

Everton Stadium – The Peoples Project

Bramley-Moore Dock

Methodology Statement

- Heritage Asset: Regent Road Wall
- Specific Element: Reconstruction Works, Repairs and Non-intrusive Works
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1. Introduction

A total of three pedestrian openings are proposed to be formed within the Grade II listed Regent Road wall. The openings will facilitate the access and egress to the Bramley-Moore Dock area during the operation of the stadium.

The primary aim of this document is to outline the methodology of reconstructing the Regent Road Wall openings, following the deconstruction detailed in document BMD01-LOR-XX-XX-MS-W-100001. The methodology for the reconstruction will ensure the works are carried out with the necessary consideration for the historical importance and preservation of Regent Road Wall.

An additional aim of this document is to outline the methodology for a number of non-intrusive works that have an interface with Regent Road wall.

2. <u>Overview of proposed works</u>

2.1. Creation of the Regent Road pedestrian openings

2.1.1. Scope of works

There are three locations along Regent Road Wall that will require reconstruction works to create the proposed pedestrian access, with each having identical dimension.

The reconstruction works are to be carried out in a phased approach, which will include the following:

Phase 1: Reconstruction of the central opening

- Excavate and construct the gate post foundation.
- Make good the existing wall local to cut line.
- Install steelwork, including columns, lintel and endplates.
- Seal around endplate with a colour matched mortar.
- Grout infill between endplate and existing wall.
- Installation of lighting supply.
- Commence reinstallation of the stone.
- Install double leaf gate.
- Relay the loose brick to the remains of the overhead railway system.
- Installation of hard landscaping.
- Repair works.



Phase 2: Sequential deconstruction and construction to the two remaining access points.

- In sequence, the two remaining openings are to be deconstructed and reconstructed following the same process as per BMD01-LOR-XX-XX-MS-W-100001 and Phase 1, respectively.

Note: it is only the northern opening that has an interface with the brick remains of the overhead railway system as shown on BMD01-PAT-ZZ-EX-DR-A-904100.

2.1.2. Proposed pedestrian opening design information

The proposed opening details can be seen in Figures 1 to 5. Refer to Drawing BMD01-BHE-ZZ-ZZ-SK-S-284057 for the full detailed drawing containing Figures 1 to 3.









Figure 3. Cross-section through the lintel.



Figure 4. Plan view of interface with existing wall.





Figure 5. Cross-section thorough the foundation and column interface.

2.2. Non-intrusive works with Regent Road Wall interface

There are a number of non-intrusive works proposed that have an interface with Regent Road Wall and Turrets. These activities are listed as follows:

- Removal of various items affixed to Regent Road Wall.
- Removal of East Bramley-Moore Gate Substation.
- Construction of new vehicle gates.
- Foul drainage outfall to Regent Road.
- Repair Works Masonry.
- Repair Works Gates.



3. <u>Method statement</u>

3.1. Creation of the Regent Road pedestrian openings

The following section of the report will provide further details around the activities associated with the reconstruction of Regent Road pedestrian openings as detailed in the scope of works (Section 2.1.1.)

All of the following work activities detailed will be carried out by competent contractors working to an approved design. All works will be in accordance with the approved method statement or tasks sheet, as detailed in Section 3.8.

3.1.1. Excavate and construct the gate post foundation

The existing foundations that clash with the proposed foundations are to be excavated and removed using hand tools and (or) via non-destructive means using a Vacuum Excavator (Vac-Ex). No mechanical excavation is permitted. Hard structures will be removed using hand-held saws and breakers and the air lance attached to the Vac-Ex.

Concrete to be in accordance with the relevant design drawings, specification and installation methodology.

3.1.2. Make good the existing wall local to cut line

A specialist stonework contractor is to make good the existing wall local to the cutline such that a relatively uniform vertical line is achieved. The vertical edge will be hidden by the endplate in the permanent case, as shown in Figure 4.

Specific attention will be given to match the existing style and bedding mortar colour of the existing wall characteristics, as far as practicable.

3.1.3. Installation of structural frame including columns, lintel and endplates.

The galvanised steel columns and lintel will be installed onto the foundation using holding down bolts.

