wastewater storage and transfer tunnel’ (a “nationally significant infrastructure project” as defined in sections 14 and 29(1A) of the Planning Act 2008) between operational Thames Water sites at Acton Storm Tanks and Abbey Mills Pumping Station. The project comprises one main tunnel which will capture and store combined sewage from combined sewer overflows (“CSOs”) along its route and transfer the sewage to Abbey Mills Pumping Station. From there the Lee Tunnel will transport the combined sewage for treatment at Beckton Sewage Treatment Works. Twelve connection tunnels will link flows from CSO drop shafts to the main tunnel.
- 1.3 The Victoria Embankment Foreshore (VCTEF) site is located on the north side of the river Thames within the administrative boundary of the City of Westminster. It comprises an area of the foreshore of the River Thames and a section of the pavement and carriageway of the Victoria Embankment. The site is defined by the limits of land to be acquired or used (LLAU) and covers an area of approximately 1.8 hectares. The site is bounded to the north, east and south by the River Thames and to the west by the Victoria Embankment (A3211). The permanently moored Tattershall Castle (a floating bar and restaurant), and two service moorings lie within the site.
- 1.4 The Blackfriars Bridge Foreshore (BLABF) site is also located on the north side of the river Thames within the administrative boundary of the City of London. It comprises the River Thames to the west and east of Blackfriars Bridge (A201), sections of the Victoria Embankment slip road up to Blackfriars Bridge and areas of the pavement along Victoria Embankment and Paul’s Walk. The site is defined by the limits of land to be acquired or used (LLAU) and covers an area of approximately 3.15 hectares for the main site (west of the bridge) and 0.8 hectares for the secondary site (east of the bridge). Works at the secondary site to the east of Blackfriars Bridge have been completed. The relocated Blackfriars Millennium Pier is in use and new stairs and a lift have been provided from the existing Thames Path up to Blackfriars Road Bridge.

¹ As amended by the Thames Water Utilities Limited (Thames Tideway Tunnel) (Correction) Order 2015 (SI:2015/723), the Thames Water Utilities Limited (Thames Tideway Tunnel) (Amendment) Order 2017 (SI:2017/659), the Thames Water Utilities Limited (Thames Tideway Tunnel) (Amendment) Order 2018 (SI:2018/1262), the Thames Water Utilities Limited (Thames Tideway Tunnel) (Amendment) Order 2020 (SI:2020/268) and the Notice of Variation No.1 (17 March 2015) and Notice of Variation No. 2 (17 August 2017) in respect of the deemed Marine Licence.

1. Introduction

- 1.5 This report has been prepared to accompany an application for a non-material amendment to the DCO at each of the VCTEF and BLABF sites. Amendments are proposed to:
- the Site works parameter plan for the VCTEF site;
 - the Site works parameter plan for the BLABF site;
 - the Extent of loss of listed river wall plans at BLABF sheets 1 and 2; and
 - the Demolition and site clearance plans at BLABF sheets 2 and 3 (of 5).
- 1.6 These drawings are approved drawings listed in Schedule 2 Part 4 of the DCO. The proposed non-material change seeks to amend the approved drawings and revise the references to these plans in Part 4 of Schedule 2 of the DCO, and, in the case of the Extent of loss of listed river wall plans at BLABF, the references in Requirement BLABF 11 – Details of works to listed buildings.
- 1.7 Three previous non-material amendments to the DCO have been approved. On 17th May 2017 Thames Water Utilities Limited was granted an amendment to the DCO for changes to the location and depth of the inlet and outlet shafts and siphon tunnel to be constructed within the Beckton Sewage Treatment Works (BESTW) site 'The Thames Water Utilities Limited (Thames Tideway Tunnel) (Amendment) Order 2017 (SI:2017/659)' These approved changes were localised in nature and related to works within the existing Thames Water sewage treatment site.
- 1.8 Tideway was granted a second Amendment Order (SI: 2018/1262) on 30th November 2018 which approved substitution of a revised Site works parameter plan for the Falconbrook Pumping Station (FALPS) site. This amendment was required to remove ambiguities on the original plan which had the inadvertent effect of removing the flexibility required to enable the works to be constructed as originally intended at the site. It was not required as a result of a change in the design or approach proposed to the works at the time of the original application.
- 1.9 On 10th March 2020 Tideway was granted a third Amendment Order (SI:2020/268) which approved a realignment of the main tunnel in the vicinity of the King Edward Memorial Park Foreshore (KEMPF) worksite. This amendment approved the realignment of the main tunnel to the south of the shaft and provided consent for the construction of a short connection tunnel between the shaft and the main tunnel. The works approved by this amendment affected below ground works in this location only.
- 1.10 None of the three non-material amendments (either separately or cumulatively) were found to introduce any new significant environmental effects or materially different environmental effects beyond those already assessed within the Environmental Statement (ES) which accompanied the original DCO application.
- 1.11 Consent is sought for the following further amendments to the DCO:
- Minor adjustments to the “blue zone” (shafts) on the Site works parameter plan for VCTEF site;

1. Introduction

- Minor adjustments to the “green zone” (permanent site structures) on the Site works parameter plan for the BLABF site at two locations;
- Amendments to the Extent of loss of listed river wall plan at BLABF (drawing DCO-PP-17X-BLABF-190023) to allow for the permanent loss of the listed structure above the level of the Low Level Sewer No.1 interception;
- Addition of an informative note to Extent of loss of listed river wall plans at BLABF (drawings DCO-PP-17X-BLABF-190022-rev 1 and DCO-PP-17X-BLABF-190023) to make it clear that the permanent loss of the listed river wall authorised under the DCO extends to the toe of the river wall.
- Amendment to the Demolition and site clearance plan (drawing DCO-PP-17X-BLABF-190007-rev 2):
 - so that the area for demolition is consistent with the changes proposed to the Site works parameter plan and Extent of loss of listed river wall plan;
 - reference to granite river wall facing is removed from the informative note;
- Amendments to the Demolition and site clearance plans (drawings DCO-PP-17X-BLABF-190006 – rev 1 and DCO-PP-17X-BLABF-190007 - rev 2) at the western end of the site where a new vehicular access to the foreshore is to be provided.
- Revise the references to the amended plans in Part 4 of Schedule 2 of the DCO; and
- Revise the reference to the Extent of loss of listed river wall plans referred to in Requirement BLABF 11 – Details of works to listed buildings.

1.12 This application for an amendment to the Thames Water Utilities (Thames Tideway Tunnel) Order 2014 is made in accordance with section 153 and Schedule 6 of the Planning Act 2008 and the Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulation 2011 (as amended).

2. Proposed Changes and Need for the Amendment at VCTEF

2 Proposed Changes and Need for the Amendment at VCTEF

2.1 Authorised Development

2.1.1 The development approved by the DCO at VCTEF is set out under Work Nos. 16a, 16b and 16c of Part 1 of Schedule 1 of the DCO. Work Nos. 16a and 16b form part of the nationally significant infrastructure project (as defined in sections 14 and 29(1A) of the Planning Act 2008) and comprises:

**Work No. 16a: Victoria Embankment Foreshore CSO drop shaft – A shaft with an internal diameter of 13 metres and a depth (to invert level) of 51 metres.*

**Work No. 16b: Regent Street connection tunnel – A tunnel between Victoria Embankment Foreshore CSO drop shaft (Work No. 16a) and the main tunnel (east central) (Work No. 1c).*

2.1.2 Work No. 16c sets out the associated development within the meaning of section 115(2) of the Planning Act 2008, and comprises:

Work No. 16c: Victoria Embankment Foreshore associated development - Works to control and divert flow from the northern Low Level Sewer No. 1 to the Victoria Embankment Foreshore CSO drop shaft (Work No. 16a) and into the Regent Street connection tunnel (Work No. 16b) including the following above and below ground works:

(i) dredging and construction of cofferdam, including the placement of fill material, connection to the existing river wall and construction of campsheds;

