

Background, Timeline and Public Consultation Process

INTRODUCTION

The Office of Public Works (OPW) working in partnership with, Dublin City Council (DCC) and Dún Laoghaire-Rathdown County Council (DLRCC) and have completed the Dodder Catchment Flood Risk Management Plan (CFRMP). The Dodder Flood Alleviation Scheme (FAS) Phase 3 was identified within the CFRMP study as an Area for Further Assessment (AFA) based on the fluvial flood risk.

To assess and develop a suitable flood alleviation scheme for the phase 3 area of the River Dodder, Ayesa has been appointed by Dublin City Council to provide engineering and environmental consultancy services for the River Dodder FAS. DCC, DLRCC and the OPW are working in partnership steering the project.

DESIGN STANDARD

The design Standard of Protection (SoP) sought for the River Dodder FAS is the 1% annual exceedance probability (AEP) event. This can be thought of as a flood with a magnitude such that it has a 1% chance of occurring in any given year and is sometimes referred to as the 100-year flood.

The scheme has also been assessed for resistance/adaption to climate change for flood events that are greater than the design flood event.

OPTIONS SELECTION

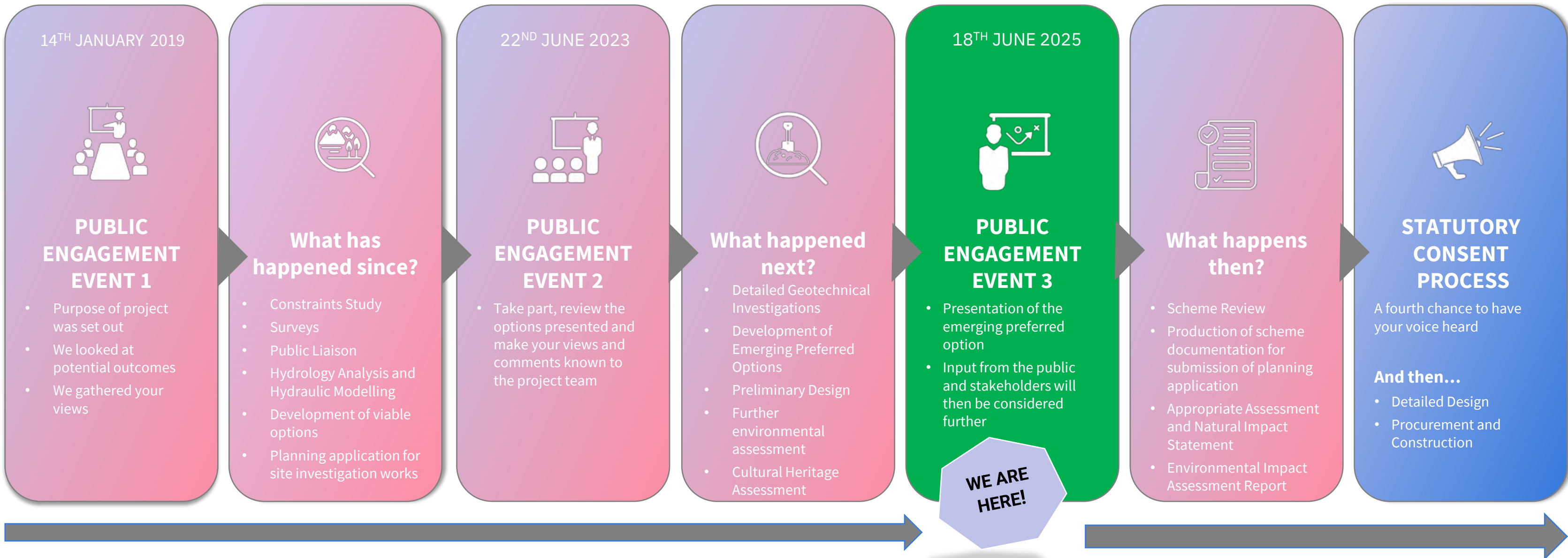
Options presented at the last Public Consultation were assessed based on the public feedback and under the following criteria:

- Social
- Economic
- Environmental
- Technical

The emerging preferred options are being prepared for statutory approval. The following posters present the details of the emerging preferred options of the FAS. The emerging preferred option generally makes use of replacing existing walls so much as possible.

STAGES & TIMELINES

The diagram below outlined the steps in Stages 1-2 that lead up to the statutory approval for the scheme. Once this is obtained, the detailed design will begin, and a construction contractor will then be procured to build the scheme. The timeline for the entire project is shown inset below.