The galvanised end plate will be installed onto the foundation to encapsulate the existing wall ends.

3.1.4. Grout infill to endplate

Prior to infilling with grout, as shown in Figure 4, the joint between the endplate and wall is to be sealed using a colour matched mortar, as shown in Figure 6. The mortar will ensure the grout infill is contained.



Figure 6. Annotated extract from figure 4.

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3.1.5. Lighting Supply

The supply for the signage backlighting will be discreet. The supply will be fed through a duct in the foundation, through the steel work and out a joint in the granite stone in the necessary location. The signage design shown in Figure 7 is indicative only and subject to further design development.

3.1.6. Reconstruction of stonework.

The specialist stonework contractor will carry out the reconstruction of the stonework. Similar to section 3.1.2. Specific attention will be given to match the compatible mortar specification to the existing wall.

It is expected that the distribution of granite stone size used for the gate reconstruction will be subtly different than the existing wall. It is expected that the wall will be constructed with a bias towards the larger granite stone, whilst ensuring the cyclopean style, continuous profile and historical character of the wall is maintained. This is illustrated in Figure 7.

Note: All rebuilt stonework will be subject to sample review and agreement with Liverpool City Council Conservation Officer (LCCCO).



Figure 7. Artistic impression of the pedestrian access taken from BMD01-PAT-ZZ-XX-PP-Z-000032.

3.1.7. Installation of pedestrian gates

The double leaf gates and all necessary components will be installed by a competent contractor working to approved design details. Extract of the drawing indicating the design intent for the pedestrian accesses can be seen in Figure 8.

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heritage

Figure 8. Extract from BMD01-PAT-ZZ-EX-DR-A-904100 illustrating pedestrian access design intent

3.1.8. Relay the loose brick to the remains of the overhead railway system

- All of the following reconstruction works and repairs will be carried out to ensure the style and character of the existing brick wall is preserved and maintained.
- The loose brick that will be removed from the upper courses from the remains of the overhead railway system is to be reinstalled by the specialist stonework contractor.
- Significantly damaged brick will be replaced with salvaged brick of good condition. An example of an unsalvageable brick can be seen in Figure 9.



Figure 9. An example of an unsalvageable brick.

- The brick is to be returned into Regent Road Wall, circa 300mm back from the cut line joint of the northern pedestrian opening as shown in Figure 4. The return into the wall is to be made good using the salvaged brick and will be carried out to match the style and character of the existing wall, similar to what is shown in Figure 10.
- The salvaged brick is to be used to construct a copping brick along the length of the structure to ensure water is shed from the top course.
- A lime-based mortar with silver sand will be used to develop a colour match to the existing mortar.
- Repairs to the mortar joints are to be carried out where necessary, refer to section 3.2.5. for details on the repair works.





Figure 10. Image of the existing brick remains.

3.1.9. Installation of hard landscaping

The installation of the hard landscaping local to the gates will ensure the following:

- Hard landscaping in the Bramley-Moore Dock area will be installed to the approved landscaping designs by a competent contractor.
- Hard landscaping local to the gate opening will be as per Figure 5.

3.1.10. Works in The Public Highway.

Permanent works within the public highway include the following:

- Alterations to Regent Road footpath and cycleway as shown in drawing BMD01-PLA-S0-EX-DR-L-948410.
- Alterations include raising the cycleway to the same level as the adjacent footpath due to the expected high pedestrian volumes. Additionally, drainage channel units will be installed to accommodate the resulting changes in level and tactiles installed where required.

Temporary works within the public highway include the following:

- Trial holes to accommodate saw cutting of the Regent Road Wall
- To facilitate the creation of the pedestrian openings, a scaffolding system is to be installed onto the footpath local to the location of the proposed opening.

3.2. Non-intrusive works with Regent Road Wall interface

The following section of the report will provide further details around the non-intrusive works, as detailed in the outline scope of works (Section 2.2.).

All of the following work activities will be carried out by competent contractors working to an approved design. All works will be in accordance with the approved method statement or tasks sheet, as detailed in Section 3.8.



