

Location 15

Hard standing area – view away from river wall



Notes:

- Existing cracks in concrete hard standing first observed during first inspection on 19th December 2017.
- No new cracks or other evidence of movement or settlement within concrete hard standing observed.
- Borehole within concrete hardstanding, containing monitoring equipment. Presumed to be part of site investigation works by TfL for the Silvertown Tunnel.



Technical Note

Project Thames Side West

Subject Dohm Wharf River Wall Quarterly Inspection – February 2019

Project no 035668

Date 14 February 2019

Revision	Description	Issued by	Date	Approved (signature)
00	For issue	JF	14.02.19	

1 Introduction

Dohm Wharf Wall is a section of river wall on the north bank of the River Thames. The wall is 32m long, and comprises steel sheet piles, waling beams and ground anchors. The retained area behind the wall is occupied by hard standing and a warehouse.

Following the completion of a series of repairs to the steel sheet pile sections in September 2017, it was agreed with the Environment Agency (EA) that quarterly inspections of the river shall be carried out. The principle aim of these inspections is to ensure that the river wall remains in suitable condition to act as a flood defence, until the wall is fully replaced as part of the Thames Side West Operational Development works. The purpose of these visual inspections is twofold:

- To monitor the overall structural stability of river wall; and
- To monitor the repairs previously carried out to the steel sheet pile wall to confirm that the repairs remain in place and that no further degradation of the condition of the steel has taken place.

The fifth quarterly inspection was carried out on the 6th February 2019. Present at the inspection were Jack Foster and Dominic Nugent, of BuroHappold Engineering. The inspection was carried out from the land side of the river wall only.

This Technical Note provides a summary of the observations during the 6th February 2019 inspection and should be read in conjunction with the following reports from previous inspections and site visits carried out by BuroHappold:

- Dohm Wharf River Wall Inspection, 23rd February 2017
- Dohm Wharf Repairs Summary Report, 27th September 2017
- Dohm Wharf River Wall Quarterly Inspection, 19th December 2017
- Dohm Wharf River Wall Quarterly Inspection, 22nd March 2018
- Dohm Wharf River Wall Quarterly Inspection, 25th June 2018
- Dohm Wharf River Wall Quarterly Inspection, 26th September 2018

2 Overall Structural Stability

A visual inspection of the river wall was carried out from the land side, with access gained via the following two areas shown in Figure 2.1 which are separated by timber hoarding and a fire escape from the adjacent building.

- Concrete hardstanding (purple)
- The terrace area of the former The Old Basket Supply Co (TOBS), both at ground and first floor level (orange)

The site is now controlled by Transport for London (TfL) and the warehouses formerly occupied by The Old Basket Supply (TOBS) are now vacant. Access to the site was arranged directly with Jeffrey Boardman from TfL.