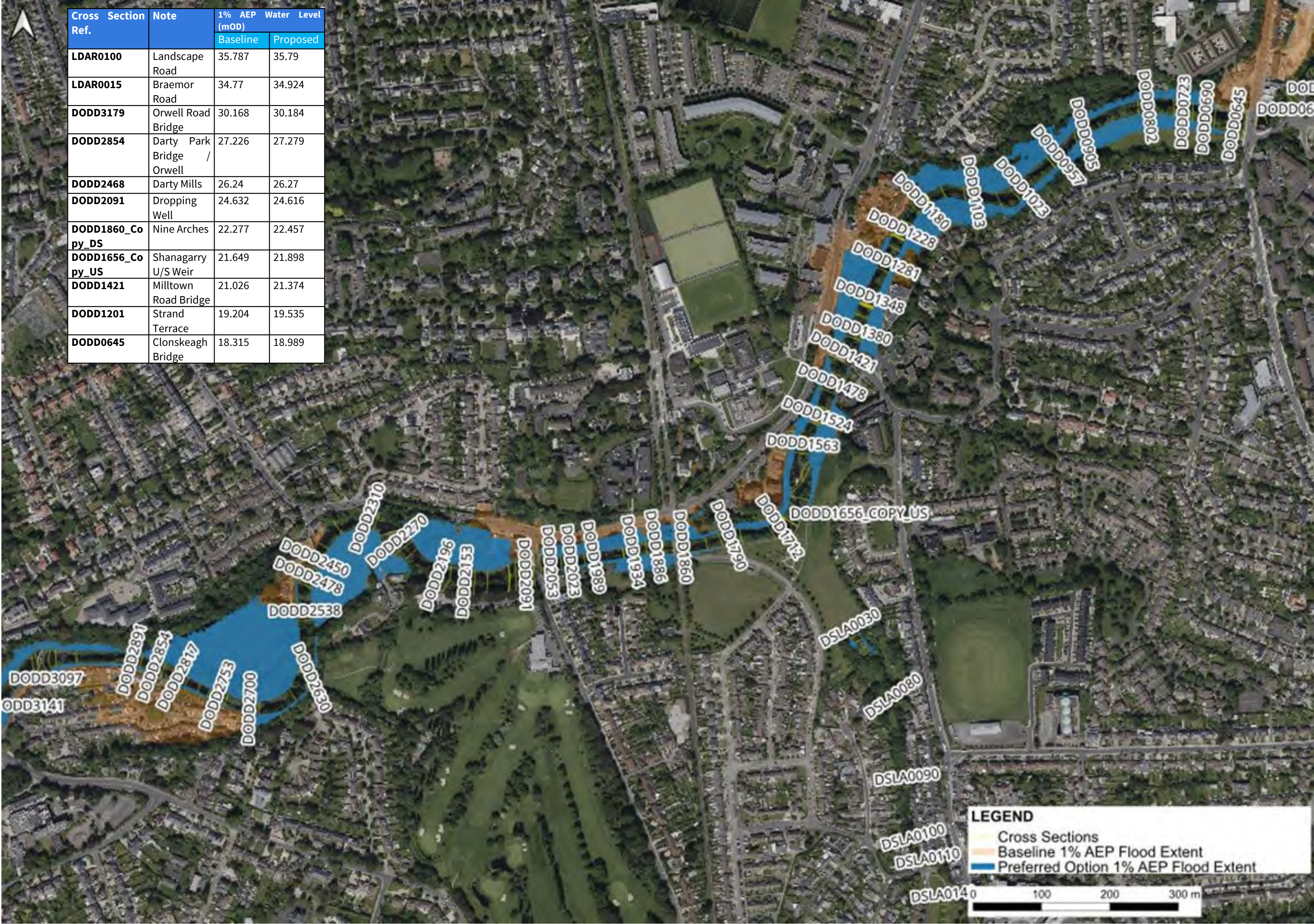
Little Dargle



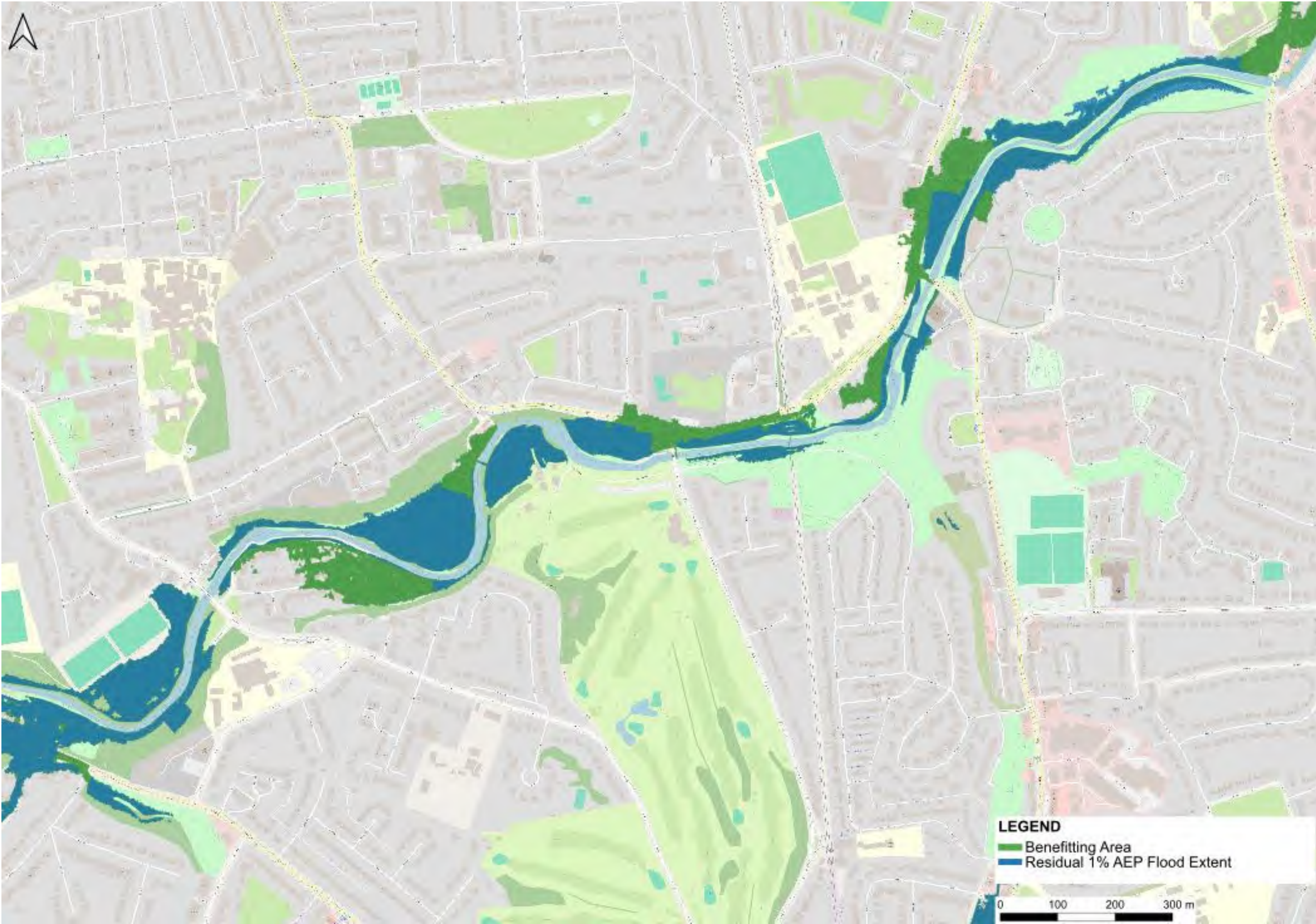
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Stage 1	Scheme Development & Preliminary Design														
Stage 2	Planning														
Stage 3	Detailed Design														
Stage 4	Construction														
Stage 5	Handover of Works														