3.2.1. Removal of various items affixed to Regent Road Wall.

There are a number of items in the proximity of Bramley-Moore Dock that have been fixed to Regent Road Wall that require removal. These include:

- Vehicle signage.
- Utility services infrastructure.
- Ferrous fixings.
- Timber boards.
- Removal of the existing timber gates to the northern access (Figure 11).



Figure11. Image of the northern vehicle access gates to be removed.

The removal of these items will be carried out with due consideration for the Heritage significance of the wall and turrets, ensuring minimal disruption occurs.

It is expected that once the items have been removed repairs to the wall will be required. The repair works are detailed in Section 3.2.5.

In addition to Figure 11. an example of the various items that require removal can be seen in Figure 12.



Figure 12. Images of various items fixed to Regent Road Wall and Turrets.

3.2.2. Removal of East Bramley-Moore Gate Substation

The East Bramley-Moore Gate substation located near the southern vehicle access is to be deconstructed. The works will be carried out with due consideration for the close proximity of Regents Road Wall.



3.2.3. Construction of new vehicle gates

There are new security gates proposed to the northern and southern vehicle access points. The gates will be set back from the existing turrets to maximise vehicular access. The gates will sit independent of the turrets and therefore the heritage interface with Turrets is not expected to be significant. The foundations for the gate will be constructed using the same methodology detailed in Section 3.1.1.

The design intent can be seen on drawing BMD01-PAT-ZZ-EX-DR-A-904100. Extract of the drawing can be seen in Figure 13.



Figure 13. Extract from BMD01-PAT-ZZ-EX-DR-A-904100 illustrating the proposed security gates sitting independent of the turrets.

3.2.4. Drainage Outfall to Regents Road

The proposed foul drainage outfall for the scheme will discharge into a manhole (United Utilities ref. 6501) f ound in the Regent Road and A5054 junction, as shown in Figure 13.



Figure 13. Proposed foul drainage design shown alongside an aerial image replicating the same information.



The proposed pipe is 375mm dia. and will be created using a direction boring method, with the pipe installed over 4m below ground level. In order to enable the directional boring, launch pits will be created. The launch pits will be over 12m away, in either direction, of where the proposed drainage alignment intersects Regent Road Wall (Figure 13). In light of the above, the proposed works are deemed to have minimal interface with Regent Road Wall.

3.2.5. Repair Works – Masonry

There is expected to be an element of repair works required due to the existing damage or weathering to Regent Road Wall, the brick remains and concrete structure, as well as the necessary repairs due to the removal of the wall mounted items. The proposed repair works these include:

- Repair to the coping stones.
- Repointing of loose mortar.
- Grout fill of cracked joints.
- Re-bedding locally of dislodged stonework.
- Replacement of missing stonework.
- Repairs due to wall mounted items; including signs, ferrous fixings, northern vehicle. access timber gates, timber boards etc.
- Repair to the bedding mortars of Regent Road Wall and the brick remains.
- Repair to the concrete plinth.
- Removal of paint finishes and bituminous material.
- Cleaning of the wall due to debris.
- Cleaning of the wall due to calcium deposits.

The repairs will be carried out on a 'minimum intrusive' basis in order to preserve the historical character of the wall.

The proposed repair techniques and materials used will be trialled prior to the main works commencing on a section of wall agreed with Liverpool City Council. The trial repairs will be subject to review and approval by the Liverpool Council Conservation Officer. The approved repairs, rebuild methods, materials and products used will form the benchmark of the follow works.

An example of the repairs required can be seen in Figure 15.



Figure 15. An example of the repairs required. (left to right) Missing and loose stone, cracking in the wall causing smaller stones to dislodge, bituminous material deposits.



3.2.6. Repair Works – Gates

The timber gates on the southern vehicle access are to be integrated into the proposed scheme. The timber gates will be parked in the open position and receive light refurbishment only, for example replacement of missing timber board. The southern gate can be seen in Figure 16.



Figure 16. Image of the Southern Timber Gate.

3.3. Temporary works

3.3.1. Creation of Regent Road pedestrian openings

- Access to the elevated levels of Regent Road Wall will be provided using a scaffold arrangement
- No significant temporary works are expected for the brick wall other than a low-level working platform if necessary.