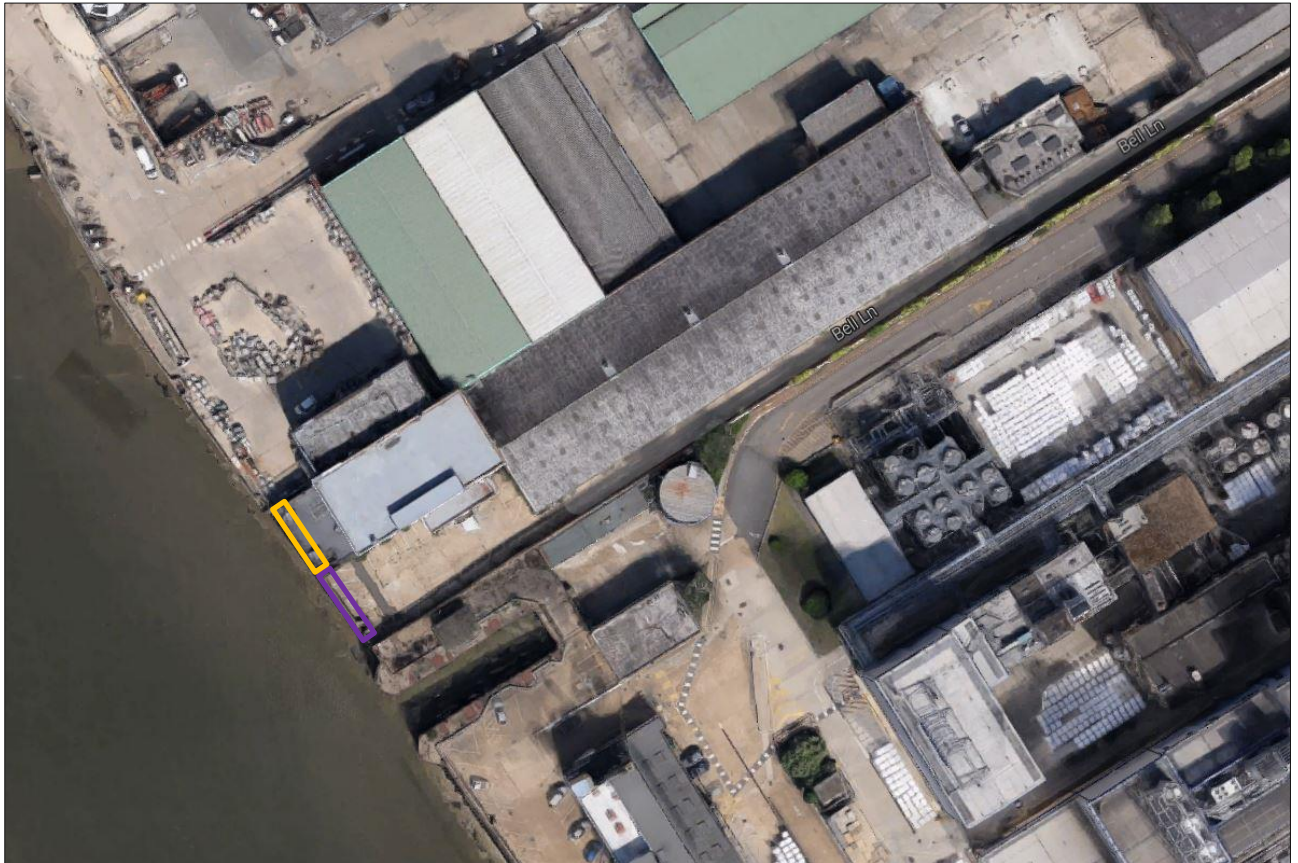


Figure 2.1: Aerial view of Dohm Wharf showing inspection areas

The purpose of the visual inspection was to monitor the overall structural stability of the river wall by identifying any evidence of movement such as new cracks in the concrete parapet wall, capping beam, hardstanding or adjacent perpendicular brick walls.

Record photos were taken from a series of standard locations to allow repeat photos to be taken to enable direct visual comparison to determine if any degradation occurs between subsequent quarterly inspections. These record photos and locations are given in the Appendix, along with observation notes.

During the previous inspection in September 2018, 2 no. boreholes within the hardstanding behind the river wall were observed. One is approx. 2m from the river wall and has been fitted with a steel cap, the other is further back and contains monitoring equipment. During this inspection a third borehole was observed approx. 0.5m from the river wall, which has been backfilled with concrete. There were no representatives from TfL on site during the Dohm Wharf inspection. It is assumed that these boreholes are part of site investigation works on behalf of TfL for the Silvertown Tunnel.

The vegetation within the concrete hard standing has been partially cut back since the previous inspection. It is assumed that this was carried out by TfL in order to gain access to the boreholes.

No evidence of movement or settlement of the existing river wall was observed.

3 Steel Sheet Pile Repairs

3.1 Overview

During the 23rd February 2017 inspection, corrosion to the steel sheet pile sections of the river wall was observed. This was most significant in the splash zone above high water where voids were present behind perforations in the steel.

Following the inspection, it was recommended that short-term remedial works were carried out to preserve the structural integrity of the wall and the associated flood defence. These remedial works to the corroded areas of the steel sheet piling were carried out in August and September 2017, in the form of plates welded over the perforations.

As part of this quarterly monitoring, a visual inspection of the remedial works was carried out from the land side of the river wall to confirm that the repairs remain in place and that no further degradation of the steel has taken place.

3.2 Upper Level

The repairs to the upper part of the sheet pile wall above the upper waling beam were visible from the land side.