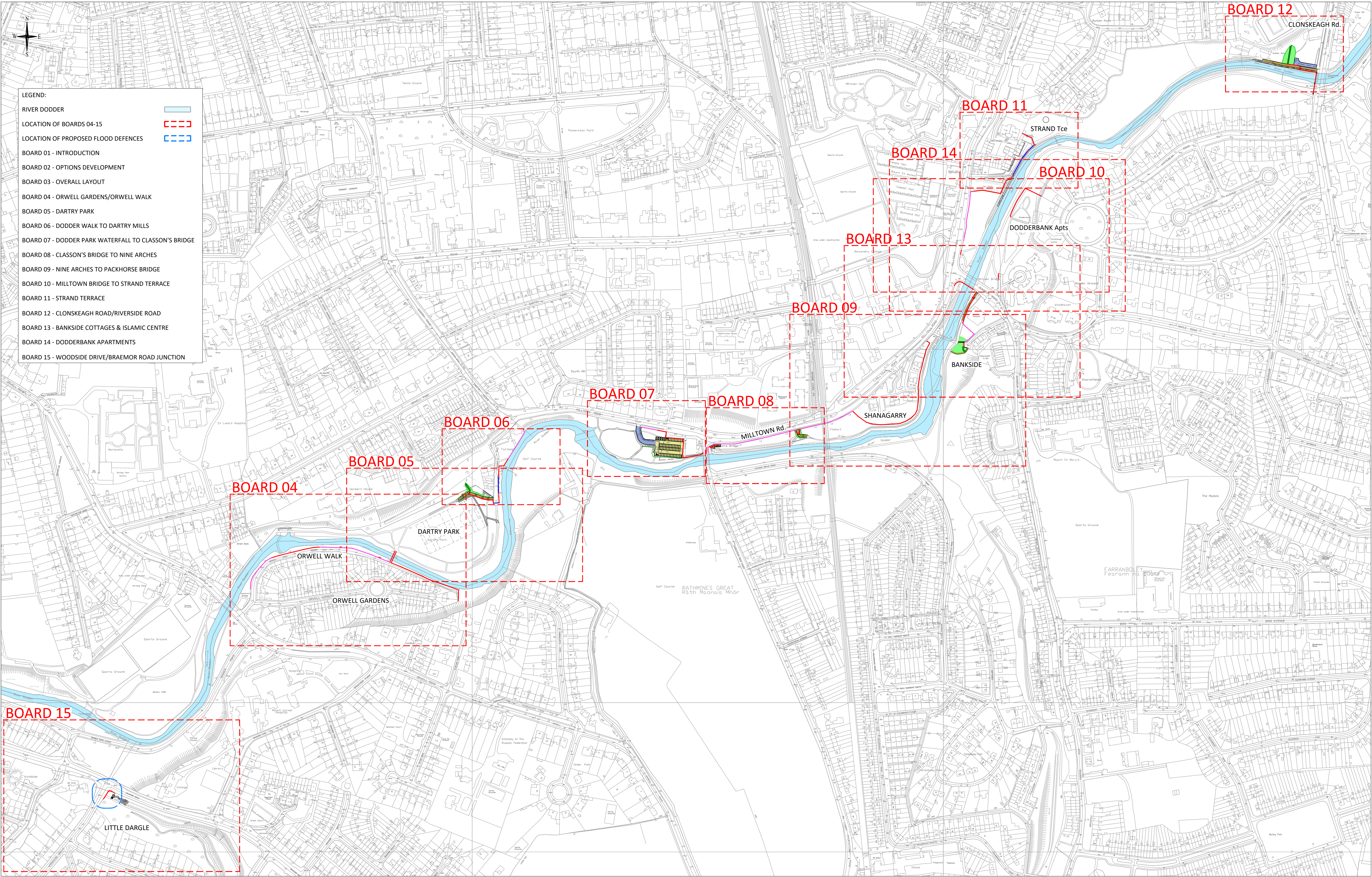


Flood Extent Mapping

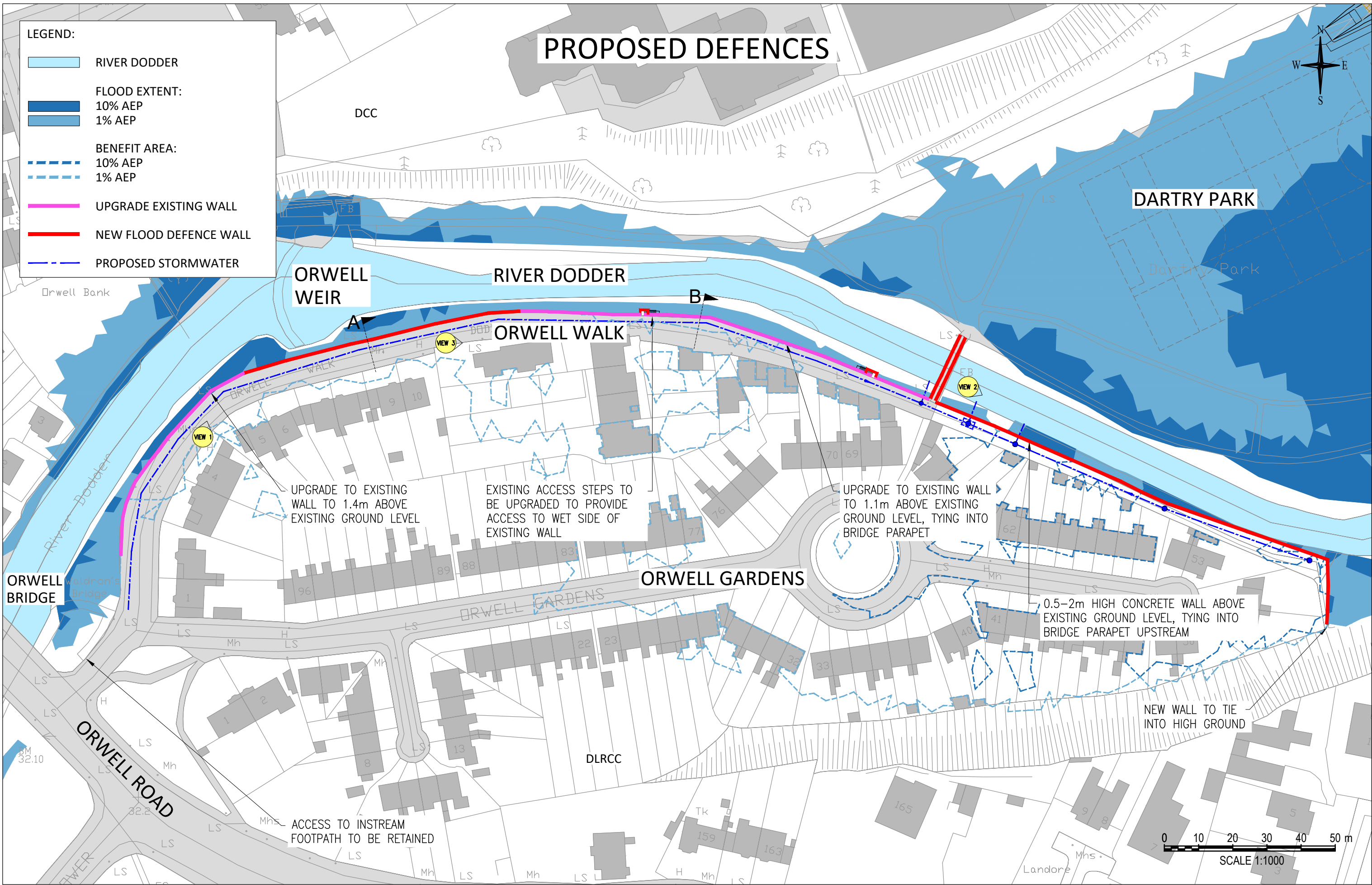


Defended Benefitting Area





OVERALL LAYOUT



AREAS 1A & 1B - PROPOSED

CONSIDERATIONS

DESCRIPTION OF WORKS

Orwell Walk includes the raising of the existing flood defence wall combined with the construction of replacement upgraded sections of flood defence walls where the existing wall is insufficient. A new flood defence wall will be built between the existing wall at the rear of the dwelling in Orwell Garden and the River Dodder. The total length of wall will be 503m. A new surface water drainage channel will be constructed to collect and discharge rainfall during flooding events in the River Dodder. Two staircases for access over the walls are proposed to maintain the existing access arrangement.

ENVIRONMENTAL CONSIDERATIONS

Works have the potential to result in:

- Scrub clearing, tree trimming and tree removal where bankside works are proposed, resulting in:
 - Habitat removal for breeding birds and to bats. Three different species of bat have been recorded in this area, and at least two species of bird have been seen to breed in this area.
 - Removal of approx. 33no. trees with ecological and/or landscape value. Extent of impact will be dependent upon the results of ground investigation works.
 - The removed vegetation will be replaced by a combination of native hedge, and low maintenance planting.
- Disturbance to bats and wintering birds from construction noise and light.
- Disturbance/impact to otter and badger where works are proposed (habitat disturbance, noise & contamination). A mammal trail, two potential holts, and one sett have been recorded previously in this area.
- Potential impact to water quality and fisheries from contamination and/or sedimentation where bankside works are proposed. The River Dodder is 'at risk' (WFD) and previously, Brown Trout, Stone Loach and European Eel were recorded in this area of the river.
- Potential spread of invasive plant species. Winter Heliotrope and Japanese Knotweed have been recorded here.

Pre-construction surveys will be conducted, and derogation licences sought if nests, roosts, holts or setts are found to be present. Mitigation measures will be in place as outlined in the EIAR to reduce impacts.

CULTURAL HERITAGE

No impacts to designated features are anticipated. 8 undesignated cultural heritage sites identified by underwater archaeological impact assessment by ADCO. Metal footbridge (ADCO 6) crosses the River Dodder at Dartry Park, probably dating to the 1950's. Proposed concrete upstand to be tied into footbridge. Rebar steps (ADCO 8) and lintel weir (ADCO 9) are located adjacent to the temporary access crossing. No impact to other features as there will be no dredging works.

LANDSCAPE AND VISUAL

Views from the houses on Orwell Walk will be slightly altered due to the increase in wall height. The flood defence wall at Orwell Walk will have a random rubble finish with half-round capping. The riverbank will be planted with native riparian plants. The scrub clearance has the potential to change the landscape character of the area. The flood defence wall at Orwell Gardens will have a concrete finish with flat top. The riverbank will be planted with native riparian plants, with additional native hedge planting along the boundary walls of the houses. Low maintenance planting will be planted along the new maintenance path. The footbridge is considered to have historical landscape value but does not have archaeological or architectural designation. Character of the bridge setting will be altered by works but this impact is considered minor.