(ii) partial demolition of existing listed river wall and construction of new river wall including connection to and alteration of the existing river wall to reclaim land and to enclose Work Nos. 16a and 16c(iii), (v), (vi) and (vii) and scour protection works, new Regent Street B CSO, and new CSO outfall apron;

(iii) construction of an overflow weir chamber, hydraulic structures, chambers with access covers and other structures including culverts, pipes and ducts to modify, connect, control, ventilate, de-aerate, and intercept flow;

(iv) removal and subsequent reinstatement of existing listed features including lamp standards and benches;

(v) construction of structures for air management plant and equipment including filters and ventilation columns and associated below ground ducts and chambers;

(vi) construction of electrical and control kiosks;

(vii) construction of pits, chambers, ducts and pipes for cables, hydraulic pipelines, utility connections, utility diversions and drainage including reinstatement of pipe subway;

2. Proposed Changes and Need for the Amendment at VCTEF

- (viii) provision of construction access from Victoria Embankment and subsequent reinstatement to original layout;*
- (ix) provision of permanent access from Victoria Embankment;*
- (x) removal of a section of central reservation and its subsequent re-instatement;*
- (xi) removal of existing mooring for the Tattershall Castle attached to listed wall (and associated access ramps), construction and use of a new temporary and permanent mooring (over listed wall) for a vessel to the south of Work No. 16c(ii), and means of access for both attached to the listed wall including access brows, gangways, guide piles, mooring chains and anchors fixed to the river bed, construction dredging and associated sheet piling to accommodate the relocated vessel in both the permanent and temporary locations for the vessel;*
- (xii) temporary removal and then reinstatement of the service mooring / service pontoon to the east of the junction of Victoria Embankment and Horse Guards Avenue including guide piles;*
- (xiii) permanent removal of service mooring / service pontoon to the north of the junction of Victoria Embankment and Horse Guards Avenue;*
and
- (xiv) construction of amenity buildings.*

- 2.1.3 The works at VCTEF will divert flows from the Low Level Sewer No.1 by constructing an overflow weir chamber which will connect to the CSO drop shaft via a connection culvert. The interception of the Low Level Sewer No.1 at three locations (VCTEF, BLABF and Chelsea Embankment Foreshore (CHEEF)) will create additional capacity in the sewer during rainfall events avoiding the need for interventions and disruption at other CSO sites along the river. The CSO drop shaft at VCTEF will have an internal diameter of 13 metres and a depth (to invert level) of 51 metres.

2.2 The need for the Amendment at VCTEF

- 2.2.1 At VCTEF, an amendment is required to the Site works parameter plan to correct an anomaly on the approved plan which prevents the works from being constructed as originally intended.
- 2.2.2 The Site works parameter plans are approved plans (as set out in Part 4 of Schedule 2 of the DCO) and identify the specific zones within which certain of the authorised works will take place at each worksite. These zones are applied consistently across all worksites. For each worksite, the Site works parameter plans define the areas within which specific permanent works will be located and include:
- Areas edged in green - the “green zone” (all permanent site structures). The green zone was established to limit the extent of land that could be used for construction of any permanent structures whilst giving some flexibility for their detailed design and layout.

2. Proposed Changes and Need for the Amendment at VCTEF

- Areas edged in blue – the “blue zone” (shafts). The blue zone clarified each shaft location in relation to its associated tunnel’s limits of deviation.
- Areas edged purple – the “purple zone” (permanent above ground structures). The purple zone confirms the limit of land within the worksite where permanent above ground structures could be located.

- 2.2.3 The amendment proposed to the Site works parameter plan at VCTEF (Drawing DCO-PP-16X-VCTEF-180008-rev 3) would amend the “blue zone” (shaft) parameter. Note 3 on the approved plan states: *“The zone within which the shaft would be located would include all permanent works including shaft walls (including appropriate allowances for construction tolerances) and if applicable under-reaming. Shaft construction temporary works may be located within or outside this zone provided they are located within the Limits of land to be acquired or used.”* The illustrative permanent works layout plan (drawing DCO-PP-16X-VCTEF-180010-rev2) shows the proposed location for the shaft and its location within the blue shaft parameter zone. It is apparent from this drawing that the shaft as proposed at the time of the DCO application, could not be constructed within the shaft parameter shown on the approved Site works parameter plan as the shaft walls on the landside (western boundary) are shown extending beyond the approved zone for construction.
- 2.2.4 Note 3 on the approved drawing makes it clear that all permanent works associated with the shaft including shaft walls and under-reaming should be located within the shaft parameter. At this site an ‘under-ream’ (approximately 50m below ground level) is required at the base of the shaft for the shaft to resist flotation. Additionally, a structural ring beam is required in the top 7m of the shaft to protect the integrity of the shaft in the event of an accidental ship impact event. As currently drawn, the under-ream at the base of the shaft and local thickening of the walls in the top 7m of the shaft would fall outside the western boundary of the shaft parameter zone.
- 2.2.5 The proposed amendment to the Site works parameter plan would modify the western boundary of the shaft parameter zone and extend it to the west so that the under-ream and shaft walls will be within the shaft parameter zone to comply with note 3 on the drawing. The amended shaft zone would remain within the green zone within which all permanent site structures are to be located. The need for the amendment to the Site works parameter plan at this site is required to correct an anomaly on the approved plan which prevents the works from being constructed as originally intended. There are no changes to the size or location of the shaft at VCTEF.

3. Proposed Changes and Need for the Amendment at BLABF

3 Proposed Changes and Need for the Amendment at BLABF

3.1 Authorised Development

3.1.1 The development approved by the DCO at BLABF is set out under Work Nos. 17a and 17b of Part 1 of Schedule 1 of the DCO. Work No. 17a forms part of the nationally significant infrastructure project (as defined in sections 14 and 29(1A) of the Planning Act 2008) and comprises:

**Work No. 17a: Blackfriars Bridge Foreshore CSO drop shaft – A shaft with an internal diameter of up to 24 metres and a depth (to invert level) of 53 metres.*

3.1.2 Work No. 17b sets out the associated development within the meaning of section 115(2) of the Planning Act 2008, and comprises:

Work No. 17b: Blackfriars Bridge Foreshore associated development – Works to intercept and divert flow from the Fleet Main CSO and connect the northern Low Level Sewer No.1 to the Blackfriars Bridge Foreshore CSO drop shaft (Work No. 17a) and into the main tunnel (east central) (Work No. 1c), including the following above and below ground works:

- (i) demolition of the existing Blackfriars Millennium Pier (including associated ramps, steps, and offices adjacent to the Pier) and relocation to the east of Blackfriars Bridge, including dredging and associated sheet piled wall, a new pontoon (including enclosed waiting area and associated office accommodation) and means of access including access brows, bank seats and gangways;*
- (ii) removal of section of wall to the north of Work No. 17b(i) and construction of pedestrian gate for emergency services access to the relocated pier;*
- (iii) dredging and construction of a cofferdam including the placement of fill material, connection to the existing listed river wall, and protection to listed Blackfriars Road Bridge;*
- (iv) partial demolition of existing listed and non-listed river wall and construction of new river wall including connection to and alteration of the existing river wall to reclaim land and to enclose Work Nos. 17a and 17b(v), (xi), (xii), and (xiii) and scour protection works, relocation of Fleet Main CSO, and a new CSO outfall apron;*
- (v) construction of an interception chamber, overflow weir chamber, hydraulic structures, chambers with access covers and other structures including culverts, pipes and ducts to modify, connect, control, ventilate, de-aerate, and intercept flow;*
- (vi) demolition of existing west bound Victoria Embankment on-slip ramp and its subsequent reconstruction;*
- (vii) removal of existing mooring for the President and subsequent reinstatement after construction of Work Nos. 17a and 17b (save for this reinstatement) including pontoon and means of access over listed river*