3.3.2. Non-intrusive works with Regent Road Wall interface

There are no significant temporary works for the non-intrusive works that are expected to have an interface with a Regent Road other than low-level access platforms. The launch pits detailed in Section 3.2.4. will include sheet piles, frames and deep excavations. However, these works will be over 12m from Regent Road Wall so is will have minimal interface.

3.4. Plant and equipment

It is expected that only hand tools are required for the majority of the work activities described, exceptions to this include:

- Potential use of a Vac-Ex for excavations.
- Potential use of a HIAB (or similar) for lifting operations of the steelwork.
- Akerman Guided Auger Rig (See Section 3.2.4.).

3.5. Recording of information

The recording of the stone and brick that is removed from the wall will be carried out as part of the deconstruction works detailed in BMD01-LOR-XX-XX-MS-W-100001.



It is only expected that the repairs will be recorded. All repairs will be photographically recorded before and after the repairs to form part of the Historical Environment Record. All photographs will be high resolution.

3.6. Protection arrangements

The protection arrangements that will be implemented during the works detailed in this document will be in accordance with the site wide Protection Strategy (BMD01-HPM-XX-XX-RP-W-100003).

3.7. Competency of staff

All operatives working on the project will be required to attend a site induction provided by Laing O'Rourke before starting work. The induction will be used to emphasize the historical importance of the heritage items across the site and the precautionary measures implemented to ensure they are preserved and protected where necessary.

All operatives will be required to hold a valid CSCS and competency cards suitable to their trade and the equipment they are using.

Prior to any works being carried out that have a heritage interface, the site team will be briefed by the supervising engineer on the approved task methodology, any expected risks that have a heritage interface aspect as well as the mitigating measures required.

3.8. Health, Safety and Quality Assurance

3.8.1. Site Supervision

Supervision on site will be provided by Laing O'Rourke.

Specialist contractors will provide supervision for each of their individual teams.

3.8.2. Risk Assessments and Method Statements (RAMS)

A Health and Safety method statement and/or task sheet for all work activities detailed in this document will be developed in due course. Copies of the Method statement and/or task sheet will be issued to the client and planning authority for information and comment prior to the execution of works.

All activities carried out on site will be in strict accordance with the approved task sheet or method statement.

3.8.3. Inspection and Test Plan (ITP)

Prior to the reconstruction and repair works, an Inspection and Test Plan (ITP) that details the step by step quality and safety processes will be produced. The ITP will be reviewed and approved by Laing O'Rourke. The ITP will identify the necessary hold points where samples will be offered up to Liverpool City Council for inspection and approval to form the benchmarks for the follow-on works.



3.8.4. Daily Activity Briefing (DAB)

Prior to any activities being carried out, the Site Supervisor will give a Daily Activity Briefing (DAB) each morning or each change of work activity. The DAB allows a collaborative discussion amongst the site team to discuss the risks presented by the current work activity and agree the relevant mitigating measures. In addition to the safety dimension of the DAB, attention will be paid to the heritage interface of the work activity.

3.9. Employee duties

Employees and sub-contractors must ensure that the works are carried out in line with the proposals noted in this document. It is a criminal offence under the Planning Acts if any person executes *"any work for the demolition of a listed building or for its alteration or extension in any manner which would affect its character as a building of special architectural or historic interest unless the works are authorised"*. The current penalty for conviction in a magistrates' court is a fine of up to £20,000 and/or a prison sentence of up to six months, and on conviction in the Crown Court, an unlimited fine and/or a prison sentence of up to two years. Consequently, it is essential to ensure that the proposed works are appropriately authorised and follow the agreed methodologies within this document.

3.10. Monitoring

Regent Road Wall will be subject to a monitoring programme for the full duration of the construction phase of the stadium, as detailed in the 'Site Wide Monitoring Scope of Works, BMD01-BHE-ZZ-XX-RP-C-110004, Section 9, Table 9-2'.