IMAGES & SECTIONS



VIEW No.1 OF ORWELL WALK (Existing)



VIEW No.2 OF ORWELL WALK (Existing)



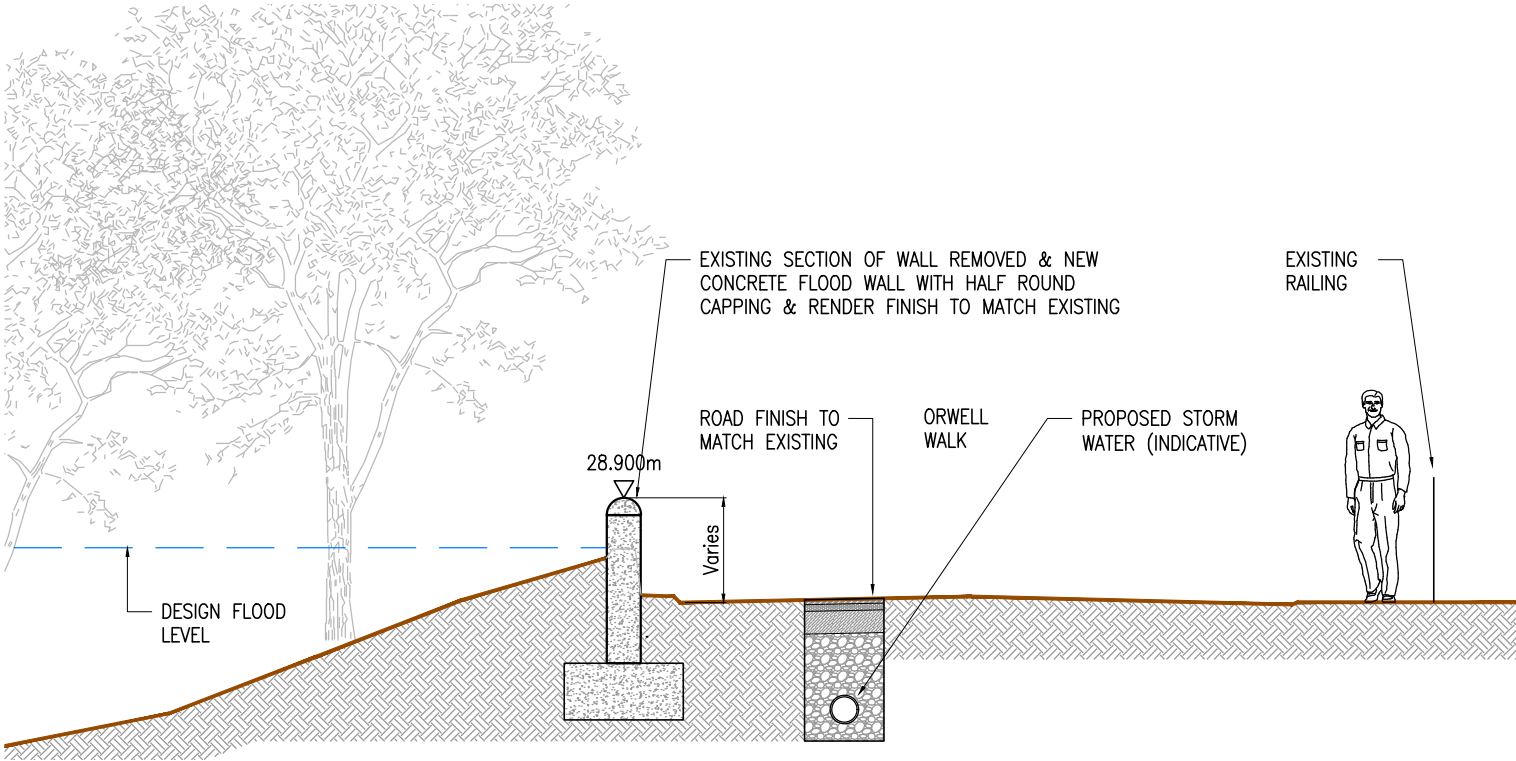
VIEW No.1 OF ORWELL WALK (Proposed)



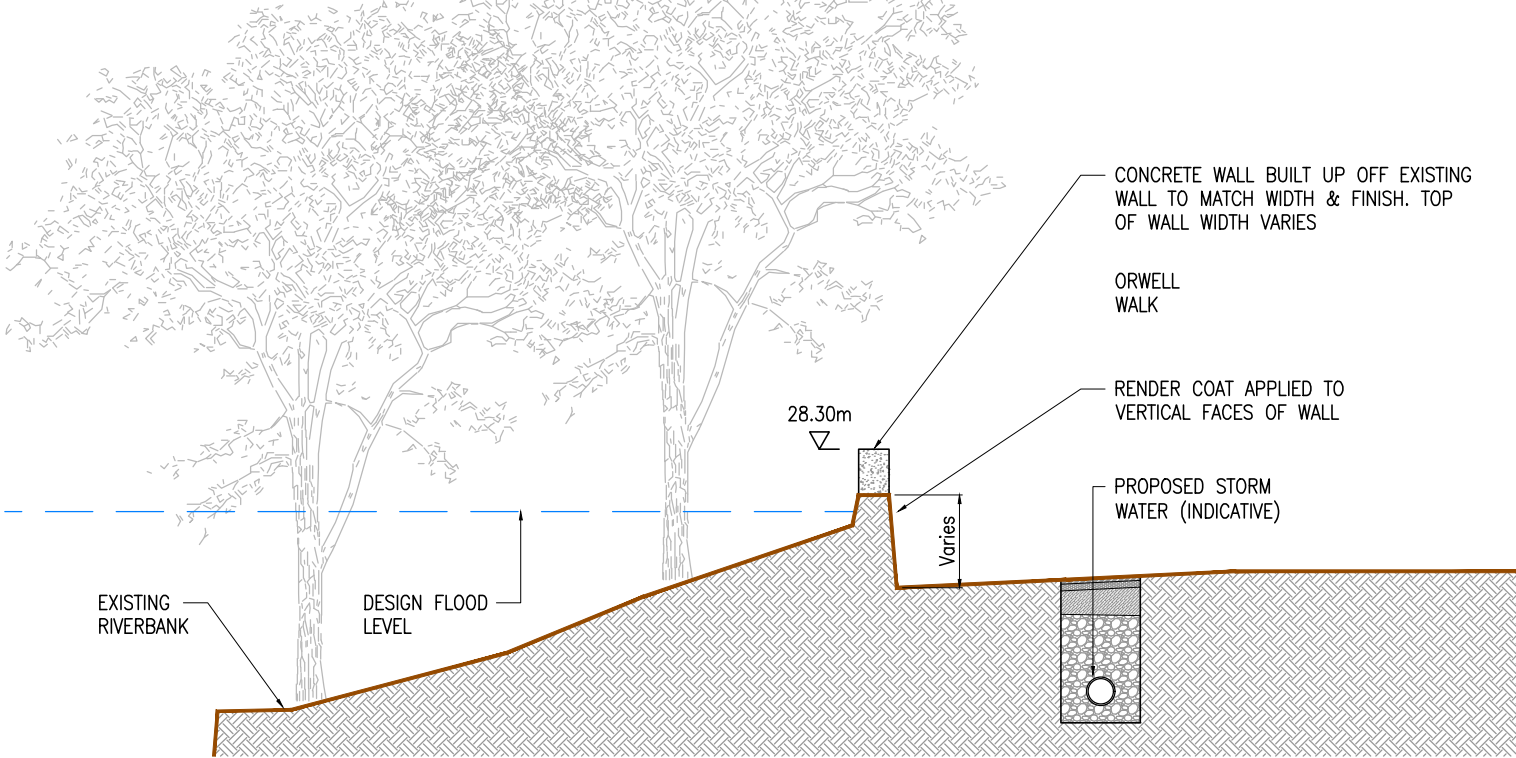
VIEW No.2 OF ORWELL WALK (Proposed)