3. Proposed Changes and Need for the Amendment at BLABF

wall including access brows, bank seats and gangways, guide piles, mooring chains and anchors fixed to the river bed and dredging and associated sheet piling to accommodate the vessel. Construction of a temporary mooring at Chrysanthemum Pier to accommodate the President, including modification to the existing mooring or its demolition and construction of a new mooring; including means of access over listed river wall, including access brows, bank seats and gangways to accommodate the temporary mooring of the President; mooring chains and anchors fixed to the river bed, and dredging and associated sheet piling to accommodate the relocated vessel; and reinstatement of existing mooring at Chrysanthemum Pier after construction of Work Nos. 17a and 17b (save for this reinstatement);

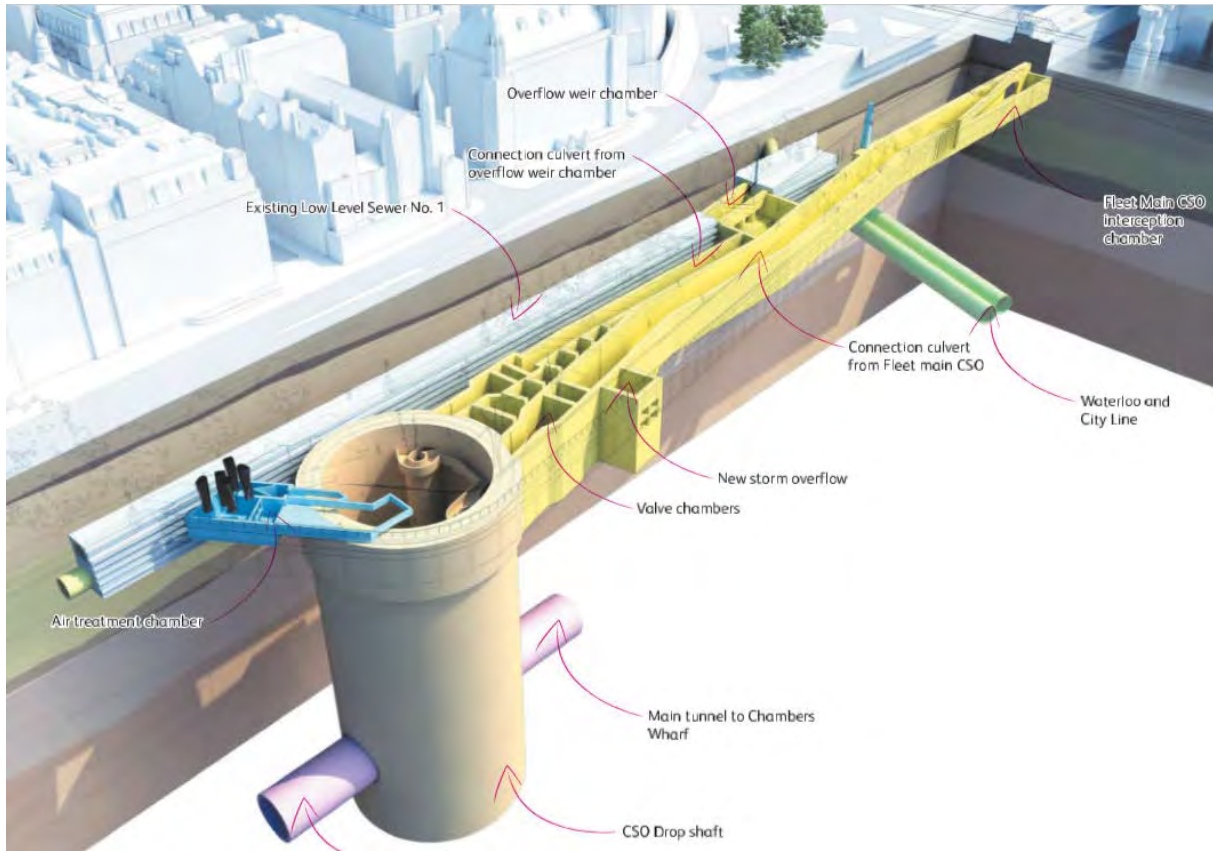
- (viii) works to the listed Blackfriars Road Bridge to remove and subsequently relocate the existing stairs from the Thames Path and subway and Blackfriars Road Bridge on the west side of the bridge;*
- (ix) works to the listed Blackfriars Road Bridge to remove the existing stairs on the east side of the bridge and provision of replacement stairs and lift from the existing Thames Path up to Blackfriars Road Bridge;*
- (x) removal and reinstatement of listed features including lamp standards and benches;*
- (xi) construction of structures for air management plant and equipment including filters and ventilation columns and associated below ground ducts and chambers;*
- (xii) construction of electrical and control kiosks;*
- (xiii) construction of pits, chambers, ducts and pipes for cables, hydraulic pipelines, utility connections, utility diversions and drainage;*
- (xiv) provision of temporary access from Victoria Embankment and subsequent reinstatement to original layout;*
- (xv) provision of permanent access from Victoria Embankment;*
- (xvi) construction of amenity building(s); and*
- (xvii) works to reprovide access to public toilets and sports club.*

3.1.3 The works at BLABF involve one interception and one diversion. Flows from the Fleet Main Combined Sewer Overflow (CSO) will be intercepted via a connection culvert into the Blackfriars CSO drop shaft. Works will also be undertaken to divert flows from the Low Level Sewer No.1 by constructing an overflow weir chamber which will connect to the CSO drop shaft via a connection culvert. The CSO drop shaft will accommodate two vortex drops (one for the interception of the Fleet Main CSO and one for the connection to the Low Level Sewer No. 1) and will have an approximate internal diameter of 24m and be approximately 53m deep.

3.1.4 The underground works that will be taking place at BLABF are shown in Figure 1 which was included in the Design and Access Statement submitted as part of the original DCO application.

3. Proposed Changes and Need for the Amendment at BLABF

Figure 1 – CSO drop shaft and associated structures



- 3.1.5 Where the sewer flow diversion takes place, an overflow weir chamber will be constructed. This will require demolition of part of the existing Low Level Sewer No. 1 and utility ('pipe') subway above it for a length of approximately 20m. The sewer will be rebuilt as part of a new structure which will incorporate the overflow weir chamber as illustrated in Figure 1 and the section of pipe subway will be reinstated. Demolition of the listed river wall will be necessary where the interception takes place to connect the new infrastructure to the existing infrastructure located behind it. These below ground works will be enclosed within the new foreshore structure that will be constructed in front of the existing river wall (Work No. 17b (iv)) on completion of the works. The indicative layout for the new foreshore structure proposed at the time of the original application is shown in Figure 2.