All plate repairs appear to remain securely welded to the existing sheet pile sections and there is no evidence of further degradation of the condition of the remaining steel. Figure 3.1 shows a typical photograph of the upper level of the river wall, showing the steel plate repairs securely welded to the sheet piling.



Figure 3.1: Typical photograph of upper level of river wall, showing steel plate repairs to sheet piling, taken from the land side of the river wall

3.3 Low Level

A detailed inspection of the repairs to the low level of the river wall was not carried out as access to the foreshore was not gained during the inspection. However, from observations from the land side of the top of the river wall, no patch repairs appeared to be missing or displaced.

4 Summary and Conclusion

The visual inspection did not identify any evidence of further movement or settlement within the concrete hardstanding, concrete capping beam and parapet wall or adjoining brick walls since the previous inspection.

Of the steel sheet pile repairs that were visible, the welds appear to remain sound and the plates securely fixed. The repairs carried out at the foot of the river wall were not visible in detail due to access restrictions, however observations from the land side did not reveal any faults to the low level repairs.

The site is now controlled by TfL, however there were no representatives from TfL on site during the inspection and there is no evidence that works associated with the Silvertown Tunnel have begun other than ground investigation. During the inspection, 3 no. boreholes within the hardstanding behind the river wall were observed. It is assumed that these are part of site investigation works on behalf of TfL for the Silvertown Tunnel.

The next quarterly inspection is due to be carried out in May 2019.

Appendix

Location 1

Hard standing area – overview of parapet wall



Notes:

- Hard standing generally in good condition.
- Existing cracks in hard standing previously observed during 23rd February 2017, 19th December 2017, 22nd March 2018, 25th June 2018 and 26th September 2018 inspections.
- No new cracks observed in concrete parapet wall or concrete hard standing.
- No obvious indications of movement or settlement of parapet wall or hard standing.
- Vegetation within concrete hard standing has been partially cut back since previous inspection on 26th September 2018.



Location 2

Hard standing area – south corner



Notes:

- Brick wall perpendicular to river wall, at south boundary of Dohm Wharf river wall.
- Existing crack in brick wall unchanged since last inspection. See location 3 for detail.
- No new cracks observed in concrete parapet wall, adjoining red brick wall or concrete hardstanding.
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Location 3

Hard standing area – south corner brick wall crack detail



Notes:

- Brick wall perpendicular to river wall, at south boundary of Dohm Wharf river wall.
- Existing crack in brick wall at approximate level of crest of concrete parapet wall first observed during first inspection on 19th December 2017.
- Extent of crack remains unchanged since 19th December 2017, 22nd March 2018, 25th June 2018 and 26th September 2018 inspections.
- Crack does not appear to have widened since 19th December 2017, 22nd March 2018, 25th June 2018 and 26th September 2018 inspections.
- No new cracks observed within brick wall or concrete parapet wall.
- No obvious indications of movement or settlement.



Location 4

Hard standing area – north corner



Notes:

- No cracks observed in concrete parapet wall or concrete hard standing during first inspection on 19th December 2017.
- No new cracks observed in concrete parapet wall or concrete hard standing.
- No evidence of movement at interface between timber hoarding, concrete parapet wall and concrete hard standing.
- No obvious indications of movement or settlement of parapet wall or hard standing.



Location 5

Hard standing area – crack in parapet wall



Notes:

- Existing hairline crack in concrete parapet wall first observed during first inspection on 19th December 2017.
- Crack originates through penetration in wall, assumed to be a construction defect rather than caused by movement of the river wall.
- No new cracks observed in concrete parapet wall or concrete hard standing.
- No evidence of movement since previous inspection on 26th September 2018.



Location 6

TOBS terrace area – overview of parapet wall



Notes:

- No new cracks observed in concrete parapet wall.
- Inspection of ground behind parapet wall prevented by presence of timber deck.
- No obvious indications of movement or settlement.



Location 7

TOBS terrace area – north corner



Notes:

- Existing crack in wall of concrete planter first observed during first inspection on 19th December 2017. See location 8 for detail.
- No new cracks observed in concrete parapet wall or adjoining brick wall.
- No obvious indications of movement or settlement.