3.11. Technical compliance

The following technical compliance will be adhered to:

- Concrete to be installed in accordance with the project specification
- Bedding mortars to be installed in accordance with the manufacturer's specification.
- All steel work, gates and the necessary components will be constructed in accordance with the relevant British Standard.
- The work detailed in this document will comply with all relevant Codes of Practice, Standards, Fire Regulations, Building Regulations and local Building Codes, Safety Regulations and any other regulations applicable to the installation, together with all relevant Statutory Rules, Regulations, and other enforceable instruments applicable to both the design and execution of the works.



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4. Key project staff

A list of the key project staff are as follows:

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5. Management of heritage risks

A Heritage Risk Assessment has been carried out in relation to the reconstruction, non-intrusive works and repairs. This can be seen in the following table.

Table 1 Heritage Interface Risk Assessment and mitigating measures

Ref.	SIGNIFICANT RISKS / HAZARDS	High Medium Low	CONTROL MEASURES	Residual Risk after Control Measures
1.	Unsatisfactory alteration to historical character	Medium	 A competent specialist contractor will be appointed to carry out the works. Contractor to reconstruct the wall to match the style and character of the Regent Road Wall, including a colour match of the bedding mortar, as far as practicable. On completion of the first opening, the final product of the stonework is to be collaboratively reviewed by the relevant stakeholders. All comments will be used to inform the follow-on wall reconstruction. This review process could be repeated on completion of the second gate to inform the final gate reconstruction. All works to be carried out in accordance with the approved designs and relevant specifications. 	Low
2.	Unsatisfactory reconstruction or repair works	Medium	 Samples of the methods and materials to be used for the rebuilding and repair works will be offered up to the Liverpool Council Conservation Officer prior to commencing the main works. The approved samples will form the benchmark of the follow-on works All rebuilding and repair works will be carried out in accordance with the approved samples. 	Low
3.	Damage to adjacent wall during works	Medium	 All works to be carried out in accordance with the site wide Protection Strategy Items that require protection arrangements will be detailed in the task specific method statement or task sheet. All protection arrangements to be implemented prior to works being carried out. 	Low
4.	Risk of mortar colours changing long term	Medium	 Samples of the colour matched mortar will be produced prior to the main intrusive works and repairs being carried out. The samples will be subject to inspection and approval of the Liverpool City Council Conservation Officer. A high performing mortar will be adopted which will ensure the effects of weathering and the aggressive environment (marine) are minimised, as far as practicable. 	Low
5.	Risk that there will be insufficient stone to carry out repairs	Medium	 If necessary, new stone is to be installed to the wall. This may be due to insufficient large stone being salvaged, coping stones being significantly damage etc. Test samples of the new stone will be offered up for review and approval with the Liverpool City Council Conservation Officer prior to permanent installation into the wall. 	Low



6. Environmental

6.1. Personnel Protective Equipment (PPE)

All operatives will be required to wear a minimum of the following Personnel Protective Equipment (PPE):

- Hard Hat
 - High Visibility Workwear
- Gloves
- Safety boots
- Glasses.

Task specific PPE requirements will be detailed within the task sheet or method statement of the relevant work activity.

6.2. Dust suppression

During any cutting operations, dust is to be suppressed using water.

6.3. Noise

Where possible, sound blankets are to be erected during loud works. Any saw cutting operations will be carried out during standard daytime hours.

Suitable diversions will be implemented to minimise the pedestrian interface during cutting operations.

6.4. Control of substances hazardous to health (COSHH)

The use of COSHH items will be in accordance with the relevant Health and Safety Executive regulations and guidance documents, Laing O'Rourke's Safe systems of work and the manufactures specifications.

6.5. Waste

All debris created from the works will be disposed of in the approved method, in accordance Laing O'Rourke standards. For example, depositing waste, site debris or recyclable materials into the appropriate segregated skips.

7. <u>Pedestrian interface</u>

7.1. Regent Road Wall reconstruction

Sound barriers and debris netting are to be erected, where necessary, when working adjacent to the public on Regent Road.

7.2. Footpath diversion

Pedestrian and cyclist diversion routes will be implemented, if necessary, prior to carrying out any reconstruction works to Regent Road Wall. Diversion routes to be installed to an approved layout.