3. Proposed Changes and Need for the Amendment at BLABF

Figure 2 – Proposed foreshore structure at BLABF



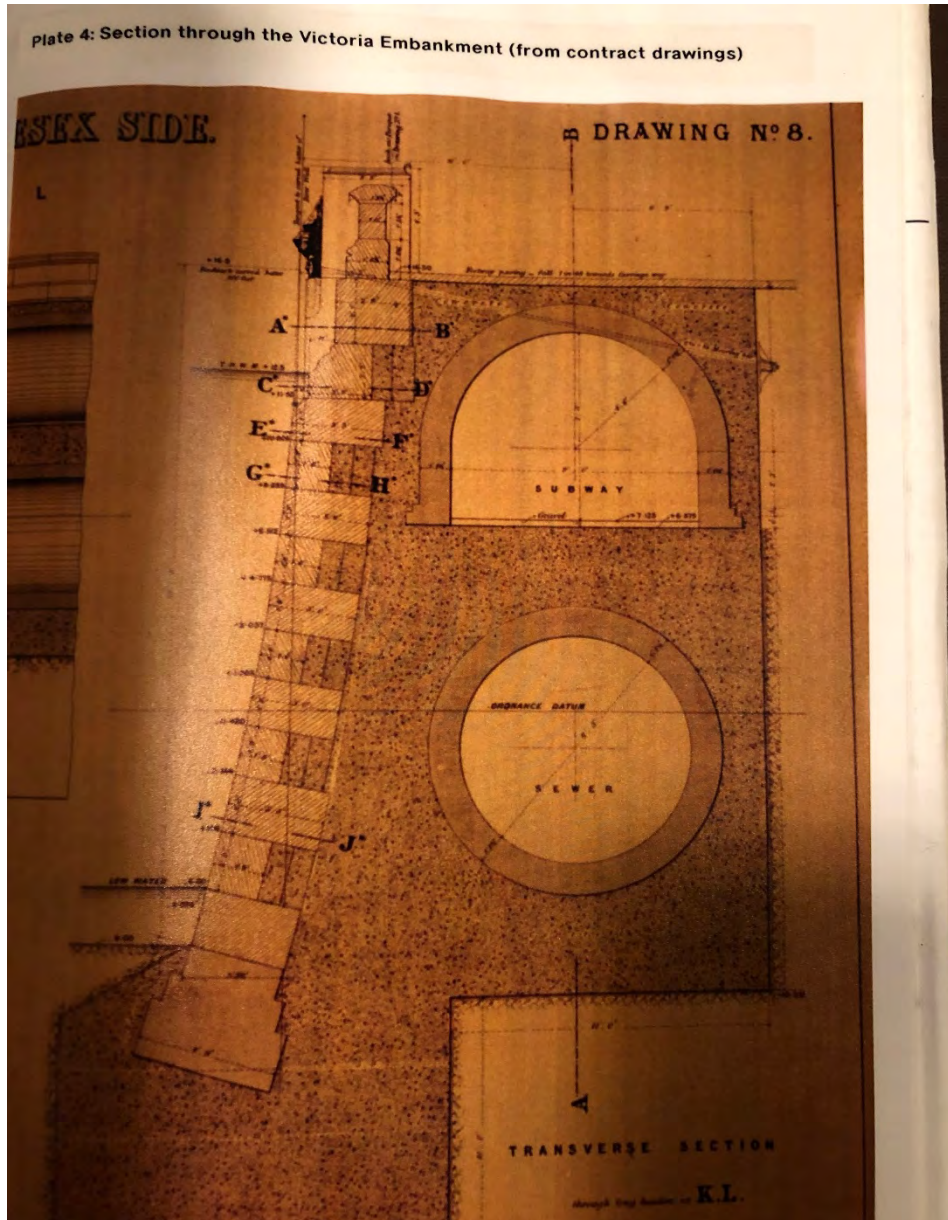
- 3.1.6 On completion of the works, the new foreshore structure will create a new area of public open space. Sections of the existing listed parapet wall will be demolished at street level to create pedestrian and vehicular accesses onto the new structure. Vehicular access for maintenance vehicles will be provided at the western end of the new foreshore structure. When the system comes into operation routine maintenance visits to inspect equipment in structures will occur approximately every three to six months and once every ten years, a major internal inspection of the underground structures will be required.
- 3.1.7 In order to accommodate the new foreshore structure, the stairs on the west side of Blackfriars Road Bridge, from the Thames Path and subway up to the Blackfriars Road Bridge, require removal and reinstatement. An elevated walkway links the existing stairs to the subway to provide a pedestrian route beneath Victoria Embankment to Blackfriars Station and the A201. To facilitate construction of the relocated staircase a portion of the elevated walkway needs to be demolished and reinstated.

3.2 The Need for the Amendment at BLABF

- 3.2.1 The Victoria Embankment river wall, designed by Sir Joseph Bazalgette, was constructed between 1864 and 1870 as part of the Victoria Embankment project to improve London's infrastructure and public health. Behind the granite river wall, the Low Level Sewer No. 1 was constructed and above the sewer a utility subway (pipe subway) was provided. This is illustrated on Figure 3.

3. Proposed Changes and Need for the Amendment at BLABF

Figure 3 – Section through the Victoria Embankment



- 3.2.2 The interception of the Low Level Sewer No.1 will require the demolition of a section of both the existing sewer and pipe subway to facilitate the construction of the overflow weir chamber on the Low Level Sewer No.1, and the subsequent reinstatement of the pipe subway. The pipe subway is a City of London asset and Requirement BLABF 24 of the DCO requires that any part of the pipe subway removed in the course of the authorised project is reinstated in accordance with details submitted to and approved by the relevant planning authority. The reinstated section of the pipe subway will continue to vest with the City of London

3. Proposed Changes and Need for the Amendment at BLABF

in accordance with the London County Council (Subways) Act 1893 as set out in Article 58 of the DCO.

3.2.3 The design of the overflow weir chamber which incorporates the pipe subway has been developed in consultation with the City of London. The City of London, as asset owner, identified a number of requirements relating to their asset which the design needed to address. A design solution has now been identified which meets both the City of London's requirements for their asset and the hydraulic requirements of the operating system relating to the interception in this location.

3.2.4 In order to facilitate construction of the design proposed, some amendments are required to the approved drawings for the BLABF site. The amendments proposed will allow for minor adjustments to area approved for the location of permanent site structures, amend and slightly increase the area approved for permanent loss of the listed river wall and amend the demolition and site clearance drawings so that they reflect these changes.

The proposed amendment to the Site works parameter plan

3.2.5 The Site works parameter plans are approved plans (as set out in Part 4 of Schedule 2 of the DCO) and identify the specific zones within which certain of the authorised works will take place at each worksite. These zones are applied consistently across all worksites. For each worksite, the Site works parameter plans define the areas within which specific permanent works will be located and include:

- Areas edged in green - the "green zone" (all permanent site structures). The green zone was established to limit the extent of land that could be used for construction of any permanent structures whilst giving some flexibility for the detailed design and layout.
- Areas edged in blue – the "blue zone" (shafts). The blue zone clarified each shaft location in relation to its associated tunnel's limits of deviation.
- Areas edged purple – the "purple zone" (permanent above ground structures). The purple zone confirms the limit of land within the worksite where permanent above ground structures could be located.

3.2.6 Minor adjustments to the "green zone" are proposed at two locations as shown on drawing 4601-FLOJV-BLABF-150-ZZ-DR-400300 in Appendix A.

3.2.7 An amendment is proposed in the area of the site where the existing Low Level Sewer No. 1 is intercepted as shown by the red dashed line in Detail 01 on drawing 4601-FLOJV-BLABF-150-ZZ-DR-400300. The amendment is required to enable the piled wall that will provide ground support during the construction of the overflow weir chamber works to be retained as part of the final design solution. The green zone boundary on the approved plan was based on the outline DCO design and information about the sewer and utility subway available at the time of the DCO application. Subsequent surveys have identified the presence of a redundant access shaft which projects beyond the envelope of the utility subway. This, in conjunction with further design development means that some of the

3. Proposed Changes and Need for the Amendment at BLABF

permanent works piles will fall outside or partly outside of the green zone. The minor adjustment to the green zone proposed will allow any piles required for ground support to be retained as part of the permanent works for the new integrated structure. It also provides the necessary flexibility to accommodate any small increases to the width of the integrated structure that may be required due to associated design development. Thames Water currently benefits from an agreement with the City of London which governs the permanent acquisition of land in this area, and as a result there is no need to amend or extend the powers under the DCO relating to permanent acquisition.