Location 8

TOBS terrace area – north corner planter crack detail



Notes:

- Existing crack in wall of concrete planter first observed during first inspection on 19th December 2017.
- Extent of crack remains unchanged since last inspection.
- No evidence to indicate that crack has widened since last inspection.
- No new cracks observed in wall of concrete planter.



Location 9

TOBS terrace area – north cornered brick wall detail



Notes:

- Adjoining brick wall at north boundary of Dohm Wharf river wall.
- Existing minor crack along horizontal mortar joints in brick wall first observed during first inspection on 19th December 2017.
- No evidence to indicate that crack has widened or extended since last inspection.
- No new cracks observed in brick wall.
- Note that condition of mortar is poor in places.



Location 10

TOBS terrace area – south corner



Notes:

- No new cracks observed in concrete parapet wall.
- No obvious indications of movement or settlement.



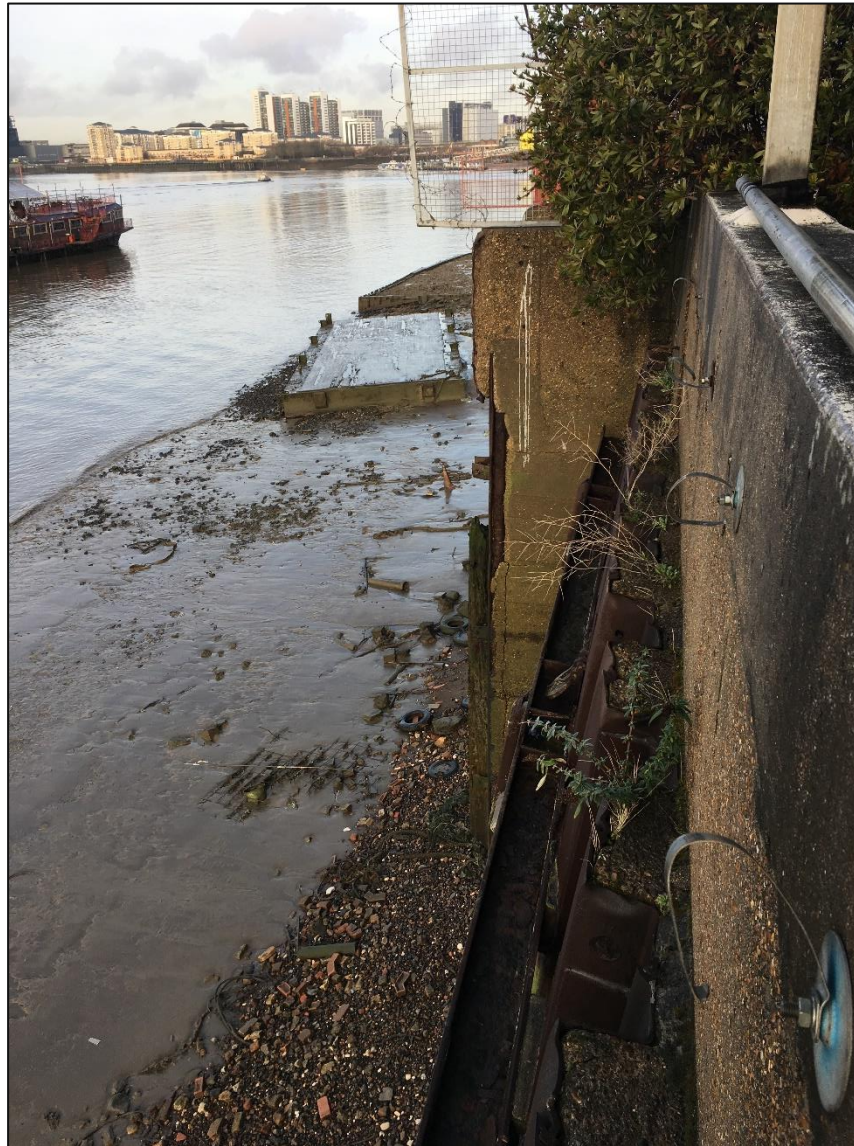
Location 11

TOBS terrace area – end face of adjacent wall to north



Notes:

- Adjoining river wall to north steps out from alignment of Dohm Wharf river wall.
- Reinforcement within concrete face of adjoining river wall exposed, first observed during first inspection on 19th December 2017. No obvious deterioration since last visit on 26th September 2018.
- No evidence of movement at interface between two river walls.