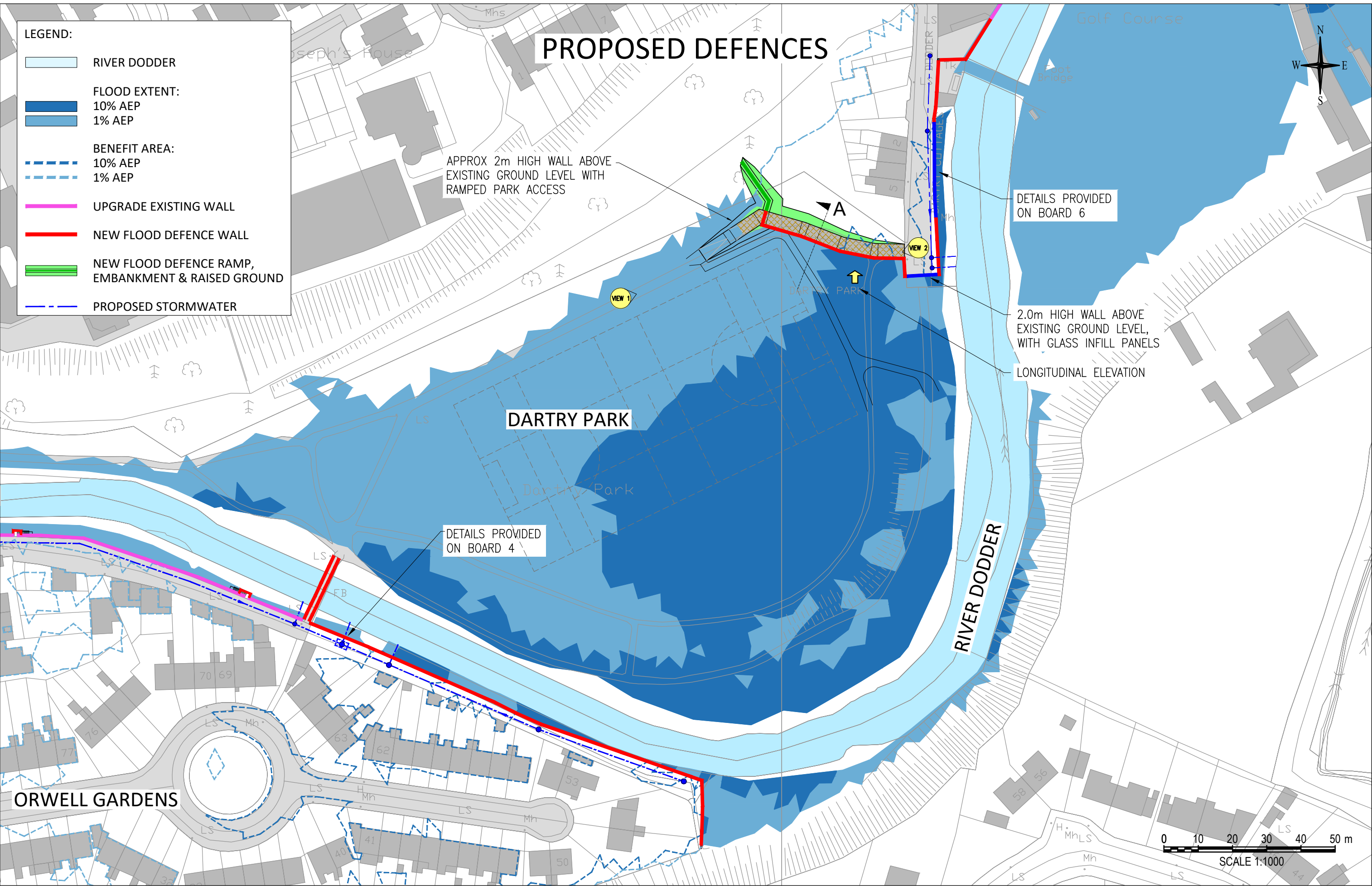
VIEW No.3 OF ORWELL WALK (Existing)



SECTION A THROUGH ORWELL WALK



SECTION B THROUGH ORWELL WALK



AREA 2A - PROPOSED

CONSIDERATIONS

DESCRIPTION OF WORKS

Dartry Park includes the raising of the park access connecting the northeast corner of Dartry Park to the riverside of the River Dodder and the construction of new flood defence walls incorporating glass panels, natural stone cladding. The new flood defence wall will wrap around the Dartry Park access area to provide flood protection while maintaining connectivity to existing paths and accesses. The wall consists of glass panels (minimum 1m height) mounted on concrete walls with natural cut stone cladding on both sides. The total length of wall will be 53m.

The ramped park access and pedestrian pathways will be integrated with the flood defence system, creating a gradual slope to match existing access heights at the Dartry Park river-side exit. Existing footpaths will be resurfaced and raised to form natural gradients connecting with the ramped accesses. The scheme incorporates various surface materials, street furniture, and lighting to enhance visual interest and functionality while maintaining flood protection integrity. Connection details to the adjacent River Dodder flood walls are provided in the corresponding section.

ENVIRONMENTAL CONSIDERATIONS

Works have the potential to result in:

- Disturbance to bats and wintering birds from construction noise and light.
- Disturbance/impact to otter and badger where bankside works are proposed (habitat disturbance, noise & contamination). Badger has been recorded in the Dartry Park.
- Potential spread of invasive plants. Winter Heliotrope and Himalayan Balsam have been recorded.
- There are approximately 20no. trees within the works area that have the potential to be affected by either removal, trimming or through indirect effects. This results in:
 - Potential habitat removal for breeding birds and to bats. Two species of bat have been recorded in this area, and at least two species of bird have been seen to breed in this area. Kingfisher presence is particularly notable.
 - Removal of trees with ecological and/or landscape value

Pre-construction surveys will be conducted, and derogation licences sought if nests, roosts, holts or setts are found to be present. Mitigation measures will be in place as outlined in the EIAR to reduce impacts.

CULTURAL HERITAGE

Works will occur within the Zone of Notification associated with the former millpond and milling. Test trench testing will be conducted to assess the potential for the works to impact upon this feature.

LANDSCAPE

The existing pathway will be realigned over the flood defence. This allows continuous connection of the pathway to the river. Various types of plating will be used throughout Dartry Park to improve the landscape for the area. 6 no large trees and 21 no small species trees will be planted. Large trees such as Betula pendula and Prunus avium, and small trees such as acer ginnala and Amelanchier lamarchkii will be planted. Climbing plants, herbaceous planting and hedge planting will also soften the effect of the flood defences.

The proposed concrete flood wall will have a rendered finish. Seating is proposed pitchside, as well as the relocation of cycle stands.

IMAGES & SECTIONS



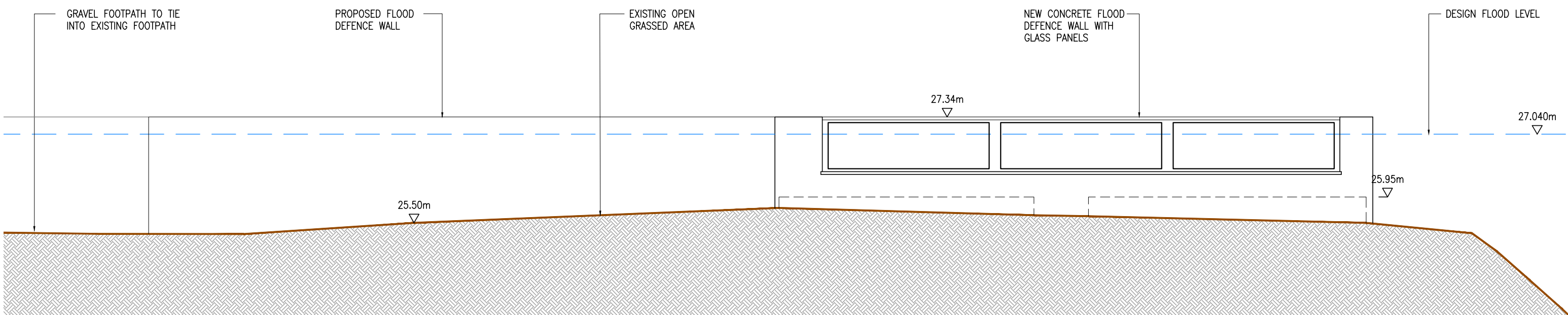
VIEW 1 OF DARTRY PARK (Existing)