- 3.2.8 A further adjustment to the green zone is proposed in the area of the site where replacement stairs are being constructed to the west of Blackfriars Bridge. At this location, the authorised development provides for works to remove and relocate the existing stairs on the west side of the bridge from the Thames Path and subway and Blackfriars Road Bridge. An elevated walkway links the existing stairs to the subway which provides a pedestrian route beneath Victoria Embankment to Blackfriars Station and the A201. To facilitate construction of the relocated staircase a portion of the elevated walkway needs to be demolished and reinstated.
- 3.2.9 The indicative design of the staircase submitted with the DCO application has been developed in consultation with the City of London and Historic England to provide improvements to the finish and configuration of the reinstated staircase. The staircase will be orientated so that pedestrians are directed from the staircase onto the new foreshore structure, and the elevated walkway (which links the existing stairs to the subway to provide a pedestrian route beneath Victoria Embankment to Blackfriars Station and the A201) will match the finish of the reinstated stairs.
- 3.2.10 Although the new parts of the elevated walkway will be reinstatement of an existing structure, it could also be argued that they form part of the new staircase structure and are therefore a permanent site structure for the purposes of the DCO. As currently drawn, part of the reinstated walkway falls outside of the green zone. It is therefore proposed to extend the green zone in this location (as shown by the red dashed line in Detail 02 on drawing 4601-FLOJV-BLABF-150-ZZ-DR-400300) so that the full extent of the elevated walkway to be reconstructed is included in the parameter. This will avoid any potential for ambiguity around the approval of the reinstated walkway.
- 3.2.11 The two amendments proposed to the green zone boundary on the Site works parameter plan for the BLABF site arise as a result of detailed design development. At both locations, the minor adjustments proposed to the green zone boundary would remain within the wider LLAU for the project.

The proposed amendment to the Extent of loss of listed river wall plans

- 3.2.12 The Extent of loss of the listed river wall plans for the Blackfriars site show the extent of loss authorised under the DCO. As currently drawn, the extent of loss of listed river wall drawing DCO-PP-17X-BLABF-190023 incorrectly shows the location for the permanent loss of the listed structure associated with the flow

3. Proposed Changes and Need for the Amendment at BLABF

diversion of the Low Level Sewer No. 1. An amendment to drawing DCO-PP-17X-BLABF-190023 is therefore required to authorise the permanent loss of the listed river wall in the location where these works will take place.

- 3.2.13 It is also proposed to add an informative note to the Extent of loss of listed river wall drawings for the BLABF site (drawings DCO-PP-17X-BLABF-190022-rev 1 and DCO-PP-17X-BLABF-190023). The base of the river wall at BLABF is not usually exposed at low tide and the approved drawings do not show the toe of the embankment wall. The informative note will make it clear that the permanent loss of the listed river wall authorised under the DCO extends to the toe of the river wall.
- 3.2.14 The DCO currently authorises the permanent removal of approximately 40m of parapet wall and approximately 149m of granite facing at the base of the river wall, an area of approximately 942m². The proposed amendment seeks to remove approval for permanent loss in the location where only the parapet wall needs to be removed (for pedestrian access to the new foreshore structure) and to provide approval for permanent loss of the river wall in the area where the flow diversion of the Low Level Sewer No. 1 will take place. The proposed amendment would increase in the overall area of permanent loss of listed river wall approved under the DCO at BLABF by approximately 80m²
- 3.2.15 The area of river wall that would be permanently removed would be obscured by the new foreshore structure and would not be visible when the works are completed. The sturgeon lamp columns and lion head moorings which would be temporarily removed during construction, would be reinstated above ground as part of the final landscape proposals for the site.

The proposed amendment to the Demolition and site clearance plan

- 3.2.16 The Demolition and site clearance plans for BLABF show, amongst other things, the below ground structures to be removed or infilled. Drawing DCO-PP-17X-BLABF-190007-rev 2 shows the demolition of the below ground structures associated with the construction of the new overflow weir chamber to the west of Blackfriars Bridge.
- 3.2.17 An amendment is proposed to the area of purple shading (below ground structures to be removed or infilled) on drawing DCO-PP-17X-BLABF-190007-rev 2 so that the area is consistent with the amendments proposed to the Site works parameter plan and Extent of loss of listed river wall plan. An informative note against the purple shading states *'Brick and mass concrete services subway, low level sewer below and granite river wall facing to be rebuilt post construction.'* As currently drafted this note could suggest that the services subway, low level sewer and river wall should be rebuilt post construction in brick and granite. It is therefore proposed that this note is amended to read *'River wall, services subway and low level sewer No 1 to be demolished and rebuilt.'* This will remove any potential ambiguity. Final details of the works to the river wall and pipe subway are subject to approval under the Requirements in the DCO.

3. Proposed Changes and Need for the Amendment at BLABF

- 3.2.18 The proposed access for maintenance vehicles to the new foreshore structure is shown on the illustrative permanent works layout plan (Drawing DCO-PP-17X-BLABF-190013-rev 1) and will be provided at the western end of the new foreshore structure. In order to access the site, it will be necessary for maintenance vehicles to drive over the existing pipe subway. Given the age and location of the pipe subway the potential for the services structure to require strengthening to accommodate maintenance vehicles was identified in the DCO application.
- 3.2.19 The approved plans do not provide for the removal or infilling of below ground structures at the western end of the foreshore structure where the vehicular access to the new foreshore is to be provided. Whilst the need for strengthening in this location is still to be determined, it is proposed that an additional area of purple shading is added to the demolition and site clearance drawings where the vehicular access to the new foreshore is to be provided. This will provide the necessary flexibility to allow for any strengthening works that may be required to the pipe subway to be undertaken should they be found necessary following discussion with the asset owner, the City of London. The location for the vehicular access straddles two drawings and therefore the amendment will apply to drawings DCO-PP-17X-BLABF-190006-rev 1 (sheet 2 of 5) and drawing DCO-PP-17X-BLABF-190007-rev 2 (sheet 3 of 5).

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4 Supporting Environmental Information

4.1 Scoping

- 4.1.1 Consideration has been given to whether the proposed changes to the authorised project give rise to any:
- a. New significant effects that were not identified in the ES for the consented project; or
 - b. Materially different effects when compared to the effects set out in the ES for the consented project.
- 4.1.2 Consideration has also been given as to whether the proposed change would constitute EIA development for the purposes of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Schedule 2 (13) sets out that a change to a Schedule 1 or Schedule 2 (1) to (12) development which has already been authorised would be considered EIA development if the change “may have significant adverse effects on the environment”. In doing so, the effect of the changes on the overall project have been considered to identify whether there are other, project wide significant effects that need to be taken into account.
- 4.1.3 The proposed amendment at VCTEF as set out in Section 2.2 is required to remove ambiguities on the approved Site works parameter plan for the VCTEF site to enable the works to be constructed as originally intended. The proposed amendment is consistent with the illustrative drawings submitted in support of the application and is not required because of a change in the design or approach proposed at the time of the original application. For these reasons the amendment proposed at VCTEF does not change the significance of the effects assessed at the time of the original application and no further assessment is deemed necessary.
- 4.1.4 The proposed changes at BLABF and set out in Section 3.2 have been considered against all the topics assessed as part of the ES for the consented scheme to identify the potential environmental effects, and whether these could result in new or materially different significant effects to those identified in the site specific assessment (ES Vol 18). The result of this assessment (for the BLABF site only) is presented in Table 4.1 below.
- 4.1.5 The nature of the proposed amendments at BLABF, which result from detailed design development, means that most topic areas are unaffected by the proposed amendment and there is no change to the significance of effects originally identified. The proposed increase in the area of the listed river wall to be permanently removed was identified as a change which could have the potential to affect the findings of the Historic Environment assessment for above ground heritage assets for the consented scheme. However, when considered against the assessment made in the ES for the consented scheme, it was clear that the proposed changes would not result in any changes to the significance of the effects previously assessed and, therefore, no new significant effects would occur.

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- 4.1.6 As such, it has been concluded that no new or materially different environmental effects from those assessed in the original ES for the consented scheme would arise from the implementation of the proposed amendments at a local level at BLABF.
- 4.1.7 The ES submitted with the consented scheme also considered and reported on the potential cumulative and project wide effects that could result from the development (ES Volume 3). The potential for project wide effects to occur as a result of the changes proposed has been considered. The amendments proposed at VCTEF and BLABF will not result in any change in the significance of effects at a local level, and it is therefore concluded that the significance of any cumulative or project wide effects would also remain unchanged.

