

Appendix 5

Architectural Heritage Impact Assessment

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ARCHITECTURAL HERITAGE IMPACT ASSESSMENT

FLOOD RELIEF WORKS
PROPOSED TO A SECTION OF THE
DODDER RIVER WALL ADJACENT
TO ANGLESEA ROAD



July 2018

Proposal

This report relates to the river wall running south from Ballsbridge adjacent to Anglesea Road on the east bank of the Dodder. The wall extends to either side of the Herbert Park Hotel Bridge. This section of wall is believed to have been constructed in the first half of the nineteenth century around the time the bridges across the Dodder were being re-built. There is documented evidence that the Dodder was flooding even at this time so it is likely these walls were constructed as part of an early defence system. Following extensive tests and inspections it has been found that the current wall does not meet the necessary defence requirements at times of flooding.

The existing wall is battered below footpath level with a straight parapet above. The battered section of the wall would appear to be original construction. It is constructed of coursed limestone and is a substantial build. There is evidence of re-building in places where the stonework has been undermined but overall it appears to be the original masonry. The condition of this facing stone is variable with some sections remaining relatively in-tack while other areas have suffered significant fabric loss. Pockets of stonework have been lost throughout, severely undermining the structural integrity of the remaining stonework. The parapet is constructed in a variety of materials including, granite, limestone, brick and limestone setts. It is built off a concrete beam that has been poured on top of the battered wall at footpath level along most of the length of the wall. These features would indicate much of the wall has been re-built on several occasions. Much of the mortar has been washed out of the joints and there is widespread vegetation growth in these joints below footpath level.

The conservation approach initially recommended for this length of wall was to retain the existing battered wall and carry out repair works as necessary. This approach would retain the historic integrity of the river wall and the wider area. Following detailed analysis of this option by the design team it was found that a conserved and consolidated wall would not be capable of withstanding the anticipated water pressures.

After examining all potential solutions to carrying out the necessary upgrade works it has been found that constructing a retaining wall inside the original wall is the best solution available. The concrete retaining wall is to be inserted in front of the existing wall and clad in coursed limestone with lime mortar pointing. The wall is to be battered to match the line of the original wall behind. This approach allows for the original wall to remain undisturbed, albeit buried behind the new retaining wall. At footpath level the concrete beam and parapet stonework are to be removed and the retaining wall will extend up to the required flood height. This new parapet wall will be wider than the original due to the stone cladding on each side of the retaining wall. To account for this the wall top will have a rounded rubble limestone capping. This finish will be in keeping with the surrounding flood defence walls and will deter people from walking on the wider wall. This solution will allow the mature trees along the footpath to be retained. These trees are important to the overall setting of the area.

It has been agreed by all that this area of the Dodder is susceptible to flooding and that upgrade works are essential to control these high water levels. The chosen approach will provide this protection for the neighbourhood and it is the best solution available. All less intrusive alternatives were considered and investigated but unfortunately they could not satisfy the loading requirements for the anticipated water pressures. The use of limestone, lime mortar joints, coursed stonework and the battered profile of the wall will help retain some of the existing character of the area while providing suitable flood defences for future generations.

Potential Adverse, Positive Effects and Mitigation Measures

The following table summarises the proposed alterations and their impact on the river Dodder and surrounding area.

PROPOSAL	POTENTIAL ADVERSE EFFECTS	POTENTIAL POSITIVE EFFECTS	MITIGATION MEASURES
Construction of retaining wall inside existing wall.	The original stonework will be buried behind the new retaining wall. The new wall will be wider than the original.	The new retaining wall will provide the flood defences required for the surrounding area.	The original stone wall will remain undisturbed behind the new wall. Allows for the mature trees along Anglesea Road to be retained. The wall will be battered to match the original. The wall top will be rounded to deter people from walking on the wall.
Removal of existing parapet.	Loss of some original fabric.	The higher level of the parapet will provide the flood defences required for the surrounding area.	Allows for the mature trees along Anglesea Road to be retained.
Clad the retaining wall with stone.	The stone cladding cannot replicate the construction style of the original due to the construction technique. Expansion joints where the precast panels meet.		Limestone closely matching the original to be used to clad the walls. The stonework will be pointed in a compatible lime mortar.

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Photographic Record



Current view of river wall. Extensive vegetation visible along length of wall.



Concrete beam indicated at footpath level.



Concrete beam with more recent parapet wall above. Wall capped with sets. Original river wall visible below beam.



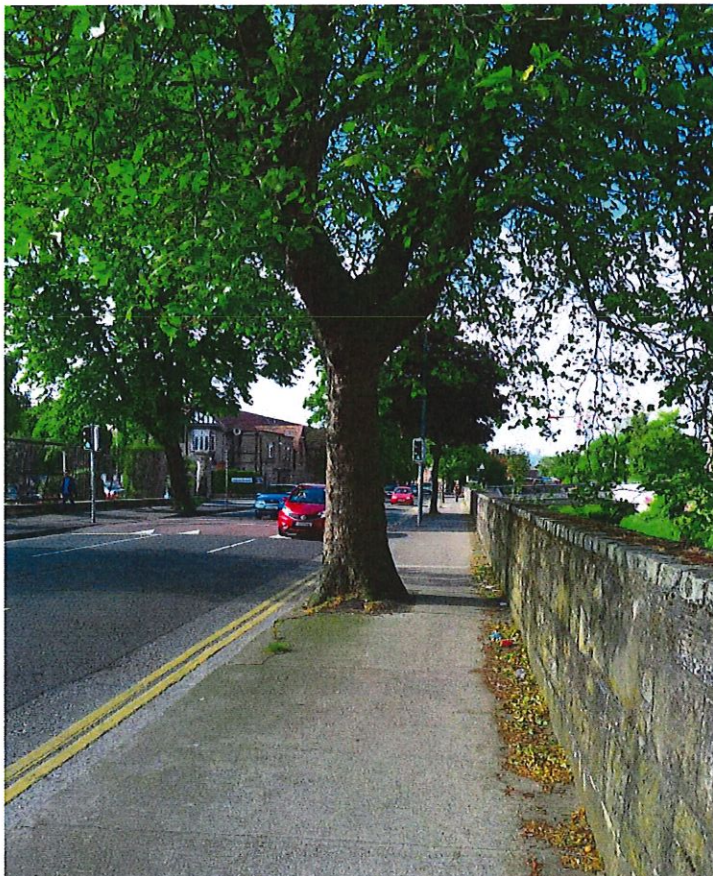
Face of parapet wall from Anglesea Road. Limestone and granite stonework visible with a setts capping.



Condition of original stonework visible below concrete beam. Pockets of original stone lost throughout.



Facing stone lost at low level



Mature trees on Anglesea Road that will be retained with chosen approach.