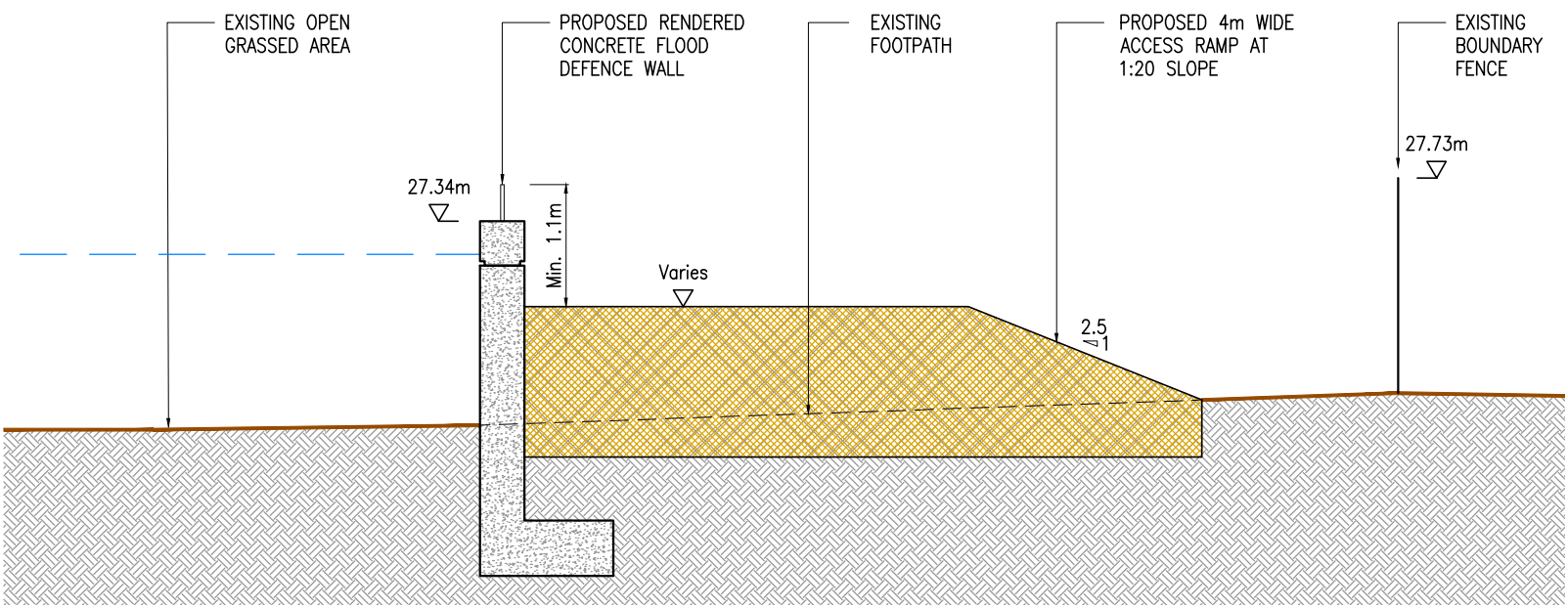
VIEW 2 INTO DARTRY PARK (Existing)



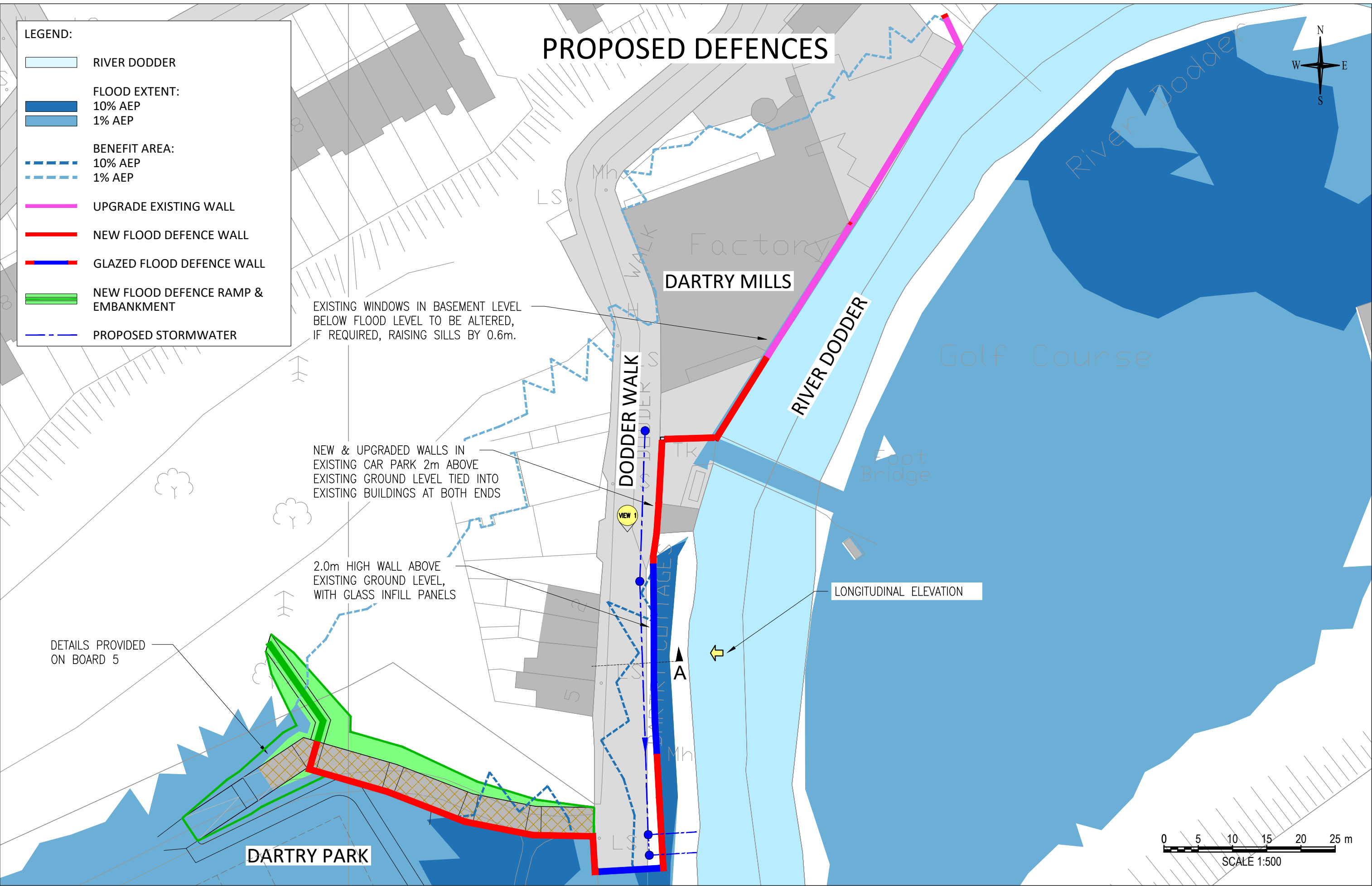
VIEW 1 OF DARTRY PARK (Proposed)



LONGITUDINAL ELEVATION FROM DARTRY PARK



SECTION A THROUGH ACCESS RAMP/WALL



AREAS 2B-2D - PROPOSED

CONSIDERATIONS

DESCRIPTION OF WORKS

Dodder Walk to Dartry Mills includes the raising of the existing flood defence wall and the construction of new glass and concrete walls extending from the Dodder Walk entrance at Dartry Park site behind Dartry Cottage, continuing alongside Dartry Mills and the River Dodder, and connecting to existing walls at the riverside.

The total upgraded flood defence system will align with the original wall configuration around the riverside area. Glass panels (minimum 1m height) will be mounted on the new concrete walls behind Dartry Cottage. All gaps and disconnections in the riverside wall system will be sealed to ensure continuous flood protection. The total length of wall will be 139m. A new surface water drainage channel will be constructed to collect and discharge rainfall during flooding events in the River Dodder.

ENVIRONMENTAL CONSIDERATIONS

Works at this area have the potential for:

- Disturbance to bats and wintering birds from construction noise and light.
- Potential impact to water quality and fisheries from contamination and/or sedimentation where bankside works are proposed. The River Dodder is 'at risk' (WFD) and previously, Brown Trout, Stone Loach, Minnow and European Eel were recorded near to this area.
- Disturbance/impact to otter and badger where bankside works are proposed (habitat disturbance, noise & contamination).
- Potential spread of invasive plants. Winter Heliotrope and Himalayan Balsam have been recorded.
- There are approximately 10no. trees within the works area that have the potential to be affected by either removal, trimming or through indirect effects. This results in:
 - Potential habitat removal for breeding birds and to bats. Two species of bat have been recorded in this area, and at least two species of bird have been seen to breed in this area. Kingfisher presence is particularly notable.
 - Removal of notable trees with ecological and/or landscape value.

Pre-construction surveys will be conducted, and derogation licences sought if nests, roosts, holts or setts are found to be present. Mitigation measures will be in place as outlined in the EIAR to reduce impacts.