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Table 4.1 Consideration of the Proposed Amendments at BLABF on the ES (Vol 18)

ES Topic	Sub Topics	Original ES Residual Impacts	Impact of Proposed Non Material Change
Air Quality and Odour	Construction Phase	Negligible – Minor Adverse at receptors	Amendment required as a result of design development for the Low Level Sewer No.1 diversion and pipe subway interface. The changes do not affect proposed construction method. All construction works would be undertaken in accordance with the project wide strategies and codes of practice secured under the DCO. No change
	Operational Phase (Odour)	Negligible	No changes proposed to above ground structures associated with air management. No change
Ecology – aquatic (Terrestrial ecology was scoped out of the Environmental Assessment for the BLABF site)	Site Specific Construction effects on Designated sites and habitats, Marine Mammals, Fish, Invertebrates and Algae	Residual impacts ranged from Minor Adverse - Negligible	Amendment required as a result of design development for the Low Level Sewer No.1 diversion and pipe subway interface. No change to size or extent of temporary cofferdam. No change
	Site Specific Operational effects on Designated sites and habitats, Marine Mammals, Fish, Invertebrates and Algae	Minor Adverse to Minor Beneficial. The project will result in improved water quality in the River Thames which will have beneficial effects on	No change to area of permanent foreshore loss. Compensation for this loss is provided through a suite of off-site habitat creation schemes. No change

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		fish and on invertebrate density and abundance (Decision Letter para 35)	
<p>Historic Environment</p> <p>Buried Heritage assets</p> <p>Above Ground Heritage assets</p> <p>Setting of Listed Buildings and Conservation Areas</p>	Construction phase	<p>Negligible effect on buried heritage assets</p> <p>Moderate Adverse effects on embankment river wall, listed lamp columns and benches from localised demolition, temporary removal and reinstatement of listed lamp standards. Asset significance reduced.</p> <p>Moderate Adverse effects on the setting of Blackfriars Bridge, the Whitefriars, Temples and South Bank Conservation Areas, and the historic character of the Embankment river wall as a result of construction activities.</p>	<p>Amendment required as a result of design development for the Low Level Sewer No.1 diversion and pipe subway interface and to correct the location for permanent loss associated with the sewer diversion.</p> <p>The proposed amendment would increase the overall area approved for permanent loss of the listed river wall at BLABF by approximately 80m2. Mitigation measures would remain as existing. The river wall designation extends from Blackfriars Bridge to Westminster Bridge. The increase in the area for permanent loss proposed will not result in complete removal of the asset as the listed river wall adjacent to the site will remain unchanged. The additional area of loss proposed by this amendment would not therefore result in a change to the significance of the overall effect. No changes to above ground works are proposed so the amendment would not introduce any new effects to the setting of the listed buildings or the listed river wall.</p> <p>No changes are proposed to the alignment of the main tunnel or to the footprint of the development. There will be no additional effects on buried heritage assets.</p> <p>No change</p>
	Operation Phase	Minor Adverse – Moderate Beneficial	<p>No change to above ground works.</p> <p>No change</p>
Land Quality	Construction Phase only	Negligible - minor adverse	<p>Amendment required as a result of design development for the Low Level Sewer No.1 diversion and pipe subway interface.</p>

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			No effect on land quality. No change
Noise and Vibration	Construction Noise and Vibration	Not significant	Amendment required as a result of design development for the Low Level Sewer No.1 diversion and pipe subway interface. No change to proposed construction method. All construction works would be undertaken in accordance with the project wide strategies and codes of practice secured under the DCO. No change
	Operational Noise and Vibration	Not Significant	No changes proposed to the operation of the site No change
Socio-economic	Construction Phase	Negligible to minor adverse effects on users of the Thames Path, Blackfriars Millennium Pier and sports club.	Amendment required as a result of design development for the Low Level Sewer No.1 diversion and pipe subway interface. Works will be undertaken in accordance with the Codes of Practice secured through the DCO. No change
	Operational Phase	Moderate Beneficial	No changes proposed to the new public realm that will be created on the foreshore. No change

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Townscape and Visual	Construction Phase	Major Adverse effects on townscape character and riverside setting as a result of construction activities and visual impact.	Amendment required as a result of design development for the Low Level Sewer No.1 diversion and pipe subway interface. No changes to proposed construction methods or activities. No change
	Operational Phase	Minor adverse effects on character and setting arising from new foreshore structure. Visual impact negligible.	No changes proposed to above ground works. No new effects to the setting of listed buildings or Conservation Areas close to the site. No change
Transport	Construction Phase	Major adverse effect on pedestrians due to footpath closures; Moderate adverse effect on cyclists due to increased journey times and highway layout changes; Minor adverse effect on highway users arising from construction vehicle movements, diversions and delays to journeys.	Amendment required as a result of design development for the Low Level Sewer No.1 diversion and pipe subway interface. The changes do not affect proposed construction method. All construction works would be undertaken in accordance with the project wide strategies and codes of practice secured under the DCO. No change
	Operational phase	Negligible effect on pedestrians and highway users	No change
Water Resources – groundwater	Construction Phase	Minor Adverse effect to lower aquifer due to lowering of groundwater levels in the chalk from dewatering.	Amendment required as a result of design development for the Low Level Sewer No.1 diversion and pipe subway interface. The changes do not affect proposed construction method.

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			All construction works would be undertaken in accordance with the project wide strategies and codes of practice secured under the DCO. No change
	Operational phase	Minor Adverse arising from change in groundwater levels as a result of physical obstruction and seepage into shaft	No changes proposed to shaft or tunnel in this location. No change
Water Resources- surface water	Construction Phase	Minor Adverse due to temporary changes to channel morphology associated with the cofferdam and associated scour protection construction.	No change to size or extent of temporary cofferdam. No change
	Operational phase	Moderate to Major Beneficial as a result of water quality improvements	No change

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4.2 Heritage Statement

- 4.2.1 The original DCO application was accompanied by a Heritage Statement which identified the statutory and non-statutory sites of historic importance and considered the effects of the proposals on the historic environment in relation to the criteria and policies in the National Policy Statement for Wastewater (the NPS). The Heritage Statement was concerned with above ground assets only and identified the project proposals that would normally require Listed Building Consent and Conservation Area Consent. The Heritage Statement has been reviewed to confirm that the effects of the proposed amendment at BLABF would not alter the findings of Heritage Statement.
- 4.2.2 Both the Environmental Statement and Heritage Statement submitted with the DCO application considered the impacts on the historic environment that would result from the proposed development. The assessment methodology used in both documents to determine 'harm' and thus the magnitude of the impact on a built heritage asset, established complete removal of an asset as a major adverse effect which would equate to substantial harm in terms of the NPS. This was followed by varying levels of impact relating to changes to the asset significance which would affect the ability to understand and appreciate the asset and its historical context, character and setting. Moderate adverse effects in the ES equate to harm which is less than substantial in NPS terms. The assessment methodology and statements of significance were accepted by the Examining Authority and Secretary of State when determining the application.
- 4.2.3 Appendix J of the Heritage Statement considered the works at BLABF and concluded that the main heritage impact of the proposals at BLABF related to changes to the setting of the listed buildings, being both the river wall and those listed buildings around the site. The effect of the works was not considered to amount to substantial harm to the setting of the listed buildings.
- 4.2.4 The Embankment river wall is Grade II* listed. The works to the river wall for approval under the DCO which would normally require Listed Building Consent are set out in J.4.14 of the Heritage Statement and include:
- c. Removal of significant elements for re-use and demolition (refer to the Demolition and site clearance plans and the Construction phase 1: Site set-up pier relocation drawing).*
- i. The significant elements of the river wall to be removed and reinstated would first be recorded to facilitate accurate reinstatement.*
 - ii. The elements would be carefully removed without cutting, where possible.*
 - iii. The elements, especially the fragile lamp standards, would be lifted from beneath (where possible) in such a way as to avoid unnecessary strain.*
 - iv. The elements would be palletted and transported to a secure indoor storage facility during construction. They would be cleaned and refurbished prior to reinstatement.*

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- v. *In order to construct the foreshore structure and connections, the granite blocks in the area shown on the Extent of loss of listed river wall drawing would be removed. The amount of historic fabric to be removed would be kept to a minimum and less fabric might be removed than indicated on the drawing.*
- vi. *The river wall parapet adjacent to Blackfriars Millennium Pier would be removed.*
- vii. *A proportion of the granite facing and parapet stone to be removed permanently would be retained and stored for re-use in making good the river wall following removal of the cofferdam and elsewhere on the project.*
- viii. *Four Grade II* listed sturgeon lamp standards in the western part of the site and two adjacent to the access ramp and steps to Blackfriars Millennium Pier would be removed and subsequently reinstated.*
- ix. *The items to be removed permanently, including the lamp standards and the President's mooring, would be re-used where possible (in accordance with Section 3.2 of this document).*
- x. *The river wall parapet on either side of the foreshore structure would also be temporarily removed to prevent damage and reinstated towards the end of the construction phase.*

4.2.5 The proposed amendment will slightly increase the area of listed river wall approved for permanent removal in v. above. The permanent loss of the listed river wall associated with these works was considered in the Heritage Statement which concluded that the effect of the works would not amount to substantial harm because only a small section of the asset was affected. The proposed amendment will not alter this conclusion. No changes are proposed to above ground structures which could affect the setting of listed buildings around the site.