Location 12

Hard standing area – overview of hard standing



Notes:

- Taken from the upper deck of the TOBS roof terrace.
- Existing cracks in concrete hard standing first observed during first inspection on 19th December 2017.
- No new cracks or other evidence of movement or settlement within concrete hard standing observed.
- Vegetation within concrete hard standing has been partially cut back since previous inspection on 26th September 2018.
- Borehole within concrete hardstanding, containing monitoring equipment. Presumed to be part of site investigation works by TfL for the Silvertown Tunnel.



Location 13

Hard standing area – overview of hard standing



Notes:

- Taken from the upper deck of the TOBS roof terrace.
- Existing cracks in concrete hard standing first observed during first inspection on 19th December 2017.
- No new cracks or other evidence of movement or settlement within concrete hard standing observed.
- Vegetation within concrete hard standing has been partially cut back since previous inspection on 26th September 2018. Borehole within concrete hardstanding, containing monitoring equipment. Presumed to be part of site investigation works by TfL for the Silvertown Tunnel.



Location 14

Hard standing area – overview of hard standing



Notes:

- Taken from the upper deck of the TOBS roof terrace.
- Existing cracks in concrete hard standing first observed during first inspection on 19th December 2017.
- No new cracks or other evidence of movement or settlement within concrete hard standing observed.
- Vegetation within concrete hard standing has been partially cut back since previous inspection on 26th September 2018.
- Borehole within concrete hardstanding approx. 2m from face of river wall has been capped. A second borehole approx. 0.5m from face of river wall has been backfilled with concrete. Presumed to be part of site investigation works by TfL for the Silvertown Tunnel.



Location 15

Hard standing area – view away from river wall



Notes:

- Existing cracks in concrete hard standing first observed during first inspection on 19th December 2017.
- No new cracks or other evidence of movement or settlement within concrete hard standing observed.
- Vegetation within concrete hard standing has been partially cut back since previous inspection on 26th September 2018
- Borehole within concrete hardstanding, containing monitoring equipment. Presumed to be part of site investigation works by TfL for the Silvertown Tunnel.



Technical Note

Project Thames Side West

Subject Dohm Wharf River Wall Quarterly Inspection – May 2019

Project no 035668

Date 11 June 2019

Revision	Description	Issued by	Date	Approved (signature)
00	For issue	JF	11.06.19	

1 Introduction

Dohm Wharf Wall is a section of river wall on the north bank of the River Thames. The wall is 32m long, and comprises steel sheet piles, waling beams and ground anchors. The retained area behind the wall is occupied by hard standing and a warehouse.

Following the completion of a series of repairs to the steel sheet pile sections in September 2017, it was agreed with the Environment Agency (EA) that quarterly inspections of the river shall be carried out. The principle aim of these inspections is to ensure that the river wall remains in suitable condition to act as a flood defence, until the wall is fully replaced as part of the Thames Side West Operational Development works. The purpose of these visual inspections is twofold:

- To monitor the overall structural stability of river wall; and
- To monitor the repairs previously carried out to the steel sheet pile wall to confirm that the repairs remain in place and that no further degradation of the condition of the steel has taken place.

The sixth quarterly inspection was carried out on the 24th May 2019. Present at the inspection were Jack Foster and Sara Moslemi Zadeh, of BuroHappold Engineering. The inspection was carried out from the land side of the river wall only.

This Technical Note provides a summary of the observations during the 24th May 2019 inspection and should be read in conjunction with the following reports from previous inspections and site visits carried out by BuroHappold:

- Dohm Wharf River Wall Inspection, 23rd February 2017
- Dohm Wharf Repairs Summary Report, 27th September 2017
- Dohm Wharf River Wall Quarterly Inspection, 19th December 2017
- Dohm Wharf River Wall Quarterly Inspection, 22nd March 2018
- Dohm Wharf River Wall Quarterly Inspection, 25th June 2018
- Dohm Wharf River Wall Quarterly Inspection, 26th September 2018
- Dohm Wharf River Wall Quarterly Inspection, 6th February 2019

2 Overall Structural Stability

A visual inspection of the river wall was carried out from the land side, with access gained via the following two areas shown in Figure 2.1 which are separated by timber hoarding and a fire escape from the adjacent building.