CULTURAL HERITAGE

No impacts to designated features are anticipated.

LANDSCAPE

The view from the houses at Dodder Walk will be impacted. This will be mitigated by glass panels within the flood defence wall providing view to the riverscape. Plant species will be planted on the riparian side of the flood defence walls and glass panel.

Visual impact up to Dartry Mills is minimal, as works at this location largely involve upgrading / waterproofing of existing walls and office features

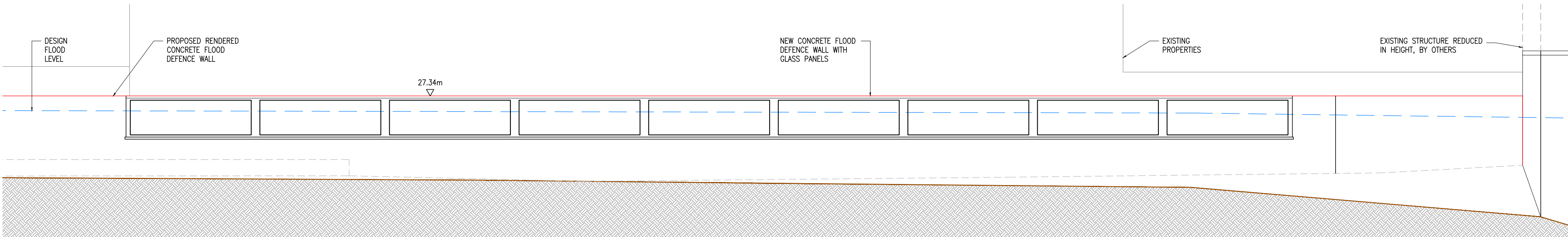
IMAGES & SECTIONS



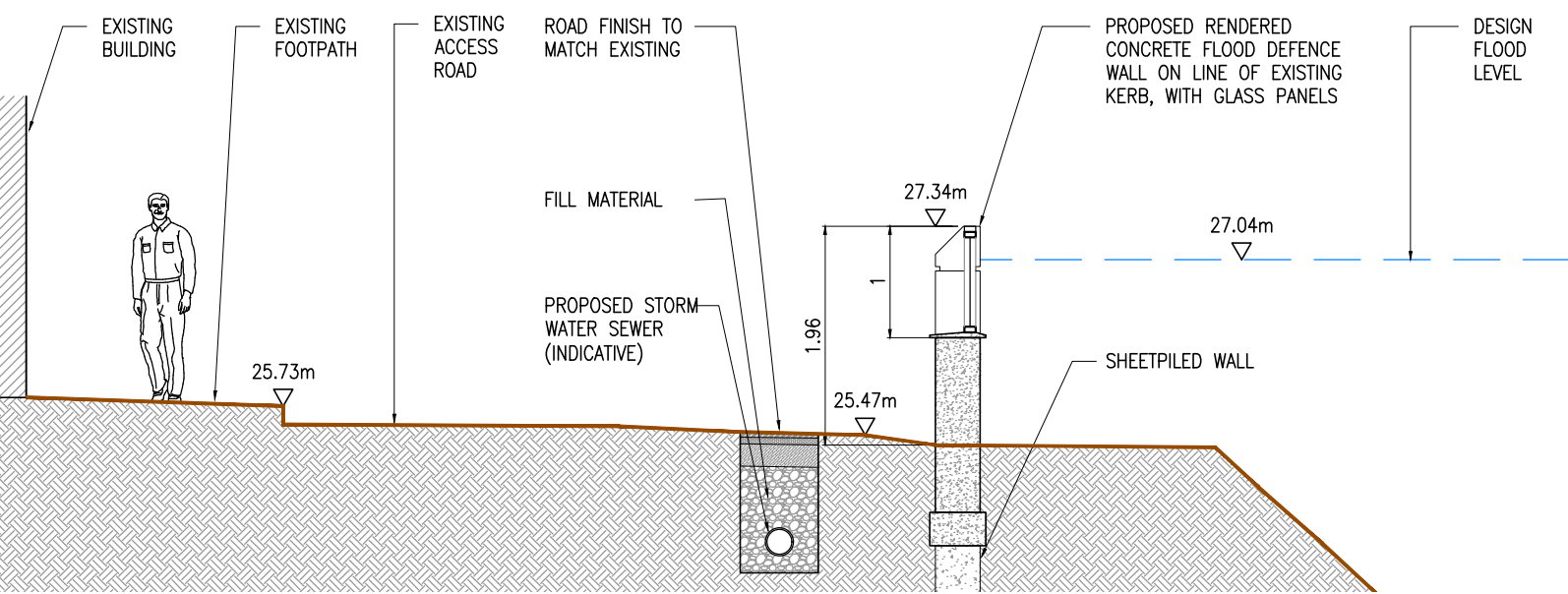
VIEW No.1 OF DODDER WALK (Existing)



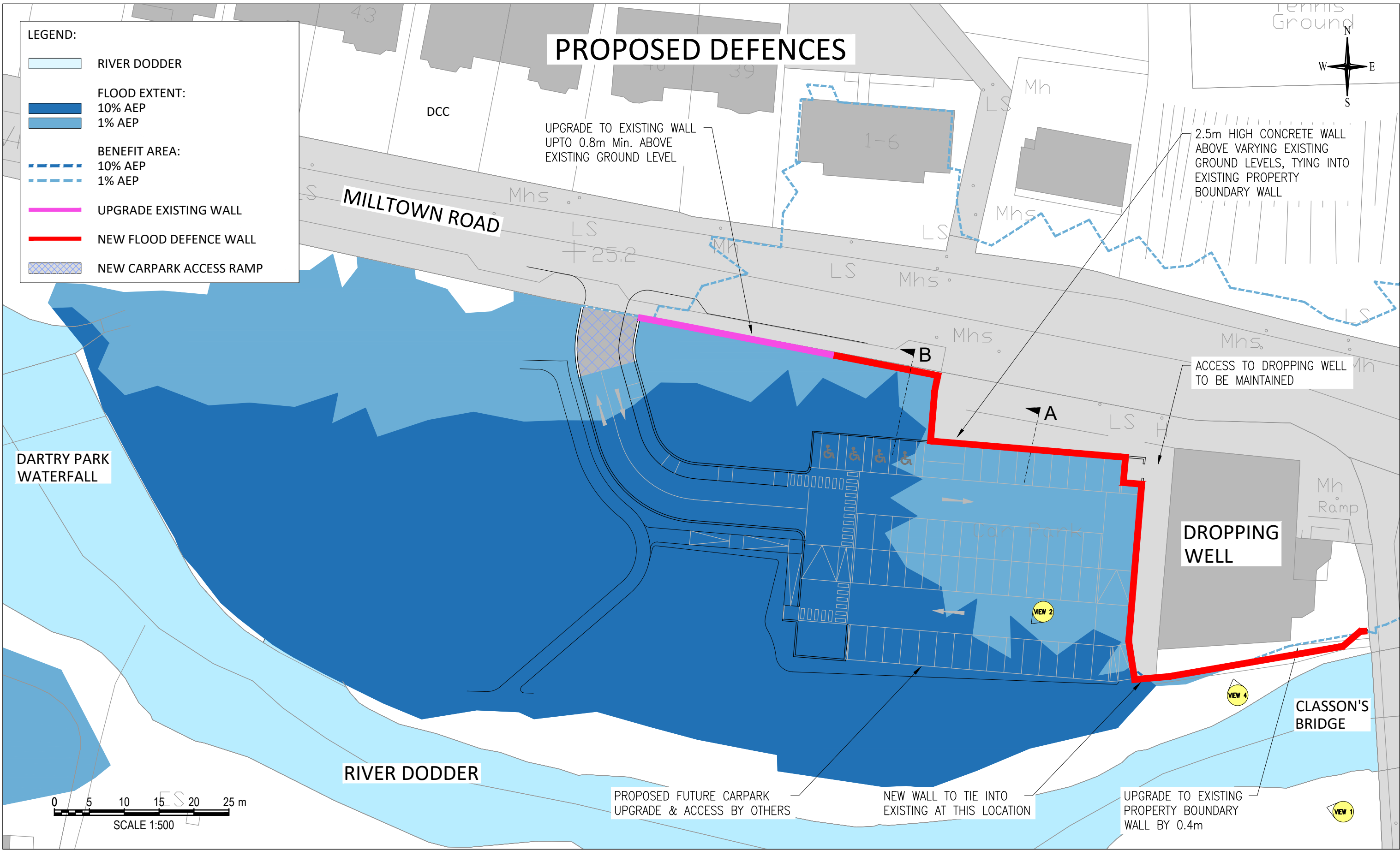
VIEW No.1 OF DODDER WALK (Proposed)



LONGITUDINAL ELEVATION OF GLAZED FLOOD DEFENCE WALL



SECTION A THROUGH GLAZED FLOOD WALL



AREAS 3A & 3B - PROPOSED

CONSIDERATIONS

DESCRIPTION OF WORKS

Dartry Park Waterfall to Classon's Bridge includes the raising of the existing flood defence wall and construction of new concrete walls with an integrated car park access ramp connecting the Dartry Car Park entrance to the riverside area near the Dropping Well property boundary.