4.2.6 The design principles and construction codes of practice will continue to apply to the works and the amount of listed fabric to be removed will be kept to a minimum. In addition, Requirements BLABF 11 (Details of works to listed buildings), BLABF 12 (Protective works to listed buildings) and BLABF 13 (Restoration works to listed buildings) will continue to apply and provide the local planning authority and Heritage England with further controls to approve the works.

4.3 Habitat Regulation Assessment

4.3.1 In addition to the ES, the original DCO application was accompanied by a Habitats Regulations Assessment: No Significant Effects Report (dated January 2013). This report concluded that the proposed development was not likely to have a significant effect on any European sites, either alone or in combination with other projects and plans. As a result, it was concluded that an appropriate assessment was not required.

4.3.2 A change to a DCO might be considered as material if in terms of the Habitats Regulations if:

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- a. The change itself is likely to have a new significant effect on a European site (or a European offshore marine site) or will add to the significant effects on such site and will therefore need a Habitats Regulations Assessment; and/or
- b. The change will result in the need for a licence, or a change to an existing license for a European Protected Species.

4.3.3 The changes proposed at both sites affect below ground works only. No European protected sites or species will be affected. The changes do not require a Habitats Regulation Assessment and will not result in the need for any European Protected Species licences.

5. Stakeholder Engagement

5 Stakeholder Engagement

- 5.1.1 Pre application discussions have taken place with the following consultees in advance of this submission

City of Westminster

- 5.1.2 Discussions have taken place with the City of Westminster regarding the proposed amendment to the Site works parameter plan for the VCTEF site. They have raised no objections or concerns relating to the amendment proposed.

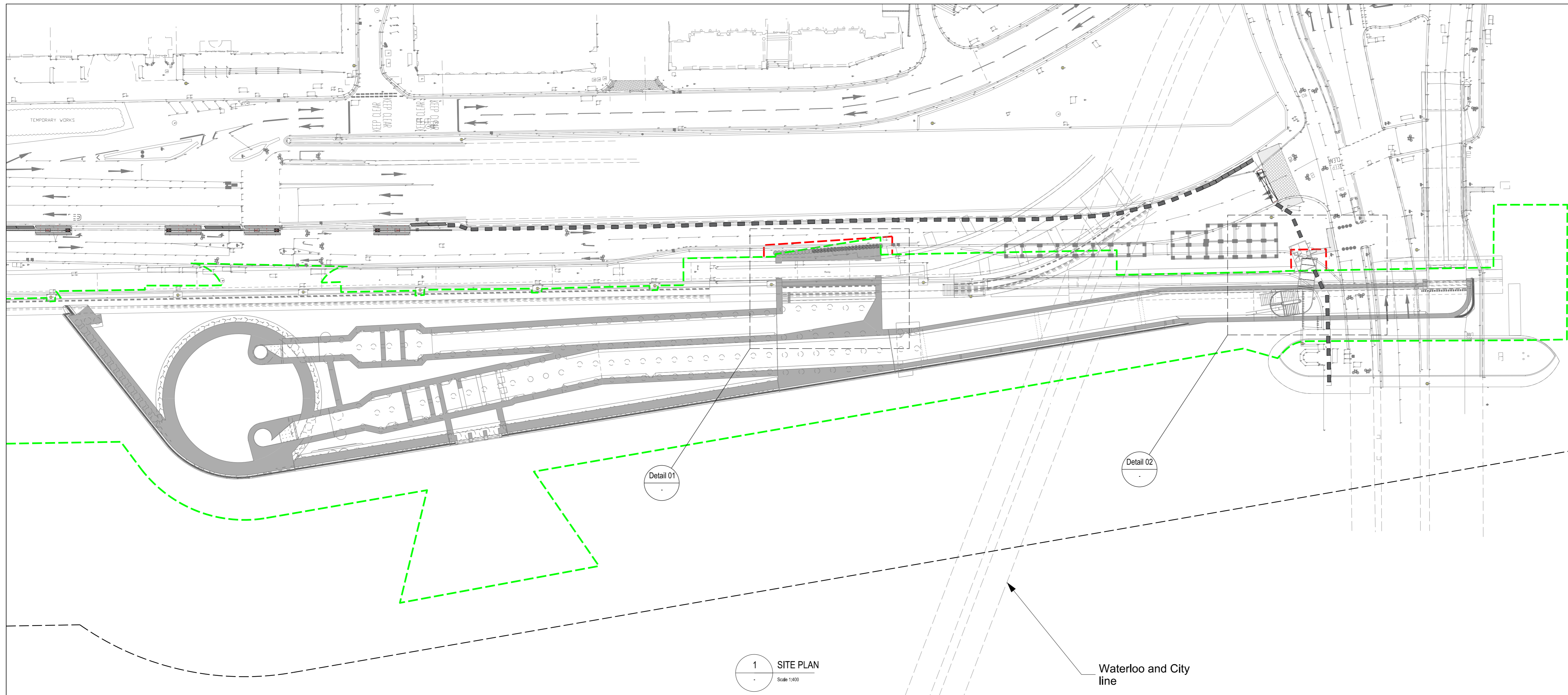
City of London

- 5.1.3 The City of London, as asset owner and local planning authority have been closely involved in the development of the design solution at BLABF as part of the works will involve the reinstatement of their asset. Discussions have been ongoing over a number of months with the City of London's planning, engineering, urban design and heritage officers to develop a design that is acceptable to the City of London. The City of London have confirmed that they support the proposed design solution and that it addresses their requirements with respect to the reinstated pipe subway. They are also aware that the amendment to the green zone to accommodate the piling will extend the area of sub-soil land to be acquired under the existing agreement with Thames Water.

The Historic Buildings and Monuments Commission for England

- 5.1.4 Historic England have been consulted about the proposed amendment at BLABF. They have confirmed that in their view, the increase in the area of listed river wall authorised for permanent removal would not result in any new or materially different effects on the above ground heritage assets at BLABF from those assessed in the original ES for the consented scheme.