- Concrete hardstanding (purple)
- The terrace area of the former The Old Basket Supply Co (TOBS), both at ground and first floor level (orange)

The site is now controlled by Transport for London (TfL) and the warehouses formerly occupied by The Old Basket Supply (TOBS) are now vacant. Access to the site was arranged directly with Jeffrey Boardman from TfL.

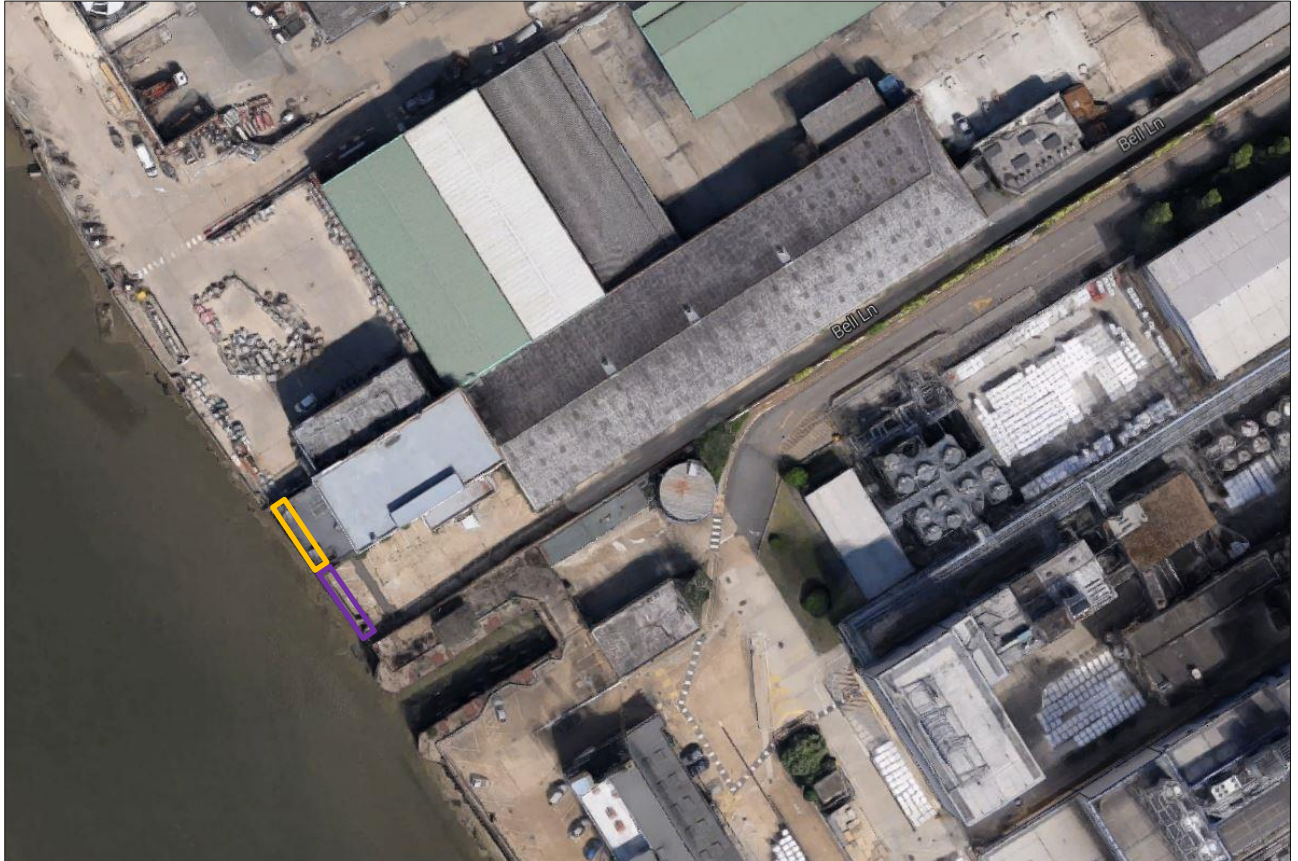


Figure 2.1: Aerial view of Dohm Wharf showing inspection areas

The purpose of the visual inspection was to monitor the overall structural stability of the river wall by identifying any evidence of movement such as new cracks in the concrete parapet wall, capping beam, hardstanding or adjacent perpendicular brick walls.