The upgraded flood defence system will align with the original wall alongside Milltown Road, incorporating the new access ramp and wrapping around the car park perimeter. The total length of wall will be 279m. A new surface water drainage channel will be constructed to collect and discharge rainfall during flooding events in the River Dodder.

ENVIRONMENTAL CONSIDERATIONS

- Works have the potential to result in:
- Disturbance to bats and wintering birds from construction noise and light.
 - Potential impact to water quality and fisheries from contamination and/or sedimentation where bankside works are proposed. The River Dodder is 'at risk' (WFD) and previously, Brown Trout, Stone Loach, Minnow and European Eel were recorded near to this area of the river.
 - Disturbance/impact to otter and badger where bankside works are proposed (habitat disturbance, noise & contamination). Badger has previously been recorded in the area, and two otter holts have been recorded here also.
 - Potential spread of invasive plant species. Japanese Knotweed and Winter Heliotrope have been recorded here.
 - There are approximately 16no. trees within the works area that have the potential to be affected by either removal, trimming or through indirect effects. This may result in:
 - Potential habitat removal for breeding birds and to bats. Four species of bat have been recorded in this area, and at least two species of bird have been seen to breed in this area. Kingfisher presence is particularly notable.
- Pre-construction surveys will be conducted, and derogation licences sought if nests, roosts, holts or setts are found to be present. Mitigation measures will be in place as outlined in the EIAR to reduce impacts.

CULTURAL HERITAGE

Classon's Bridge (DCIHR 22 03014) carries Churchtown Road across Dodder. Dates to 1790 and was widened on both sides in 1928. Results of site investigations demonstrate that no further investigations are required at this site. No other impacts to designated cultural heritage features anticipated.

LANDSCAPE

There will be noticeable changes to the landscape in this area. The car park and entrance ramp will change the alignment of the greenspace. The wall along Milltown Road will have a rubble finish and upstand stone capping.

8 no. large tree species, and 3 no. small tree species will be planted. Other planting is proposed including, groundcover, wildflower, hedge, low maintenance and shrub planting.

The existing seating and table on the riverside of the carpark will be retained. The existing path will be realigned around the new ramped entrance.

IMAGES & SECTIONS



VIEW No.1 OF RIVERBANK (Existing)



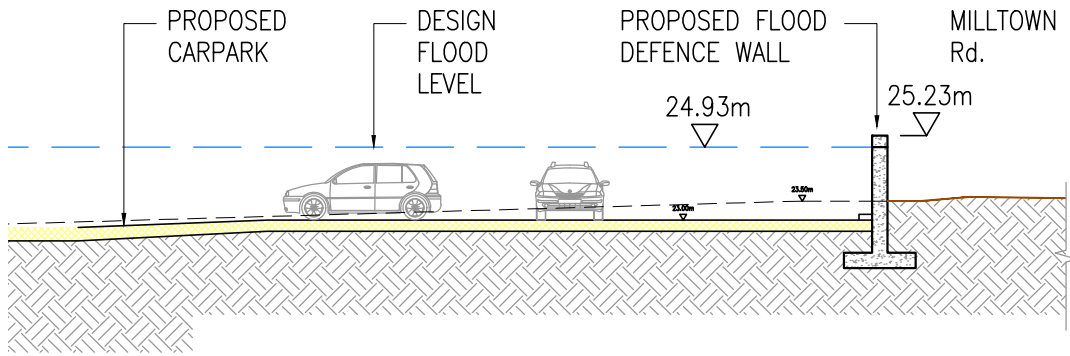
VIEW No.2 OF PARKING (Existing)



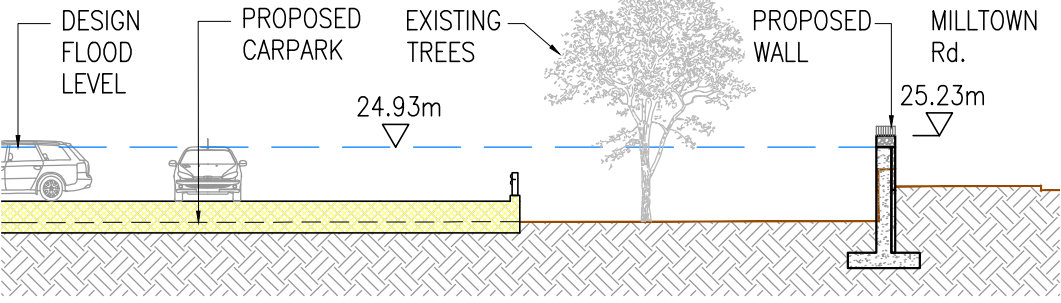
VIEW No.1 OF RIVERBANK (Proposed)



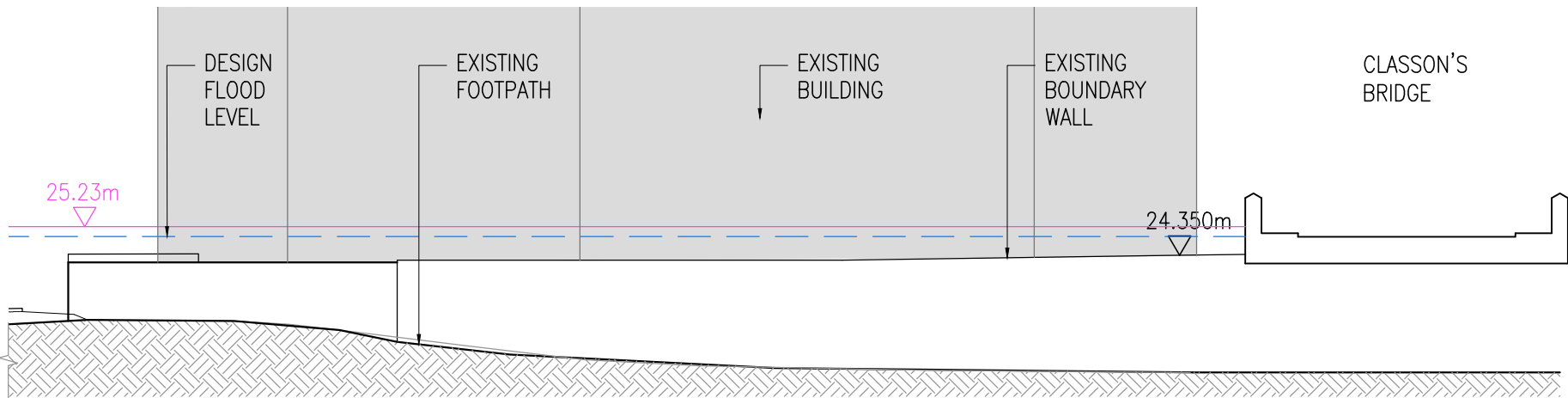
VIEW No.2 OF PARKING (Proposed)



SECTION A THROUGH NEW CONCRETE WALL



SECTION B THROUGH NEW CONCRETE WALL



VIEW No.4 WALL ELEVATION OF DROPPING WELL BOUNDARY WALL