Appendix A
Drawing 4601-FLOJV-BLABF-150-ZZ-DR-400300

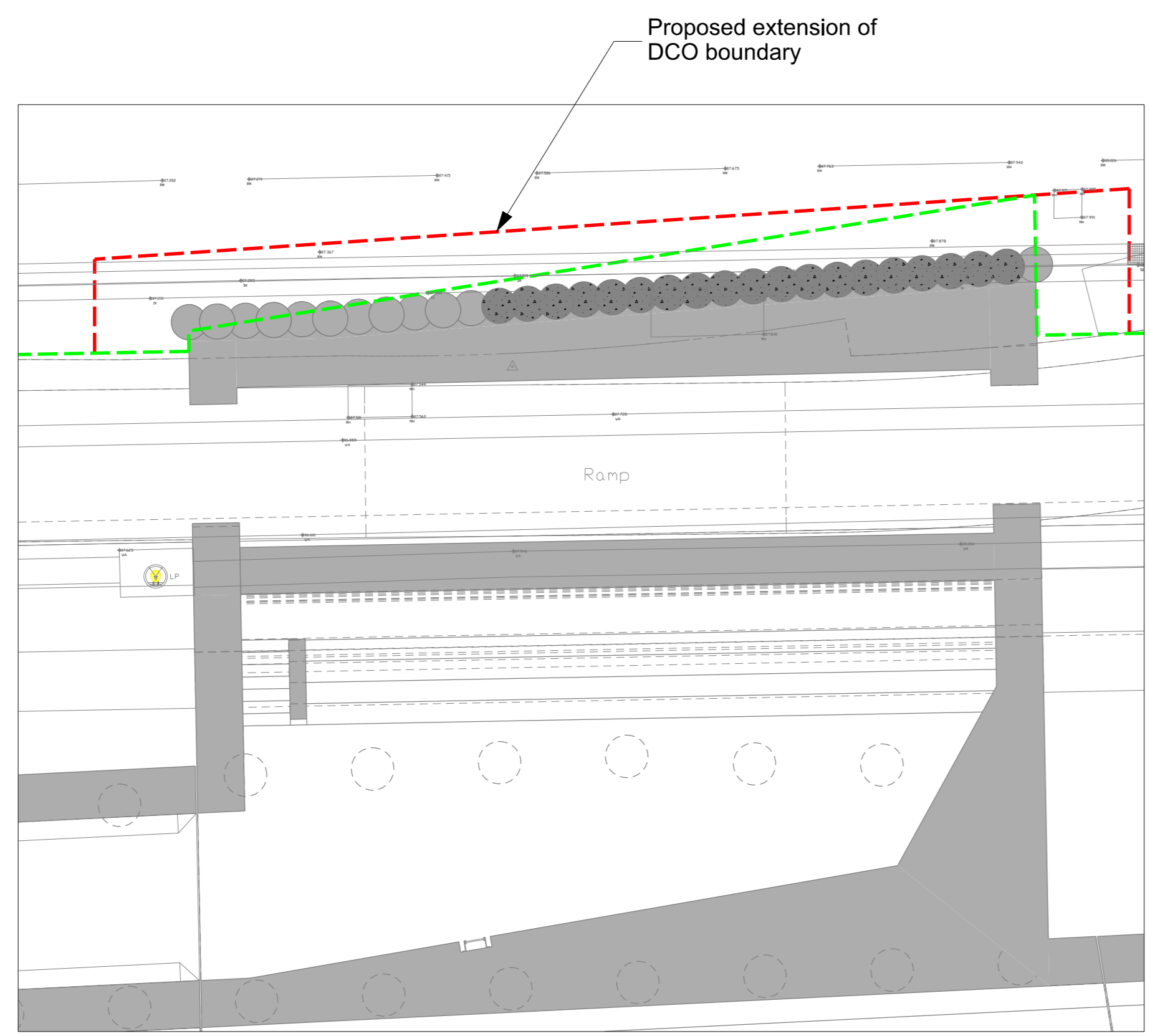


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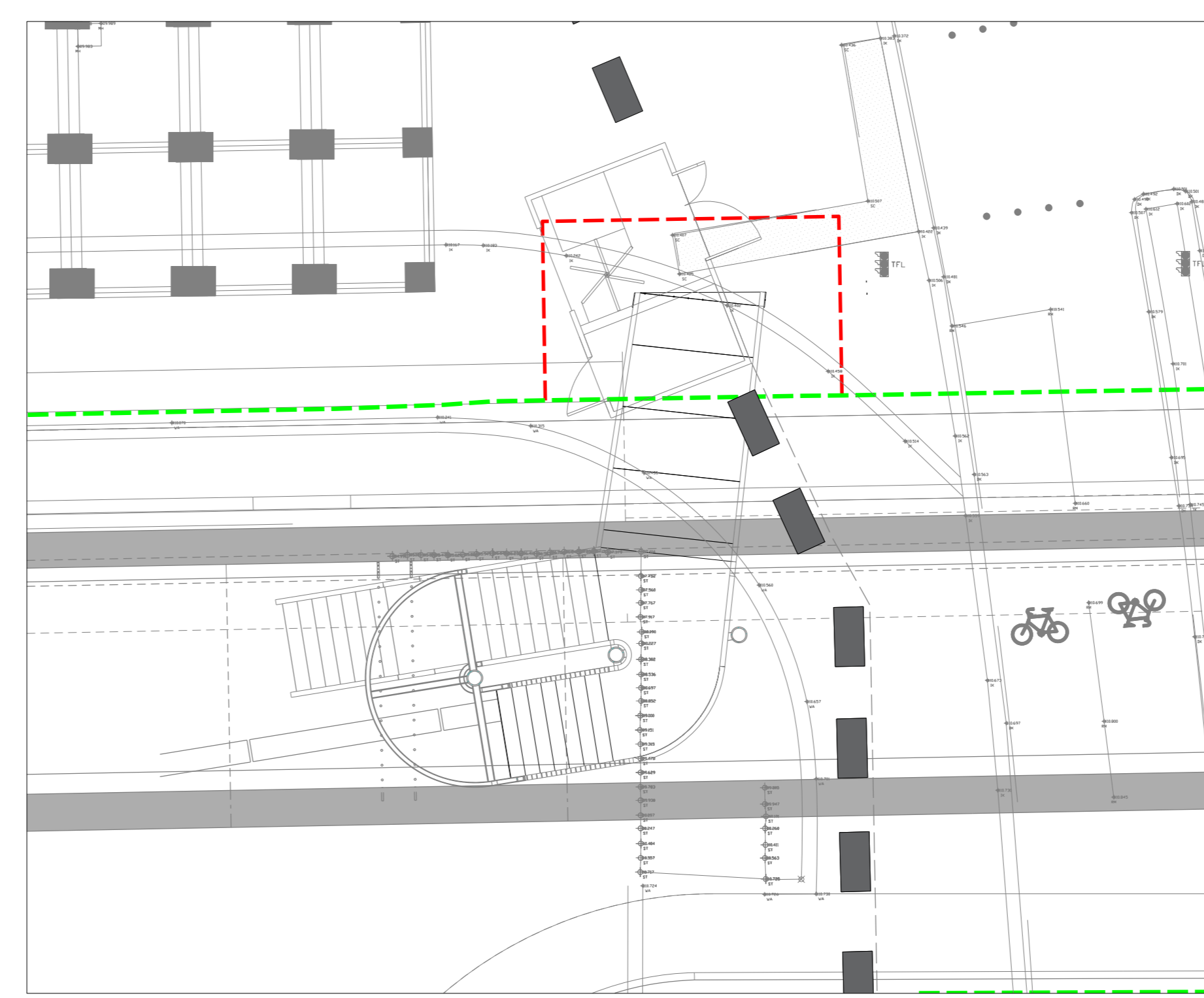
- KEY:
- LIMITS OF LAND TO BE ACQUIRED OR USED (LLAU)
 - - - ZONE WITHIN WHICH ALL PERMANENT SITE STRUCTURES WOULD BE LOCATED (DCO)
 - - - PROPOSED (DCO) BOUNDARY

1 SITE PLAN
Scale 1:100

Waterloo and City line



2 DETAIL 01
Scale 1:100



3 DETAIL 02
Scale 1:100

1m 0 10m
Scale 1:100 at A1

Work in Progress

Revision History					
Rev	Description	Dsgnr	Chkd	Appd	Date
Current Revision					
P01.2					06/04/20

Contractor Approval: --

P01.2

Work in Progress

S0

Location
Blackfriars Bridge Foreshore
CITY OF LONDON
Document Information
FLo - Permanent Works
PLAN
PROPOSED DCO BOUNDARY ALTERNATIVE

--
4601-FLOJV-BLABF-150-ZZ-DR-400300
OFFICIAL