Record photos were taken from a series of standard locations to allow repeat photos to be taken to enable direct visual comparison to determine if any degradation occurs between subsequent quarterly inspections. These record photos and locations are given in the Appendix, along with observation notes.

The vegetation within the concrete hard standing has regrown since the previous inspection on the 6th February 2019, having been partially cut back prior to the 26th September 2018 inspection. There were no representatives from TfL on site during the Dohm Wharf inspection.

No evidence of movement or settlement of the existing river wall was observed.

3 Steel Sheet Pile Repairs

3.1 Overview

During the 23rd February 2017 inspection, corrosion to the steel sheet pile sections of the river wall was observed. This was most significant in the splash zone above high water where voids were present behind perforations in the steel.

Following the inspection, it was recommended that short-term remedial works were carried out to preserve the structural integrity of the wall and the associated flood defence. These remedial works to the corroded areas of the steel sheet piling were carried out in August and September 2017, in the form of plates welded over the perforations.

As part of this quarterly monitoring, a visual inspection of the remedial works was carried out from the land side of the river wall to confirm that the repairs remain in place and that no further degradation of the steel has taken place.

3.2 Upper Level

The repairs to the upper part of the sheet pile wall above the upper waling beam were visible from the land side.

All plate repairs appear to remain securely welded to the existing sheet pile sections and there is no evidence of further degradation of the condition of the remaining steel. Figure 3.1 shows a typical photograph of the upper level of the river wall, showing the steel plate repairs securely welded to the sheet piling.



Figure 3.1: Typical photograph of upper level of river wall, showing steel plate repairs to sheet piling, taken from the land side of the river wall

3.3 Low Level

A detailed inspection of the repairs to the low level of the river wall was not carried out as access to the foreshore was not gained during the inspection. However, from observations from the land side of the top of the river wall, no patch repairs appeared to be missing or displaced.

4 Summary and Conclusion

The visual inspection did not identify any evidence of further movement or settlement within the concrete hardstanding, concrete capping beam and parapet wall or adjoining brick walls since the previous inspection.

Of the steel sheet pile repairs that were visible, the welds appear to remain sound and the plates securely fixed. The repairs carried out at the foot of the river wall were not visible in detail due to access restrictions, however observations from the land side did not reveal any faults to the low level repairs.

The site is controlled by TfL, however there were no representatives from TfL on site during the inspection and there is no evidence that works associated with the Silvertown Tunnel have begun other than ground investigation.

The next quarterly inspection is due to be carried out in August 2019.

Appendix

Location 1

Hard standing area – overview of parapet wall



Notes:

- Hard standing generally in good condition.
- Existing cracks in hard standing previously observed during all previous inspections.
- No new cracks observed in concrete parapet wall or concrete hard standing.
- No obvious indications of movement or settlement of parapet wall or hard standing.
- Significant vegetation within concrete hard standing since previous inspection on 6th February 2019.



Location 2

Hard standing area – south corner



Notes:

- Brick wall perpendicular to river wall, at south boundary of Dohm Wharf river wall.
- Existing crack in brick wall unchanged since last inspection. See location 3 for detail.
- No new cracks observed in concrete parapet wall, adjoining red brick wall or concrete hardstanding.
- Significant growth of vegetation within concrete hard standing since previous inspection on 6th February 2019.



Location 3

Hard standing area – south corner brick wall crack detail



Notes:

- Brick wall perpendicular to river wall, at south boundary of Dohm Wharf river wall.
- Existing crack in brick wall at approximate level of crest of concrete parapet wall first observed during first inspection on 19th December 2017.
- Extent of crack remains unchanged all previous inspections.
- Crack does not appear to have widened since previous inspections.
- No new cracks observed within brick wall or concrete parapet wall.
- No obvious indications of movement or settlement.

